



Nokia Service Router Linux

Release 24.7

Data Model Reference

3HE 20660 AAAA TQZZA
Edition: 01
July 2024

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1 About this guide

This document describes the configuration and state data models available for the Nokia Service Router Linux (SR Linux).

**Note:**

This guide generically covers the current release and may contain some content that will be released in later maintenance loads. See the *SR Linux Release Notes*, for information about features supported in each load.

Configuration and command outputs shown in this guide are examples only; actual displays may differ depending on supported functionality and user configuration.

For more information about accessing and using the interfaces that support these data models, see the *SR Linux System Management Guide*.

2 Overview

This overview describes the structure of the configuration and state data models available for the Nokia Service Router Linux (SR Linux). It includes an introduction to the tree hierarchy and details how to interpret field descriptions.

2.1 Tree hierarchy

The tree hierarchy consists of branches that show the fields and parameters that are available. [Figure 1: Tree hierarchy example](#) shows a tree hierarchy example.

Figure 1: Tree hierarchy example

```

bfd
- network-instance string
- peer number
  - active-receive-interval
  - active-transmit-interval
  - async
    - last-packet-received
    - last-packet-transmitted
    - received-errored-packets
    - received-packets
    - transmitted-packets
    - up-transitions
  - failure-transitions
  - last-failure-time
  - local-address
  - local-diagnostic-code
  - oper-state
  - remote-address
  - remote-control-plane-independent
  - remote-diagnostic-code
  - remote-discriminator
  - remote-minimum-receive-interval
  - remote-multiplier
  - remote-session-state
  - session-state
  - subscribed-protocols
+ peers number
+ clear
+ statistics
  + peers number
    + clear
  + subinterface string
    + admin-state
    + desired-minimum-transmit-interval
    + detection-multiplier
    + minimum-echo-receive-interval
    + required-minimum-receive
+ total_bfd_sessions
+ total_unmatched_bfd_packets

```

Each chapter of this guide describes a branch in the tree with field names linked to their corresponding descriptions. These descriptions indicate the required syntax for each field. See [Field descriptions](#) for more information.

Italic names after a field indicate the parameter type. Parameter types include (but are not limited to):

- Boolean (true and false values)
- keyword (enumerated values)

- string
- number
- IPv4 prefix
- IPv6 prefix
- IPv4 address
- IPv6 address
- MAC address

For more information about the input values, click the field or parameter name in the tree. The link will take you to the description where these values are defined.

A parameter type may also be a combination of different base types. These parameters are displayed in the tree with the individual parameter types enclosed in round brackets and separated by a pipe. For example: *(keyword | number)*

2.2 Transaction and report types

The following transaction and report types are used with the SR Linux:

- configuration transactions
- state transactions
- show reports

Configuration transactions allow you to modify a configuration while state transactions allow you to view the configuration and operational state.

In the tree hierarchy, configuration transactions are denoted with a plus sign (+). State transactions are denoted with a minus sign (-). See [Figure 2: Configuration/state in tree hierarchy](#).

Figure 2: Configuration/state in tree hierarchy



Each field description has a field called "Configurable". The field is set to either:

- true (for configuration transactions)
- false (for state transactions)

Show reports are Python plug-ins used to create custom output. A set of pre-defined show reports are provided and described in the *SR Linux System Management Guide*. These pre-defined reports can be used as examples for how to create additional custom reports.

2.3 Hardware platform designation

The platforms field is used to define the hardware platforms that are valid for a transaction. If a transaction is only valid on specific platforms, the designation is similar to the following:

Figure 3: Platforms: applies to designated platforms only

name string	
Description	Enter the name context
Context	system mirroring mirroring-instance name string mirror-source interface name string
String Length	3 to 20
Configurable	True
Platforms	7220 IXR-D3L, 7220 IXR-D3, 7220 IXR-D5, 7220 IXR-D2, 7220 IXR-D2L

If a transaction is valid on all platforms, the designation is the following:

Figure 4: Platforms: applies to all platforms

acl	
Description	Top level enclosing container for ACL operational tools
Context	acl
Tree	acl
Configurable	True
Platforms	Supported on all platforms

2.4 Field descriptions

Syntax for each field is displayed in bold, followed by supported parameters and their type. In the example that follows, the **bfd network-instance** field shows that the parameter type is a string:

```
- bfd
  - network-instance string
```

[Table 1: Field descriptions](#) describes valid fields for commands. Not all fields are applicable for all commands.

Table 1: Field descriptions

Field	Description
Context	Configuration path to the command
Tree	Defines the commands location in the tree hierarchy
Description	Describes the command
Configurable	Indicates if the command can be configured (true) or if it is a view-only state command (false)
String Length	For a string, indicates a range (number of characters allowed)

Field	Description
Range	For a number, indicates the range of allowed values
Default	Default value
Units	Base unit type
Options	Enumerated values allowed
Reference	Reference to an instance in the configuration needed before the configuration is considered valid
Max Element	For lists and leaf-lists, the maximum number of elements
Platform	Defines the supported hardware platforms

2.4.1 References

A description of each parameter is also available from the online CLI help function. See the *SR Linux System Management Guide* for information on using the CLI help.

3 acl

```

acl
+ acl-filter name string type keyword
+ description string
+ entry sequence-id number
+ action
  + accept
    + rate-limit
      + policer reference
      + system-cpu-policer reference
    + copy
  + drop
  + log boolean
+ description string
- last-clear string
+ match
  + ipv4
    + destination-ip
      + address string
      + mask string
      + prefix string
    + dscp-set (number | keyword)
    + first-fragment boolean
    + fragment boolean
    + icmp
      + code number
      + type (number | keyword)
    + protocol (number | keyword)
    + source-ip
      + address string
      + mask string
      + prefix string
  + ipv6
    + destination-ip
      + address string
      + mask string
      + prefix string
    + dscp-set (number | keyword)
    + icmp6
      + code number
      + type (number | keyword)
    + next-header (number | keyword)
    + source-ip
      + address string
      + mask string
      + prefix string
  + l2
    + destination-mac
      + address string
      + mask string
    + ethertype (string | keyword)
    + source-mac
      + address string
      + mask string
    + vlan
      + outermost-vlan-id
        + none

```

```

    + operator keyword
    + range
      + end number
      + start number
    + value number
+ transport
+ destination-port
  + operator keyword
  + range
    + end (number | keyword)
    + start (number | keyword)
  + value (number | keyword)
+ source-port
  + operator keyword
  + range
    + end (number | keyword)
    + start (number | keyword)
  + value (number | keyword)
+ tcp-flags string
- statistics
- incomplete boolean
- last-clear string
- last-match string
- matched-packets number
- policer
  - conforming-octets number
  - conforming-packets number
  - exceeding-octets number
  - exceeding-packets number
- system-cpu-policer
  - conforming-octets number
  - conforming-packets number
  - exceeding-octets number
  - exceeding-packets number
- tcam-entries
  - forwarding-complex complex-identifier string
  - input-total number
  - output-total number
  - single-instance number
- last-clear string
+ statistics-per-entry boolean
+ subinterface-specific keyword
- datapath-programming
  - forwarding-complex slot-id number complex-id number
  - last-completed-timestamp string
  - programming-complete boolean
+ egress-mac-filtering boolean
+ interface interface-id string
+ input
  + acl-filter name reference type reference
  - entry sequence-id reference
  - policer
    - conforming-octets number
    - conforming-packets number
    - exceeding-octets number
    - exceeding-packets number
  - statistics
    - incomplete boolean
    - last-clear string
    - last-match string
    - matched-packets number
- statistics
  - last-clear string
  - policer

```

```

    - conforming-octets number
    - conforming-packets number
    - exceeding-octets number
    - exceeding-packets number
+ interface-ref
+ interface reference
+ subinterface reference
+ output
+ acl-filter name reference type reference
  - entry sequence-id reference
  - policer
    - conforming-octets number
    - conforming-packets number
    - exceeding-octets number
    - exceeding-packets number
  - statistics
    - incomplete boolean
    - last-clear string
    - last-match string
    - matched-packets number
  - statistics
    - last-clear string
    - policer
      - conforming-octets number
      - conforming-packets number
      - exceeding-octets number
      - exceeding-packets number
+ policers
+ policer name string
+ entry-specific boolean
+ max-burst number
+ peak-rate number
+ scope keyword
- statistics
  - aggregate
    - conforming-octets number
    - conforming-packets number
    - exceeding-octets number
    - exceeding-packets number
    - last-clear string
+ system-cpu-policer name string
+ entry-specific boolean
+ max-packet-burst number
+ peak-packet-rate number
- statistics
  - conforming-octets number
  - conforming-packets number
  - exceeding-octets number
  - exceeding-packets number
  - last-clear string
+ tcam-profile keyword

```

3.1 acl Descriptions

acl

Description	Top level container for configuration and operational state related to access control lists (ACLs)
Context	acl
Tree	acl
Configurable	True
Platforms	Supported on all platforms

acl-filter *name string type keyword*

Description	List of filter types such as IPv4, IPv6 and MAC depending on the platform's capabilities.
Context	acl acl-filter <i>name string type keyword</i>
Tree	acl-filter
Configurable	True
Platforms	Supported on all platforms

name *string*

Description	ACL Filter policy name
Context	acl acl-filter <i>name string type keyword</i>
Configurable	True
Platforms	Supported on all platforms

type *keyword*

Description	Defines the type of ACL filter: ipv4: IPv4 ACL filter ipv6: IPv6 ACL filter mac: MAC ACL filter
Context	acl acl-filter <i>name string type keyword</i>
Options	<ul style="list-style-type: none"> • ipv4 • ipv6 • mac

Configurable	True
Platforms	Supported on all platforms

description *string*

Description	Description string for the filter policy
Context	acl acl-filter name <i>string</i> type keyword description <i>string</i>
Tree	description
String Length	1 to 255
Configurable	True
Platforms	Supported on all platforms

entry [sequence-id](#) *number*

Description	List of ACL entries comprising an ACL Filter
Context	acl acl-filter name <i>string</i> type keyword entry sequence-id <i>number</i>
Tree	entry
Configurable	True
Platforms	Supported on all platforms

sequence-id *number*

Description	A number to indicate the relative evaluation order of the different entries; lower numbered entries are evaluated before higher numbered entries
Context	acl acl-filter name <i>string</i> type keyword entry sequence-id <i>number</i>
Range	0 to 65535
Configurable	True
Platforms	Supported on all platforms

action

Description	Container for the actions to be applied to packets matching the filter entry.
Context	acl acl-filter name <i>string</i> type keyword entry sequence-id <i>number</i> action
Tree	action
Configurable	True
Platforms	Supported on all platforms

accept

Description	Accept matching packets and forward them towards their normal destination
Context	acl acl-filter name <i>string type keyword</i> entry sequence-id number action accept
Tree	accept
Configurable	True
Platforms	Supported on all platforms

rate-limit

Description	Rate-limit accepted packets
Context	acl acl-filter name <i>string type keyword</i> entry sequence-id number action accept rate-limit
Tree	rate-limit
Configurable	True
Platforms	Supported on all platforms

policer *reference*

Description	Reference to a policer
Context	acl acl-filter name <i>string type keyword</i> entry sequence-id number action accept rate-limit policer <i>reference</i>
Tree	policer
Reference	acl policers policer name
Configurable	True
Platforms	7220 IXR-D4, 7220 IXR-D5, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

system-cpu-policer *reference*

Description	Reference to a system-cpu-policer.
Context	acl acl-filter name <i>string type keyword</i> entry sequence-id number action accept rate-limit system-cpu-policer <i>reference</i>
Tree	system-cpu-policer
Reference	acl policers system-cpu-policer name
Configurable	True

Platforms Supported on all platforms

copy

Description Create a copy of matching packets extract them to the CPM and deliver them to the designated veth interface

Context [acl](#) [acl-filter name](#) [string type](#) [keyword](#) [entry](#) [sequence-id](#) [number](#) [action](#) [copy](#)

Tree [copy](#)

Configurable True

Platforms Supported on all platforms

drop

Description Drop matching packets.
Dropped IP packets do not result in sending ICMP messages back to the source

Context [acl](#) [acl-filter name](#) [string type](#) [keyword](#) [entry](#) [sequence-id](#) [number](#) [action](#) [drop](#)

Tree [drop](#)

Configurable True

Platforms Supported on all platforms

log *boolean*

Description When this is true, a log is created for each packet matching the entry
For IP packets matched by an IP filter entry the log entry contains the following information:

Context [acl](#) [acl-filter name](#) [string type](#) [keyword](#) [entry](#) [sequence-id](#) [number](#) [action](#) [log](#) [boolean](#)

Tree [log](#)

Default false

Configurable True

Platforms Supported on all platforms

description *string*

Description Description string for the filter entry

Context	acl acl-filter name string type keyword entry sequence-id number description string
Tree	description
String Length	1 to 255
Configurable	True
Platforms	Supported on all platforms

last-clear string

Description	Time of the last clear command performed by the user at this level
Context	acl acl-filter name string type keyword entry sequence-id number last-clear string
Tree	last-clear
String Length	20 to 32
Configurable	False
Platforms	Supported on all platforms

match

Description	Container for the conditions that determine whether a packet matches this entry
Context	acl acl-filter name string type keyword entry sequence-id number match
Tree	match
Configurable	True
Platforms	Supported on all platforms

ipv4

Description	Container for the common layer-3 IPv4 match criteria
Context	acl acl-filter name string type keyword entry sequence-id number match ipv4
Tree	ipv4
Configurable	True
Platforms	Supported on all platforms

destination-ip

Description	Packet matching criteria based on destination IPv4 address
--------------------	--

Context	acl acl-filter name string type keyword entry sequence-id number match ipv4 destination-ip
Tree	destination-ip
Configurable	True
Platforms	Supported on all platforms

address *string*

Description	Match a packet if its destination IP address logically anded with the inverse of the mask equals this IP address.
Context	acl acl-filter name string type keyword entry sequence-id number match ipv4 destination-ip address string
Tree	address
Configurable	True
Platforms	Supported on all platforms

mask *string*

Description	Match a packet if its destination IP address logically anded with the inverse of this mask equals the configured IP address.
Context	acl acl-filter name string type keyword entry sequence-id number match ipv4 destination-ip mask string
Tree	mask
Configurable	True
Platforms	Supported on all platforms

prefix *string*

Description	Match a packet if its destination IP address is within the specified IPv4 prefix.
Context	acl acl-filter name string type keyword entry sequence-id number match ipv4 destination-ip prefix string
Tree	prefix
Configurable	True
Platforms	Supported on all platforms

dscp-set (*number* | *keyword*)

Description	A list of DSCP values to be matched for incoming packets. An OR match should be performed, such that a packet must match one of the values defined in this list. If the field is left empty then any DSCP value matches.
Context	acl acl-filter name string type keyword entry sequence-id number match ipv4 dscp-set (<i>number</i> <i>keyword</i>)
Tree	dscp-set
Range	0 to 63
Options	<ul style="list-style-type: none"> • CS0 • LE • CS1 • AF11 • AF12 • AF13 • CS2 • AF21 • AF22 • AF23 • CS3 • AF31 • AF32 • AF33 • CS4 • AF41 • AF42 • AF43 • CS5 • EF • CS6 • CS7
Configurable	True
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

first-fragment *boolean*

Description	Match the first fragment of an IPv4 datagram A packet matches the true condition if the IPv4 header indicates that the fragment-offset is zero and and the more-fragments bit is 1. It is not valid to configure this leaf without configuring a match value for the fragment leaf.
Context	acl acl-filter name string type keyword entry sequence-id number match ipv4 first-fragment boolean
Tree	first-fragment
Configurable	True
Platforms	Supported on all platforms

fragment *boolean*

Description	Match an IPv4 fragment A packet matches the true condition if the IPv4 header indicates that the fragment-offset is zero and and the more-fragments bit is 1 or if the IPv4 header indicates that the fragment-offset is greater than 0. A packet matches the false condition if it is unfragmented.
Context	acl acl-filter name string type keyword entry sequence-id number match ipv4 fragment boolean
Tree	fragment
Configurable	True
Platforms	Supported on all platforms

icmp

Description	A packet matches this condition if its ICMP type and code matches one of the specified combinations The rule should also have a condition that the IP protocol equals 1 (ICMP) in order for this to be interpreted correctly.
Context	acl acl-filter name string type keyword entry sequence-id number match ipv4 icmp
Tree	icmp
Configurable	True
Platforms	Supported on all platforms

code number

Description	Match if the ICMP code value is any value in the list Requires ICMP type to be specified because codes are type dependent.
Context	acl acl-filter name string type keyword entry sequence-id number match ipv4 icmp code number
Tree	code
Configurable	True
Platforms	Supported on all platforms

type (number | keyword)

Description	Match a single ICMP type value.
Context	acl acl-filter name string type keyword entry sequence-id number match ipv4 icmp type (number keyword)
Tree	type
Range	0 to 255
Options	<ul style="list-style-type: none"> • echo-reply ICMP Echo Reply • dest-unreachable ICMP Destination Unreachable • source-quench ICMP Source Quench • redirect ICMP Redirect • echo ICMP Echo • router-advertise ICMP Router Advertisement • router-solicit ICMP Router Solicitation • time-exceeded ICMP Time Exceeded • param-problem ICMP Parameter Problem • timestamp

	ICMP Timestamp
	• timestamp-reply
	ICMP Timestamp Reply
Configurable	True
Platforms	Supported on all platforms

protocol (*number* | *keyword*)

Description	An IPv4 packet matches this condition if its IP protocol type field matches the specified value
Context	acl acl-filter name string type keyword entry sequence-id number match ipv4 protocol (<i>number</i> <i>keyword</i>)
Tree	protocol
Range	0 to 255
Options	<ul style="list-style-type: none"> • ipv6-hop IPv6 hop-by-hop option • icmp Internet Control Message Protocol • igmp Internet Group Management Protocol • ggp Gateway-to-Gateway Protocol • ipv4 IPv4 encapsulation • st Stream Protocol • tcp Transmission Control Protocol • egp Exterior Gateway Protocol • igp Interior Gateway Protocol • udp User Datagram Protocol • ipv6 IPv6 encapsulation

- idrp
Inter-Domain Routing Protocol
- rsvp
Resource Reservation Protocol
- gre
Generic Routing Encapsulation
- esp
IPSec Encapsulating Security Payload
- ah
IPSec Authentication Header
- icmp6
IPSec Authentication Header
- no-next-hdr
No Next Header for IPv6
- ipv6-dest-opts
Destination Options for IPv6
- eigrp
Cisco EIGRP
- ospf
OSPFv2 and OSPFv3
- pim
Protocol Independent Multicast
- vrrp
Virtual Router Redundancy Protocol
- l2tp
Layer Two Tunneling Protocol
- sctp
Stream Control Transmission Protocol
- mpls-in-ip
MPLS Encapsulation inside IP
- rohc
Robust Header Compression

Configurable
Platforms

True
Supported on all platforms

source-ip

Description	Packet matching criteria based on source IPv4 address
Context	acl acl-filter name <i>string</i> type keyword entry sequence-id number match ipv4 source-ip
Tree	source-ip
Configurable	True
Platforms	Supported on all platforms

address *string*

Description	Match a packet if its source IP address logically anded with the inverse of the mask equals this IP address.
Context	acl acl-filter name <i>string</i> type keyword entry sequence-id number match ipv4 source-ip address <i>string</i>
Tree	address
Configurable	True
Platforms	Supported on all platforms

mask *string*

Description	Match a packet if its source IP address logically anded with the inverse of this mask equals the configured IP address.
Context	acl acl-filter name <i>string</i> type keyword entry sequence-id number match ipv4 source-ip mask <i>string</i>
Tree	mask
Configurable	True
Platforms	Supported on all platforms

prefix *string*

Description	Match a packet if its source IP address is within the specified IPv4 prefix.
Context	acl acl-filter name <i>string</i> type keyword entry sequence-id number match ipv4 source-ip prefix <i>string</i>
Tree	prefix
Configurable	True
Platforms	Supported on all platforms

ipv6

Description	Container for the common layer-3 IPv6 match criteria
Context	acl acl-filter name <i>string</i> type keyword entry sequence-id number match ipv6
Tree	ipv6
Configurable	True
Platforms	Supported on all platforms

destination-ip

Description	Packet matching criteria based on destination IPv6 address
Context	acl acl-filter name <i>string</i> type keyword entry sequence-id number match ipv6 destination-ip
Tree	destination-ip
Configurable	True
Platforms	Supported on all platforms

address *string*

Description	Match a packet if its destination IP address logically anded with the inverse of the mask equals this IP address.
Context	acl acl-filter name <i>string</i> type keyword entry sequence-id number match ipv6 destination-ip address <i>string</i>
Tree	address
Configurable	True
Platforms	Supported on all platforms

mask *string*

Description	Match a packet if its destination IP address logically anded with the inverse of this mask equals the configured IP address.
Context	acl acl-filter name <i>string</i> type keyword entry sequence-id number match ipv6 destination-ip mask <i>string</i>
Tree	mask
Configurable	True
Platforms	Supported on all platforms

prefix string

Description	Match a packet if its destination IP address is within the specified IPv6 prefix.
Context	acl acl-filter name string type keyword entry sequence-id number match ipv6 destination-ip prefix string
Tree	prefix
Configurable	True
Platforms	Supported on all platforms

dscp-set (number | keyword)

Description	A list of DSCP values to be matched for incoming packets. An OR match should be performed, such that a packet must match one of the values defined in this list. If the field is left empty then any DSCP value matches.
Context	acl acl-filter name string type keyword entry sequence-id number match ipv6 dscp-set (number keyword)
Tree	dscp-set
Range	0 to 63
Options	<ul style="list-style-type: none"> • CS0 • LE • CS1 • AF11 • AF12 • AF13 • CS2 • AF21 • AF22 • AF23 • CS3 • AF31 • AF32 • AF33 • CS4 • AF41 • AF42 • AF43 • CS5

- EF
- CS6
- CS7

Configurable

True

Platforms

7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

icmp6**Description**

A packet matches this condition if its ICMPv6 type and code matches one of the specified combinations

The rule should also have a condition that the next-header value equals 58 (ICMPv6) in order for this to be interpreted correctly.

Context

[acl acl-filter name string type keyword entry sequence-id number match ipv6 icmp6](#)

Tree

[icmp6](#)

Configurable

True

Platforms

Supported on all platforms

code number**Description**

Match if the ICMPv6 code value is any value in the list

Requires ICMPv6 type to be specified because codes are type dependent.

Context

[acl acl-filter name string type keyword entry sequence-id number match ipv6 icmp6 code number](#)

Tree

[code](#)

Configurable

True

Platforms

Supported on all platforms

type (number | keyword)**Description**

Match a single ICMPv6 type value

Context

[acl acl-filter name string type keyword entry sequence-id number match ipv6 icmp6 type \(number | keyword\)](#)

Tree

[type](#)

Range

0 to 255

Options

- dest-unreachable

- ICMPv6 Destination Unreachable
 - packet-too-big
ICMPv6 Packet Too Big
- time-exceeded
ICMPv6 Time Exceeded
- param-problem
Parameter Problem
- echo-request
ICMPv6 Echo Request
- echo-reply
ICMPv6 Echo Reply
- mld-query
Multicast Listener Discovery Query
- mld-report
Multicast Listener Discovery Report
- mld-done
Multicast Listener Discovery Done
- router-solicit
ICMPv6 Router Solicitation
- router-advertise
ICMPv6 Router Advertisement
- neighbor-solicit
ICMPv6 Neighbor Solicitation
- neighbor-advertise
ICMPv6 Neighbor Advertisement
- redirect
ICMPv6 Redirect
- router-renumber
ICMPv6 Router Renumbering
- node-info-query
ICMPv6 Node Information Query
- node-info-response
ICMPv6 Node Information Response
- mld-v2
Multicast Listener Discovery Version 2
- mcast-rtr-adv

	Multicast Router Advertisement
	• mcast-rtr-solicit
	Multicast Router Solicitation
	• mcast-rtr-term
	Multicast Router Termination
Configurable	True
Platforms	Supported on all platforms

next-header (*number* | *keyword*)

Description	An IPv6 packet matches this condition if its first next-header field (in the IPv6 fixed header) contains the specified value
Context	acl acl-filter name <i>string</i> type keyword entry sequence-id <i>number</i> match ipv6 next-header (<i>number</i> <i>keyword</i>)
Tree	next-header
Range	0 to 255
Options	<ul style="list-style-type: none"> • ipv6-hop IPv6 hop-by-hop option • icmp Internet Control Message Protocol • igmp Internet Group Management Protocol • ggp Gateway-to-Gateway Protocol • ipv4 IPv4 encapsulation • st Stream Protocol • tcp Transmission Control Protocol • egp Exterior Gateway Protocol • igp Interior Gateway Protocol • udp User Datagram Protocol

- ipv6
IPv6 encapsulation
- idrp
Inter-Domain Routing Protocol
- rsvp
Resource Reservation Protocol
- gre
Generic Routing Encapsulation
- esp
IPSec Encapsulating Security Payload
- ah
IPSec Authentication Header
- icmp6
IPSec Authentication Header
- no-next-hdr
No Next Header for IPv6
- ipv6-dest-opts
Destination Options for IPv6
- eigrp
Cisco EIGRP
- ospf
OSPFv2 and OSPFv3
- pim
Protocol Independent Multicast
- vrrp
Virtual Router Redundancy Protocol
- l2tp
Layer Two Tunneling Protocol
- sctp
Stream Control Transmission Protocol
- mpls-in-ip
MPLS Encapsulation inside IP
- rohc
Robust Header Compression

Configurable

True

Platforms

Supported on all platforms

source-ip

Description	Packet matching criteria based on source IPv6 address
Context	acl acl-filter name <i>string</i> type keyword entry sequence-id number match ipv6 source-ip
Tree	source-ip
Configurable	True
Platforms	Supported on all platforms

address *string*

Description	Match a packet if its source IP address logically anded with the inverse of the mask equals this IP address.
Context	acl acl-filter name <i>string</i> type keyword entry sequence-id number match ipv6 source-ip address <i>string</i>
Tree	address
Configurable	True
Platforms	Supported on all platforms

mask *string*

Description	Match a packet if its source IP address logically anded with the inverse of this mask equals the configured IP address.
Context	acl acl-filter name <i>string</i> type keyword entry sequence-id number match ipv6 source-ip mask <i>string</i>
Tree	mask
Configurable	True
Platforms	Supported on all platforms

prefix *string*

Description	Match a packet if its source IP address is within the specified IPv6 prefix.
Context	acl acl-filter name <i>string</i> type keyword entry sequence-id number match ipv6 source-ip prefix <i>string</i>
Tree	prefix
Configurable	True
Platforms	Supported on all platforms

I2

Description	Container for the common layer-2 match criteria
Context	acl acl-filter name <i>string</i> type keyword entry sequence-id number match I2
Tree	I2
Configurable	True
Platforms	Supported on all platforms

destination-mac

Description	Ethernet frame matching criteria based on destination MAC address
Context	acl acl-filter name <i>string</i> type keyword entry sequence-id number match I2 destination-mac
Tree	destination-mac
Configurable	True
Platforms	Supported on all platforms

address *string*

Description	Match an Ethernet frame if its destination MAC address logically anded with the mask equals this MAC address.
Context	acl acl-filter name <i>string</i> type keyword entry sequence-id number match I2 destination-mac address <i>string</i>
Tree	address
Configurable	True
Platforms	Supported on all platforms

mask *string*

Description	Match an Ethernet frame if its destination MAC address logically anded with the mask equals the configured MAC address.
Context	acl acl-filter name <i>string</i> type keyword entry sequence-id number match I2 destination-mac mask <i>string</i>
Tree	mask
Configurable	True
Platforms	Supported on all platforms

ethertype (*string* | *keyword*)

Description	An Ethernet frame matches this condition if its ethertype value (after 802.1Q VLAN tags) matches the specified value
Context	acl acl-filter name <i>string</i> type keyword entry sequence-id number match l2 ethertype (<i>string</i> <i>keyword</i>)
Tree	ethertype
Options	<ul style="list-style-type: none">• ipv4 Internet Protocol version 4. Ethertype 0x0800.• arp Address Resolution Protocol. Ethertype 0x0806.• ipv6 Internet Protocol version 6. Ethertype 0x86DD.• flow-control Ethernet flow control PAUSE frames. Ethertype 0x8808• lacp LACP. Ethertype 0x8809.• mpls-unicast MPLS unicast. Ethertype 0x8847.• mpls-multicast MPLS multicast. Ethertype 0x8848.• pppoe-discovery PPPoE discovery. Ethertype 0x8863.• pppoe-session PPPoE session. Ethertype 0x8864.• 8021x-authentication 802.1x authentication (EAP). Ethertype 0x888E.• lldp Link Layer Discovery Protocol. Ethertype 0x88CC.• macsec IEEE 802.1AE MAC security. Ethertype 0x88E5.• pbb Provider Backbone Bridging. Ethertype 0x88E7.• ptp Precision Time Protocol. Ethertype 0x88F7.• eth-oam

IEEE 802.1ag CFM and ITU-T Y.1731 OAM. Ethertype 0x8902.

- **fcoe**
Fibre Channel over Ethernet. Ethertype 0x8906.
- **fcoe-initialization**
Fibre Channel over Ethernet Initialization Protocol. Ethertype 0x8914.
- **roce**
RDMA over Converged Ethernet. Ethertype 0x8915.

Configurable True
Platforms Supported on all platforms

source-mac

Description Ethernet frame matching criteria based on source MAC address
Context [acl](#) [acl-filter name](#) [string type keyword](#) [entry sequence-id](#) [number match I2](#) [source-mac](#)
Tree [source-mac](#)
Configurable True
Platforms Supported on all platforms

address *string*

Description Match an Ethernet frame if its source MAC address logically anded with the mask equals this MAC address.
Context [acl](#) [acl-filter name](#) [string type keyword](#) [entry sequence-id](#) [number match I2](#) [source-mac address](#) [string](#)
Tree [address](#)
Configurable True
Platforms Supported on all platforms

mask *string*

Description Match an Ethernet frame if its source MAC address logically anded with the mask equals the configured MAC address.
Context [acl](#) [acl-filter name](#) [string type keyword](#) [entry sequence-id](#) [number match I2](#) [source-mac mask](#) [string](#)
Tree [mask](#)
Configurable True

Platforms Supported on all platforms

vlan

Description Ethernet frame matching criteria based on VLAN tags

Context [acl](#) [acl-filter name](#) *string* [type](#) [keyword](#) [entry](#) [sequence-id](#) [number](#) [match](#) [I2](#)
[vlan](#)

Tree [vlan](#)

Configurable True

Platforms Supported on all platforms

outermost-vlan-id

Description Ethernet frame matching criteria based on the outermost VLAN ID found before the subinterface-defining VLAN tag (if any) is removed.

Context [acl](#) [acl-filter name](#) *string* [type](#) [keyword](#) [entry](#) [sequence-id](#) [number](#) [match](#) [I2](#)
[vlan](#) [outermost-vlan-id](#)

Tree [outermost-vlan-id](#)

Configurable True

Platforms Supported on all platforms

none

Description When configured, only untagged frames are matched.

Context [acl](#) [acl-filter name](#) *string* [type](#) [keyword](#) [entry](#) [sequence-id](#) [number](#) [match](#) [I2](#)
[vlan](#) [outermost-vlan-id](#) [none](#)

Tree [none](#)

Configurable True

Platforms Supported on all platforms

operator *keyword*

Description Comparison operator
eq = equal ge = greater than or equal to le = less than or equal to

Context [acl](#) [acl-filter name](#) *string* [type](#) [keyword](#) [entry](#) [sequence-id](#) [number](#) [match](#) [I2](#)
[vlan](#) [outermost-vlan-id](#) [operator](#) *keyword*

Tree [operator](#)

Options	<ul style="list-style-type: none"> • le Less than or equal. • ge Greater than or equal. • eq Equal to.
Configurable	True
Platforms	Supported on all platforms

range

Description	Container used to specify a contiguous range of VLAN IDs. Matched values include the start and end values.
Context	acl acl-filter name string type keyword entry sequence-id number match I2 vlan outermost-vlan-id range
Tree	range
Configurable	True
Platforms	Supported on all platforms

end *number*

Description	The ending VLAN ID to include in the range
Context	acl acl-filter name string type keyword entry sequence-id number match I2 vlan outermost-vlan-id range end number
Tree	end
Range	0 to 4095
Configurable	True
Platforms	Supported on all platforms

start *number*

Description	The starting VLAN ID to include in the range
Context	acl acl-filter name string type keyword entry sequence-id number match I2 vlan outermost-vlan-id range start number
Tree	start
Range	0 to 4095
Configurable	True

Platforms Supported on all platforms

value *number*

Description A VLAN ID number
A value of zero is used to match priority-tagged 802.1Q frames.

Context [acl](#) [acl-filter name](#) *string* [type](#) *keyword* [entry](#) [sequence-id](#) *number* [match](#) [l2](#) [vlan](#) [outermost-vlan-id](#) *value* *number*

Tree [value](#)

Range 0 to 4095

Configurable True

Platforms Supported on all platforms

transport

Description Container for the common layer-4 transport match criteria

Context [acl](#) [acl-filter name](#) *string* [type](#) *keyword* [entry](#) [sequence-id](#) *number* [match](#) [transport](#)

Tree [transport](#)

Configurable True

Platforms Supported on all platforms

destination-port

Description A packet matches this condition if its destination TCP or UDP port number matches the value or range that is specified
The rule should also have a condition that the IP protocol equals 6 (TCP) or 17 (UDP) in order for this to be interpreted correctly.

Context [acl](#) [acl-filter name](#) *string* [type](#) *keyword* [entry](#) [sequence-id](#) *number* [match](#) [transport](#) [destination-port](#)

Tree [destination-port](#)

Configurable True

Platforms Supported on all platforms

operator *keyword*

Description Comparison operator

	eq = equal ge = greater than or equal to le = less than or equal to
Context	acl acl-filter name <i>string type keyword</i> entry sequence-id <i>number match</i> transport destination-port operator <i>keyword</i>
Tree	operator
Options	<ul style="list-style-type: none"> le Less than or equal. ge Greater than or equal. eq Equal to.
Configurable	True
Platforms	Supported on all platforms

range

Description	Container used to specify a contiguous range of TCP/UDP port numbers
Context	acl acl-filter name <i>string type keyword</i> entry sequence-id <i>number match</i> transport destination-port range
Tree	range
Configurable	True
Platforms	Supported on all platforms

end (*number* | *keyword*)

Description	The ending port number to include in the range
Context	acl acl-filter name <i>string type keyword</i> entry sequence-id <i>number match</i> transport destination-port range end (<i>number</i> <i>keyword</i>)
Tree	end
Range	0 to 65535
Options	<ul style="list-style-type: none"> acap Application Configuration Access Protocol afp-tcp Apple Filing Protocol over TCP arns A Remote Network Server System asf-rmcp

-
- ASF Remote Management and Control Protocol & IPMI Remote Management Protocol
 - ashare
AppleShare IP Web Administration
 - atalk-rm
AppleTalk Routing Maintenance
 - aurp
AppleTalk Update-Based Routing Protocol
 - auth
Authentication Service
 - bfd
Bidirectional Forwarding Detection Single Hop
 - bfd-echo
BFD Echo
 - bftp
Background File Transfer Program
 - bgmp
Border Gateway Multicast Protocol
 - bgp
Border Gateway Protocol
 - bootpc
Bootstrap Protocol (BOOTP) Client and DHCP Client
 - bootps
Bootstrap Protocol (BOOTP) Server and DHCP Server
 - ccso-ns
CCSO Nameserver
 - chargen
Character Generator Protocol (CHARGEN)
 - cisco-tdp
Cisco Tag Distribution Protocol
 - citadel
Citadel
 - clearcase
ClearCase albd
 - commerce
Commerce Applications

- courier
Remote Procedure Call
- daytime
Daytime Protocol
- dhcpv6-client
DHCPv6 Client
- dhcpv6-server
DHCPv6 Server
- dhcp-failover
DHCP Failover Protocol
- dicom
Digital Imaging and Communications in Medicine
- discard
Discard Protocol. Also Wake-on-LAN.
- dnsix
DNSIX security protocol auditing
- domain
Domain Name System
- dsp
Display Support Protocol
- echo
Echo Protocol
- epp
Extensible Provisioning Protocol
- esro
Efficient Short Remote Operations (ESRO)
- exec
Remote Process Execution (Rexec)
- finger
Finger protocol
- ftp
File Transfer Protocol control
- ftp-data
File Transfer Protocol data
- ftps
FTPS (FTP over SSL/TLS) control

- `ftps-data`
FTPS (FTP over SSL/TLS) data
- `godi`
Group Domain Of Interpretation (GDOI) protocol
- `gopher`
Gopher protocol
- `gtp-c`
GTP control messages (GTP-C)
- `gtp-prime`
GTP prime CDR logging protocol
- `gtp-u`
GTP user data messages (GTP-U)
- `ha-cluster`
Linux-HA high-availability heartbeat
- `hostname`
NIC hostname server
- `hp-alarm-mgr`
HP data alarm manager
- `http`
Hypertext Transfer Protocol
- `http-alt`
FileMaker Web Sharing (HTTP Alternate)
- `http-mgmt`
`http-mgmt`
- `http-rpc`
Remote procedure call over Hypertext Transfer Protocol
- `https`
Hypertext Transfer Protocol over TLS/SSL
- `ieee-mms-ssl`
IEEE Media Management System over SSL
- `imap`
Internet Message Access Protocol (IMAP)
- `imap3`
Internet Message Access Protocol (IMAP), version 3
- `imaps`
Internet Message Access Protocol over TLS/SSL

- ipp
Internet Printing Protocol
- ipsec
Internet Protocol Security (IPSec)
- ipx
Internetwork Packet Exchange (IPX)
- irc
Internet Relay Chat (IRC)
- iris-beep
IRIS (Internet Registry Information Service) over BEEP
- isakmp
Internet Security Association and Key Management Protocol (ISAKMP) /
Internet Key Exchange (IKE)
- isakmp-nat
IPSec NAT Traversal
- iscsi
iSCSI
- iso-tsap
ISO Transport Service Access Point (TSAP) Class 0 protocol
- kerberos
Kerberos authentication system
- kerberos-adm
Kerberos administration
- klogin
Kerberos login
- kpasswd
Kerberos Change/Set password
- kshell
Kerberos Remote shell
- l2tp
Layer 2 Forwarding Protocol (L2F) and Layer 2 Tunneling Protocol
(L2TP)
- ldap
Lightweight Directory Access Protocol (LDAP)
- ldaps
Lightweight Directory Access Protocol over TLS/SSL (LDAPS)
- ldap

- Label Distribution Protocol
- Imp
- Link Management Protocol (LMP)
- login
- rlogin (TCP) or Who (UDP)
- lpd
- Line Printer Daemon
- lsp-ping
- MPLS LSP-echo
- mac-server-adm
- Mac OS X Server administration
- matip-a
- Mapping of Airline Traffic over Internet Protocol (MATIP) type A
- matip-b
- Mapping of Airline Traffic over Internet Protocol (MATIP) type B
- micro-bfd
- BFD session over each LAG member link
- microsoft-ds
- Microsoft Directory Services
- mobile-ip
- Mobile IP Agent
- monitor
- Monitor
- mpp
- Message posting protocol (MPP)
- mssql-m
- Microsoft SQL Server database management system (MSSQL) monitor
- mssql-s
- Microsoft SQL Server database management system (MSSQL) server
- msdp
- Multicast Source Discovery Protocol
- ms-exchange
- MS Exchange Routing
- msp
- Message Send Protocol
- multihop-bfd

-
- Bidirectional Forwarding Detection Multi-Hop
 - nas
Netnews Administration System (NAS)
 - ncp
NetWare Core Protocol
 - netrjs-1
NETRJS protocol
 - netrjs-2
NETRJS protocol
 - netrjs-3
NETRJS protocol
 - netrjs-4
NETRJS protocol
 - netbios-data
NetBIOS Datagram Service
 - netbios-ns
NetBIOS Name Service
 - netbios-ss
NetBIOS Session Service
 - netnews
Netnews
 - netwall
netwall, for Emergency Broadcasts
 - new-rwho
new-rwho, new-who
 - nfs
Network File System (NFS)
 - nntp
Network News Transfer Protocol (NNTP)
 - nntps
Network News Transfer Protocol over TLS/SSL (NNTPS)
 - ntp
Network Time Protocol (NTP)
 - odmr
On-Demand Mail Relay (ODMR)
 - olsr

- Optimized Link State Routing (OLSR)
- openvpn
OpenVPN
- pim-auto-rp
PIM Auto-RP
- pkix-timestamp
PKIX Time Stamp Protocol (TSP)
- pop2
Post Office Protocol, version 2 (POP2)
- pop3
Post Office Protocol, version 3 (POP3)
- pop3s
Post Office Protocol 3 over TLS/SSL (POP3S)
- pptp
Point-to-Point Tunneling Protocol (PPTP)
- ptp-event
Precision Time Protocol (PTP) event messages
- ptp-general
Precision Time Protocol (PTP) general messages
- print-srv
Network PostScript print server
- qmtp
Quick Mail Transfer Protocol
- qotd
Quote of the Day (QOTD)
- radius
RADIUS authentication protocol
- radius-acct
RADIUS accounting protocol
- remote-mail
Remote Mail Checking Protocol
- remotefs
Remotefs, RFS Server
- remotecmd
SupportSoft Nexus Remote Command
- rip

- Routing Information Protocol
- rje
Remote Job Entry
- rlp
Resource Location Protocol
- rlzdb
RLZ DBase
- rmc
IBM RMC (Remote monitoring and Control) protocol
- rmonitor
rmonitor, Remote Monitor
- rpc2portmap
Rpc2portmap
- rsync
rsync file synchronization protocol
- rtelnet
Remote User Telnet Service (RTelnet)
- rtsp
Real Time Streaming Protocol (RTSP)
- sgmp
Simple Gateway Monitoring Protocol (SGMP)
- silc
Secure Internet Live Conferencing (SILC)
- smux
SNMP multiplexing protocol (SMUX)
- sna-gw
IBM Systems Network Architecture (SNA) gateway access server
- snmp
Simple Network Management Protocol (SNMP)
- snmp-trap
SNMP Traps
- snpp
Simple Network Paging Protocol (SNPP)
- smtp
Simple Mail Transfer Protocol (SMTP)
- sql-svcs

- Structured Query Language (SQL) Services
 - sql
Structured Query Language (SQL) Service
- ssh
Secure Shell Protocol
- submission
Email message submission (SMTP)
- sunrpc
Open Network Computing Remote Procedure Call (ONC RPC), also Sun RPC
- svcloc
Service Location Protocol (SLP)
- syslog
Syslog (UDP) and Remote Shell (TCP)
- systat
Active Users (systat service)
- tacacs
TACACS Login Host protocol
- talk
Talk
- tcpmux
TCP Port Service Multiplexer (TCPMUX)
- tcpnethasprv
tcpnethasprv, Aladdin Knowledge Systems Hasp services
- tftp
Trivial File Transfer Protocol (TFTP)
- time
Time Protocol
- timed
Timeserver
- ups
Uninterruptible power supply (UPS)
- xdmcp
X Display Manager Control Protocol (XDMCP)
- xns-ch
Xerox Network Systems (XNS) Clearinghouse (Name Server)

	<ul style="list-style-type: none"> xns-mail Xerox Network Systems (XNS) Mail xns-time Xerox Network Systems (XNS) Time Protocol z3950 ANSI Z39.50
Configurable	True
Platforms	Supported on all platforms

start (*number* | *keyword*)

Description	The starting port number to include in the range
Context	acl acl-filter name string type keyword entry sequence-id number match transport destination-port range start (<i>number</i> <i>keyword</i>)
Tree	start
Range	0 to 65535
Options	<ul style="list-style-type: none"> acap Application Configuration Access Protocol afp-tcp Apple Filing Protocol over TCP arns A Remote Network Server System asf-rmcp ASF Remote Management and Control Protocol & IPMI Remote Management Protocol ashare AppleShare IP Web Administration atalk-rm AppleTalk Routing Maintenance aurp AppleTalk Update-Based Routing Protocol auth Authentication Service bfd Bidirectional Forwarding Detection Single Hop bfd-echo BFD Echo

- bftp
Background File Transfer Program
- bgmp
Border Gateway Multicast Protocol
- bgp
Border Gateway Protocol
- bootpc
Bootstrap Protocol (BOOTP) Client and DHCP Client
- bootps
Bootstrap Protocol (BOOTP) Server and DHCP Server
- ccso-ns
CCSO Nameserver
- chargen
Character Generator Protocol (CHARGEN)
- cisco-tdp
Cisco Tag Distribution Protocol
- citadel
Citadel
- clearcase
ClearCase albd
- commerce
Commerce Applications
- courier
Remote Procedure Call
- daytime
Daytime Protocol
- dhcpv6-client
DHCPv6 Client
- dhcpv6-server
DHCPv6 Server
- dhcp-failover
DHCP Failover Protocol
- dicom
Digital Imaging and Communications in Medicine
- discard
Discard Protocol. Also Wake-on-LAN.

- dnsix
DNSIX security protocol auditing
- domain
Domain Name System
- dsp
Display Support Protocol
- echo
Echo Protocol
- epp
Extensible Provisioning Protocol
- esro
Efficient Short Remote Operations (ESRO)
- exec
Remote Process Execution (Rexec)
- finger
Finger protocol
- ftp
File Transfer Protocol control
- ftp-data
File Transfer Protocol data
- ftps
FTPS (FTP over SSL/TLS) control
- ftps-data
FTPS (FTP over SSL/TLS) data
- godi
Group Domain Of Interpretation (GDOI) protocol
- gopher
Gopher protocol
- gtp-c
GTP control messages (GTP-C)
- gtp-prime
GTP prime CDR logging protocol
- gtp-u
GTP user data messages (GTP-U)
- ha-cluster
Linux-HA high-availability heartbeat

- hostname
NIC hostname server
- hp-alarm-mgr
HP data alarm manager
- http
Hypertext Transfer Protocol
- http-alt
FileMaker Web Sharing (HTTP Alternate)
- http-mgmt
http-mgmt
- http-rpc
Remote procedure call over Hypertext Transfer Protocol
- https
Hypertext Transfer Protocol over TLS/SSL
- ieee-mms-ssl
IEEE Media Management System over SSL
- imap
Internet Message Access Protocol (IMAP)
- imap3
Internet Message Access Protocol (IMAP), version 3
- imaps
Internet Message Access Protocol over TLS/SSL
- ipp
Internet Printing Protocol
- ipsec
Internet Protocol Security (IPSec)
- ipx
Internetwork Packet Exchange (IPX)
- irc
Internet Relay Chat (IRC)
- iris-beep
IRIS (Internet Registry Information Service) over BEEP
- isakmp
Internet Security Association and Key Management Protocol (ISAKMP) /
Internet Key Exchange (IKE)
- isakmp-nat
IPSec NAT Traversal

- iscsi
iSCSI
- iso-tsap
ISO Transport Service Access Point (TSAP) Class 0 protocol
- kerberos
Kerberos authentication system
- kerberos-adm
Kerberos administration
- klogin
Kerberos login
- kpasswd
Kerberos Change/Set password
- kshell
Kerberos Remote shell
- l2tp
Layer 2 Forwarding Protocol (L2F) and Layer 2 Tunneling Protocol (L2TP)
- ldap
Lightweight Directory Access Protocol (LDAP)
- ldaps
Lightweight Directory Access Protocol over TLS/SSL (LDAPS)
- ldp
Label Distribution Protocol
- lmp
Link Management Protocol (LMP)
- login
rlogin (TCP) or Who (UDP)
- lpd
Line Printer Daemon
- lsp-ping
MPLS LSP-echo
- mac-server-adm
Mac OS X Server administration
- matip-a
Mapping of Airline Traffic over Internet Protocol (MATIP) type A
- matip-b
Mapping of Airline Traffic over Internet Protocol (MATIP) type B

- micro-bfd
BFD session over each LAG member link
- microsoft-ds
Microsoft Directory Services
- mobile-ip
Mobile IP Agent
- monitor
Monitor
- mpp
Message posting protocol (MPP)
- mssql-m
Microsoft SQL Server database management system (MSSQL) monitor
- mssql-s
Microsoft SQL Server database management system (MSSQL) server
- msdp
Multicast Source Discovery Protocol
- ms-exchange
MS Exchange Routing
- msp
Message Send Protocol
- multihop-bfd
Bidirectional Forwarding Detection Multi-Hop
- nas
Netnews Administration System (NAS)
- ncp
NetWare Core Protocol
- netrjs-1
NETRJS protocol
- netrjs-2
NETRJS protocol
- netrjs-3
NETRJS protocol
- netrjs-4
NETRJS protocol
- netbios-data
NetBIOS Datagram Service

- netbios-ns
NetBIOS Name Service
- netbios-ss
NetBIOS Session Service
- netnews
Netnews
- netwall
netwall, for Emergency Broadcasts
- new-rwho
new-rwho, new-who
- nfs
Network File System (NFS)
- nntp
Network News Transfer Protocol (NNTP)
- nntps
Network News Transfer Protocol over TLS/SSL (NNTPS)
- ntp
Network Time Protocol (NTP)
- odmr
On-Demand Mail Relay (ODMR)
- olsr
Optimized Link State Routing (OLSR)
- openvpn
OpenVPN
- pim-auto-rp
PIM Auto-RP
- pkix-timestamp
PKIX Time Stamp Protocol (TSP)
- pop2
Post Office Protocol, version 2 (POP2)
- pop3
Post Office Protocol, version 3 (POP3)
- pop3s
Post Office Protocol 3 over TLS/SSL (POP3S)
- pptp
Point-to-Point Tunneling Protocol (PPTP)

- ptp-event
Precision Time Protocol (PTP) event messages
- ptp-general
Precision Time Protocol (PTP) general messages
- print-srv
Network PostScript print server
- qmtp
Quick Mail Transfer Protocol
- qotd
Quote of the Day (QOTD)
- radius
RADIUS authentication protocol
- radius-acct
RADIUS accounting protocol
- remote-mail
Remote Mail Checking Protocol
- remotefs
Remotefs, RFS Server
- remotecmd
SupportSoft Nexus Remote Command
- rip
Routing Information Protocol
- rje
Remote Job Entry
- rlp
Resource Location Protocol
- rlzdb
RLZ DBase
- rmc
IBM RMC (Remote monitoring and Control) protocol
- rmonitor
rmonitor, Remote Monitor
- rpc2portmap
Rpc2portmap
- rsync
rsync file synchronization protocol

- rtelnet
Remote User Telnet Service (RTelnet)
- rtsp
Real Time Streaming Protocol (RTSP)
- sgmp
Simple Gateway Monitoring Protocol (SGMP)
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- smux
SNMP multiplexing protocol (SMUX)
- sna-gw
IBM Systems Network Architecture (SNA) gateway access server
- snmp
Simple Network Management Protocol (SNMP)
- snmp-trap
SNMP Traps
- snpp
Simple Network Paging Protocol (SNPP)
- smtp
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- sql-svcs
Structured Query Language (SQL) Services
- sql
Structured Query Language (SQL) Service
- ssh
Secure Shell Protocol
- submission
Email message submission (SMTP)
- sunrpc
Open Network Computing Remote Procedure Call (ONC RPC), also Sun RPC
- svcloc
Service Location Protocol (SLP)
- syslog
Syslog (UDP) and Remote Shell (TCP)
- systat
Active Users (systat service)

- tacacs
TACACS Login Host protocol
- talk
Talk
- tcpmux
TCP Port Service Multiplexer (TCPMUX)
- tcpnethaspsrv
tcpnethaspsrv, Aladdin Knowledge Systems Hasp services
- tftp
Trivial File Transfer Protocol (TFTP)
- time
Time Protocol
- timed
Timeserver
- ups
Uninterruptible power supply (UPS)
- xdmcp
X Display Manager Control Protocol (XDMCP)
- xns-ch
Xerox Network Systems (XNS) Clearinghouse (Name Server)
- xns-mail
Xerox Network Systems (XNS) Mail
- xns-time
Xerox Network Systems (XNS) Time Protocol
- z3950
ANSI Z39.50

Configurable	True
Platforms	Supported on all platforms

value (*number* | *keyword*)

Description	A destination port number
Context	acl acl-filter name string type keyword entry sequence-id number match transport destination-port value (<i>number</i> <i>keyword</i>)
Tree	value
Range	0 to 65535

Options

- acap
Application Configuration Access Protocol
- afp-tcp
Apple Filing Protocol over TCP
- arns
A Remote Network Server System
- asf-rmcp
ASF Remote Management and Control Protocol & IPMI Remote Management Protocol
- ashare
AppleShare IP Web Administration
- atalk-rm
AppleTalk Routing Maintenance
- aurp
AppleTalk Update-Based Routing Protocol
- auth
Authentication Service
- bfd
Bidirectional Forwarding Detection Single Hop
- bfd-echo
BFD Echo
- bftp
Background File Transfer Program
- bgmp
Border Gateway Multicast Protocol
- bgp
Border Gateway Protocol
- bootpc
Bootstrap Protocol (BOOTP) Client and DHCP Client
- bootps
Bootstrap Protocol (BOOTP) Server and DHCP Server
- ccso-ns
CCSO Nameserver
- chargen
Character Generator Protocol (CHARGEN)
- cisco-tdp

-
- Cisco Tag Distribution Protocol
 - citadel
Citadel
 - clearcase
ClearCase albd
 - commerce
Commerce Applications
 - courier
Remote Procedure Call
 - daytime
Daytime Protocol
 - dhcpv6-client
DHCPv6 Client
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 - dhcp-failover
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 - dicom
Digital Imaging and Communications in Medicine
 - discard
Discard Protocol. Also Wake-on-LAN.
 - dnsix
DNSIX security protocol auditing
 - domain
Domain Name System
 - dsp
Display Support Protocol
 - echo
Echo Protocol
 - epp
Extensible Provisioning Protocol
 - esro
Efficient Short Remote Operations (ESRO)
 - exec
Remote Process Execution (Rexec)
 - finger

- Finger protocol
- ftp
File Transfer Protocol control
- ftp-data
File Transfer Protocol data
- ftps
FTPS (FTP over SSL/TLS) control
- ftps-data
FTPS (FTP over SSL/TLS) data
- godi
Group Domain Of Interpretation (GDOI) protocol
- gopher
Gopher protocol
- gtp-c
GTP control messages (GTP-C)
- gtp-prime
GTP prime CDR logging protocol
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GTP user data messages (GTP-U)
- ha-cluster
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- ieee-mms-ssl

- IEEE Media Management System over SSL
- imap
Internet Message Access Protocol (IMAP)
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IRIS (Internet Registry Information Service) over BEEP
- isakmp
Internet Security Association and Key Management Protocol (ISAKMP) /
Internet Key Exchange (IKE)
- isakmp-nat
IPSec NAT Traversal
- iscsi
iSCSI
- iso-tsap
ISO Transport Service Access Point (TSAP) Class 0 protocol
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Kerberos authentication system
- kerberos-adm
Kerberos administration
- klogin
Kerberos login
- kpasswd
Kerberos Change/Set password
- kshell
Kerberos Remote shell

- l2tp
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BFD session over each LAG member link
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Remote Mail Checking Protocol
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Remotefs, RFS Server
- remotecmd
SupportSoft Nexus Remote Command
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Routing Information Protocol
- rje
Remote Job Entry
- rlp
Resource Location Protocol
- rlzdb
RLZ DBase
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IBM RMC (Remote monitoring and Control) protocol
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rmonitor, Remote Monitor
- rpc2portmap
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Configurable

True

Platforms

Supported on all platforms

source-port**Description**

A packet matches this condition if its source TCP or UDP port number matches the value or range that is specified

The rule should also have a condition that the IP protocol equals 6 (TCP) or 17 (UDP) in order for this to be interpreted correctly.

Context

[acl](#) [acl-filter name](#) *string* [type](#) [keyword](#) [entry](#) [sequence-id](#) [number](#) [match](#)
[transport](#) [source-port](#)

Tree

[source-port](#)

Configurable

True

Platforms

Supported on all platforms

operator *keyword***Description**

Comparison operator

eq = equal ge = greater than or equal to le = less than or equal to

Context

[acl](#) [acl-filter name](#) *string* [type](#) [keyword](#) [entry](#) [sequence-id](#) [number](#) [match](#)
[transport](#) [source-port](#) [operator](#) *keyword*

Tree

[operator](#)

Options

- le
Less than or equal.
- ge

Greater than or equal.

- eq

Equal to.

Configurable	True
Platforms	Supported on all platforms

range

Description	Container used to specify a contiguous range of TCP/UDP port numbers
Context	acl acl-filter name <i>string</i> type keyword entry sequence-id number match transport source-port range
Tree	range
Configurable	True
Platforms	Supported on all platforms

end (*number* | *keyword*)

Description	The ending port number to include in the range
Context	acl acl-filter name <i>string</i> type keyword entry sequence-id number match transport source-port range end (<i>number</i> <i>keyword</i>)
Tree	end
Range	0 to 65535
Options	<ul style="list-style-type: none"> • acap Application Configuration Access Protocol • afp-tcp Apple Filing Protocol over TCP • arns A Remote Network Server System • asf-rmcp ASF Remote Management and Control Protocol & IPMI Remote Management Protocol • ashare AppleShare IP Web Administration • atalk-rm AppleTalk Routing Maintenance • aarp AppleTalk Update-Based Routing Protocol

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ANSI Z39.50

**Configurable
Platforms**

True
Supported on all platforms

start (*number* | *keyword*)

Description	The starting port number to include in the range
Context	acl acl-filter name <i>string</i> type keyword entry sequence-id number match transport source-port range start (<i>number</i> <i>keyword</i>)
Tree	start
Range	0 to 65535
Options	<ul style="list-style-type: none"> • acap Application Configuration Access Protocol • afp-tcp Apple Filing Protocol over TCP • arns A Remote Network Server System • asf-rmcp ASF Remote Management and Control Protocol & IPMI Remote Management Protocol • ashare AppleShare IP Web Administration • atalk-rm AppleTalk Routing Maintenance • aurp AppleTalk Update-Based Routing Protocol • auth Authentication Service • bfd Bidirectional Forwarding Detection Single Hop • bfd-echo BFD Echo • bftp Background File Transfer Program • bgmp Border Gateway Multicast Protocol • bgp Border Gateway Protocol • bootpc Bootstrap Protocol (BOOTP) Client and DHCP Client

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Real Time Streaming Protocol (RTSP)
- sgmp
Simple Gateway Monitoring Protocol (SGMP)
- silc
Secure Internet Live Conferencing (SILC)

- smux
SNMP multiplexing protocol (SMUX)
- sna-gw
IBM Systems Network Architecture (SNA) gateway access server
- snmp
Simple Network Management Protocol (SNMP)
- snmp-trap
SNMP Traps
- snpp
Simple Network Paging Protocol (SNPP)
- smtp
Simple Mail Transfer Protocol (SMTP)
- sql-svcs
Structured Query Language (SQL) Services
- sql
Structured Query Language (SQL) Service
- ssh
Secure Shell Protocol
- submission
Email message submission (SMTP)
- sunrpc
Open Network Computing Remote Procedure Call (ONC RPC), also Sun RPC
- svcloc
Service Location Protocol (SLP)
- syslog
Syslog (UDP) and Remote Shell (TCP)
- systat
Active Users (systat service)
- tacacs
TACACS Login Host protocol
- talk
Talk
- tcpmux
TCP Port Service Multiplexer (TCPMUX)
- tcpnethasprv
tcpnethasprv, Aladdin Knowledge Systems Hasp services

- tftp
Trivial File Transfer Protocol (TFTP)
- time
Time Protocol
- timed
Timeserver
- ups
Uninterruptible power supply (UPS)
- xdmcp
X Display Manager Control Protocol (XDMCP)
- xns-ch
Xerox Network Systems (XNS) Clearinghouse (Name Server)
- xns-mail
Xerox Network Systems (XNS) Mail
- xns-time
Xerox Network Systems (XNS) Time Protocol
- z3950
ANSI Z39.50

Configurable	True
Platforms	Supported on all platforms

value (*number* | *keyword*)

Description	A source port number
Context	acl acl-filter name string type keyword entry sequence-id number match transport source-port value (<i>number</i> <i>keyword</i>)
Tree	value
Range	0 to 65535
Options	<ul style="list-style-type: none"> • acap Application Configuration Access Protocol • afp-tcp Apple Filing Protocol over TCP • arns A Remote Network Server System • asf-rmcp ASF Remote Management and Control Protocol & IPMI Remote Management Protocol

- ashare
AppleShare IP Web Administration
- atalk-rm
AppleTalk Routing Maintenance
- aurp
AppleTalk Update-Based Routing Protocol
- auth
Authentication Service
- bfd
Bidirectional Forwarding Detection Single Hop
- bfd-echo
BFD Echo
- bftp
Background File Transfer Program
- bgmp
Border Gateway Multicast Protocol
- bgp
Border Gateway Protocol
- bootpc
Bootstrap Protocol (BOOTP) Client and DHCP Client
- bootps
Bootstrap Protocol (BOOTP) Server and DHCP Server
- ccso-ns
CCSO Nameserver
- chargen
Character Generator Protocol (CHARGEN)
- cisco-tdp
Cisco Tag Distribution Protocol
- citadel
Citadel
- clearcase
ClearCase albd
- commerce
Commerce Applications
- courier
Remote Procedure Call

- daytime
Daytime Protocol
- dhcpv6-client
DHCPv6 Client
- dhcpv6-server
DHCPv6 Server
- dhcp-failover
DHCP Failover Protocol
- dicom
Digital Imaging and Communications in Medicine
- discard
Discard Protocol. Also Wake-on-LAN.
- dnsix
DNSIX security protocol auditing
- domain
Domain Name System
- dsp
Display Support Protocol
- echo
Echo Protocol
- epp
Extensible Provisioning Protocol
- esro
Efficient Short Remote Operations (ESRO)
- exec
Remote Process Execution (Rexec)
- finger
Finger protocol
- ftp
File Transfer Protocol control
- ftp-data
File Transfer Protocol data
- ftps
FTPS (FTP over SSL/TLS) control
- ftps-data
FTPS (FTP over SSL/TLS) data

- godi
Group Domain Of Interpretation (GDOI) protocol
- gopher
Gopher protocol
- gtp-c
GTP control messages (GTP-C)
- gtp-prime
GTP prime CDR logging protocol
- gtp-u
GTP user data messages (GTP-U)
- ha-cluster
Linux-HA high-availability heartbeat
- hostname
NIC hostname server
- hp-alarm-mgr
HP data alarm manager
- http
Hypertext Transfer Protocol
- http-alt
FileMaker Web Sharing (HTTP Alternate)
- http-mgmt
http-mgmt
- http-rpc
Remote procedure call over Hypertext Transfer Protocol
- https
Hypertext Transfer Protocol over TLS/SSL
- ieee-mms-ssl
IEEE Media Management System over SSL
- imap
Internet Message Access Protocol (IMAP)
- imap3
Internet Message Access Protocol (IMAP), version 3
- imaps
Internet Message Access Protocol over TLS/SSL
- ipp
Internet Printing Protocol

- ipsec
Internet Protocol Security (IPSec)
- ipx
Internetwork Packet Exchange (IPX)
- irc
Internet Relay Chat (IRC)
- iris-beep
IRIS (Internet Registry Information Service) over BEEP
- isakmp
Internet Security Association and Key Management Protocol (ISAKMP) /
Internet Key Exchange (IKE)
- isakmp-nat
IPSec NAT Traversal
- iscsi
iSCSI
- iso-tsap
ISO Transport Service Access Point (TSAP) Class 0 protocol
- kerberos
Kerberos authentication system
- kerberos-adm
Kerberos administration
- klogin
Kerberos login
- kpasswd
Kerberos Change/Set password
- kshell
Kerberos Remote shell
- l2tp
Layer 2 Forwarding Protocol (L2F) and Layer 2 Tunneling Protocol
(L2TP)
- ldap
Lightweight Directory Access Protocol (LDAP)
- ldaps
Lightweight Directory Access Protocol over TLS/SSL (LDAPS)
- ldp
Label Distribution Protocol
- lmp

- Link Management Protocol (LMP)
- login
 - rlogin (TCP) or Who (UDP)
- lpd
 - Line Printer Daemon
- lsp-ping
 - MPLS LSP-echo
- mac-server-adm
 - Mac OS X Server administration
- matip-a
 - Mapping of Airline Traffic over Internet Protocol (MATIP) type A
- matip-b
 - Mapping of Airline Traffic over Internet Protocol (MATIP) type B
- micro-bfd
 - BFD session over each LAG member link
- microsoft-ds
 - Microsoft Directory Services
- mobile-ip
 - Mobile IP Agent
- monitor
 - Monitor
- mpp
 - Message posting protocol (MPP)
- mssql-m
 - Microsoft SQL Server database management system (MSSQL) monitor
- mssql-s
 - Microsoft SQL Server database management system (MSSQL) server
- msdp
 - Multicast Source Discovery Protocol
- ms-exchange
 - MS Exchange Routing
- msp
 - Message Send Protocol
- multihop-bfd
 - Bidirectional Forwarding Detection Multi-Hop
- nas

- Netnews Administration System (NAS)
- ncp
NetWare Core Protocol
- netrjs-1
NETRJS protocol
- netrjs-2
NETRJS protocol
- netrjs-3
NETRJS protocol
- netrjs-4
NETRJS protocol
- netbios-data
NetBIOS Datagram Service
- netbios-ns
NetBIOS Name Service
- netbios-ss
NetBIOS Session Service
- netnews
Netnews
- netwall
netwall, for Emergency Broadcasts
- new-rwho
new-rwho, new-who
- nfs
Network File System (NFS)
- nntp
Network News Transfer Protocol (NNTP)
- nntps
Network News Transfer Protocol over TLS/SSL (NNTPS)
- ntp
Network Time Protocol (NTP)
- odmr
On-Demand Mail Relay (ODMR)
- olsr
Optimized Link State Routing (OLSR)
- openvpn

- OpenVPN
- pim-auto-rp
PIM Auto-RP
- pkix-timestamp
PKIX Time Stamp Protocol (TSP)
- pop2
Post Office Protocol, version 2 (POP2)
- pop3
Post Office Protocol, version 3 (POP3)
- pop3s
Post Office Protocol 3 over TLS/SSL (POP3S)
- pptp
Point-to-Point Tunneling Protocol (PPTP)
- ptp-event
Precision Time Protocol (PTP) event messages
- ptp-general
Precision Time Protocol (PTP) general messages
- print-srv
Network PostScript print server
- qmtp
Quick Mail Transfer Protocol
- qotd
Quote of the Day (QOTD)
- radius
RADIUS authentication protocol
- radius-acct
RADIUS accounting protocol
- remote-mail
Remote Mail Checking Protocol
- remotefs
Remotefs, RFS Server
- remotecmd
SupportSoft Nexus Remote Command
- rip
Routing Information Protocol
- rje

- Remote Job Entry
- rlp
Resource Location Protocol
- rlzdb
RLZ DBase
- rmc
IBM RMC (Remote monitoring and Control) protocol
- rmonitor
rmonitor, Remote Monitor
- rpc2portmap
Rpc2portmap
- rsync
rsync file synchronization protocol
- rtelnet
Remote User Telnet Service (RTelnet)
- rtsp
Real Time Streaming Protocol (RTSP)
- sgmp
Simple Gateway Monitoring Protocol (SGMP)
- silc
Secure Internet Live Conferencing (SILC)
- smux
SNMP multiplexing protocol (SMUX)
- sna-gw
IBM Systems Network Architecture (SNA) gateway access server
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- snmp-trap
SNMP Traps
- snpp
Simple Network Paging Protocol (SNPP)
- smtp
Simple Mail Transfer Protocol (SMTP)
- sql-svcs
Structured Query Language (SQL) Services
- sql

-
- Structured Query Language (SQL) Service
 - ssh
Secure Shell Protocol
 - submission
Email message submission (SMTP)
 - sunrpc
Open Network Computing Remote Procedure Call (ONC RPC), also Sun RPC
 - svcloc
Service Location Protocol (SLP)
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Syslog (UDP) and Remote Shell (TCP)
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Active Users (systat service)
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TACACS Login Host protocol
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TCP Port Service Multiplexer (TCPMUX)
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tcpnethasprv, Aladdin Knowledge Systems Hasp services
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Trivial File Transfer Protocol (TFTP)
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Timeserver
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Uninterruptible power supply (UPS)
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X Display Manager Control Protocol (XDMCP)
 - xns-ch
Xerox Network Systems (XNS) Clearinghouse (Name Server)
 - xns-mail
Xerox Network Systems (XNS) Mail

- xns-time
Xerox Network Systems (XNS) Time Protocol
- z3950
ANSI Z39.50

Configurable	True
Platforms	Supported on all platforms

tcp-flags *string*

Description	A logical expression using the &, and ! logical operators and the TCP flag names: rst, syn and ack.
Context	acl acl-filter name <i>string</i> type keyword entry sequence-id number match transport tcp-flags <i>string</i>
Tree	tcp-flags
Configurable	True
Platforms	Supported on all platforms

statistics

Description	Container for per-entry statistics
Context	acl acl-filter name <i>string</i> type keyword entry sequence-id number statistics
Tree	statistics
Configurable	False
Platforms	Supported on all platforms

incomplete *boolean*

Description	Returns true when at least one linecard had insufficient stats resources to ensure an accurate set of values for the number of matched packets.
Context	acl acl-filter name <i>string</i> type keyword entry sequence-id number statistics incomplete <i>boolean</i>
Tree	incomplete
Configurable	False
Platforms	Supported on all platforms

last-clear *string*

Description	Time of the last clear command performed by the user at this level or a higher level
Context	acl acl-filter name <i>string</i> type keyword entry sequence-id number statistics last-clear <i>string</i>
Tree	last-clear
String Length	20 to 32
Configurable	False
Platforms	Supported on all platforms

last-match *string*

Description	The elapsed time since a packet last matched the entry, considering the mgmt0 subinterface and all subinterfaces of all linecard ports that use the ACL as an input ACL
Context	acl acl-filter name <i>string</i> type keyword entry sequence-id number statistics last-match <i>string</i>
Tree	last-match
String Length	20 to 32
Configurable	False
Platforms	Supported on all platforms

matched-packets *number*

Description	The number of packets matching the entry since it was programmed or since the last clear, considering the mgmt0 subinterface and all subinterfaces of all linecard ports that use the ACL as an input ACL
Context	acl acl-filter name <i>string</i> type keyword entry sequence-id number statistics matched-packets <i>number</i>
Tree	matched-packets
Default	0
Configurable	False
Platforms	Supported on all platforms

policer

Description	Policer stats for traffic matching the entry:
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Statistics for policer configured with scope=global and entry-specific=true, and acl configured with subinterface-specific=false.

Context	acl acl-filter name <i>string</i> type keyword entry sequence-id number statistics policer
Tree	policer
Configurable	False
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

conforming-octets *number*

Description	The number of bytes that were considered conforming by the policer. The byte count includes 18 bytes of Ethernet overhead for every IP packet.
Context	acl acl-filter name <i>string</i> type keyword entry sequence-id number statistics policer conforming-octets <i>number</i>
Tree	conforming-octets
Default	0
Configurable	False
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

conforming-packets *number*

Description	The number of packets (actually Ethernet frames) that were considered conforming by the policer
Context	acl acl-filter name <i>string</i> type keyword entry sequence-id number statistics policer conforming-packets <i>number</i>
Tree	conforming-packets
Default	0
Configurable	False
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

exceeding-octets *number*

Description	The number of bytes that were considered exceeding by the policer. The byte count includes 18 bytes of Ethernet overhead for every IP packet.
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Context	acl acl-filter name string type keyword entry sequence-id number statistics policer exceeding-octets number
Tree	exceeding-octets
Default	0
Configurable	False
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

exceeding-packets *number*

Description	The number of packets (actually Ethernet frames) that were considered exceeding by the policer
Context	acl acl-filter name string type keyword entry sequence-id number statistics policer exceeding-packets number
Tree	exceeding-packets
Default	0
Configurable	False
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

system-cpu-policer

Description	System CPU policer stats for traffic matching the entry: Statistics for system cpu policer configured with scope=global and entry-specific=true, and acl configured with subinterface-specific=false.
Context	acl acl-filter name string type keyword entry sequence-id number statistics system-cpu-policer
Tree	system-cpu-policer
Configurable	False
Platforms	Supported on all platforms

conforming-octets *number*

Description	The number of bytes that were considered conforming by the policer. The byte count includes 18 bytes of Ethernet overhead for every IP packet.
Context	acl acl-filter name string type keyword entry sequence-id number statistics system-cpu-policer conforming-octets number

Tree	conforming-octets
Default	0
Configurable	False
Platforms	Supported on all platforms

conforming-packets *number*

Description	The number of packets (actually Ethernet frames) that were considered conforming by the policer
Context	acl acl-filter name <i>string type keyword</i> entry sequence-id <i>number</i> statistics system-cpu-policer conforming-packets <i>number</i>
Tree	conforming-packets
Default	0
Configurable	False
Platforms	Supported on all platforms

exceeding-octets *number*

Description	The number of bytes that were considered exceeding by the policer. The byte count includes 18 bytes of Ethernet overhead for every IP packet.
Context	acl acl-filter name <i>string type keyword</i> entry sequence-id <i>number</i> statistics system-cpu-policer exceeding-octets <i>number</i>
Tree	exceeding-octets
Default	0
Configurable	False
Platforms	Supported on all platforms

exceeding-packets *number*

Description	The number of packets (actually Ethernet frames) that were considered exceeding by the policer
Context	acl acl-filter name <i>string type keyword</i> entry sequence-id <i>number</i> statistics system-cpu-policer exceeding-packets <i>number</i>
Tree	exceeding-packets
Default	0
Configurable	False
Platforms	Supported on all platforms

tcam-entries

Description	Information about the TCAM entries used to implement the ACL entry
Context	acl acl-filter name <i>string</i> type keyword entry sequence-id <i>number</i> tcam-entries
Tree	tcam-entries
Configurable	False
Platforms	Supported on all platforms

forwarding-complex [complex-identifier](#) *string*

Description	List of forwarding complexes in the system
Context	acl acl-filter name <i>string</i> type keyword entry sequence-id <i>number</i> tcam-entries forwarding-complex complex-identifier <i>string</i>
Tree	forwarding-complex
Configurable	False
Platforms	Supported on all platforms

complex-identifier *string*

Description	A forwarding complex in the format (slot-number,complex-number).
Context	acl acl-filter name <i>string</i> type keyword entry sequence-id <i>number</i> tcam-entries forwarding-complex complex-identifier <i>string</i>
Configurable	False
Platforms	Supported on all platforms

input-total *number*

Description	The number of TCAM entries required to implement this entry on all subinterfaces of this complex where the filter is applied to ingress traffic. For example, if a single-instance of the entry takes 2 TCAM entries and the filter is an output-only subinterface-specific filter and the filter is applied to 5 subinterfaces on output and to 5 subinterfaces on input then input-total=2. If the entry is not applied to ingress traffic on any subinterfaces of this complex then input-total=0.
Context	acl acl-filter name <i>string</i> type keyword entry sequence-id <i>number</i> tcam-entries forwarding-complex complex-identifier <i>string</i> input-total <i>number</i>
Tree	input-total

Configurable	False
Platforms	Supported on all platforms

output-total *number*

Description	The number of TCAM entries required to implement this entry on all subinterfaces of this complex where the filter is applied to egress traffic. For example, if a single-instance of the entry takes 2 TCAM entries and the filter is an output-only subinterface-specific filter and the filter is applied to 5 subinterfaces on output and to 5 subinterfaces on input then output-total=10. If the entry is not applied to egress traffic on any subinterfaces of this complex then output-total=0.
Context	acl acl-filter name string type keyword entry sequence-id number tcam-entries forwarding-complex complex-identifier string output-total number
Tree	output-total
Configurable	False
Platforms	Supported on all platforms

single-instance *number*

Description	The number of TCAM entries required to implement this entry if it is applied to only one subinterface and one traffic direction specific to this slot. This is non-zero even if the filter is not applied to any subinterfaces of this complex. It captures the effect of TCAM entry expansion to deal with L4 port or VLAN ranges, for example.
Context	acl acl-filter name string type keyword entry sequence-id number tcam-entries forwarding-complex complex-identifier string single-instance number
Tree	single-instance
Configurable	False
Platforms	Supported on all platforms

last-clear *string*

Description	Time of the last clear command performed by the user at this level
Context	acl acl-filter name string type keyword last-clear string
Tree	last-clear
String Length	20 to 32
Configurable	False

Platforms Supported on all platforms

statistics-per-entry *boolean*

Description Collect statistics for each entry of the ACL. If this is set to false no hardware resources are allocated to collecting statistics for this ACL policy.
The exact set of statistics depend on the subinterface-specific mode

Context [acl](#) [acl-filter name](#) *string type keyword* [statistics-per-entry boolean](#)

Tree [statistics-per-entry](#)

Configurable True

Platforms Supported on all platforms

subinterface-specific *keyword*

Description Controls the instantiation of the filter when it is applied as an input or output ACL
disabled: all subinterfaces on a single linecard that reference the ACL as an input ACL use a shared filter instance, and all subinterfaces on a single linecard that reference the ACL as an output ACL use a shared filter instance
input-only: all subinterfaces on a single linecard that reference the ACL as an output ACL use a shared filter instance, but each subinterface that references the ACL as an input ACL uses its own separate instance of the filter
output-only: all subinterfaces on a single linecard that reference the ACL as an input ACL use a shared filter instance, but each subinterface that references the ACL as an output ACL uses its own separate instance of the filter
input-and-output: each subinterface that references the ACL as either an input ACL or an output ACL uses its own separate instance of the filter

Context [acl](#) [acl-filter name](#) *string type keyword* [subinterface-specific keyword](#)

Tree [subinterface-specific](#)

Default disabled

Options

- disabled
- input-only
- output-only
- input-and-output

Configurable True

Platforms Supported on all platforms

datapath-programming

Description	Container to represent the progress of ACL datapath programming
Context	acl datapath-programming
Tree	datapath-programming
Configurable	False
Platforms	Supported on all platforms

forwarding-complex *slot-id number complex-id number*

Description	List of forwarding complexes that are currently installed and online
Context	acl datapath-programming forwarding-complex slot-id number complex-id number
Tree	forwarding-complex
Configurable	False
Platforms	Supported on all platforms

slot-id *number*

Description	The slot id
Context	acl datapath-programming forwarding-complex slot-id number complex-id number
Configurable	False
Platforms	Supported on all platforms

complex-id *number*

Description	The complex id
Context	acl datapath-programming forwarding-complex slot-id number complex-id number
Range	0 to 1
Configurable	False
Platforms	Supported on all platforms

last-completed-timestamp *string*

Description	The date and time when the forwarding complex last completed all datapath programming related to prior ACL configuration changes.
Context	acl datapath-programming forwarding-complex slot-id number complex-id number last-completed-timestamp string
Tree	last-completed-timestamp
String Length	20 to 32
Configurable	False
Platforms	Supported on all platforms

programming-complete *boolean*

Description	<p>Reads false when there are still pending entries to program from prior configuration transactions</p> <p>Reads true when all datapath programming related to all prior ACL configuration changes is complete</p>
Context	acl datapath-programming forwarding-complex slot-id number complex-id number programming-complete boolean
Tree	programming-complete
Configurable	False
Platforms	Supported on all platforms

egress-mac-filtering *boolean*

Description	<p>Must be set to true in order to apply any MAC ACLs to any subinterface in the egress traffic direction.</p> <p>Internally this sets the following limits:</p> <p>Remember that the number of ACL instances per ACL policy is greater than one if subinterface-specific is set to input-and-output or output-only.</p> <p>A setting of true is blocked if the number of IPv4 ACL instances applied to egress traffic is already greater than 32, or if the number of IPv6 ACL instances applied to egress traffic is already greater than 32.</p>
Context	acl egress-mac-filtering boolean
Tree	egress-mac-filtering
Default	false
Configurable	True

Platforms 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5

interface [interface-id](#) *string*

Description List of interfaces and subinterfaces referencing ACL filters.

Context [acl interface interface-id](#) *string*

Tree [interface](#)

Configurable True

Platforms Supported on all platforms

Max. Elements 16383

interface-id *string*

Description Identifier for the interface or subinterface.

Context [acl interface interface-id](#) *string*

Configurable True

Platforms Supported on all platforms

input

Description Container for ACL filters that apply to ingress traffic on the subinterface

Context [acl interface interface-id](#) *string* [input](#)

Tree [input](#)

Configurable True

Platforms Supported on all platforms

acl-filter [name](#) *reference* [type](#) *reference*

Description MAC, IPv4, IPv6 ACL filter(s) to be applied on this subinterface direction
On 7220 and 7250 IXR platforms only a single MAC, IPv4 or IPv6 filter is supported.

Context [acl interface interface-id](#) *string* [input](#) [acl-filter](#) [name](#) *reference* [type](#) *reference*

Tree [acl-filter](#)

Configurable True

Platforms Supported on all platforms

Max. Elements 4

name *reference*

Description Enter the name context

Context [acl interface interface-id string input acl-filter name reference type reference](#)

Reference acl acl-filter name

Configurable True

Platforms Supported on all platforms

type *reference*

Description Enter the type context

Context [acl interface interface-id string input acl-filter name reference type reference](#)

Reference acl acl-filter type

Configurable True

Platforms Supported on all platforms

entry [sequence-id](#) *reference*

Description ACL Filter statistics per entry and per subinterface

Context [acl interface interface-id string input acl-filter name reference type reference entry sequence-id reference](#)

Tree [entry](#)

Configurable False

Platforms Supported on all platforms

sequence-id *reference*

Description Reference to type entry ID key

Context [acl interface interface-id string input acl-filter name reference type reference entry sequence-id reference](#)

Reference acl acl-filter entry sequence-id

Configurable False

Platforms Supported on all platforms

policer

Description	Policer stats for traffic matching the entry: Statistics under /acl/interfaces for policer configured with scope=subinterface and entry-specific=true, and acl configured with subinterface-specific=input-and-output.
Context	acl interface interface-id string input acl-filter name reference type reference entry sequence-id reference policer
Tree	policer
Configurable	False
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5

conforming-octets *number*

Description	The number of bytes that were considered conforming by the policer. The byte count includes 18 bytes of Ethernet overhead for every IP packet.
Context	acl interface interface-id string input acl-filter name reference type reference entry sequence-id reference policer conforming-octets number
Tree	conforming-octets
Default	0
Configurable	False
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5

conforming-packets *number*

Description	The number of packets (actually Ethernet frames) that were considered conforming by the policer
Context	acl interface interface-id string input acl-filter name reference type reference entry sequence-id reference policer conforming-packets number
Tree	conforming-packets
Default	0
Configurable	False
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5

exceeding-octets *number*

Description	The number of bytes that were considered exceeding by the policer. The byte count includes 18 bytes of Ethernet overhead for every IP packet.
Context	acl interface interface-id string input acl-filter name reference type reference entry sequence-id reference policer exceeding-octets number
Tree	exceeding-octets
Default	0
Configurable	False
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5

exceeding-packets *number*

Description	The number of packets (actually Ethernet frames) that were considered exceeding by the policer
Context	acl interface interface-id string input acl-filter name reference type reference entry sequence-id reference policer exceeding-packets number
Tree	exceeding-packets
Default	0
Configurable	False
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5

statistics

Description	Container for per-entry statistics
Context	acl interface interface-id string input acl-filter name reference type reference entry sequence-id reference statistics
Tree	statistics
Configurable	False
Platforms	Supported on all platforms

incomplete *boolean*

Description	Returns true when at least one linecard had insufficient stats resources to ensure an accurate set of values for the number of matched packets.
--------------------	---

Context	acl interface interface-id string input acl-filter name reference type reference entry sequence-id reference statistics incomplete boolean
Tree	incomplete
Configurable	False
Platforms	Supported on all platforms

last-clear *string*

Description	Time of the last clear command performed by the user at this level or a higher level
Context	acl interface interface-id string input acl-filter name reference type reference entry sequence-id reference statistics last-clear string
Tree	last-clear
String Length	20 to 32
Configurable	False
Platforms	Supported on all platforms

last-match *string*

Description	The elapsed time since a packet last matched the entry, considering the mgmt0 subinterface and all subinterfaces of all linecard ports that use the ACL as an input ACL
Context	acl interface interface-id string input acl-filter name reference type reference entry sequence-id reference statistics last-match string
Tree	last-match
String Length	20 to 32
Configurable	False
Platforms	Supported on all platforms

matched-packets *number*

Description	The number of packets matching the entry since it was programmed or since the last clear, considering the mgmt0 subinterface and all subinterfaces of all linecard ports that use the ACL as an input ACL
Context	acl interface interface-id string input acl-filter name reference type reference entry sequence-id reference statistics matched-packets number
Tree	matched-packets
Default	0

Configurable	False
Platforms	Supported on all platforms

statistics

Description	Container for policer scope=subinterface and per-entry-statistics=false statistics
Context	acl interface interface-id string input statistics
Tree	statistics
Configurable	False
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5

last-clear *string*

Description	Time of the last clear command performed by the user at this level
Context	acl interface interface-id string input statistics last-clear string
Tree	last-clear
String Length	20 to 32
Configurable	False
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5

policer

Description	Policer stats for traffic matching one or multiple entries: List of ACL policer statistics of scope=subinterface and per-entry-statistics=false, and acl configured with subinterface-specific=false.
Context	acl interface interface-id string input statistics policer
Tree	policer
Configurable	False
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5

conforming-octets *number*

Description	The number of bytes that were considered conforming by the policer. The byte count includes 18 bytes of Ethernet overhead for every IP packet.
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Context	acl interface interface-id <i>string</i> input statistics policer conforming-octets number
Tree	conforming-octets
Default	0
Configurable	False
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5

conforming-packets *number*

Description	The number of packets (actually Ethernet frames) that were considered conforming by the policer
Context	acl interface interface-id <i>string</i> input statistics policer conforming-packets number
Tree	conforming-packets
Default	0
Configurable	False
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5

exceeding-octets *number*

Description	The number of bytes that were considered exceeding by the policer. The byte count includes 18 bytes of Ethernet overhead for every IP packet.
Context	acl interface interface-id <i>string</i> input statistics policer exceeding-octets number
Tree	exceeding-octets
Default	0
Configurable	False
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5

exceeding-packets *number*

Description	The number of packets (actually Ethernet frames) that were considered exceeding by the policer
Context	acl interface interface-id <i>string</i> input statistics policer exceeding-packets number
Tree	exceeding-packets

Default	0
Configurable	False
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5

interface-ref

Description	Reference to an interface or subinterface
Context	acl interface interface-id <i>string</i> interface-ref
Tree	interface-ref
Configurable	True
Platforms	Supported on all platforms

interface *reference*

Description	Reference to a base interface, for example a port or LAG
Context	acl interface interface-id <i>string</i> interface-ref interface reference
Tree	interface
Reference	interface name <i>string</i>
Configurable	True
Platforms	Supported on all platforms

subinterface *reference*

Description	Reference to a subinterface This requires the base interface to be specified using the interface leaf in this container.
Context	acl interface interface-id <i>string</i> interface-ref subinterface reference
Tree	subinterface
Reference	interface name <i>string</i> subinterface index <i>number</i>
Configurable	True
Platforms	Supported on all platforms

output

Description	Container for ACL filters that apply to ingress traffic on the subinterface
--------------------	---

Context	acl interface interface-id <i>string</i> output
Tree	output
Configurable	True
Platforms	Supported on all platforms except 7215

acl-filter [name](#) *reference* [type](#) *reference*

Description	MAC, IPv4, IPv6 ACL filter(s) to be applied on this subinterface direction On 7220 and 7250 IXR platforms only a single MAC, IPv4 or IPv6 filter is supported.
Context	acl interface interface-id <i>string</i> output acl-filter name <i>reference</i> type <i>reference</i>
Tree	acl-filter
Configurable	True
Platforms	Supported on all platforms except 7215
Max. Elements	4

name *reference*

Description	Enter the name context
Context	acl interface interface-id <i>string</i> output acl-filter name <i>reference</i> type <i>reference</i>
Reference	acl acl-filter name
Configurable	True
Platforms	Supported on all platforms except 7215

type *reference*

Description	Enter the type context
Context	acl interface interface-id <i>string</i> output acl-filter name <i>reference</i> type <i>reference</i>
Reference	acl acl-filter type
Configurable	True
Platforms	Supported on all platforms except 7215

entry [sequence-id](#) *reference*

Description	ACL Filter statistics per entry and per subinterface
Context	acl interface interface-id <i>string</i> output acl-filter name <i>reference</i> type reference entry sequence-id <i>reference</i>
Tree	entry
Configurable	False
Platforms	Supported on all platforms except 7215

sequence-id *reference*

Description	Reference to type entry ID key
Context	acl interface interface-id <i>string</i> output acl-filter name <i>reference</i> type reference entry sequence-id <i>reference</i>
Reference	acl acl-filter entry sequence-id
Configurable	False
Platforms	Supported on all platforms except 7215

policer

Description	Policer stats for traffic matching the entry: Statistics under /acl/interfaces for policer configured with scope=subinterface and entry-specific=true, and acl configured with subinterface-specific=input-and-output.
Context	acl interface interface-id <i>string</i> output acl-filter name <i>reference</i> type reference entry sequence-id <i>reference</i> policer
Tree	policer
Configurable	False
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5

conforming-octets *number*

Description	The number of bytes that were considered conforming by the policer. The byte count includes 18 bytes of Ethernet overhead for every IP packet.
Context	acl interface interface-id <i>string</i> output acl-filter name <i>reference</i> type reference entry sequence-id <i>reference</i> policer conforming-octets <i>number</i>
Tree	conforming-octets

Default	0
Configurable	False
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5

conforming-packets *number*

Description	The number of packets (actually Ethernet frames) that were considered conforming by the policer
Context	acl interface interface-id string output acl-filter name reference type reference entry sequence-id reference policer conforming-packets number
Tree	conforming-packets
Default	0
Configurable	False
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5

exceeding-octets *number*

Description	The number of bytes that were considered exceeding by the policer. The byte count includes 18 bytes of Ethernet overhead for every IP packet.
Context	acl interface interface-id string output acl-filter name reference type reference entry sequence-id reference policer exceeding-octets number
Tree	exceeding-octets
Default	0
Configurable	False
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5

exceeding-packets *number*

Description	The number of packets (actually Ethernet frames) that were considered exceeding by the policer
Context	acl interface interface-id string output acl-filter name reference type reference entry sequence-id reference policer exceeding-packets number
Tree	exceeding-packets
Default	0
Configurable	False

Platforms 7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5

statistics

Description Container for per-entry statistics

Context [acl interface interface-id string output acl-filter name reference type reference entry sequence-id reference statistics](#)

Tree [statistics](#)

Configurable False

Platforms Supported on all platforms except 7215

incomplete *boolean*

Description Returns true when at least one linecard had insufficient stats resources to ensure an accurate set of values for the number of matched packets.

Context [acl interface interface-id string output acl-filter name reference type reference entry sequence-id reference statistics incomplete boolean](#)

Tree [incomplete](#)

Configurable False

Platforms Supported on all platforms

last-clear *string*

Description Time of the last clear command performed by the user at this level or a higher level

Context [acl interface interface-id string output acl-filter name reference type reference entry sequence-id reference statistics last-clear string](#)

Tree [last-clear](#)

String Length 20 to 32

Configurable False

Platforms Supported on all platforms except 7215

last-match *string*

Description The elapsed time since a packet last matched the entry, considering the mgmt0 subinterface and all subinterfaces of all linecard ports that use the ACL as an input ACL

Context	acl interface interface-id <i>string</i> output acl-filter name <i>reference</i> type reference entry sequence-id <i>reference</i> statistics last-match <i>string</i>
Tree	last-match
String Length	20 to 32
Configurable	False
Platforms	Supported on all platforms except 7215

matched-packets *number*

Description	The number of packets matching the entry since it was programmed or since the last clear, considering the mgmt0 subinterface and all subinterfaces of all linecard ports that use the ACL as an input ACL
Context	acl interface interface-id <i>string</i> output acl-filter name <i>reference</i> type reference entry sequence-id <i>reference</i> statistics matched-packets <i>number</i>
Tree	matched-packets
Default	0
Configurable	False
Platforms	Supported on all platforms except 7215

statistics

Description	Container for policer scope=subinterface and per-entry-statistics=false statistics
Context	acl interface interface-id <i>string</i> output statistics
Tree	statistics
Configurable	False
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5

last-clear *string*

Description	Time of the last clear command performed by the user at this level
Context	acl interface interface-id <i>string</i> output statistics last-clear <i>string</i>
Tree	last-clear
String Length	20 to 32
Configurable	False
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5

policer

Description	Policer stats for traffic matching one or multiple entries: List of ACL policer statistics of scope=subinterface and per-entry-statistics=false, and acl configured with subinterface-specific=false.
Context	acl interface interface-id string output statistics policer
Tree	policer
Configurable	False
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5

conforming-octets *number*

Description	The number of bytes that were considered conforming by the policer. The byte count includes 18 bytes of Ethernet overhead for every IP packet.
Context	acl interface interface-id string output statistics policer conforming-octets number
Tree	conforming-octets
Default	0
Configurable	False
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5

conforming-packets *number*

Description	The number of packets (actually Ethernet frames) that were considered conforming by the policer
Context	acl interface interface-id string output statistics policer conforming-packets number
Tree	conforming-packets
Default	0
Configurable	False
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5

exceeding-octets *number*

Description	The number of bytes that were considered exceeding by the policer. The byte count includes 18 bytes of Ethernet overhead for every IP packet.
Context	acl interface interface-id <i>string</i> output statistics policer exceeding-octets number
Tree	exceeding-octets
Default	0
Configurable	False
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5

exceeding-packets *number*

Description	The number of packets (actually Ethernet frames) that were considered exceeding by the policer
Context	acl interface interface-id <i>string</i> output statistics policer exceeding-packets number
Tree	exceeding-packets
Default	0
Configurable	False
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5

policers

Description	Container for policer definitions used by ACL entries
Context	acl policers
Tree	policers
Configurable	True
Platforms	Supported on all platforms

policer *name string*

Description	List of policer templates used in subinterface and CPM Filter ACL.
Context	acl policers policer name <i>string</i>
Tree	policer

Configurable	True
Platforms	7220 IXR-D4, 7220 IXR-D5, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

name *string*

Description	User-defined name of the policer
Context	acl policers policer name <i>string</i>
String Length	1 to 255
Configurable	True
Platforms	7220 IXR-D4, 7220 IXR-D5, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

entry-specific *boolean*

Description	Controls the instantiation of the policer between filter entries false: one policer instance is created from this template and it is shared by all entries of in the same ACL filter that refer to this policer true: multiple policer instances are created from this template, one for each ACL filter entry that refers to this policer
Context	acl policers policer name <i>string</i> entry-specific <i>boolean</i>
Tree	entry-specific
Default	false
Configurable	True
Platforms	Supported on all platforms

max-burst *number*

Description	The MBS bucket depth in bytes
Context	acl policers policer name <i>string</i> max-burst <i>number</i>
Tree	max-burst
Range	1 to 125000000
Units	bytes
Configurable	True
Platforms	7220 IXR-D4, 7220 IXR-D5, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

peak-rate *number*

Description	The PIR rate in kbps (bucket empty/fill rate).
Context	acl policers policer name <i>string</i> peak-rate <i>number</i>
Tree	peak-rate
Range	1 to 800000000
Units	kbps
Configurable	True
Platforms	7220 IXR-D4, 7220 IXR-D5, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

scope *keyword*

Description	Controls the instantiation of the policer between subinterfaces global: policer is instantiated per direction and shared between ACL, requires filter subinterface-specific disabled subinterface: policer is instantiated per subinterface and per direction, requires filter subinterface-specific input-and-ouput
Context	acl policers policer name <i>string</i> scope <i>keyword</i>
Tree	scope
Default	global
Options	<ul style="list-style-type: none"> • global • subinterface
Configurable	True
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5

statistics

Description	Container for linecard policer statistics.
Context	acl policers policer name <i>string</i> statistics
Tree	statistics
Configurable	False
Platforms	7220 IXR-D4, 7220 IXR-D5, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

aggregate

Description	None of these statistics are populated if the policer is configured as entry-specific=true. If entry-specific=false and subinterface-specific=true, this is sum of all the entries and all the policer templates instantiated for all subintrefaces. If entry-specific=false and subinterface-specific=false, this is sum of all the entries using this policer template.
Context	acl policers policer name <i>string</i> statistics aggregate
Tree	aggregate
Configurable	False
Platforms	7220 IXR-D4, 7220 IXR-D5, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

conforming-octets *number*

Description	The number of bytes that were considered conforming by the policer. The byte count includes 18 bytes of Ethernet overhead for every IP packet.
Context	acl policers policer name <i>string</i> statistics aggregate conforming-octets <i>number</i>
Tree	conforming-octets
Default	0
Configurable	False
Platforms	7220 IXR-D4, 7220 IXR-D5, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

conforming-packets *number*

Description	The number of packets (actually Ethernet frames) that were considered conforming by the policer
Context	acl policers policer name <i>string</i> statistics aggregate conforming-packets <i>number</i>
Tree	conforming-packets
Default	0
Configurable	False
Platforms	7220 IXR-D4, 7220 IXR-D5, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

exceeding-octets *number*

Description	The number of bytes that were considered exceeding by the policer. The byte count includes 18 bytes of Ethernet overhead for every IP packet.
Context	acl policers policer name <i>string</i> statistics aggregate exceeding-octets number
Tree	exceeding-octets
Default	0
Configurable	False
Platforms	7220 IXR-D4, 7220 IXR-D5, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

exceeding-packets *number*

Description	The number of packets (actually Ethernet frames) that were considered exceeding by the policer
Context	acl policers policer name <i>string</i> statistics aggregate exceeding-packets number
Tree	exceeding-packets
Default	0
Configurable	False
Platforms	7220 IXR-D4, 7220 IXR-D5, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

last-clear *string*

Description	Time of the last clear command that applied to these statistics
Context	acl policers policer name <i>string</i> statistics aggregate last-clear <i>string</i>
Tree	last-clear
String Length	20 to 32
Configurable	False
Platforms	7220 IXR-D4, 7220 IXR-D5, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

system-cpu-policer *name string*

Description	List of system CPU policer templates. For each policer in this list one or more policer instances are implemented in the XDP-CPM software and these
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policer instances process the aggregate of terminating traffic received from all linecards.

Context	acl policers system-cpu-policer name <i>string</i>
Tree	system-cpu-policer
Configurable	True
Platforms	Supported on all platforms

name *string*

Description	User-defined name of the policer
Context	acl policers system-cpu-policer name <i>string</i>
String Length	1 to 255
Configurable	True
Platforms	Supported on all platforms

entry-specific *boolean*

Description	<p>If set to false, only one policer instance is created from this template and it is shared by all entries of all cpm-filter ACLs that refer to this policer.</p> <p>If set to true, multiple policer instances are created from this template, one for each cpm-filter entry that refers to the policer template.</p>
Context	acl policers system-cpu-policer name <i>string</i> entry-specific <i>boolean</i>
Tree	entry-specific
Default	false
Configurable	True
Platforms	Supported on all platforms

max-packet-burst *number*

Description	The maximum depth of the policer bucket in number of packets
Context	acl policers system-cpu-policer name <i>string</i> max-packet-burst <i>number</i>
Tree	max-packet-burst
Range	16 to 4000000
Default	16
Configurable	True
Platforms	Supported on all platforms

peak-packet-rate *number*

Description	The maximum number of packets per second (bucket empty/fill rate)
Context	acl policers system-cpu-policer name <i>string</i> peak-packet-rate <i>number</i>
Tree	peak-packet-rate
Range	1 to 4000000
Configurable	True
Platforms	Supported on all platforms

statistics

Description	Container for system CPU policer statistics None of these statistics are populated if the policer is configured as entry-specific=true.
Context	acl policers system-cpu-policer name <i>string</i> statistics
Tree	statistics
Configurable	False
Platforms	Supported on all platforms

conforming-octets *number*

Description	The number of bytes that were considered conforming by the policer. The byte count includes 18 bytes of Ethernet overhead for every IP packet.
Context	acl policers system-cpu-policer name <i>string</i> statistics conforming-octets <i>number</i>
Tree	conforming-octets
Default	0
Configurable	False
Platforms	Supported on all platforms

conforming-packets *number*

Description	The number of packets (actually Ethernet frames) that were considered conforming by the policer
Context	acl policers system-cpu-policer name <i>string</i> statistics conforming-packets <i>number</i>
Tree	conforming-packets

Default	0
Configurable	False
Platforms	Supported on all platforms

exceeding-octets *number*

Description	The number of bytes that were considered exceeding by the policer. The byte count includes 18 bytes of Ethernet overhead for every IP packet.
Context	acl policers system-cpu-policer name <i>string</i> statistics exceeding-octets number
Tree	exceeding-octets
Default	0
Configurable	False
Platforms	Supported on all platforms

exceeding-packets *number*

Description	The number of packets (actually Ethernet frames) that were considered exceeding by the policer
Context	acl policers system-cpu-policer name <i>string</i> statistics exceeding-packets number
Tree	exceeding-packets
Default	0
Configurable	False
Platforms	Supported on all platforms

last-clear *string*

Description	Time of the last clear command that applied to these statistics
Context	acl policers system-cpu-policer name <i>string</i> statistics last-clear <i>string</i>
Tree	last-clear
String Length	20 to 32
Configurable	False
Platforms	Supported on all platforms

tcam-profile *keyword*

Description	Specify the TCAM resource management profile
Context	acl tcam-profile <i>keyword</i>
Tree	tcam-profile
Options	<ul style="list-style-type: none">• default Default allocation that provides twice as many resources to ingress ACLs as egress ACLs• ipv4-egress-scaled Alternate allocation that provides more resources to IPv4 egress ACLs than any other application• acl-mfc-ipv4-only Alternate allocation that provides maximum entries for IPv4 ACLs and IPv4 MFC policies and provides no space for MAC ACLs, IPv6 ACLs or IPv6 MFC policies
Configurable	True
Platforms	7220 IXR-D4, 7220 IXR-D5

4 bfd

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bfd
+ micro-bfd-sessions
+ lag-interface name reference
+ admin-state keyword
+ desired-minimum-transmit-interval number
+ detection-multiplier number
+ local-address (ipv4-address | ipv6-address)
- member-interface name string
- active-receive-interval number
- active-transmit-interval number
- async
- last-clear string
- last-packet-received string
- last-packet-transmitted string
- received-errored-packets number
- received-packets number
- transmitted-packets number
- up-transitions number
- failure-transitions number
- last-failure-time string
- last-state-transition string
- local-diagnostic-code keyword
- local-discriminator number
- remote-control-plane-independent boolean
- remote-diagnostic-code keyword
- remote-discriminator number
- remote-minimum-receive-interval number
- remote-multiplier number
- remote-session-state keyword
- session-state keyword
+ remote-address (ipv4-address | ipv6-address)
+ required-minimum-receive number
- network-instance name string
- peer local-discriminator number
- active-receive-interval number
- active-transmit-interval number
- async
- last-clear string
- last-packet-received string
- last-packet-transmitted string
- received-errored-packets number
- received-packets number
- transmitted-packets number
- up-transitions number
- failure-transitions number
- ipv4-unnumbered-interface string
- ipv6-link-local-interface string
- last-failure-time string
- last-state-transition string
- local-address (ipv4-address | ipv6-address)
- local-diagnostic-code keyword
- oper-state keyword
- remote-address (ipv4-address | ipv6-address)
- remote-control-plane-independent boolean
- remote-diagnostic-code keyword
- remote-discriminator number

```

```
- remote-minimum-receive-interval number
- remote-multiplier number
- remote-session-state keyword
- session-state keyword
- sr-policy-endpoint (ipv4-address | ipv6-address)
- subscribed-protocols string
- te-policy-name string
- te-policy-protocol-origin keyword
- te-policy-segment-list-index number
- te-policy-segment-list-lsp-index number
- te-policy-type keyword
+ subinterface id string
+ admin-state keyword
+ desired-minimum-transmit-interval number
+ detection-multiplier number
+ max-hop-count number
+ minimum-echo-receive-interval number
+ required-minimum-receive number
- total-bfd-sessions number
- total-unmatched-bfd-packets number
```

4.1 bfd Descriptions

bfd

Description	Context to configure BFD parameters and report BFD sessions state
Context	bfd
Tree	bfd
Configurable	True
Platforms	Supported on all platforms

micro-bfd-sessions

Description	Context to configure micro-BFD session parameters and report sessions state
Context	bfd micro-bfd-sessions
Tree	micro-bfd-sessions
Configurable	True
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

lag-interface [name reference](#)

Description	List of interface references to associate a micro-BFD session config and state
Context	bfd micro-bfd-sessions lag-interface name reference
Tree	lag-interface
Configurable	True
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

name [reference](#)

Description	Reference ID for associated lag interface Example: lag1 (Reference Interface lag1).
Context	bfd micro-bfd-sessions lag-interface name reference

Reference	interface name <i>string</i>
Configurable	True
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

admin-state *keyword*

Description	Administratively enable or disable BFD for this subinterface
Context	bfd micro-bfd-sessions lag-interface name <i>reference</i> admin-state <i>keyword</i>
Tree	admin-state
Default	disable
Options	<ul style="list-style-type: none"> • enable • disable
Configurable	True
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

desired-minimum-transmit-interval *number*

Description	<p>The minimum interval between transmission of BFD control packets</p> <p>This value is advertised to the peer, however the actual interval used is specified by taking the maximum of desired-minimum-transmit-interval and the value of the remote required-minimum-recv interval value. This value is specified as an integer number of microseconds.</p>
Context	bfd micro-bfd-sessions lag-interface name <i>reference</i> desired-minimum-transmit-interval <i>number</i>
Tree	desired-minimum-transmit-interval
Range	10000 to 100000000
Default	1000000
Units	microseconds
Configurable	True
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

detection-multiplier *number*

Description	The number of packets that must be missed to declare this session as down The detection interval for the BFD session is calculated by multiplying the value of the negotiated transmission interval by this value.
Context	bfd micro-bfd-sessions lag-interface name <i>reference</i> detection-multiplier number
Tree	detection-multiplier
Range	3 to 20
Default	3
Configurable	True
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

local-address (*ipv4-address* | *ipv6-address*)

Description	IP address to be used as source address in BFD packets
Context	bfd micro-bfd-sessions lag-interface name <i>reference</i> local-address (ipv4-address ipv6-address)
Tree	local-address
Configurable	True
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

member-interface *name string*

Description	List of interface references to associate a micro-BFD session config and state
Context	bfd micro-bfd-sessions lag-interface name <i>reference</i> member-interface name string
Tree	member-interface
Configurable	False
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

name *string*

Description	Reference ID for associated interface Example: ethernet-2/1 (Reference Interface ethernet-2/1).
Context	bfd micro-bfd-sessions lag-interface name <i>reference</i> member-interface name <i>string</i>
Configurable	False
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

active-receive-interval *number*

Description	The receive interval currently being used by this BFD session This is the amount of time the BFD state machine expects between receiving BFD messages from the remote peer.
Context	bfd micro-bfd-sessions lag-interface name <i>reference</i> member-interface name <i>string</i> active-receive-interval <i>number</i>
Tree	active-receive-interval
Configurable	False
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

active-transmit-interval *number*

Description	The transmit interval currently being used by this BFD session This is the amount of time the local BFD agent will wait between the sending of BFD messages to the remote peer
Context	bfd micro-bfd-sessions lag-interface name <i>reference</i> member-interface name <i>string</i> active-transmit-interval <i>number</i>
Tree	active-transmit-interval
Configurable	False
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

async

Description	Container for async BFD operational state parameters
Context	bfd micro-bfd-sessions lag-interface name <i>reference</i> member-interface name <i>string async</i>
Tree	async
Configurable	False
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

last-clear *string*

Description	Timestamp of the last time the session counters were cleared.
Context	bfd micro-bfd-sessions lag-interface name <i>reference</i> member-interface name <i>string async last-clear string</i>
Tree	last-clear
String Length	20 to 32
Configurable	False
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

last-packet-received *string*

Description	Timestamp for when the last BFD packet was received for this session
Context	bfd micro-bfd-sessions lag-interface name <i>reference</i> member-interface name <i>string async last-packet-received string</i>
Tree	last-packet-received
String Length	20 to 32
Configurable	False
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

last-packet-transmitted *string*

Description	Timestamp for when the last BFD packet was transmitted for this session
--------------------	---

Context	bfd micro-bfd-sessions lag-interface name <i>reference</i> member-interface name <i>string</i> async last-packet-transmitted <i>string</i>
Tree	last-packet-transmitted
String Length	20 to 32
Configurable	False
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

received-errored-packets *number*

Description	Counter for the number of BFD packets received with BFD level errors
Context	bfd micro-bfd-sessions lag-interface name <i>reference</i> member-interface name <i>string</i> async received-errored-packets <i>number</i>
Tree	received-errored-packets
Default	0
Configurable	False
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

received-packets *number*

Description	Counter for the number of BFD packets received for this session
Context	bfd micro-bfd-sessions lag-interface name <i>reference</i> member-interface name <i>string</i> async received-packets <i>number</i>
Tree	received-packets
Default	0
Configurable	False
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

transmitted-packets *number*

Description	Counter for the number of BFD packets transmitted for this session
Context	bfd micro-bfd-sessions lag-interface name <i>reference</i> member-interface name <i>string</i> async transmitted-packets <i>number</i>
Tree	transmitted-packets

Default	0
Configurable	False
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

up-transitions *number*

Description	Counter for the number of UP transitions for this BFD session
Context	bfd micro-bfd-sessions lag-interface name <i>reference</i> member-interface name <i>string</i> async up-transitions <i>number</i>
Tree	up-transitions
Default	0
Configurable	False
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

failure-transitions *number*

Description	The number of times that the BFD session has transitioned out of the up state
Context	bfd micro-bfd-sessions lag-interface name <i>reference</i> member-interface name <i>string</i> failure-transitions <i>number</i>
Tree	failure-transitions
Configurable	False
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

last-failure-time *string*

Description	Timestamp of the last BFD session transition out of the up state to down state
Context	bfd micro-bfd-sessions lag-interface name <i>reference</i> member-interface name <i>string</i> last-failure-time <i>string</i>
Tree	last-failure-time
String Length	20 to 32
Configurable	False

Platforms 7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

last-state-transition *string*

Description Timestamp of the last micro-BFD session transition from any state to any state. Time of the session in the current state can be calculated from this value.

Context [bfd micro-bfd-sessions lag-interface name](#) *reference* [member-interface name](#) *string* [last-state-transition](#) *string*

Tree [last-state-transition](#)

String Length 20 to 32

Configurable False

Platforms 7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

local-diagnostic-code *keyword*

Description The local BFD diagnostic code indicating the most recent reason for failure of this BFD session

Context [bfd micro-bfd-sessions lag-interface name](#) *reference* [member-interface name](#) *string* [local-diagnostic-code](#) *keyword*

Tree [local-diagnostic-code](#)

Options

- NO_DIAGNOSTIC
No diagnostic code was specified, or the session has not changed state
- DETECTION_TIMEOUT
The control detection time expired: no BFD packet was received within the required period
- ECHO_FAILED
The BFD echo function failed - echo packets have not been received for the required period of time
- NEIGHBOR_SIGNED_DOWN
The neighbor signaled session down
- FORWARDING_RESET
The forwarding plane in the local system was reset
The remote system cannot rely on the forwarding state of the device specifying this error code.
- PATH_DOWN

Signalling outside of BFD specified that the path underlying this session has failed

- **CONCATENATED_PATH_DOWN**

A segment on the path between source and destination has failed

When a BFD session runs over a series of path segments, this error code indicates that a subsequent path segment (i.e., one in the transmit path between the source and destination of the session) has failed.

- **ADMIN_DOWN**

The BFD session has been administratively disabled by the peer

- **REVERSE_CONCATENATED_PATH_DOWN**

A segment on the reverse path between destination and source has failed

In the case that a BFD session is running over a series of path segments, this error code indicates that a path segment on the reverse path (i.e., in the transmit direction from the destination to the source of the session) has failed.

Configurable

False

Platforms

7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

local-discriminator *number*

Description

BFD session local discriminator

Context

[bfd micro-bfd-sessions lag-interface name](#) *reference* [member-interface name string](#) [local-discriminator number](#)

Tree

[local-discriminator](#)

Configurable

False

Platforms

7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

remote-control-plane-independent *boolean*

Description

Indicates if the remote neighbor has set the control independent flag

Context

[bfd micro-bfd-sessions lag-interface name](#) *reference* [member-interface name string](#) [remote-control-plane-independent boolean](#)

Tree

[remote-control-plane-independent](#)

Configurable

False

Platforms 7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

remote-diagnostic-code *keyword*

Description	The remote BFD diagnostic code indicating the remote system's reason for failure of the BFD session
Context	bfd micro-bfd-sessions lag-interface name <i>reference</i> member-interface name <i>string</i> remote-diagnostic-code <i>keyword</i>
Tree	remote-diagnostic-code
Options	<ul style="list-style-type: none"> • NO_DIAGNOSTIC No diagnostic code was specified, or the session has not changed state • DETECTION_TIMEOUT The control detection time expired: no BFD packet was received within the required period • ECHO_FAILED The BFD echo function failed - echo packets have not been received for the required period of time • NEIGHBOR_SIGNED_DOWN The neighbor signaled session down • FORWARDING_RESET The forwarding plane in the local system was reset The remote system cannot rely on the forwarding state of the device specifying this error code. • PATH_DOWN Signalling outside of BFD specified that the path underlying this session has failed • CONCATENATED_PATH_DOWN A segment on the path between source and destination has failed When a BFD session runs over a series of path segments, this error code indicates that a subsequent path segment (i.e., one in the transmit path between the source and destination of the session) has failed. • ADMIN_DOWN The BFD session has been administratively disabled by the peer • REVERSE_CONCATENATED_PATH_DOWN A segment on the reverse path between destination and source has failed In the case that a BFD session is running over a series of path segments, this error code indicates that a path segment on the reverse path (i.e., in

the transmit direction from the destination to the source of the session) has failed.

Configurable	False
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

remote-discriminator *number*

Description	A unique identifier used by the remote system to identify this BFD session
Context	bfd micro-bfd-sessions lag-interface name <i>reference</i> member-interface name <i>string</i> remote-discriminator number
Tree	remote-discriminator
Configurable	False
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

remote-minimum-receive-interval *number*

Description	The value of the minimum receive interval that was specified by the peer This value references the value in the most recent BFD control packet received from the peer.
Context	bfd micro-bfd-sessions lag-interface name <i>reference</i> member-interface name <i>string</i> remote-minimum-receive-interval number
Tree	remote-minimum-receive-interval
Configurable	False
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

remote-multiplier *number*

Description	The current number of packets that must be missed to declare the session as down The detection interval for the BFD session is calculated by multiplying the value of the negotiated transmission interval by this value.
Context	bfd micro-bfd-sessions lag-interface name <i>reference</i> member-interface name <i>string</i> remote-multiplier number
Tree	remote-multiplier

Configurable	False
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

remote-session-state *keyword*

Description	The reported state of the BFD session according to the remote system This state reflects the last state reported in a BFD control packet.
Context	bfd micro-bfd-sessions lag-interface name <i>reference</i> member-interface name <i>string</i> remote-session-state <i>keyword</i>
Tree	remote-session-state
Options	<ul style="list-style-type: none"> • ADMIN_DOWN The BFD session is administratively disabled • DOWN The BFD session is perceived to be down by the system • INIT The BFD session is perceived to be initialising by the system • UP The BFD session is perceived to be up by the system
Configurable	False
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

session-state *keyword*

Description	The state of the BFD session perceived by the local system
Context	bfd micro-bfd-sessions lag-interface name <i>reference</i> member-interface name <i>string</i> session-state <i>keyword</i>
Tree	session-state
Options	<ul style="list-style-type: none"> • ADMIN_DOWN The BFD session is administratively disabled • DOWN The BFD session is perceived to be down by the system • INIT The BFD session is perceived to be initialising by the system

- UP
The BFD session is perceived to be up by the system

Configurable	False
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

remote-address (*ipv4-address* | *ipv6-address*)

Description	The remote IP address for the far-end of the BFD session This must be the same IP version as the local-address.
Context	bfd micro-bfd-sessions lag-interface name <i>reference</i> remote-address (<i>ipv4-address</i> <i>ipv6-address</i>)
Tree	remote-address
Configurable	True
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

required-minimum-receive *number*

Description	The minimum interval between received BFD control packets that this system should support This value is advertised to the remote peer to indicate the maximum frequency (i.e., minimum inter-packet interval) between BFD control packets that is acceptable to the local system. This value is specified as an integer number of microseconds.
Context	bfd micro-bfd-sessions lag-interface name <i>reference</i> required-minimum-receive number
Tree	required-minimum-receive
Range	10000 to 100000000
Default	1000000
Units	microseconds
Configurable	True
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

network-instance *name string*

Description	network-instance context for BFD session.
Context	bfd network-instance name string
Tree	network-instance
Configurable	False
Platforms	Supported on all platforms

name *string*

Description	A unique name identifying the network instance
Context	bfd network-instance name string
Configurable	False
Platforms	Supported on all platforms

peer local-discriminator *number*

Description	BFD session state related to this peer
Context	bfd network-instance name string peer local-discriminator number
Tree	peer
Configurable	False
Platforms	Supported on all platforms

local-discriminator *number*

Description	BFD session local discriminator
Context	bfd network-instance name string peer local-discriminator number
Configurable	False
Platforms	Supported on all platforms

active-receive-interval *number*

Description	The receive interval currently being used by this BFD session This is the amount of time the BFD state machine expects between receiving BFD messages from the remote peer.
--------------------	--

Context	bfd network-instance name <i>string</i> peer local-discriminator <i>number</i> active-receive-interval <i>number</i>
Tree	active-receive-interval
Configurable	False
Platforms	Supported on all platforms

active-transmit-interval *number*

Description	The transmit interval currently being used by this BFD session This is the amount of time the local BFD agent will wait between the sending of BFD messages to the remote peer
Context	bfd network-instance name <i>string</i> peer local-discriminator <i>number</i> active-transmit-interval <i>number</i>
Tree	active-transmit-interval
Configurable	False
Platforms	Supported on all platforms

async

Description	Container for async BFD operational state parameters
Context	bfd network-instance name <i>string</i> peer local-discriminator <i>number</i> async
Tree	async
Configurable	False
Platforms	Supported on all platforms

last-clear *string*

Description	Timestamp of the last time the session counters were cleared.
Context	bfd network-instance name <i>string</i> peer local-discriminator <i>number</i> async last-clear <i>string</i>
Tree	last-clear
String Length	20 to 32
Configurable	False
Platforms	Supported on all platforms

last-packet-received *string*

Description	Timestamp for when the last BFD packet was received for this session
Context	bfd network-instance name <i>string</i> peer local-discriminator <i>number</i> async last-packet-received <i>string</i>
Tree	last-packet-received
String Length	20 to 32
Configurable	False
Platforms	Supported on all platforms

last-packet-transmitted *string*

Description	Timestamp for when the last BFD packet was transmitted for this session
Context	bfd network-instance name <i>string</i> peer local-discriminator <i>number</i> async last-packet-transmitted <i>string</i>
Tree	last-packet-transmitted
String Length	20 to 32
Configurable	False
Platforms	Supported on all platforms

received-errored-packets *number*

Description	Counter for the number of BFD packets received with BFD level errors
Context	bfd network-instance name <i>string</i> peer local-discriminator <i>number</i> async received-errored-packets <i>number</i>
Tree	received-errored-packets
Default	0
Configurable	False
Platforms	Supported on all platforms

received-packets *number*

Description	Counter for the number of BFD packets received for this session
Context	bfd network-instance name <i>string</i> peer local-discriminator <i>number</i> async received-packets <i>number</i>
Tree	received-packets
Default	0

Configurable	False
Platforms	Supported on all platforms

transmitted-packets *number*

Description	Counter for the number of BFD packets transmitted for this session
Context	bfd network-instance name <i>string</i> peer local-discriminator <i>number</i> async transmitted-packets <i>number</i>
Tree	transmitted-packets
Default	0
Configurable	False
Platforms	Supported on all platforms

up-transitions *number*

Description	Counter for the number of UP transitions for this BFD session
Context	bfd network-instance name <i>string</i> peer local-discriminator <i>number</i> async up-transitions <i>number</i>
Tree	up-transitions
Default	0
Configurable	False
Platforms	Supported on all platforms

failure-transitions *number*

Description	The number of times that the BFD session has transitioned out of the up state
Context	bfd network-instance name <i>string</i> peer local-discriminator <i>number</i> failure-transitions <i>number</i>
Tree	failure-transitions
Configurable	False
Platforms	Supported on all platforms

ipv4-unnumbered-interface *string*

Description	For IPv4 unnumbered sessions only, indicates the local interface with which the session is associated.
--------------------	--

Context	bfd network-instance name <i>string</i> peer local-discriminator <i>number</i> ipv4-unnumbered-interface <i>string</i>
Tree	ipv4-unnumbered-interface
Configurable	False
Platforms	Supported on all platforms

ipv6-link-local-interface *string*

Description	For IPv6 link local sessions only, indicates the local interface with which the session is associated.
Context	bfd network-instance name <i>string</i> peer local-discriminator <i>number</i> ipv6-link-local-interface <i>string</i>
Tree	ipv6-link-local-interface
Configurable	False
Platforms	Supported on all platforms

last-failure-time *string*

Description	Timestamp of the last BFD session transition out of the up state to down state
Context	bfd network-instance name <i>string</i> peer local-discriminator <i>number</i> last-failure-time <i>string</i>
Tree	last-failure-time
String Length	20 to 32
Configurable	False
Platforms	Supported on all platforms

last-state-transition *string*

Description	Timestamp of the last BFD session transition from any state to any state Time of the session in the current state can be calculated from this value.
Context	bfd network-instance name <i>string</i> peer local-discriminator <i>number</i> last-state-transition <i>string</i>
Tree	last-state-transition
String Length	20 to 32
Configurable	False
Platforms	Supported on all platforms

local-address (*ipv4-address* | *ipv6-address*)

Description	IP address to be used as source address in BFD packets
Context	bfd network-instance name <i>string</i> peer local-discriminator <i>number</i> local-address (<i>ipv4-address</i> <i>ipv6-address</i>)
Tree	local-address
Configurable	False
Platforms	Supported on all platforms

local-diagnostic-code *keyword*

Description	The local BFD diagnostic code indicating the most recent reason for failure of this BFD session
Context	bfd network-instance name <i>string</i> peer local-discriminator <i>number</i> local-diagnostic-code <i>keyword</i>
Tree	local-diagnostic-code
Options	<ul style="list-style-type: none"> • NO_DIAGNOSTIC No diagnostic code was specified, or the session has not changed state • DETECTION_TIMEOUT The control detection time expired: no BFD packet was received within the required period • ECHO_FAILED The BFD echo function failed - echo packets have not been received for the required period of time • NEIGHBOR_SIGNED_DOWN The neighbor signaled session down • FORWARDING_RESET The forwarding plane in the local system was reset The remote system cannot rely on the forwarding state of the device specifying this error code. • PATH_DOWN Signalling outside of BFD specified that the path underlying this session has failed • CONCATENATED_PATH_DOWN A segment on the path between source and destination has failed When a BFD session runs over a series of path segments, this error code indicates that a subsequent path segment (i.e., one in the transmit path between the source and destination of the session) has failed.

- ADMIN_DOWN
The BFD session has been administratively disabled by the peer
- REVERSE_CONCATENATED_PATH_DOWN
A segment on the reverse path between destination and source has failed
In the case that a BFD session is running over a series of path segments, this error code indicates that a path segment on the reverse path (i.e., in the transmit direction from the destination to the source of the session) has failed.

Configurable

False

Platforms

Supported on all platforms

oper-state keyword**Description**

Details the operational state of the session

Context[bfd network-instance name](#) *string* [peer local-discriminator](#) *number* [oper-state keyword](#)**Tree**[oper-state](#)**Options**

- up
Component or process is operational
- down
Component or process is not operational
- empty
Component slot is empty
- downloading
Component is downloading image into memory
- booting
Component is booting downloaded image
- starting
Component image operational, application processes starting
- failed
Component or process has failed
- synchronizing
Component is currently being synchronized
- upgrading
Component is currently being upgraded
- low-power
Component is offline due to insufficient system power

- degraded
Component or process is in a degraded state
- warm-reboot
Component or process is currently warm rebooting
This state is set during a warm reboot immediately following initiation of the reboot, continuing after startup until the system has completed audit. In this state the system will not accept configuration changes.
- waiting
Component or process is currently waiting
This state can be set by event handler when the reinvoke-with-delay action is used, and indicates that the event handler is waiting for the provided delay before reinvoking the instance.

Configurable	False
Platforms	Supported on all platforms

remote-address (*ipv4-address* | *ipv6-address*)

Description	The remote IP address for the far-end of the BFD session This must be the same IP version as the local-address.
Context	bfd network-instance name <i>string</i> peer local-discriminator <i>number</i> remote-address (<i>ipv4-address</i> <i>ipv6-address</i>)
Tree	remote-address
Configurable	False
Platforms	Supported on all platforms

remote-control-plane-independent *boolean*

Description	Indicates if the remote neighbor has set the control independent flag
Context	bfd network-instance name <i>string</i> peer local-discriminator <i>number</i> remote-control-plane-independent <i>boolean</i>
Tree	remote-control-plane-independent
Configurable	False
Platforms	Supported on all platforms

remote-diagnostic-code *keyword*

Description	The remote BFD diagnostic code indicating the remote system's reason for failure of the BFD session
--------------------	---

Context	<code>bfd network-instance name string peer local-discriminator number remote-diagnostic-code keyword</code>
Tree	<code>remote-diagnostic-code</code>
Options	<ul style="list-style-type: none"> • NO_DIAGNOSTIC No diagnostic code was specified, or the session has not changed state • DETECTION_TIMEOUT The control detection time expired: no BFD packet was received within the required period • ECHO_FAILED The BFD echo function failed - echo packets have not been received for the required period of time • NEIGHBOR_SIGNED_DOWN The neighbor signaled session down • FORWARDING_RESET The forwarding plane in the local system was reset The remote system cannot rely on the forwarding state of the device specifying this error code. • PATH_DOWN Signalling outside of BFD specified that the path underlying this session has failed • CONCATENATED_PATH_DOWN A segment on the path between source and destination has failed When a BFD session runs over a series of path segments, this error code indicates that a subsequent path segment (i.e., one in the transmit path between the source and destination of the session) has failed. • ADMIN_DOWN The BFD session has been administratively disabled by the peer • REVERSE_CONCATENATED_PATH_DOWN A segment on the reverse path between destination and source has failed In the case that a BFD session is running over a series of path segments, this error code indicates that a path segment on the reverse path (i.e., in the transmit direction from the destination to the source of the session) has failed.
Configurable	False
Platforms	Supported on all platforms

remote-discriminator *number*

Description	A unique identifier used by the remote system to identify this BFD session
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Context	bfd network-instance name <i>string</i> peer local-discriminator <i>number</i> remote-discriminator <i>number</i>
Tree	remote-discriminator
Configurable	False
Platforms	Supported on all platforms

remote-minimum-receive-interval *number*

Description	The value of the minimum receive interval that was specified by the peer This value references the value in the most recent BFD control packet received from the peer.
Context	bfd network-instance name <i>string</i> peer local-discriminator <i>number</i> remote-minimum-receive-interval <i>number</i>
Tree	remote-minimum-receive-interval
Configurable	False
Platforms	Supported on all platforms

remote-multiplier *number*

Description	The current number of packets that must be missed to declare the session as down The detection interval for the BFD session is calculated by multiplying the value of the negotiated transmission interval by this value.
Context	bfd network-instance name <i>string</i> peer local-discriminator <i>number</i> remote-multiplier <i>number</i>
Tree	remote-multiplier
Configurable	False
Platforms	Supported on all platforms

remote-session-state *keyword*

Description	The reported state of the BFD session according to the remote system This state reflects the last state reported in a BFD control packet.
Context	bfd network-instance name <i>string</i> peer local-discriminator <i>number</i> remote-session-state <i>keyword</i>
Tree	remote-session-state
Options	<ul style="list-style-type: none"> ADMIN_DOWN The BFD session is administratively disabled

- DOWN
The BFD session is perceived to be down by the system
- INIT
The BFD session is perceived to be initialising by the system
- UP
The BFD session is perceived to be up by the system

Configurable	False
Platforms	Supported on all platforms

session-state *keyword*

Description	The state of the BFD session perceived by the local system
Context	bfd network-instance name <i>string</i> peer local-discriminator <i>number</i> session-state <i>keyword</i>
Tree	session-state
Options	<ul style="list-style-type: none"> • ADMIN_DOWN The BFD session is administratively disabled • DOWN The BFD session is perceived to be down by the system • INIT The BFD session is perceived to be initialising by the system • UP The BFD session is perceived to be up by the system
Configurable	False
Platforms	Supported on all platforms

sr-policy-endpoint (*ipv4-address* | *ipv6-address*)

Description	SR-Policy endpoint IP address associated with this seamless BFD session
Context	bfd network-instance name <i>string</i> peer local-discriminator <i>number</i> sr-policy-endpoint (<i>ipv4-address</i> <i>ipv6-address</i>)
Tree	sr-policy-endpoint
Configurable	False
Platforms	Supported on all platforms

subscribed-protocols *string*

Description	Indicates the set of protocols that currently use this BFD session for liveliness detection
Context	bfd network-instance name <i>string</i> peer local-discriminator <i>number</i> subscribed-protocols <i>string</i>
Tree	subscribed-protocols
Configurable	False
Platforms	Supported on all platforms

te-policy-name *string*

Description	Name of the TE-Policy associated with this seamless BFD session
Context	bfd network-instance name <i>string</i> peer local-discriminator <i>number</i> te-policy-name <i>string</i>
Tree	te-policy-name
Configurable	False
Platforms	Supported on all platforms

te-policy-protocol-origin *keyword*

Description	Indicates the protocol type used to originate the TE-Policy associated with this seamless BFD session
Context	bfd network-instance name <i>string</i> peer local-discriminator <i>number</i> te-policy-protocol-origin <i>keyword</i>
Tree	te-policy-protocol-origin
Options	<ul style="list-style-type: none"> • LOCAL The associated TE-Policy originated from local configuration • PCEP The associated TE-Policy from a PCEP controller
Configurable	False
Platforms	Supported on all platforms

te-policy-segment-list-index *number*

Description	Indicates the segment list index of the TE-Policy associated with this seamless BFD session
--------------------	---

Context	bfd network-instance name <i>string</i> peer local-discriminator <i>number</i> te-policy-segment-list-index <i>number</i>
Tree	te-policy-segment-list-index
Configurable	False
Platforms	Supported on all platforms

te-policy-segment-list-lsp-index *number*

Description	Indicates the lsp index for the segment list of the TE-Policy associated with this seamless BFD session
Context	bfd network-instance name <i>string</i> peer local-discriminator <i>number</i> te-policy-segment-list-lsp-index <i>number</i>
Tree	te-policy-segment-list-lsp-index
Configurable	False
Platforms	Supported on all platforms

te-policy-type *keyword*

Description	Type of TE-Policy associated with this seamless BFD session
Context	bfd network-instance name <i>string</i> peer local-discriminator <i>number</i> te-policy-type <i>keyword</i>
Tree	te-policy-type
Options	<ul style="list-style-type: none"> • sr-mpls-colored • sr-mpls-uncolored
Configurable	False
Platforms	Supported on all platforms

subinterface [id](#) *string*

Description	List of subinterface references to associating BFD config and state
Context	bfd subinterface id <i>string</i>
Tree	subinterface
Configurable	True
Platforms	Supported on all platforms

id string

Description	Reference ID for associated subinterface Example: ethernet-2/1.100 (Reference Interface ethernet-2/1, subinterface 100).
Context	bfd subinterface id string
String Length	5 to 25
Configurable	True
Platforms	Supported on all platforms

admin-state keyword

Description	Administratively enable or disable BFD for this subinterface
Context	bfd subinterface id string admin-state keyword
Tree	admin-state
Default	disable
Options	<ul style="list-style-type: none"> • enable • disable
Configurable	True
Platforms	Supported on all platforms

desired-minimum-transmit-interval number

Description	<p>The minimum interval between transmission of BFD control packets</p> <p>This value is advertised to the peer, however the actual interval used is specified by taking the maximum of desired-minimum-transmit-interval and the value of the remote required-minimum-receive interval value. This value is specified as an integer number of microseconds.</p>
Context	bfd subinterface id string desired-minimum-transmit-interval number
Tree	desired-minimum-transmit-interval
Range	10000 to 100000000
Default	1000000
Units	microseconds
Configurable	True
Platforms	Supported on all platforms

detection-multiplier *number*

Description	The number of packets that must be missed to declare this session as down The detection interval for the BFD session is calculated by multiplying the value of the negotiated transmission interval by this value.
Context	bfd subinterface id <i>string</i> detection-multiplier <i>number</i>
Tree	detection-multiplier
Range	3 to 20
Default	3
Configurable	True
Platforms	Supported on all platforms

max-hop-count *number*

Description	TTL to be used in the BFD IP header for multihop BFD.
Context	bfd subinterface id <i>string</i> max-hop-count <i>number</i>
Tree	max-hop-count
Range	2 to 255
Default	255
Configurable	True
Platforms	Supported on all platforms

minimum-echo-receive-interval *number*

Description	The minimum interval between echo packets the local node can receive Implicitly enabled echo mode on the associated interface.
Context	bfd subinterface id <i>string</i> minimum-echo-receive-interval <i>number</i>
Tree	minimum-echo-receive-interval
Range	0 250000 to 100000000
Default	0
Configurable	True
Platforms	Supported on all platforms

required-minimum-receive *number*

Description	The minimum interval between received BFD control packets that this system should support This value is advertised to the remote peer to indicate the maximum frequency (i.e., minimum inter-packet interval) between BFD control packets that is acceptable to the local system. This value is specified as an integer number of microseconds.
Context	bfd subinterface id <i>string</i> required-minimum-receive <i>number</i>
Tree	required-minimum-receive
Range	10000 to 100000000
Default	1000000
Units	microseconds
Configurable	True
Platforms	Supported on all platforms

total-bfd-sessions *number*

Description	Counter for the total number of BFD sessions
Context	bfd total-bfd-sessions <i>number</i>
Tree	total-bfd-sessions
Default	0
Configurable	False
Platforms	Supported on all platforms

total-unmatched-bfd-packets *number*

Description	Counter for the total number of BFD packets received not matching a BFD session
Context	bfd total-unmatched-bfd-packets <i>number</i>
Tree	total-unmatched-bfd-packets
Default	0
Configurable	False
Platforms	Supported on all platforms

5 interface

```

interface name string
- adapter
  - model-number string
  - type keyword
  - vendor-manufacture-date string
  - vendor-oui string
  - vendor-part-number string
  - vendor-serial-number string
+ admin-state keyword
+ breakout-mode
  + breakout-port-speed keyword
  + num-breakout-ports keyword
+ description string
+ ethernet
  + aggregate-id reference
  + auto-negotiate boolean
  + dac-link-training boolean
  + duplex-mode keyword
  + flow-control
    + receive boolean
  + forwarding-viable boolean
  + hold-time
    + down number
    - down-expires string
    + up number
    - up-expires string
  - hw-mac-address string
  + l2cp-transparency
    + dot1x
      - oper-rule keyword
      + tunnel boolean
    + lacp
      - oper-rule keyword
      + tunnel boolean
    + lldp
      - oper-rule keyword
      + tunnel boolean
    + ptp
      - oper-rule keyword
      + tunnel boolean
  + tunnel-all-l2cp boolean
  + xstp
    - oper-rule keyword
    + tunnel boolean
+ lacp-port-priority number
+ mac-address string
- physical-medium keyword
+ port-speed keyword
+ ptp-asymmetry number
+ reload-delay number
- reload-delay-expires string
+ standby-signaling keyword
- statistics
  - in-1024b-to-1518b-frames number
  - in-128b-to-255b-frames number
  - in-1519b-or-longer-frames number

```

```

- in-256b-to-511b-frames number
- in-512b-to-1023b-frames number
- in-64b-frames number
- in-65b-to-127b-frames number
- in-crc-error-frames number
- in-fragment-frames number
- in-jabber-frames number
- in-mac-pause-frames number
- in-oversize-frames number
- last-clear string
- out-1024b-to-1518b-frames number
- out-128b-to-255b-frames number
- out-1519b-or-longer-frames number
- out-256b-to-511b-frames number
- out-512b-to-1023b-frames number
- out-64b-frames number
- out-65b-to-127b-frames number
- out-mac-pause-frames number
+ storm-control
+ broadcast-rate number
+ multicast-rate number
- operational-broadcast-rate number
- operational-multicast-rate number
- operational-unknown-unicast-rate number
+ units keyword
+ unknown-unicast-rate number
+ synce
+ ssm
+ admin-state keyword
- forwarding-complex reference
- ifindex number
+ lag
+ lacp
+ admin-key number
+ interval keyword
+ lacp-mode keyword
+ system-id-mac string
+ system-priority number
+ lacp-fallback-mode keyword
+ lacp-fallback-timeout number
- lag-speed number
+ lag-type keyword
- member name reference
- lacp
- activity keyword
- aggregatable boolean
- collecting boolean
- distributing boolean
- lacp-port-priority number
- oper-key number
- partner-id string
- partner-key number
- partner-port-num number
- port-num number
- statistics
- lacp-errors number
- lacp-in-pkts number
- lacp-out-pkts number
- lacp-rx-errors number
- lacp-tx-errors number
- lacp-unknown-errors number
- synchronization keyword
- system-id string
- timeout keyword

```

```

- last-change string
- microbfd-enabled boolean
- oper-down-reason keyword
- oper-state keyword
+ member-speed keyword
+ min-links number
- last-change string
- linecard reference
+ loopback-mode keyword
+ mtu number
- oper-down-reason keyword
- oper-state keyword
+ p4rt
+ id number
- parent-id number
- packet-link-qualification
- result id string
- end-time string
- expected-rate number
- oper-state keyword
- packets-dropped number
- packets-error number
- packets-received number
- packets-sent number
- qualification-rate number
- start-time string
- status keyword
- status-message string
- phy-group-members string
- physical-channel reference
+ sflow
+ admin-state keyword
- statistics
- carrier-transitions number
- in-broadcast-packets number
- in-discarded-packets number
- in-error-packets number
- in-fcs-error-packets number
- in-multicast-packets number
- in-octets number
- in-packets number
- in-unicast-packets number
- last-clear string
- out-broadcast-packets number
- out-discarded-packets number
- out-error-packets number
- out-mirror-octets number
- out-mirror-packets number
- out-multicast-packets number
- out-octets number
- out-packets number
- out-unicast-packets number
+ subinterface index number
+ admin-state keyword
+ anycast-gw
+ anycast-gw-mac string
- anycast-gw-mac-origin keyword
+ virtual-router-id number
+ bridge-table
+ discard-unknown-src-mac boolean
+ mac-duplication
+ action keyword
- duplicate-entries
- mac address string

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    - dup-detect-time string
    - hold-down-time-remaining (keyword | number)
+ mac-learning
+ admin-state keyword
+ aging
  + admin-state keyword
  - learnt-entries
    - mac address string
    - aging (number | keyword)
    - last-update string
+ mac-limit
+ maximum-entries number
+ warning-threshold-pct number
- mac-table
  - mac address string
  - failed-slots number
  - last-update string
  - not-programmed-reason keyword
  - type keyword
- statistics
  - active-entries number
  - failed-entries number
  - mac-type type keyword
  - active-entries number
  - failed-entries number
  - total-entries number
  - total-entries number
+ description string
- ethernet-segment-association
  - designated-forwarder boolean
  - es-managed boolean
  - ethernet-segment string
- ifindex number
+ ip-mtu number
+ ipv4
+ address ip-prefix string
+ anycast-gw boolean
- origin keyword
+ primary
- status keyword
+ vrrp
  + vrrp-group virtual-router-id number
  + accept-mode boolean
  + admin-state keyword
  + advertise-interval number
  + authentication
    + keychain reference
  - current-master (ipv4-address | ipv6-address)
  + init-delay number
  + interface-tracking
    + track-interface interface reference
    + priority-decrement number
  - last-transition string
  + master-inherit-interval boolean
  - oper-down-reason keyword
  - oper-interval number
  - oper-state keyword
  - operational-priority number
  - owner boolean
  + preempt boolean
  + preempt-delay number
  - priority number
  - state identityref
  + statistics

```

```

- advertisements-discarded-address-mismatch number
- advertisements-discarded-authfail number
- advertisements-discarded-authtype-mismatch number
- advertisements-discarded-interval number
- advertisements-discarded-length number
- advertisements-discarded-total number
- advertisements-discarded-ttl number
- advertisements-discarded-version-mismatch number
- advertisements-interval-error number
- advertisements-received number
- advertisements-sent number
- priority-zero-packets-received number
- priority-zero-packets-sent number
+ version number
+ virtual-address (ipv4-address | ipv6-address)
- virtual-mac string
+ admin-state keyword
+ allow-directed-broadcast boolean
+ arp
+ debug keyword
+ duplicate-address-detection boolean
+ evpn
+ advertise route-type keyword
+ internal-tags
+ set-tag-set reference
+ host-route
+ populate route-type keyword
+ datapath-programming boolean
+ internal-tags
+ set-tag-set reference
+ learn-unsolicited boolean
+ neighbor ipv4-address string
- datapath-programming
- last-failed-complexes string
- status keyword
- expiration-time string
+ link-layer-address string
- origin keyword
+ proxy-arp boolean
+ timeout number
+ virtual-ipv4-discovery
+ address ipv4-address string
+ allowed-macs string
+ probe-bridged-subinterfaces string
+ probe-interval number
- statistics
- out-probe-packets number
- statistics
- out-total-probe-packets number
+ dhcp-client
+ trace-options
+ trace keyword
+ dhcp-relay
+ admin-state keyword
- dns-resolution
- server domain string
- last-update string
- resolved-ip-address (ipv4-address | ipv6-address)
+ gi-address string
+ network-instance reference
- oper-down-reason keyword
- oper-state keyword
+ option keyword
+ server (ipv4-address | domain-name)

```

```

- statistics
- client-packets-discarded number
- client-packets-received number
- client-packets-relayed number
- server-packets-discarded number
- server-packets-received number
- server-packets-relayed number
+ trace-options
+ trace keyword
+ use-gi-addr-as-src-ip-addr boolean
+ dhcp-server
+ admin-state keyword
- oper-state keyword
- statistics
- in-discarded-packets number
- in-error-packets number
- in-forwarded-octets number
- in-forwarded-packets number
- in-matched-ra-packets number
- in-octets number
- in-packets number
- in-terminated-octets number
- in-terminated-packets number
- last-clear string
- out-discarded-packets number
- out-error-packets number
- out-forwarded-octets number
- out-forwarded-packets number
- out-octets number
- out-originated-octets number
- out-originated-packets number
- out-packets number
+ ipv6
+ address ip-prefix string
+ anycast-gw boolean
- origin keyword
+ primary
- status keyword
+ type keyword
+ vrrp
+ vrrp-group virtual-router-id number
+ accept-mode boolean
+ admin-state keyword
+ advertise-interval number
+ authentication
+ keychain reference
- current-master (ipv4-address | ipv6-address)
+ init-delay number
+ interface-tracking
+ track-interface interface reference
+ priority-decrement number
- last-transition string
+ master-inherit-interval boolean
- oper-down-reason keyword
- oper-interval number
- oper-state keyword
- operational-priority number
- owner boolean
+ preempt boolean
+ preempt-delay number
+ priority number
- state identityref
+ statistics
- advertisements-discarded-address-mismatch number

```

```

- advertisements-discarded-authfail number
- advertisements-discarded-authtype-mismatch number
- advertisements-discarded-interval number
- advertisements-discarded-length number
- advertisements-discarded-total number
- advertisements-discarded-ttl number
- advertisements-discarded-version-mismatch number
- advertisements-interval-error number
- advertisements-received number
- advertisements-sent number
- priority-zero-packets-received number
- priority-zero-packets-sent number
+ version number
+ virtual-address string
- virtual-link-local-address string
- virtual-mac string
+ admin-state keyword
+ dhcp-client
+ trace-options
+ trace keyword
+ dhcp-relay
+ admin-state keyword
- dns-resolution
- server domain string
- last-update string
- resolved-ip-address (ipv4-address | ipv6-address)
+ network-instance reference
- oper-down-reason keyword
- oper-state keyword
+ option keyword
+ server (ipv6-address | domain-name)
+ source-address string
- statistics
- client-packets-discarded number
- client-packets-received number
- client-packets-relayed number
- server-packets-discarded number
- server-packets-received number
- server-packets-relayed number
+ trace-options
+ trace keyword
+ dhcpv6-server
+ admin-state keyword
- oper-state keyword
+ neighbor-discovery
+ debug keyword
+ duplicate-address-detection boolean
+ evpn
+ advertise route-type keyword
+ internal-tags
+ set-tag-set reference
+ host-route
+ populate route-type keyword
+ datapath-programming boolean
+ internal-tags
+ set-tag-set reference
+ learn-unsolicited keyword
+ limit
+ log-only boolean
+ max-entries number
+ warning-threshold-pct number
+ neighbor ipv6-address string
- current-state keyword
- datapath-programming

```

```

    - last-failed-complexes string
    - status keyword
    - is-router boolean
  + link-layer-address string
  - next-state-time string
  - origin keyword
+ proxy-nd boolean
+ reachable-time number
+ stale-time number
+ virtual-ipv6-discovery
  + address ipv6-address string
  + allowed-macs string
  + probe-bridged-subinterfaces string
  + probe-interval number
  - statistics
    - out-probe-packets number
  - statistics
    - out-total-probe-packets number
+ router-advertisement
+ debug keyword
+ router-role
  + admin-state keyword
  + current-hop-limit number
  + ip-mtu number
  + managed-configuration-flag boolean
  + max-advertisement-interval number
  + min-advertisement-interval number
  + other-configuration-flag boolean
  + prefix ipv6-prefix string
  + autonomous-flag boolean
  + on-link-flag boolean
  + preferred-lifetime (keyword | number)
  + valid-lifetime (keyword | number)
  + reachable-time number
  + retransmit-time number
  + router-lifetime number
- statistics
  - in-discarded-packets number
  - in-error-packets number
  - in-forwarded-octets number
  - in-forwarded-packets number
  - in-matched-ra-packets number
  - in-octets number
  - in-packets number
  - in-terminated-octets number
  - in-terminated-packets number
  - last-clear string
  - out-discarded-packets number
  - out-error-packets number
  - out-forwarded-octets number
  - out-forwarded-packets number
  - out-octets number
  - out-originated-octets number
  - out-originated-packets number
  - out-packets number
+ l2-mtu number
- last-change string
+ local-mirror-destination
  + admin-state keyword
  - oper-state keyword
- mpls
  - statistics
    - in-discarded-packets number
    - in-error-packets number

```



```

- in-forwarded-octets number
- in-forwarded-packets number
- in-matched-ra-packets number
- in-octets number
- in-packets number
- in-terminated-octets number
- in-terminated-packets number
- last-clear string
- out-discarded-packets number
- out-error-packets number
- out-forwarded-octets number
- out-forwarded-packets number
- out-octets number
- out-originated-octets number
- out-originated-packets number
- out-packets number
+ mpls-mtu number
- name string
- oper-down-reason keyword
- oper-state keyword
+ ra-guard
+ policy reference
+ vlan-list vlan-id number
- statistics
- in-discarded-packets number
- in-error-packets number
- in-forwarded-octets number
- in-forwarded-packets number
- in-matched-ra-packets number
- in-octets number
- in-packets number
- in-terminated-octets number
- in-terminated-packets number
- last-clear string
- out-discarded-packets number
- out-error-packets number
- out-forwarded-octets number
- out-forwarded-packets number
- out-octets number
- out-originated-octets number
- out-originated-packets number
- out-packets number
+ type identityref
+ unidirectional-link-delay
- last-reported-dynamic-delay (number | keyword)
+ static-delay (number | keyword)
+ vlan
+ encap
+ double-tagged
+ inner-vlan-id (number | keyword)
+ outer-vlan-id (number | keyword)
+ single-tagged
+ vlan-id (number | keyword)
+ single-tagged-range
+ low-vlan-id range-low-vlan-id number
+ high-vlan-id number
+ untagged
+ tpid identityref
- traffic-rate
- in-bps number
- out-bps number
+ transceiver
- channel index number
- input-power

```

```

- high-alarm-condition boolean
- high-alarm-threshold decimal-number
- high-warning-condition boolean
- high-warning-threshold decimal-number
- latest-value decimal-number
- low-alarm-condition boolean
- low-alarm-threshold decimal-number
- low-warning-condition boolean
- low-warning-threshold decimal-number
- laser-bias-current
- high-alarm-condition boolean
- high-alarm-threshold decimal-number
- high-warning-condition boolean
- high-warning-threshold decimal-number
- latest-value decimal-number
- low-alarm-condition boolean
- low-alarm-threshold decimal-number
- low-warning-condition boolean
- low-warning-threshold decimal-number
- output-power
- high-alarm-condition boolean
- high-alarm-threshold decimal-number
- high-warning-condition boolean
- high-warning-threshold decimal-number
- latest-value decimal-number
- low-alarm-condition boolean
- low-alarm-threshold decimal-number
- low-warning-condition boolean
- low-warning-threshold decimal-number
- wavelength decimal-number
- connector-type keyword
- date-code string
+ ddm-events boolean
- ethernet-pmd string
- fault-condition boolean
- form-factor keyword
+ forward-error-correction keyword
- healthz
- last-unhealthy string
- status keyword
- unhealthy-count number
- input-power
- high-alarm-condition boolean
- high-alarm-threshold decimal-number
- high-warning-condition boolean
- high-warning-threshold decimal-number
- latest-value decimal-number
- low-alarm-condition boolean
- low-alarm-threshold decimal-number
- low-warning-condition boolean
- low-warning-threshold decimal-number
- laser-bias-current
- high-alarm-condition boolean
- high-alarm-threshold decimal-number
- high-warning-condition boolean
- high-warning-threshold decimal-number
- latest-value decimal-number
- low-alarm-condition boolean
- low-alarm-threshold decimal-number
- low-warning-condition boolean
- low-warning-threshold decimal-number
- oper-down-reason keyword
- oper-state keyword
- output-power

```

```
- high-alarm-condition boolean
- high-alarm-threshold decimal-number
- high-warning-condition boolean
- high-warning-threshold decimal-number
- latest-value decimal-number
- low-alarm-condition boolean
- low-alarm-threshold decimal-number
- low-warning-condition boolean
- low-warning-threshold decimal-number
- serial-number string
- temperature
  - high-alarm-condition boolean
  - high-alarm-threshold number
  - high-warning-condition boolean
  - high-warning-threshold number
  - latest-value number
  - low-alarm-condition boolean
  - low-alarm-threshold number
  - low-warning-condition boolean
  - low-warning-threshold number
  - maximum number
  - maximum-time string
+ tx-laser boolean
- vendor string
- vendor-lot-number string
- vendor-part-number string
- vendor-revision string
- voltage
  - high-alarm-condition boolean
  - high-alarm-threshold decimal-number
  - high-warning-condition boolean
  - high-warning-threshold decimal-number
  - latest-value decimal-number
  - low-alarm-condition boolean
  - low-alarm-threshold decimal-number
  - low-warning-condition boolean
  - low-warning-threshold decimal-number
- wavelength decimal-number
+ vlan-tagging boolean
```

5.1 interface Descriptions

interface `name string`

Description	The list of named interfaces on the device
Context	interface name string
Tree	interface
Configurable	True
Platforms	Supported on all platforms

name `string`

Description	<p>The name of the interface</p> <p>Valid options are: irb<N>, N=0..255 lif-<lif_name> enp<bus>s<dev>f<fn>, bus=0..255, dev=0..31, fn=0..7 vhn-<vhn_name> lag<N>, N=1..1000 [note1] lo<N>, N=0..255 mgmt0 mgmt0-standby ethernet-<slot>/<port> ethernet-<slot>/<mda>/<port> system0 sync0</p> <p><lif_name>=Linux interface name <vhn_name>=vhost interface name <slot>=slot number {1,2,3,..} <mda>=mda id {a,b,c,d} <port>=port id {1,2,3,..}</p> <p>[note1] The maximum number of LAGs per platform is as follows: D1: 32 D2-D3: 128 D4-D5: 64 H2-H3: 127 H4-32D: 127 H4: 255 IXR: 128</p>
Context	interface name string
String Length	3 to 20
Configurable	True
Platforms	Supported on all platforms

adapter

Description	State for adapters
Context	interface name string adapter
Tree	adapter
Configurable	False
Platforms	Supported on all platforms

model-number *string*

Description	Model information for the adapter This is the information as read from the EEPROM of the part. The string is expected to contain printable ASCII characters, but unprintable ASCII characters read from the EEPROM are not filtered out.
Context	interface name <i>string</i> adapter model-number <i>string</i>
Tree	model-number
Configurable	False
Platforms	Supported on all platforms

type *keyword*

Description	Type of adapter for the port
Context	interface name <i>string</i> adapter type <i>keyword</i>
Tree	type
Options	<ul style="list-style-type: none"> • unknown • qsfp28-to-sfp+/sfp28 • cfp-to-qsfp28
Configurable	False
Platforms	Supported on all platforms

vendor-manufacture-date *string*

Description	Vendor's date code. This is the information as read from the EEPROM of the part.
Context	interface name <i>string</i> adapter vendor-manufacture-date <i>string</i>
Tree	vendor-manufacture-date
Configurable	False
Platforms	Supported on all platforms

vendor-oui *string*

Description	Vendor's OUI which contains the IEEE company identifier for the vendor This is the information as read from the EEPROM of the part. A value of all zero indicates that the vendor OUI is unspecified.
--------------------	--

Context	interface name <i>string</i> adapter vendor-oui <i>string</i>
Tree	vendor-oui
Configurable	False
Platforms	Supported on all platforms

vendor-part-number *string*

Description	Vendor's part number or product name of the adapter This is the information as read from the EEPROM of the part. An empty string indicates the vendor part number is unspecified. The string is expected to contain printable ASCII characters, but unprintable ASCII characters read from the EEPROM are not filtered out.
Context	interface name <i>string</i> adapter vendor-part-number <i>string</i>
Tree	vendor-part-number
Configurable	False
Platforms	Supported on all platforms

vendor-serial-number *string*

Description	Vendor's serial number of the adapter This is the information as read from the EEPROM of the part. An empty string indicates the vendor serial number is unspecified. The string is expected to contain printable ASCII characters, but unprintable ASCII characters read from the EEPROM are not filtered out.
Context	interface name <i>string</i> adapter vendor-serial-number <i>string</i>
Tree	vendor-serial-number
Configurable	False
Platforms	Supported on all platforms

admin-state *keyword*

Description	The configured, desired state of the interface
Context	interface name <i>string</i> admin-state <i>keyword</i>
Tree	admin-state
Default	enable
Options	<ul style="list-style-type: none"> • enable • disable

Configurable	True
Platforms	Supported on all platforms

breakout-mode

Description

Configuration of breakout options.

7220 D3 ports 3-33: 4x10G and 4x25G 7220 D3L ports 1-31: 4x10G and 4x25G 7220 H3 ports 3-34: 4x10G, 2x100G/4x100G, and 2x200G 7220 H4 ports 1-64: 4x100G and 2x200G 7220 H4-32D ports 1-32: 4x100G and 2x200G 7220 D4 ports 29-32: 4x100G, 4x25G, and 4x10G 7220 D4 ports 9, 23-27: 4x25G and 4x10G 7220 D5 ports 1-32: 4x10G, 4x25G, 2x100G/4x100G, and 2x200G 7250 IXR-6e/10e 60p QSFP28 IMM all ports: 4x25G and 4x10G supported but with port group dependencies (Note 2) 7250 IXR-6e/10e 36p QSFP28 ports 1-24: 4x25G, and 4x10G (Note 4) 7250 IXR-X3b QSFPDD all ports: 4x100G, 3x100G (Note 1), 2x100G, 4x25G, and 4x10G
Note 1: 3x100G is only supported for Digital Coherent Optic transceivers

Note 2: For the following port groupings only the higher numbered port can be configured and enabled for breakout-mode. If the higher numbered port is configured and enabled for breakout-mode, then the lower numbered port cannot be enabled. Groupings are (25,28),(31,34),(37,40) and (n,n+3) and (n+1,n+2) and (n+4,n+5) for n=1,7,13,19,43,49,55.

Note 3: Breakout and 40G is only supported on odd numbered ports. For the QSFP28 four port groupings [1-4], [5-8], [9-12], [13-16], [21-24], [25-28], and [29-32] if either of the odd numbered ports within a group is enabled and configured for 40G, 4x10G, or 4x25G, then the other odd numbered port in the same group may only be enabled if it is configured for one of 40G, 4x10G, or 4x25G (can differ between the odd ports) and neither of the two even numbered ports within the same group can be enabled.

Note 4: For the QSFP28 ports, the following port groups exist [n, n+1, n+2, n+3] for n = 1, 5, 9, 13, 17, 21. Breakout for 4x25G or 4x10G is only supported on ports n+1 and n+3. If port n+1 within the group is configured for breakout and enabled, then port n cannot be enabled. In addition if port n+1 is configured for breakout and enabled and port n+3 is configured without breakout and enabled, then port n+2 may only be configured and enabled with the same speed as port n+3. If port n+3 within the group is configured for breakout and enabled, then port n+2 cannot be enabled. In addition if port n+3 is configured for breakout and enabled and port n+1 is configured without breakout and enabled, then port n may only be configured and enabled with the same speed as port n+1.

Port Groups and auto-configuration of port speed: Manually configured breakout-mode takes precedence over the auto-configured port-speed. This means that configuring a port within a port-group can have a side effect to take down an operational port that had its speed set based on the auto configuration feature. If there is risk of mixing transceiver types within a port group, then it is recommended to always manually configure the ports

Context

[interface name](#) *string* `breakout-mode`

Tree	breakout-mode
Configurable	True
Platforms	7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10e, 7250 IXR-6e, 7250 IXR-X3b

breakout-port-speed *keyword*

Description	The speed of each breakout port
Context	interface name <i>string</i> breakout-mode breakout-port-speed <i>keyword</i>
Tree	breakout-port-speed
Options	<ul style="list-style-type: none"> • 10G • 25G • 50G • 100G • 200G
Configurable	True
Platforms	7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10e, 7250 IXR-6e, 7250 IXR-X3b

num-breakout-ports *keyword*

Description	The number of breakout ports supported by this connector
Context	interface name <i>string</i> breakout-mode num-breakout-ports <i>keyword</i>
Tree	num-breakout-ports
Options	<ul style="list-style-type: none"> • 1 • 2 • 3 • 4 • 8
Configurable	True
Platforms	7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10e, 7250 IXR-6e, 7250 IXR-X3b

description *string*

Description	A user-configured description of the interface
--------------------	--

Context	interface name <i>string</i> description <i>string</i>
Tree	description
String Length	1 to 255
Configurable	True
Platforms	Supported on all platforms

ethernet

Description	Enter the ethernet context
Context	interface name <i>string</i> ethernet
Tree	ethernet
Configurable	True
Platforms	Supported on all platforms

aggregate-id *reference*

Description	lag interface with which this interface is associated
Context	interface name <i>string</i> ethernet aggregate-id <i>reference</i>
Tree	aggregate-id
Reference	interface name <i>string</i>
Configurable	True
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

auto-negotiate *boolean*

Description	When set to true the interface uses auto-negotiation for speed, duplex and flow-control settings. When set to false, the transmission parameters are specified manually.
Context	interface name <i>string</i> ethernet auto-negotiate <i>boolean</i>
Tree	auto-negotiate
Configurable	True
Platforms	7220 IXR-D1

dac-link-training *boolean*

Description	If the system detects that the transceiver is connected to a DAC cable then a true setting enables link training for better link stability. The link training setting must be the same at both ends of the DAC cable or else the link may not come up.
Context	interface name <i>string</i> ethernet dac-link-training <i>boolean</i>
Tree	dac-link-training
Configurable	True
Platforms	7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H3, 7220 IXR-H4

duplex-mode *keyword*

Description	When auto-negotiate is true, this sets the duplex mode that will be advertised to the peer. When auto-negotiate is false, this directly sets the duplex mode of the interface.
Context	interface name <i>string</i> ethernet duplex-mode <i>keyword</i>
Tree	duplex-mode
Options	<ul style="list-style-type: none"> • full • half
Configurable	True
Platforms	7220 IXR-D1

flow-control

Description	Enter the flow-control context
Context	interface name <i>string</i> ethernet flow-control
Tree	flow-control
Configurable	True
Platforms	Supported on all platforms

receive *boolean*

Description	When this is true PAUSE frames received on this interface are accepted and processed, and, if auto-negotiation is enabled it also causes the capability to receive PAUSE frames to be signaled to the peer (applicable only to ports 1-48 of the 7220 IXR-D1 and to mgmt0 and mgmt0-standby ports).
--------------------	---

When this is false PAUSE frames received on this interface are ignored, and, if auto-negotiation is enabled it causes the capability to receive PAUSE frames to be signaled to the peer as non-support (applicable only to ports 1-48 of the 7220 IXR-D1 and to mgmt0 and mgmt0-standby ports)

Context	interface name <i>string</i> ethernet flow-control receive <i>boolean</i>
Tree	receive
Configurable	True
Platforms	Supported on all platforms

forwarding-viable *boolean*

Description	<p>If true: this LAG member link should be used for the transmission of traffic if all other LAG/port attributes allow it.</p> <p>If false: this LAG member link should not be used for the transmission of traffic.</p> <p>In all cases: This LAG member link should process any received frames when it is an active member link. L2 protocols such as LLDP, LACP and micro-BFD should continue to be sent and processed.</p>
Context	interface name <i>string</i> ethernet forwarding-viable <i>boolean</i>
Tree	forwarding-viable
Configurable	True
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

hold-time

Description	Configure interface hold timers for Ethernet interfaces
Context	interface name <i>string</i> ethernet hold-time
Tree	hold-time
Configurable	True
Platforms	Supported on all platforms

down *number*

Description	<p>Holds link down events for the configured time</p> <p>The hold-time down behavior is triggered with events that try to bring the ethernet interface down and can change quickly. It is not triggered with an admin-state disable event or interface disable due to other internal reasons (such as fabric unavailability). When running, the interface will not be brought</p>
--------------------	---

down till the timer expires. The typical use of the hold-time down is to provide stability and avoid the protocols to advertise/withdraw messages if there are flapping optics. The hold-time down is aborted if the user does admin-state disable or if the interface is disabled due to other internal reasons that prevent the traffic to be forwarded on the interface.

Context	interface name <i>string</i> ethernet hold-time down <i>number</i>
Tree	down
Range	0 100 to 86400000
Default	0
Units	milliseconds
Configurable	True
Platforms	Supported on all platforms

down-expires *string*

Description	The remaining time until the hold-time down expires and the interface goes operationally down.
Context	interface name <i>string</i> ethernet hold-time down-expires <i>string</i>
Tree	down-expires
String Length	20 to 32
Configurable	False
Platforms	Supported on all platforms

up *number*

Description	Holds link up events for the configured time The hold-time up behavior is triggered with any event that tries to bring up the ethernet interface (interface admin-state enable, a reboot, etc). While the hold-time up is running, the transceiver laser will be enabled, however the higher layers will not be notified that the interface is operationally up until the timer expires.
Context	interface name <i>string</i> ethernet hold-time up <i>number</i>
Tree	up
Range	0 100 to 86400000
Default	0
Units	milliseconds
Configurable	True
Platforms	Supported on all platforms

up-expires *string*

Description	The remaining time until the hold-time up expires and the interface comes up.
Context	interface name <i>string</i> ethernet hold-time up-expires <i>string</i>
Tree	up-expires
String Length	20 to 32
Configurable	False
Platforms	Supported on all platforms

hw-mac-address *string*

Description	The MAC address associated with the port
Context	interface name <i>string</i> ethernet hw-mac-address <i>string</i>
Tree	hw-mac-address
Configurable	False
Platforms	Supported on all platforms

l2cp-transparency

Description	Configuration and state of the Layer-2 Control Protocol transparency
Context	interface name <i>string</i> ethernet l2cp-transparency
Tree	l2cp-transparency
Configurable	True
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

dot1x

Description	Container for the configuration of 802.1x Port based Network Access Control.
Context	interface name <i>string</i> ethernet l2cp-transparency dot1x
Tree	dot1x
Configurable	True

Platforms 7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

oper-rule *keyword*

Description The operational state of the TCAM rule applied to ingress dot1x frames.

Context [interface name](#) *string* [ethernet l2cp-transparency dot1x oper-rule](#) *keyword*

Tree [oper-rule](#)

Options

- trap-to-cpu-untagged
- drop-tagged-and-untagged
- tunnel-tagged-and-untagged

Configurable False

Platforms 7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

tunnel *boolean*

Description Configures if incoming dot1x frames are tunneled.
Dot1x frames are identified by MAC DA 01-80-c2-00-00-03 and Ethertype 0x888e.

Context [interface name](#) *string* [ethernet l2cp-transparency dot1x tunnel](#) *boolean*

Tree [tunnel](#)

Default false

Configurable True

Platforms 7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

lACP

Description Container for L2CP transparency of the Link Aggregation Control Protocol

Context [interface name](#) *string* [ethernet l2cp-transparency lACP](#)

Tree [lACP](#)

Configurable True

Platforms 7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

oper-rule *keyword*

Description The operational state of the TCAM rule applied to ingress LACP frames.

Context [interface name](#) *string* [ethernet l2cp-transparency lacp oper-rule](#) *keyword*

Tree [oper-rule](#)

Options

- trap-to-cpu-untagged
- drop-tagged-and-untagged
- tunnel-tagged-and-untagged

Configurable False

Platforms 7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

tunnel *boolean*

Description Configures if incoming LACP frames are tunneled.
LACP frames are identified by MAC DA 01-80-c2-00-00-02, Ethertype 0x8809 and slow-protocol sub-type 0x01.

Context [interface name](#) *string* [ethernet l2cp-transparency lacp tunnel](#) *boolean*

Tree [tunnel](#)

Default false

Configurable True

Platforms 7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

Ildp

Description Container for L2CP transparency of the Link Layer Discovery Protocol

Context [interface name](#) *string* [ethernet l2cp-transparency lldp](#)

Tree [lldp](#)

Configurable True

Platforms 7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

oper-rule *keyword*

Description The operational state of the TCAM rule applied to ingress LLDP frames.

Context [interface name](#) *string* [ethernet](#) [l2cp-transparency](#) [lldp](#) [oper-rule](#) *keyword*

Tree [oper-rule](#)

Options

- [trap-to-cpu-untagged](#)
- [drop-tagged-and-untagged](#)
- [tunnel-tagged-and-untagged](#)

Configurable False

Platforms 7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

tunnel *boolean*

Description Configures if incoming LLDP frames are tunneled.
LLDP frames are identified by MAC DA 01-80-c2-00-00-00 and Ethertype 0x88cc.

Context [interface name](#) *string* [ethernet](#) [l2cp-transparency](#) [lldp](#) [tunnel](#) *boolean*

Tree [tunnel](#)

Default false

Configurable True

Platforms 7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

ptp

Description Container for the configuration of Precision Time Protocol Peer-Delay frames.

Context [interface name](#) *string* [ethernet](#) [l2cp-transparency](#) [ptp](#)

Tree [ptp](#)

Configurable True

Platforms 7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

oper-rule *keyword*

Description The operational state of the TCAM rule applied to ingress ptp frames.

Context [interface name](#) *string* [ethernet l2cp-transparency ptp oper-rule](#) *keyword*

Tree [oper-rule](#)

Options

- trap-to-cpu-untagged
- drop-tagged-and-untagged
- tunnel-tagged-and-untagged

Configurable False

Platforms 7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

tunnel *boolean*

Description Configures if incoming ptp frames are tunneled.
ptp frames are identified by MAC DA 01-80-c2-00-00-0e and Ethertype 0x88f7.

Context [interface name](#) *string* [ethernet l2cp-transparency ptp tunnel](#) *boolean*

Tree [tunnel](#)

Default false

Configurable True

Platforms 7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

tunnel-all-l2cp *boolean*

Description Configures the tunneling of all the L2CP protocols.
When set to true this command triggers the installation of an ingress TCAM rule with the highest priority (above all the individual L2CP tunnel rules) which allows the forwarding of any Layer-2 Control Protocol coming into the interface. All the L2CP frames identified by MAC DA = 01:80:c2:00:00:0x or MAC DA = 01:80:c2:00:00:2x, with 'x' being any hex value, are tunneled.

When set to false, all L2CP frames without a specific L2CP tunnel rule are discarded.

Context	interface name <i>string</i> ethernet l2cp-transparency tunnel-all-l2cp <i>boolean</i>
Tree	tunnel-all-l2cp
Default	false
Configurable	True
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

xstp

Description	Container for the configuration of all the Spanning Tree Protocols. It includes Spanning Tree Protocol (STP), Rapid RSTP (RSTP) and Multiple STP (MSTP)
Context	interface name <i>string</i> ethernet l2cp-transparency xstp
Tree	xstp
Configurable	True
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

oper-rule *keyword*

Description	The operational state of the TCAM rule applied to ingress xSTP frames.
Context	interface name <i>string</i> ethernet l2cp-transparency xstp oper-rule <i>keyword</i>
Tree	oper-rule
Options	<ul style="list-style-type: none"> • trap-to-cpu-untagged • drop-tagged-and-untagged • tunnel-tagged-and-untagged
Configurable	False
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

tunnel *boolean*

Description	Configures if incoming xSTP frames are tunneled.
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xSTP frames are identified by MAC DA 01-80-c2-00-00-00 and any Ethertype.

Context	interface name <i>string</i> ethernet l2cp-transparency xstp tunnel <i>boolean</i>
Tree	tunnel
Default	false
Configurable	True
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

lACP-port-priority *number*

Description	Configure the port priority for LACP. This value is used to determine which port should be activated with LACP fallback mode. Lower values are more preferred.
Context	interface name <i>string</i> ethernet lACP-port-priority <i>number</i>
Tree	lACP-port-priority
Configurable	True
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

mac-address *string*

Description	MAC address of the interface If not configured, this is set to the hw-mac-address, which is populated depending on interface type: When deleted, will revert back to the value of hw-mac-address.
Context	interface name <i>string</i> ethernet mac-address <i>string</i>
Tree	mac-address
Configurable	True
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

physical-medium *keyword*

Description	Indicates the PHY supported by the RJ45 port. If the port is supported by a SFP, QSFP+, QSFP28 or QSFP-DD transceiver no value is populated in this leaf.
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Context	interface name <i>string</i> ethernet physical-medium <i>keyword</i>
Tree	physical-medium
Options	<ul style="list-style-type: none"> • 1000BASE-T
Configurable	False
Platforms	Supported on all platforms

port-speed *keyword*

Description	<p>The speed of the port or channel</p> <p>If this parameter is configured, then the configured value will be applied. If it is not configured, then there are two mechanisms that will set a speed for the port.</p> <p>Some platforms support a mechanism to automatically set the port-speed based on the form factor of the inserted transceiver. form-factor speed QSFP28 100G SFP112 100G SFP56-DD 100G SFP 1G SFP+ 10G QSFP56-DD 400G QSFP56 200G QSFP28-DD 200G SFP28 25G QSFP112 400G QSFP+ 40G QSFP28-50G 50G SFP56 50G QSFP112-DD 800G CFP2-DCO 400G</p> <p>When the auto-configuration of speed based on form factor is not supported and the speed is not configured, then the default speed of a port (when auto-negotiation is disabled or unsupported) depends on the platform and port/connector number as follows:</p> <p>mgmt0 and mgmt0-standby ports: 1G J2 IMM ports 1-32: 100G J2 IMM ports 33-36: 100G 7220-D1 ports 1-48: 1G 7220-D1 ports 49-52: 10G 7220-D2/D2L ports 1-48: 25G 7220-D2/D2L ports 49-56: 100G 7220-D2L ports 57-58: 10G 7220-D3 ports 1-2: 10G 7220-D3 ethernet-1/[3-34]: 100G 7220-D3 ethernet-1/[3-33]/n: 25G 7220-D3L ethernet-1/[1-32]: 100G 7220-D3L ethernet-1/[1-31]/n: 25G 7220-D3L ports 33-34: 10G 7220-D4 ports 1-28: 100G 7220-D4 ports 29-36: 400G 7220-D5 ports 1-32: 400G 7220-D5 ports 33-38: 10G 7220-H2 ports 1-128: 100G 7220-H3 ports 1-2: 10G 7220-H3 ports 3-34: 400G 7220-H4 ports 1-64: 400G 7220-H4 ports 65-66: 10G 7220-H4-32D ports 1-32: 400G 7220-H4-32D ports 33: 10G 7250 IXR-6e/10e 60p QSFP28 IMM all ports: 100G 7250 IXR-6e/10e 36p QSFPDD ports 25-36: 400G 7250 IXR-X3b QSFPDD all ports: 400G</p> <p>Supported speeds: mgmt0 and mgmt0-standby ports: 1G J2 IMM ports 1-32: 40G, 100G (Note 1) J2 IMM ports 33-36: 40G, 100G, 400G 7220-D1 ports 1-48: 10M, 100M, 1G 7220-D1 ports 49-52: 10G 7220-D2/D2L ports 1-48: 1G, 10G, 25G (Note 2) 7220-D2 ports 49-56: 10G, 25G, 40G, 100G 7220-D2L ports 49-56: 10G, 25G, 40G, 100G 7220-D2L ports 57-58: 10G 7220-D3 ports 1-2: 10G 7220-D3 ethernet-1/[3-34]: 10G, 25G, 40G, 50G, 100G 7220-D3 ethernet-1/[3-33]/n: 10G, 25G 7220-D3L ethernet-1/[1-32]: 10G, 25G, 40G, 50G, 100G 7220-D3L ethernet-1/[1-31]/n: 10G, 25G 7220-D3L ports 33-34: 10G 7220-D4 ports 1-8: 40G, 100G 7220-D4 ports 9-28: 10G, 25G, 40G, 100G 7220-D4 ports 29-36: 10G, 25G, 40G, 100G, 400G 7220-D5 ports 1-32: 40G, 100G, 400G 7220-D5 ports 33-38: 10G 7220-H2</p>
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ports 1-128: 100G 7220-H3 ports 1-2: 10G 7220-H3 ports 3-34: 40G, 100G, 200G, 400G 7220-H4 ports 1-64: 40G, 100G, 400G 7220-H4 ports 65-66: 10G 7220-H4-32D ports 1-32: 40G, 100G, 400G 7220-H4-32D ports 33: 10G 7250 IXR-6e/10e 60p QSFP28 IMM all ports: 100G 7250 IXR-6e/10e 36p QSFPDD-400 IMM all ports: 40G, 100G, 400G 7250 IXR-X3b QSFPDD all ports: 40G, 50G, 100G, 400G

Note 1: Ports 9-12 cannot operate at different port speeds (some at 40G and others at 100G). The required speed of ports 9-12 is based on the port-speed of the first configured port in this block; if any subsequent port in the block is configured with a different port speed that port will not come up.

Note 2: On 7220-D2: if one port in each consecutive group of 4 ports (1-4, 5-8, .. , 45-48) is enabled and has a configured speed of 25G then the other 3 ports may only be enabled if they also have a configured speed of 25G or no speed configured; if one port in each consecutive group of 4 ports (1-4, 5-8, .. , 45-48) is enabled and has a configured speed of 1G or 10G the other 3 ports may only be enabled if they also have a configured speed of 1G or 10G or no speed configured. On 7220-D2L: if one port in each port group of 4 ports ({1, 2, 3, 6}, {4, 5, 7, 9}, {8, 10, 11, 12}, {13, 14, 15, 18}, {16, 17, 19, 21}, {20, 22, 23, 24}, {25, 26, 27, 30}, {28, 29, 31, 33}, {32, 34, 35, 36}, {37, 38, 39, 42}, {40, 41, 43, 45}, {44, 46, 47, 48}) is enabled and has a configured speed of 25G the other 3 ports may only be enabled if they also have a configured speed of 25G or no speed configured; if one port in each port group of 4 ports is enabled and has a configured speed of 1G or 10G the other 3 ports may only be enabled if they also have a configured speed of 1G or 10G or no speed configured.

Note 3: Breakout and 40G is only supported on odd numbered ports. For the QSFP28 four port groupings [1-4], [5-8], [9-12], [13-16], [21-24], [25-28], and [29-32] if either of the odd numbered ports within a group is enabled and configured for 40G, 4x10G, or 4x25G, then the other odd numbered port in the same group may only be enabled if it is configured for one of 40G, 4x10G, or 4x25G (can differ between the odd ports) and neither of the two even numbered ports within the same group can be enabled.

Note 4: For the QSFP28 ports, the following port groups exist [n, n+1, n+2, n+3] for n = 1, 5, 9, 13, 17, 21. Breakout for 4x25G or 4x10G is only supported on ports n+1 and n+3. If port n+1 within the group is configured for breakout and enabled, then port n cannot be enabled. In addition if port n+1 is configured for breakout and enabled and port n+3 is configured without breakout and enabled, then port n+2 may only be configured and enabled with the same speed as port n+3. If port n+3 within the group is configured for breakout and enabled, then port n+2 cannot be enabled. In addition if port n+3 is configured for breakout and enabled and port n+1 is configured without breakout and enabled, then port n may only be configured and enabled with the same speed as port n+1.

7250 IXR details: If the interface corresponds to a connector that has no installed transceiver then the value is accepted without any checking or restriction, and info from state will display the configured value. Otherwise if the configured port-speed is NOT supported by the installed transceiver the port is forced operationally down.

Port Groups and auto-configuration: Manually configured and enabled port-speed (and breakout-modes) take precedence over the auto-configured port-speed. This means that configuring and enabling a port within a port-group can have a side effect to take down an operational port that had its speed set based on the auto-configuration feature. If there is risk of mixing transceiver types within a port group, then it is recommended to always manually configure the speed for enabled ports

Context	interface name <i>string</i> ethernet port-speed <i>keyword</i>
Tree	port-speed
Options	<ul style="list-style-type: none"> • 10M • 100M • 1G • 10G • 25G • 40G • 50G • 100G • 200G • 400G • 800G • 1T
Configurable	True
Platforms	Supported on all platforms

ptp-asymmetry *number*

Description	<p>This command configures the PTP asymmetry delay on the Ethernet port</p> <p>This command is used to correct known asymmetry as part of time of day or phase recovery using PTP packets on both local and downstream PTP clocks.</p>
Context	interface name <i>string</i> ethernet ptp-asymmetry <i>number</i>
Tree	ptp-asymmetry
Default	0
Units	nanoseconds
Configurable	True
Platforms	7220 IXR-D5, 7250 IXR-X3b

reload-delay number

Description	Configure reload-delay timer for Ethernet interfaces. The reload-delay timer starts when the associated XDP interface state is learned. While the timer is running, the interface transceiver laser is disabled to avoid attracting traffic from the connected device at the other end of the interface. The reload-delay timer should be used in multi-homing interfaces and be set to a value long enough to allow the system to recover all the network protocols upon reboot, before start attracting traffic from the multi-homed device.
Context	interface name string ethernet reload-delay number
Tree	reload-delay
Range	1 to 86400
Units	seconds
Configurable	True
Platforms	7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

reload-delay-expires string

Description	The remaining time until the reload-delay expires and the interface can go operationally up.
Context	interface name string ethernet reload-delay-expires string
Tree	reload-delay-expires
String Length	20 to 32
Configurable	False
Platforms	7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

standby-signaling keyword

Description	Indicates the standby-signaling used in the interface. An application using a port-based redundancy mechanism will trigger the standby signaling on the ethernet interface if the interface is selected as standby.
Context	interface name string ethernet standby-signaling keyword
Tree	standby-signaling

Options	<ul style="list-style-type: none"> • power-off • lacp
Configurable	True
Platforms	Supported on all platforms

statistics

Description	Enter the statistics context
Context	interface name <i>string</i> ethernet statistics
Tree	statistics
Configurable	False
Platforms	Supported on all platforms

in-1024b-to-1518b-frames *number*

Description	Number of received Ethernet frames that are 1024-1518 bytes in length
Context	interface name <i>string</i> ethernet statistics in-1024b-to-1518b-frames <i>number</i>
Tree	in-1024b-to-1518b-frames
Default	0
Configurable	False
Platforms	Supported on all platforms

in-128b-to-255b-frames *number*

Description	Number of received Ethernet frames that are 128-255 bytes in length
Context	interface name <i>string</i> ethernet statistics in-128b-to-255b-frames <i>number</i>
Tree	in-128b-to-255b-frames
Default	0
Configurable	False
Platforms	Supported on all platforms

in-1519b-or-longer-frames *number*

Description	Number of received Ethernet frames that are 1519 bytes or longer
Context	interface name <i>string</i> ethernet statistics in-1519b-or-longer-frames <i>number</i>

Tree	in-1519b-or-longer-frames
Default	0
Configurable	False
Platforms	Supported on all platforms

in-256b-to-511b-frames *number*

Description	Number of received Ethernet frames that are 256-511 bytes in length
Context	interface name <i>string</i> ethernet statistics in-256b-to-511b-frames <i>number</i>
Tree	in-256b-to-511b-frames
Default	0
Configurable	False
Platforms	Supported on all platforms

in-512b-to-1023b-frames *number*

Description	Number of received Ethernet frames that are 512-1023 bytes in length
Context	interface name <i>string</i> ethernet statistics in-512b-to-1023b-frames <i>number</i>
Tree	in-512b-to-1023b-frames
Default	0
Configurable	False
Platforms	Supported on all platforms

in-64b-frames *number*

Description	Number of received Ethernet frames that are exactly 64 bytes in length
Context	interface name <i>string</i> ethernet statistics in-64b-frames <i>number</i>
Tree	in-64b-frames
Default	0
Configurable	False
Platforms	Supported on all platforms

in-65b-to-127b-frames *number*

Description	Number of received Ethernet frames that are 65-127 bytes in length
Context	interface name <i>string</i> ethernet statistics in-65b-to-127b-frames <i>number</i>

Tree	in-65b-to-127b-frames
Default	0
Configurable	False
Platforms	Supported on all platforms

in-crc-error-frames *number*

Description	Number of receive error events due to FCS/CRC check failure
Context	interface name <i>string</i> ethernet statistics in-crc-error-frames <i>number</i>
Tree	in-crc-error-frames
Default	0
Configurable	False
Platforms	Supported on all platforms

in-fragment-frames *number*

Description	Number of fragment frames received on the interface
Context	interface name <i>string</i> ethernet statistics in-fragment-frames <i>number</i>
Tree	in-fragment-frames
Default	0
Configurable	False
Platforms	Supported on all platforms

in-jabber-frames *number*

Description	Number of jabber frames received on the interface. Jabber frames are typically defined as oversize frames which also have a bad CRC
Context	interface name <i>string</i> ethernet statistics in-jabber-frames <i>number</i>
Tree	in-jabber-frames
Default	0
Configurable	False
Platforms	Supported on all platforms

in-mac-pause-frames *number*

Description	Number of MAC layer PAUSE frames received on the interface.
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Context	interface name <i>string</i> ethernet statistics in-mac-pause-frames <i>number</i>
Tree	in-mac-pause-frames
Default	0
Configurable	False
Platforms	Supported on all platforms

in-oversize-frames *number*

Description	Number of oversize frames received on the interface (i.e. frames that exceed the operational port MTU)
Context	interface name <i>string</i> ethernet statistics in-oversize-frames <i>number</i>
Tree	in-oversize-frames
Default	0
Configurable	False
Platforms	Supported on all platforms

last-clear *string*

Description	Timestamp of the last time the MAC counters were cleared
Context	interface name <i>string</i> ethernet statistics last-clear <i>string</i>
Tree	last-clear
String Length	20 to 32
Configurable	False
Platforms	Supported on all platforms

out-1024b-to-1518b-frames *number*

Description	Number of transmitted Ethernet frames that are 1024-1518 bytes in length
Context	interface name <i>string</i> ethernet statistics out-1024b-to-1518b-frames <i>number</i>
Tree	out-1024b-to-1518b-frames
Default	0
Configurable	False
Platforms	Supported on all platforms

out-128b-to-255b-frames *number*

Description	Number of transmitted Ethernet frames that are 128-255 bytes in length
Context	interface name <i>string</i> ethernet statistics out-128b-to-255b-frames <i>number</i>
Tree	out-128b-to-255b-frames
Default	0
Configurable	False
Platforms	Supported on all platforms

out-1519b-or-longer-frames *number*

Description	Number of transmitted Ethernet frames that are 1519 bytes or longer
Context	interface name <i>string</i> ethernet statistics out-1519b-or-longer-frames <i>number</i>
Tree	out-1519b-or-longer-frames
Default	0
Configurable	False
Platforms	Supported on all platforms

out-256b-to-511b-frames *number*

Description	Number of transmitted Ethernet frames that are 256-511 bytes in length
Context	interface name <i>string</i> ethernet statistics out-256b-to-511b-frames <i>number</i>
Tree	out-256b-to-511b-frames
Default	0
Configurable	False
Platforms	Supported on all platforms

out-512b-to-1023b-frames *number*

Description	Number of transmitted Ethernet frames that are 512-1023 bytes in length
Context	interface name <i>string</i> ethernet statistics out-512b-to-1023b-frames <i>number</i>
Tree	out-512b-to-1023b-frames
Default	0
Configurable	False
Platforms	Supported on all platforms

out-64b-frames *number*

Description	Number of transmitted Ethernet frames that are exactly 64 bytes in length
Context	interface name <i>string</i> ethernet statistics out-64b-frames <i>number</i>
Tree	out-64b-frames
Default	0
Configurable	False
Platforms	Supported on all platforms

out-65b-to-127b-frames *number*

Description	Number of transmitted Ethernet frames that are 65-127 bytes in length
Context	interface name <i>string</i> ethernet statistics out-65b-to-127b-frames <i>number</i>
Tree	out-65b-to-127b-frames
Default	0
Configurable	False
Platforms	Supported on all platforms

out-mac-pause-frames *number*

Description	Number of MAC layer PAUSE frames sent on the interface
Context	interface name <i>string</i> ethernet statistics out-mac-pause-frames <i>number</i>
Tree	out-mac-pause-frames
Default	0
Configurable	False
Platforms	Supported on all platforms

storm-control

Description	Enable the storm-control context
Context	interface name <i>string</i> ethernet storm-control
Tree	storm-control
Configurable	True
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5

broadcast-rate *number*

Description	<p>The maximum rate allowed for ingress broadcast frames on the interface</p> <p>The rate can be set in multiple of 64kbps. If the rate is configured to any value in the 1-127 kbps range, the effective rate will be 64kbps and shown in the operational rate. If any value in the 128-191 range, the effective rate will be 128kbps and shown in the operational rate, and so on for higher rates. When the rate is set to zero, all the broadcast traffic in the interface is discarded.</p> <p>The maximum rate that can be effectively configured in 7220 D4/D5 platforms is 132000000. When a configured percentage exceeds that value, the maximum supported rate is set and shown in the operational-broadcast-rate.</p>
Context	interface name <i>string</i> ethernet storm-control broadcast-rate <i>number</i>
Tree	broadcast-rate
Range	0 to 132000000
Configurable	True
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5

multicast-rate *number*

Description	<p>The maximum rate allowed for ingress multicast frames on the interface</p> <p>The rate can be set in multiple of 64kbps. If the rate is configured to any value in the 1-127 kbps range, the effective rate will be 64kbps and shown in the operational rate. If any value in the 128-191 range, the effective rate will be 128kbps and shown in the operational rate, and so on for higher rates. When the rate is set to zero, all the multicast traffic in the interface is discarded.</p> <p>The maximum rate that can be effectively configured in 7220 D4/D5 platforms is 132000000. When a configured percentage exceeds that value, the maximum supported rate is set and shown in the operational-multicast-rate.</p>
Context	interface name <i>string</i> ethernet storm-control multicast-rate <i>number</i>
Tree	multicast-rate
Range	0 to 132000000
Configurable	True
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5

operational-broadcast-rate *number*

Description	The operational maximum rate for ingress broadcast frames programmed on the interface
Context	interface name <i>string</i> ethernet storm-control operational-broadcast-rate <i>number</i>
Tree	operational-broadcast-rate
Units	kbps
Configurable	False
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5

operational-multicast-rate *number*

Description	The operational maximum rate for ingress multicast frames programmed on the interface
Context	interface name <i>string</i> ethernet storm-control operational-multicast-rate <i>number</i>
Tree	operational-multicast-rate
Units	kbps
Configurable	False
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5

operational-unknown-unicast-rate *number*

Description	The operational maximum rate for ingress unknown unicast frames programmed on the interface
Context	interface name <i>string</i> ethernet storm-control operational-unknown-unicast-rate <i>number</i>
Tree	operational-unknown-unicast-rate
Units	kbps
Configurable	False
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5

units *keyword*

Description	Units of storm-control policer in kbps or percentage of the interface bandwidth
Context	interface name <i>string</i> ethernet storm-control units <i>keyword</i>
Tree	units
Default	percentage
Options	<ul style="list-style-type: none"> • kbps • percentage
Configurable	True
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5

unknown-unicast-rate *number*

Description	<p>The maximum rate allowed for ingress unknown unicast frames on the interface</p> <p>The rate can be set in multiple of 64kbps. If the rate is configured to any value in the 1-127 kbps range, the effective rate will be 64kbps and shown in the operational rate. If any value in the 128-191 range, the effective rate will be 128kbps and shown in the operational rate, and so on for higher rates. When the rate is set to zero, all the unknown unicast traffic in the interface is discarded.</p> <p>The maximum rate that can be effectively configured in 7220 D4/D5 platforms is 132000000. When a configured percentage exceeds that value, the maximum supported rate is set and shown in the operational-multicast-rate.</p>
Context	interface name <i>string</i> ethernet storm-control unknown-unicast-rate <i>number</i>
Tree	unknown-unicast-rate
Range	0 to 132000000
Configurable	True
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5

sync

Description	This struct containing all attributes for SyncE in line/client ports.
Context	interface name <i>string</i> ethernet sync
Tree	sync

Configurable	True
Platforms	7220 IXR-D5, 7250 IXR-X3b

ssm

Description	This struct containing all attributes for QL/SSM with SyncE in these ports.
Context	interface name <i>string</i> ethernet sync e ssm
Tree	ssm
Configurable	True
Platforms	7220 IXR-D5, 7250 IXR-X3b

admin-state *keyword*

Description	Configure the administrative state for SyncE in line/client ports. When enabled, the associated transmit and receiver ports are set to synchronous mode and ESMC/SSM processing is enabled. Otherwise, all syncE functions are disabled in the port.
Context	interface name <i>string</i> ethernet sync e ssm admin-state <i>keyword</i>
Tree	admin-state
Default	disable
Options	<ul style="list-style-type: none"> • enable • disable
Configurable	True
Platforms	7220 IXR-D5, 7250 IXR-X3b

forwarding-complex *reference*

Description	The forwarding-complex on which this interface resides This field is not populated for non-forwarding-complex-attached interfaces, for example mgmt0.
Context	interface name <i>string</i> forwarding-complex <i>reference</i>
Tree	forwarding-complex
Reference	platform linecard slot <i>number</i> forwarding-complex <i>name</i> <i>keyword</i>
Configurable	False
Platforms	Supported on all platforms

ifindex number

Description	System-wide persistent unique ifIndex assigned to the interface
Context	interface name <i>string</i> ifindex number
Tree	ifindex
Configurable	False
Platforms	Supported on all platforms

lag

Description	Container for options related to LAG
Context	interface name <i>string</i> lag
Tree	lag
Configurable	True
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

lacp

Description	LACP parameters for the associated LAG
Context	interface name <i>string</i> lag lacp
Tree	lacp
Configurable	True
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

admin-key number

Description	Configure the LACP admin-key to be advertised by the local system. If this value is not specified a value starting from 32768 is automatically assigned by the system.
Context	interface name <i>string</i> lag lacp admin-key number
Tree	admin-key
Range	1 to 65535
Configurable	True

Platforms 7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

interval *keyword*

Description Set the period between LACP messages -- uses the lacp-period-type enumeration.

Context [interface name](#) *string lag lacp interval keyword*

Tree [interval](#)

Default SLOW

- Options**
- FAST
Send LACP packets every second
 - SLOW
Send LACP packets every 30 seconds

Configurable True

Platforms 7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

lacp-mode *keyword*

Description ACTIVE is to initiate the transmission of LACP packets. PASSIVE is to wait for peer to initiate the transmission of LACP packets.

Context [interface name](#) *string lag lacp lacp-mode keyword*

Tree [lacp-mode](#)

Default ACTIVE

- Options**
- ACTIVE
Interface is an active member, i.e., will detect and maintain aggregates
 - PASSIVE
Interface is a passive member, i.e., it participates with an active partner

Configurable True

Platforms 7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

system-id-mac *string*

Description	The MAC address portion of the node's System ID. This is combined with the system priority to construct the 8-octet system-id. If not configured, the system-ID configured at the system/ level is used.
Context	interface name <i>string</i> lag lACP system-id-mac <i>string</i>
Tree	system-id-mac
Configurable	True
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

system-priority *number*

Description	System priority used by the node on this LAG interface. Lower value is higher priority for determining which node is the controlling system. If not configured, the system-priority configured at the system/ level is used.
Context	interface name <i>string</i> lag lACP system-priority <i>number</i>
Tree	system-priority
Configurable	True
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

lACP-fallback-mode *keyword*

Description	Specifies lACP-fallback mode if enabled
Context	interface name <i>string</i> lag lACP-fallback-mode <i>keyword</i>
Tree	lACP-fallback-mode
Options	<ul style="list-style-type: none"> static Set the LACP-fallback mode as static
Configurable	True
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

lacp-fallback-timeout *number*

Description	Specifies the LACP-fallback timeout interval in seconds
Context	interface name <i>string</i> lag lacp-fallback-timeout <i>number</i>
Tree	lacp-fallback-timeout
Range	4 to 3600
Configurable	True
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

lag-speed *number*

Description	reports current aggregate bandwidth speed of the associated LAG
Context	interface name <i>string</i> lag lag-speed <i>number</i>
Tree	lag-speed
Units	Mbps
Configurable	False
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

lag-type *keyword*

Description	Sets the type of LAG, i.e., how it is configured / maintained
Context	interface name <i>string</i> lag lag-type <i>keyword</i>
Tree	lag-type
Default	static
Options	<ul style="list-style-type: none"> • lacp LAG managed by LACP • static Statically configured bundle / LAG
Configurable	True
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

member name *reference*

Description	Reports the list of interfaces associated with the LAG instance
Context	interface name <i>string</i> lag member name <i>reference</i>
Tree	member
Configurable	False
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

name *reference*

Description	Enter the name context
Context	interface name <i>string</i> lag member name <i>reference</i>
Reference	interface name <i>string</i>
Configurable	False
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

lACP

Description	Operational status data for the member interfaces
Context	interface name <i>string</i> lag member name <i>reference</i> lACP
Tree	lACP
Configurable	False
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

activity *keyword*

Description	Indicates participant is active or passive
Context	interface name <i>string</i> lag member name <i>reference</i> lACP activity <i>keyword</i>
Tree	activity
Options	<ul style="list-style-type: none"> ACTIVE <p>Interface is an active member, i.e., will detect and maintain aggregates</p>

- PASSIVE

Interface is a passive member, i.e., it participates with an active partner

Configurable

False

Platforms

7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

aggregatable *boolean***Description**

A true value indicates that the participant will allow the link to be used as part of the aggregate. A false value indicates the link should be used as an individual link

Context

[interface name](#) *string* [lag member name](#) *reference* [lACP aggregatable](#) *boolean*

Tree

[aggregatable](#)

Configurable

False

Platforms

7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

collecting *boolean***Description**

If true, the participant is collecting incoming frames on the link, otherwise false

Context

[interface name](#) *string* [lag member name](#) *reference* [lACP collecting](#) *boolean*

Tree

[collecting](#)

Configurable

False

Platforms

7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

distributing *boolean***Description**

When true, the participant is distributing outgoing frames; when false, distribution is disabled

Context

[interface name](#) *string* [lag member name](#) *reference* [lACP distributing](#) *boolean*

Tree

[distributing](#)

Configurable

False

Platforms 7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

lacp-port-priority *number*

Description Configure the port priority for LACP. This value is used to determine which port should be activated with LACP fallback mode. Lower values are more preferred.

Context [interface name](#) *string* [lag member name](#) *reference* [lacp lacp-port-priority number](#)

Tree [lacp-port-priority](#)

Configurable False

Platforms 7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

oper-key *number*

Description Current operational value of the key for the aggregate interface

Context [interface name](#) *string* [lag member name](#) *reference* [lacp oper-key number](#)

Tree [oper-key](#)

Configurable False

Platforms 7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

partner-id *string*

Description MAC address representing the protocol partner's interface system ID

Context [interface name](#) *string* [lag member name](#) *reference* [lacp partner-id string](#)

Tree [partner-id](#)

Configurable False

Platforms 7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

partner-key number

Description	Operational value of the protocol partner's key
Context	interface name <i>string</i> lag member name <i>reference</i> lACP partner-key number
Tree	partner-key
Configurable	False
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

partner-port-num number

Description	Port number of the partner (remote) port for this member port
Context	interface name <i>string</i> lag member name <i>reference</i> lACP partner-port-num number
Tree	partner-port-num
Configurable	False
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

port-num number

Description	Port number of the local (actor) aggregation member
Context	interface name <i>string</i> lag member name <i>reference</i> lACP port-num number
Tree	port-num
Configurable	False
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

statistics

Description	LACP protocol counters
Context	interface name <i>string</i> lag member name <i>reference</i> lACP statistics
Tree	statistics
Configurable	False

Platforms 7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

lACP-errors *number*

Description Number of LACPDU illegal packet errors

Context [interface name](#) *string* [lag member name](#) *reference* [lACP statistics lACP-errors number](#)

Tree [lACP-errors](#)

Default 0

Configurable False

Platforms 7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

lACP-in-pkts *number*

Description Number of LACPDU received

Context [interface name](#) *string* [lag member name](#) *reference* [lACP statistics lACP-in-pkts number](#)

Tree [lACP-in-pkts](#)

Default 0

Configurable False

Platforms 7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

lACP-out-pkts *number*

Description Number of LACPDU transmitted

Context [interface name](#) *string* [lag member name](#) *reference* [lACP statistics lACP-out-pkts number](#)

Tree [lACP-out-pkts](#)

Default 0

Configurable False

Platforms 7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

lacp-rx-errors *number*

Description	Number of LACPDU receive packet errors
Context	interface name <i>string</i> lag member name <i>reference</i> lacp statistics lacp-rx-errors <i>number</i>
Tree	lacp-rx-errors
Default	0
Configurable	False
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

lacp-tx-errors *number*

Description	Number of LACPDU transmit packet errors
Context	interface name <i>string</i> lag member name <i>reference</i> lacp statistics lacp-tx-errors <i>number</i>
Tree	lacp-tx-errors
Default	0
Configurable	False
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

lacp-unknown-errors *number*

Description	Number of LACPDU unknown packet errors
Context	interface name <i>string</i> lag member name <i>reference</i> lacp statistics lacp-unknown-errors <i>number</i>
Tree	lacp-unknown-errors
Default	0
Configurable	False
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

synchronization keyword

Description	Indicates whether the participant is in-sync or out-of-sync
Context	interface name <i>string</i> lag member name <i>reference</i> lACP synchronization keyword
Tree	synchronization
Options	<ul style="list-style-type: none"> • IN_SYNC Participant is in sync with the system id and key transmitted • OUT_SYNC Participant is not in sync with the system id and key transmitted
Configurable	False
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

system-id string

Description	MAC address that defines the local system ID for the aggregate interface
Context	interface name <i>string</i> lag member name <i>reference</i> lACP system-id string
Tree	system-id
Configurable	False
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

timeout keyword

Description	The timeout type (short or long) used by the participant
Context	interface name <i>string</i> lag member name <i>reference</i> lACP timeout keyword
Tree	timeout
Options	<ul style="list-style-type: none"> • LONG Participant wishes to use long timeouts to detect status of the aggregate, i.e., will expect less frequent transmissions. Long timeout is 90 seconds. • SHORT Participant wishes to use short timeouts, i.e., expects frequent transmissions to aggressively detect status changes. Short timeout is 3 seconds.

Configurable	False
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

last-change *string*

Description	The date and time of the most recent change to the LAG member-link state
Context	interface name <i>string</i> lag member name <i>reference</i> last-change <i>string</i>
Tree	last-change
String Length	20 to 32
Configurable	False
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

microbfd-enabled *boolean*

Description	Indicates if microBFD is currently used in the determination of the member-link oper-status
Context	interface name <i>string</i> lag member name <i>reference</i> microbfd-enabled <i>boolean</i>
Tree	microbfd-enabled
Configurable	False
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

oper-down-reason *keyword*

Description	Reason for operational down state for the associated LAG
Context	interface name <i>string</i> lag member name <i>reference</i> oper-down-reason <i>keyword</i>
Tree	oper-down-reason
Options	<ul style="list-style-type: none"> • port-disabled • port-oper-disabled • lag-admin-disabled • lacp-down • microBFD-down

- lag-min-link-threshold
- lag-speed-mismatch
- other

Configurable

False

Platforms

7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

oper-state keyword**Description**

Operational state for the associated LAG

Context[interface name](#) *string* [lag member name](#) *reference* [oper-state keyword](#)**Tree**[oper-state](#)**Options**

- up
Component or process is operational
- down
Component or process is not operational
- empty
Component slot is empty
- downloading
Component is downloading image into memory
- booting
Component is booting downloaded image
- starting
Component image operational, application processes starting
- failed
Component or process has failed
- synchronizing
Component is currently being synchronized
- upgrading
Component is currently being upgraded
- low-power
Component is offline due to insufficient system power
- degraded
Component or process is in a degraded state
- warm-reboot
Component or process is currently warm rebooting

This state is set during a warm reboot immediately following initiation of the reboot, continuing after startup until the system has completed audit. In this state the system will not accept configuration changes.

- waiting

Component or process is currently waiting

This state can be set by event handler when the `reinvoke-with-delay` action is used, and indicates that the event handler is waiting for the provided delay before reinvoking the instance.

Configurable

False

Platforms

7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

member-speed *keyword*

Description

Specifies the link speed of allowed member-links

Context

[interface name](#) *string* [lag](#) [member-speed](#) *keyword*

Tree

[member-speed](#)

Options

- 10M
Indicates the the LAG member-links must be 10M to be active
- 100M
Indicates the the LAG member-links must be 100M to be active
- 1G
Indicates the the LAG member-links must be 1G to be active
- 10G
Indicates the the LAG member-links must be 10G to be active
- 25G
Indicates the the LAG member-links must be 25G to be active
- 40G
Indicates the the LAG member-links must be 40G to be active
- 50G
Indicates the the LAG member-links must be 50G to be active
- 100G
Indicates the the LAG member-links must be 100G to be active
- 400G
Indicates the the LAG member-links must be 400G to be active

Configurable

True

Platforms 7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

min-links *number*

Description Specifies the minimum number of member interfaces that must be active for the aggregate interface to be available

Context [interface name](#) *string lag min-links number*

Tree [min-links](#)

Range 1 to 64

Default 1

Configurable True

Platforms 7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

last-change *string*

Description The date and time of the most recent change to the interface state

Context [interface name](#) *string last-change string*

Tree [last-change](#)

String Length 20 to 32

Configurable False

Platforms Supported on all platforms

linecard *reference*

Description The linecard on which this interface resides
This field is not populated for non-forwarding-complex-attached interfaces, for example mgmt0.

Context [interface name](#) *string linecard reference*

Tree [linecard](#)

Reference [platform linecard slot](#) *number*

Configurable False

Platforms Supported on all platforms

loopback-mode *keyword*

Description	Loopback mode of the port
Context	interface name <i>string</i> loopback-mode <i>keyword</i>
Tree	loopback-mode
Options	<ul style="list-style-type: none"> • none No loopback is applied • facility A loopback which directs traffic normally transmitted on the port back into the switch as if received on the same port from an external source On some systems this is also called local loopback. • terminal A loopback which directs traffic received from an external source on the port back out the transmit side of the same port.
Configurable	True
Platforms	Supported on all platforms

mtu *number*

Description	<p>Port MTU in bytes including ethernet overhead but excluding 4-bytes FCS</p> <p>If a transmitted packet exceeds this size it is dropped. The default value for ethernet-x interfaces is taken from /system/mtu/default-port-mtu. For the mgmt0 and mgmt0-standby interfaces the default is 1514 bytes, but the value can be changed for each interface individually. Port MTU is not configurable for loopback interfaces or irb interfaces. For irb interfaces, if the size of the ip packets to be routed to a mac-vrf has to be restricted, the subinterface.ip-mtu should be configured instead. The max mtu for the mgmt0 and mgmt0-standby interfaces is 9216. The 7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D3, 7220 IXR-H2, and 7220 IXR-H3 systems support a maximum port MTU of 9412 bytes and minimum of 1500 bytes. All other systems support a maximum port MTU of 9500 and minimum of 1500 bytes. Each 7250 IXR IMM supports a maximum of 8 different port MTU values. 7220 IXR systems do not have any limit on the maximum number of different port MTU values.</p>
Context	interface name <i>string</i> mtu <i>number</i>
Tree	mtu
Range	1450 to 9500
Units	bytes
Configurable	True

Platforms Supported on all platforms

oper-down-reason *keyword*

Description The first (and possibly only) reason for the port being operationally down

Context [interface name](#) *string* [oper-down-reason](#) *keyword*

Tree [oper-down-reason](#)

Options

- port-admin-disabled
- mda-admin-disabled
- transceiver-oper-down
- port-not-present
- mda-not-present
- phy-initializing
- lower-layer-down
- auto-negotiation-mismatch
- port-mtu-resource-exceeded
- unsupported-speed
- unsupported-fec
- other
- fabric-availability
- no-active-links
- min-link-threshold
- port-9-12-speed-mismatch
- lag-resource-exceeded
- lag-member-resource-exceeded
- standby-signaling
- interface-hold-time-up-active
- interface-reload-timer-active
- connector-down
- event-handler
- unsupported-breakout-port
- cfm-ccm-defect
- crc-monitor-fail-threshold
- symbol-monitor-fail-threshold

Configurable False

Platforms Supported on all platforms

oper-state keyword

Description	The operational state of the interface
Context	interface name <i>string oper-state keyword</i>
Tree	oper-state
Options	<ul style="list-style-type: none"> • up • down • testing
Configurable	False
Platforms	Supported on all platforms

p4rt

Description	Top-level container for P4Runtime interface configuration and state
Context	interface name <i>string p4rt</i>
Tree	p4rt
Configurable	True
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

id number

Description	<p>The numeric identifier used by the controller to address the interface</p> <p>This ID is the interface ifIndex by default, or is assigned by an external-to-the-device entity (e.g., an SDN management system) to establish an externally deterministic numeric reference for the interface.</p> <p>The programming entity must ensure that the ID is unique within the required context.</p> <p>Note that this identifier is used only when a numeric reference to the interface is required, it does not replace the unique name assigned to the interface.</p>
Context	interface name <i>string p4rt id number</i>
Tree	id
Range	1 to 4294967295
Configurable	True
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

parent-id *number*

Description	The numeric ID used by the controller to address the ASIC this interface resides on This is the ID configured at /platform/linecard/forwarding-complex/p4rt/id. This ID may be referred to as a 'device', 'node' or 'target' by the P4RT specification. Each switching ASIC (i.e., node) is addressed by the external entity based on its numeric identifier.
Context	interface name <i>string</i> p4rt parent-id <i>number</i>
Tree	parent-id
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

packet-link-qualification

Description	gNOI Packet Link Qualification results
Context	interface name <i>string</i> packet-link-qualification
Tree	packet-link-qualification
Configurable	False
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

result id *string*

Description	Enter the result list instance
Context	interface name <i>string</i> packet-link-qualification result id <i>string</i>
Tree	result
Configurable	False
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

id *string*

Description	Packet link qualification test ID
Context	interface name <i>string</i> packet-link-qualification result id <i>string</i>

String Length	1 to 255
Configurable	False
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

end-time string

Description	End time of the test
Context	interface name <i>string</i> packet-link-qualification result id <i>string</i> end-time <i>string</i>
Tree	end-time
String Length	20 to 32
Configurable	False
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

expected-rate number

Description	Expected rate of the test This is the computed or observed rate that the service expected to be maintained throughout the qualification duration.
Context	interface name <i>string</i> packet-link-qualification result id <i>string</i> expected-rate number
Tree	expected-rate
Units	bytes per second
Configurable	False
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

oper-state keyword

Description	State of the qualification test
Context	interface name <i>string</i> packet-link-qualification result id <i>string</i> oper-state keyword
Tree	oper-state
Options	<ul style="list-style-type: none"> unspecified

- Unspecified state of the qualification
- error
 - The qualification has errored
- idle
 - Initial state for the qualification
- setup
 - Interface is being configured
- running
 - Qualification underway
- teardown
 - Interface is being reset
- completed
 - Qualification is complete

Configurable

False

Platforms

7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

packets-dropped *number***Description**

Number of packets dropped

Context

[interface name](#) *string* [packet-link-qualification result id](#) *string* [packets-dropped number](#)

Tree[packets-dropped](#)**Units**

packets

Configurable

False

Platforms

7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

packets-error *number***Description**

Number of packets transmitted that experienced corruption

Context

[interface name](#) *string* [packet-link-qualification result id](#) *string* [packets-error number](#)

Tree[packets-error](#)**Units**

packets

Configurable	False
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

packets-received *number*

Description	Number of packets received
Context	interface name <i>string</i> packet-link-qualification result id <i>string</i> packets-received number
Tree	packets-received
Units	packets
Configurable	False
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

packets-sent *number*

Description	Number of packets sent
Context	interface name <i>string</i> packet-link-qualification result id <i>string</i> packets-sent number
Tree	packets-sent
Units	packets
Configurable	False
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

qualification-rate *number*

Description	Observed rate of the test This is the computed or observed rate that the service expected to be maintained throughout the qualification duration.
Context	interface name <i>string</i> packet-link-qualification result id <i>string</i> qualification-rate number
Tree	qualification-rate
Units	bytes per second
Configurable	False

Platforms 7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

start-time *string*

Description Start time of the test

Context [interface name](#) *string* [packet-link-qualification result id](#) *string* [start-time](#) *string*

Tree [start-time](#)

String Length 20 to 32

Configurable False

Platforms 7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

status *keyword*

Description Status of the test
Only set when the test is in the error state.

Context [interface name](#) *string* [packet-link-qualification result id](#) *string* [status](#) *keyword*

Tree [status](#)

Options

- not-found
Request ID not found
- invalid-argument
Unsupported configuration parameter
- canceled
Test was canceled
- deadline-exceeded
A test stage took too long to complete
- failed-precondition
A test stage was not setup properly
- internal
A test stage had unexpected serious errors

Configurable False

Platforms 7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

status-message *string*

Description	Status message of the test Only set when the test is in the error state.
Context	interface name <i>string</i> packet-link-qualification result id <i>string</i> status-message <i>string</i>
Tree	status-message
Configurable	False
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

phy-group-members *string*

Description	The group of interfaces sharing a phy with this interface On the 7220 IXR-D2 and 7220 IXR-D2L platforms this group of interfaces must be set to the same speed, either 1/10G or 25G.
Context	interface name <i>string</i> phy-group-members <i>string</i>
Tree	phy-group-members
Configurable	False
Platforms	7220 IXR-D2, 7220 IXR-D2L

physical-channel *reference*

Description	The list of transceiver channels associated with this port
Context	interface name <i>string</i> physical-channel <i>reference</i>
Tree	physical-channel
Reference	interface name <i>string</i> transceiver channel index <i>number</i>
Configurable	False
Platforms	Supported on all platforms

sflow

Description	Context to configure sFlow parameters
Context	interface name <i>string</i> sflow
Tree	sflow

Configurable	True
Platforms	Supported on all platforms

admin-state *keyword*

Description	Administratively enable or disable sFlow on this interface
Context	interface name <i>string</i> sflow admin-state <i>keyword</i>
Tree	admin-state
Options	<ul style="list-style-type: none"> • enable • disable
Configurable	True
Platforms	Supported on all platforms

statistics

Description	Enter the statistics context
Context	interface name <i>string</i> statistics
Tree	statistics
Configurable	False
Platforms	Supported on all platforms

carrier-transitions *number*

Description	Number of times the interface state has transitioned from down to up. This is reset to zero when the device is started or reset or the counters are cleared.
Context	interface name <i>string</i> statistics carrier-transitions <i>number</i>
Tree	carrier-transitions
Default	0
Configurable	False
Platforms	Supported on all platforms

in-broadcast-packets *number*

Description	Corresponds to ifHCInBroadcastPkts from the IF-MIB
Context	interface name <i>string</i> statistics in-broadcast-packets <i>number</i>

Tree	in-broadcast-packets
Default	0
Configurable	False
Platforms	Supported on all platforms

in-discarded-packets *number*

Description	Corresponds to ifInDiscards from the IFMIB. This counts the number of IP packets discarded due to VLAN mismatch, unknown dest MAC or drop by system-filter drop action. On 7250 IXR/IXRe systems this counter is not expected to increment above zero.
Context	interface name <i>string</i> statistics in-discarded-packets <i>number</i>
Tree	in-discarded-packets
Default	0
Configurable	False
Platforms	Supported on all platforms

in-error-packets *number*

Description	Corresponds to ifInErrors from the IF-MIB
Context	interface name <i>string</i> statistics in-error-packets <i>number</i>
Tree	in-error-packets
Default	0
Configurable	False
Platforms	Supported on all platforms

in-fcs-error-packets *number*

Description	Ingress FCS errors
Context	interface name <i>string</i> statistics in-fcs-error-packets <i>number</i>
Tree	in-fcs-error-packets
Default	0
Configurable	False
Platforms	Supported on all platforms

in-multicast-packets *number*

Description	Corresponds to ifHCInMulticastPkts from the IF-MIB
Context	interface name <i>string</i> statistics in-multicast-packets <i>number</i>
Tree	in-multicast-packets
Default	0
Configurable	False
Platforms	Supported on all platforms

in-octets *number*

Description	Corresponds to ifHCInOctets from the IFMIB
Context	interface name <i>string</i> statistics in-octets <i>number</i>
Tree	in-octets
Default	0
Configurable	False
Platforms	Supported on all platforms

in-packets *number*

Description	Sum of all received packets, independent of protocol and forwarding type and before discards and errors
Context	interface name <i>string</i> statistics in-packets <i>number</i>
Tree	in-packets
Default	0
Configurable	False
Platforms	Supported on all platforms

in-unicast-packets *number*

Description	Corresponds to ifHCInUcastPkts from the IF-MIB
Context	interface name <i>string</i> statistics in-unicast-packets <i>number</i>
Tree	in-unicast-packets
Default	0
Configurable	False
Platforms	Supported on all platforms

last-clear *string*

Description	Timestamp of the last time the interface counters were cleared
Context	interface name <i>string</i> statistics last-clear <i>string</i>
Tree	last-clear
String Length	20 to 32
Configurable	False
Platforms	Supported on all platforms

out-broadcast-packets *number*

Description	Corresponds to ifHCOutBroadcastPkts from the IF-MIB
Context	interface name <i>string</i> statistics out-broadcast-packets <i>number</i>
Tree	out-broadcast-packets
Default	0
Configurable	False
Platforms	Supported on all platforms

out-discarded-packets *number*

Description	Corresponds to ifOutDiscards from the IF-MIB. On 7250 IXR-6/10 systems this counts packets dropped by an egress IP ACL of any of the port's subinterfaces.
Context	interface name <i>string</i> statistics out-discarded-packets <i>number</i>
Tree	out-discarded-packets
Default	0
Configurable	False
Platforms	Supported on all platforms

out-error-packets *number*

Description	Corresponds to ifOutErrors from the IF-MIB
Context	interface name <i>string</i> statistics out-error-packets <i>number</i>
Tree	out-error-packets
Default	0
Configurable	False

Platforms Supported on all platforms

out-mirror-octets *number*

Description This counts the number of outgoing mirrored octets

Context [interface name](#) *string* [statistics](#) [out-mirror-octets](#) *number*

Tree [out-mirror-octets](#)

Default 0

Configurable False

Platforms 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L

out-mirror-packets *number*

Description This counts the number of outgoing mirrored packets

Context [interface name](#) *string* [statistics](#) [out-mirror-packets](#) *number*

Tree [out-mirror-packets](#)

Default 0

Configurable False

Platforms 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L

out-multicast-packets *number*

Description Corresponds to ifHCOutMulticastPkts from the IF-MIB

Context [interface name](#) *string* [statistics](#) [out-multicast-packets](#) *number*

Tree [out-multicast-packets](#)

Default 0

Configurable False

Platforms Supported on all platforms

out-octets *number*

Description Corresponds to ifHCOutOctets from the IF-MIB

Context [interface name](#) *string* [statistics](#) [out-octets](#) *number*

Tree [out-octets](#)

Default 0

Configurable False

Platforms Supported on all platforms

out-packets *number*

Description Sum of all transmitted packets, independent of protocol and forwarding type and before discards and errors

Context [interface name](#) *string* [statistics](#) [out-packets](#) *number*

Tree [out-packets](#)

Default 0

Configurable False

Platforms Supported on all platforms

out-unicast-packets *number*

Description Corresponds to ifHCOUcastPkts from the IF-MIB

Context [interface name](#) *string* [statistics](#) [out-unicast-packets](#) *number*

Tree [out-unicast-packets](#)

Default 0

Configurable False

Platforms Supported on all platforms

subinterface [index](#) *number*

Description The list of subinterfaces (logical interfaces) associated with a physical interface

Context [interface name](#) *string* [subinterface](#) [index](#) *number*

Tree [subinterface](#)

Configurable True

Platforms Supported on all platforms

Max. Elements 4095

index *number*

Description The index of the subinterface, or logical interface number

Context [interface name](#) *string* [subinterface](#) [index](#) *number*

Range 0 to 9999

Configurable	True
Platforms	Supported on all platforms

admin-state *keyword*

Description	The configured, desired state of the subinterface
Context	interface name <i>string</i> subinterface index number admin-state <i>keyword</i>
Tree	admin-state
Default	enable
Options	<ul style="list-style-type: none"> • enable • disable
Configurable	True
Platforms	Supported on all platforms

anycast-gw

Description	Enable the anycast-gw context
Context	interface name <i>string</i> subinterface index number anycast-gw
Tree	anycast-gw
Configurable	True
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

anycast-gw-mac *string*

Description	<p>The MAC address of associated to the anycast-gw IP address.</p> <p>If the anycast-gw MAC address is not configured, it will be auto-derived from the virtual-router-id value as per draft-ietf-bess-evpn-inter-subnet-forwarding following the format 00:00:5E:00:01:VRID.</p>
Context	interface name <i>string</i> subinterface index number anycast-gw anycast-gw-mac <i>string</i>
Tree	anycast-gw-mac
Configurable	True
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

anycast-gw-mac-origin *keyword*

Description	Origin of the active anycast-gateway MAC address. If not configured, the anycast-gateway-mac will be auto-derived out of 00:00:5E:00:01:VRID, where VRID is the Virtual Router Identifier of the subinterface anycast-gw.
Context	interface name <i>string</i> subinterface index <i>number</i> anycast-gw anycast-gw-mac-origin <i>keyword</i>
Tree	anycast-gw-mac-origin
Options	<ul style="list-style-type: none"> • configured • vrid-auto-derived
Configurable	False
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

virtual-router-id *number*

Description	The Virtual Router Identifier (VRID) value used to auto-derive the anycast-gw-mac in the format 00:00:5E:00:01:VRID.
Context	interface name <i>string</i> subinterface index <i>number</i> anycast-gw virtual-router-id <i>number</i>
Tree	virtual-router-id
Range	1 to 255
Default	1
Configurable	True
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

bridge-table

Description	Enable the Bridge Table on the subinterface and configure associated parameters
Context	interface name <i>string</i> subinterface index <i>number</i> bridge-table
Tree	bridge-table
Configurable	True

Platforms 7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

discard-unknown-src-mac *boolean*

Description Discard frames with unknown source mac addresses. The source mac address of the discarded frame is never learned when this command is enabled.

Context [interface name](#) *string* [subinterface index](#) *number* [bridge-table discard-unknown-src-mac](#) *boolean*

Tree [discard-unknown-src-mac](#)

Default false

Configurable True

Platforms 7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

mac-duplication

Description Enter the mac-duplication context

Context [interface name](#) *string* [subinterface index](#) *number* [bridge-table mac-duplication](#)

Tree [mac-duplication](#)

Configurable True

Platforms 7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

action *keyword*

Description Action to take on the subinterface upon detecting at least one mac addresses as duplicate on the subinterface. In particular:

Context [interface name](#) *string* [subinterface index](#) *number* [bridge-table mac-duplication action](#) *keyword*

Tree [action](#)

Default use-net-instance-action

Options

- use-net-instance-action
- stop-learning

- blackhole
- oper-down

Configurable

True

Platforms

7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

duplicate-entries**Description**

Enter the duplicate-entries context

Context[interface name](#) *string* [subinterface](#) *index* *number* [bridge-table](#) [mac-duplication](#) [duplicate-entries](#)**Tree**[duplicate-entries](#)**Configurable**

False

Platforms

7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

mac [address](#) *string***Description**

macs duplicate on the bridging instance

Context[interface name](#) *string* [subinterface](#) *index* *number* [bridge-table](#) [mac-duplication](#) [duplicate-entries](#) [mac address](#) *string***Tree**[mac](#)**Configurable**

False

Platforms

7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

address *string***Description**

Enter the address context

Context[interface name](#) *string* [subinterface](#) *index* *number* [bridge-table](#) [mac-duplication](#) [duplicate-entries](#) [mac address](#) *string***Configurable**

False

Platforms

7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

dup-detect-time *string*

Description	The date and time when the mac was declared duplicate
Context	interface name <i>string</i> subinterface index <i>number</i> bridge-table mac-duplication duplicate-entries mac address <i>string</i> dup-detect-time <i>string</i>
Tree	dup-detect-time
String Length	20 to 32
Configurable	False
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

hold-down-time-remaining (*keyword* | *number*)

Description	remaining hold down time for duplicate mac
Context	interface name <i>string</i> subinterface index <i>number</i> bridge-table mac-duplication duplicate-entries mac address <i>string</i> hold-down-time-remaining (<i>keyword</i> <i>number</i>)
Tree	hold-down-time-remaining
Units	seconds
Options	<ul style="list-style-type: none"> indefinite
Configurable	False
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

mac-learning

Description	Enter the mac-learning context
Context	interface name <i>string</i> subinterface index <i>number</i> bridge-table mac-learning
Tree	mac-learning
Configurable	True
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

admin-state *keyword*

Description	Configurable state of the learning procedures for dynamic mac addresses. If disabled, the existing macs in the bridge-table will be kept (and refreshed if new frames arrive for them) but no new mac addresses will be learned. Frames with unknown mac addresses are not dropped, unless discard-unknown-src-mac is configured.
Context	interface name <i>string</i> subinterface <i>index number</i> bridge-table mac-learning admin-state <i>keyword</i>
Tree	admin-state
Default	enable
Options	<ul style="list-style-type: none"> • enable • disable
Configurable	True
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

aging

Description	Enter the aging context
Context	interface name <i>string</i> subinterface <i>index number</i> bridge-table mac-learning aging
Tree	aging
Configurable	True
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

admin-state *keyword*

Description	Configurable state of the aging for the dynamic mac entries in the bridge table. If disabled, dynamically learned mac entries will be programmed in the bridge table until the network instance is disabled.
Context	interface name <i>string</i> subinterface <i>index number</i> bridge-table mac-learning aging admin-state <i>keyword</i>
Tree	admin-state
Default	enable
Options	<ul style="list-style-type: none"> • enable

	<ul style="list-style-type: none"> • disable
Configurable	True
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

learnt-entries

Description	Enter the learnt-entries context
Context	interface name <i>string</i> subinterface <i>index</i> <i>number</i> bridge-table mac-learning learnt-entries
Tree	learnt-entries
Configurable	False
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

mac address *string*

Description	macs learnt on the bridging instance
Context	interface name <i>string</i> subinterface <i>index</i> <i>number</i> bridge-table mac-learning learnt-entries mac address <i>string</i>
Tree	mac
Configurable	False
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

address *string*

Description	Enter the address context
Context	interface name <i>string</i> subinterface <i>index</i> <i>number</i> bridge-table mac-learning learnt-entries mac address <i>string</i>
Configurable	False
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

aging (*number* | *keyword*)

Description	remaining age time for learnt macs
Context	interface name <i>string</i> subinterface index <i>number</i> bridge-table mac-learning learnt-entries mac address <i>string</i> aging (<i>number</i> <i>keyword</i>)
Tree	aging
Units	seconds
Options	<ul style="list-style-type: none"> disabled
Configurable	False
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

last-update *string*

Description	The date and time of the last update of this learnt mac
Context	interface name <i>string</i> subinterface index <i>number</i> bridge-table mac-learning learnt-entries mac address <i>string</i> last-update <i>string</i>
Tree	last-update
String Length	20 to 32
Configurable	False
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

mac-limit

Description	Bridge Table size and thresholds.
Context	interface name <i>string</i> subinterface index <i>number</i> bridge-table mac-limit
Tree	mac-limit
Configurable	True
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

maximum-entries *number*

Description	Maximum number of mac addresses allowed in the bridge-table.
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Context	interface name <i>string</i> subinterface index <i>number</i> bridge-table mac-limit maximum-entries <i>number</i>
Tree	maximum-entries
Range	1 to 8192
Default	250
Configurable	True
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

warning-threshold-pct *number*

Description	Percentage of the configured max-number-macs over which a warning is triggered. The warning message is cleared when the percentage drops below the configured percentage minus 5%
Context	interface name <i>string</i> subinterface index <i>number</i> bridge-table mac-limit warning-threshold-pct <i>number</i>
Tree	warning-threshold-pct
Range	6 to 100
Default	95
Configurable	True
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

mac-table

Description	Enter the mac-table context
Context	interface name <i>string</i> subinterface index <i>number</i> bridge-table mac-table
Tree	mac-table
Configurable	False
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

mac address *string*

Description	macs learnt on the bridging instance
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Context	interface name <i>string</i> subinterface <i>index</i> <i>number</i> bridge-table mac-table mac address <i>string</i>
Tree	mac
Configurable	False
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

address *string*

Description	Enter the address context
Context	interface name <i>string</i> subinterface <i>index</i> <i>number</i> bridge-table mac-table mac address <i>string</i>
Configurable	False
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

failed-slots *number*

Description	The list of slot IDs corresponding to the linecards that did not successfully program the mac
Context	interface name <i>string</i> subinterface <i>index</i> <i>number</i> bridge-table mac-table mac address <i>string</i> failed-slots <i>number</i>
Tree	failed-slots
Range	1 to 8
Configurable	False
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

last-update *string*

Description	The date and time of the last update of this mac
Context	interface name <i>string</i> subinterface <i>index</i> <i>number</i> bridge-table mac-table mac address <i>string</i> last-update <i>string</i>
Tree	last-update
String Length	20 to 32
Configurable	False

Platforms 7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

not-programmed-reason *keyword*

Description The reason why the mac is not programmed

Context [interface name](#) *string* [subinterface index](#) *number* [bridge-table mac-table mac address](#) *string* **not-programmed-reason** *keyword*

Tree [not-programmed-reason](#)

Options

- mac-limit
- failed-on-slots
- no-destination-index
- reserved

Configurable False

Platforms 7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

type *keyword*

Description the type of the mac installed in the fib.

Context [interface name](#) *string* [subinterface index](#) *number* [bridge-table mac-table mac address](#) *string* **type** *keyword*

Tree [type](#)

Options

- static
- duplicate
- learnt
- irb-interface
- evpn
- evpn-static
- irb-interface-anycast
- proxy-anti-spoof
- reserved
- eth-cfm
- irb-interface-vrrp

Configurable False

Platforms 7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

statistics

Description Enter the statistics context

Context [interface name](#) *string* [subinterface](#) *index* *number* [bridge-table](#) [statistics](#)

Tree [statistics](#)

Configurable False

Platforms 7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

active-entries *number*

Description The total number of entries that are active on the sub-interface.

Context [interface name](#) *string* [subinterface](#) *index* *number* [bridge-table](#) [statistics](#) [active-entries](#) *number*

Tree [active-entries](#)

Default 0

Configurable False

Platforms 7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

failed-entries *number*

Description The total number of macs, which have not been programmed on atleast one slot

Context [interface name](#) *string* [subinterface](#) *index* *number* [bridge-table](#) [statistics](#) [failed-entries](#) *number*

Tree [failed-entries](#)

Default 0

Configurable False

Platforms 7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

mac-type *type keyword*

Description	the type of the mac on the sub-interface.
Context	interface name <i>string</i> subinterface <i>index number</i> bridge-table statistics mac-type <i>type keyword</i>
Tree	mac-type
Configurable	False
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

type *keyword*

Description	Enter the type context
Context	interface name <i>string</i> subinterface <i>index number</i> bridge-table statistics mac-type <i>type keyword</i>
Options	<ul style="list-style-type: none"> • static • duplicate • learnt • irb-interface • evpn • evpn-static • irb-interface-anycast • proxy-anti-spoof • reserved • eth-cfm • irb-interface-vrrp
Configurable	False
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

active-entries *number*

Description	The total number of entries of this type on the sub-interface
Context	interface name <i>string</i> subinterface <i>index number</i> bridge-table statistics mac-type <i>type keyword</i> active-entries <i>number</i>
Tree	active-entries

Default	0
Configurable	False
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

failed-entries *number*

Description	The total number of macs of this type, which have not been programmed on atleast one slot
Context	interface name <i>string</i> subinterface index <i>number</i> bridge-table statistics mac-type type <i>keyword</i> failed-entries <i>number</i>
Tree	failed-entries
Default	0
Configurable	False
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

total-entries *number*

Description	The total number of macs of this type , active and inactive, on the sub-interface.
Context	interface name <i>string</i> subinterface index <i>number</i> bridge-table statistics mac-type type <i>keyword</i> total-entries <i>number</i>
Tree	total-entries
Default	0
Configurable	False
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

total-entries *number*

Description	The total number of macs, active and inactive, on the sub-interface.
Context	interface name <i>string</i> subinterface index <i>number</i> bridge-table statistics total-entries <i>number</i>
Tree	total-entries
Default	0

Configurable	False
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

description *string*

Description	A user-configured description of the interface
Context	interface name <i>string</i> subinterface index <i>number</i> description <i>string</i>
Tree	description
String Length	1 to 255
Configurable	True
Platforms	Supported on all platforms

ethernet-segment-association

Description	ethernet-segment association information.
Context	interface name <i>string</i> subinterface index <i>number</i> ethernet-segment-association
Tree	ethernet-segment-association
Configurable	False
Platforms	Supported on all platforms

designated-forwarder *boolean*

Description	The value of this leaf indicates if the interface is the designated forwarder for the ethernet-segment on the network-instance.
Context	interface name <i>string</i> subinterface index <i>number</i> ethernet-segment-association designated-forwarder <i>boolean</i>
Tree	designated-forwarder
Default	false
Configurable	False
Platforms	Supported on all platforms

es-managed *boolean*

Description	The value of this leaf indicates if the interface is managed by the ethernet-segment on the network-instance.
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Context	interface name <i>string</i> subinterface index <i>number</i> ethernet-segment-association es-managed <i>boolean</i>
Tree	es-managed
Default	false
Configurable	False
Platforms	Supported on all platforms

ethernet-segment *string*

Description	The value of this leaf indicates the ethernet-segment, the sub-interface is associated to.
Context	interface name <i>string</i> subinterface index <i>number</i> ethernet-segment-association ethernet-segment <i>string</i>
Tree	ethernet-segment
String Length	1 to 255
Configurable	False
Platforms	Supported on all platforms

ifindex *number*

Description	System-wide persistent unique ifIndex assigned to the subinterface
Context	interface name <i>string</i> subinterface index <i>number</i> ifindex <i>number</i>
Tree	ifindex
Configurable	False
Platforms	Supported on all platforms

ip-mtu *number*

Description	<p>IP MTU of the subinterface in bytes.</p> <p>Includes the IP header but excludes Ethernet encapsulation.</p> <p>IP MTU specifies the maximum sized IPv4 or IPv6 packet that can be transmitted on the subinterface. If an IPv4 or IPv6 packet exceeds this size it is dropped and this may result in the generation of an ICMP error message back to the source.</p> <p>The default IP MTU for a subinterface is taken from /system/mtu/default-ip-mtu. For the mgmt0 and mgmt0-standby subinterfaces the default is the associated interface MTU minus the Ethernet encapsulation overhead.</p> <p>The IP MTU is not configurable for subinterfaces of loopback interfaces.</p>
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The 7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D3, 7220 IXR-H2, and 7220 IXR-H3 systems support a maximum IP MTU of 9398 bytes.

Each 7250 IXR IMM supports a maximum of 4 different IP MTU values. 7220 IXR systems do not have any limit on the maximum number of different IP MTU values.

Context	interface name <i>string</i> subinterface index <i>number</i> ip-mtu <i>number</i>
Tree	ip-mtu
Range	1280 to 9486
Units	bytes
Configurable	True
Platforms	Supported on all platforms

ipv4

Description	IPv4 configuration and state for the subinterface
Context	interface name <i>string</i> subinterface index <i>number</i> ipv4
Tree	ipv4
Configurable	True
Platforms	Supported on all platforms

address [ip-prefix](#) *string*

Description	The list of IPv4 addresses assigned to the subinterface.
Context	interface name <i>string</i> subinterface index <i>number</i> ipv4 address ip-prefix <i>string</i>
Tree	address
Configurable	True
Platforms	Supported on all platforms
Max. Elements	64

[ip-prefix](#) *string*

Description	The IPv4 address and prefix length in CIDR notation Subnets on the same subinterface are allowed to overlap as long as the host bits are different. When a locally originated unicast packet is destined to a host covered by multiple subnets associated with a subinterface, the source address is chosen to be the numerically lowest IP address among all these subnets. For example, if the addresses 172.16.1.1/12, 172.16.1.2/12, and
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172.16.1.3/12 are configured on the same interface, 172.16.1.1 would be used as a local address when you issue a ping 172.16.1.5 command

Context	interface name <i>string</i> subinterface index <i>number</i> ipv4 address ip-prefix <i>string</i>
Configurable	True
Platforms	Supported on all platforms

anycast-gw *boolean*

Description	This designates the associated IPv4 address as an anycast-gateway IPv4 address of the subinterface. When this parameter is set to true:
Context	interface name <i>string</i> subinterface index <i>number</i> ipv4 address ip-prefix <i>string</i> anycast-gw <i>boolean</i>
Tree	anycast-gw
Configurable	True
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

origin *keyword*

Description	The origin of the IPv4 address.
Context	interface name <i>string</i> subinterface index <i>number</i> ipv4 address ip-prefix <i>string</i> origin <i>keyword</i>
Tree	origin
Options	<ul style="list-style-type: none"> • other • static • dhcp • link-layer • random
Configurable	False
Platforms	Supported on all platforms

primary

Description	One of the IPv4 prefixes assigned to the subinterface can be explicitly configured as primary by setting this leaf to true. This designates the associated IPv4 address as a primary IPv4 address of the subinterface. By
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default, the numerically lowest value IPv4 address is selected as the primary address.

The primary address is used as the source address for locally originated broadcast and multicast packets sent out the subinterface.

Context	interface name <i>string</i> subinterface index <i>number</i> ipv4 address ip-prefix <i>string primary</i>
Tree	primary
Configurable	True
Platforms	Supported on all platforms

status *keyword*

Description	The status of an IPv4 address
Context	interface name <i>string</i> subinterface index <i>number</i> ipv4 address ip-prefix <i>string status keyword</i>
Tree	status
Options	<ul style="list-style-type: none"> • preferred • inaccessible • tentative • duplicate
Configurable	False
Platforms	Supported on all platforms

vrrp

Description	VRRP Configuration and State under a IPv4 context of a sub-interface
Context	interface name <i>string</i> subinterface index <i>number</i> ipv4 address ip-prefix <i>string vrrp</i>
Tree	vrrp
Configurable	True
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

vrrp-group [virtual-router-id](#) *number*

Description	VRRP Group Specific Configuration under IPv4 context
Context	interface name <i>string</i> subinterface index <i>number</i> ipv4 address ip-prefix <i>string vrrp vrrp-group virtual-router-id number</i>

Tree	vrrp-group
Configurable	True
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

virtual-router-id *number*

Description	VRRP Group Index
Context	interface name <i>string</i> subinterface <i>index</i> <i>number</i> ipv4 address <i>ip-prefix</i> <i>string</i> vrrp vrrp-group virtual-router-id <i>number</i>
Range	1 to 255
Configurable	True
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

accept-mode *boolean*

Description	Allows ssh,ping,traceroute to be accepted on the virtual IP address
Context	interface name <i>string</i> subinterface <i>index</i> <i>number</i> ipv4 address <i>ip-prefix</i> <i>string</i> vrrp vrrp-group virtual-router-id <i>number</i> accept-mode <i>boolean</i>
Tree	accept-mode
Configurable	True
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

admin-state *keyword*

Description	Administrative state for the associated VRRP group instance
Context	interface name <i>string</i> subinterface <i>index</i> <i>number</i> ipv4 address <i>ip-prefix</i> <i>string</i> vrrp vrrp-group virtual-router-id <i>number</i> admin-state <i>keyword</i>
Tree	admin-state
Default	enable
Options	<ul style="list-style-type: none"> • enable • disable
Configurable	True
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

advertise-interval *number*

Description	The interval between VRRP messages in milliseconds
Context	interface name <i>string</i> subinterface index <i>number</i> ipv4 address ip-prefix <i>string</i> vrrp vrrp-group virtual-router-id <i>number</i> advertise-interval <i>number</i>
Tree	advertise-interval
Range	1000 to 40950
Default	1000
Configurable	True
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

authentication

Description	Context to configure authentication keychain
Context	interface name <i>string</i> subinterface index <i>number</i> ipv4 address ip-prefix <i>string</i> vrrp vrrp-group virtual-router-id <i>number</i> authentication
Tree	authentication
Configurable	True
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

keychain *reference*

Description	Reference to a keychain. The keychain type must be md5 or clear-text
Context	interface name <i>string</i> subinterface index <i>number</i> ipv4 address ip-prefix <i>string</i> vrrp vrrp-group virtual-router-id <i>number</i> authentication keychain <i>reference</i>
Tree	keychain
Reference	system authentication keychain name <i>string</i>
Configurable	True
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

current-master (*ipv4-address* | *ipv6-address*)

Description	IP address of node currently acting as VRRP master
Context	interface name <i>string</i> subinterface index <i>number</i> ipv4 address ip-prefix <i>string</i> vrrp vrrp-group virtual-router-id <i>number</i> current-master (<i>ipv4-address</i> <i>ipv6-address</i>)
Tree	current-master

Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

init-delay *number*

Description	Initialization delay in seconds before a router that just rebooted will preempt an existing master router. Only applicable if preempt is enabled
Context	interface name <i>string</i> subinterface <i>index</i> <i>number</i> ipv4 address <i>ip-prefix</i> <i>string</i> vrrp vrrp-group virtual-router-id <i>number</i> init-delay <i>number</i>
Tree	init-delay
Range	1 to 65535
Configurable	True
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

interface-tracking

Description	Interface reference for interface tracking
Context	interface name <i>string</i> subinterface <i>index</i> <i>number</i> ipv4 address <i>ip-prefix</i> <i>string</i> vrrp vrrp-group virtual-router-id <i>number</i> interface-tracking
Tree	interface-tracking
Configurable	True
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

track-interface [interface](#) *reference*

Description	Interface reference for interface tracking. VRRP Group can track multiple interfaces.
Context	interface name <i>string</i> subinterface <i>index</i> <i>number</i> ipv4 address <i>ip-prefix</i> <i>string</i> vrrp vrrp-group virtual-router-id <i>number</i> interface-tracking track-interface interface <i>reference</i>
Tree	track-interface
Configurable	True
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

interface *reference*

Description	Interface to track
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Context	interface name <i>string</i> subinterface index <i>number</i> ipv4 address ip-prefix <i>string</i> vrrp vrrp-group virtual-router-id <i>number</i> interface-tracking track-interface interface <i>reference</i>
Reference	interface name <i>string</i>
Configurable	True
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

priority-decrement *number*

Description	For each tracked interface that is down then the priority is decremented by the specific amount to a minimum value of 0
Context	interface name <i>string</i> subinterface index <i>number</i> ipv4 address ip-prefix <i>string</i> vrrp vrrp-group virtual-router-id <i>number</i> interface-tracking track-interface interface <i>reference</i> priority-decrement <i>number</i>
Tree	priority-decrement
Configurable	True
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

last-transition *string*

Description	timestamp for last master router transition
Context	interface name <i>string</i> subinterface index <i>number</i> ipv4 address ip-prefix <i>string</i> vrrp vrrp-group virtual-router-id <i>number</i> last-transition <i>string</i>
Tree	last-transition
String Length	20 to 32
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

master-inherit-interval *boolean*

Description	Learn VRRP advertisement interval from master
Context	interface name <i>string</i> subinterface index <i>number</i> ipv4 address ip-prefix <i>string</i> vrrp vrrp-group virtual-router-id <i>number</i> master-inherit-interval <i>boolean</i>
Tree	master-inherit-interval
Default	false
Configurable	True
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

oper-down-reason *keyword*

Description	The first (and possibly only) reason for the vrrp-group being operationally down
Context	interface name <i>string</i> subinterface index <i>number</i> ipv4 address ip-prefix <i>string</i> vrrp vrrp-group virtual-router-id <i>number</i> oper-down-reason <i>keyword</i>
Tree	oper-down-reason
Options	<ul style="list-style-type: none"> • admin-down • sub-intf-down • virtual-ip-mismatch • authentication-config • other
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

oper-interval *number*

Description	The operational advertisement interval between VRRP messages
Context	interface name <i>string</i> subinterface index <i>number</i> ipv4 address ip-prefix <i>string</i> vrrp vrrp-group virtual-router-id <i>number</i> oper-interval <i>number</i>
Tree	oper-interval
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

oper-state *keyword*

Description	VRRP Operational state
Context	interface name <i>string</i> subinterface index <i>number</i> ipv4 address ip-prefix <i>string</i> vrrp vrrp-group virtual-router-id <i>number</i> oper-state <i>keyword</i>
Tree	oper-state
Options	<ul style="list-style-type: none"> • up Component or process is operational • down Component or process is not operational • empty Component slot is empty • downloading

- Component is downloading image into memory
- booting
Component is booting downloaded image
- starting
Component image operational, application processes starting
- failed
Component or process has failed
- synchronizing
Component is currently being synchronized
- upgrading
Component is currently being upgraded
- low-power
Component is offline due to insufficient system power
- degraded
Component or process is in a degraded state
- warm-reboot
Component or process is currently warm rebooting
This state is set during a warm reboot immediately following initiation of the reboot, continuing after startup until the system has completed audit. In this state the system will not accept configuration changes.
- waiting
Component or process is currently waiting
This state can be set by event handler when the reinvoke-with-delay action is used, and indicates that the event handler is waiting for the provided delay before reinvoking the instance.

Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

operational-priority *number*

Description	Reports the current VRRP operational priority.
Context	interface name <i>string</i> subinterface index <i>number</i> ipv4 address ip-prefix <i>string</i> vrrp vrrp-group virtual-router-id <i>number</i> operational-priority <i>number</i>
Tree	operational-priority
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

owner *boolean*

Description	VRRP instance is owner or not
Context	interface name <i>string</i> subinterface <i>index</i> <i>number</i> ipv4 address <i>ip-prefix</i> <i>string</i> vrrp vrrp-group virtual-router-id <i>number</i> owner <i>boolean</i>
Tree	owner
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

preempt *boolean*

Description	Enable VRRP master pre-emption. If enabled, router with higher priority can assume master role. If disabled, router can only become master if no other master is present
Context	interface name <i>string</i> subinterface <i>index</i> <i>number</i> ipv4 address <i>ip-prefix</i> <i>string</i> vrrp vrrp-group virtual-router-id <i>number</i> preempt <i>boolean</i>
Tree	preempt
Configurable	True
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

preempt-delay *number*

Description	Delay in seconds before a router preempts an existing master router, only applicable if preempt is enabled
Context	interface name <i>string</i> subinterface <i>index</i> <i>number</i> ipv4 address <i>ip-prefix</i> <i>string</i> vrrp vrrp-group virtual-router-id <i>number</i> preempt-delay <i>number</i>
Tree	preempt-delay
Range	1 to 65535
Configurable	True
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

priority *number*

Description	Base VRRP Priority for associated Virtual Address
Context	interface name <i>string</i> subinterface <i>index</i> <i>number</i> ipv4 address <i>ip-prefix</i> <i>string</i> vrrp vrrp-group virtual-router-id <i>number</i> priority <i>number</i>
Tree	priority
Range	0 to 254

Default	100
Configurable	True
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

state *identityref*

Description	Virtual Router state (Initialize, Backup, Master)
Context	interface name <i>string</i> subinterface <i>index</i> <i>number</i> ipv4 address <i>ip-prefix</i> <i>string</i> vrrp vrrp-group virtual-router-id <i>number</i> <i>state</i> <i>identityref</i>
Tree	state
Options	<ul style="list-style-type: none"> initialize Indicates that the virtual router is waiting for a startup event. backup Indicates that the virtual router is monitoring the availability of the master router. master Indicates that the virtual router is forwarding packets for IP addresses that are associated with this virtual router.
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

statistics

Description	Enter the statistics context
Context	interface name <i>string</i> subinterface <i>index</i> <i>number</i> ipv4 address <i>ip-prefix</i> <i>string</i> vrrp vrrp-group virtual-router-id <i>number</i> statistics
Tree	statistics
Configurable	True
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

advertisements-discarded-address-mismatch *number*

Description	Counter for the total numebr fo VRRP advertisement messages discarded due to address mismatch
Context	interface name <i>string</i> subinterface <i>index</i> <i>number</i> ipv4 address <i>ip-prefix</i> <i>string</i> vrrp vrrp-group virtual-router-id <i>number</i> statistics advertisements-discarded-address-mismatch <i>number</i>
Tree	advertisements-discarded-address-mismatch

Default	0
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

advertisements-discarded-authfail *number*

Description	Counter for the total numebr fo VRRP advertisement messages discarded due to authentication failure
Context	interface name <i>string</i> subinterface <i>index</i> <i>number</i> ipv4 address <i>ip-prefix</i> <i>string</i> vrrp vrrp-group virtual-router-id <i>number</i> statistics advertisements-discarded-authfail <i>number</i>
Tree	advertisements-discarded-authfail
Default	0
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

advertisements-discarded-authtype-mismatch *number*

Description	Counter for the total numebr fo VRRP advertisement messages discarded due to authentication type mismatch
Context	interface name <i>string</i> subinterface <i>index</i> <i>number</i> ipv4 address <i>ip-prefix</i> <i>string</i> vrrp vrrp-group virtual-router-id <i>number</i> statistics advertisements-discarded-authtype-mismatch <i>number</i>
Tree	advertisements-discarded-authtype-mismatch
Default	0
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

advertisements-discarded-interval *number*

Description	Counter for the total numebr fo VRRP advertisement messages discarded due to interval mismatch
Context	interface name <i>string</i> subinterface <i>index</i> <i>number</i> ipv4 address <i>ip-prefix</i> <i>string</i> vrrp vrrp-group virtual-router-id <i>number</i> statistics advertisements-discarded-interval <i>number</i>
Tree	advertisements-discarded-interval
Default	0
Configurable	False

Platforms 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

advertisements-discarded-length *number*

Description Counter for the total number of VRRP advertisement messages discarded due to length of the packet

Context [interface name](#) *string* [subinterface index](#) *number* [ipv4 address ip-prefix](#) *string* [vrrp vrrp-group virtual-router-id](#) *number* [statistics advertisements-discarded-length](#) *number*

Tree [advertisements-discarded-length](#)

Default 0

Configurable False

Platforms 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

advertisements-discarded-total *number*

Description Counter for the total number of VRRP advertisement messages discarded

Context [interface name](#) *string* [subinterface index](#) *number* [ipv4 address ip-prefix](#) *string* [vrrp vrrp-group virtual-router-id](#) *number* [statistics advertisements-discarded-total](#) *number*

Tree [advertisements-discarded-total](#)

Default 0

Configurable False

Platforms 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

advertisements-discarded-ttl *number*

Description Counter for the total number of VRRP advertisement messages discarded due to ttl error

Context [interface name](#) *string* [subinterface index](#) *number* [ipv4 address ip-prefix](#) *string* [vrrp vrrp-group virtual-router-id](#) *number* [statistics advertisements-discarded-ttl](#) *number*

Tree [advertisements-discarded-ttl](#)

Default 0

Configurable False

Platforms 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

advertisements-discarded-version-mismatch *number*

Description	Counter for the total numebr fo VRRP advertisement messages discarded due to version mismatch
Context	interface name <i>string</i> subinterface index <i>number</i> ipv4 address ip-prefix <i>string</i> vrrp vrrp-group virtual-router-id <i>number</i> statistics advertisements-discarded-version-mismatch <i>number</i>
Tree	advertisements-discarded-version-mismatch
Default	0
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

advertisements-interval-error *number*

Description	Counter for the total numebr fo VRRP advertisement messages with interval mismatch
Context	interface name <i>string</i> subinterface index <i>number</i> ipv4 address ip-prefix <i>string</i> vrrp vrrp-group virtual-router-id <i>number</i> statistics advertisements-interval-error <i>number</i>
Tree	advertisements-interval-error
Default	0
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

advertisements-received *number*

Description	Counter for the total numebr fo VRRP advertisement messages received
Context	interface name <i>string</i> subinterface index <i>number</i> ipv4 address ip-prefix <i>string</i> vrrp vrrp-group virtual-router-id <i>number</i> statistics advertisements-received <i>number</i>
Tree	advertisements-received
Default	0
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

advertisements-sent *number*

Description	Counter for the total number fo VRRP advertisement messages sent
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Context	interface name <i>string</i> subinterface <i>index</i> <i>number</i> ipv4 address <i>ip-prefix</i> <i>string</i> vrrp vrrp-group <i>virtual-router-id</i> <i>number</i> statistics <i>advertisements-sent</i> <i>number</i>
Tree	advertisements-sent
Default	0
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

priority-zero-packets-received *number*

Description	Counter for the total numebr fo VRRP advertisement messages received with priority 0
Context	interface name <i>string</i> subinterface <i>index</i> <i>number</i> ipv4 address <i>ip-prefix</i> <i>string</i> vrrp vrrp-group <i>virtual-router-id</i> <i>number</i> statistics <i>priority-zero-packets-received</i> <i>number</i>
Tree	priority-zero-packets-received
Default	0
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

priority-zero-packets-sent *number*

Description	Counter for the total numebr fo VRRP advertisement messages sent out with priority 0
Context	interface name <i>string</i> subinterface <i>index</i> <i>number</i> ipv4 address <i>ip-prefix</i> <i>string</i> vrrp vrrp-group <i>virtual-router-id</i> <i>number</i> statistics <i>priority-zero-packets-sent</i> <i>number</i>
Tree	priority-zero-packets-sent
Default	0
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

version *number*

Description	VRRP version for the Instance
Context	interface name <i>string</i> subinterface <i>index</i> <i>number</i> ipv4 address <i>ip-prefix</i> <i>string</i> vrrp vrrp-group <i>virtual-router-id</i> <i>number</i> version <i>number</i>
Tree	version

Range	2 to 3
Default	2
Configurable	True
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

virtual-address (*ipv4-address* | *ipv6-address*)

Description	Associated Virtual IP address.
Context	interface name <i>string</i> subinterface index <i>number</i> ipv4 address ip-prefix <i>string</i> vrrp vrrp-group virtual-router-id <i>number</i> virtual-address (<i>ipv4-address</i> <i>ipv6-address</i>)
Tree	virtual-address
Configurable	True
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b
Max. Elements	4

virtual-mac *string*

Description	VRRP Instance generated virtual mac
Context	interface name <i>string</i> subinterface index <i>number</i> ipv4 address ip-prefix <i>string</i> vrrp vrrp-group virtual-router-id <i>number</i> virtual-mac <i>string</i>
Tree	virtual-mac
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

admin-state *keyword*

Description	Enable/disable IPv4 on the subinterface When set to enable, and even before an IPv4 address is configured, the subinterface starts to accept incoming packets with dest-ip 255.255.255.255, which is necessary to support dhcp-client functionality.
Context	interface name <i>string</i> subinterface index <i>number</i> ipv4 admin-state <i>keyword</i>
Tree	admin-state
Default	disable
Options	<ul style="list-style-type: none"> • enable • disable
Configurable	True

Platforms Supported on all platforms

allow-directed-broadcast *boolean*

Description When this is set to true the software is allowed to re-broadcast targeted broadcast IPv4 packets on this subinterface

Detailed handling of subnet broadcast is as follows:

If a targeted broadcast packet is received on subinterface X that has the matching subnet then it is delivered to the CPM and CPM will reply to an ICMP echo.

If a targeted broadcast packet is received on subinterface X but the matching subnet is associated with subinterface Y, and subinterface Y is configured with `allow-directed-broadcasts=false` then it is delivered to the CPM and CPM replies to an ICMP echo per above, but it does not re-broadcast the packet on subinterface Y.

If a targeted broadcast packet is received on subinterface X but the matching subnet is associated with subinterface Y, and subinterface Y is configured with `allow-directed-broadcasts=true` then it is delivered to the CPM and CPM replies to an ICMP echo per above, and CPM also re-broadcasts the packet on subinterface Y.

Context [interface name](#) *string* [subinterface index](#) *number* [ipv4 allow-directed-broadcast](#) *boolean*

Tree [allow-directed-broadcast](#)

Default false

Configurable True

Platforms Supported on all platforms

arp

Description Container for the IPv4 ARP protocol

Context [interface name](#) *string* [subinterface index](#) *number* [ipv4 arp](#)

Tree [arp](#)

Configurable True

Platforms Supported on all platforms

debug *keyword*

Description List of events to debug

Context [interface name](#) *string* [subinterface index](#) *number* [ipv4 arp debug](#) *keyword*

Tree	debug
Options	<ul style="list-style-type: none"> • messages <p>Capture all arp-request and reply-messages sent and received by the subinterface</p>
Configurable	True
Platforms	Supported on all platforms

duplicate-address-detection *boolean*

Description	If set to true IPv4 Address Conflict Detection per RFC 5227 is performed on the IPv4 address assigned to the subinterface
Context	interface name <i>string</i> subinterface index <i>number</i> ipv4 arp duplicate-address-detection <i>boolean</i>
Tree	duplicate-address-detection
Default	true
Configurable	True
Platforms	Supported on all platforms

evpn

Description	Configure which types of ARP or ND entries will be advertised in EVPN MAC/IP routes.
Context	interface name <i>string</i> subinterface index <i>number</i> ipv4 arp evpn
Tree	evpn
Configurable	True
Platforms	7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

advertise [route-type](#) *keyword*

Description	Enter the advertise list instance
Context	interface name <i>string</i> subinterface index <i>number</i> ipv4 arp evpn advertise route-type <i>keyword</i>
Tree	advertise
Configurable	True

Platforms 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

route-type *keyword*

Description Controls what type of ARP or ND entries to advertise.

Context [interface name](#) *string* [subinterface index](#) *number* [ipv4 arp evpn advertise route-type](#) *keyword*

Options

- static
- dynamic

Configurable True

Platforms 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

internal-tags

Description Configuration and state of internal tags

Context [interface name](#) *string* [subinterface index](#) *number* [ipv4 arp evpn advertise route-type](#) *keyword* [internal-tags](#)

Tree [internal-tags](#)

Configurable True

Platforms Supported on all platforms

set-tag-set *reference*

Description Reference to a tag-set defined under routing-policy

Context [interface name](#) *string* [subinterface index](#) *number* [ipv4 arp evpn advertise route-type](#) *keyword* [internal-tags set-tag-set](#) *reference*

Tree [set-tag-set](#)

Reference [routing-policy tag-set name](#) *string*

Configurable True

Platforms Supported on all platforms

Max. Elements 1

host-route

Description	Configure which types of ARP or ND entries will be populated in the route-table.
Context	interface name <i>string</i> subinterface <i>index</i> <i>number</i> ipv4 arp host-route
Tree	host-route
Configurable	True
Platforms	Supported on all platforms

populate [route-type](#) *keyword*

Description	Enter the populate list instance
Context	interface name <i>string</i> subinterface <i>index</i> <i>number</i> ipv4 arp host-route populate route-type <i>keyword</i>
Tree	populate
Configurable	True
Platforms	Supported on all platforms

route-type *keyword*

Description	Controls what type of ARP or ND entries generate a host route.
Context	interface name <i>string</i> subinterface <i>index</i> <i>number</i> ipv4 arp host-route populate route-type <i>keyword</i>
Options	<ul style="list-style-type: none"> • static • dynamic • evpn
Configurable	True
Platforms	Supported on all platforms

datapath-programming *boolean*

Description	When set to true, the host route is programmed in the datapath
Context	interface name <i>string</i> subinterface <i>index</i> <i>number</i> ipv4 arp host-route populate route-type <i>keyword</i> datapath-programming <i>boolean</i>
Tree	datapath-programming
Configurable	True

Platforms 7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

internal-tags

Description Configuration and state of internal tags

Context [interface name](#) *string* [subinterface index](#) *number* [ipv4 arp host-route populate route-type](#) *keyword* [internal-tags](#)

Tree [internal-tags](#)

Configurable True

Platforms 7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

set-tag-set *reference*

Description Reference to a tag-set defined under routing-policy

Context [interface name](#) *string* [subinterface index](#) *number* [ipv4 arp host-route populate route-type](#) *keyword* [internal-tags set-tag-set](#) *reference*

Tree [set-tag-set](#)

Reference [routing-policy tag-set name](#) *string*

Configurable True

Platforms 7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

Max. Elements 1

learn-unsolicited *boolean*

Description If set to true an ARP entry should be learned from any received ARP packets.

Context [interface name](#) *string* [subinterface index](#) *number* [ipv4 arp learn-unsolicited](#) *boolean*

Tree [learn-unsolicited](#)

Default false

Configurable True

Platforms Supported on all platforms

neighbor ipv4-address *string*

Description	List of static and dynamic ARP cache entries that map an IPv4 address to a MAC address To configure a static ARP entry a value must be written into this leaf and the link-layer-address leaf.
Context	interface name <i>string</i> subinterface index <i>number</i> ipv4 arp neighbor ipv4-address <i>string</i>
Tree	neighbor
Configurable	True
Platforms	Supported on all platforms

ipv4-address *string*

Description	IPv4 address resolved by the ARP entry To configure a static neighbor entry a value must be written into this leaf and the link-layer-address leaf.
Context	interface name <i>string</i> subinterface index <i>number</i> ipv4 arp neighbor ipv4-address <i>string</i>
Configurable	True
Platforms	Supported on all platforms

datapath-programming

Description	Container for state related to the datapath programming of the ARP or neighbor entry
Context	interface name <i>string</i> subinterface index <i>number</i> ipv4 arp neighbor ipv4-address <i>string</i> datapath-programming
Tree	datapath-programming
Configurable	False
Platforms	Supported on all platforms

last-failed-complexes *string*

Description	List of forwarding complexes that reported a failure for the last operation. They appear in the format (slot-number,complex-number).
Context	interface name <i>string</i> subinterface index <i>number</i> ipv4 arp neighbor ipv4-address <i>string</i> datapath-programming last-failed-complexes <i>string</i>

Tree	last-failed-complexes
Configurable	False
Platforms	Supported on all platforms

status *keyword*

Description	The status of the ARP or neighbor entry with respect to datapath programming
Context	interface name <i>string</i> subinterface index <i>number</i> ipv4 arp neighbor ipv4-address <i>string</i> datapath-programming status <i>keyword</i>
Tree	status
Options	<ul style="list-style-type: none"> • success All linecard complexes have reported that the entry was programmed successfully • failed At least one linecard complex reported that the entry was not programmed successfully or else this entry was not even provided to the datapath for programming because the system limit on the number of IPv4 ARP and IPv6 neighbor entries was exceeded • pending The ARP or neighbor entry was provided to the datapath for programming but at least one linecard complex has not provided a status yet.
Configurable	False
Platforms	Supported on all platforms

expiration-time *string*

Description	The date and time when the dynamic ARP entry is set to expire
Context	interface name <i>string</i> subinterface index <i>number</i> ipv4 arp neighbor ipv4-address <i>string</i> expiration-time <i>string</i>
Tree	expiration-time
String Length	20 to 32
Configurable	False
Platforms	Supported on all platforms

link-layer-address *string*

Description	The resolving MAC address of the ARP entry
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To configure a static ARP entry a value must be written into this leaf and the ipv4-address leaf.

Context	interface name <i>string</i> subinterface index <i>number</i> ipv4 arp neighbor ipv4-address <i>string</i> link-layer-address <i>string</i>
Tree	link-layer-address
Configurable	True
Platforms	Supported on all platforms

origin *keyword*

Description	The origin of the ARP entry
Context	interface name <i>string</i> subinterface index <i>number</i> ipv4 arp neighbor ipv4-address <i>string</i> origin <i>keyword</i>
Tree	origin
Options	<ul style="list-style-type: none"> • other • static • dynamic • evpn
Configurable	False
Platforms	Supported on all platforms

proxy-arp *boolean*

Description	When set to true, the router replies with its own MAC to ARP Request destined to any host.
Context	interface name <i>string</i> subinterface index <i>number</i> ipv4 arp proxy-arp <i>boolean</i>
Tree	proxy-arp
Default	false
Configurable	True
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

timeout *number*

Description	Duration of time that dynamic ARP entries remain in the ARP cache before they expire
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A change to this value does not affect existing entries until they are refreshed.

Context	interface name <i>string</i> subinterface index number <i>number</i> ipv4 arp timeout <i>number</i>
Tree	timeout
Range	60 to 65535
Default	14400
Units	seconds
Configurable	True
Platforms	Supported on all platforms

virtual-ipv4-discovery

Description	Enable Virtual IPv4 discovery on the subinterface and configure associated parameters When enabled, the system will attempt to discover the configured virtual IPv4 addresses on the listed bridged subinterfaces.
Context	interface name <i>string</i> subinterface index number <i>number</i> ipv4 arp virtual-ipv4-discovery
Tree	virtual-ipv4-discovery
Configurable	True
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

address [ipv4-address](#) *string*

Description	The list of virtual IPv4 addresses to be discovered on the subinterface.
Context	interface name <i>string</i> subinterface index number <i>number</i> ipv4 arp virtual-ipv4-discovery address ipv4-address <i>string</i>
Tree	address
Configurable	True
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b
Max. Elements	640

ipv4-address *string*

Description	The virtual IPv4 address.
Context	interface name <i>string</i> subinterface index number <i>number</i> ipv4 arp virtual-ipv4-discovery address ipv4-address <i>string</i>
Configurable	True
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

allowed-macs *string*

Description	List of allowed mac addresses for a discovered virtual IP address.
Context	interface name <i>string</i> subinterface index number <i>number</i> ipv4 arp virtual-ipv4-discovery address ipv4-address <i>string</i> allowed-macs <i>string</i>
Tree	allowed-macs
Configurable	True
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b
Max. Elements	10

probe-bridged-subinterfaces *string*

Description	Configure the list of bridged sub-interfaces on the associated MAC-VRF to which the ARP probes are sent.
Context	interface name <i>string</i> subinterface index number <i>number</i> ipv4 arp virtual-ipv4-discovery address ipv4-address <i>string</i> probe-bridged-subinterfaces <i>string</i>
Tree	probe-bridged-subinterfaces
String Length	5 to 25
Configurable	True
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b
Max. Elements	10

probe-interval *number*

Description	Configure the ARP probe interval at which the system sends an ARP request for the virtual IPv4 address. The default value of zero determines that the system sends an ARP Request for the virtual IPv4 only when the address is configured. The creation of the ARP entry for the virtual IPv4 address will in this case rely on the server sending a Gratuitous ARP for the virtual IPv4 address. When the value is set to a non-zero interval, the system sends a periodic ARP Request at the configured interval and irrespective of the ARP entry being already created.
Context	interface name <i>string</i> subinterface index <i>number</i> ipv4 arp virtual-ipv4-discovery address <i>string</i> probe-interval <i>number</i>
Tree	probe-interval
Range	0 5 to 86400
Default	0
Units	seconds
Configurable	True
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

statistics

Description	Statistics for the Virtual IP address
Context	interface name <i>string</i> subinterface index <i>number</i> ipv4 arp virtual-ipv4-discovery address <i>string</i> statistics
Tree	statistics
Configurable	False
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

out-probe-packets *number*

Description	The number of probe packets transmitted for the Virtual IP discovery.
Context	interface name <i>string</i> subinterface index <i>number</i> ipv4 arp virtual-ipv4-discovery address <i>string</i> statistics out-probe-packets <i>number</i>
Tree	out-probe-packets
Default	0

Configurable	False
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

statistics

Description	Global statistics for Virtual IP discovery
Context	interface name <i>string</i> subinterface <i>index</i> <i>number</i> ipv4 arp virtual-ipv4-discovery statistics
Tree	statistics
Configurable	False
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

out-total-probe-packets *number*

Description	The number of total probe packets transmitted for Virtual discovery.
Context	interface name <i>string</i> subinterface <i>index</i> <i>number</i> ipv4 arp virtual-ipv4-discovery statistics out-total-probe-packets <i>number</i>
Tree	out-total-probe-packets
Default	0
Configurable	False
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

dhcp-client

Description	Container for options related to DHCP
Context	interface name <i>string</i> subinterface <i>index</i> <i>number</i> ipv4 dhcp-client
Tree	dhcp-client
Configurable	True
Platforms	Supported on all platforms

trace-options

Description	Container for tracing DHCPv4 operations on the subinterface
Context	interface name <i>string</i> subinterface <i>index</i> <i>number</i> ipv4 dhcp-client trace-options
Tree	trace-options
Configurable	True
Platforms	Supported on all platforms

trace *keyword*

Description	List of events to trace
Context	interface name <i>string</i> subinterface <i>index</i> <i>number</i> ipv4 dhcp-client trace-options trace <i>keyword</i>
Tree	trace
Options	<ul style="list-style-type: none"> • <code>messages</code> Capture all DHCPv4 messages sent and received by the subinterface
Configurable	True
Platforms	Supported on all platforms

dhcp-relay

Description	Container for options related to DHCPv4 relay
Context	interface name <i>string</i> subinterface <i>index</i> <i>number</i> ipv4 dhcp-relay
Tree	dhcp-relay
Configurable	True
Platforms	Supported on all platforms

admin-state *keyword*

Description	The configurable state of the dhcp relay agent
Context	interface name <i>string</i> subinterface <i>index</i> <i>number</i> ipv4 dhcp-relay admin-state <i>keyword</i>
Tree	admin-state
Default	enable
Options	<ul style="list-style-type: none"> • <code>enable</code>

	<ul style="list-style-type: none"> • disable
Configurable	True
Platforms	Supported on all platforms

dns-resolution

Description	Enter the dns-resolution context
Context	interface name <i>string</i> subinterface <i>index</i> <i>number</i> ipv4 dhcp-relay dns-resolution
Tree	dns-resolution
Configurable	False
Platforms	Supported on all platforms

server [domain](#) *string*

Description	Reports the resolved IP address for server entries using domain names
Context	interface name <i>string</i> subinterface <i>index</i> <i>number</i> ipv4 dhcp-relay dns-resolution server domain <i>string</i>
Tree	server
Configurable	False
Platforms	Supported on all platforms

domain *string*

Description	The server domain name
Context	interface name <i>string</i> subinterface <i>index</i> <i>number</i> ipv4 dhcp-relay dns-resolution server domain <i>string</i>
String Length	1 to 253
Configurable	False
Platforms	Supported on all platforms

last-update *string*

Description	The date and time of the last update of the server IP address
Context	interface name <i>string</i> subinterface <i>index</i> <i>number</i> ipv4 dhcp-relay dns-resolution server domain <i>string</i> last-update <i>string</i>
Tree	last-update

String Length	20 to 32
Configurable	False
Platforms	Supported on all platforms

resolved-ip-address (*ipv4-address* | *ipv6-address*)

Description	The resolved IP address of the server domain name. An entry of 0.0.0.0 indicates the server IP cannot be resolved.
Context	interface name <i>string</i> subinterface index <i>number</i> ipv4 dhcp-relay dns-resolution server domain <i>string</i> resolved-ip-address (<i>ipv4-address</i> <i>ipv6-address</i>)
Tree	resolved-ip-address
Configurable	False
Platforms	Supported on all platforms

gi-address *string*

Description	IPv4 address to be used as giaddr of the relayed packets towards DHCPv4 servers. This address can be any IPv4 address configured within the network-instance towards the DHCPv4 server
Context	interface name <i>string</i> subinterface index <i>number</i> ipv4 dhcp-relay gi-address <i>string</i>
Tree	gi-address
Configurable	True
Platforms	Supported on all platforms

network-instance *reference*

Description	network instance to relay dhcp packets to
Context	interface name <i>string</i> subinterface index <i>number</i> ipv4 dhcp-relay network-instance <i>reference</i>
Tree	network-instance
Reference	network-instance name <i>string</i>
Configurable	True
Platforms	Supported on all platforms

oper-down-reason *keyword*

Description	The reason causing the dhcp relay agent to go into operational down state
Context	interface name <i>string</i> subinterface index <i>number</i> ipv4 dhcp-relay oper-down-reason <i>keyword</i>
Tree	oper-down-reason
Options	<ul style="list-style-type: none"> • dhcp-relay-admin-down • sub-interface-oper-down • all-dhcp-servers-unreachable-within-net-instance • gi-address-not-matching-relay-sub-interface-ipv4-addresses • no-valid-ipv4-address-on-sub-interface
Configurable	False
Platforms	Supported on all platforms

oper-state *keyword*

Description	The operational state of the dhcp relay agent
Context	interface name <i>string</i> subinterface index <i>number</i> ipv4 dhcp-relay oper-state <i>keyword</i>
Tree	oper-state
Options	<ul style="list-style-type: none"> • up Component or process is operational • down Component or process is not operational • empty Component slot is empty • downloading Component is downloading image into memory • booting Component is booting downloaded image • starting Component image operational, application processes starting • failed Component or process has failed • synchronizing Component is currently being synchronized

- upgrading
Component is currently being upgraded
- low-power
Component is offline due to insufficient system power
- degraded
Component or process is in a degraded state
- warm-reboot
Component or process is currently warm rebooting
This state is set during a warm reboot immediately following initiation of the reboot, continuing after startup until the system has completed audit. In this state the system will not accept configuration changes.
- waiting
Component or process is currently waiting
This state can be set by event handler when the reinvoke-with-delay action is used, and indicates that the event handler is waiting for the provided delay before reinvoking the instance.

Configurable

False

Platforms

Supported on all platforms

option keyword**Description**

List of option82 suboptions to insert into relayed packet towards DHCPv4 server

Context[interface name](#) *string* [subinterface](#) *index* *number* [ipv4 dhcp-relay option keyword](#)**Tree**[option](#)**Options**

- circuit-id
Enable option 82 suboption 1 circuit-id into relayed packet towards DHCPv4 server, format=system_name/VRF_instance/sub-interface_id:vlan_id
- remote-id
Enable option 82 suboption 2 remote-id into relayed packet towards DHCPv4 server, format=client MAC address

Configurable

True

Platforms

Supported on all platforms

server (*ipv4-address* | *domain-name*)

Description	List of the DHCPv4 servers that the DHCPv4 relay function will relay DHCPv4 packets to/from
Context	interface name <i>string</i> subinterface <i>index</i> <i>number</i> ipv4 dhcp-relay server (<i>ipv4-address</i> <i>domain-name</i>)
Tree	server
String Length	1 to 253
Configurable	True
Platforms	Supported on all platforms
Max. Elements	8
Min. Elements	1

statistics

Description	Enter the statistics context
Context	interface name <i>string</i> subinterface <i>index</i> <i>number</i> ipv4 dhcp-relay statistics
Tree	statistics
Configurable	False
Platforms	Supported on all platforms

client-packets-discarded *number*

Description	Total discarded dhcp packets from dhcp client(s) towards DHCP server(s)
Context	interface name <i>string</i> subinterface <i>index</i> <i>number</i> ipv4 dhcp-relay statistics client-packets-discarded <i>number</i>
Tree	client-packets-discarded
Default	0
Configurable	False
Platforms	Supported on all platforms

client-packets-received *number*

Description	Total received dhcp packets from dhcp client(s) for DHCP Relay
Context	interface name <i>string</i> subinterface <i>index</i> <i>number</i> ipv4 dhcp-relay statistics client-packets-received <i>number</i>
Tree	client-packets-received

Default	0
Configurable	False
Platforms	Supported on all platforms

client-packets-relayed *number*

Description	Total relayed dhcp packets from dhcp client(s) towards DHCP server(s)
Context	interface name <i>string</i> subinterface <i>index</i> <i>number</i> ipv4 dhcp-relay statistics client-packets-relayed <i>number</i>
Tree	client-packets-relayed
Default	0
Configurable	False
Platforms	Supported on all platforms

server-packets-discarded *number*

Description	Total discarded dhcp packets from DHCP server(s) towards dhcp client(s)
Context	interface name <i>string</i> subinterface <i>index</i> <i>number</i> ipv4 dhcp-relay statistics server-packets-discarded <i>number</i>
Tree	server-packets-discarded
Default	0
Configurable	False
Platforms	Supported on all platforms

server-packets-received *number*

Description	Total received dhcp packets from DHCP server(s) for DHCP Relay
Context	interface name <i>string</i> subinterface <i>index</i> <i>number</i> ipv4 dhcp-relay statistics server-packets-received <i>number</i>
Tree	server-packets-received
Default	0
Configurable	False
Platforms	Supported on all platforms

server-packets-relayed *number*

Description	Total relayed dhcp packets from DHCP server(s) towards dhcp client(s)
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Context	interface name <i>string</i> subinterface index <i>number</i> ipv4 dhcp-relay statistics server-packets-relayed <i>number</i>
Tree	server-packets-relayed
Default	0
Configurable	False
Platforms	Supported on all platforms

trace-options

Description	Container for tracing DHCPv4 relay operations on the subinterface
Context	interface name <i>string</i> subinterface index <i>number</i> ipv4 dhcp-relay trace-options
Tree	trace-options
Configurable	True
Platforms	Supported on all platforms

trace *keyword*

Description	List of events to trace
Context	interface name <i>string</i> subinterface index <i>number</i> ipv4 dhcp-relay trace-options trace <i>keyword</i>
Tree	trace
Options	<ul style="list-style-type: none"> • <code>messages</code> Capture all DHCPv4 messages sent and received by the subinterface
Configurable	True
Platforms	Supported on all platforms

use-gi-addr-as-src-ip-addr *boolean*

Description	When this is set, the configured giaddress will be used as source ip address.
Context	interface name <i>string</i> subinterface index <i>number</i> ipv4 dhcp-relay use-gi-addr-as-src-ip-addr <i>boolean</i>
Tree	use-gi-addr-as-src-ip-addr
Default	false
Configurable	True
Platforms	Supported on all platforms

dhcp-server

Description	Enable the dhcp-server context
Context	interface name <i>string</i> subinterface index <i>number</i> ipv4 dhcp-server
Tree	dhcp-server
Configurable	True
Platforms	Supported on all platforms

admin-state *keyword*

Description	Enables/Disables DHCP server function on subinterface
Context	interface name <i>string</i> subinterface index <i>number</i> ipv4 dhcp-server admin-state <i>keyword</i>
Tree	admin-state
Default	disable
Options	<ul style="list-style-type: none"> • enable • disable
Configurable	True
Platforms	Supported on all platforms

oper-state *keyword*

Description	Details if the dhcp server is operationally available
Context	interface name <i>string</i> subinterface index <i>number</i> ipv4 dhcp-server oper-state <i>keyword</i>
Tree	oper-state
Options	<ul style="list-style-type: none"> • up Component or process is operational • down Component or process is not operational • empty Component slot is empty • downloading Component is downloading image into memory • booting Component is booting downloaded image

- starting
Component image operational, application processes starting
- failed
Component or process has failed
- synchronizing
Component is currently being synchronized
- upgrading
Component is currently being upgraded
- low-power
Component is offline due to insufficient system power
- degraded
Component or process is in a degraded state
- warm-reboot
Component or process is currently warm rebooting
This state is set during a warm reboot immediately following initiation of the reboot, continuing after startup until the system has completed audit. In this state the system will not accept configuration changes.
- waiting
Component or process is currently waiting
This state can be set by event handler when the `reinvoke-with-delay` action is used, and indicates that the event handler is waiting for the provided delay before reinvoking the instance.

Configurable

False

Platforms

Supported on all platforms

statistics**Description**

Container for subinterface statistics, including all IPv4, IPv6 and MPLS packets belonging to a routed subinterface, or including just one of these protocols on a routed subinterface, or for all frames on a bridged subinterface

Context

[interface name](#) *string* [subinterface index](#) *number* [ipv4 statistics](#)

Tree

[statistics](#)

Configurable

False

Platforms

7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

in-discarded-packets *number*

Description	The total number of input packets that were dropped due to explicit programming The discards can be due to any of the following reasons In an MPLS context, this includes the total number of MPLS packets that were dropped because they were received with forwarded top label having an MPLS TTL value of 1
Context	interface name <i>string</i> subinterface index <i>number</i> ipv4 statistics in-discarded-packets <i>number</i>
Tree	in-discarded-packets
Default	0
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

in-error-packets *number*

Description	The total number of input packets discarded due to errors, counting transit and terminating traffic In an IP context, the sum of the following RFC 4293 counters: ipIfStatsInHdrErrors ipIfStatsInNoRoutes ipIfStatsInAddrErrors ipIfStatsInUnknownProtos ipIfStatsInTruncatedPkts In an MPLS context, the total number of MPLS packets that were dropped because:
Context	interface name <i>string</i> subinterface index <i>number</i> ipv4 statistics in-error-packets <i>number</i>
Tree	in-error-packets
Default	0
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

in-forwarded-octets *number*

Description	The number of octets in packets received on this subinterface counted in in-forwarded-packets
Context	interface name <i>string</i> subinterface index <i>number</i> ipv4 statistics in-forwarded-octets <i>number</i>
Tree	in-forwarded-octets
Default	0

Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

in-forwarded-packets *number*

Description	The number of packets received on this subinterface for which the router was not the final destination and for which the router attempted to find a route to forward them to that final destination. Note that non-terminating IPv4 packets with options and non-terminating IPv6 packets with extension headers are included in this count as are packets that trigger ICMP/ICMPv6 redirect messages.
Context	interface name <i>string</i> subinterface index <i>number</i> ipv4 statistics in-forwarded-packets <i>number</i>
Tree	in-forwarded-packets
Default	0
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

in-matched-ra-packets *number*

Description	The total number of IPv6 packets matched with applied RA-Guard policy
Context	interface name <i>string</i> subinterface index <i>number</i> ipv4 statistics in-matched-ra-packets <i>number</i>
Tree	in-matched-ra-packets
Default	0
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

in-octets *number*

Description	The total number of octets received in input packets, counting transit and terminating traffic
Context	interface name <i>string</i> subinterface index <i>number</i> ipv4 statistics in-octets <i>number</i>
Tree	in-octets
Default	0
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

in-packets *number*

Description	The total number of input packets received, counting transit and terminating traffic This equals the sum of: in-error-packets in-discarded-packets in-terminated-packets in-forwarded-packets
Context	interface name <i>string</i> subinterface index <i>number</i> ipv4 statistics in-packets <i>number</i>
Tree	in-packets
Default	0
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

in-terminated-octets *number*

Description	The total number of octets in packets that were received on this subinterface and counted in in-terminated-packets
Context	interface name <i>string</i> subinterface index <i>number</i> ipv4 statistics in-terminated-octets <i>number</i>
Tree	in-terminated-octets
Default	0
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

in-terminated-packets *number*

Description	The total number of input packets that were received on this subinterface that were extracted to the control plane The count includes packets eventually discarded by the CPM. Such discards include:
Context	interface name <i>string</i> subinterface index <i>number</i> ipv4 statistics in-terminated-packets <i>number</i>
Tree	in-terminated-packets
Default	0
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

last-clear *string*

Description	Timestamp of the last time the subinterface counters were cleared
Context	interface name <i>string</i> subinterface index <i>number</i> ipv4 statistics last-clear <i>string</i>
Tree	last-clear
String Length	20 to 32
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

out-discarded-packets *number*

Description	The total number of packets, originating and transit, that should have been sent out this subinterface but were dropped This includes IP packets dropped by egress interface ACL drop action.
Context	interface name <i>string</i> subinterface index <i>number</i> ipv4 statistics out-discarded-packets <i>number</i>
Tree	out-discarded-packets
Default	0
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

out-error-packets *number*

Description	The number of packets, originating and transit, for which this router was successful in finding a path to their final destination through this subinterface but an error prevented their transmission On 7250 IXR systems this is incremented when the IPv4 packet size exceeds the IP MTU and fragmentation was not allowed or not supported. It is also incremented when the MPLS packet size exceeds the MPLS MTU of the subinterface.
Context	interface name <i>string</i> subinterface index <i>number</i> ipv4 statistics out-error-packets <i>number</i>
Tree	out-error-packets
Default	0
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

out-forwarded-octets *number*

Description	The number of octets in transit packets which the router attempted to forward out this subinterface
Context	interface name <i>string</i> subinterface index <i>number</i> ipv4 statistics out-forwarded-octets <i>number</i>
Tree	out-forwarded-octets
Default	0
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

out-forwarded-packets *number*

Description	The number of transit packets which the router attempted to forward out this subinterface
Context	interface name <i>string</i> subinterface index <i>number</i> ipv4 statistics out-forwarded-packets <i>number</i>
Tree	out-forwarded-packets
Default	0
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

out-octets *number*

Description	The total number of octets in packets delivered to the lower layers for transmission
Context	interface name <i>string</i> subinterface index <i>number</i> ipv4 statistics out-octets <i>number</i>
Tree	out-octets
Default	0
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

out-originated-octets *number*

Description	The number of octets in packets which originated on the CPM and which the router attempted to forward out this subinterface
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Context	interface name <i>string</i> subinterface index <i>number</i> ipv4 statistics out-originated-octets <i>number</i>
Tree	out-originated-octets
Default	0
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

out-originated-packets *number*

Description	The number of packets which originated on the CPM and which the router attempted to forward out this subinterface
Context	interface name <i>string</i> subinterface index <i>number</i> ipv4 statistics out-originated-packets <i>number</i>
Tree	out-originated-packets
Default	0
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

out-packets *number*

Description	The total number of packets that this router supplied to the lower layers for transmission This equals the sum of: out-error-packets out-discarded-packets out-originated-packets out-forwarded-packets
Context	interface name <i>string</i> subinterface index <i>number</i> ipv4 statistics out-packets <i>number</i>
Tree	out-packets
Default	0
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

ipv6

Description	IPv6 configuration and state for the subinterface
Context	interface name <i>string</i> subinterface index <i>number</i> ipv6
Tree	ipv6
Configurable	True

Platforms Supported on all platforms

address ip-prefix string

Description The list of IPv6 addresses assigned to the subinterface.

Context [interface name string subinterface index number ipv6 address ip-prefix string](#)

Tree [address](#)

Configurable True

Platforms Supported on all platforms

Max. Elements 18

ip-prefix string

Description The IPv6 address and prefix-length in CIDR notation

Up to 16 global unicast IPv6 addresses can be assigned to each subinterface. Global unicast IPv6 address subnets on the same subinterface are allowed to overlap as long as the host bits are different. When a locally originated unicast packet is destined to a host covered by multiple subnets associated with a subinterface, the source address is chosen to be the numerically lowest IP address among all these subnets.

Context [interface name string subinterface index number ipv6 address ip-prefix string](#)

Configurable True

Platforms Supported on all platforms

anycast-gw boolean

Description This designates the associated IPv6 address as an anycast-gateway IPv6 address of the subinterface.

When this parameter is set to true:

Context [interface name string subinterface index number ipv6 address ip-prefix string anycast-gw boolean](#)

Tree [anycast-gw](#)

Configurable True

Platforms 7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

origin keyword

Description	The origin of the IPv6 address
Context	interface name <i>string</i> subinterface index <i>number</i> ipv6 address ip-prefix <i>string</i> origin keyword
Tree	origin
Options	<ul style="list-style-type: none"> • other • static • dhcp • link-layer • random
Configurable	False
Platforms	Supported on all platforms

primary

Description	<p>One of the IPv6 prefixes assigned to the subinterface can be explicitly configured as primary by setting this leaf to true. This designates the associated IPv6 address as a primary IPv6 address of the subinterface. By default, the numerically lowest value IPv6 address is selected as the primary address.</p> <p>The primary address is used as the source address for locally originated broadcast and multicast packets sent out the subinterface.</p>
Context	interface name <i>string</i> subinterface index <i>number</i> ipv6 address ip-prefix <i>string</i> primary
Tree	primary
Configurable	True
Platforms	Supported on all platforms

status keyword

Description	The status of an IPv6 address
Context	interface name <i>string</i> subinterface index <i>number</i> ipv6 address ip-prefix <i>string</i> status keyword
Tree	status
Options	<ul style="list-style-type: none"> • preferred • deprecated • invalid

- inaccessible
- unknown
- tentative
- duplicate
- optimistic

Configurable

False

Platforms

Supported on all platforms

type keyword**Description**

Specifies the explicit type of the IPv6 address being assigned to the subinterface

By default, addresses are assumed to be global unicast. Where a link-local address is to be explicitly configured, this leaf should be set to link-local.

Context

[interface name](#) *string* [subinterface index](#) *number* [ipv6 address ip-prefix](#) *string* [type keyword](#)

Tree[type](#)**Default**

global-unicast

Options

- global-unicast

The IPv6 address is a global unicast address type and must be in the format defined in RFC 4291 section 2.4.

- link-local-unicast

The IPv6 address is a Link-Local unicast address type and must be in the format defined in RFC 4291 section 2.4.

Configurable

True

Platforms

Supported on all platforms

vrrp**Description**

VRRP Configuration and State under a IPv6 context of a sub-interface

Context

[interface name](#) *string* [subinterface index](#) *number* [ipv6 address ip-prefix](#) *string* [vrrp](#)

Tree[vrrp](#)**Configurable**

True

Platforms

7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

vrrp-group virtual-router-id number

Description	VRRP Group Specific Configuration under IPv6 context
Context	interface name <i>string</i> subinterface index <i>number</i> ipv6 address ip-prefix <i>string</i> vrrp vrrp-group virtual-router-id <i>number</i>
Tree	vrrp-group
Configurable	True
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

virtual-router-id number

Description	VRRP Group Index
Context	interface name <i>string</i> subinterface index <i>number</i> ipv6 address ip-prefix <i>string</i> vrrp vrrp-group virtual-router-id <i>number</i>
Range	1 to 255
Configurable	True
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

accept-mode boolean

Description	Allows ssh,ping,traceroute to be accepted on the virtual IP address
Context	interface name <i>string</i> subinterface index <i>number</i> ipv6 address ip-prefix <i>string</i> vrrp vrrp-group virtual-router-id <i>number</i> accept-mode <i>boolean</i>
Tree	accept-mode
Configurable	True
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

admin-state keyword

Description	Administrative state for the associated VRRP group instance
Context	interface name <i>string</i> subinterface index <i>number</i> ipv6 address ip-prefix <i>string</i> vrrp vrrp-group virtual-router-id <i>number</i> admin-state <i>keyword</i>
Tree	admin-state
Default	enable
Options	<ul style="list-style-type: none"> • enable • disable

Configurable	True
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

advertise-interval *number*

Description	The interval between VRRP messages in milliseconds
Context	interface name <i>string</i> subinterface <i>index</i> <i>number</i> ipv6 address <i>ip-prefix</i> <i>string</i> vrrp vrrp-group virtual-router-id <i>number</i> advertise-interval <i>number</i>
Tree	advertise-interval
Range	1000 to 40950
Default	1000
Configurable	True
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

authentication

Description	Context to configure authentication keychain
Context	interface name <i>string</i> subinterface <i>index</i> <i>number</i> ipv6 address <i>ip-prefix</i> <i>string</i> vrrp vrrp-group virtual-router-id <i>number</i> authentication
Tree	authentication
Configurable	True
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

keychain *reference*

Description	Reference to a keychain. The keychain type must be md5 or clear-text
Context	interface name <i>string</i> subinterface <i>index</i> <i>number</i> ipv6 address <i>ip-prefix</i> <i>string</i> vrrp vrrp-group virtual-router-id <i>number</i> authentication keychain <i>reference</i>
Tree	keychain
Reference	system authentication keychain name <i>string</i>
Configurable	True
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

current-master (*ipv4-address* | *ipv6-address*)

Description	IP address of node currently acting as VRRP master
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Context	interface name <i>string</i> subinterface index <i>number</i> ipv6 address ip-prefix <i>string</i> vrrp vrrp-group virtual-router-id <i>number</i> current-master (<i>ipv4-address ipv6-address</i>)
Tree	current-master
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

init-delay *number*

Description	Initialization delay in seconds before a router that just rebooted will preempt an existing master router. Only applicable if preempt is enabled
Context	interface name <i>string</i> subinterface index <i>number</i> ipv6 address ip-prefix <i>string</i> vrrp vrrp-group virtual-router-id <i>number</i> init-delay <i>number</i>
Tree	init-delay
Range	1 to 65535
Configurable	True
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

interface-tracking

Description	Interface reference for interface tracking
Context	interface name <i>string</i> subinterface index <i>number</i> ipv6 address ip-prefix <i>string</i> vrrp vrrp-group virtual-router-id <i>number</i> interface-tracking
Tree	interface-tracking
Configurable	True
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

track-interface [interface](#) *reference*

Description	Interface reference for interface tracking. VRRP Group can track multiple interfaces.
Context	interface name <i>string</i> subinterface index <i>number</i> ipv6 address ip-prefix <i>string</i> vrrp vrrp-group virtual-router-id <i>number</i> interface-tracking track-interface interface <i>reference</i>
Tree	track-interface
Configurable	True
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

interface *reference*

Description	Interface to track
Context	interface name <i>string</i> subinterface index <i>number</i> ipv6 address ip-prefix <i>string</i> vrrp vrrp-group virtual-router-id <i>number</i> interface-tracking track-interface interface <i>reference</i>
Reference	interface name <i>string</i>
Configurable	True
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

priority-decrement *number*

Description	For each tracked interface that is down then the priority is decremented by the specific amount to a minimum value of 0
Context	interface name <i>string</i> subinterface index <i>number</i> ipv6 address ip-prefix <i>string</i> vrrp vrrp-group virtual-router-id <i>number</i> interface-tracking track-interface interface <i>reference</i> priority-decrement <i>number</i>
Tree	priority-decrement
Configurable	True
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

last-transition *string*

Description	timestamp for last master router transition
Context	interface name <i>string</i> subinterface index <i>number</i> ipv6 address ip-prefix <i>string</i> vrrp vrrp-group virtual-router-id <i>number</i> last-transition <i>string</i>
Tree	last-transition
String Length	20 to 32
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

master-inherit-interval *boolean*

Description	Learn VRRP advertisement interval from master
Context	interface name <i>string</i> subinterface index <i>number</i> ipv6 address ip-prefix <i>string</i> vrrp vrrp-group virtual-router-id <i>number</i> master-inherit-interval <i>boolean</i>
Tree	master-inherit-interval
Default	false

Configurable	True
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

oper-down-reason *keyword*

Description	The first (and possibly only) reason for the vrrp-group being operationally down
Context	interface name <i>string</i> subinterface index <i>number</i> ipv6 address ip-prefix <i>string</i> vrrp vrrp-group virtual-router-id <i>number</i> oper-down-reason <i>keyword</i>
Tree	oper-down-reason
Options	<ul style="list-style-type: none"> • admin-down • sub-intf-down • virtual-ip-mismatch • authentication-config • other
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

oper-interval *number*

Description	The operational advertisement interval between VRRP messages
Context	interface name <i>string</i> subinterface index <i>number</i> ipv6 address ip-prefix <i>string</i> vrrp vrrp-group virtual-router-id <i>number</i> oper-interval <i>number</i>
Tree	oper-interval
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

oper-state *keyword*

Description	VRRP Operational state
Context	interface name <i>string</i> subinterface index <i>number</i> ipv6 address ip-prefix <i>string</i> vrrp vrrp-group virtual-router-id <i>number</i> oper-state <i>keyword</i>
Tree	oper-state
Options	<ul style="list-style-type: none"> • up Component or process is operational • down Component or process is not operational

- empty
Component slot is empty
- downloading
Component is downloading image into memory
- booting
Component is booting downloaded image
- starting
Component image operational, application processes starting
- failed
Component or process has failed
- synchronizing
Component is currently being synchronized
- upgrading
Component is currently being upgraded
- low-power
Component is offline due to insufficient system power
- degraded
Component or process is in a degraded state
- warm-reboot
Component or process is currently warm rebooting
This state is set during a warm reboot immediately following initiation of the reboot, continuing after startup until the system has completed audit. In this state the system will not accept configuration changes.
- waiting
Component or process is currently waiting
This state can be set by event handler when the reinvoke-with-delay action is used, and indicates that the event handler is waiting for the provided delay before reinvoking the instance.

Configurable

False

Platforms

7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

operational-priority *number***Description**

Reports the current VRRP operational priority.

Context[interface name](#) *string* [subinterface index](#) *number* [ipv6 address ip-prefix](#) *string* [vrrp vrrp-group virtual-router-id](#) *number* [operational-priority](#) *number***Tree**[operational-priority](#)

Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

owner *boolean*

Description	VRRP instance is owner or not
Context	interface name <i>string</i> subinterface index <i>number</i> ipv6 address ip-prefix <i>string</i> vrrp vrrp-group virtual-router-id <i>number</i> owner <i>boolean</i>
Tree	owner
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

preempt *boolean*

Description	Enable VRRP master pre-emption. If enabled, router with higher priority can assume master role. If disabled, router can only become master if no other master is present
Context	interface name <i>string</i> subinterface index <i>number</i> ipv6 address ip-prefix <i>string</i> vrrp vrrp-group virtual-router-id <i>number</i> preempt <i>boolean</i>
Tree	preempt
Configurable	True
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

preempt-delay *number*

Description	Delay in seconds before a router preempts an existing master router, only applicable if preempt is enabled
Context	interface name <i>string</i> subinterface index <i>number</i> ipv6 address ip-prefix <i>string</i> vrrp vrrp-group virtual-router-id <i>number</i> preempt-delay <i>number</i>
Tree	preempt-delay
Range	1 to 65535
Configurable	True
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

priority *number*

Description	Base VRRP Priority for associated Virtual Address
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Context	interface name <i>string</i> subinterface <i>index</i> <i>number</i> ipv6 address <i>ip-prefix</i> <i>string</i> vrrp vrrp-group <i>virtual-router-id</i> <i>number</i> priority <i>number</i>
Tree	priority
Range	0 to 254
Default	100
Configurable	True
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

state *identityref*

Description	Virtual Router state (Initialize, Backup, Master)
Context	interface name <i>string</i> subinterface <i>index</i> <i>number</i> ipv6 address <i>ip-prefix</i> <i>string</i> vrrp vrrp-group <i>virtual-router-id</i> <i>number</i> state <i>identityref</i>
Tree	state
Options	<ul style="list-style-type: none"> • initialize Indicates that the virtual router is waiting for a startup event. • backup Indicates that the virtual router is monitoring the availability of the master router. • master Indicates that the virtual router is forwarding packets for IP addresses that are associated with this virtual router.
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

statistics

Description	Enter the statistics context
Context	interface name <i>string</i> subinterface <i>index</i> <i>number</i> ipv6 address <i>ip-prefix</i> <i>string</i> vrrp vrrp-group <i>virtual-router-id</i> <i>number</i> statistics
Tree	statistics
Configurable	True
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

advertisements-discarded-address-mismatch *number*

Description	Counter for the total numebr fo VRRP advertisement messages discarded due to address mismatch
Context	interface name <i>string</i> subinterface index <i>number</i> ipv6 address ip-prefix <i>string</i> vrrp vrrp-group virtual-router-id <i>number</i> statistics advertisements-discarded-address-mismatch <i>number</i>
Tree	advertisements-discarded-address-mismatch
Default	0
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

advertisements-discarded-authfail *number*

Description	Counter for the total numebr fo VRRP advertisement messages discarded due to authentication failure
Context	interface name <i>string</i> subinterface index <i>number</i> ipv6 address ip-prefix <i>string</i> vrrp vrrp-group virtual-router-id <i>number</i> statistics advertisements-discarded-authfail <i>number</i>
Tree	advertisements-discarded-authfail
Default	0
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

advertisements-discarded-authype-mismatch *number*

Description	Counter for the total numebr fo VRRP advertisement messages discarded due to authentication type mismatch
Context	interface name <i>string</i> subinterface index <i>number</i> ipv6 address ip-prefix <i>string</i> vrrp vrrp-group virtual-router-id <i>number</i> statistics advertisements-discarded-authype-mismatch <i>number</i>
Tree	advertisements-discarded-authype-mismatch
Default	0
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

advertisements-discarded-interval *number*

Description	Counter for the total numebr fo VRRP advertisement messages discarded due to interval mismatch
Context	interface name <i>string</i> subinterface index <i>number</i> ipv6 address ip-prefix <i>string</i> vrrp vrrp-group virtual-router-id <i>number</i> statistics advertisements-discarded-interval <i>number</i>
Tree	advertisements-discarded-interval
Default	0
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

advertisements-discarded-length *number*

Description	Counter for the total numebr fo VRRP advertisement messages discarded due to length of the packet
Context	interface name <i>string</i> subinterface index <i>number</i> ipv6 address ip-prefix <i>string</i> vrrp vrrp-group virtual-router-id <i>number</i> statistics advertisements-discarded-length <i>number</i>
Tree	advertisements-discarded-length
Default	0
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

advertisements-discarded-total *number*

Description	Counter for the total numebr fo VRRP advertisement messages dicarded
Context	interface name <i>string</i> subinterface index <i>number</i> ipv6 address ip-prefix <i>string</i> vrrp vrrp-group virtual-router-id <i>number</i> statistics advertisements-discarded-total <i>number</i>
Tree	advertisements-discarded-total
Default	0
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

advertisements-discarded-ttl *number*

Description	Counter for the total numebr fo VRRP advertisement messages discarded due to ttl error
Context	interface name <i>string</i> subinterface index <i>number</i> ipv6 address ip-prefix <i>string</i> vrrp vrrp-group virtual-router-id <i>number</i> statistics advertisements-discarded-ttl <i>number</i>
Tree	advertisements-discarded-ttl
Default	0
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

advertisements-discarded-version-mismatch *number*

Description	Counter for the total numebr fo VRRP advertisement messages discarded due to version mismatch
Context	interface name <i>string</i> subinterface index <i>number</i> ipv6 address ip-prefix <i>string</i> vrrp vrrp-group virtual-router-id <i>number</i> statistics advertisements-discarded-version-mismatch <i>number</i>
Tree	advertisements-discarded-version-mismatch
Default	0
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

advertisements-interval-error *number*

Description	Counter for the total numebr fo VRRP advertisement messages with interval mismatch
Context	interface name <i>string</i> subinterface index <i>number</i> ipv6 address ip-prefix <i>string</i> vrrp vrrp-group virtual-router-id <i>number</i> statistics advertisements-interval-error <i>number</i>
Tree	advertisements-interval-error
Default	0
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

advertisements-received *number*

Description	Counter for the total numebr fo VRRP advertisement messages received
Context	interface name <i>string</i> subinterface index <i>number</i> ipv6 address ip-prefix <i>string</i> vrrp vrrp-group virtual-router-id <i>number</i> statistics advertisements-received <i>number</i>
Tree	advertisements-received
Default	0
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

advertisements-sent *number*

Description	Counter for the total number fo VRRP advertisement messages sent
Context	interface name <i>string</i> subinterface index <i>number</i> ipv6 address ip-prefix <i>string</i> vrrp vrrp-group virtual-router-id <i>number</i> statistics advertisements-sent <i>number</i>
Tree	advertisements-sent
Default	0
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

priority-zero-packets-received *number*

Description	Counter for the total numebr fo VRRP advertisement messages received with priority 0
Context	interface name <i>string</i> subinterface index <i>number</i> ipv6 address ip-prefix <i>string</i> vrrp vrrp-group virtual-router-id <i>number</i> statistics priority-zero-packets-received <i>number</i>
Tree	priority-zero-packets-received
Default	0
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

priority-zero-packets-sent *number*

Description	Counter for the total numebr fo VRRP advertisement messages sent out with priority 0
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Context	interface name <i>string</i> subinterface <i>index</i> <i>number</i> ipv6 address ip-prefix <i>string</i> vrrp vrrp-group virtual-router-id <i>number</i> statistics priority-zero-packets-sent <i>number</i>
Tree	priority-zero-packets-sent
Default	0
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

version *number*

Description	VRRP version for the Instance
Context	interface name <i>string</i> subinterface <i>index</i> <i>number</i> ipv6 address ip-prefix <i>string</i> vrrp vrrp-group virtual-router-id <i>number</i> version <i>number</i>
Tree	version
Range	2 to 3
Default	3
Configurable	True
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

virtual-address *string*

Description	Associated Virtual IP address.
Context	interface name <i>string</i> subinterface <i>index</i> <i>number</i> ipv6 address ip-prefix <i>string</i> vrrp vrrp-group virtual-router-id <i>number</i> virtual-address <i>string</i>
Tree	virtual-address
Configurable	True
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b
Max. Elements	2

virtual-link-local-address *string*

Description	Generated link local address based on virtual-mac for virtual router instance
Context	interface name <i>string</i> subinterface <i>index</i> <i>number</i> ipv6 address ip-prefix <i>string</i> vrrp vrrp-group virtual-router-id <i>number</i> virtual-link-local-address <i>string</i>
Tree	virtual-link-local-address
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

virtual-mac *string*

Description	VRRP Instance generated virtual mac
Context	interface name <i>string</i> subinterface index <i>number</i> ipv6 address ip-prefix <i>string</i> vrrp vrrp-group virtual-router-id <i>number</i> virtual-mac <i>string</i>
Tree	virtual-mac
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

admin-state *keyword*

Description	Enable/disable IPv6 on the subinterface When set to enable, and even before a global unicast IPv6 address is configured, chassis manager assigns an IPv6 link-local address to the subinterface, which will appear as a read-only entry in the address list. At this stage, the subinterface can receive IPv6 packets with any of the following destinations:
Context	interface name <i>string</i> subinterface index <i>number</i> ipv6 admin-state <i>keyword</i>
Tree	admin-state
Default	disable
Options	<ul style="list-style-type: none"> • enable • disable
Configurable	True
Platforms	Supported on all platforms

dhcp-client

Description	Container for options related to DHCPv6
Context	interface name <i>string</i> subinterface index <i>number</i> ipv6 dhcp-client
Tree	dhcp-client
Configurable	True
Platforms	Supported on all platforms

trace-options

Description	Container for tracing DHCPv6 operations on the subinterface
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Context	interface name <i>string</i> subinterface index <i>number</i> ipv6 dhcp-client trace-options
Tree	trace-options
Configurable	True
Platforms	Supported on all platforms

trace *keyword*

Description	List of events to trace
Context	interface name <i>string</i> subinterface index <i>number</i> ipv6 dhcp-client trace-options trace <i>keyword</i>
Tree	trace
Options	<ul style="list-style-type: none"> • messages Capture all DHCPv6 messages sent and received by the subinterface
Configurable	True
Platforms	Supported on all platforms

dhcp-relay

Description	Container for options related to DHCPv6 relay
Context	interface name <i>string</i> subinterface index <i>number</i> ipv6 dhcp-relay
Tree	dhcp-relay
Configurable	True
Platforms	Supported on all platforms

admin-state *keyword*

Description	The configurable state of the dhcp relay agent
Context	interface name <i>string</i> subinterface index <i>number</i> ipv6 dhcp-relay admin-state <i>keyword</i>
Tree	admin-state
Default	enable
Options	<ul style="list-style-type: none"> • enable • disable
Configurable	True
Platforms	Supported on all platforms

dns-resolution

Description	Enter the dns-resolution context
Context	interface name <i>string</i> subinterface <i>index</i> <i>number</i> ipv6 dhcp-relay dns-resolution
Tree	dns-resolution
Configurable	False
Platforms	Supported on all platforms

server domain *string*

Description	Reports the resolved IP address for server entries using domain names
Context	interface name <i>string</i> subinterface <i>index</i> <i>number</i> ipv6 dhcp-relay dns-resolution server domain <i>string</i>
Tree	server
Configurable	False
Platforms	Supported on all platforms

domain *string*

Description	The server domain name
Context	interface name <i>string</i> subinterface <i>index</i> <i>number</i> ipv6 dhcp-relay dns-resolution server domain <i>string</i>
String Length	1 to 253
Configurable	False
Platforms	Supported on all platforms

last-update *string*

Description	The date and time of the last update of the server IP address
Context	interface name <i>string</i> subinterface <i>index</i> <i>number</i> ipv6 dhcp-relay dns-resolution server domain <i>string</i> last-update <i>string</i>
Tree	last-update
String Length	20 to 32
Configurable	False
Platforms	Supported on all platforms

resolved-ip-address (*ipv4-address* | *ipv6-address*)

Description	The resolved IP address of the server domain name. An entry of 0.0.0.0 indicates the server IP cannot be resolved.
Context	interface name <i>string</i> subinterface <i>index</i> <i>number</i> ipv6 dhcp-relay dns-resolution server domain <i>string</i> resolved-ip-address (<i>ipv4-address</i> <i>ipv6-address</i>)
Tree	resolved-ip-address
Configurable	False
Platforms	Supported on all platforms

network-instance *reference*

Description	network instance to relay dhcp packets to
Context	interface name <i>string</i> subinterface <i>index</i> <i>number</i> ipv6 dhcp-relay network-instance <i>reference</i>
Tree	network-instance
Reference	network-instance <i>name</i> <i>string</i>
Configurable	True
Platforms	Supported on all platforms

oper-down-reason *keyword*

Description	The reason causing the dhcp relay agent to go into operational down state
Context	interface name <i>string</i> subinterface <i>index</i> <i>number</i> ipv6 dhcp-relay oper-down-reason <i>keyword</i>
Tree	oper-down-reason
Options	<ul style="list-style-type: none"> • dhcp-relay-admin-down • sub-interface-oper-down • all-dhcpv6-servers-unreachable-within-net-instance • source-address-not-matching-relay-sub-interface-ipv6-addresses • no-valid-ipv6-address-on-sub-interface
Configurable	False
Platforms	Supported on all platforms

oper-state keyword

Description	The operational state of the dhcp relay agent
Context	interface name <i>string</i> subinterface <i>index</i> number ipv6 dhcp-relay oper-state <i>keyword</i>
Tree	oper-state
Options	<ul style="list-style-type: none">• up Component or process is operational• down Component or process is not operational• empty Component slot is empty• downloading Component is downloading image into memory• booting Component is booting downloaded image• starting Component image operational, application processes starting• failed Component or process has failed• synchronizing Component is currently being synchronized• upgrading Component is currently being upgraded• low-power Component is offline due to insufficient system power• degraded Component or process is in a degraded state• warm-reboot Component or process is currently warm rebooting This state is set during a warm reboot immediately following initiation of the reboot, continuing after startup until the system has completed audit. In this state the system will not accept configuration changes.• waiting Component or process is currently waiting

This state can be set by event handler when the `reinvoke-with-delay` action is used, and indicates that the event handler is waiting for the provided delay before reinvoking the instance.

Configurable	False
Platforms	Supported on all platforms

option *keyword*

Description	List of options to insert into relayed packet towards DHCPv6 server
Context	interface name <i>string</i> subinterface index <i>number</i> ipv6 dhcp-relay option <i>keyword</i>
Tree	option
Options	<ul style="list-style-type: none"> interface-id Enable option 18 Interface-Id into relayed packet towards DHCPv6 server, format=<code>system_name/VRF_instance/sub-interface_id:vlan_id</code> remote-id Enable option 37 Remote Identifier into relayed packet towards DHCPv6 server, format=client MAC address client-link-layer-address Enable option 79 Client Link-Layer Address into relayed packet towards DHCPv6 server, format based on rfc-6939
Configurable	True
Platforms	Supported on all platforms

server (*ipv6-address* | *domain-name*)

Description	List of the DHCPv6 servers that the DHCPv6 relay function will relay DHCPv6 packets to/from
Context	interface name <i>string</i> subinterface index <i>number</i> ipv6 dhcp-relay server (<i>ipv6-address</i> <i>domain-name</i>)
Tree	server
String Length	1 to 253
Configurable	True
Platforms	Supported on all platforms
Max. Elements	8
Min. Elements	1

source-address *string*

Description	Source IPv6 address of the relayed packets towards DHCPv6 servers this address can be any IPv6 address configured within the network-instance towards the DHCPv6 server
Context	interface name <i>string</i> subinterface index <i>number</i> ipv6 dhcp-relay source-address <i>string</i>
Tree	source-address
Configurable	True
Platforms	Supported on all platforms

statistics

Description	Enter the statistics context
Context	interface name <i>string</i> subinterface index <i>number</i> ipv6 dhcp-relay statistics
Tree	statistics
Configurable	False
Platforms	Supported on all platforms

client-packets-discarded *number*

Description	Total discarded dhcp packets from dhcp client(s) towards DHCP server(s)
Context	interface name <i>string</i> subinterface index <i>number</i> ipv6 dhcp-relay statistics client-packets-discarded <i>number</i>
Tree	client-packets-discarded
Default	0
Configurable	False
Platforms	Supported on all platforms

client-packets-received *number*

Description	Total received dhcp packets from dhcp client(s) for DHCP Relay
Context	interface name <i>string</i> subinterface index <i>number</i> ipv6 dhcp-relay statistics client-packets-received <i>number</i>
Tree	client-packets-received
Default	0
Configurable	False

Platforms Supported on all platforms

client-packets-relayed *number*

Description Total relayed dhcp packets from dhcp client(s) towards DHCP server(s)

Context [interface name](#) *string* [subinterface index](#) *number* [ipv6 dhcp-relay statistics client-packets-relayed](#) *number*

Tree [client-packets-relayed](#)

Default 0

Configurable False

Platforms Supported on all platforms

server-packets-discarded *number*

Description Total discarded dhcp packets from DHCP server(s) towards dhcp client(s)

Context [interface name](#) *string* [subinterface index](#) *number* [ipv6 dhcp-relay statistics server-packets-discarded](#) *number*

Tree [server-packets-discarded](#)

Default 0

Configurable False

Platforms Supported on all platforms

server-packets-received *number*

Description Total received dhcp packets from DHCP server(s) for DHCP Relay

Context [interface name](#) *string* [subinterface index](#) *number* [ipv6 dhcp-relay statistics server-packets-received](#) *number*

Tree [server-packets-received](#)

Default 0

Configurable False

Platforms Supported on all platforms

server-packets-relayed *number*

Description Total relayed dhcp packets from DHCP server(s) towards dhcp client(s)

Context [interface name](#) *string* [subinterface index](#) *number* [ipv6 dhcp-relay statistics server-packets-relayed](#) *number*

Tree	server-packets-relayed
Default	0
Configurable	False
Platforms	Supported on all platforms

trace-options

Description	Container for tracing DHCPv6 relay operations on the subinterface
Context	interface name <i>string</i> subinterface index <i>number</i> ipv6 dhcp-relay trace-options
Tree	trace-options
Configurable	True
Platforms	Supported on all platforms

trace *keyword*

Description	List of events to trace
Context	interface name <i>string</i> subinterface index <i>number</i> ipv6 dhcp-relay trace-options trace <i>keyword</i>
Tree	trace
Options	<ul style="list-style-type: none"> • <code>messages</code> Capture all DHCPv6 messages sent and received by the subinterface
Configurable	True
Platforms	Supported on all platforms

dhcpv6-server

Description	Enable the dhcpv6-server context
Context	interface name <i>string</i> subinterface index <i>number</i> ipv6 dhcpv6-server
Tree	dhcpv6-server
Configurable	True
Platforms	Supported on all platforms

admin-state *keyword*

Description	Enables/Disables DHCPv6 server function on subinterface
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Context	interface name <i>string</i> subinterface index <i>number</i> ipv6 dhcpv6-server admin-state <i>keyword</i>
Tree	admin-state
Default	disable
Options	<ul style="list-style-type: none"> • enable • disable
Configurable	True
Platforms	Supported on all platforms

oper-state *keyword*

Description	Details if the dhcp server is operationally available
Context	interface name <i>string</i> subinterface index <i>number</i> ipv6 dhcpv6-server oper-state <i>keyword</i>
Tree	oper-state
Options	<ul style="list-style-type: none"> • up Component or process is operational • down Component or process is not operational • empty Component slot is empty • downloading Component is downloading image into memory • booting Component is booting downloaded image • starting Component image operational, application processes starting • failed Component or process has failed • synchronizing Component is currently being synchronized • upgrading Component is currently being upgraded • low-power Component is offline due to insufficient system power • degraded

Component or process is in a degraded state

- warm-reboot

Component or process is currently warm rebooting

This state is set during a warm reboot immediately following initiation of the reboot, continuing after startup until the system has completed audit. In this state the system will not accept configuration changes.

- waiting

Component or process is currently waiting

This state can be set by event handler when the reinvoke-with-delay action is used, and indicates that the event handler is waiting for the provided delay before reinvoking the instance.

Configurable

False

Platforms

Supported on all platforms

neighbor-discovery

Description

Container for the IPv6 Neighbor Discovery protocol

Context

[interface name](#) *string* [subinterface](#) *index* *number* [ipv6 neighbor-discovery](#)

Tree

[neighbor-discovery](#)

Configurable

True

Platforms

Supported on all platforms

debug *keyword*

Description

List of events to debug

Context

[interface name](#) *string* [subinterface](#) *index* *number* [ipv6 neighbor-discovery](#)
[debug](#) *keyword*

Tree

[debug](#)

Options

- messages

Capture all neighbor-solicitation and neighbor-advertisement messages sent and received by the subinterface

Configurable

True

Platforms

Supported on all platforms

duplicate-address-detection *boolean*

Description

Enables Duplicate Address Detection on all tentative addresses

This applies to link-local and global unicast addresses. Only one transmission is done; there are no retransmissions.

Must be true on an IPv6 subinterface that has dhcp-client enabled.

Context	interface name <i>string</i> subinterface index <i>number</i> ipv6 neighbor-discovery duplicate-address-detection <i>boolean</i>
Tree	duplicate-address-detection
Default	true
Configurable	True
Platforms	Supported on all platforms

evpn

Description	Configure which types of ARP or ND entries will be advertised in EVPN MAC/IP routes.
Context	interface name <i>string</i> subinterface index <i>number</i> ipv6 neighbor-discovery evpn
Tree	evpn
Configurable	True
Platforms	7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

advertise [route-type](#) *keyword*

Description	Enter the advertise list instance
Context	interface name <i>string</i> subinterface index <i>number</i> ipv6 neighbor-discovery evpn advertise route-type <i>keyword</i>
Tree	advertise
Configurable	True
Platforms	7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

[route-type](#) *keyword*

Description	Controls what type of ARP or ND entries to advertise.
Context	interface name <i>string</i> subinterface index <i>number</i> ipv6 neighbor-discovery evpn advertise route-type <i>keyword</i>
Options	<ul style="list-style-type: none"> static

	<ul style="list-style-type: none"> dynamic
Configurable	True
Platforms	7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

internal-tags

Description	Configuration and state of internal tags
Context	interface name <i>string</i> subinterface <i>index</i> <i>number</i> ipv6 neighbor-discovery evpn advertise route-type <i>keyword</i> internal-tags
Tree	internal-tags
Configurable	True
Platforms	Supported on all platforms

set-tag-set *reference*

Description	Reference to a tag-set defined under routing-policy
Context	interface name <i>string</i> subinterface <i>index</i> <i>number</i> ipv6 neighbor-discovery evpn advertise route-type <i>keyword</i> internal-tags set-tag-set <i>reference</i>
Tree	set-tag-set
Reference	routing-policy tag-set <i>name</i> <i>string</i>
Configurable	True
Platforms	Supported on all platforms
Max. Elements	1

host-route

Description	Configure which types of ARP or ND entries will be populated in the route-table.
Context	interface name <i>string</i> subinterface <i>index</i> <i>number</i> ipv6 neighbor-discovery host-route
Tree	host-route
Configurable	True
Platforms	Supported on all platforms

populate *route-type keyword*

Description	Enter the populate list instance
Context	interface name <i>string</i> subinterface <i>index number</i> ipv6 neighbor-discovery host-route populate route-type <i>keyword</i>
Tree	populate
Configurable	True
Platforms	Supported on all platforms

route-type *keyword*

Description	Controls what type of ARP or ND entries generate a host route.
Context	interface name <i>string</i> subinterface <i>index number</i> ipv6 neighbor-discovery host-route populate route-type <i>keyword</i>
Options	<ul style="list-style-type: none"> • static • dynamic • evpn
Configurable	True
Platforms	Supported on all platforms

datapath-programming *boolean*

Description	When set to true, the host route is programmed in the datapath
Context	interface name <i>string</i> subinterface <i>index number</i> ipv6 neighbor-discovery host-route populate route-type <i>keyword</i> datapath-programming <i>boolean</i>
Tree	datapath-programming
Configurable	True
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

internal-tags

Description	Configuration and state of internal tags
Context	interface name <i>string</i> subinterface <i>index number</i> ipv6 neighbor-discovery host-route populate route-type <i>keyword</i> internal-tags
Tree	internal-tags

Configurable	True
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

set-tag-set *reference*

Description	Reference to a tag-set defined under routing-policy
Context	interface name <i>string</i> subinterface index <i>number</i> ipv6 neighbor-discovery host-route populate route-type keyword internal-tags set-tag-set reference
Tree	set-tag-set
Reference	routing-policy tag-set name <i>string</i>
Configurable	True
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b
Max. Elements	1

learn-unsolicited *keyword*

Description	Sets if neighbors should be learned from unsolicited neighbor advertisements for global or link local addresses or both.
Context	interface name <i>string</i> subinterface index <i>number</i> ipv6 neighbor-discovery learn-unsolicited keyword
Tree	learn-unsolicited
Default	none
Options	<ul style="list-style-type: none"> • none • global • link-local • both
Configurable	True
Platforms	Supported on all platforms

limit

Description	Container for the configuration of Neighbor-Discovery limit
Context	interface name <i>string</i> subinterface index <i>number</i> ipv6 neighbor-discovery limit

Tree	limit
Configurable	True
Platforms	Supported on all platforms

log-only *boolean*

Description	Generate only a log message when limit is reached When set to true, neighbor entries are still being learned after exceeding the max-entries limit.
Context	interface name <i>string</i> subinterface index <i>number</i> ipv6 neighbor-discovery limit log-only <i>boolean</i>
Tree	log-only
Default	false
Configurable	True
Platforms	Supported on all platforms

max-entries *number*

Description	The maximum number of neighbor entries allowed on the subinterface If not configured, the amount of neighbor entries on the subinterface is only limited by the total amount of entries supported by the router.
Context	interface name <i>string</i> subinterface index <i>number</i> ipv6 neighbor-discovery limit max-entries <i>number</i>
Tree	max-entries
Configurable	True
Platforms	Supported on all platforms

warning-threshold-pct *number*

Description	Threshold percentage of the configured maximum number of entries When exceeded, an event is triggered.
Context	interface name <i>string</i> subinterface index <i>number</i> ipv6 neighbor-discovery limit warning-threshold-pct <i>number</i>
Tree	warning-threshold-pct
Range	1 to 100
Default	90
Units	percent

Configurable	True
Platforms	Supported on all platforms

neighbor ipv6-address *string*

Description	List of static and dynamic ND cache entries that map an IPv6 address to a MAC address
Context	interface name <i>string</i> subinterface index <i>number</i> ipv6 neighbor-discovery neighbor ipv6-address <i>string</i>
Tree	neighbor
Configurable	True
Platforms	Supported on all platforms

ipv6-address *string*

Description	IPv6 address resolved by the ND cache entry To configure a static neighbor entry a value must be written into this leaf and the link-layer-address leaf.
Context	interface name <i>string</i> subinterface index <i>number</i> ipv6 neighbor-discovery neighbor ipv6-address <i>string</i>
Configurable	True
Platforms	Supported on all platforms

current-state *keyword*

Description	The Neighbor Unreachability Detection state
Context	interface name <i>string</i> subinterface index <i>number</i> ipv6 neighbor-discovery neighbor ipv6-address <i>string</i> current-state <i>keyword</i>
Tree	current-state
Options	<ul style="list-style-type: none"> • incomplete • reachable • stale • delay • probe
Configurable	False
Platforms	Supported on all platforms

datapath-programming

Description	Container for state related to the datapath programming of the ARP or neighbor entry
Context	interface name <i>string</i> subinterface index <i>number</i> ipv6 neighbor-discovery neighbor ipv6-address <i>string</i> datapath-programming
Tree	datapath-programming
Configurable	False
Platforms	Supported on all platforms

last-failed-complexes *string*

Description	List of forwarding complexes that reported a failure for the last operation. They appear in the format (slot-number,complex-number).
Context	interface name <i>string</i> subinterface index <i>number</i> ipv6 neighbor-discovery neighbor ipv6-address <i>string</i> datapath-programming last-failed-complexes <i>string</i>
Tree	last-failed-complexes
Configurable	False
Platforms	Supported on all platforms

status *keyword*

Description	The status of the ARP or neighbor entry with respect to datapath programming
Context	interface name <i>string</i> subinterface index <i>number</i> ipv6 neighbor-discovery neighbor ipv6-address <i>string</i> datapath-programming status <i>keyword</i>
Tree	status
Options	<ul style="list-style-type: none"> • success All linecard complexes have reported that the entry was programmed successfully • failed At least one linecard complex reported that the entry was not programmed successfully or else this entry was not even provided to the datapath for programming because the system limit on the number of IPv4 ARP and IPv6 neighbor entries was exceeded • pending The ARP or neighbor entry was provided to the datapath for programming but at least one linecard complex has not provided a status yet.

Configurable	False
Platforms	Supported on all platforms

is-router *boolean*

Description	Indicates that the neighbor node claims to be a router (R bit in the Neighbor Advertisement message)
Context	interface name <i>string</i> subinterface index <i>number</i> ipv6 neighbor-discovery neighbor ipv6-address <i>string</i> is-router <i>boolean</i>
Tree	is-router
Configurable	False
Platforms	Supported on all platforms

link-layer-address *string*

Description	The resolving MAC address of the ND cache entry To configure a static neighbor entry a value must be written into this leaf and the ipv6-address leaf.
Context	interface name <i>string</i> subinterface index <i>number</i> ipv6 neighbor-discovery neighbor ipv6-address <i>string</i> link-layer-address <i>string</i>
Tree	link-layer-address
Configurable	True
Platforms	Supported on all platforms

next-state-time *string*

Description	The date and time when the neighbor state is expected to transition to the next state
Context	interface name <i>string</i> subinterface index <i>number</i> ipv6 neighbor-discovery neighbor ipv6-address <i>string</i> next-state-time <i>string</i>
Tree	next-state-time
String Length	20 to 32
Configurable	False
Platforms	Supported on all platforms

origin *keyword*

Description	The origin of the neighbor cache entry.
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Context	interface name <i>string</i> subinterface index <i>number</i> ipv6 neighbor-discovery neighbor ipv6-address <i>string</i> origin <i>keyword</i>
Tree	origin
Options	<ul style="list-style-type: none"> • other • static • dynamic • evpn
Configurable	False
Platforms	Supported on all platforms

proxy-nd *boolean*

Description	When set to true, the router replies with its own MAC to Neighbor Solicitations destined to any host.
Context	interface name <i>string</i> subinterface index <i>number</i> ipv6 neighbor-discovery proxy-nd <i>boolean</i>
Tree	proxy-nd
Default	false
Configurable	True
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

reachable-time *number*

Description	The period of time that a dynamic IPv6 neighbor cache entry is considered reachable after a reachability confirmation event After this time expires the neighbor state moves to STALE.
Context	interface name <i>string</i> subinterface index <i>number</i> ipv6 neighbor-discovery reachable-time <i>number</i>
Tree	reachable-time
Range	30 to 3600
Default	30
Units	seconds
Configurable	True
Platforms	Supported on all platforms

stale-time *number*

Description	The maximum time that a dynamic IPv6 neighbor cache entry can remain in the STALE state before it is removed This limit is reached only if no traffic is sent/queued towards the neighbor during the entire duration of the timer.
Context	interface name <i>string</i> subinterface index <i>number</i> ipv6 neighbor-discovery stale-time <i>number</i>
Tree	stale-time
Range	60 to 65535
Default	14400
Units	seconds
Configurable	True
Platforms	Supported on all platforms

virtual-ipv6-discovery

Description	Enable Virtual IPv6 discovery on the subinterface and configure associated parameters When enabled, the system will attempt to discover the configured virtual IPv6 addresses on the listed bridged subinterfaces.
Context	interface name <i>string</i> subinterface index <i>number</i> ipv6 neighbor-discovery virtual-ipv6-discovery
Tree	virtual-ipv6-discovery
Configurable	True
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

address [ipv6-address](#) *string*

Description	The list of virtual IPv6 addresses to be discovered on the subinterface.
Context	interface name <i>string</i> subinterface index <i>number</i> ipv6 neighbor-discovery virtual-ipv6-discovery address ipv6-address <i>string</i>
Tree	address
Configurable	True

Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b
Max. Elements	640

ipv6-address *string*

Description	The virtual IPv6 address.
Context	interface name <i>string</i> subinterface index <i>number</i> ipv6 neighbor-discovery virtual-ipv6-discovery address ipv6-address <i>string</i>
Configurable	True
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

allowed-macs *string*

Description	List of allowed mac addresses for a discovered virtual IP address.
Context	interface name <i>string</i> subinterface index <i>number</i> ipv6 neighbor-discovery virtual-ipv6-discovery address ipv6-address <i>string</i> allowed-macs <i>string</i>
Tree	allowed-macs
Configurable	True
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b
Max. Elements	10

probe-bridged-subinterfaces *string*

Description	Configure the list of bridged sub-interfaces on the associated MAC-VRF to which the NS probes are sent.
Context	interface name <i>string</i> subinterface index <i>number</i> ipv6 neighbor-discovery virtual-ipv6-discovery address ipv6-address <i>string</i> probe-bridged-subinterfaces <i>string</i>
Tree	probe-bridged-subinterfaces
String Length	5 to 25
Configurable	True
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

Max. Elements 10

probe-interval *number*

Description	Configure the probe interval at which the system sends a Neighbor Solicitation (NS) for the virtual IPv6 address. The default value of zero determines that the system sends a NS for the virtual IPv6 only when the address is configured. The creation of the Neighbor entry for the virtual IPv6 address will in this case rely on the server sending an unsolicited Neighbor Advertisement for the virtual IPv6 address. When the value is set to a non-zero interval, the system sends a periodic NS at the configured interval and irrespective of the Neighbor entry being already created.
Context	interface name <i>string</i> subinterface index <i>number</i> ipv6 neighbor-discovery virtual-ipv6-discovery address ipv6-address <i>string</i> probe-interval <i>number</i>
Tree	probe-interval
Range	0 5 to 86400
Default	0
Units	seconds
Configurable	True
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

statistics

Description	Statistics for the Virtual IP address
Context	interface name <i>string</i> subinterface index <i>number</i> ipv6 neighbor-discovery virtual-ipv6-discovery address ipv6-address <i>string</i> statistics
Tree	statistics
Configurable	False
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

out-probe-packets *number*

Description	The number of probe packets transmitted for the Virtual IP discovery.
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Context	interface name <i>string</i> subinterface index <i>number</i> ipv6 neighbor-discovery virtual-ipv6-discovery address ipv6-address <i>string</i> statistics out-probe-packets <i>number</i>
Tree	out-probe-packets
Default	0
Configurable	False
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

statistics

Description	Global statistics for Virtual IP discovery
Context	interface name <i>string</i> subinterface index <i>number</i> ipv6 neighbor-discovery virtual-ipv6-discovery statistics
Tree	statistics
Configurable	False
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

out-total-probe-packets *number*

Description	The number of total probe packets transmitted for Virtual discovery.
Context	interface name <i>string</i> subinterface index <i>number</i> ipv6 neighbor-discovery virtual-ipv6-discovery statistics out-total-probe-packets <i>number</i>
Tree	out-total-probe-packets
Default	0
Configurable	False
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

router-advertisement

Description	Container for configuring IPv6 router discovery options
Context	interface name <i>string</i> subinterface index <i>number</i> ipv6 router-advertisement
Tree	router-advertisement
Configurable	True

Platforms Supported on all platforms

debug *keyword*

Description List of events to debug

Context [interface name](#) *string* [subinterface index](#) *number* [ipv6 router-advertisement debug](#) *keyword*

Tree [debug](#)

Options

- messages

Capture all router-solicitation and router-advertisement messages sent and received by the subinterface

Configurable True

Platforms Supported on all platforms

router-role

Description IPv6 router advertisement options that apply when the role of the interface is a router interface.

Context [interface name](#) *string* [subinterface index](#) *number* [ipv6 router-advertisement router-role](#)

Tree [router-role](#)

Configurable True

Platforms Supported on all platforms

admin-state *keyword*

Description Administratively enable or disable the sending of router advertisements on the subinterface.

Context [interface name](#) *string* [subinterface index](#) *number* [ipv6 router-advertisement router-role admin-state](#) *keyword*

Tree [admin-state](#)

Default disable

Options

- enable
- disable

Configurable True

Platforms Supported on all platforms

current-hop-limit *number*

Description	The current hop limit to advertise in the router advertisement messages.
Context	interface name <i>string</i> subinterface index <i>number</i> ipv6 router-advertisement router-role current-hop-limit <i>number</i>
Tree	current-hop-limit
Default	64
Configurable	True
Platforms	Supported on all platforms

ip-mtu *number*

Description	The IP MTU to advertise in the router advertisement messages and that hosts should associate with the link on which these messages are received. If no value is specified the option is not included.
Context	interface name <i>string</i> subinterface index <i>number</i> ipv6 router-advertisement router-role ip-mtu <i>number</i>
Tree	ip-mtu
Range	1280 to 9486
Configurable	True
Platforms	Supported on all platforms

managed-configuration-flag *boolean*

Description	When this is set the M-bit is set in the router advertisement messages, indicating that hosts should use DHCPv6 to obtain IPv6 addresses.
Context	interface name <i>string</i> subinterface index <i>number</i> ipv6 router-advertisement router-role managed-configuration-flag <i>boolean</i>
Tree	managed-configuration-flag
Default	false
Configurable	True
Platforms	Supported on all platforms

max-advertisement-interval *number*

Description	The maximum time between sending router advertisement messages to the all-nodes multicast address.
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Each subinterface has its own timer. Whenever the timer fires the message is sent and then the timer is reset to a uniformly distributed random value between min-advertisement-interval and max-advertisement-interval. The RA message can be sent before timer expiry in response to a RS message.

Context	interface name <i>string</i> subinterface index <i>number</i> ipv6 router-advertisement router-role max-advertisement-interval <i>number</i>
Tree	max-advertisement-interval
Range	4 to 1800
Default	600
Units	seconds
Configurable	True
Platforms	Supported on all platforms

min-advertisement-interval *number*

Description	The minimum time between sending router advertisement messages to the all-nodes multicast address. Each subinterface has its own timer. Whenever the timer fires the message is sent and then the timer is reset to a uniformly distributed random value between min-advertisement-interval and max-advertisement-interval. The RA message can be sent before timer expiry in response to a RS message.
Context	interface name <i>string</i> subinterface index <i>number</i> ipv6 router-advertisement router-role min-advertisement-interval <i>number</i>
Tree	min-advertisement-interval
Range	3 to 1350
Default	200
Units	seconds
Configurable	True
Platforms	Supported on all platforms

other-configuration-flag *boolean*

Description	When this is set the O-bit is set in the router advertisement messages, indicating that hosts should use DHCPv6 to obtain other configuration information (besides addresses).
Context	interface name <i>string</i> subinterface index <i>number</i> ipv6 router-advertisement router-role other-configuration-flag <i>boolean</i>
Tree	other-configuration-flag
Default	false

Configurable	True
Platforms	Supported on all platforms

prefix ipv6-prefix *string*

Description	The list of IPv6 prefixes to advertise in the router advertisement messages.
Context	interface name <i>string</i> subinterface index <i>number</i> ipv6 router-advertisement router-role prefix ipv6-prefix <i>string</i>
Tree	prefix
Configurable	True
Platforms	Supported on all platforms
Max. Elements	16

ipv6-prefix *string*

Description	An IPv6 global unicast address prefix.
Context	interface name <i>string</i> subinterface index <i>number</i> ipv6 router-advertisement router-role prefix ipv6-prefix <i>string</i>
Configurable	True
Platforms	Supported on all platforms

autonomous-flag *boolean*

Description	When this is set in the prefix information option hosts can use the prefix for stateless address autoconfiguration (SLAAC).
Context	interface name <i>string</i> subinterface index <i>number</i> ipv6 router-advertisement router-role prefix ipv6-prefix <i>string</i> autonomous-flag <i>boolean</i>
Tree	autonomous-flag
Default	true
Configurable	True
Platforms	Supported on all platforms

on-link-flag *boolean*

Description	When this is set in the prefix information option hosts can use the prefix for on-link determination.
Context	interface name <i>string</i> subinterface index <i>number</i> ipv6 router-advertisement router-role prefix ipv6-prefix <i>string</i> on-link-flag <i>boolean</i>

Tree	on-link-flag
Default	true
Configurable	True
Platforms	Supported on all platforms

preferred-lifetime (*keyword* | *number*)

Description	The length of time in seconds (relative to the time the packet is sent) that addresses generated from the prefix via stateless address autoconfiguration remain preferred.
Context	interface name <i>string</i> subinterface index <i>number</i> ipv6 router-advertisement router-role prefix ipv6-prefix <i>string</i> preferred-lifetime (<i>keyword</i> <i>number</i>)
Tree	preferred-lifetime
Default	604800
Units	seconds
Options	<ul style="list-style-type: none"> infinite
Configurable	True
Platforms	Supported on all platforms

valid-lifetime (*keyword* | *number*)

Description	The length of time in seconds (relative to the time the packet is sent) that the prefix is valid for the purpose of on-link determination.
Context	interface name <i>string</i> subinterface index <i>number</i> ipv6 router-advertisement router-role prefix ipv6-prefix <i>string</i> valid-lifetime (<i>keyword</i> <i>number</i>)
Tree	valid-lifetime
Default	2592000
Units	seconds
Options	<ul style="list-style-type: none"> infinite
Configurable	True
Platforms	Supported on all platforms

reachable-time *number*

Description	The time, in milliseconds, that is advertised as the reachable time in RA messages and that hosts use for the ICMPv6 Neighbor Unreachability Detection algorithm. A value of zero means unspecified by this router.
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Context	interface name <i>string</i> subinterface <i>index</i> <i>number</i> ipv6 router-advertisement router-role reachable-time <i>number</i>
Tree	reachable-time
Range	0 to 3600000
Default	0
Configurable	True
Platforms	Supported on all platforms

retransmit-time *number*

Description	The time, in milliseconds, that is advertised as the retrans-timer in RA messages and that hosts use for address resolution and the Neighbor Unreachability Detection algorithm. It represents the time between retransmitted NS messages. A value of zero means unspecified by this router.
Context	interface name <i>string</i> subinterface <i>index</i> <i>number</i> ipv6 router-advertisement router-role retransmit-time <i>number</i>
Tree	retransmit-time
Range	0 to 1800000
Default	0
Configurable	True
Platforms	Supported on all platforms

router-lifetime *number*

Description	The lifetime in seconds that is advertised as the router lifetime in RA messages. This indicates the time period for which the advertising router can be used as a default router/gateway. A value of 0 means the router should not be used as a default gateway.
Context	interface name <i>string</i> subinterface <i>index</i> <i>number</i> ipv6 router-advertisement router-role router-lifetime <i>number</i>
Tree	router-lifetime
Range	0 to 9000
Default	1800
Configurable	True
Platforms	Supported on all platforms

statistics

Description	Container for subinterface statistics, including all IPv4, IPv6 and MPLS packets belonging to a routed subinterface, or including just one of these protocols on a routed subinterface, or for all frames on a bridged subinterface
Context	interface name <i>string</i> subinterface <i>index number</i> ipv6 statistics
Tree	statistics
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

in-discarded-packets *number*

Description	The total number of input packets that were dropped due to explicit programming The discards can be due to any of the following reasons In an MPLS context, this includes the total number of MPLS packets that were dropped because they were received with forwarded top label having an MPLS TTL value of 1
Context	interface name <i>string</i> subinterface <i>index number</i> ipv6 statistics in-discarded-packets <i>number</i>
Tree	in-discarded-packets
Default	0
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

in-error-packets *number*

Description	The total number of input packets discarded due to errors, counting transit and terminating traffic In an IP context, the sum of the following RFC 4293 counters: ipIfStatsInHdrErrors ipIfStatsInNoRoutes ipIfStatsInAddrErrors ipIfStatsInUnknownProtos ipIfStatsInTruncatedPkts In an MPLS context, the total number of MPLS packets that were dropped because:
Context	interface name <i>string</i> subinterface <i>index number</i> ipv6 statistics in-error-packets <i>number</i>
Tree	in-error-packets
Default	0

Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

in-forwarded-octets *number*

Description	The number of octets in packets received on this subinterface counted in in-forwarded-packets
Context	interface name <i>string</i> subinterface index <i>number</i> ipv6 statistics in-forwarded-octets <i>number</i>
Tree	in-forwarded-octets
Default	0
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

in-forwarded-packets *number*

Description	The number of packets received on this subinterface for which the router was not the final destination and for which the router attempted to find a route to forward them to that final destination. Note that non-terminating IPv4 packets with options and non-terminating IPv6 packets with extension headers are included in this count as are packets that trigger ICMP/ICMPv6 redirect messages.
Context	interface name <i>string</i> subinterface index <i>number</i> ipv6 statistics in-forwarded-packets <i>number</i>
Tree	in-forwarded-packets
Default	0
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

in-matched-ra-packets *number*

Description	The total number of IPv6 packets matched with applied RA-Guard policy
Context	interface name <i>string</i> subinterface index <i>number</i> ipv6 statistics in-matched-ra-packets <i>number</i>
Tree	in-matched-ra-packets
Default	0
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

in-octets *number*

Description	The total number of octets received in input packets, counting transit and terminating traffic
Context	interface name <i>string</i> subinterface index <i>number</i> ipv6 statistics in-octets number
Tree	in-octets
Default	0
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

in-packets *number*

Description	The total number of input packets received, counting transit and terminating traffic This equals the sum of: in-error-packets in-discarded-packets in-terminated-packets in-forwarded-packets
Context	interface name <i>string</i> subinterface index <i>number</i> ipv6 statistics in-packets number
Tree	in-packets
Default	0
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

in-terminated-octets *number*

Description	The total number of octets in packets that were received on this subinterface and counted in in-terminated-packets
Context	interface name <i>string</i> subinterface index <i>number</i> ipv6 statistics in-terminated-octets number
Tree	in-terminated-octets
Default	0
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

in-terminated-packets *number*

Description	The total number of input packets that were received on this subinterface that were extracted to the control plane The count includes packets eventually discarded by the CPM. Such discards include:
Context	interface name <i>string</i> subinterface index <i>number</i> ipv6 statistics in-terminated-packets <i>number</i>
Tree	in-terminated-packets
Default	0
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

last-clear *string*

Description	Timestamp of the last time the subinterface counters were cleared
Context	interface name <i>string</i> subinterface index <i>number</i> ipv6 statistics last-clear <i>string</i>
Tree	last-clear
String Length	20 to 32
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

out-discarded-packets *number*

Description	The total number of packets, originating and transit, that should have been sent out this subinterface but were dropped This includes IP packets dropped by egress interface ACL drop action.
Context	interface name <i>string</i> subinterface index <i>number</i> ipv6 statistics out-discarded-packets <i>number</i>
Tree	out-discarded-packets
Default	0
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

out-error-packets *number*

Description	The number of packets, originating and transit, for which this router was successful in finding a path to their final destination through this subinterface but an error prevented their transmission On 7250 IXR systems this is incremented when the IPv4 packet size exceeds the IP MTU and fragmentation was not allowed or not supported. It is also incremented when the MPLS packet size exceeds the MPLS MTU of the subinterface.
Context	interface name <i>string</i> subinterface index <i>number</i> ipv6 statistics out-error-packets <i>number</i>
Tree	out-error-packets
Default	0
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

out-forwarded-octets *number*

Description	The number of octets in transit packets which the router attempted to forward out this subinterface
Context	interface name <i>string</i> subinterface index <i>number</i> ipv6 statistics out-forwarded-octets <i>number</i>
Tree	out-forwarded-octets
Default	0
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

out-forwarded-packets *number*

Description	The number of transit packets which the router attempted to forward out this subinterface
Context	interface name <i>string</i> subinterface index <i>number</i> ipv6 statistics out-forwarded-packets <i>number</i>
Tree	out-forwarded-packets
Default	0
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

out-octets *number*

Description	The total number of octets in packets delivered to the lower layers for transmission
Context	interface name <i>string</i> subinterface index <i>number</i> ipv6 statistics out-octets <i>number</i>
Tree	out-octets
Default	0
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

out-originated-octets *number*

Description	The number of octets in packets which originated on the CPM and which the router attempted to forward out this subinterface
Context	interface name <i>string</i> subinterface index <i>number</i> ipv6 statistics out-originated-octets <i>number</i>
Tree	out-originated-octets
Default	0
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

out-originated-packets *number*

Description	The number of packets which originated on the CPM and which the router attempted to forward out this subinterface
Context	interface name <i>string</i> subinterface index <i>number</i> ipv6 statistics out-originated-packets <i>number</i>
Tree	out-originated-packets
Default	0
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

out-packets *number*

Description	The total number of packets that this router supplied to the lower layers for transmission
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This equals the sum of: out-error-packets out-discarded-packets out-originated-packets out-forwarded-packets

Context	interface name <i>string</i> subinterface index number ipv6 statistics out-packets number
Tree	out-packets
Default	0
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

I2-mtu *number*

Description	<p>Layer-2 MTU of the subinterface in bytes.</p> <p>Includes the Ethernet header and VLAN tags, and excludes 4-bytes FCS.</p> <p>L2 MTU specifies the maximum sized Ethernet frame that can be transmitted on the subinterface. If a frame exceeds this size it is discarded. If the I2-mtu of the subinterface exceeds the port-mtu of the associated interface, the subinterface will remain operationally down.</p> <p>The default value for a subinterface is taken from /system/mtu/default-I2-mtu. The L2 MTU is only configurable for bridged subinterfaces.</p> <p>The 7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D3, 7220 IXR-H2, and 7220 IXR-H3 systems support a maximum L2 MTU of 9412 bytes and minimum of 1500 bytes.</p> <p>All other systems support a maximum L2 MTU of 9500 and minimum of 1500 bytes.</p>
Context	interface name <i>string</i> subinterface index number I2-mtu number
Tree	I2-mtu
Range	1450 to 9500
Units	bytes
Configurable	True
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

last-change *string*

Description	The date and time of the most recent change to the subinterface state
Context	interface name <i>string</i> subinterface index number last-change string
Tree	last-change
String Length	20 to 32

Configurable	False
Platforms	Supported on all platforms

local-mirror-destination

Description	Container for options related to local mirror destination
Context	interface name <i>string</i> subinterface <i>index</i> <i>number</i> local-mirror-destination
Tree	local-mirror-destination
Configurable	True
Platforms	7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

admin-state *keyword*

Description	The configurable state of the local mirror destination
Context	interface name <i>string</i> subinterface <i>index</i> <i>number</i> local-mirror-destination admin-state <i>keyword</i>
Tree	admin-state
Default	enable
Options	<ul style="list-style-type: none"> • enable • disable
Configurable	True
Platforms	7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

oper-state *keyword*

Description	The operational state of the local mirror destination
Context	interface name <i>string</i> subinterface <i>index</i> <i>number</i> local-mirror-destination oper-state <i>keyword</i>
Tree	oper-state
Options	<ul style="list-style-type: none"> • up Component or process is operational • down Component or process is not operational

- empty
Component slot is empty
- downloading
Component is downloading image into memory
- booting
Component is booting downloaded image
- starting
Component image operational, application processes starting
- failed
Component or process has failed
- synchronizing
Component is currently being synchronized
- upgrading
Component is currently being upgraded
- low-power
Component is offline due to insufficient system power
- degraded
Component or process is in a degraded state
- warm-reboot
Component or process is currently warm rebooting
This state is set during a warm reboot immediately following initiation of the reboot, continuing after startup until the system has completed audit. In this state the system will not accept configuration changes.
- waiting
Component or process is currently waiting
This state can be set by event handler when the reinvoke-with-delay action is used, and indicates that the event handler is waiting for the provided delay before reinvoking the instance.

Configurable

False

Platforms

7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

mpls**Description**

Container for MPLS configuration and state at the subinterface level

Context[interface name](#) *string* [subinterface index number](#) *mpls***Tree**[mpls](#)

Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

statistics

Description	Container for subinterface statistics, including all IPv4, IPv6 and MPLS packets belonging to a routed subinterface, or including just one of these protocols on a routed subinterface, or for all frames on a bridged subinterface
Context	interface name <i>string</i> subinterface <i>index number</i> mpls statistics
Tree	statistics
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

in-discarded-packets *number*

Description	The total number of input packets that were dropped due to explicit programming The discards can be due to any of the following reasons In an MPLS context, this includes the total number of MPLS packets that were dropped because they were received with forwarded top label having an MPLS TTL value of 1
Context	interface name <i>string</i> subinterface <i>index number</i> mpls statistics in-discarded-packets <i>number</i>
Tree	in-discarded-packets
Default	0
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

in-error-packets *number*

Description	The total number of input packets discarded due to errors, counting transit and terminating traffic In an IP context, the sum of the following RFC 4293 counters: ipIfStatsInHdrErrors ipIfStatsInNoRoutes ipIfStatsInAddrErrors ipIfStatsInUnknownProtos ipIfStatsInTruncatedPkts In an MPLS context, the total number of MPLS packets that were dropped because:
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Context	interface name <i>string</i> subinterface index <i>number</i> mpls statistics in-error-packets <i>number</i>
Tree	in-error-packets
Default	0
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

in-forwarded-octets *number*

Description	The number of octets in packets received on this subinterface counted in in-forwarded-packets
Context	interface name <i>string</i> subinterface index <i>number</i> mpls statistics in-forwarded-octets <i>number</i>
Tree	in-forwarded-octets
Default	0
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

in-forwarded-packets *number*

Description	The number of packets received on this subinterface for which the router was not the final destination and for which the router attempted to find a route to forward them to that final destination. Note that non-terminating IPv4 packets with options and non-terminating IPv6 packets with extension headers are included in this count as are packets that trigger ICMP/ICMPv6 redirect messages.
Context	interface name <i>string</i> subinterface index <i>number</i> mpls statistics in-forwarded-packets <i>number</i>
Tree	in-forwarded-packets
Default	0
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

in-matched-ra-packets *number*

Description	The total number of IPv6 packets matched with applied RA-Guard policy
Context	interface name <i>string</i> subinterface index <i>number</i> mpls statistics in-matched-ra-packets <i>number</i>

Tree	in-matched-ra-packets
Default	0
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

in-octets *number*

Description	The total number of octets received in input packets, counting transit and terminating traffic
Context	interface name <i>string</i> subinterface index <i>number</i> mpls statistics in-octets number
Tree	in-octets
Default	0
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

in-packets *number*

Description	The total number of input packets received, counting transit and terminating traffic This equals the sum of: in-error-packets in-discarded-packets in-terminated-packets in-forwarded-packets
Context	interface name <i>string</i> subinterface index <i>number</i> mpls statistics in-packets number
Tree	in-packets
Default	0
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

in-terminated-octets *number*

Description	The total number of octets in packets that were received on this subinterface and counted in in-terminated-packets
Context	interface name <i>string</i> subinterface index <i>number</i> mpls statistics in-terminated-octets number
Tree	in-terminated-octets
Default	0
Configurable	False

Platforms 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

in-terminated-packets *number*

Description The total number of input packets that were received on this subinterface that were extracted to the control plane
The count includes packets eventually discarded by the CPM. Such discards include:

Context [interface name](#) *string* [subinterface index](#) *number* [mpls statistics in-terminated-packets](#) *number*

Tree [in-terminated-packets](#)

Default 0

Configurable False

Platforms 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

last-clear *string*

Description Timestamp of the last time the subinterface counters were cleared

Context [interface name](#) *string* [subinterface index](#) *number* [mpls statistics last-clear](#) *string*

Tree [last-clear](#)

String Length 20 to 32

Configurable False

Platforms 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

out-discarded-packets *number*

Description The total number of packets, originating and transit, that should have been sent out this subinterface but were dropped
This includes IP packets dropped by egress interface ACL drop action.

Context [interface name](#) *string* [subinterface index](#) *number* [mpls statistics out-discarded-packets](#) *number*

Tree [out-discarded-packets](#)

Default 0

Configurable False

Platforms 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

out-error-packets *number*

Description	The number of packets, originating and transit, for which this router was successful in finding a path to their final destination through this subinterface but an error prevented their transmission On 7250 IXR systems this is incremented when the IPv4 packet size exceeds the IP MTU and fragmentation was not allowed or not supported. It is also incremented when the MPLS packet size exceeds the MPLS MTU of the subinterface.
Context	interface name <i>string</i> subinterface index <i>number</i> mpls statistics out-error-packets <i>number</i>
Tree	out-error-packets
Default	0
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

out-forwarded-octets *number*

Description	The number of octets in transit packets which the router attempted to forward out this subinterface
Context	interface name <i>string</i> subinterface index <i>number</i> mpls statistics out-forwarded-octets <i>number</i>
Tree	out-forwarded-octets
Default	0
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

out-forwarded-packets *number*

Description	The number of transit packets which the router attempted to forward out this subinterface
Context	interface name <i>string</i> subinterface index <i>number</i> mpls statistics out-forwarded-packets <i>number</i>
Tree	out-forwarded-packets
Default	0
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

out-octets *number*

Description	The total number of octets in packets delivered to the lower layers for transmission
Context	interface name <i>string</i> subinterface index <i>number</i> mpls statistics out-octets number
Tree	out-octets
Default	0
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

out-originated-octets *number*

Description	The number of octets in packets which originated on the CPM and which the router attempted to forward out this subinterface
Context	interface name <i>string</i> subinterface index <i>number</i> mpls statistics out-originated-octets number
Tree	out-originated-octets
Default	0
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

out-originated-packets *number*

Description	The number of packets which originated on the CPM and which the router attempted to forward out this subinterface
Context	interface name <i>string</i> subinterface index <i>number</i> mpls statistics out-originated-packets number
Tree	out-originated-packets
Default	0
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

out-packets *number*

Description	The total number of packets that this router supplied to the lower layers for transmission
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	This equals the sum of: out-error-packets out-discarded-packets out-originated-packets out-forwarded-packets
Context	interface name <i>string</i> subinterface index <i>number</i> mpls statistics out-packets <i>number</i>
Tree	out-packets
Default	0
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

mpls-mtu *number*

Description	<p>MPLS MTU of the subinterface in bytes, including the transmitted label stack.</p> <p>MPLS MTU specifies the maximum sized MPLS packet that can be transmitted on the subinterface. If an MPLS packet containing any payload exceeds this size then it is dropped. If the payload of the dropped packet is IPv4 or IPv6 then this may also result in the generation of an ICMP error message that is either tunneled or sent back to the source.</p> <p>The default MPLS MTU for a subinterface is taken from /system/mtu/default-mpls-mtu.</p> <p>The MPLS MTU is not configurable for subinterfaces of loopback interfaces. Each 7250 IXR IMM supports a maximum of 4 different MPLS MTU values.</p>
Context	interface name <i>string</i> subinterface index <i>number</i> mpls-mtu <i>number</i>
Tree	mpls-mtu
Range	1284 to 9496
Units	bytes
Configurable	True
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

name *string*

Description	<p>The system assigned name of the subinterface.</p> <p>It is formed by taking the base interface name and appending a dot (.) and the subinterface index number. For example, ethernet-2/1.0</p>
Context	interface name <i>string</i> subinterface index <i>number</i> name <i>string</i>
Tree	name
Configurable	False
Platforms	Supported on all platforms

oper-down-reason *keyword*

Description	The first (and possibly only) reason for the subinterface being operationally down
Context	interface name <i>string</i> subinterface index number oper-down-reason <i>keyword</i>
Tree	oper-down-reason
Options	<ul style="list-style-type: none"> • admin-disabled • port-down • ip-mtu-resource-exceeded • mpls-mtu-resource-exceeded • ip-mtu-too-large • mpls-mtu-too-large • l2-mtu-too-large • no-ip-config • ip-mtu-larger-than-oper-mac-vrf-mtu • irb-mac-address-not-programmed • missing-xdp-state • no-underlay-egress-next-hop-resources • cfm-ccm-defect • no-irb-hardware-resources • other
Configurable	False
Platforms	Supported on all platforms

oper-state *keyword*

Description	The operational state of the subinterface
Context	interface name <i>string</i> subinterface index number oper-state <i>keyword</i>
Tree	oper-state
Options	<ul style="list-style-type: none"> • up • down
Configurable	False
Platforms	Supported on all platforms

ra-guard

Description	Enable the ra-guard context
Context	interface name <i>string</i> subinterface index <i>number</i> ra-guard
Tree	ra-guard
Configurable	True
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5

policy reference

Description	Reference to RA Guard Policy to apply to the associated subinterface
Context	interface name <i>string</i> subinterface index <i>number</i> ra-guard policy reference
Tree	policy
Reference	system ra-guard-policy name <i>string</i>
Configurable	True
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5

vlan-list [vlan-id](#) *number*

Description	List of VLAN IDs that the RA policy should be matched against
Context	interface name <i>string</i> subinterface index <i>number</i> ra-guard vlan-list vlan-id <i>number</i>
Tree	vlan-list
Configurable	True
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5

vlan-id *number*

Description	Enter the vlan-id context
Context	interface name <i>string</i> subinterface index <i>number</i> ra-guard vlan-list vlan-id <i>number</i>
Range	0 to 4095
Configurable	True

Platforms 7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5

statistics

Description Container for subinterface statistics, including all IPv4, IPv6 and MPLS packets belonging to a routed subinterface, or including just one of these protocols on a routed subinterface, or for all frames on a bridged subinterface

Context [interface name](#) *string* [subinterface](#) *index* *number* [statistics](#)

Tree [statistics](#)

Configurable False

Platforms Supported on all platforms

in-discarded-packets *number*

Description The total number of input packets that were dropped due to explicit programming

The discards can be due to any of the following reasons

In an MPLS context, this includes the total number of MPLS packets that were dropped because they were received with forwarded top label having an MPLS TTL value of 1

Context [interface name](#) *string* [subinterface](#) *index* *number* [statistics](#) [in-discarded-packets](#) *number*

Tree [in-discarded-packets](#)

Default 0

Configurable False

Platforms Supported on all platforms

in-error-packets *number*

Description The total number of input packets discarded due to errors, counting transit and terminating traffic

In an IP context, the sum of the following RFC 4293 counters: ipIfStatsInHdrErrors ipIfStatsInNoRoutes ipIfStatsInAddrErrors ipIfStatsInUnknownProtos ipIfStatsInTruncatedPkts

In an MPLS context, the total number of MPLS packets that were dropped because:

Context [interface name](#) *string* [subinterface](#) *index* *number* [statistics](#) [in-error-packets](#) *number*

Tree	in-error-packets
Default	0
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

in-forwarded-octets *number*

Description	The number of octets in packets received on this subinterface counted in in-forwarded-packets
Context	interface name <i>string</i> subinterface <i>index</i> <i>number</i> statistics in-forwarded-octets <i>number</i>
Tree	in-forwarded-octets
Default	0
Configurable	False
Platforms	Supported on all platforms

in-forwarded-packets *number*

Description	The number of packets received on this subinterface for which the router was not the final destination and for which the router attempted to find a route to forward them to that final destination. Note that non-terminating IPv4 packets with options and non-terminating IPv6 packets with extension headers are included in this count as are packets that trigger ICMP/ICMPv6 redirect messages.
Context	interface name <i>string</i> subinterface <i>index</i> <i>number</i> statistics in-forwarded-packets <i>number</i>
Tree	in-forwarded-packets
Default	0
Configurable	False
Platforms	Supported on all platforms

in-matched-ra-packets *number*

Description	The total number of IPv6 packets matched with applied RA-Guard policy
Context	interface name <i>string</i> subinterface <i>index</i> <i>number</i> statistics in-matched-ra-packets <i>number</i>
Tree	in-matched-ra-packets
Default	0

Configurable	False
Platforms	Supported on all platforms

in-octets *number*

Description	The total number of octets received in input packets, counting transit and terminating traffic
Context	interface name <i>string</i> subinterface <i>index</i> <i>number</i> statistics in-octets <i>number</i>
Tree	in-octets
Default	0
Configurable	False
Platforms	Supported on all platforms

in-packets *number*

Description	The total number of input packets received, counting transit and terminating traffic This equals the sum of: in-error-packets in-discarded-packets in-terminated-packets in-forwarded-packets
Context	interface name <i>string</i> subinterface <i>index</i> <i>number</i> statistics in-packets <i>number</i>
Tree	in-packets
Default	0
Configurable	False
Platforms	Supported on all platforms

in-terminated-octets *number*

Description	The total number of octets in packets that were received on this subinterface and counted in in-terminated-packets
Context	interface name <i>string</i> subinterface <i>index</i> <i>number</i> statistics in-terminated-octets <i>number</i>
Tree	in-terminated-octets
Default	0
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

in-terminated-packets *number*

Description	The total number of input packets that were received on this subinterface that were extracted to the control plane The count includes packets eventually discarded by the CPM. Such discards include:
Context	interface name <i>string</i> subinterface index <i>number</i> statistics in-terminated-packets <i>number</i>
Tree	in-terminated-packets
Default	0
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

last-clear *string*

Description	Timestamp of the last time the subinterface counters were cleared
Context	interface name <i>string</i> subinterface index <i>number</i> statistics last-clear <i>string</i>
Tree	last-clear
String Length	20 to 32
Configurable	False
Platforms	Supported on all platforms

out-discarded-packets *number*

Description	The total number of packets, originating and transit, that should have been sent out this subinterface but were dropped This includes IP packets dropped by egress interface ACL drop action.
Context	interface name <i>string</i> subinterface index <i>number</i> statistics out-discarded-packets <i>number</i>
Tree	out-discarded-packets
Default	0
Configurable	False
Platforms	Supported on all platforms

out-error-packets *number*

Description	The number of packets, originating and transit, for which this router was successful in finding a path to their final destination through this subinterface but an error prevented their transmission On 7250 IXR systems this is incremented when the IPv4 packet size exceeds the IP MTU and fragmentation was not allowed or not supported. It is also incremented when the MPLS packet size exceeds the MPLS MTU of the subinterface.
Context	interface name <i>string</i> subinterface index <i>number</i> statistics out-error-packets <i>number</i>
Tree	out-error-packets
Default	0
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

out-forwarded-octets *number*

Description	The number of octets in transit packets which the router attempted to forward out this subinterface
Context	interface name <i>string</i> subinterface index <i>number</i> statistics out-forwarded-octets <i>number</i>
Tree	out-forwarded-octets
Default	0
Configurable	False
Platforms	Supported on all platforms

out-forwarded-packets *number*

Description	The number of transit packets which the router attempted to forward out this subinterface
Context	interface name <i>string</i> subinterface index <i>number</i> statistics out-forwarded-packets <i>number</i>
Tree	out-forwarded-packets
Default	0
Configurable	False
Platforms	Supported on all platforms

out-octets *number*

Description	The total number of octets in packets delivered to the lower layers for transmission
Context	interface name <i>string</i> subinterface index <i>number</i> statistics out-octets <i>number</i>
Tree	out-octets
Default	0
Configurable	False
Platforms	Supported on all platforms

out-originated-octets *number*

Description	The number of octets in packets which originated on the CPM and which the router attempted to forward out this subinterface
Context	interface name <i>string</i> subinterface index <i>number</i> statistics out-originated-octets <i>number</i>
Tree	out-originated-octets
Default	0
Configurable	False
Platforms	Supported on all platforms

out-originated-packets *number*

Description	The number of packets which originated on the CPM and which the router attempted to forward out this subinterface
Context	interface name <i>string</i> subinterface index <i>number</i> statistics out-originated-packets <i>number</i>
Tree	out-originated-packets
Default	0
Configurable	False
Platforms	Supported on all platforms

out-packets *number*

Description	The total number of packets that this router supplied to the lower layers for transmission This equals the sum of: out-error-packets out-discarded-packets out-originated-packets out-forwarded-packets
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Context	interface name <i>string</i> subinterface index <i>number</i> statistics out-packets number
Tree	out-packets
Default	0
Configurable	False
Platforms	Supported on all platforms

type *identityref*

Description	Indicates the context in which the ethernet subinterface will be used
Context	interface name <i>string</i> subinterface index <i>number</i> type <i>identityref</i>
Tree	type
Options	<ul style="list-style-type: none"> • routed Indicates subinterface is used in a routed context • bridged Indicates subinterface is used in a bridged context • local-mirror-dest Indicates subinterface is used in a mirroring destination SPAN context
Configurable	True
Platforms	Supported on all platforms

unidirectional-link-delay

Description	Unidirectional link delay configuration and state related to subinterface
Context	interface name <i>string</i> subinterface index <i>number</i> unidirectional-link-delay
Tree	unidirectional-link-delay
Configurable	True
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

last-reported-dynamic-delay (*number* | *keyword*)

Description	Indicates the last delay measurement reported to the routing engine
Context	interface name <i>string</i> subinterface index <i>number</i> unidirectional-link-delay last-reported-dynamic-delay (<i>number</i> <i>keyword</i>)
Tree	last-reported-dynamic-delay
Range	0 to 2147483647

Units	microseconds
Options	• none
Configurable	False
Platforms	7250 IXR-10e, 7250 IXR-6e, 7250 IXR-X3b

static-delay (*number* | *keyword*)

Description	A statically configured unidirectional delay value that can be advertised as an interface attribute by an IGP
Context	interface name <i>string</i> subinterface index <i>number</i> unidirectional-link-delay static-delay (<i>number</i> <i>keyword</i>)
Tree	static-delay
Range	1 to 16777215
Default	none
Units	microseconds
Options	• none
Configurable	True
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

vlan

Description	Parameters for VLAN definition under SRL interfaces.
Context	interface name <i>string</i> subinterface index <i>number</i> vlan
Tree	vlan
Configurable	True
Platforms	Supported on all platforms

encap

Description	VLAN match parameters for the associated subinterface.
Context	interface name <i>string</i> subinterface index <i>number</i> vlan encap
Tree	encap
Configurable	True
Platforms	Supported on all platforms

double-tagged

Description	When present, double-tagged frames with a specific, non-zero, outer and inner VLAN ID values are associated to the subinterface By default, the specific configured vlan-id tags are stripped at ingress and pushed on egress.
Context	interface name <i>string</i> subinterface index <i>number</i> vlan encap double-tagged
Tree	double-tagged
Configurable	True
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

inner-vlan-id (*number* | *keyword*)

Description	Inner VLAN tag identifier for double-tagged packets
Context	interface name <i>string</i> subinterface index <i>number</i> vlan encap double-tagged inner-vlan-id (<i>number</i> <i>keyword</i>)
Tree	inner-vlan-id
Range	1 to 4094
Options	<ul style="list-style-type: none"> • any • optional
Configurable	True
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

outer-vlan-id (*number* | *keyword*)

Description	Outer VLAN tag identifier for double-tagged packets
Context	interface name <i>string</i> subinterface index <i>number</i> vlan encap double-tagged outer-vlan-id (<i>number</i> <i>keyword</i>)
Tree	outer-vlan-id
Range	1 to 4094
Options	<ul style="list-style-type: none"> • any • optional
Configurable	True
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

single-tagged

Description	When present, tagged frames with a specific, non-zero, outer VLAN ID are associated to the subinterface The outer VLAN-ID tag is considered service delimiting and it is by default stripped at ingress and restored/added on egress.
Context	interface name <i>string</i> subinterface index <i>number</i> vlan encap single-tagged
Tree	single-tagged
Configurable	True
Platforms	Supported on all platforms

vlan-id (*number* | *keyword*)

Description	VLAN identifier for single-tagged packets.
Context	interface name <i>string</i> subinterface index <i>number</i> vlan encap single-tagged vlan-id (<i>number</i> <i>keyword</i>)
Tree	vlan-id
Range	1 to 4094
Options	<ul style="list-style-type: none"> • optional • any
Configurable	True
Platforms	Supported on all platforms

single-tagged-range

Description	When present, tagged frames with a specific, non-zero, outer VLAN ID contained in a specified set of range are associated to the subinterface. The outer VLAN ID tag of the frame is not stripped off on ingress, and no tag is pushed on egress.
Context	interface name <i>string</i> subinterface index <i>number</i> vlan encap single-tagged-range
Tree	single-tagged-range
Configurable	True
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

low-vlan-id *range-low-vlan-id number*

Description	Enter the low-vlan-id list instance
Context	interface name <i>string</i> subinterface <i>index number</i> vlan encap single-tagged-range low-vlan-id range-low-vlan-id <i>number</i>
Tree	low-vlan-id
Configurable	True
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b
Max. Elements	8
Min. Elements	1

range-low-vlan-id *number*

Description	The low-value VLAN identifier in a range for single-tagged packets. The range is matched inclusively.
Context	interface name <i>string</i> subinterface <i>index number</i> vlan encap single-tagged-range low-vlan-id range-low-vlan-id <i>number</i>
Range	1 to 4094
Configurable	True
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

high-vlan-id *number*

Description	The high-value VLAN identifier in a range for single-tagged packets. The range is matched inclusively.
Context	interface name <i>string</i> subinterface <i>index number</i> vlan encap single-tagged-range low-vlan-id range-low-vlan-id <i>number</i> high-vlan-id <i>number</i>
Tree	high-vlan-id
Range	1 to 4094
Configurable	True
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

untagged

Description	When present, untagged frames and VLAN ID 0 priority tagged frames are associated to the subinterface when it belongs to an interface with vlan-tagging enabled.
Context	interface name <i>string</i> subinterface index <i>number</i> vlan encap untagged
Tree	untagged
Configurable	True
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

tpid *identityref*

Description	Optionally set the tag protocol identifier field (TPID) that is accepted on the VLAN
Context	interface name <i>string</i> tpid identityref
Tree	tpid
Options	<ul style="list-style-type: none"> • TPID_0X8100 Default TPID value for 802.1q single-tagged VLANs. • TPID_0X88A8 TPID value for 802.1ad provider bridging, QinQ or stacked VLANs. • TPID_0X9100 Alternate TPID value. • TPID_0X9200 Alternate TPID value. • TPID_ANY A wildcard that matches any of the generally used TPID values for singly- or multiply-tagged VLANs. Equivalent to matching any of TPID_0X8100, TPID_0X88A8, TPID_0X9100 and TPID_0x9200. This value is only applicable where the TPID of a packet is being matched.
Configurable	True
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-X3b

traffic-rate

Description	Container for traffic rate statistics
Context	interface name <i>string</i> traffic-rate
Tree	traffic-rate
Configurable	False
Platforms	Supported on all platforms

in-bps *number*

Description	The ingress bandwidth utilization of the port
Context	interface name <i>string</i> traffic-rate in-bps <i>number</i>
Tree	in-bps
Configurable	False
Platforms	Supported on all platforms

out-bps *number*

Description	The egress bandwidth utilization of the port
Context	interface name <i>string</i> traffic-rate out-bps <i>number</i>
Tree	out-bps
Configurable	False
Platforms	Supported on all platforms

transceiver

Description	Enter the transceiver context
Context	interface name <i>string</i> transceiver
Tree	transceiver
Configurable	True
Platforms	Supported on all platforms

channel [index](#) *number*

Description	List of physical channels supported by the transceiver associated with this port
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Context	interface name <i>string</i> transceiver channel index number
Tree	channel
Configurable	False
Platforms	Supported on all platforms

index number

Description	Index of the physical channel or lane
Context	interface name <i>string</i> transceiver channel index number
Range	1 to 10
Configurable	False
Platforms	Supported on all platforms

input-power

Description	Enter the input-power context
Context	interface name <i>string</i> transceiver channel index number input-power
Tree	input-power
Configurable	False
Platforms	Supported on all platforms

high-alarm-condition *boolean*

Description	High alarm threshold condition. Set to true whenever the Rx power is above the high-alarm-threshold and set to false whenever the Rx power is below the high-alarm-threshold
Context	interface name <i>string</i> transceiver channel index number input-power high-alarm-condition <i>boolean</i>
Tree	high-alarm-condition
Configurable	False
Platforms	Supported on all platforms

high-alarm-threshold *decimal-number*

Description	High alarm threshold. Read from the installed transceiver
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Context	interface name <i>string</i> transceiver channel index <i>number</i> input-power high-alarm-threshold <i>decimal-number</i>
Tree	high-alarm-threshold
Configurable	False
Platforms	Supported on all platforms

high-warning-condition *boolean*

Description	High warning threshold condition. Set to true whenever the Rx power is above the high-warning-threshold and set to false whenever the Rx power is below the high-warning-threshold
Context	interface name <i>string</i> transceiver channel index <i>number</i> input-power high-warning-condition <i>boolean</i>
Tree	high-warning-condition
Configurable	False
Platforms	Supported on all platforms

high-warning-threshold *decimal-number*

Description	High warning threshold. Read from the installed transceiver
Context	interface name <i>string</i> transceiver channel index <i>number</i> input-power high-warning-threshold <i>decimal-number</i>
Tree	high-warning-threshold
Configurable	False
Platforms	Supported on all platforms

latest-value *decimal-number*

Description	The current value of the optical Rx power in dBm
Context	interface name <i>string</i> transceiver channel index <i>number</i> input-power latest-value <i>decimal-number</i>
Tree	latest-value
Configurable	False
Platforms	Supported on all platforms

low-alarm-condition *boolean*

Description	Low alarm threshold condition. Set to true whenever the Rx power is below the low-alarm-threshold and set to false whenever the Rx power is above the low-alarm-threshold
Context	interface name <i>string</i> transceiver channel index <i>number</i> input-power low-alarm-condition <i>boolean</i>
Tree	low-alarm-condition
Configurable	False
Platforms	Supported on all platforms

low-alarm-threshold *decimal-number*

Description	Low alarm threshold condition. Read from the installed transceiver
Context	interface name <i>string</i> transceiver channel index <i>number</i> input-power low-alarm-threshold <i>decimal-number</i>
Tree	low-alarm-threshold
Configurable	False
Platforms	Supported on all platforms

low-warning-condition *boolean*

Description	Low warning threshold condition. Set to true whenever the Rx power is below the low-warning-threshold and set to false whenever the Rx power is above the low-warning-threshold
Context	interface name <i>string</i> transceiver channel index <i>number</i> input-power low-warning-condition <i>boolean</i>
Tree	low-warning-condition
Configurable	False
Platforms	Supported on all platforms

low-warning-threshold *decimal-number*

Description	Low warning threshold. Read from the installed transceiver
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Context	interface name <i>string</i> transceiver channel index <i>number</i> input-power low-warning-threshold <i>decimal-number</i>
Tree	low-warning-threshold
Configurable	False
Platforms	Supported on all platforms

laser-bias-current

Description	Enter the laser-bias-current context
Context	interface name <i>string</i> transceiver channel index <i>number</i> laser-bias-current
Tree	laser-bias-current
Configurable	False
Platforms	Supported on all platforms

high-alarm-condition *boolean*

Description	High alarm threshold condition. Set to true whenever the laser bias current is above the high-alarm-threshold and set to false whenever the laser bias current is below the high-alarm-threshold
Context	interface name <i>string</i> transceiver channel index <i>number</i> laser-bias-current high-alarm-condition <i>boolean</i>
Tree	high-alarm-condition
Configurable	False
Platforms	Supported on all platforms

high-alarm-threshold *decimal-number*

Description	High alarm threshold. Read from the installed transceiver
Context	interface name <i>string</i> transceiver channel index <i>number</i> laser-bias-current high-alarm-threshold <i>decimal-number</i>
Tree	high-alarm-threshold
Configurable	False
Platforms	Supported on all platforms

high-warning-condition *boolean*

Description	High warning threshold condition. Set to true whenever the laser bias current is above the high-warning-threshold and set to false whenever the laser bias current is below the high-warning-threshold
Context	interface name <i>string</i> transceiver channel index <i>number</i> laser-bias-current high-warning-condition <i>boolean</i>
Tree	high-warning-condition
Configurable	False
Platforms	Supported on all platforms

high-warning-threshold *decimal-number*

Description	High warning threshold. Read from the installed transceiver
Context	interface name <i>string</i> transceiver channel index <i>number</i> laser-bias-current high-warning-threshold <i>decimal-number</i>
Tree	high-warning-threshold
Configurable	False
Platforms	Supported on all platforms

latest-value *decimal-number*

Description	The current value of the laser bias current in mA
Context	interface name <i>string</i> transceiver channel index <i>number</i> laser-bias-current latest-value <i>decimal-number</i>
Tree	latest-value
Configurable	False
Platforms	Supported on all platforms

low-alarm-condition *boolean*

Description	Low alarm threshold condition. Set to true whenever the laser bias current is below the low-alarm-threshold and set to false whenever the laser bias current is above the low-alarm-threshold
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Context	interface name <i>string</i> transceiver channel index <i>number</i> laser-bias-current low-alarm-condition <i>boolean</i>
Tree	low-alarm-condition
Configurable	False
Platforms	Supported on all platforms

low-alarm-threshold *decimal-number*

Description	Low alarm threshold. Read from the installed transceiver
Context	interface name <i>string</i> transceiver channel index <i>number</i> laser-bias-current low-alarm-threshold <i>decimal-number</i>
Tree	low-alarm-threshold
Configurable	False
Platforms	Supported on all platforms

low-warning-condition *boolean*

Description	Low warning threshold condition. Set to true whenever the laser bias current is below the low-warning-threshold and set to false whenever the laser bias current is above the low-warning-threshold
Context	interface name <i>string</i> transceiver channel index <i>number</i> laser-bias-current low-warning-condition <i>boolean</i>
Tree	low-warning-condition
Configurable	False
Platforms	Supported on all platforms

low-warning-threshold *decimal-number*

Description	Low warning threshold. Read from the installed transceiver
Context	interface name <i>string</i> transceiver channel index <i>number</i> laser-bias-current low-warning-threshold <i>decimal-number</i>
Tree	low-warning-threshold
Configurable	False
Platforms	Supported on all platforms

output-power

Description	Enter the output-power context
Context	interface name <i>string</i> transceiver channel index <i>number</i> output-power
Tree	output-power
Configurable	False
Platforms	Supported on all platforms

high-alarm-condition *boolean*

Description	High alarm threshold condition. Set to true whenever the Tx power is above the high-alarm-threshold and set to false whenever the Tx power is below the high-alarm-threshold
Context	interface name <i>string</i> transceiver channel index <i>number</i> output-power high-alarm-condition <i>boolean</i>
Tree	high-alarm-condition
Configurable	False
Platforms	Supported on all platforms

high-alarm-threshold *decimal-number*

Description	High alarm threshold. Read from the installed transceiver
Context	interface name <i>string</i> transceiver channel index <i>number</i> output-power high-alarm-threshold <i>decimal-number</i>
Tree	high-alarm-threshold
Configurable	False
Platforms	Supported on all platforms

high-warning-condition *boolean*

Description	High warning threshold condition. Set to true whenever the Tx power is above the high-warning-threshold and set to false whenever the Tx power is below the high-warning-threshold
Context	interface name <i>string</i> transceiver channel index <i>number</i> output-power high-warning-condition <i>boolean</i>
Tree	high-warning-condition

Configurable	False
Platforms	Supported on all platforms

high-warning-threshold *decimal-number*

Description	High warning threshold. Read from the installed transceiver
Context	interface name <i>string</i> transceiver channel index <i>number</i> output-power high-warning-threshold <i>decimal-number</i>
Tree	high-warning-threshold
Configurable	False
Platforms	Supported on all platforms

latest-value *decimal-number*

Description	The current value of the optical Tx power in dBm
Context	interface name <i>string</i> transceiver channel index <i>number</i> output-power latest-value <i>decimal-number</i>
Tree	latest-value
Configurable	False
Platforms	Supported on all platforms

low-alarm-condition *boolean*

Description	Low alarm threshold condition. Set to true whenever the Tx power is below the low-alarm-threshold and set to false whenever the Tx power is above the low-alarm-threshold
Context	interface name <i>string</i> transceiver channel index <i>number</i> output-power low-alarm-condition <i>boolean</i>
Tree	low-alarm-condition
Configurable	False
Platforms	Supported on all platforms

low-alarm-threshold *decimal-number*

Description	Low alarm threshold. Read from the installed transceiver
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Context	interface name <i>string</i> transceiver channel index <i>number</i> output-power low-alarm-threshold <i>decimal-number</i>
Tree	low-alarm-threshold
Configurable	False
Platforms	Supported on all platforms

low-warning-condition *boolean*

Description	Low warning threshold condition. Set to true whenever the Tx power is below the low-warning-threshold and set to false whenever the Tx power is above the low-warning-threshold
Context	interface name <i>string</i> transceiver channel index <i>number</i> output-power low-warning-condition <i>boolean</i>
Tree	low-warning-condition
Configurable	False
Platforms	Supported on all platforms

low-warning-threshold *decimal-number*

Description	Low warning threshold. Read from the installed transceiver
Context	interface name <i>string</i> transceiver channel index <i>number</i> output-power low-warning-threshold <i>decimal-number</i>
Tree	low-warning-threshold
Configurable	False
Platforms	Supported on all platforms

wavelength *decimal-number*

Description	Wavelength of the transmitting laser in nanometers
Context	interface name <i>string</i> transceiver channel index <i>number</i> wavelength <i>decimal-number</i>
Tree	wavelength
Configurable	False
Platforms	Supported on all platforms

connector-type *keyword*

Description	Specifies the fiber connector type of the transceiver associated with the port
Context	interface name <i>string</i> transceiver connector-type <i>keyword</i>
Tree	connector-type
Options	<ul style="list-style-type: none"> • SC • FC-STYLE1-COPPER • FC-STYLE2-COPPER • BNC-OR-TNC • FC-COAX • FIBER-JACK • LC • MT-RJ • MU • SG • OPTICAL-PIGTAIL • MPO-1x12 • MPO-2x16 • HSSDC • COPPER-PIGTAIL • RJ45 • no-separable-connector • MXC-2x16 • CS-OPTICAL-CONNECTOR • SN-OPTICAL-CONNECTOR • MPO-2x12 • MPO-1x16 • unknown
Configurable	False
Platforms	Supported on all platforms

date-code *string*

Description	Transceiver date code.
Context	interface name <i>string</i> transceiver date-code <i>string</i>
Tree	date-code

String Length	20 to 32
Configurable	False
Platforms	Supported on all platforms

ddm-events *boolean*

Description	Controls the reporting of DDM events When set to true, log events related to the Digital Diagnostic Monitoring (DDM) capabilities of the transceiver are generated. When set to false, no DDM-related log events are generated for this port/transceiver. When read from state this leaf always returns false (even if the configured value is true) when the Ethernet port is a copper/RJ45 port.
Context	interface name <i>string</i> transceiver ddm-events <i>boolean</i>
Tree	ddm-events
Configurable	True
Platforms	Supported on all platforms

ethernet-pmd *string*

Description	Specifies the Ethernet compliance code of the transceiver associated with the port
Context	interface name <i>string</i> transceiver ethernet-pmd <i>string</i>
Tree	ethernet-pmd
Configurable	False
Platforms	Supported on all platforms

fault-condition *boolean*

Description	Indicates if a fault condition exists in the transceiver.
Context	interface name <i>string</i> transceiver fault-condition <i>boolean</i>
Tree	fault-condition
Configurable	False
Platforms	Supported on all platforms

form-factor *keyword*

Description	Specifies the transceiver form factor associated with the port
Context	interface name <i>string</i> transceiver form-factor <i>keyword</i>
Tree	form-factor
Options	<ul style="list-style-type: none"> • CFP2 • CFP2-ACO • CFP4 • QSFP • QSFPplus • QSFP28 • QSFPDD • SFP • SFPplus • Non-pluggable • Other • SFP28 • SFPDD • QSFP56 • SFP56
Configurable	False
Platforms	Supported on all platforms

forward-error-correction *keyword*

Description	<p>The forward error correction algorithm to use on the optical channel</p> <p>The same FEC algorithm must be used at both ends of a link.</p> <p>25G interfaces support disabled, base-r, rs-108 and rs-528; configuring other (incompatible) options will bring the port down. The FEC requirement for a 25G interface depends on the cable type. A CA-N DAC cable has a loss specification that requires no FEC. A CA-S DAC cable requires base-r FEC at a minimum. A CA-L DAC cable requires the stronger rs-108 Reed Solomon FEC.</p> <p>100G interfaces support disabled and rs-528; configuring other (incompatible) options will bring the port down.</p> <p>400G interfaces require rs-544; configuring other (unsupported) options will bring the port down.</p>
Context	interface name <i>string</i> transceiver forward-error-correction <i>keyword</i>

Tree	forward-error-correction
Options	<ul style="list-style-type: none"> • disabled • rs-528 • rs-544 • base-r BASE-R FEC algorithm for 25GbE interfaces (also known as fire-code) • rs-108 Reed Solomon FEC algorithm for 25GbE interfaces
Configurable	True
Platforms	Supported on all platforms

healthz

Description	<p>The health of the component</p> <p>The paramaters within this container indicate the status of the component beyond whether it is operationally up or down. When a signal is received that a component is in an unhealthy state the gNOI.Healthz service can be used to retrieve further diagnostic information relating to the component. The contents of this directory relate only to the specific component that it is associated with.</p>
Context	interface name <i>string</i> transceiver healthz
Tree	healthz
Configurable	False
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

last-unhealthy *string*

Description	<p>Last unhealthy time</p> <p>The time at which the component was last observed to transition from the healthy state to any other state, represented as nanoseconds since the Unix epoch.</p>
Context	interface name <i>string</i> transceiver healthz last-unhealthy <i>string</i>
Tree	last-unhealthy
String Length	20 to 32
Configurable	False

Platforms 7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

status *keyword*

Description Health status
The status of the component, indicating its current health.

Context [interface name](#) *string* [transceiver healthz status](#) *keyword*

Tree [status](#)

Options

- unspecified
Unspecified status
The component's health status has not yet been checked by the system.
- healthy
Healthy status
The component is in a healthy state, and is operating within the expected parameters.
- unhealthy
Unhealthy status
The component is in a unhealthy state, it is not performing the function expected of it.

Configurable False

Platforms 7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

unhealthy-count *number*

Description Unhealthy count
The number of times the component has transitioned from the healthy state to any other state.

Context [interface name](#) *string* [transceiver healthz unhealthy-count](#) *number*

Tree [unhealthy-count](#)

Default 0

Configurable False

Platforms 7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

input-power

Description	Enter the input-power context
Context	interface name <i>string</i> transceiver input-power
Tree	input-power
Configurable	False
Platforms	Supported on all platforms

high-alarm-condition *boolean*

Description	High alarm threshold condition. Set to true whenever the Rx power is above the high-alarm-threshold and set to false whenever the Rx power is below the high-alarm-threshold
Context	interface name <i>string</i> transceiver input-power high-alarm-condition <i>boolean</i>
Tree	high-alarm-condition
Configurable	False
Platforms	Supported on all platforms

high-alarm-threshold *decimal-number*

Description	High alarm threshold. Read from the installed transceiver
Context	interface name <i>string</i> transceiver input-power high-alarm-threshold <i>decimal-number</i>
Tree	high-alarm-threshold
Configurable	False
Platforms	Supported on all platforms

high-warning-condition *boolean*

Description	High warning threshold condition. Set to true whenever the Rx power is above the high-warning-threshold and set to false whenever the Rx power is below the high-warning-threshold
Context	interface name <i>string</i> transceiver input-power high-warning-condition <i>boolean</i>
Tree	high-warning-condition

Configurable	False
Platforms	Supported on all platforms

high-warning-threshold *decimal-number*

Description	High warning threshold. Read from the installed transceiver
Context	interface name <i>string</i> transceiver input-power high-warning-threshold <i>decimal-number</i>
Tree	high-warning-threshold
Configurable	False
Platforms	Supported on all platforms

latest-value *decimal-number*

Description	The current value of the optical Rx power in dBm
Context	interface name <i>string</i> transceiver input-power latest-value <i>decimal-number</i>
Tree	latest-value
Configurable	False
Platforms	Supported on all platforms

low-alarm-condition *boolean*

Description	Low alarm threshold condition. Set to true whenever the Rx power is below the low-alarm-threshold and set to false whenever the Rx power is above the low-alarm-threshold
Context	interface name <i>string</i> transceiver input-power low-alarm-condition <i>boolean</i>
Tree	low-alarm-condition
Configurable	False
Platforms	Supported on all platforms

low-alarm-threshold *decimal-number*

Description	Low alarm threshold condition. Read from the installed transceiver
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Context	interface name <i>string</i> transceiver input-power low-alarm-threshold <i>decimal-number</i>
Tree	low-alarm-threshold
Configurable	False
Platforms	Supported on all platforms

low-warning-condition *boolean*

Description	Low warning threshold condition. Set to true whenever the Rx power is below the low-warning-threshold and set to false whenever the Rx power is above the low-warning-threshold
Context	interface name <i>string</i> transceiver input-power low-warning-condition <i>boolean</i>
Tree	low-warning-condition
Configurable	False
Platforms	Supported on all platforms

low-warning-threshold *decimal-number*

Description	Low warning threshold. Read from the installed transceiver
Context	interface name <i>string</i> transceiver input-power low-warning-threshold <i>decimal-number</i>
Tree	low-warning-threshold
Configurable	False
Platforms	Supported on all platforms

laser-bias-current

Description	Enter the laser-bias-current context
Context	interface name <i>string</i> transceiver laser-bias-current
Tree	laser-bias-current
Configurable	False
Platforms	Supported on all platforms

high-alarm-condition *boolean*

Description	High alarm threshold condition.
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Set to true whenever the laser bias current is above the high-alarm-threshold and set to false whenever the laser bias current is below the high-alarm-threshold

Context	interface name <i>string</i> transceiver laser-bias-current high-alarm-condition <i>boolean</i>
Tree	high-alarm-condition
Configurable	False
Platforms	Supported on all platforms

high-alarm-threshold *decimal-number*

Description	High alarm threshold. Read from the installed transceiver
Context	interface name <i>string</i> transceiver laser-bias-current high-alarm-threshold <i>decimal-number</i>
Tree	high-alarm-threshold
Configurable	False
Platforms	Supported on all platforms

high-warning-condition *boolean*

Description	High warning threshold condition. Set to true whenever the laser bias current is above the high-warning-threshold and set to false whenever the laser bias current is below the high-warning-threshold
Context	interface name <i>string</i> transceiver laser-bias-current high-warning-condition <i>boolean</i>
Tree	high-warning-condition
Configurable	False
Platforms	Supported on all platforms

high-warning-threshold *decimal-number*

Description	High warning threshold. Read from the installed transceiver
Context	interface name <i>string</i> transceiver laser-bias-current high-warning-threshold <i>decimal-number</i>
Tree	high-warning-threshold

Configurable	False
Platforms	Supported on all platforms

latest-value *decimal-number*

Description	The current value of the laser bias current in mA
Context	interface name <i>string</i> transceiver laser-bias-current latest-value <i>decimal-number</i>
Tree	latest-value
Configurable	False
Platforms	Supported on all platforms

low-alarm-condition *boolean*

Description	Low alarm threshold condition. Set to true whenever the laser bias current is below the low-alarm-threshold and set to false whenever the laser bias current is above the low-alarm-threshold
Context	interface name <i>string</i> transceiver laser-bias-current low-alarm-condition <i>boolean</i>
Tree	low-alarm-condition
Configurable	False
Platforms	Supported on all platforms

low-alarm-threshold *decimal-number*

Description	Low alarm threshold. Read from the installed transceiver
Context	interface name <i>string</i> transceiver laser-bias-current low-alarm-threshold <i>decimal-number</i>
Tree	low-alarm-threshold
Configurable	False
Platforms	Supported on all platforms

low-warning-condition *boolean*

Description	Low warning threshold condition.
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Set to true whenever the laser bias current is below the low-warning-threshold and set to false whenever the laser bias current is above the low-warning-threshold

Context	interface name <i>string</i> transceiver laser-bias-current low-warning-condition <i>boolean</i>
Tree	low-warning-condition
Configurable	False
Platforms	Supported on all platforms

low-warning-threshold *decimal-number*

Description	Low warning threshold. Read from the installed transceiver
Context	interface name <i>string</i> transceiver laser-bias-current low-warning-threshold <i>decimal-number</i>
Tree	low-warning-threshold
Configurable	False
Platforms	Supported on all platforms

oper-down-reason *keyword*

Description	The reason for the transceiver being operationally down
Context	interface name <i>string</i> transceiver oper-down-reason <i>keyword</i>
Tree	oper-down-reason
Options	<ul style="list-style-type: none"> • not-present • read-failure • checksum-failure • unknown-transceiver • tx-laser-disabled • unsupported-breakout • port-disabled • connector-transceiver-down • unsupported-operational-mode • no-tunable-config
Configurable	False
Platforms	Supported on all platforms

oper-state *keyword*

Description	The operational state of the transceiver The oper-state is always down when the Ethernet port is a copper/RJ45 port.
Context	interface name <i>string</i> transceiver oper-state <i>keyword</i>
Tree	oper-state
Options	<ul style="list-style-type: none"> • up • down
Configurable	False
Platforms	Supported on all platforms

output-power

Description	Enter the output-power context
Context	interface name <i>string</i> transceiver output-power
Tree	output-power
Configurable	False
Platforms	Supported on all platforms

high-alarm-condition *boolean*

Description	High alarm threshold condition. Set to true whenever the Tx power is above the high-alarm-threshold and set to false whenever the Tx power is below the high-alarm-threshold
Context	interface name <i>string</i> transceiver output-power high-alarm-condition <i>boolean</i>
Tree	high-alarm-condition
Configurable	False
Platforms	Supported on all platforms

high-alarm-threshold *decimal-number*

Description	High alarm threshold. Read from the installed transceiver
Context	interface name <i>string</i> transceiver output-power high-alarm-threshold <i>decimal-number</i>
Tree	high-alarm-threshold

Configurable	False
Platforms	Supported on all platforms

high-warning-condition *boolean*

Description	High warning threshold condition. Set to true whenever the Tx power is above the high-warning-threshold and set to false whenever the Tx power is below the high-warning-threshold
Context	interface name <i>string</i> transceiver output-power high-warning-condition <i>boolean</i>
Tree	high-warning-condition
Configurable	False
Platforms	Supported on all platforms

high-warning-threshold *decimal-number*

Description	High warning threshold. Read from the installed transceiver
Context	interface name <i>string</i> transceiver output-power high-warning-threshold <i>decimal-number</i>
Tree	high-warning-threshold
Configurable	False
Platforms	Supported on all platforms

latest-value *decimal-number*

Description	The current value of the optical Tx power in dBm
Context	interface name <i>string</i> transceiver output-power latest-value <i>decimal-number</i>
Tree	latest-value
Configurable	False
Platforms	Supported on all platforms

low-alarm-condition *boolean*

Description	Low alarm threshold condition. Set to true whenever the Tx power is below the low-alarm-threshold and set to false whenever the Tx power is above the low-alarm-threshold
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Context	interface name <i>string</i> transceiver output-power low-alarm-condition <i>boolean</i>
Tree	low-alarm-condition
Configurable	False
Platforms	Supported on all platforms

low-alarm-threshold *decimal-number*

Description	Low alarm threshold. Read from the installed transceiver
Context	interface name <i>string</i> transceiver output-power low-alarm-threshold <i>decimal-number</i>
Tree	low-alarm-threshold
Configurable	False
Platforms	Supported on all platforms

low-warning-condition *boolean*

Description	Low warning threshold condition. Set to true whenever the Tx power is below the low-warning-threshold and set to false whenever the Tx power is above the low-warning-threshold
Context	interface name <i>string</i> transceiver output-power low-warning-condition <i>boolean</i>
Tree	low-warning-condition
Configurable	False
Platforms	Supported on all platforms

low-warning-threshold *decimal-number*

Description	Low warning threshold. Read from the installed transceiver
Context	interface name <i>string</i> transceiver output-power low-warning-threshold <i>decimal-number</i>
Tree	low-warning-threshold
Configurable	False
Platforms	Supported on all platforms

serial-number *string*

Description	Transceiver serial number This is the information as read from the EEPROM of the part.
Context	interface name <i>string</i> transceiver serial-number <i>string</i>
Tree	serial-number
Configurable	False
Platforms	Supported on all platforms

temperature

Description	Enter the temperature context
Context	interface name <i>string</i> transceiver temperature
Tree	temperature
Configurable	False
Platforms	Supported on all platforms

high-alarm-condition *boolean*

Description	High alarm threshold condition Set to true whenever the temperature is above the high-alarm-threshold and set to false whenever the temperature is below the high-alarm-threshold
Context	interface name <i>string</i> transceiver temperature high-alarm-condition <i>boolean</i>
Tree	high-alarm-condition
Configurable	False
Platforms	Supported on all platforms

high-alarm-threshold *number*

Description	High alarm threshold Read from the installed transceiver
Context	interface name <i>string</i> transceiver temperature high-alarm-threshold <i>number</i>
Tree	high-alarm-threshold
Configurable	False
Platforms	Supported on all platforms

high-warning-condition *boolean*

Description	High warning threshold condition. Set to true whenever the temperature is above the high-warning-threshold and set to false whenever the temperature is below the high-warning-threshold
Context	interface name <i>string</i> transceiver temperature high-warning-condition <i>boolean</i>
Tree	high-warning-condition
Configurable	False
Platforms	Supported on all platforms

high-warning-threshold *number*

Description	High warning threshold. Read from the installed transceiver
Context	interface name <i>string</i> transceiver temperature high-warning-threshold <i>number</i>
Tree	high-warning-threshold
Configurable	False
Platforms	Supported on all platforms

latest-value *number*

Description	The current temperature of the transceiver module in degrees Celsius
Context	interface name <i>string</i> transceiver temperature latest-value <i>number</i>
Tree	latest-value
Configurable	False
Platforms	Supported on all platforms

low-alarm-condition *boolean*

Description	Low alarm threshold condition. Set to true whenever the temperature is below the low-alarm-threshold and set to false whenever the temperature is above the low-alarm-threshold
Context	interface name <i>string</i> transceiver temperature low-alarm-condition <i>boolean</i>
Tree	low-alarm-condition

Configurable	False
Platforms	Supported on all platforms

low-alarm-threshold *number*

Description	Low alarm threshold. Read from the installed transceiver
Context	interface name <i>string</i> transceiver temperature low-alarm-threshold <i>number</i>
Tree	low-alarm-threshold
Configurable	False
Platforms	Supported on all platforms

low-warning-condition *boolean*

Description	Low warning threshold condition. Set to true whenever the temperature is below the low-warning-threshold and set to false whenever the temperature is above the low-warning-threshold
Context	interface name <i>string</i> transceiver temperature low-warning-condition <i>boolean</i>
Tree	low-warning-condition
Configurable	False
Platforms	Supported on all platforms

low-warning-threshold *number*

Description	Low warning threshold. Read from the installed transceiver
Context	interface name <i>string</i> transceiver temperature low-warning-threshold <i>number</i>
Tree	low-warning-threshold
Configurable	False
Platforms	Supported on all platforms

maximum *number*

Description	Represents the highest temperature the transceiver has reached since it booted
--------------------	--

Context	interface name <i>string</i> transceiver temperature maximum <i>number</i>
Tree	maximum
Configurable	False
Platforms	Supported on all platforms

maximum-time *string*

Description	Indicates the time this transceiver reached the temperature referenced in maximum
Context	interface name <i>string</i> transceiver temperature maximum-time <i>string</i>
Tree	maximum-time
String Length	20 to 32
Configurable	False
Platforms	Supported on all platforms

tx-laser *boolean*

Description	Enable (true) or disable (false) the transmit laser of the transceiver When read from state this leaf always returns false (even if the configured value is true) when the Ethernet port is a copper/RJ45 port. Default is true (for interfaces that support transceivers).
Context	interface name <i>string</i> transceiver tx-laser <i>boolean</i>
Tree	tx-laser
Configurable	True
Platforms	Supported on all platforms

vendor *string*

Description	Name of the transceiver vendor This is the information as read from the EEPROM of the part.
Context	interface name <i>string</i> transceiver vendor <i>string</i>
Tree	vendor
Configurable	False
Platforms	Supported on all platforms

vendor-lot-number *string*

Description	Vendor's lot number for the transceiver This is the information as read from the EEPROM of the part.
Context	interface name <i>string</i> transceiver vendor-lot-number <i>string</i>
Tree	vendor-lot-number
Configurable	False
Platforms	Supported on all platforms

vendor-part-number *string*

Description	Vendor's part number for the transceiver This is the information as read from the EEPROM of the part.
Context	interface name <i>string</i> transceiver vendor-part-number <i>string</i>
Tree	vendor-part-number
Configurable	False
Platforms	Supported on all platforms

vendor-revision *string*

Description	Vendor's revision number for the transceiver This is the information as read from the EEPROM of the part.
Context	interface name <i>string</i> transceiver vendor-revision <i>string</i>
Tree	vendor-revision
Configurable	False
Platforms	Supported on all platforms

voltage

Description	Enter the voltage context
Context	interface name <i>string</i> transceiver voltage
Tree	voltage
Configurable	False
Platforms	Supported on all platforms

high-alarm-condition *boolean*

Description	High alarm threshold condition. Set to true whenever the module voltage is above the high-alarm-threshold and set to false whenever the module voltage is below the high-alarm-threshold
Context	interface name <i>string</i> transceiver voltage high-alarm-condition <i>boolean</i>
Tree	high-alarm-condition
Configurable	False
Platforms	Supported on all platforms

high-alarm-threshold *decimal-number*

Description	High alarm threshold. Read from the installed transceiver
Context	interface name <i>string</i> transceiver voltage high-alarm-threshold <i>decimal-number</i>
Tree	high-alarm-threshold
Configurable	False
Platforms	Supported on all platforms

high-warning-condition *boolean*

Description	High warning threshold condition. Set to true whenever the module voltage is above the high-warning-threshold and set to false whenever the module voltage is below the high-warning-threshold
Context	interface name <i>string</i> transceiver voltage high-warning-condition <i>boolean</i>
Tree	high-warning-condition
Configurable	False
Platforms	Supported on all platforms

high-warning-threshold *decimal-number*

Description	High warning threshold. Read from the installed transceiver
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Context	interface name <i>string</i> transceiver voltage high-warning-threshold <i>decimal-number</i>
Tree	high-warning-threshold
Configurable	False
Platforms	Supported on all platforms

latest-value *decimal-number*

Description	The current voltage reading of the transceiver module (in Volts)
Context	interface name <i>string</i> transceiver voltage latest-value <i>decimal-number</i>
Tree	latest-value
Configurable	False
Platforms	Supported on all platforms

low-alarm-condition *boolean*

Description	Low alarm threshold condition. Set to true whenever the module voltage is below the low-alarm-threshold and set to false whenever the module voltage is above the low-alarm-threshold
Context	interface name <i>string</i> transceiver voltage low-alarm-condition <i>boolean</i>
Tree	low-alarm-condition
Configurable	False
Platforms	Supported on all platforms

low-alarm-threshold *decimal-number*

Description	Low alarm threshold. Read from the installed transceiver
Context	interface name <i>string</i> transceiver voltage low-alarm-threshold <i>decimal-number</i>
Tree	low-alarm-threshold
Configurable	False
Platforms	Supported on all platforms

low-warning-condition *boolean*

Description	Low warning threshold condition. Set to true whenever the module voltage is below the low-warning-threshold and set to false whenever the module voltage is above the low-warning-threshold
Context	interface name <i>string</i> transceiver voltage low-warning-condition <i>boolean</i>
Tree	low-warning-condition
Configurable	False
Platforms	Supported on all platforms

low-warning-threshold *decimal-number*

Description	Low warning threshold . Read from the installed transceiver
Context	interface name <i>string</i> transceiver voltage low-warning-threshold <i>decimal-number</i>
Tree	low-warning-threshold
Configurable	False
Platforms	Supported on all platforms

wavelength *decimal-number*

Description	Wavelength of the transmitting laser in nanometers
Context	interface name <i>string</i> transceiver wavelength <i>decimal-number</i>
Tree	wavelength
Configurable	False
Platforms	Supported on all platforms

vlan-tagging *boolean*

Description	When set to true the interface is allowed to accept frames with one or more VLAN tags
Context	interface name <i>string</i> vlan-tagging <i>boolean</i>
Tree	vlan-tagging
Configurable	True

Platforms

Supported on all platforms

6 network-instance

```

network-instance name string
+ admin-state keyword
- afts
  - ipv4-unicast
    - ipv4-entry prefix string
      - entry-metadata binary
      - next-hop-group reference
      - next-hop-group-network-instance reference
      - origin-network-instance reference
      - origin-protocol identityref
    - ipv6-unicast
      - ipv6-entry prefix string
        - entry-metadata binary
        - next-hop-group reference
        - next-hop-group-network-instance reference
        - origin-network-instance reference
        - origin-protocol identityref
+ aggregate-routes
+ route prefix (ipv4-prefix | ipv6-prefix)
+ admin-state keyword
+ aggregator
+ address string
+ as-number number
+ communities
+ add (bgp-std-community-type | identityref | bgp-large-community-type)
+ generate-icmp boolean
- installed boolean
+ summary-only boolean
+ bfd
+ seamless-bfd
+ peer address (ipv4-address | ipv6-address)
+ discriminator number
+ reflector name string
+ admin-state keyword
+ description string
+ local-discriminator number
- bgp-rib
- afi-safi afi-safi-name identityref
- ipv4-labeled-unicast
  - local-rib
    - route prefix (ipv4-prefix | ipv6-prefix) neighbor (ipv4-address-with-zone |
ipv6-address-with-zone) origin-protocol identityref path-id number
    - attr-id reference
    - best-route boolean
    - group-best boolean
    - invalid-reason
      - as-loop boolean
      - cluster-loop boolean
      - fib-programming-failed boolean
      - label-allocation-failed boolean
      - next-hop-unresolved boolean
      - rejected-route boolean
    - last-modified string
    - neighbor-as number
    - pending-delete boolean
    - received-mpls-label (number | keyword)

```

```

- stale-route boolean
- tie-break-reason keyword
- used-route boolean
- valid-route boolean
- rib-in-out
  - rib-in-post
    - route prefix (ipv4-prefix | ipv6-prefix) neighbor (ipv4-address-with-zone | ipv6-address-with-zone) path-id number
    - attr-id reference
    - best-route boolean
    - group-best boolean
    - internal-tags string
    - invalid-reason
      - as-loop boolean
      - cluster-loop boolean
      - fib-programming-failed boolean
      - label-allocation-failed boolean
      - next-hop-unresolved boolean
      - rejected-route boolean
    - last-modified string
    - neighbor-as number
    - pending-delete boolean
    - received-mpls-label (number | keyword)
    - stale-route boolean
    - tie-break-reason keyword
    - used-route boolean
    - valid-route boolean
  - rib-in-pre
    - route prefix (ipv4-prefix | ipv6-prefix) neighbor (ipv4-address-with-zone | ipv6-address-with-zone) path-id number
    - attr-id reference
    - received-mpls-label (number | keyword)
  - rib-out-post
    - route prefix (ipv4-prefix | ipv6-prefix) neighbor (ipv4-address-with-zone | ipv6-address-with-zone) path-id number
    - advertised-mpls-label (number | keyword)
    - attr-id reference
- ipv4-unicast
  - local-rib
    - route prefix (ipv4-prefix | ipv6-prefix) neighbor (ipv4-address-with-zone | ipv6-address-with-zone) origin-protocol identityref path-id number
    - attr-id reference
    - best-route boolean
    - group-best boolean
    - invalid-reason
      - as-loop boolean
      - cluster-loop boolean
      - fib-programming-failed boolean
      - label-allocation-failed boolean
      - next-hop-unresolved boolean
      - rejected-route boolean
    - last-modified string
    - neighbor-as number
    - pending-delete boolean
    - stale-route boolean
    - tie-break-reason keyword
    - used-route boolean
    - valid-route boolean
  - rib-in-out
    - rib-in-post
      - route prefix (ipv4-prefix | ipv6-prefix) neighbor (ipv4-address-with-zone | ipv6-address-with-zone) path-id number
      - attr-id reference
      - best-route boolean

```

```

- group-best boolean
- internal-tags string
- invalid-reason
  - as-loop boolean
  - cluster-loop boolean
  - fib-programming-failed boolean
  - label-allocation-failed boolean
  - next-hop-unresolved boolean
  - rejected-route boolean
- last-modified string
- neighbor-as number
- pending-delete boolean
- stale-route boolean
- tie-break-reason keyword
- used-route boolean
- valid-route boolean
- rib-in-pre
  - route prefix (ipv4-prefix | ipv6-prefix) neighbor (ipv4-address-with-zone | ipv6-address-with-zone) path-id number
  - attr-id reference
- rib-out-post
  - route prefix (ipv4-prefix | ipv6-prefix) neighbor (ipv4-address-with-zone | ipv6-address-with-zone) path-id number
  - attr-id reference
- ipv6-labeled-unicast
  - local-rib
    - route prefix (ipv4-prefix | ipv6-prefix) neighbor (ipv4-address-with-zone | ipv6-address-with-zone) origin-protocol identityref path-id number
    - attr-id reference
    - best-route boolean
    - group-best boolean
    - invalid-reason
      - as-loop boolean
      - cluster-loop boolean
      - fib-programming-failed boolean
      - label-allocation-failed boolean
      - next-hop-unresolved boolean
      - rejected-route boolean
    - last-modified string
    - neighbor-as number
    - pending-delete boolean
    - received-mpls-label (number | keyword)
    - stale-route boolean
    - tie-break-reason keyword
    - used-route boolean
    - valid-route boolean
  - rib-in-out
    - rib-in-post
      - route prefix (ipv4-prefix | ipv6-prefix) neighbor (ipv4-address-with-zone | ipv6-address-with-zone) path-id number
      - attr-id reference
      - best-route boolean
      - group-best boolean
      - internal-tags string
      - invalid-reason
        - as-loop boolean
        - cluster-loop boolean
        - fib-programming-failed boolean
        - label-allocation-failed boolean
        - next-hop-unresolved boolean
        - rejected-route boolean
      - last-modified string
      - neighbor-as number
      - pending-delete boolean

```

```

- received-mpls-label (number | keyword)
- stale-route boolean
- tie-break-reason keyword
- used-route boolean
- valid-route boolean
- rib-in-pre
  - route prefix (ipv4-prefix | ipv6-prefix) neighbor (ipv4-address-with-zone |
  ipv6-address-with-zone) path-id number
  - attr-id reference
  - received-mpls-label (number | keyword)
- rib-out-post
  - route prefix (ipv4-prefix | ipv6-prefix) neighbor (ipv4-address-with-zone |
  ipv6-address-with-zone) path-id number
  - advertised-mpls-label (number | keyword)
  - attr-id reference
- ipv6-unicast
- local-rib
  - route prefix (ipv4-prefix | ipv6-prefix) neighbor (ipv4-address-with-zone |
  ipv6-address-with-zone) origin-protocol identityref path-id number
  - attr-id reference
  - best-route boolean
  - group-best boolean
  - invalid-reason
    - as-loop boolean
    - cluster-loop boolean
    - fib-programming-failed boolean
    - label-allocation-failed boolean
    - next-hop-unresolved boolean
    - rejected-route boolean
  - last-modified string
  - neighbor-as number
  - pending-delete boolean
  - stale-route boolean
  - tie-break-reason keyword
  - used-route boolean
  - valid-route boolean
- rib-in-out
- rib-in-post
  - route prefix (ipv4-prefix | ipv6-prefix) neighbor (ipv4-address-with-zone |
  ipv6-address-with-zone) path-id number
  - attr-id reference
  - best-route boolean
  - group-best boolean
  - internal-tags string
  - invalid-reason
    - as-loop boolean
    - cluster-loop boolean
    - fib-programming-failed boolean
    - label-allocation-failed boolean
    - next-hop-unresolved boolean
    - rejected-route boolean
  - last-modified string
  - neighbor-as number
  - pending-delete boolean
  - stale-route boolean
  - tie-break-reason keyword
  - used-route boolean
  - valid-route boolean
- rib-in-pre
  - route prefix (ipv4-prefix | ipv6-prefix) neighbor (ipv4-address-with-zone |
  ipv6-address-with-zone) path-id number
  - attr-id reference
- rib-out-post

```

```

- route prefix (ipv4-prefix | ipv6-prefix) neighbor (ipv4-address-with-zone |
  ipv6-address-with-zone) path-id number
  - attr-id reference
- l3vpn-ipv4-unicast
  - local-rib
    - route route-distinguisher (route-distinguisher-type-0 | route-distinguisher-
      type-1 | route-distinguisher-type-2 | route-distinguisher-type-2b) prefix (ipv4-prefix | ipv6-
      prefix) neighbor (ipv4-address-with-zone | ipv6-address-with-zone) path-id number
    - attr-id reference
    - best-route boolean
    - group-best boolean
    - imported-ip-vrf-network-instances reference
    - invalid-reason
      - as-loop boolean
      - cluster-loop boolean
      - fib-programming-failed boolean
      - label-allocation-failed boolean
      - next-hop-unresolved boolean
      - rejected-route boolean
    - last-modified string
    - neighbor-as number
    - pending-delete boolean
    - received-mpls-label (number | keyword)
    - stale-route boolean
    - tie-break-reason keyword
    - used-route boolean
    - valid-route boolean
  - rib-in-out
    - rib-in-post
      - route route-distinguisher (route-distinguisher-type-0 | route-distinguisher-
        type-1 | route-distinguisher-type-2 | route-distinguisher-type-2b) prefix (ipv4-prefix | ipv6-
        prefix) neighbor (ipv4-address-with-zone | ipv6-address-with-zone) path-id number
      - attr-id reference
      - best-route boolean
      - group-best boolean
      - imported-ip-vrf-network-instances reference
      - internal-tags string
      - invalid-reason
        - as-loop boolean
        - cluster-loop boolean
        - fib-programming-failed boolean
        - label-allocation-failed boolean
        - next-hop-unresolved boolean
        - rejected-route boolean
      - last-modified string
      - neighbor-as number
      - pending-delete boolean
      - received-mpls-label (number | keyword)
      - stale-route boolean
      - tie-break-reason keyword
      - used-route boolean
      - valid-route boolean
    - rib-in-pre
      - route route-distinguisher (route-distinguisher-type-0 | route-distinguisher-
        type-1 | route-distinguisher-type-2 | route-distinguisher-type-2b) prefix (ipv4-prefix | ipv6-
        prefix) neighbor (ipv4-address-with-zone | ipv6-address-with-zone) path-id number
      - attr-id reference
      - imported-ip-vrf-network-instances reference
      - received-mpls-label (number | keyword)
    - rib-out-post
      - route route-distinguisher (route-distinguisher-type-0 | route-distinguisher-
        type-1 | route-distinguisher-type-2 | route-distinguisher-type-2b) prefix (ipv4-prefix | ipv6-
        prefix) neighbor (ipv4-address-with-zone | ipv6-address-with-zone) path-id number
      - advertised-mpls-label (number | keyword)

```

```

- attr-id reference
- l3vpn-ipv6-unicast
- local-rib
  - route route-distinguisher (route-distinguisher-type-0 | route-distinguisher-
type-1 | route-distinguisher-type-2 | route-distinguisher-type-2b) prefix (ipv4-prefix | ipv6-
prefix) neighbor (ipv4-address-with-zone | ipv6-address-with-zone) path-id number
  - attr-id reference
  - best-route boolean
  - group-best boolean
  - imported-ip-vrf-network-instances reference
  - invalid-reason
  - as-loop boolean
  - cluster-loop boolean
  - fib-programming-failed boolean
  - label-allocation-failed boolean
  - next-hop-unresolved boolean
  - rejected-route boolean
  - last-modified string
  - neighbor-as number
  - pending-delete boolean
  - received-mpls-label (number | keyword)
  - stale-route boolean
  - tie-break-reason keyword
  - used-route boolean
  - valid-route boolean
- rib-in-out
- rib-in-post
  - route route-distinguisher (route-distinguisher-type-0 | route-distinguisher-
type-1 | route-distinguisher-type-2 | route-distinguisher-type-2b) prefix (ipv4-prefix | ipv6-
prefix) neighbor (ipv4-address-with-zone | ipv6-address-with-zone) path-id number
  - attr-id reference
  - best-route boolean
  - group-best boolean
  - imported-ip-vrf-network-instances reference
  - internal-tags string
  - invalid-reason
  - as-loop boolean
  - cluster-loop boolean
  - fib-programming-failed boolean
  - label-allocation-failed boolean
  - next-hop-unresolved boolean
  - rejected-route boolean
  - last-modified string
  - neighbor-as number
  - pending-delete boolean
  - received-mpls-label (number | keyword)
  - stale-route boolean
  - tie-break-reason keyword
  - used-route boolean
  - valid-route boolean
- rib-in-pre
  - route route-distinguisher (route-distinguisher-type-0 | route-distinguisher-
type-1 | route-distinguisher-type-2 | route-distinguisher-type-2b) prefix (ipv4-prefix | ipv6-
prefix) neighbor (ipv4-address-with-zone | ipv6-address-with-zone) path-id number
  - attr-id reference
  - imported-ip-vrf-network-instances reference
  - received-mpls-label (number | keyword)
- rib-out-post
  - route route-distinguisher (route-distinguisher-type-0 | route-distinguisher-
type-1 | route-distinguisher-type-2 | route-distinguisher-type-2b) prefix (ipv4-prefix | ipv6-
prefix) neighbor (ipv4-address-with-zone | ipv6-address-with-zone) path-id number
  - advertised-mpls-label (number | keyword)
  - attr-id reference
- route-target

```

```

- rib-in-out
  - rib-in-post
    - route origin-as number route-target-prefix string neighbor (ipv4-address-
with-zone | ipv6-address-with-zone) path-id number
      - attr-id reference
      - best-route boolean
      - group-best boolean
      - internal-tags string
      - invalid-reason
        - as-loop boolean
        - cluster-loop boolean
        - fib-programming-failed boolean
        - label-allocation-failed boolean
        - next-hop-unresolved boolean
        - rejected-route boolean
      - last-modified string
      - neighbor-as number
      - pending-delete boolean
      - stale-route boolean
      - tie-break-reason keyword
      - used-route boolean
      - valid-route boolean
    - rib-in-pre
      - route origin-as number route-target-prefix string neighbor (ipv4-address-
with-zone | ipv6-address-with-zone) path-id number
        - attr-id reference
    - rib-out-post
      - route origin-as number route-target-prefix string neighbor (ipv4-address-
with-zone | ipv6-address-with-zone) path-id number
        - attr-id reference
- attr-sets
  - attr-set index number
  - aggregator
    - address (ipv4-address | ipv6-address)
    - as-number number
  - aigp number
  - as-path
    - segment as-path-index number
      - member number
      - type keyword
  - atomic-aggregate boolean
  - cluster-list (ipv4-address | ipv6-address)
  - communities
    - community string
    - ext-community string
    - large-community string
  - local-pref number
  - med number
  - next-hop (ipv4-address-with-zone | ipv6-address-with-zone)
  - origin keyword
  - originator-id (ipv4-address | ipv6-address)
  - pmsi-tunnel
    - flags
      - assisted-replication-type keyword
      - leaf-information-required boolean
      - pruned-flood-list
        - broadcast-multicast keyword
        - unknown-unicast keyword
    - label
      - value number
      - value-type keyword
  - tunnel-endpoint (ipv4-address | ipv6-address)
  - tunnel-type keyword
- prefix-sid

```

```

- tlv type identityref
- label-index
  - label-index number
- srgb-originator
  - srgb string
- unknown-attributes
  - unknown-attribute unknown-attr-index number
  - attr-len number
  - attr-type number
  - extended boolean
  - optional boolean
  - partial boolean
  - transitive boolean
+ bridge-table
+ discard-unknown-dest-mac boolean
+ mac-duplication
+ action keyword
+ admin-state keyword
- duplicate-entries
  - mac address string
  - destination string
  - destination-index number
  - destination-type keyword
  - dup-detect-time string
  - hold-down-time-remaining (keyword | number)
+ hold-down-time (keyword | number)
+ monitoring-window number
+ num-moves number
+ mac-learning
+ admin-state keyword
+ aging
  + admin-state keyword
  + age-time number
- learnt-entries
  - mac address string
  - aging (number | keyword)
  - destination string
  - last-update string
- mac-relearn-only boolean
- oper-mac-learning keyword
- oper-mac-learning-disabled-reason keyword
+ mac-limit
+ maximum-entries number
+ warning-threshold-pct number
- mac-table
  - mac address string
  - destination string
  - destination-index number
  - destination-type keyword
  - failed-slots number
  - is-protected boolean
  - last-update string
  - not-programmed-reason keyword
  - type keyword
+ protect-anycast-gw-mac boolean
+ proxy-arp
+ admin-state keyword
- duplicate-entries
  - neighbor ipv4-address string
  - detect-time string
  - hold-down-time-remaining (keyword | number)
  - is-immutable boolean
  - link-layer-address string
  - state keyword

```



```

- dynamic-entries
  - neighbor ipv4-address string
    - aging (number | keyword)
    - is-immutable boolean
    - last-update string
    - link-layer-address string
    - state keyword
+ dynamic-learning
+ admin-state keyword
+ age-time (keyword | number)
+ send-refresh (number | keyword)
+ evpn
+ flood
+ gratuitous-arp boolean
+ unknown-arp-req boolean
+ internal-tags
+ set-tag-set reference
- evpn-entries
  - neighbor ipv4-address string
    - is-immutable boolean
    - last-update string
    - link-layer-address string
    - state keyword
+ ip-duplication
+ anti-spoof-mac string
+ hold-down-time (keyword | number)
+ monitoring-window number
+ num-moves number
+ static-blackhole boolean
- oper-down-reason keyword
+ process-arp-probes boolean
+ static-entries
+ neighbor ipv4-address string
  - is-immutable boolean
  - last-update string
+ link-layer-address string
  - state keyword
- statistics
- active-entries number
- in-active-entries number
- neighbor-origin origin keyword
  - active-entries number
  - in-active-entries number
  - pending-entries number
  - total-entries number
- pending-entries number
- total-entries number
- table-entries
  - neighbor ipv4-address string
    - is-immutable boolean
    - last-update string
    - link-layer-address string
    - origin keyword
    - state keyword
+ table-size number
+ trace-options
+ flag name keyword
+ modifier keyword
+ proxy-nd
+ admin-state keyword
- duplicate-entries
  - neighbor ipv6-address string
    - detect-time string
    - evpn-override boolean

```

```

- hold-down-time-remaining (keyword | number)
- is-immutable boolean
- link-layer-address string
- state keyword
- type keyword
- dynamic-entries
- neighbor ipv6-address string
- aging (number | keyword)
- evpn-override boolean
- is-immutable boolean
- last-update string
- link-layer-address string
- state keyword
- type keyword
+ dynamic-learning
+ admin-state keyword
+ age-time (keyword | number)
+ send-refresh (number | keyword)
+ evpn
+ advertise-neighbor-type keyword
+ flood
+ unknown-neighbor-advertise-host boolean
+ unknown-neighbor-advertise-router boolean
+ unknown-neighbor-solicitation boolean
+ internal-tags
+ set-tag-set reference
- evpn-entries
- neighbor ipv6-address string
- evpn-override boolean
- is-immutable boolean
- last-update string
- link-layer-address string
- state keyword
- type keyword
+ ip-duplication
+ anti-spoof-mac string
+ hold-down-time (keyword | number)
+ monitoring-window number
+ num-moves number
+ static-blackhole boolean
- oper-down-reason keyword
+ process-dad-neighbor-solicitations boolean
+ static-entries
+ neighbor ipv6-address string
- evpn-override boolean
- is-immutable boolean
- last-update string
+ link-layer-address string
- state keyword
+ type keyword
- statistics
- active-entries number
- in-active-entries number
- neighbor-origin origin keyword
- active-entries number
- in-active-entries number
- pending-entries number
- total-entries number
- pending-entries number
- total-entries number
- table-entries
- neighbor ipv6-address string
- evpn-override boolean
- is-immutable boolean

```

```

    - last-update string
    - link-layer-address string
    - origin keyword
    - state keyword
    - type keyword
+ table-size number
+ trace-options
  + flag name keyword
  + modifier keyword
- reserved-macs
  - mac address string
  - users application string
+ static-mac
  + mac address string
  + destination (keyword | subinterface-all | name)
- statistics
  - active-entries number
  - failed-entries number
  - mac-type type keyword
    - active-entries number
    - failed-entries number
    - total-entries number
  - total-entries number
+ description string
- icmp
  - statistics
    - last-clear string
    - total
      - in-error-packets number
      - in-packets number
      - out-error-packets number
      - out-packets number
    - type name keyword
      - in-packets number
      - out-error-packets number
      - out-packets number
- icmp6
  - statistics
    - last-clear string
    - total
      - in-error-packets number
      - in-packets number
      - out-error-packets number
      - out-packets number
    - type name keyword
      - in-packets number
      - out-error-packets number
      - out-packets number
+ inter-instance-policies
  + apply-policy
    + export-policy reference
    + import-policy reference
+ interface name string
+ bridge-table
  - mac-relearn-only boolean
  - multicast-forwarding keyword
  - oper-mac-learning keyword
  - oper-mac-learning-disabled-reason keyword
- index number
+ interface-ref
  + interface reference
  + subinterface reference
- oper-down-reason keyword
- oper-state keyword

```

```

+ ip-forwarding
+ last-resort-lookup
+   network-instance reference
+ receive-ipv4-check boolean
+ receive-ipv6-check boolean
+ ip-load-balancing
+ resilient-hash-prefix ip-prefix (ipv4-prefix | ipv6-prefix)
+   hash-buckets-per-path number
+   max-paths number
+ ip-tunnel-decapsulation
+ group name string
+ allowed-payloads keyword
+ termination-subnet ip-prefix (ipv4-prefix | ipv6-prefix)
+ maintenance-policies
+ policy maintenance-policy-name string
+ revert-timer (number | keyword)
+ seamless-bfd
+   desired-minimum-transmit-interval number
+   detection-multiplier number
+   hold-down-timer (number | keyword)
+   mode keyword
+   return-path-label number
+   threshold number
+   wait-for-up-timer number
+ mpls
+ icmp-tunneling boolean
+ static-entry top-label number preference number
+ admin-state keyword
+ collect-stats boolean
- installed boolean
+ next-hop-group reference
+ operation keyword
- resolved-next-hop-group-id reference
+ static-label-block reference
- static-label-block-status keyword
+ mpls-forwarding
+ forward-received-packets boolean
+ mtu
+ path-mtu-discovery boolean
- multicast-forwarding-information-base
- multicast-route source (ipv4-address | ipv6-address) group (ipv4-address | ipv6-address)
- last-update string
- outgoing-interface index number
-   forward boolean
- outgoing-next-hop-group index number
-   forward boolean
+ next-hop-groups
+ group name string
+ admin-state keyword
+ blackhole
+ generate-icmp boolean
+ nexthop index number
+ admin-state keyword
+ encapsulate-header keyword
+ failure-detection
+ enable-bfd
+   local-address (ipv4-address | ipv6-address)
+   local-discriminator number
+   remote-discriminator number
+ gre
+ destination-ip (ipv4-address-unicast | ipv6-address-unicast)
+ source-ip (ipv4-address-unicast | ipv6-address-unicast)
+ ip-address (ipv4-address-with-zone | ipv6-address-with-zone)
+ pushed-mpls-label-stack (number | keyword)

```

```

    + resolve boolean
  - oper-down-reason keyword
  - oper-mac-vrf-mtu number
  - oper-state keyword
+ policy-forwarding
+ interface subinterface string
  + apply-forwarding-policy reference
  + interface-ref
    + interface reference
    + subinterface reference
+ policy policy-id string
  + description string
  + rule sequence-id number
  + action
    + encapsulate-gre
      + target id string
      + destination (ipv4-prefix | ipv6-prefix)
      + ip-ttl number
      + source (ipv4-address | ipv6-address)
    + network-instance reference
  + description string
+ match
  + ipv4
    + destination-ip
      + prefix string
    + dscp-set (number | keyword)
    + protocol (number | keyword)
    + source-ip
      + prefix string
  + ipv6
    + dscp-set (number | keyword)
    + next-header (number | keyword)
    + source-ip
      + prefix string
  - tcam-entries
    - forwarding-complex complex-identifier string
    - tcam-entries number
+ type keyword
+ protocols
+ bgp
  + admin-state keyword
  + afi-safi afi-safi-name identityref
  - active-routes number
  + add-paths
    + receive boolean
    + send boolean
    + send-max number
    + send-multipath
  + admin-state keyword
+ evpn
  + advertise-ipv6-next-hops boolean
  + default-received-encapsulation keyword
  + inter-as-vpn boolean
  + keep-all-routes boolean
  + next-hop-resolution
    + ipv4-next-hops
      + route-resolution
        + admin-state keyword
        + ignore-default-routes boolean
    + tunnel-resolution
      + allowed-tunnel-types identityref
      + color-aware
  + ipv6-next-hops
    + route-resolution

```

```

    + admin-state keyword
    + ignore-default-routes boolean
  + tunnel-resolution
    + allowed-tunnel-types identityref
    + color-aware
+ next-hop-self-route-reflector boolean
+ rapid-update boolean
+ export-policy reference
+ import-policy reference
+ ipv4-labeled-unicast
+ advertise-ipv6-next-hops boolean
+ backup-paths
  + install boolean
+ convergence
  - converged-peers number
  - convergence-state keyword
  - convergence-time number
  - first-up-peer-time number
  - last-up-peer-time number
  + max-wait-to-advertise number
  - oper-max-wait-to-advertise number
  - up-peers number
  - up-peers-when-min-expired number
+ next-hop-resolution
  + ipv4-next-hops
    + route-resolution
      + admin-state keyword
      + ignore-default-routes boolean
    + tunnel-resolution
      + allowed-tunnel-types identityref
      + color-aware
  + ipv6-next-hops
    + route-resolution
      + admin-state keyword
      + ignore-default-routes boolean
    + tunnel-resolution
      + allowed-tunnel-types identityref
      + color-aware
+ rapid-update boolean
+ receive-ipv6-next-hops boolean
+ ipv4-unicast
+ advertise-ipv6-next-hops boolean
+ convergence
  - converged-peers number
  - convergence-state keyword
  - convergence-time number
  - first-up-peer-time number
  - last-up-peer-time number
  + max-wait-to-advertise number
  - oper-max-wait-to-advertise number
  - up-peers number
  - up-peers-when-min-expired number
+ next-hop-resolution
  + ipv4-next-hops
    + tunnel-resolution
      + allowed-tunnel-types identityref
      + color-aware
      + mode keyword
  + ipv6-next-hops
    + tunnel-resolution
      + allowed-tunnel-types identityref
      + color-aware
      + mode keyword
+ receive-ipv6-next-hops boolean

```

```

+ ipv6-labeled-unicast
+ backup-paths
+ install boolean
+ convergence
- converged-peers number
- convergence-state keyword
- convergence-time number
- first-up-peer-time number
- last-up-peer-time number
+ max-wait-to-advertise number
- oper-max-wait-to-advertise number
- up-peers number
- up-peers-when-min-expired number
+ next-hop-resolution
+ ipv4-next-hops
+ route-resolution
+ admin-state keyword
+ ignore-default-routes boolean
+ tunnel-resolution
+ allowed-tunnel-types identityref
+ color-aware
+ ipv6-next-hops
+ route-resolution
+ admin-state keyword
+ ignore-default-routes boolean
+ tunnel-resolution
+ allowed-tunnel-types identityref
+ color-aware
+ rapid-update boolean
+ ipv6-unicast
+ convergence
- converged-peers number
- convergence-state keyword
- convergence-time number
- first-up-peer-time number
- last-up-peer-time number
+ max-wait-to-advertise number
- oper-max-wait-to-advertise number
- up-peers number
- up-peers-when-min-expired number
+ next-hop-resolution
+ ipv4-next-hops
+ tunnel-resolution
+ allowed-tunnel-types identityref
+ color-aware
+ mode keyword
+ ipv6-next-hops
+ tunnel-resolution
+ allowed-tunnel-types identityref
+ color-aware
+ mode keyword
+ l3vpn-ipv4-unicast
+ advertise-ipv6-next-hops boolean
+ convergence
- converged-peers number
- convergence-state keyword
- convergence-time number
- first-up-peer-time number
- last-up-peer-time number
+ max-wait-to-advertise number
- oper-max-wait-to-advertise number
- up-peers number
- up-peers-when-min-expired number
+ inter-as-vpn boolean

```

```

+ keep-all-routes boolean
+ next-hop-self-route-reflector boolean
+ rapid-update boolean
+ receive-ipv6-next-hops boolean
+ l3vpn-ipv6-unicast
+ convergence
- converged-peers number
- convergence-state keyword
- convergence-time number
- first-up-peer-time number
- last-up-peer-time number
+ max-wait-to-advertise number
- oper-max-wait-to-advertise number
- up-peers number
- up-peers-when-min-expired number
+ inter-as-vpn boolean
+ keep-all-routes boolean
+ next-hop-self-route-reflector boolean
+ rapid-update boolean
+ multipath
+ allow-multiple-as boolean
+ maximum-paths number
- received-routes number
+ as-path-options
+ allow-own-as number
+ remove-private-as
+ ignore-peer-as boolean
+ leading-only boolean
+ mode keyword
+ authentication
+ keychain reference
+ password string
+ autonomous-system number
+ best-path-selection
+ advertise-inactive boolean
+ always-compare-med boolean
+ bgp-label
+ bgp-ipvpn
+ next-hop-resolution
+ ipv4-next-hops
+ route-resolution
+ admin-state keyword
+ ignore-default-routes boolean
+ tunnel-resolution
+ allowed-tunnel-types identityref
+ color-aware
+ ipv6-next-hops
+ route-resolution
+ admin-state keyword
+ ignore-default-routes boolean
+ tunnel-resolution
+ allowed-tunnel-types identityref
+ color-aware
+ bgp-vpn
+ dynamic-label-block reference
- dynamic-label-block-status keyword
+ convergence
+ min-wait-to-advertise number
+ dynamic-neighbors
+ accept
+ match prefix (ipv4-prefix | ipv6-prefix)
+ allowed-peer-as string
+ peer-group reference
+ max-sessions number

```



```

+ interface interface-name string
  + allowed-peer-as string
  + max-sessions number
  + peer-group reference
+ ebgp-default-policy
  + export-reject-all boolean
  + import-reject-all boolean
+ export-policy reference
+ failure-detection
  + enable-bfd boolean
  + fast-failover boolean
+ graceful-restart
  + admin-state keyword
  + requested-restart-time number
  + stale-routes-time number
+ group group-name string
  + admin-state keyword
  + afi-safi afi-safi-name identityref
  + add-paths
    + receive boolean
    + send boolean
    + send-max number
    + send-multipath
  + admin-state keyword
+ evpn
  + advertise-ipv6-next-hops boolean
  + default-received-encapsulation keyword
  + prefix-limit-received
    + max-received-routes number
    + warning-threshold-pct number
+ export-policy reference
+ import-policy reference
+ ipv4-labeled-unicast
  + advertise-ipv6-next-hops boolean
  + receive-ipv6-next-hops boolean
+ ipv4-unicast
  + advertise-ipv6-next-hops boolean
  + link-bandwidth
    + add-next-hop-count-to-received-bgp-routes (number | keyword)
  + prefix-limit-received
    + max-received-routes number
    + prevent-teardown boolean
    + warning-threshold-pct number
  + receive-ipv6-next-hops boolean
+ ipv6-labeled-unicast
+ ipv6-unicast
  + link-bandwidth
    + add-next-hop-count-to-received-bgp-routes (number | keyword)
  + prefix-limit-received
    + max-received-routes number
    + prevent-teardown boolean
    + warning-threshold-pct number
+ l3vpn-ipv4-unicast
  + advertise-ipv6-next-hops boolean
  + prefix-limit-received
    + max-received-routes number
    + prevent-teardown boolean
    + warning-threshold-pct number
  + receive-ipv6-next-hops boolean
+ l3vpn-ipv6-unicast
  + prefix-limit-received
    + max-received-routes number
    + prevent-teardown boolean
    + warning-threshold-pct number

```

```

+ route-target
+ prefix-limit-received
+   max-received-routes number
+   prevent-teardown boolean
+   warning-threshold-pct number
+ send-default-route boolean
+ as-path-options
+ allow-own-as number
+ remove-private-as
+   ignore-peer-as boolean
+   leading-only boolean
+   mode keyword
+ replace-peer-as boolean
+ authentication
+ keychain reference
+ password string
+ description string
+ export-policy reference
+ failure-detection
+   enable-bfd boolean
+   fast-failover boolean
+ graceful-restart
+   admin-state keyword
+   requested-restart-time number
+   stale-routes-time number
+ import-policy reference
+ local-as
+   as-number number
+   prepend-global-as boolean
+   prepend-local-as boolean
+ local-preference number
- maintenance-group string
+ multihop
+   admin-state keyword
+   maximum-hops number
+ next-hop-self boolean
+ optional-attributes
+   block-prefix-sid boolean
+ peer-as number
+ route-reflector
+   client boolean
+   cluster-id (number | dotted-quad)
+ send-community
+   large boolean
+   standard boolean
+ send-default-route
+   export-policy reference
+   ipv4-unicast boolean
+   ipv6-unicast boolean
- statistics
-   disabled-peers number
-   dynamic-peers number
-   path-memory number
-   total-active-routes number
-   total-paths number
-   total-peers number
-   total-prefixes number
-   total-received-routes number
-   up-peers number
+ timers
+ connect-retry number
+ hold-time number
+ keepalive-interval number
+ minimum-advertisement-interval number

```

```

+ prefix-limit-restart-timer number
+ trace-options
+ flag name keyword
+ modifier keyword
+ transport
+ local-address (ipv4-address | ipv6-address | subinterface-all)
+ mtu-discovery boolean
+ passive-mode boolean
+ tcp-mss number
- under-maintenance boolean
+ import-policy reference
+ local-preference number
- maintenance-group string
+ max-ecmp-hash-buckets-per-next-hop-group number
+ neighbor peer-address (ipv4-address-with-zone | ipv6-address-with-zone)
+ admin-state keyword
- advertised-capabilities keyword
+ afi-safi afi-safi-name identityref
- active-routes number
+ add-paths
+ receive boolean
+ send boolean
+ send-max number
+ send-multipath
+ admin-state keyword
+ evpn
+ advertise-ipv6-next-hops boolean
+ default-received-encapsulation keyword
+ prefix-limit-received
+ max-received-routes number
+ warning-threshold-pct number
+ export-policy reference
+ import-policy reference
+ ipv4-labeled-unicast
+ advertise-ipv6-next-hops boolean
+ receive-ipv6-next-hops boolean
+ ipv4-unicast
+ advertise-ipv6-next-hops boolean
+ link-bandwidth
+ add-next-hop-count-to-received-bgp-routes (number | keyword)
+ prefix-limit-received
+ max-received-routes number
- prefix-limit-exceeded boolean
+ prevent-teardown boolean
+ warning-threshold-pct number
+ receive-ipv6-next-hops boolean
+ ipv6-labeled-unicast
+ ipv6-unicast
+ link-bandwidth
+ add-next-hop-count-to-received-bgp-routes (number | keyword)
+ prefix-limit-received
+ max-received-routes number
- prefix-limit-exceeded boolean
+ prevent-teardown boolean
+ warning-threshold-pct number
+ l3vpn-ipv4-unicast
+ advertise-ipv6-next-hops boolean
+ prefix-limit-received
+ max-received-routes number
- prefix-limit-exceeded boolean
+ prevent-teardown boolean
+ warning-threshold-pct number
+ receive-ipv6-next-hops boolean
+ l3vpn-ipv6-unicast

```

```

+ prefix-limit-received
+ max-received-routes number
- prefix-limit-exceeded boolean
+ prevent-teardown boolean
+ warning-threshold-pct number
- oper-state keyword
- received-routes number
- received-routes-withdrawn-due-to-error number
- rejected-routes number
+ route-target
+ prefix-limit-received
+ max-received-routes number
- prefix-limit-exceeded boolean
+ prevent-teardown boolean
+ warning-threshold-pct number
+ send-default-route boolean
- sent-routes number
+ as-path-options
+ allow-own-as number
+ remove-private-as
+ ignore-peer-as boolean
+ leading-only boolean
+ mode keyword
+ replace-peer-as boolean
+ authentication
+ keychain reference
+ password string
- transmit-active boolean
+ description string
- discovered-by-lldp boolean
- dynamic-neighbor boolean
- established-transitions number
+ export-policy reference
+ failure-detection
+ enable-bfd boolean
+ fast-failover boolean
+ graceful-restart
+ admin-state keyword
- helper-active boolean
- last-restart-time string
- neighbor-capability
- afi-safi name identityref
- forwarding-preserved boolean
- restart-time number
- number-of-restarts number
+ requested-restart-time number
+ stale-routes-time number
+ import-policy reference
- last-established string
- last-event keyword
- last-state keyword
+ local-as
+ as-number number
+ prepend-global-as boolean
+ prepend-local-as boolean
+ local-preference number
- maintenance-group string
+ multihop
+ admin-state keyword
+ maximum-hops number
+ next-hop-self boolean
+ optional-attributes
+ block-prefix-sid boolean
+ peer-as number

```

```

+ peer-group reference
- peer-router-id string
- peer-type keyword
- received-afi-safi identityref
- received-capabilities keyword
- received-end-of-rib identityref
- received-messages
  - last-notification-error-code keyword
  - last-notification-error-subcode keyword
  - last-notification-time string
  - last-update-time string
  - malformed-updates number
  - queue-depth number
  - route-refresh number
  - total-messages number
  - total-non-updates number
  - total-notifications number
  - total-updates number
+ route-reflector
+ client boolean
+ cluster-id (number | dotted-quad)
+ send-community
+ large boolean
+ standard boolean
+ send-default-route
+ export-policy reference
+ ipv4-unicast boolean
+ ipv6-unicast boolean
- sent-end-of-rib identityref
- sent-messages
  - last-notification-error-code keyword
  - last-notification-error-subcode keyword
  - last-notification-time string
  - queue-depth number
  - route-refresh number
  - total-messages number
  - total-non-updates number
  - total-notifications number
  - total-updates number
- session-state keyword
- slow-peer keyword
+ timers
+ connect-retry number
+ hold-time number
+ keepalive-interval number
+ minimum-advertisement-interval number
- negotiated-hold-time number
- negotiated-keepalive-interval number
- next-connect-retry-time string
+ prefix-limit-restart-timer number
+ trace-options
+ flag name keyword
+ modifier keyword
+ transport
+ local-address (ipv4-address | ipv6-address | subinterface-all)
- local-port number
+ mtu-discovery boolean
+ passive-mode boolean
- remote-port number
+ tcp-mss number
- under-maintenance boolean
- oper-state keyword
+ preference
+ ebgp number

```

```

+ ibgp number
+ rib-management
+ table address-family identityref
+ route-table-import reference
+ route-advertisement
+ rapid-withdrawal boolean
+ wait-for-fib-install boolean
+ route-reflector
+ client boolean
+ cluster-id (number | dotted-quad)
+ router-id (ipv4-address | ipv6-address)
+ segment-routing-mpls
+ admin-state keyword
+ send-community
+ large boolean
+ standard boolean
- statistics
- disabled-peers number
- dynamic-peers number
- path-memory number
- total-active-routes number
- total-paths number
- total-peers number
- total-prefixes number
- total-received-routes number
- up-peers number
+ trace-options
+ flag name keyword
+ modifier keyword
+ transport
+ mtu-discovery boolean
+ single-hop-connected-check boolean
+ tcp-mss number
- under-maintenance boolean
+ bgp-evpn
+ bgp-instance id reference
+ admin-state keyword
+ ecmp number
+ encapsulation-type keyword
+ evi number
+ internal-tags
+ set-tag-set reference
+ mpls
+ bridge-table
- ingress-multicast-mpls-label number
- ingress-unicast-mpls-label number
- multicast-destinations
- destination tep (ipv4-address | ipv6-address) evi-label number tunnel-
id number
- destination-index number
- multicast-forwarding keyword
- not-programmed-reason keyword
- multicast-limit
- current-usage number
- maximum-entries number
+ split-horizon-group reference
- statistics
- active-entries number
- failed-entries number
- mac-type type keyword
- active-entries number
- failed-entries number
- total-entries number
- total-entries number

```

```

- unicast-destinations
- destination tep (ipv4-address | ipv6-address) evi-label number tunnel-
id number
- destination-index number
- mac-table
- mac address string
- failed-slots number
- last-update string
- not-programmed-reason keyword
- type keyword
- not-programmed-reason keyword
- statistics
- active-entries number
- failed-entries number
- mac-type type keyword
- active-entries number
- failed-entries number
- total-entries number
- total-entries number
- es-destination esi string
- destination tep (ipv4-address | ipv6-address) evi-label number tunnel-
id number
- destination-index number
- mac-table
- mac address string
- failed-slots number
- last-update string
- not-programmed-reason keyword
- type keyword
- statistics
- active-entries number
- failed-entries number
- mac-type type keyword
- active-entries number
- failed-entries number
- total-entries number
- total-entries number
+ control-word boolean
+ flow-label boolean
+ next-hop-resolution
+ allowed-tunnel-types identityref
+ color-aware
+ route-table
- ingress-mpls-label number
- oper-down-reason keyword
- oper-state keyword
+ routes
+ bridge-table
+ inclusive-mcast
+ advertise boolean
+ originating-ip (ipv4-address | ipv6-address)
+ mac-ip
+ advertise boolean
+ advertise-arp-nd-extended-community boolean
+ advertise-arp-nd-only-with-mac-table-entry boolean
+ next-hop (keyword | ipv4-address | ipv6-address)
+ vlan-aware-bundle-eth-tag number
+ route-table
+ ip-prefix
+ evpn-link-bandwidth
+ advertise
+ maximum-dynamic-weight number
+ weight (number | keyword)
+ weighted-ecmp

```

```

        + admin-state keyword
        + max-ecmp-hash-buckets-per-next-hop-group number
    + mac-ip
        + advertise-gateway-mac boolean
    + vxlan-interface reference
+ bgp-ipvpn
+ bgp-instance id reference
+ admin-state keyword
+ ecmp number
+ encapsulation-type keyword
+ mpls
  - ingress-mpls-label number
  + next-hop-resolution
    + allowed-tunnel-types identityref
    + color-aware
  - oper-down-reason keyword
  - oper-state keyword
+ bgp-vpn
+ backup-paths
  + ipv4-unicast
    + install boolean
  + ipv6-unicast
    + install boolean
+ bgp-instance id number
+ export-policy reference
+ import-policy reference
- oper-down-reason keyword
+ route-distinguisher
  + rd (route-distinguisher-type-0 | route-distinguisher-type-1 | route-
distinguisher-type-2 | route-distinguisher-type-2b)
  - route-distinguisher-origin keyword
+ route-target
  - export-route-target-origin keyword
  + export-rt (string | string | string | string | string | string | string |
string)
  - import-route-target-origin keyword
  + import-rt (string | string | string | string | string | string | string |
string)
+ combined-ecmp
+ gribi
+ admin-state keyword
+ default-metric number
+ default-preference number
+ max-ecmp-hash-buckets-per-next-hop-group number
+ maximum-routes number
- oper-state keyword
+ igmp-snooping
+ admin-state keyword
+ interface interface-name string
  + fast-leave boolean
  + import-policy reference
  - is-mrouter-port boolean
  + maximum-number-group-sources number
  + maximum-number-groups number
  + maximum-number-sources number
  - membership-group-count number
  - membership-groups
    - group group string
      - expiry-time number
      - filter-mode keyword
      - group-type keyword
      - igmp-compatibility-mode keyword
      - source source string
        - expiry-time number

```



```

- forwarding-state keyword
- source-type keyword
- up-time string
- up-time string
- v1-host-timer number
- v2-host-timer number
+ mrouter-port boolean
+ query-interval number
+ query-last-member-interval number
+ query-response-interval number
+ robust-count number
+ router-alert-check boolean
+ send-queries boolean
+ static-membership-groups
+ group group string
+ source source string
+ starg
- statistics
- error
- bad-encoding number
- bad-igmp-checksum number
- bad-length number
- discarded-bgp-join-sync number
- discarded-bgp-leave-sync number
- import-policy-drops number
- local-scope number
- missing-router-alert number
- out-of-memory-discarded-packets number
- reached-maximum-number-group-sources number
- reached-maximum-number-groups number
- reached-maximum-number-sources number
- send-query-configured-discarded-packets number
- unknown-type number
- wrong-version number
- zero-source-ip-address number
- forwarded
- error-packets number
- general-queries number
- group-queries number
- group-source-queries number
- leave-messages number
- unknown-type number
- v1-reports number
- v2-reports number
- v3-reports number
- multicast-states
- source-group-entries number
- star-group-entries number
- received
- bgp-join-sync number
- bgp-leave-sync number
- discarded-packets number
- general-queries number
- group-queries number
- group-source-queries number
- leave-messages number
- v1-reports number
- v2-reports number
- v3-reports number
- transmitted
- bgp-join-sync number
- bgp-leave-sync number
- error-packets number
- general-queries number

```

```

    - group-queries number
    - group-source-queries number
    - leave-messages number
    - v1-reports number
    - v2-reports number
    - v3-reports number
+ version number
- multicast-routers address string
  - expiry-time number
  - igmp-v3-states
    - general-query-interval number
    - general-response-interval number
    - robust-count number
  - interface string
  - up-time string
  - version number
- oper-state keyword
- proxy-evpn-membership-group-count number
- proxy-evpn-membership-groups
  - group group string
    - filter-mode keyword
    - source source string
    - up-time string
    - up-time string
    - v1-support boolean
    - v2-support boolean
    - v3-support boolean
- proxy-membership-group-count number
- proxy-membership-groups
  - group group string
    - filter-mode keyword
    - source source string
    - up-time string
    - up-time string
- querier
  - address string
  - expiry-time number
  - igmp-v3-states
    - general-query-interval number
    - general-response-interval number
    - robust-count number
  - interface string
  - up-time string
  - version number
+ query-interval number
+ query-source-address string
+ report-source-address string
+ robust-count number
+ trace-options
+ trace
  + packet
    + interface interface-name string
    + modifier keyword
    + source-mac source-mac string
- transmitted-bgp-smet-routes number
- vxlan-destination vtep (ipv4-address | ipv6-address) vni number
  - index number
  - is-evpn-proxy boolean
  - is-mrouter-port boolean
  - is-sbd boolean
  - membership-group-count number
  - membership-groups
    - group group string
    - expiry-time number

```

```

- filter-mode keyword
- group-type keyword
- igmp-compatibility-mode keyword
- source source string
  - expiry-time number
  - forwarding-state keyword
  - source-type keyword
  - up-time string
- up-time string
- v1-host-timer number
- v2-host-timer number
- statistics
  - discarded-smet number
  - received-smet number
+ isis
+ dynamic-label-block reference
- dynamic-label-block-status keyword
+ instance name string
+ admin-state keyword
+ attached-bit
+ ignore boolean
+ suppress boolean
+ authentication
+ csnp-authentication
  + check-received keyword
  + generate boolean
+ hello-authentication
  + check-received keyword
  + generate boolean
+ key
  + auth-password string
  + crypto-algorithm keyword
+ keychain reference
+ lsp-authentication
  + check-received keyword
  + generate boolean
+ psnp-authentication
  + check-received keyword
  + generate boolean
+ auto-cost
+ reference-bandwidth number
+ enable-csnp-on-p2p-links boolean
+ export-policy reference
+ graceful-restart
  + acceptable-duration number
  + helper-mode boolean
+ hello-padding keyword
- hostnames
  - system-id host-system-id string
  - hostname string
+ iid-tlv boolean
+ instance-id number
+ inter-level-propagation-policies
+ level1-to-level2
  + summary-address ip-prefix (ipv4-prefix | ipv6-prefix)
  + route-tag number
+ interface interface-name string
  - adjacency neighbor-system-id string adjacency-level string
  - area-address string
  - designated-is-system-id string
  - down-reason keyword
  - last-up-down-transition string
  - local-extended-circuit-id number
  - neighbor-circuit-type keyword

```

```

- neighbor-extended-circuit-id number
- neighbor-hostname string
- neighbor-ipv4 string
- neighbor-ipv6 string
- neighbor-last-restart (keyword | date-and-time-delta)
- neighbor-priority number
- neighbor-restart-capable boolean
- neighbor-restart-status keyword
- neighbor-restarts number
- neighbor-snpa string
- nlpid keyword
- remaining-holdtime number
- state keyword
- up-down-transitions number
+ admin-state keyword
+ authentication
+ hello-authentication
+   check-received keyword
+   generate boolean
+ key
+   auth-password string
+   crypto-algorithm keyword
+ keychain reference
- circuit-id number
+ circuit-type keyword
+ delay
+   delay-selection keyword
+   unidirectional-minimum-link-delay number
+ hello-padding keyword
+ interface-ref
+   interface reference
+   subinterface reference
+ ipv4-unicast
+   admin-state keyword
+   enable-bfd boolean
+   include-bfd-tlv boolean
+ ipv6-unicast
+   admin-state keyword
+   enable-bfd boolean
+   include-bfd-tlv boolean
+ ldp-synchronization
+   disable
-   duration number
+   end-of-lib boolean
+   hold-down-timer number
-   sync-state keyword
+ level level-number number
+ authentication
+   hello-authentication
+     check-received keyword
+     generate boolean
+   key
+     auth-password string
+     crypto-algorithm keyword
+   keychain reference
+ disable boolean
+ ipv6-unicast-metric number
+ metric number
+ passive boolean
+ priority number
- statistics
-   pdu pdu-name keyword
-   dropped number
-   processed number

```

```

    - received number
    - sent number
  + timers
    + hello-interval number
    + hello-multiplier number
+ loopfree-alternate-exclude boolean
- oper-state keyword
+ passive boolean
+ segment-routing
+ mpls
  + ipv4-adjacency-sid
    + assignment keyword
    - programmed-sids label-value number
      - adjacency-level keyword
      - neighbor-system-id string
    + static number
  + ipv4-node-sid
    + index number
  + ipv6-adjacency-sid
    + assignment keyword
    - programmed-sids label-value number
      - adjacency-level keyword
      - neighbor-system-id string
    + static number
  + ipv6-node-sid
    + index number
- statistics
  - adjacency-changes number
  - adjacency-number number
  - area-address-mismatches number
  - authentication-failures number
  - authentication-type-failures number
  - designated-is-changes number
  - max-area-address-mismatches number
  - rejected-adjacencies number
  - system-id-length-mismatches number
+ timers
  + csnp-interval number
  + lsp-pacing-interval number
+ trace-options
  + trace keyword
+ weighted-ecmp
  + load-balancing-weight (number | keyword)
+ ipv4-unicast
  + admin-state keyword
+ ipv6-unicast
  + admin-state keyword
  + multi-topology boolean
+ ldp-synchronization
  + end-of-lib boolean
  + hold-down-timer number
+ level level-number number
+ authentication
  + csnp-authentication
    + check-received keyword
    + generate boolean
  + hello-authentication
    + check-received keyword
    + generate boolean
  + key
    + auth-password string
    + crypto-algorithm keyword
  + keychain reference
  + lsp-authentication

```

```

+ check-received keyword
+ generate boolean
+ psnp-authentication
+ check-received keyword
+ generate boolean
- Link-state-database
- lsp lsp-id string
- checksum number
- flags keyword
- id-length number
- is-type number
- maximum-area-addresses number
- pdu-length number
- pdu-type keyword
- remaining-lifetime number
- sequence-number number
- tlvs
- tlv type identityref
- area-address
- address string
- authentication
- authentication-key string
- crypto-type keyword
- extended-ipv4-reachability
- prefixes
- prefix prefix string
- metric number
- s-bit boolean
- subtlvs
- subtlv type identityref
- flags
- flags keyword
- type identityref
- ipv4-source-router-id
- router-id string
- type identityref
- ipv6-source-router-id
- router-id string
- type identityref
- prefix-sids
- prefix-sid value number
- algorithm number
- flags keyword
- tag
- tag32 number
- tag64
- tag64 number
- undefined-subtlvs
- undefined-subtlv type number
- length number
- value binary
- up-down boolean
- extended-is-reachability
- neighbors
- neighbor system-id string
- instances
- instance id number
- metric number
- subtlvs
- subtlv type identityref
- adjacency-sids
- adjacency-sid value number
- flags keyword
- weight number

```

- **admin-group**
 - **admin-group** *number*
- **application-specific-link-attributes**
 - **legacy** *boolean*
 - **loop-free-alternate** *boolean*
 - **rsvp-te** *boolean*
 - **sr-policy** *boolean*
 - **sub-sub-tlvs**
 - **admin-group** *number*
 - **maximum-link-bandwidth** *number*
 - **min-max-unidirectional-link-delay**
 - **anomalous** *boolean*
 - **max-delay** *number*
 - **min-delay** *number*
 - **te-default-metric** *number*
- **available-bandwidth**
 - **bandwidth** *binary*
 - **type** *identityref*
- **bandwidth-constraints**
 - **bandwidth-constraint** *model-id* *number*
 - **constraints**
 - **constraint** *constraint-id* *number*
 - **bandwidth** *binary*
- **extended-admin-group**
 - **extended-admin-group** *number*
- **ipv4-interface-address**
 - **address** *string*
- **ipv4-neighbor-address**
 - **address** *string*
- **ipv6-interface-address**
 - **address** *string*
- **ipv6-neighbor-address**
 - **address** *string*
- **lan-adjacency-sids**
 - **lan-adjacency-sid** *value* *number*
 - **flags** *keyword*
 - **neighbor-id** *string*
 - **weight** *number*
- **link-attributes**
 - **local-protection** *keyword*
- **link-delay**
 - **a-bit** *boolean*
 - **delay** *number*
- **link-delay-variation**
 - **delay** *number*
- **link-id**
 - **local** *number*
 - **remote** *number*
- **link-loss**
 - **a-bit** *boolean*
 - **link-loss** *number*
- **link-protection-type**
 - **type** *keyword*
- **max-link-bandwidth**
 - **bandwidth** *binary*
- **max-reservable-link-bandwidth**
 - **bandwidth** *binary*
- **min-max-link-delay**
 - **a-bit** *boolean*
 - **max-delay** *number*
 - **min-delay** *number*
- **residual-bandwidth**
 - **bandwidth** *binary*
- **te-default-metric**

```

- metric number
- unconstrained-lsp
- count number
- type identityref
- unreserved-bandwidth
- setup-priority priority number
  - bandwidth binary
- utilized-bandwidth
- bandwidth binary
- type identityref
- undefined-subtlvs
- undefined-subtlv type number
  - length number
  - value binary
- hostname
- hostname string
- instance-ids
- instance-id instance-id number
  - topology-id number
- ipv4-external-reachability
- prefixes
- prefix prefix string
- default-metric
- flags keyword
- metric number
- delay-metric
- flags keyword
- metric number
- error-metric
- flags keyword
- metric number
- expense-metric
- flags keyword
- metric number
- up-down boolean
- ipv4-interface-addresses
- address string
- ipv4-internal-reachability
- prefixes
- prefix prefix string
- default-metric
- flags keyword
- metric number
- delay-metric
- flags keyword
- metric number
- error-metric
- flags keyword
- metric number
- expense-metric
- flags keyword
- metric number
- up-down boolean
- ipv4-srlgs
- ipv4-srlg instance-number number
- flags keyword
- ipv4-interface-address string
- ipv4-neighbor-address string
- psn-number number
- srlg-value number
- system-id string
- ipv4-te-router-id
- router-id string
- ipv6-interface-addresses

```



```

- address string
- ipv6-reachability
- prefixes
  - prefix prefix string
  - metric number
  - s-bit boolean
  - subtlvs
    - subtlv type identityref
    - flags
      - flags keyword
      - type identityref
    - ipv4-source-router-id
      - router-id string
      - type identityref
    - ipv6-source-router-id
      - router-id string
      - type identityref
    - prefix-sids
      - prefix-sid value number
        - algorithm number
        - flags keyword
    - tag
      - tag32 number
    - tag64
      - tag64 number
    - undefined-subtlvs
      - undefined-subtlv type number
        - length number
        - value binary
    - up-down boolean
    - x-bit boolean
- ipv6-srlgs
  - ipv6-srlg instance-number number
  - flags keyword
  - ipv6-interface-address string
  - ipv6-neighbor-address string
  - psn-number number
  - srlg-value number
  - system-id string
- ipv6-te-router-id
  - router-id string
- is-alias-id
  - alias-id string
- is-reachability
  - neighbors
    - neighbor system-id string
    - default-metric
      - flags keyword
      - metric number
    - delay-metric
      - flags keyword
      - metric number
    - error-metric
      - flags keyword
      - metric number
    - expense-metric
      - flags keyword
      - metric number
- isis-neighbor-attribute
  - neighbors
    - neighbor system-id string
    - instances
      - instance id number
      - metric number

```

```

- subtlvs
  - subtlv type identityref
    - adjacency-sids
      - adjacency-sid value number
      - flags keyword
      - weight number
    - admin-group
      - admin-group number
    - available-bandwidth
      - bandwidth binary
      - type identityref
    - bandwidth-constraints
      - bandwidth-constraint model-id number
      - constraints
        - constraint constraint-id number
        - bandwidth binary
    - extended-admin-group
      - extended-admin-group number
    - ipv4-interface-address
      - address string
    - ipv4-neighbor-address
      - address string
    - ipv6-interface-address
      - address string
    - ipv6-neighbor-address
      - address string
    - lan-adjacency-sids
      - lan-adjacency-sid value number
      - flags keyword
      - neighbor-id string
      - weight number
    - link-attributes
      - local-protection keyword
    - link-delay
      - a-bit boolean
      - delay number
    - link-delay-variation
      - delay number
    - link-id
      - local number
      - remote number
    - link-loss
      - a-bit boolean
      - link-loss number
    - link-protection-type
      - type keyword
    - max-link-bandwidth
      - bandwidth binary
    - max-reservable-link-bandwidth
      - bandwidth binary
    - min-max-link-delay
      - a-bit boolean
      - max-delay number
      - min-delay number
    - residual-bandwidth
      - bandwidth binary
    - te-default-metric
      - metric number
    - unconstrained-lsp
      - count number
      - type identityref
    - unreserved-bandwidth
      - setup-priority priority number
      - bandwidth binary

```

```

        - utilized-bandwidth
          - bandwidth binary
          - type identityref
      - undefined-subtlvs
        - undefined-subtlv type number
        - length number
        - value binary
- lsp-buffer-size
- size number
- mt-ipv4-reachability
- prefixes
  - prefix mt-id number prefix string
  - metric number
  - s-bit boolean
  - subtlvs
    - subtlv type identityref
    - flags
      - flags keyword
      - type identityref
    - ipv4-source-router-id
      - router-id string
      - type identityref
    - ipv6-source-router-id
      - router-id string
      - type identityref
    - prefix-sids
      - prefix-sid value number
      - algorithm number
      - flags keyword
    - tag
      - tag32 number
    - tag64
      - tag64 number
    - undefined-subtlvs
      - undefined-subtlv type number
      - length number
      - value binary
    - up-down boolean
- mt-ipv6-reachability
- prefixes
  - prefix prefix string mt-id number
  - metric number
  - s-bit boolean
  - subtlvs
    - subtlv type identityref
    - flags
      - flags keyword
      - type identityref
    - ipv4-source-router-id
      - router-id string
      - type identityref
    - ipv6-source-router-id
      - router-id string
      - type identityref
    - prefix-sids
      - prefix-sid value number
      - algorithm number
      - flags keyword
    - tag
      - tag32 number
    - tag64
      - tag64 number
    - undefined-subtlvs
      - undefined-subtlv type number

```

```

- length number
- value binary
- up-down boolean
- x-bit boolean
- mt-isis-neighbor-attribute
- neighbors
- neighbor mt-id number system-id string
- instances
- instance id number
- metric number
- subtlvs
- subtlv type identityref
- adjacency-sids
- adjacency-sid value number
- flags keyword
- weight number
- admin-group
- admin-group number
- application-specific-link-attributes
- legacy boolean
- loop-free-alternate boolean
- rsvp-te boolean
- sr-policy boolean
- sub-sub-tlvs
- admin-group number
- maximum-link-bandwidth number
- min-max-unidirectional-link-delay
- anomolous boolean
- max-delay number
- min-delay number
- te-default-metric number
- available-bandwidth
- bandwidth binary
- type identityref
- bandwidth-constraints
- bandwidth-constraint model-id number
- constraints
- constraint constraint-id number
- bandwidth binary
- extended-admin-group
- extended-admin-group number
- ipv4-interface-address
- address string
- ipv4-neighbor-address
- address string
- ipv6-interface-address
- address string
- ipv6-neighbor-address
- address string
- lan-adjacency-sids
- lan-adjacency-sid value number
- flags keyword
- neighbor-id string
- weight number
- link-attributes
- local-protection keyword
- link-delay
- a-bit boolean
- delay number
- link-delay-variation
- delay number
- link-id
- local number
- remote number

```

```

- link-loss
  - a-bit boolean
  - link-loss number
- link-protection-type
  - type keyword
- max-link-bandwidth
  - bandwidth binary
- max-reservable-link-bandwidth
  - bandwidth binary
- min-max-link-delay
  - a-bit boolean
  - max-delay number
  - min-delay number
- residual-bandwidth
  - bandwidth binary
- te-default-metric
  - metric number
- unconstrained-lsp
  - count number
  - type identityref
- unreserved-bandwidth
  - setup-priority priority number
  - bandwidth binary
- utilized-bandwidth
  - bandwidth binary
  - type identityref
- undefined-subtlvs
  - undefined-subtlv type number
  - length number
  - value binary
- mt-isn
  - neighbors
    - neighbor mt-id number system-id string
    - instances
      - instance id number
      - metric number
      - subtlvs
        - subtlv type identityref
        - adjacency-sids
          - adjacency-sid value number
          - flags keyword
          - weight number
        - admin-group
          - admin-group number
        - application-specific-link-attributes
          - legacy boolean
          - loop-free-alternate boolean
          - rsvp-te boolean
          - sr-policy boolean
          - sub-sub-tlvs
            - admin-group number
            - maximum-link-bandwidth number
            - min-max-unidirectional-link-delay
              - anomolous boolean
              - max-delay number
              - min-delay number
              - te-default-metric number
          - available-bandwidth
            - bandwidth binary
            - type identityref
        - bandwidth-constraints
          - bandwidth-constraint model-id number
          - constraints
            - constraint constraint-id number

```

```

- bandwidth binary
- extended-admin-group
- extended-admin-group number
- ipv4-interface-address
- address string
- ipv4-neighbor-address
- address string
- ipv6-interface-address
- address string
- ipv6-neighbor-address
- address string
- lan-adjacency-sids
- lan-adjacency-sid value number
- flags keyword
- neighbor-id string
- weight number
- link-attributes
- local-protection keyword
- link-delay
- a-bit boolean
- delay number
- link-delay-variation
- delay number
- link-id
- local number
- remote number
- link-loss
- a-bit boolean
- link-loss number
- link-protection-type
- type keyword
- max-link-bandwidth
- bandwidth binary
- max-reservable-link-bandwidth
- bandwidth binary
- min-max-link-delay
- a-bit boolean
- max-delay number
- min-delay number
- residual-bandwidth
- bandwidth binary
- te-default-metric
- metric number
- unconstrained-lsp
- count number
- type identityref
- unreserved-bandwidth
- setup-priority priority number
- bandwidth binary
- utilized-bandwidth
- bandwidth binary
- type identityref
- undefined-subtlvs
- undefined-subtlv type number
- length number
- value binary
- multi-topology
- topologies
- topology mt-id number
- attributes keyword
- nlpid
- nlpid keyword
- purge-oi
- received-system-id string

```

```

- source-system-id string
- system-id-count number
- router-capabilities
- capability instance-number number
- flags keyword
- router-id string
- subtlvs
- subtlv type identityref
- node-msds
- bmi-msd number
- erld-msd number
- sbfd-discriminators
- discriminator number
- segment-routing-algorithms
- algorithm keyword
- segment-routing-capability
- flags keyword
- srgb-descriptors
- srgb-descriptor range number
- label number
- undefined-tlvs
- undefined-tlv type number
- length number
- value binary
- version number
- version2 number
+ loopfree-alternate-exclude boolean
+ metric-style keyword
+ route-preference
+ external number
+ internal number
- statistics
- authentication-failures number
- authentication-type-failures number
- corrupted-lsps number
- database-overloads number
- exceeded-max-sequence-number number
- lsp-errors number
- manual-address-drop-from-area number
- max-area-address-mismatches number
- own-lsp-purges number
- sequence-number-skips number
- spf-runs number
- system-id-length-mismatches number
- total-lsps number
+ trace-options
+ trace keyword
+ level-capability keyword
- level-database level-number number lsp-id string
- attributes
- attached boolean
- level1-is-type boolean
- level2-is-type boolean
- overload boolean
- checksum string
- defined-tlvs
- application-specific-srlg neighbor string
- legacy boolean
- loop-free-alternate boolean
- rsvp-te boolean
- sr-policy boolean
- sub-tlvs
- ipv4-interface-address string
- ipv4-neighbor-address string

```

```

- ipv6-interface-address string
- ipv6-neighbor-address string
- link-local-identifier number
- link-remote-identifier number
- shared-risk-link-group number
- area-addresses string
- authentication
  - auth-data string
  - auth-type keyword
- extended-ipv4-reachability ipv4-prefix string
  - down boolean
  - metric number
  - sub-tlvs
    - prefix-attribute-flags
      - external-prefix boolean
      - node-identifier boolean
      - re-advertised boolean
    - route-tag-32bit number
    - route-tag-64bit number
    - segment-routing-prefix-sid
      - algorithm keyword
      - explicit-null boolean
      - local boolean
      - node-sid boolean
      - penultimate-hop-popping boolean
      - re-advertised boolean
      - sr-index-or-label number
      - value boolean
- extended-is-reachability neighbor string
  - default-metric number
  - sub-tlvs
    - admin-group number
    - application-specific-link-attributes
      - legacy boolean
      - loop-free-alternate boolean
      - rsvp-te boolean
      - sr-policy boolean
      - sub-sub-tlvs
        - admin-group number
        - maximum-link-bandwidth number
        - min-max-unidirectional-link-delay
          - anomolous boolean
          - max-delay number
          - min-delay number
          - te-default-metric number
    - ipv4-interface-address string
    - ipv4-neighbor-address string
    - ipv6-interface-address string
    - ipv6-neighbor-address string
  - link-msd
    - msd-info msd-type (keyword | number) msd-value number
  - maximum-link-bandwidth number
  - min-max-unidirectional-link-delay
    - anomolous boolean
    - max-delay number
    - min-delay number
  - segment-routing-adjacency-sid sr-index-or-label number
    - adj-set boolean
    - backup boolean
    - ipv6-family boolean
    - local boolean
    - persistent boolean
    - value boolean
    - weight number

```



```

- segment-routing-lan-adjacency-sid sr-index-or-label number
  - adj-set boolean
  - backup boolean
  - ipv6-family boolean
  - local boolean
  - neighbor-system-id string
  - persistent boolean
  - value boolean
  - weight number
- te-default-metric number
- hostname string
- ipv4-external-reachability ipv4-prefix string
  - default-metric number
  - default-metric-type keyword
  - down boolean
- ipv4-interface-addresses (ipv4-address | ipv6-address)
- ipv4-internal-reachability ipv4-prefix string
  - default-metric number
  - default-metric-type keyword
  - down boolean
- ipv4-srlg neighbor string
  - ipv4-interface-address string
  - ipv4-neighbor-address string
  - numbered boolean
  - shared-risk-link-group number
- ipv6-interface-addresses (ipv4-address | ipv6-address)
- ipv6-reachability ipv6-prefix string
  - down boolean
  - external boolean
  - metric number
  - sub-tlvs
    - prefix-attribute-flags
      - external-prefix boolean
      - node-identifier boolean
      - re-advertised boolean
    - route-tag-32bit number
    - route-tag-64bit number
    - segment-routing-prefix-sid
      - algorithm keyword
      - explicit-null boolean
      - local boolean
      - node-sid boolean
      - penultimate-hop-popping boolean
      - re-advertised boolean
      - sr-index-or-label number
      - value boolean
- ipv6-srlg neighbor string
  - ipv6-interface-address string
  - ipv6-neighbor-address string
  - neighbor-address-included boolean
  - shared-risk-link-group number
- ipv6-te-router-id string
- is-reachability neighbor string
  - default-metric number
  - default-metric-type keyword
- mt-ipv4-reachability ipv4-prefix string
  - down boolean
  - metric number
  - mt-id number
  - sub-tlvs
    - prefix-attribute-flags
      - external-prefix boolean
      - node-identifier boolean
      - re-advertised boolean

```

```

- route-tag-32bit number
- route-tag-64bit number
- segment-routing-prefix-sid
  - algorithm keyword
  - explicit-null boolean
  - local boolean
  - node-sid boolean
  - penultimate-hop-popping boolean
  - re-advertised boolean
  - sr-index-or-label number
  - value boolean
- mt-ipv6-reachability ipv6-prefix string
  - down boolean
  - external boolean
  - metric number
  - mt-id number
  - sub-tlvs
    - prefix-attribute-flags
      - external-prefix boolean
      - node-identifier boolean
      - re-advertised boolean
    - route-tag-32bit number
    - route-tag-64bit number
    - segment-routing-prefix-sid
      - algorithm keyword
      - explicit-null boolean
      - local boolean
      - node-sid boolean
      - penultimate-hop-popping boolean
      - re-advertised boolean
      - sr-index-or-label number
      - value boolean
- mt-is-reachability neighbor string
  - default-metric number
  - mt-id number
  - sub-tlvs
    - admin-group number
    - application-specific-link-attributes
      - legacy boolean
      - loop-free-alternate boolean
      - rsvp-te boolean
      - sr-policy boolean
      - sub-sub-tlvs
        - admin-group number
        - maximum-link-bandwidth number
        - min-max-unidirectional-link-delay
          - anomolous boolean
          - max-delay number
          - min-delay number
          - te-default-metric number
    - ipv4-interface-address string
    - ipv4-neighbor-address string
    - ipv6-interface-address string
    - ipv6-neighbor-address string
  - link-msd
    - msd-info msd-type (keyword | number) msd-value number
  - maximum-link-bandwidth number
  - min-max-unidirectional-link-delay
    - anomolous boolean
    - max-delay number
    - min-delay number
  - segment-routing-adjacency-sid sr-index-or-label number
    - adj-set boolean
    - backup boolean

```

```

- ipv6-family boolean
- local boolean
- persistent boolean
- value boolean
- weight number
- segment-routing-lan-adjacency-sid sr-index-or-label number
- adj-set boolean
- backup boolean
- ipv6-family boolean
- local boolean
- neighbor-system-id string
- persistent boolean
- value boolean
- weight number
- te-default-metric number
- multi-topology
- topology mt-id number
- attached boolean
- overload boolean
- nlpid keyword
- purge-oi string
- router-capability
- leaked-down boolean
- router-id string
- scope-is-domain-wide boolean
- sub-tlvs
- node-msd
- msd-info msd-type (keyword | number) msd-value number
- sr-algorithm
- algorithm number
- sr-capabilities
- ipv4-support boolean
- ipv6-support boolean
- srgb-descriptor sr-index-or-label number range number
- sr-local-block
- srlb-descriptor sr-index-or-label number range number
- te-router-id string
- maximum-area-addresses number
- pdu-length number
- pdu-type number
- pkt-version number
- remaining-lifetime number
- sequence-number string
- system-id-len number
- undefined-tlvs string
- version number
+ loopfree-alternate
+ admin-state keyword
+ exclude
+ prefix-policy reference
+ multi-homed-prefix
+ admin-state keyword
+ preference keyword
+ remote-lfa
+ admin-state keyword
+ max-pq-cost number
+ node-protect
+ admin-state keyword
+ max-pq-nodes number
+ ti-lfa
+ admin-state keyword
+ max-sr-policy-lfa-labels number
+ node-protect
+ admin-state keyword

```

```

+ max-ecmp-paths number
+ net string
- oper-area-id string
- oper-state keyword
- oper-system-id string
+ overload
+ advertise-external boolean
+ advertise-interlevel boolean
+ immediate
+ max-metric boolean
+ set-bit boolean
- instance-is-in-overload boolean
+ on-boot
+ max-metric boolean
+ set-bit boolean
+ timeout number
+ poi-tlv boolean
- restarting-neighbor-list
- neighbor system-id string
- hostname string
+ segment-routing
+ mpls
+ adjacency-sid-hold-time (keyword | number)
+ dynamic-adjacency-sids
+ all-interfaces boolean
+ maximum-sid-depth
+ override-bmi number
- sid-database
- prefix-sid prefix (ipv4-prefix | ipv6-prefix) sid-label-
value number multi-topology-id number algorithm number
- active boolean
- prefix-conflict boolean
- sid-conflict boolean
- sid-out-of-range boolean
- source-router system-id string level-number number
- flags
- explicit-null boolean
- local boolean
- node-sid boolean
- penultimate-hop-popping boolean
- re-advertised boolean
- local-system boolean
+ static-label-block reference
- static-label-block-status keyword
- statistics
- last-partial-spf string
- last-spf string
- partial-spf-runs number
- pdu pdu-name keyword
- dropped number
- processed number
- received number
- sent number
- spf-runs number
+ te-database-install
+ bgp-ls
+ bgp-ls-identifier number
+ igp-identifier number
+ timers
+ lsp-generation
+ initial-wait number
+ max-wait number
+ second-wait number
+ lsp-lifetime number

```

```

+ lsp-refresh
+ half-lifetime boolean
+ interval number
+ spf
+ initial-wait number
+ max-wait number
+ second-wait number
+ trace-options
+ trace keyword
+ traffic-engineering
+ advertisement boolean
+ ipv4-te-router-id string
+ ipv6-te-router-id string
+ legacy-link-attribute-advertisement boolean
+ transport
+ lsp-mtu-size number
+ weighted-ecmp
+ admin-state keyword
+ max-ecmp-hash-buckets-per-next-hop-group number
+ non-stop-forwarding
+ admin-state keyword
+ ldp
+ admin-state keyword
+ discovery
+ interfaces
+ hello-holdtime number
+ hello-interval number
+ interface name string
+ hello-holdtime number
+ hello-interval number
+ ipv4
+ admin-state keyword
+ enable-bfd boolean
- hello-adjacencies
- adjacency lsr-id reference label-space-id reference
- hello-holdtime
- negotiated number
- neighbor-proposed number
- remaining number
- hello-received number
- hello-sent number
- local-address string
- remote-address string
- intf-oper-down-reason keyword
- last-oper-state-change string
- oper-state keyword
+ override-lsr-id
+ local-subinterface keyword
- statistics
- hello-message-errors
- bad-message-length number
- bad-pdu-length number
- bad-protocol-version number
- malformed-tlv-value number
- hello-received number
- hello-sent number
+ trace-options
+ trace keyword
+ ipv6
+ admin-state keyword
+ enable-bfd boolean
- hello-adjacencies
- adjacency lsr-id reference label-space-id reference
- hello-holdtime

```

```

        - negotiated number
        - neighbor-proposed number
        - remaining number
        - hello-received number
        - hello-sent number
        - local-address string
        - remote-address string
    - intf-oper-down-reason keyword
    - last-oper-state-change string
    - oper-state keyword
    + override-lsr-id
    + local-subinterface keyword
    - statistics
        - hello-message-errors
            - bad-message-length number
            - bad-pdu-length number
            - bad-protocol-version number
            - malformed-tlv-value number
        - hello-received number
        - hello-sent number
    + trace-options
        + trace keyword
    + trace-options
        + trace keyword
    + dynamic-label-block reference
    - dynamic-label-block-status keyword
    + export-prefix-policy reference
    + fec-resolution
    + longest-prefix boolean
    + graceful-restart
    + helper-enable boolean
    + max-reconnect-time number
    + max-recovery-time number
    + import-prefix-policy reference
    + ipv4
        - bindings
            - advertised-address
                - peer lsr-id reference label-space-id reference
                - ip-address string
            - advertised-prefix-fec
                - prefix-fec fec string lsr-id reference label-space-id reference
                - egress-lsr-fec boolean
                - label (number | keyword)
                - label-status keyword
                - label-type keyword
            - received-address
                - peer lsr-id reference label-space-id reference
                - ip-address string
            - received-prefix-fec
                - prefix-fec fec string lsr-id reference label-space-id reference
                - entropy-label-transmit boolean
                - ingress-lsr-fec boolean
                - label (number | keyword)
                - next-hop index number
                - interface string
                - next-hop (ipv4-address | ipv6-address)
                - next-hop-type keyword
                - outer-label (number | keyword)
                - not-used-reason keyword
                - used-in-forwarding boolean
            - service-fec128 virtual-circuit-type keyword virtual-circuit-
identifier number peer-lsr-id (ipv4-address | ipv6-address)
            - advertised
                - control-word boolean

```

```

- l2-mtu number
- label (number | keyword)
- label-status keyword
- pw-status boolean
- signaling-status keyword
- withdraw-reason keyword
- binding-oper-down-reason keyword
- binding-oper-state keyword
- received
  - control-word boolean
  - l2-mtu number
  - label (number | keyword)
  - label-status keyword
  - pw-status boolean
  - signaling-status keyword
- last-oper-state-change string
- lsr-id string
- oper-down-reason keyword
- oper-state keyword
- oper-up-to-down-transitions number
+ ipv6
- bindings
  - advertised-address
    - peer lsr-id reference label-space-id reference
    - ip-address string
  - advertised-prefix-fec
    - prefix-fec fec string lsr-id reference label-space-id reference
    - egress-lsr-fec boolean
    - label (number | keyword)
    - label-status keyword
    - label-type keyword
  - received-address
    - peer lsr-id reference label-space-id reference
    - ip-address string
  - received-prefix-fec
    - prefix-fec fec string lsr-id reference label-space-id reference
    - entropy-label-transmit boolean
    - ingress-lsr-fec boolean
    - label (number | keyword)
    - next-hop index number
    - interface string
    - next-hop (ipv4-address | ipv6-address)
    - next-hop-type keyword
    - outer-label (number | keyword)
    - not-used-reason keyword
    - used-in-forwarding boolean
  - service-fec128 virtual-circuit-type keyword virtual-circuit-
  identifier number peer-lsr-id (ipv4-address | ipv6-address)
  - advertised
    - control-word boolean
    - l2-mtu number
    - label (number | keyword)
    - label-status keyword
    - pw-status boolean
    - signaling-status keyword
    - withdraw-reason keyword
    - binding-oper-down-reason keyword
    - binding-oper-state keyword
  - received
    - control-word boolean
    - l2-mtu number
    - label (number | keyword)
    - label-status keyword
    - pw-status boolean

```

```

- signaling-status keyword
- last-oper-state-change string
- lsr-id string
- oper-down-reason keyword
- oper-state keyword
- oper-up-to-down-transitions number
+ loopfree-alternate
+ admin-state keyword
+ multipath
+ max-paths number
+ peers
+ peer lsr-id (ipv4-address | ipv6-address) label-space-id number
- adjacency-type keyword
- end-of-lib
- ipv4-prefix-fecs
- received boolean
- sent boolean
- ipv6-prefix-fecs
- received boolean
- sent boolean
+ export-prefix-policy reference
+ fec-limit number
- fec-limit-exceeded boolean
- graceful-restart
- peer-reconnect-time number
- peer-recovery-time number
- peer-restarting boolean
+ import-prefix-policy reference
- label-advertisement-mode
- negotiated keyword
- last-oper-state-change string
- overload
- local-router-is-overloaded boolean
- peer-is-overloaded boolean
- received-capabilities
- dual-stack-capability boolean
- dynamic-capability boolean
- entropy-label-capability boolean
- graceful-restart-capability boolean
- make-before-break-capability boolean
- multipoint-to-multipoint-capability boolean
- nokia-vendor-overload-capability boolean
- point-to-multipoint-capability boolean
- state-advertisement-control
- ipv4-prefix-disable boolean
- ipv6-prefix-disable boolean
- p2p-pseudowire-fec-128-disable boolean
- p2p-pseudowire-fec-129-disable boolean
- unrecognized-notification-capability boolean
- session-holdtime
- negotiated number
- peer-proposed number
- remaining number
- session-state keyword
- statistics
- address-statistics
- ipv4
- advertised-addresses number
- received-addresses number
- ipv6
- advertised-addresses number
- received-addresses number
- fec-statistics
- ipv4-prefix

```



```

- advertised-fecs number
- received-fecs number
- ipv6-prefix
- advertised-fecs number
- received-fecs number
- received-messages
- address number
- address-withdraw number
- capability number
- initialization number
- keepalive number
- label-abort-request number
- label-mapping number
- label-release number
- label-request number
- label-withdraw number
- notification number
- total-messages number
- sent-messages
- address number
- address-withdraw number
- capability number
- initialization number
- keepalive number
- label-abort-request number
- label-mapping number
- label-release number
- label-request number
- label-withdraw number
- notification number
- total-messages number
+ tcp-transport
- local-address (ipv4-address | ipv6-address)
- local-port number
- remote-address (ipv4-address | ipv6-address)
- remote-port number
+ trace-options
+ trace keyword
+ session-keepalive-holdtime number
+ session-keepalive-interval number
+ trace-options
+ trace keyword
+ static-fec fec-prefix (ipv4-prefix | ipv6-prefix)
+ swap boolean
- statistics
- fec-statistics
- ipv4-prefix
- advertised-fecs number
- received-fecs number
- ipv6-prefix
- advertised-fecs number
- received-fecs number
- ipv4
- total-discovery-interfaces number
- total-interface-hello-adjacencies number
- total-peers number
- ipv6
- total-discovery-interfaces number
- total-interface-hello-adjacencies number
- total-peers number
- protocol-errors
- bad-ldp-identifier number
- bad-message-length number
- bad-pdu-length number

```

```

- bad-protocol-version number
- bad-tlv-length number
- malformed-tlv-value number
- missing-message-parameters number
- session-rejected-bad-keepalive-time number
- session-rejected-no-hello number
- session-rejected-parameters-adv-mode number
- session-rejected-parameters-label-range number
- session-rejected-parameters-max-pdu-length number
- unknown-message-type number
- unknown-tlv number
- unsupported-address-family number
- sessions-terminated-holdtime-expiry number
+ linux
+ export-neighbors boolean
+ export-routes boolean
+ import-routes boolean
+ mld-snooping
+ admin-state keyword
+ interface interface-name string
+ fast-leave boolean
+ import-policy reference
- is-mrouter-port boolean
+ maximum-number-group-sources number
+ maximum-number-groups number
+ maximum-number-sources number
- membership-group-count number
- membership-groups
- group group string
- expiry-time number
- filter-mode keyword
- group-type keyword
- mld-compatibility-mode keyword
- source source string
- expiry-time number
- forwarding-state keyword
- source-type keyword
- up-time string
- vl-host-timer number
+ mrouter-port boolean
+ query-interval number
+ query-last-member-interval number
+ query-response-interval number
+ robust-count number
+ router-alert-check boolean
+ send-queries boolean
+ static-membership-groups
+ group group string
+ source source string
+ starg
- statistics
- error
- bad-encoding number
- bad-length number
- bad-mld-checksum number
- discarded-bgp-join-sync number
- discarded-bgp-leave-sync number
- import-policy-drops number
- local-scope number
- missing-router-alert number
- out-of-memory-discarded-packets number
- reached-maximum-number-group-sources number
- reached-maximum-number-groups number

```

```

- reached-maximum-number-sources number
- send-query-configured-discarded-packets number
- unknown-type number
- wrong-version number
- zero-source-ip-address number
- forwarded
- error-packets number
- general-queries number
- group-queries number
- group-source-queries number
- leave-messages number
- unknown-type number
- v1-reports number
- v2-reports number
- multicast-states
- source-group-entries number
- star-group-entries number
- received
- bgp-join-sync number
- bgp-leave-sync number
- discarded-packets number
- general-queries number
- group-queries number
- group-source-queries number
- leave-messages number
- v1-reports number
- v2-reports number
- transmitted
- bgp-join-sync number
- bgp-leave-sync number
- error-packets number
- general-queries number
- group-queries number
- group-source-queries number
- leave-messages number
- v1-reports number
- v2-reports number
+ version number
- multicast-routers address string
- expiry-time number
- interface string
- mld-v2-states
- general-query-interval number
- general-response-interval number
- robust-count number
- up-time string
- version number
- oper-state keyword
- proxy-evpn-membership-group-count number
- proxy-evpn-membership-groups
- group group string
- filter-mode keyword
- source source string
- up-time string
- up-time string
- v1-support boolean
- v2-support boolean
- proxy-membership-group-count number
- proxy-membership-groups
- group group string
- filter-mode keyword
- source source string
- up-time string
- up-time string

```

```

- querier
  - address string
  - expiry-time number
  - interface string
  - mld-v2-states
    - general-query-interval number
    - general-response-interval number
    - robust-count number
  - up-time string
  - version number
+ query-interval number
+ query-source-address string
+ report-source-address string
+ robust-count number
+ trace-options
+ trace
  + packet
    + interface interface-name string
    + modifier keyword
    + source-mac source-mac string
- transmitted-bgp-smet-routes number
- vxlan-destination vtep (ipv4-address | ipv6-address) vni number
  - index number
  - is-evpn-proxy boolean
  - is-mrouter-port boolean
  - is-sbd boolean
  - membership-group-count number
  - membership-groups
    - group group string
      - expiry-time number
      - filter-mode keyword
      - group-type keyword
      - mld-compatibility-mode keyword
      - source source string
        - expiry-time number
        - forwarding-state keyword
        - source-type keyword
        - up-time string
      - up-time string
      - vl-host-timer number
  - statistics
    - discarded-smet number
    - received-smet number
+ ospf
+ instance name string
+ address-family identityref
+ admin-state keyword
+ advertise-router-capability keyword
+ area area-id
  - active-interfaces number
+ advertise-router-capability boolean
  - area-bdr-rtr-count
+ area-range ip-prefix-mask (ipv4-prefix | ipv6-prefix)
  + advertise boolean
  - as-bdr-rtr-count
+ blackhole-aggregate boolean
+ export-policy reference
  - full-spf-runs
+ interface interface-name string
  + admin-state keyword
  + advertise-router-capability boolean
  + advertise-subnet boolean
  + authentication
    + keychain reference

```

```

- bad-packets
  - auth-failures
  - bad-area
  - bad-auth-type
  - bad-checksum
  - bad-dead-interval
  - bad-dest-address
  - bad-hello-interval
  - bad-length
  - bad-neighbors
  - bad-network
  - bad-options
  - bad-packet-type
  - bad-version
  - bad-virtual-link
- bdr-id
+ dead-interval number
- dr-id
- events
+ failure-detection
  + enable-bfd boolean
+ hello-interval number
+ interface-type keyword
- last-enabled-time string
- last-event-time string
+ ldp-synchronization
  + disable
  - duration number
  + end-of-lib boolean
  + hold-down-timer number
  - sync-state keyword
- link-lsa-cksum-sum string
- link-lsa-count
- local-ip-address (ipv4-address | ipv6-address)
+ lsa-filter-out keyword
- lsa-totals
  - e-link-lsa
  - link-lsa
  - link-opaque-lsa
  - router-info-lsa
+ metric number
+ mtu number
- neighbor router-id
  - address (ipv4-address-with-zone | ipv6-address-with-zone)
  - adjacency-state identityref
  - backup-designated-router
  - dead-time number
  - designated-router
  - last-established-time string
  - last-event-time string
  - last-restart-time string
  - optional-capabilities
  - priority number
  - restart-helper-age number
  - restart-helper-exit-rc keyword
  - restart-helper-status keyword
  - restart-reason (number | keyword)
  - retransmission-queue-length number
  - state-changes number
  - statistics
    - bad-mtu
    - bad-nbr-states
    - bad-packets
    - bad-seq-nums

```

```

- duplicates
- events
- lsa-install-failed
- lsa-not-in-lsdb
- num-restarts
- option-mismatches
- up-time number
- neighbor-count
- oper-state keyword
- packets
  - discarded
  - retransmits
  - rx-db-description
  - rx-hello
  - rx-ls-ack
  - rx-ls-request
  - rx-ls-update
  - rx-total
  - tx-db-description
  - tx-hello
  - tx-ls-ack
  - tx-ls-request
  - tx-ls-update
  - tx-total
+ passive boolean
+ priority number
+ retransmit-interval number
+ trace-options
  + trace
    + adjacencies
    + interfaces
    + packet
      + detail
      + modifier keyword
      + type keyword
+ transit-delay number
- last-spf-run-time string
- lsa-filter-totals
  - export-filtered
  - import-filtered
- lsa-totals
  - area-opaque-lsa
  - asbr-summary-lsa
  - e-inter-area-prefix-lsa
  - e-inter-area-router-lsa
  - e-intra-area-prefix-lsa
  - e-network-lsa
  - e-nssa-lsa
  - e-router-lsa
  - inter-area-prefix-lsa
  - inter-area-router-lsa
  - intra-area-prefix-lsa
  - network-lsa
  - network-summary-lsa
  - nssa-lsa
  - router-info-lsa
  - router-lsa
  - total
  - total-lsa-cksum-sum string
  - unknown-lsa
+ nssa
+ area-range ip-prefix-mask (ipv4-prefix | ipv6-prefix)
  + advertise boolean
+ originate-default-route

```

```

    + adjacency-check boolean
    + type-nssa boolean
    + redistribute-external boolean
    + summaries boolean
+ stub
  + default-metric number
  + summaries boolean
- area-border-router boolean
- as-border-router boolean
+ asbr
  + trace-path (number | keyword)
- backbone-router boolean
+ export-limit
  + log-percent number
  + number number
+ export-policy reference
- extern-lsa-cksum-sum string
- extern-lsa-count
+ external-db-overflow
  + interval number
  + limit number
+ external-preference number
+ graceful-restart
  + helper-mode boolean
  + strict-lsa-checking boolean
+ instance-id number
- last-disabled-reason string
- last-enabled-time string
- last-overflow-entered-time string
- last-overflow-exit-time string
- last-overload-enter-code keyword
- last-overload-entered-time string
- last-overload-exit-code keyword
- last-overload-exit-time string
+ ldp-synchronization
  + end-of-lib boolean
  + hold-down-timer number
- lsa-totals
  - as-external-lsa
  - as-opaque-lsa
  - e-as-external-lsa
  - router-info-lsa
+ max-ecmp-paths number
+ new-lsas-originated
- new-lsas-received
- opaque-lsa-support boolean
- oper-state keyword
- overflow boolean
+ overload
  + active boolean
  + overload-include-ext-1 boolean
  + overload-include-ext-2 boolean
  + overload-include-stub boolean
  + overload-on-boot
    + timeout number
  + rtr-adv-lsa-limit
    + log-only boolean
    + max-lsa-count number
    + overload-timeout number
    + warning-threshold number
  - overload-rem-interval number
  - overload-state keyword
  - ovld-lsa-limit-rem-interval number
+ preference number

```

```

+ reference-bandwidth number
+ router-id
- routes-submitted
- spf
  - avg-spf-run-interval number
  - ext-spf-runs
  - full-spf-runs
  - incremental-ext-spf-runs
  - incremental-inter-spf-runs
  - last-ext-spf
    - interval number
    - run-time string
  - last-full-spf
    - extern-spf-time number
    - inter-spf-time number
    - intra-spf-time number
    - rtm-update-time number
    - run-time string
    - total-time number
  - max-spf-run-interval number
  - min-spf-run-interval number
  - spf-attempts-failed
+ timers
+ incremental-spf-wait number
+ lsa-accumulate number
+ lsa-arrival number
+ lsa-generate
  + lsa-initial-wait number
  + lsa-second-wait number
  + max-lsa-wait number
+ redistribute-delay number
+ spf-wait
  + spf-initial-wait number
  + spf-max-wait number
  + spf-second-wait number
- total-exported-routes
+ trace-options
+ trace
  + adjacencies
  + graceful-restart
  + interfaces
  + lsdbs
    + link-state-id string
    + router-id string
    + type keyword
  + misc
  + packet
    + detail
    + modifier keyword
    + type keyword
  + routes
    + dest-address (ipv4-address | ipv6-address)
    + spf
      + dest-address (ipv4-address | ipv6-address)
+ version identityref
+ pcep
+ pcc
  + admin-state keyword
  - allow-negotiation boolean
  - capabilities keyword
  - connect-timer number
  + dead-timer number
  - keep-wait-timer number
  + keepalive number

```



```

- lsp-update pce-id number
- delegated boolean
- delegated-peer-address (ipv4-address-unicast | ipv6-address-unicast-without-
local)
- destination-address (ipv4-address-unicast | ipv6-address-unicast-without-local)
- extended-tunnel-id (ipv4-address-unicast | ipv6-address-unicast)
- lsp-id number
- lsp-type keyword
- name string
- oper-state keyword
- path-detail path-type keyword
- error keyword
- exclude-any number
- explicit-route-objects route-object-index number
- as-number number
- local-interface-id number
- local-interface-name string
- local-prefix (ipv4-address-unicast | ipv6-address-unicast-without-local)
- prefix (ipv4-address-unicast | ipv6-address-unicast-without-local)
- remote-interface-id number
- remote-prefix (ipv4-address-unicast | ipv6-address-unicast-without-local)
- router-id (ipv4-address-unicast | ipv6-address-unicast-without-local)
- sid-label number
- sid-type keyword
- holding-priority number
- hop-count number
- igp-metric number
- include-all number
- include-any number
- lsp-bandwidth number
- record-route-objects route-object-index number
- as-number number
- local-interface-id number
- local-interface-name string
- local-prefix (ipv4-address-unicast | ipv6-address-unicast-without-local)
- prefix (ipv4-address-unicast | ipv6-address-unicast-without-local)
- remote-interface-id number
- remote-prefix (ipv4-address-unicast | ipv6-address-unicast-without-local)
- router-id (ipv4-address-unicast | ipv6-address-unicast-without-local)
- sid-label number
- sid-type keyword
- setup-priority number
- srp-id number
- te-metric number
- source-address (ipv4-address-unicast | ipv6-address-unicast-without-local)
- state keyword
- tunnel-id number
- max-sessions number
- max-unknown-requests number
- open-wait-timer number
- oper-state keyword
- path-request request-id number
- bidirectional boolean
- destination-address (ipv4-address-unicast | ipv6-address-unicast-without-local)
- exclude-any number
- extended-profiles number
- extended-tunnel-id (ipv4-address-unicast | ipv6-address-unicast)
- holding-priority number
- hop-count number
- igp-metric number
- include-all number
- include-any number
- local-protection-desired boolean
- loose-path-acceptable boolean

```

```

- lsp-bandwidth number
- lsp-id number
- lsp-name string
- lsp-type keyword
- max-lsr-labels number
- message-state keyword
- metric-bound keyword
- metric-compute keyword
- msg-priority number
- profiles number
- reoptimization boolean
- setup-priority number
- source-address (ipv4-address-unicast | ipv6-address-unicast-without-local)
- sync-vector-id number
- te-metric number
- tunnel-id number
+ peer ip-address (ipv4-address-unicast | ipv6-address-unicast-without-local)
+ admin-state keyword
- capabilities keyword
- is-overloaded boolean
+ local-address (ipv4-address-unicast | ipv6-address-unicast-without-local)
+ network-instance reference
- oper-dead-timer number
- oper-keepalive number
- oper-local-address (ipv4-address-unicast | ipv6-address-unicast-without-local)
- oper-state keyword
+ preference number
- session-established-time string
- speaker-id string
- statistics
  - num-keepalive-rcvd number
  - num-keepalive-sent number
  - num-pcerr-rcvd number
  - num-pcerr-sent number
  - num-pcinit-rcvd number
  - num-pcinit-sent number
  - num-pcntf-rcvd number
  - num-pcntf-sent number
  - num-pcrep-rcvd number
  - num-pcrep-sent number
  - num-pcreq-rcvd number
  - num-pcreq-sent number
  - num-pcrpt-rcvd number
  - num-pcrpt-sent number
  - num-pcupd-rcvd number
  - num-pcupd-sent number
  - num-req-rcvd number
  - num-req-sent number
  - num-rpt-rcvd number
  - num-rpt-sent number
  - num-session-setup-fail number
  - num-session-setup-ok number
- sync-state keyword
+ redelegation-timer number
+ report-path-constraints boolean
- request-timer number
+ state-timer
  + timer number
  + timer-action keyword
- sync-timer number
+ unknown-message-rate number
+ ptp
- oper-state keyword
+ peer-limit number

```

```

+ source-address-ipv4 string
+ source-address-ipv6 string
- route-table
- ipv4-unicast
- route ipv4-prefix string route-type identityref route-owner string id number origin-
network-instance reference
- active boolean
- fib-programming
- last-failed-complexes string
- last-failed-operation-type keyword
- last-successful-operation-timestamp string
- last-successful-operation-type keyword
- pending-operation-type keyword
- suppressed boolean
- gribi-metadata binary
- internal-tags string
- last-app-update string
- leakable boolean
- metric number
- next-hop-group reference
- next-hop-group-network-instance reference
- preference number
- resilient-hash boolean
- target-network-instances reference
- route-summary
- route-type ip-route-type-name identityref
- active-routes number
- statistics
- active-routes number
- active-routes-with-ecmp number
- fib-failed-routes number
- resilient-hash-routes number
- total-routes number
- ipv6-unicast
- route ipv6-prefix string route-type identityref route-owner string id number origin-
network-instance reference
- active boolean
- fib-programming
- last-failed-complexes string
- last-failed-operation-type keyword
- last-successful-operation-timestamp string
- last-successful-operation-type keyword
- pending-operation-type keyword
- suppressed boolean
- gribi-metadata binary
- internal-tags string
- last-app-update string
- leakable boolean
- metric number
- next-hop-group reference
- next-hop-group-network-instance reference
- preference number
- resilient-hash boolean
- target-network-instances reference
- route-summary
- route-type ip-route-type-name identityref
- active-routes number
- statistics
- active-routes number
- active-routes-with-ecmp number
- fib-failed-routes number
- resilient-hash-routes number
- total-routes number
- mpls

```

```

- label-entry label-value number
  - entry-type identityref
  - last-app-update string
  - next-bgp-instance reference
  - next-ethernet-segment reference
  - next-hop-group reference
  - next-network-instance reference
  - operation keyword
- statistics
  - active-entries number
- next-hop index number
- counters
  - octets-forwarded number
  - packets-forwarded number
  - resource-allocation-failed boolean
- decapsulate-header keyword
- encapsulate-header keyword
- ip-address (ipv4-address | ipv6-address)
- ip-in-ip
  - dst-ip (ipv4-address | ipv6-address)
  - src-ip (ipv4-address | ipv6-address)
- mac-address string
- mpls
  - entropy-label-transmit boolean
  - pushed-mpls-label-stack (number | keyword)
- network-instance reference
- programmed-index number
- resolving-route
  - ip-prefix (ipv4-prefix | ipv6-prefix)
  - route-owner string
  - route-type identityref
- resolving-tunnel
  - ip-prefix (ipv4-prefix | ipv6-prefix)
  - tunnel-owner string
  - tunnel-type identityref
- subinterface reference
- type identityref
- vxlan
  - destination-mac string
  - source-mac string
  - vni number
- next-hop-group index number
- backup-next-hop id number
  - next-hop reference
  - resolved keyword
- backup-next-hop-group reference
- fib-programming
  - last-failed-complexes string
  - last-failed-operation-type keyword
  - last-successful-operation-timestamp string
  - last-successful-operation-type keyword
  - pending-operation-type keyword
  - suppressed boolean
- group-name-alias string
- next-hop id number
  - next-hop reference
  - resolved keyword
  - weight number
- programmed-index number
+ router-id string
+ segment-routing
  + mpls
    + global-block
      + label-range reference

```

```

- label-range-status keyword
+ local-prefix-sid prefix-sid-index number
+ interface string
+ ipv4-label-index number
+ ipv6-label-index number
+ node-sid boolean
- sid-database
- prefix-sid prefix (ipv4-prefix | ipv6-prefix) sid-label-
value number protocol keyword protocol-instance number protocol-multi-
topology number algorithm number
- active boolean
- prefix-conflict boolean
- sid-conflict boolean
+ static-routes
+ admin-state keyword
+ route prefix (ipv4-prefix | ipv6-prefix)
+ admin-state keyword
- installed boolean
+ metric number
+ next-hop-group reference
+ preference number
+ tag-set reference
- system-ipv4-address
- oper-down-reason keyword
- oper-state keyword
- system-ipv6-address
- oper-down-reason keyword
- oper-state keyword
- tcp
- connection local-address (ipv4-address | ipv6-address) local-port number remote-
address (ipv4-address | ipv6-address) remote-port number
- process-id number
- session-state keyword
- listening-application local-address (ipv4-address | ipv6-address) local-port number
- process-id number
- statistics
- active-opens number
- attempt-fails number
- established-resets number
- in-checksum-errors number
- in-error-segments number
- in-segments number
- out-rst-segments number
- out-segments number
- passive-opens number
- retransmitted-segments number
+ traffic-engineering
+ admin-groups
+ group name string
+ bit-position number
+ autonomous-system number
+ interface interface-name string
+ admin-group reference
+ interface-ref
+ interface reference
+ subinterface reference
+ srlg-membership reference
+ te-metric number
+ ipv4-te-router-id string
+ ipv6-te-router-id string
+ shared-risk-link-groups
+ group name string
+ value number
+ traffic-engineering-policies

```

```

+ binding-sid
+ static-label-block reference
- static-label-block-status keyword
+ explicit-paths
+ path explicit-path-name string
+ hop index number
+ ip
+ hop-type keyword
+ ip-address (ipv4-address-unicast | ipv6-address-unicast-without-local)
+ mpls-label number
+ policy policy-name string
+ admin-state keyword
+ binding-sid
+ mpls-label number
+ endpoint (ipv4-address-unicast | ipv6-address-unicast-without-local)
+ head-end (ipv4-address-excluding-all-zero | keyword)
- last-oper-state-change string
+ maintenance
+ maintenance-policy reference
+ metric number
- oper-down-reason identityref
- oper-state keyword
- oper-state-change-count number
+ policy-type keyword
+ re-optimization-timer (number | keyword)
+ retry-timer number
+ segment-list segment-list-index number
+ admin-state keyword
+ dynamic
+ path-algorithm keyword
+ te-constraints
+ exclude-hop (ipv4-address-unicast | ipv6-address-unicast-without-local)
+ hop-limit number
+ label-stack-reduction boolean
+ local-sr-protection keyword
+ metric-type keyword
+ secondary-srlg boolean
+ segment-depth
+ segment-limit number
+ explicit-path reference
- failed-reason identityref
- forwarding-state keyword
- last-oper-state-change string
- oper-state keyword
- oper-state-change-count number
+ pce-control boolean
+ pce-report boolean
+ priority
+ hold-priority number
+ setup-priority number
+ segment-list-preference number
+ segment-list-type keyword
- policy-database
- active-te-policies number
- sr-uncolored
- policy policy-name string protocol-origin keyword
- active-segment-list-index number
- binding-sid
- mpls-label number
- created-time string
- endpoint (ipv4-address-unicast | ipv6-address-unicast-without-local)
- head-end (ipv4-address-unicast | ipv6-address-unicast-without-local)
- last-oper-state-change string
- maintenance

```

```

- maintenance-policy string
- metric number
- oper-down-reason identityref
- oper-state keyword
- oper-state-change-count number
- policy-type keyword
- segment-list segment-list-index number
- bfd
  - bfd-state keyword
  - bfd-wait-for-up-expiry string
  - bfd-wait-for-up-timer number
  - hold-down-timer number
  - hold-down-timer-expiry string
- computed-segments
  - segment segment-index number
    - hop-type keyword
    - ip-address (ipv4-address-unicast | ipv6-address-unicast-without-local)
    - is-loose boolean
    - router-id (ipv4-address | ipv6-address)
    - sid-type keyword
    - sid-value
      - mpls-label number
      - unnumbered-if-id number
  - dynamic
    - path-algorithm keyword
    - te-constraints
      - exclude-hop (ipv4-address-unicast | ipv6-address-unicast-without-local)
      - hop-limit number
      - label-stack-reduction boolean
      - local-sr-protection keyword
      - metric-type keyword
      - secondary-srlg boolean
      - segment-depth
        - segment-limit number
    - explicit-path string
    - failed-reason identityref
    - forwarding-state keyword
    - igp-metric number
    - last-oper-state-change string
    - last-pce-update
      - failure-reason identityref
      - state keyword
      - time string
      - update-id number
    - last-reoptimization-attempt string
    - last-retry-attempt string
    - lsp-id number
  - mbb
    - in-progress-mbb
      - start-time string
      - type keyword
    - last-mbb
      - end-time string
      - failed-reason identityref
      - state keyword
      - type keyword
  - metric number
  - next-reoptimization-attempt string
  - next-retry-attempt string
  - oper-state keyword
  - oper-state-change-count number
  - path-computation-requests number
  - pce-control boolean
  - pce-report boolean

```

```

-   - retry-attempts number
-   - revert-timer number
-   - revert-timer-expiry string
-   - segment-list-preference number
-   - segment-list-type keyword
-   - te-metric number
-   - segment-list-count number
-   - tunnel-id number
- total-te-policies number
- tunnel-table
-   - ipv4
-     - statistics
-       - active-tunnels number
-       - inactive-tunnels number
-       - total-tunnels number
-     - tunnel ipv4-prefix string type identityref owner string id number
-       - encapsulation-type keyword
-       - fib-programming
-         - not-programmed-reason keyword
-         - status keyword
-       - internal-tags string
-       - ip-in-ip
-         - destination-address (ipv4-address | ipv6-address)
-         - source-address (ipv4-address | ipv6-address)
-       - last-app-update string
-       - metric number
-       - next-hop-group reference
-       - preference number
-       - vxlan
-         - destination-address (ipv4-address | ipv6-address)
-         - destination-udp-port number
-         - source-address (ipv4-address | ipv6-address)
-         - time-to-live number
-     - tunnel-summary
-       - tunnel-type type identityref
-       - active-tunnels number
-       - inactive-tunnels number
-       - total-tunnels number
-   - ipv6
-     - statistics
-       - active-tunnels number
-       - inactive-tunnels number
-       - total-tunnels number
-     - tunnel ipv6-prefix string type identityref owner string id number
-       - encapsulation-type keyword
-       - fib-programming
-         - not-programmed-reason keyword
-         - status keyword
-       - internal-tags string
-       - ip-in-ip
-         - destination-address (ipv4-address | ipv6-address)
-         - source-address (ipv4-address | ipv6-address)
-       - last-app-update string
-       - metric number
-       - next-hop-group reference
-       - preference number
-       - vxlan
-         - destination-address (ipv4-address | ipv6-address)
-         - destination-udp-port number
-         - source-address (ipv4-address | ipv6-address)
-         - time-to-live number
-     - tunnel-summary
-       - tunnel-type type identityref
-       - active-tunnels number

```



```
    - inactive-tunnels number
    - total-tunnels number
+ type identityref
- udp
  - listening-application local-address (ipv4-address | ipv6-address) local-port number
  - process-id number
  - statistics
    - ignored-multicast-packets number
    - in-checksum-errors number
    - in-error-packets number
    - in-no-open-ports-packets number
    - in-packets number
    - out-packets number
    - receive-buffer-errors number
    - send-buffer-errors number
+ vlan-interface name string
  - oper-down-reason keyword
  - oper-state keyword
```

6.1 network-instance Descriptions

network-instance *name string*

Description	Network instances configured on the local system
Context	network-instance name string
Tree	network-instance
Configurable	True
Platforms	Supported on all platforms

name *string*

Description	A unique name identifying the network instance
Context	network-instance name string
String Length	1 to 247
Configurable	True
Platforms	Supported on all platforms

admin-state *keyword*

Description	This leaf contains the configured, desired state of the network instance.
Context	network-instance name string admin-state keyword
Tree	admin-state
Default	enable
Options	<ul style="list-style-type: none"> • enable • disable
Configurable	True
Platforms	Supported on all platforms

afts

Description	The abstract forwarding tables (AFTs) that are associated with the network instance
Context	network-instance name string afts
Tree	afts

Configurable	False
Platforms	Supported on all platforms

ipv4-unicast

Description	The abstract forwarding table for IPv4 unicast Entries within this table are uniquely keyed on the IPv4 unicast destination prefix which is matched by ingress packets. The data set represented by the IPv4 Unicast AFT is the set of entries from the IPv4 unicast RIB that have been selected for installation into the FIB of the device exporting the data structure.
Context	network-instance name <i>string</i> afts ipv4-unicast
Tree	ipv4-unicast
Configurable	False
Platforms	Supported on all platforms

ipv4-entry [prefix](#) *string*

Description	List of the IPv4 unicast entries within the abstract forwarding table
Context	network-instance name <i>string</i> afts ipv4-unicast ipv4-entry prefix <i>string</i>
Tree	ipv4-entry
Configurable	False
Platforms	Supported on all platforms

[prefix](#) *string*

Description	The IPv4 destination prefix that should be matched to utilise the AFT entry
Context	network-instance name <i>string</i> afts ipv4-unicast ipv4-entry prefix <i>string</i>
Configurable	False
Platforms	Supported on all platforms

entry-metadata *binary*

Description	Metadata persistently stored with the entry
Context	network-instance name <i>string</i> afts ipv4-unicast ipv4-entry prefix <i>string</i> entry-metadata <i>binary</i>
Tree	entry-metadata

String Length	0 to 8
Configurable	False
Platforms	Supported on all platforms

next-hop-group *reference*

Description	A reference to the next-hop-group that is used for the entry
Context	network-instance name <i>string</i> afts ipv4-unicast ipv4-entry prefix <i>string</i> next-hop-group <i>reference</i>
Tree	next-hop-group
Reference	network-instance name <i>string</i> route-table next-hop-group index <i>number</i>
Configurable	False
Platforms	Supported on all platforms

next-hop-group-network-instance *reference*

Description	The network instance associated with the next-hop-group If unspecified, the next hop group is in the local network instance.
Context	network-instance name <i>string</i> afts ipv4-unicast ipv4-entry prefix <i>string</i> next-hop-group-network-instance <i>reference</i>
Tree	next-hop-group-network-instance
Reference	network-instance name <i>string</i>
Configurable	False
Platforms	Supported on all platforms

origin-network-instance *reference*

Description	The network-instance from which the IPv4 entry was learned if it was leaked from another network-instance If unspecified, the IPv4 entry was not leaked
Context	network-instance name <i>string</i> afts ipv4-unicast ipv4-entry prefix <i>string</i> origin-network-instance <i>reference</i>
Tree	origin-network-instance
Reference	network-instance name <i>string</i>
Configurable	False
Platforms	Supported on all platforms

origin-protocol *identityref*

Description	The protocol that submitted the route for the IPv4 prefix
Context	network-instance name <i>string</i> afts ipv4-unicast ipv4-entry prefix <i>string</i> origin-protocol <i>identityref</i>
Tree	origin-protocol
Options	<ul style="list-style-type: none"> • aggregate Locally configured aggregate route • arp-nd IP route added by ARP ND. • bgp Border Gateway Protocol version 4 • bgp-label Border Gateway Protocol labeled routes • bgp-evpn BGP Ethernet VPN (EVPN) • bgp-ipvpn BGP IP VPN • dhcp IP (default) route added by DHCP. • gribi A gRIBI route • host A host route • isis IS-IS • local A directly connected route • linux IP route added by the linux kernel. • ndk1 Route added by an agent application using the NDK • ndk2 Route added by an agent application using the NDK • ospfv2 OSPFv2

- ospfv3
OSPFv3
- static
Locally configured static route

Configurable	False
Platforms	Supported on all platforms

ipv6-unicast

Description	The abstract forwarding table for IPv6 unicast Entries within this table are uniquely keyed on the IPv6 unicast destination prefix which is matched by ingress packets. The data set represented by the IPv6 Unicast AFT is the set of entries from the IPv6 unicast RIB that have been selected for installation into the FIB of the device exporting the data structure.
Context	network-instance name <i>string</i> afts ipv6-unicast
Tree	ipv6-unicast
Configurable	False
Platforms	Supported on all platforms

ipv6-entry [prefix string](#)

Description	List of the IPv6 unicast entries within the abstract forwarding table
Context	network-instance name <i>string</i> afts ipv6-unicast ipv6-entry prefix string
Tree	ipv6-entry
Configurable	False
Platforms	Supported on all platforms

[prefix string](#)

Description	The IPv6 destination prefix that should be matched to utilise the AFT entry
Context	network-instance name <i>string</i> afts ipv6-unicast ipv6-entry prefix string
Configurable	False
Platforms	Supported on all platforms

entry-metadata *binary*

Description	Metadata persistently stored with the entry
Context	network-instance name <i>string</i> afts ipv6-unicast ipv6-entry prefix <i>string</i> entry-metadata <i>binary</i>
Tree	entry-metadata
String Length	0 to 8
Configurable	False
Platforms	Supported on all platforms

next-hop-group *reference*

Description	A reference to the next-hop-group that is used for the entry
Context	network-instance name <i>string</i> afts ipv6-unicast ipv6-entry prefix <i>string</i> next-hop-group <i>reference</i>
Tree	next-hop-group
Reference	network-instance name <i>string</i> route-table next-hop-group index <i>number</i>
Configurable	False
Platforms	Supported on all platforms

next-hop-group-network-instance *reference*

Description	The network instance associated with the next-hop-group If unspecified, the next hop group is in the local network instance.
Context	network-instance name <i>string</i> afts ipv6-unicast ipv6-entry prefix <i>string</i> next-hop-group-network-instance <i>reference</i>
Tree	next-hop-group-network-instance
Reference	network-instance name <i>string</i>
Configurable	False
Platforms	Supported on all platforms

origin-network-instance *reference*

Description	The network-instance from which the IPv6 entry was learned if it was leaked from another network-instance If unspecified, the IPv6 entry was not leaked
--------------------	--

Context	network-instance name <i>string</i> afts ipv6-unicast ipv6-entry prefix <i>string</i> origin-network-instance <i>reference</i>
Tree	origin-network-instance
Reference	network-instance name <i>string</i>
Configurable	False
Platforms	Supported on all platforms

origin-protocol *identityref*

Description	The protocol that submitted the route for the IPv6 prefix
Context	network-instance name <i>string</i> afts ipv6-unicast ipv6-entry prefix <i>string</i> origin-protocol <i>identityref</i>
Tree	origin-protocol
Options	<ul style="list-style-type: none"> • aggregate Locally configured aggregate route • arp-nd IP route added by ARP ND. • bgp Border Gateway Protocol version 4 • bgp-label Border Gateway Protocol labeled routes • bgp-evpn BGP Ethernet VPN (EVPN) • bgp-ipvpn BGP IP VPN • dhcp IP (default) route added by DHCP. • gribi A gRIBI route • host A host route • isis IS-IS • local A directly connected route • linux

IP route added by the linux kernel.

- ndk1

Route added by an agent application using the NDK

- ndk2

Route added by an agent application using the NDK

- ospfv2

OSPFv2

- ospfv3

OSPFv3

- static

Locally configured static route

Configurable

False

Platforms

Supported on all platforms

aggregate-routes

Description

Enable the aggregate-routes context

Context

[network-instance name](#) *string* [aggregate-routes](#)

Tree

[aggregate-routes](#)

Configurable

True

Platforms

Supported on all platforms

route [prefix](#) (*ipv4-prefix* | *ipv6-prefix*)

Description

Enter the route list instance

Context

[network-instance name](#) *string* [aggregate-routes](#) [route prefix](#) (*ipv4-prefix* | *ipv6-prefix*)

Tree

[route](#)

Configurable

True

Platforms

Supported on all platforms

Max. Elements

16384

[prefix](#) (*ipv4-prefix* | *ipv6-prefix*)

Description

Enter the prefix context

Context	network-instance name <i>string</i> aggregate-routes route prefix (<i>ipv4-prefix ipv6-prefix</i>)
Configurable	True
Platforms	Supported on all platforms

admin-state *keyword*

Description	Administratively enable or disable this aggregate route.
Context	network-instance name <i>string</i> aggregate-routes route prefix (<i>ipv4-prefix ipv6-prefix</i>) admin-state <i>keyword</i>
Tree	admin-state
Default	enable
Options	<ul style="list-style-type: none"> • enable • disable
Configurable	True
Platforms	Supported on all platforms

aggregator

Description	Enter the aggregator context
Context	network-instance name <i>string</i> aggregate-routes route prefix (<i>ipv4-prefix ipv6-prefix</i>) aggregator
Tree	aggregator
Configurable	True
Platforms	Supported on all platforms

address *string*

Description	Specifies the aggregator's IP address.
Context	network-instance name <i>string</i> aggregate-routes route prefix (<i>ipv4-prefix ipv6-prefix</i>) aggregator address <i>string</i>
Tree	address
Configurable	True
Platforms	Supported on all platforms

as-number *number*

Description	Specifies the aggregator's ASN
Context	network-instance name <i>string</i> aggregate-routes route prefix (<i>ipv4-prefix</i> <i>ipv6-prefix</i>) aggregator as-number <i>number</i>
Tree	as-number
Range	1 to 4294967295
Configurable	True
Platforms	Supported on all platforms

communities

Description	Enter the communities context
Context	network-instance name <i>string</i> aggregate-routes route prefix (<i>ipv4-prefix</i> <i>ipv6-prefix</i>) communities
Tree	communities
Configurable	True
Platforms	Supported on all platforms

add (*bgp-std-community-type* | *identityref* | *bgp-large-community-type*)

Description	Enter the add context
Context	network-instance name <i>string</i> aggregate-routes route prefix (<i>ipv4-prefix</i> <i>ipv6-prefix</i>) communities add (<i>bgp-std-community-type</i> <i>identityref</i> <i>bgp-large-community-type</i>)
Tree	add
Options	<ul style="list-style-type: none"> no-export Do not export NLRI received carrying this community outside the bounds of this autonomous system, or this confederation if the local autonomous system is a confederation member AS. This community has a value of 0xFFFFFFFF01. no-advertise All NLRI received carrying this community must not be advertised to other BGP peers. This community has a value of 0xFFFFFFFF02. no-export-subconfed All NLRI received carrying this community must not be advertised to external BGP peers - including over confederation sub-AS boundaries. This community has a value of 0xFFFFFFFF03.

Configurable	True
Platforms	Supported on all platforms
Max. Elements	12

generate-icmp *boolean*

Description	When set to true the router generates ICMP unreachable messages for packets matching the aggregate route (and not a more specific route).
Context	network-instance name <i>string</i> aggregate-routes route prefix (<i>ipv4-prefix</i> <i>ipv6-prefix</i>) generate-icmp <i>boolean</i>
Tree	generate-icmp
Configurable	True
Platforms	Supported on all platforms

installed *boolean*

Description	If set to true, this indicates that the aggregate route was installed into the datapath. If this is false then there are 2 possible reasons: (a) the admin-state is disable (b) there is another IP route for the same prefix that has a superior preference
Context	network-instance name <i>string</i> aggregate-routes route prefix (<i>ipv4-prefix</i> <i>ipv6-prefix</i>) installed <i>boolean</i>
Tree	installed
Configurable	False
Platforms	Supported on all platforms

summary-only *boolean*

Description	When set to true the router blocks the advertisement of all contributing routes of this aggregate route in dynamic protocols such as BGP.
Context	network-instance name <i>string</i> aggregate-routes route prefix (<i>ipv4-prefix</i> <i>ipv6-prefix</i>) summary-only <i>boolean</i>
Tree	summary-only
Default	false
Configurable	True
Platforms	Supported on all platforms

bfd

Description	Container for BFD related network-instance related configuration
Context	network-instance name <i>string</i> bfd
Tree	bfd
Configurable	True
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

seamless-bfd

Description	Container for BFD related network-instance related configuration
Context	network-instance name <i>string</i> bfd seamless-bfd
Tree	seamless-bfd
Configurable	True
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

peer [address](#) (*ipv4-address* | *ipv6-address*)

Description	Enter the peer list instance
Context	network-instance name <i>string</i> bfd seamless-bfd peer address (<i>ipv4-address</i> <i>ipv6-address</i>)
Tree	peer
Configurable	True
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

address (*ipv4-address* | *ipv6-address*)

Description	An IPv4 or IPv6 address of the farend seamless-bfd discriminator binding
Context	network-instance name <i>string</i> bfd seamless-bfd peer address (<i>ipv4-address</i> <i>ipv6-address</i>)
Configurable	True
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

discriminator *number*

Description	Static seamless-BFD discriminator for the farend binding
--------------------	--

Context	network-instance name <i>string</i> bfd seamless-bfd peer address (<i>ipv4-address</i> <i>ipv6-address</i>) discriminator <i>number</i>
Tree	discriminator
Range	524288 to 526335
Configurable	True
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

reflector name *string*

Description	List of seamless BFD reflector instances
Context	network-instance name <i>string</i> bfd seamless-bfd reflector name <i>string</i>
Tree	reflector
Configurable	True
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b
Max. Elements	1

name *string*

Description	A name for the local seamless-bfd reflector agent
Context	network-instance name <i>string</i> bfd seamless-bfd reflector name <i>string</i>
String Length	1 to 255
Configurable	True
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

admin-state *keyword*

Description	Used to administratively enable or disable seamless-bfd reflector
Context	network-instance name <i>string</i> bfd seamless-bfd reflector name <i>string</i> admin-state <i>keyword</i>
Tree	admin-state
Options	<ul style="list-style-type: none"> • enable • disable
Configurable	True
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

description *string*

Description	Description of the seamless-bfd reflector
Context	network-instance name <i>string</i> bfd seamless-bfd reflector name <i>string</i> description <i>string</i>
Tree	description
String Length	1 to 255
Configurable	True
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

local-discriminator *number*

Description	Seamless-BFD discriminator for the local reflector agent
Context	network-instance name <i>string</i> bfd seamless-bfd reflector name <i>string</i> local-discriminator <i>number</i>
Tree	local-discriminator
Range	524288 to 526335
Configurable	True
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

bgp-rib

Description	Container for BGP RIB state
Context	network-instance name <i>string</i> bgp-rib
Tree	bgp-rib
Configurable	False
Platforms	Supported on all platforms

afi-safi [afi-safi-name](#) *identityref*

Description	List of address families with routes in the BGP RIB
Context	network-instance name <i>string</i> bgp-rib afi-safi afi-safi-name <i>identityref</i>
Tree	afi-safi
Configurable	False
Platforms	Supported on all platforms

afi-safi-name *identityref*

Description	The name of the address family
Context	network-instance name <i>string</i> bgp-rib afi-safi afi-safi-name <i>identityref</i>
Options	<ul style="list-style-type: none"> • ipv4-unicast Unlabeled IPv4 unicast routes (AFI = 1, SAFI = 1) • ipv6-unicast Unlabeled IPv6 unicast routes (AFI = 2, SAFI = 1) • l3vpn-ipv4-unicast VPN-IPv4 unicast address family (AFI = 1, SAFI = 128) • l3vpn-ipv6-unicast VPN-IPv6 unicast address family (AFI = 2, SAFI = 128) • ipv4-labeled-unicast Labeled IPv4 unicast routes (AFI 1, SAFI 4) • ipv6-labeled-unicast Labeled IPv6 unicast routes (AFI 2, SAFI 4) • evpn EVPN routes (AFI = 25, SAFI = 70) • route-target Route target constraint routes (AFI 1, SAFI 132) • sr-policy-ipv4 SR-TE Policy (AFI 1, SAFI 73) • sr-policy-ipv6 SR-TE Policy (AFI 2, SAFI 73)
Configurable	False
Platforms	Supported on all platforms

ipv4-labeled-unicast

Description	Container for RIB state of labeled IPv4-unicast routes
Context	network-instance name <i>string</i> bgp-rib afi-safi afi-safi-name <i>identityref</i> ipv4-labeled-unicast
Tree	ipv4-labeled-unicast
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

local-rib

Description	Container for local RIB, containing all imported routes from other protocols plus the post-import-policy version of all label-IPv4 routes learned from all BGP neighbors
Context	network-instance name <i>string</i> bgp-rib afi-safi afi-safi-name identityref ipv4-labeled-unicast local-rib
Tree	local-rib
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

route prefix (*ipv4-prefix* | *ipv6-prefix*) **neighbor** (*ipv4-address-with-zone* | *ipv6-address-with-zone*) [origin-protocol](#) [identityref](#) [path-id](#) *number*

Description	List of label-IPv4 routes in the local RIB
Context	network-instance name <i>string</i> bgp-rib afi-safi afi-safi-name identityref ipv4-labeled-unicast local-rib route prefix (<i>ipv4-prefix</i> <i>ipv6-prefix</i>) neighbor (<i>ipv4-address-with-zone</i> <i>ipv6-address-with-zone</i>) origin-protocol identityref path-id <i>number</i>
Tree	route
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

prefix (*ipv4-prefix* | *ipv6-prefix*)

Description	Enter the prefix context
Context	network-instance name <i>string</i> bgp-rib afi-safi afi-safi-name identityref ipv4-labeled-unicast local-rib route prefix (<i>ipv4-prefix</i> <i>ipv6-prefix</i>) neighbor (<i>ipv4-address-with-zone</i> <i>ipv6-address-with-zone</i>) origin-protocol identityref path-id <i>number</i>
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

neighbor (*ipv4-address-with-zone* | *ipv6-address-with-zone*)

Description	If the route was learned from a BGP neighbor, this is the IPv4 or IPv6 address of that neighbor.
Context	network-instance name <i>string</i> bgp-rib afi-safi afi-safi-name identityref ipv4-labeled-unicast local-rib route prefix (<i>ipv4-prefix</i> <i>ipv6-prefix</i>) neighbor (<i>ipv4-</i>

	<i>address-with-zone</i> <i>ipv6-address-with-zone</i>) <i>origin-protocol</i> <i>identityref</i> <i>path-id</i> <i>number</i>
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

origin-protocol *identityref*

Description	If the route was imported from another protocol, this is the protocol name.
Context	<i>network-instance</i> <i>name</i> <i>string</i> <i>bgp-rib</i> <i>afi-safi</i> <i>afi-safi-name</i> <i>identityref</i> <i>ipv4-labeled-unicast</i> <i>local-rib</i> <i>route</i> <i>prefix</i> (<i>ipv4-prefix</i> <i>ipv6-prefix</i>) <i>neighbor</i> (<i>ipv4-address-with-zone</i> <i>ipv6-address-with-zone</i>) <i>origin-protocol</i> <i>identityref</i> <i>path-id</i> <i>number</i>
Options	<ul style="list-style-type: none"> • aggregate Locally configured aggregate route • arp-nd IP route added by ARP ND. • bgp Border Gateway Protocol version 4 • bgp-label Border Gateway Protocol labeled routes • bgp-evpn BGP Ethernet VPN (EVPN) • bgp-ipvpn BGP IP VPN • dhcp IP (default) route added by DHCP. • gribi A gRIBI route • host A host route • isis IS-IS • local A directly connected route • linux IP route added by the linux kernel. • ndk1

Route added by an agent application using the NDK

- ndk2

Route added by an agent application using the NDK

- ospfv2
OSPFv2
- ospfv3
OSPFv3
- static
Locally configured static route

Configurable

False

Platforms

7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

path-id number

Description

Path identifier of the BGP route

Context

[network-instance name](#) *string* [bgp-rib](#) [afi-safi](#) [afi-safi-name](#) [identityref](#) [ipv4-labeled-unicast](#) [local-rib](#) [route prefix](#) (*ipv4-prefix* | *ipv6-prefix*) [neighbor](#) (*ipv4-address-with-zone* | *ipv6-address-with-zone*) [origin-protocol](#) [identityref](#) [path-id number](#)

Configurable

False

Platforms

7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

attr-id reference

Description

Leaf reference to [networkinstance/bgp-rib/attr-sets/attr-set/index](#)

Context

[network-instance name](#) *string* [bgp-rib](#) [afi-safi](#) [afi-safi-name](#) [identityref](#) [ipv4-labeled-unicast](#) [local-rib](#) [route prefix](#) (*ipv4-prefix* | *ipv6-prefix*) [neighbor](#) (*ipv4-address-with-zone* | *ipv6-address-with-zone*) [origin-protocol](#) [identityref](#) [path-id number](#) [attr-id reference](#)

Tree

[attr-id](#)

Reference

[network-instance name](#) *string* [bgp-rib](#) [attr-sets](#) [attr-set](#) [index](#) *number*

Configurable

False

Platforms

7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

best-route boolean

Description

Set to true if the route is the BGP best path for the prefix.

Context	network-instance name <i>string</i> bgp-rib afi-safi afi-safi-name identityref ipv4-labeled-unicast local-rib route prefix (ipv4-prefix ipv6-prefix) neighbor (ipv4-address-with-zone ipv6-address-with-zone) origin-protocol identityref path-id <i>number</i> best-route <i>boolean</i>
Tree	best-route
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

group-best *boolean*

Description	Set to true if the route is the best BGP route amongst all routes received from one particular neighbor AS
Context	network-instance name <i>string</i> bgp-rib afi-safi afi-safi-name identityref ipv4-labeled-unicast local-rib route prefix (ipv4-prefix ipv6-prefix) neighbor (ipv4-address-with-zone ipv6-address-with-zone) origin-protocol identityref path-id <i>number</i> group-best <i>boolean</i>
Tree	group-best
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

invalid-reason

Description	Enter the invalid-reason context
Context	network-instance name <i>string</i> bgp-rib afi-safi afi-safi-name identityref ipv4-labeled-unicast local-rib route prefix (ipv4-prefix ipv6-prefix) neighbor (ipv4-address-with-zone ipv6-address-with-zone) origin-protocol identityref path-id <i>number</i> invalid-reason
Tree	invalid-reason
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

as-loop *boolean*

Description	Indicates true if the BGP route has an AS path loop that exceeds the configured threshold.
Context	network-instance name <i>string</i> bgp-rib afi-safi afi-safi-name identityref ipv4-labeled-unicast local-rib route prefix (ipv4-prefix ipv6-prefix) neighbor (ipv4-address-with-zone ipv6-address-with-zone) origin-protocol identityref path-id <i>number</i> invalid-reason as-loop <i>boolean</i>
Tree	as-loop

Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

cluster-loop *boolean*

Description	Indicates true if the BGP route has a cluster-list loop.
Context	network-instance name <i>string</i> bgp-rib afi-safi afi-safi-name identityref ipv4-labeled-unicast local-rib route prefix (ipv4-prefix ipv6-prefix) neighbor (ipv4-address-with-zone ipv6-address-with-zone) origin-protocol identityref path-id number invalid-reason cluster-loop <i>boolean</i>
Tree	cluster-loop
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

fib-programming-failed *boolean*

Description	Indicates true if FIB programming failed
Context	network-instance name <i>string</i> bgp-rib afi-safi afi-safi-name identityref ipv4-labeled-unicast local-rib route prefix (ipv4-prefix ipv6-prefix) neighbor (ipv4-address-with-zone ipv6-address-with-zone) origin-protocol identityref path-id number invalid-reason fib-programming-failed <i>boolean</i>
Tree	fib-programming-failed
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

label-allocation-failed *boolean*

Description	Indicates true if dynamic-label-block has no more free labels
Context	network-instance name <i>string</i> bgp-rib afi-safi afi-safi-name identityref ipv4-labeled-unicast local-rib route prefix (ipv4-prefix ipv6-prefix) neighbor (ipv4-address-with-zone ipv6-address-with-zone) origin-protocol identityref path-id number invalid-reason label-allocation-failed <i>boolean</i>
Tree	label-allocation-failed
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

next-hop-unresolved *boolean*

Description	Indicates true if the BGP route has a BGP next-hop that cannot be resolved to an outgoing interface.
Context	network-instance name <i>string</i> bgp-rib afi-safi afi-safi-name identityref ipv4-labeled-unicast local-rib route prefix (ipv4-prefix ipv6-prefix) neighbor (ipv4-address-with-zone ipv6-address-with-zone) origin-protocol identityref path-id number invalid-reason next-hop-unresolved <i>boolean</i>
Tree	next-hop-unresolved
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

rejected-route *boolean*

Description	Indicates true if the route was rejected by an import policy.
Context	network-instance name <i>string</i> bgp-rib afi-safi afi-safi-name identityref ipv4-labeled-unicast local-rib route prefix (ipv4-prefix ipv6-prefix) neighbor (ipv4-address-with-zone ipv6-address-with-zone) origin-protocol identityref path-id number invalid-reason rejected-route <i>boolean</i>
Tree	rejected-route
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

last-modified *string*

Description	Time of the last modification of the route stored in the BGP RIB. For a route learned from a BGP neighbor the initial value is the same as last-updatereceived. If an import policy later changed some attribute of the route last-modified would be updated to reflect the time of this change.
Context	network-instance name <i>string</i> bgp-rib afi-safi afi-safi-name identityref ipv4-labeled-unicast local-rib route prefix (ipv4-prefix ipv6-prefix) neighbor (ipv4-address-with-zone ipv6-address-with-zone) origin-protocol identityref path-id number last-modified <i>string</i>
Tree	last-modified
String Length	20 to 32
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

neighbor-as *number*

Description	The last external AS to advertise the route into the local AS
Context	network-instance name <i>string</i> bgp-rib afi-safi afi-safi-name identityref ipv4-labeled-unicast local-rib route prefix (ipv4-prefix ipv6-prefix) neighbor (ipv4-address-with-zone ipv6-address-with-zone) origin-protocol identityref path-id <i>number</i> neighbor-as <i>number</i>
Tree	neighbor-as
Range	1 to 4294967295
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

pending-delete *boolean*

Description	Set to true if the route is marked for deletion.
Context	network-instance name <i>string</i> bgp-rib afi-safi afi-safi-name identityref ipv4-labeled-unicast local-rib route prefix (ipv4-prefix ipv6-prefix) neighbor (ipv4-address-with-zone ipv6-address-with-zone) origin-protocol identityref path-id <i>number</i> pending-delete <i>boolean</i>
Tree	pending-delete
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

received-mpls-label (*number* | *keyword*)

Description	Received MPLS label value
Context	network-instance name <i>string</i> bgp-rib afi-safi afi-safi-name identityref ipv4-labeled-unicast local-rib route prefix (ipv4-prefix ipv6-prefix) neighbor (ipv4-address-with-zone ipv6-address-with-zone) origin-protocol identityref path-id <i>number</i> received-mpls-label (<i>number</i> <i>keyword</i>)
Tree	received-mpls-label
Range	16 to 1048575
Options	<ul style="list-style-type: none"> • IPV4_EXPLICIT_NULL • IPV6_EXPLICIT_NULL • IMPLICIT_NULL
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b
Max. Elements	1

stale-route *boolean*

Description	Set to true if the route is stale due to BGP graceful restart.
Context	network-instance name <i>string</i> bgp-rib afi-safi afi-safi-name identityref ipv4-labeled-unicast local-rib route prefix (ipv4-prefix ipv6-prefix) neighbor (ipv4-address-with-zone ipv6-address-with-zone) origin-protocol identityref path-id <i>number</i> stale-route <i>boolean</i>
Tree	stale-route
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

tie-break-reason *keyword*

Description	Indicates the reason why a BGP route is sorted behind the next best route. The BGP best path displays a value of 'none'.
Context	network-instance name <i>string</i> bgp-rib afi-safi afi-safi-name identityref ipv4-labeled-unicast local-rib route prefix (ipv4-prefix ipv6-prefix) neighbor (ipv4-address-with-zone ipv6-address-with-zone) origin-protocol identityref path-id <i>number</i> tie-break-reason <i>keyword</i>
Tree	tie-break-reason
Options	<ul style="list-style-type: none"> • unknown • none • origin • as-path-length • next-hop-cost • med • local-pref • aggregate • originator-id • cluster-list • extended-community • aigp • missing-attribute • rtm-pref • owner • eigrp-labeled • vpn-route • ebgp-route

- peer-ip
- local-peer
- multi-path
- vpn-rd
- next-hop-type
- invalid-route
- origin-validation
- long-live-gr-stale
- default-originate
- fib-install-disabled
- peer-router-id
- path-identifier

Configurable

False

Platforms

7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

used-route *boolean***Description**

Indicates true if the route is being used for forwarding.

Context

[network-instance name](#) *string* [bgp-rib](#) [afi-safi](#) [afi-safi-name](#) [identityref](#) [ipv4-labeled-unicast](#) [local-rib](#) [route](#) [prefix](#) ([ipv4-prefix](#) | [ipv6-prefix](#)) [neighbor](#) ([ipv4-address-with-zone](#) | [ipv6-address-with-zone](#)) [origin-protocol](#) [identityref](#) [path-id](#) [number](#) [used-route](#) *boolean*

Tree[used-route](#)**Configurable**

False

Platforms

7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

valid-route *boolean***Description**

Indicates true if the route is valid.

Context

[network-instance name](#) *string* [bgp-rib](#) [afi-safi](#) [afi-safi-name](#) [identityref](#) [ipv4-labeled-unicast](#) [local-rib](#) [route](#) [prefix](#) ([ipv4-prefix](#) | [ipv6-prefix](#)) [neighbor](#) ([ipv4-address-with-zone](#) | [ipv6-address-with-zone](#)) [origin-protocol](#) [identityref](#) [path-id](#) [number](#) [valid-route](#) *boolean*

Tree[valid-route](#)**Configurable**

False

Platforms

7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

rib-in-out

Description	Container for BGP routes learned and advertised to BGP neighbors
Context	network-instance name <i>string</i> bgp-rib afi-safi afi-safi-name identityref ipv4-labeled-unicast rib-in-out
Tree	rib-in-out
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

rib-in-post

Description	Container for the post-import-policy version of BGP routes learned from BGP neighbors
Context	network-instance name <i>string</i> bgp-rib afi-safi afi-safi-name identityref ipv4-labeled-unicast rib-in-out rib-in-post
Tree	rib-in-post
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

route prefix (*ipv4-prefix* | *ipv6-prefix*) **neighbor** (*ipv4-address-with-zone* | *ipv6-address-with-zone*) **path-id** *number*

Description	List of IPv4 routes
Context	network-instance name <i>string</i> bgp-rib afi-safi afi-safi-name identityref ipv4-labeled-unicast rib-in-out rib-in-post route prefix (<i>ipv4-prefix</i> <i>ipv6-prefix</i>) neighbor (<i>ipv4-address-with-zone</i> <i>ipv6-address-with-zone</i>) path-id <i>number</i>
Tree	route
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

prefix (*ipv4-prefix* | *ipv6-prefix*)

Description	Enter the prefix context
Context	network-instance name <i>string</i> bgp-rib afi-safi afi-safi-name identityref ipv4-labeled-unicast rib-in-out rib-in-post route prefix (<i>ipv4-prefix</i> <i>ipv6-prefix</i>) neighbor (<i>ipv4-address-with-zone</i> <i>ipv6-address-with-zone</i>) path-id <i>number</i>
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

neighbor (*ipv4-address-with-zone* | *ipv6-address-with-zone*)

Description	If the route was learned from a BGP neighbor, this is the IPv4 or IPv6 address of that neighbor.
Context	network-instance name <i>string</i> bgp-rib afi-safi afi-safi-name identityref ipv4-labeled-unicast rib-in-out rib-in-post route prefix (<i>ipv4-prefix</i> <i>ipv6-prefix</i>) neighbor (<i>ipv4-address-with-zone</i> <i>ipv6-address-with-zone</i>) path-id <i>number</i>
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

path-id *number*

Description	Path identifier of the BGP route
Context	network-instance name <i>string</i> bgp-rib afi-safi afi-safi-name identityref ipv4-labeled-unicast rib-in-out rib-in-post route prefix (<i>ipv4-prefix</i> <i>ipv6-prefix</i>) neighbor (<i>ipv4-address-with-zone</i> <i>ipv6-address-with-zone</i>) path-id <i>number</i>
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

attr-id *reference*

Description	Leaf reference to networkinstance/protocols/bgp/rib/ attr-sets/attr-set/index
Context	network-instance name <i>string</i> bgp-rib afi-safi afi-safi-name identityref ipv4-labeled-unicast rib-in-out rib-in-post route prefix (<i>ipv4-prefix</i> <i>ipv6-prefix</i>) neighbor (<i>ipv4-address-with-zone</i> <i>ipv6-address-with-zone</i>) path-id <i>number</i> attr-id <i>reference</i>
Tree	attr-id
Reference	network-instance name <i>string</i> bgp-rib attr-sets attr-set index <i>number</i>
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

best-route *boolean*

Description	Set to true if the route is the BGP best path for the prefix.
Context	network-instance name <i>string</i> bgp-rib afi-safi afi-safi-name identityref ipv4-labeled-unicast rib-in-out rib-in-post route prefix (<i>ipv4-prefix</i> <i>ipv6-prefix</i>) neighbor (<i>ipv4-address-with-zone</i> <i>ipv6-address-with-zone</i>) path-id <i>number</i> best-route <i>boolean</i>
Tree	best-route

Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

group-best *boolean*

Description	Set to true if the route is the best BGP route amongst all routes received from one particular neighbor AS
Context	network-instance name <i>string</i> bgp-rib afi-safi afi-safi-name identityref ipv4-labeled-unicast rib-in-out rib-in-post route prefix (ipv4-prefix ipv6-prefix) neighbor (ipv4-address-with-zone ipv6-address-with-zone) path-id number group-best <i>boolean</i>
Tree	group-best
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

internal-tags *string*

Description	Internal route tag written in the route/tunnel tables or BGP rib The internal-tag value is shown with the format 'type-string = hex-value-string'. For example:
Context	network-instance name <i>string</i> bgp-rib afi-safi afi-safi-name identityref ipv4-labeled-unicast rib-in-out rib-in-post route prefix (ipv4-prefix ipv6-prefix) neighbor (ipv4-address-with-zone ipv6-address-with-zone) path-id number internal-tags <i>string</i>
Tree	internal-tags
Configurable	False
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b
Max. Elements	2

invalid-reason

Description	Enter the invalid-reason context
Context	network-instance name <i>string</i> bgp-rib afi-safi afi-safi-name identityref ipv4-labeled-unicast rib-in-out rib-in-post route prefix (ipv4-prefix ipv6-prefix) neighbor (ipv4-address-with-zone ipv6-address-with-zone) path-id number invalid-reason
Tree	invalid-reason
Configurable	False

Platforms 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

as-loop *boolean*

Description Indicates true if the BGP route has an AS path loop that exceeds the configured threshold.

Context [network-instance name](#) *string* [bgp-rib](#) [afi-safi](#) [afi-safi-name](#) [identityref](#) [ipv4-labeled-unicast](#) [rib-in-out](#) [rib-in-post](#) [route](#) [prefix](#) ([ipv4-prefix](#) | [ipv6-prefix](#)) [neighbor](#) ([ipv4-address-with-zone](#) | [ipv6-address-with-zone](#)) [path-id](#) [number](#) [invalid-reason](#) [as-loop](#) *boolean*

Tree [as-loop](#)

Configurable False

Platforms 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

cluster-loop *boolean*

Description Indicates true if the BGP route has a cluster-list loop.

Context [network-instance name](#) *string* [bgp-rib](#) [afi-safi](#) [afi-safi-name](#) [identityref](#) [ipv4-labeled-unicast](#) [rib-in-out](#) [rib-in-post](#) [route](#) [prefix](#) ([ipv4-prefix](#) | [ipv6-prefix](#)) [neighbor](#) ([ipv4-address-with-zone](#) | [ipv6-address-with-zone](#)) [path-id](#) [number](#) [invalid-reason](#) [cluster-loop](#) *boolean*

Tree [cluster-loop](#)

Configurable False

Platforms 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

fib-programming-failed *boolean*

Description Indicates true if FIB programming failed

Context [network-instance name](#) *string* [bgp-rib](#) [afi-safi](#) [afi-safi-name](#) [identityref](#) [ipv4-labeled-unicast](#) [rib-in-out](#) [rib-in-post](#) [route](#) [prefix](#) ([ipv4-prefix](#) | [ipv6-prefix](#)) [neighbor](#) ([ipv4-address-with-zone](#) | [ipv6-address-with-zone](#)) [path-id](#) [number](#) [invalid-reason](#) [fib-programming-failed](#) *boolean*

Tree [fib-programming-failed](#)

Configurable False

Platforms 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

label-allocation-failed *boolean*

Description Indicates true if dynamic-label-block has no more free labels

Context	network-instance name <i>string</i> bgp-rib afi-safi afi-safi-name identityref ipv4-labeled-unicast rib-in-out rib-in-post route prefix (ipv4-prefix ipv6-prefix) neighbor (ipv4-address-with-zone ipv6-address-with-zone) path-id number invalid-reason label-allocation-failed <i>boolean</i>
Tree	label-allocation-failed
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

next-hop-unresolved *boolean*

Description	Indicates true if the BGP route has a BGP next-hop that cannot be resolved to an outgoing interface.
Context	network-instance name <i>string</i> bgp-rib afi-safi afi-safi-name identityref ipv4-labeled-unicast rib-in-out rib-in-post route prefix (ipv4-prefix ipv6-prefix) neighbor (ipv4-address-with-zone ipv6-address-with-zone) path-id number invalid-reason next-hop-unresolved <i>boolean</i>
Tree	next-hop-unresolved
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

rejected-route *boolean*

Description	Indicates true if the route was rejected by an import policy.
Context	network-instance name <i>string</i> bgp-rib afi-safi afi-safi-name identityref ipv4-labeled-unicast rib-in-out rib-in-post route prefix (ipv4-prefix ipv6-prefix) neighbor (ipv4-address-with-zone ipv6-address-with-zone) path-id number invalid-reason rejected-route <i>boolean</i>
Tree	rejected-route
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

last-modified *string*

Description	Time of the last modification of the route stored in the BGP RIB. For a route learned from a BGP neighbor the initial value is the same as last-updatereceived. If an import policy later changed some attribute of the route last-modified would be updated to reflect the time of this change.
Context	network-instance name <i>string</i> bgp-rib afi-safi afi-safi-name identityref ipv4-labeled-unicast rib-in-out rib-in-post route prefix (ipv4-prefix ipv6-prefix) neighbor (ipv4-address-with-zone ipv6-address-with-zone) path-id number last-modified <i>string</i>

Tree	last-modified
String Length	20 to 32
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

neighbor-as *number*

Description	The last external AS to advertise the route into the local AS
Context	network-instance name string bgp-rib afi-safi afi-safi-name identityref ipv4-labeled-unicast rib-in-out rib-in-post route prefix (ipv4-prefix ipv6-prefix) neighbor (ipv4-address-with-zone ipv6-address-with-zone) path-id number neighbor-as <i>number</i>
Tree	neighbor-as
Range	1 to 4294967295
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

pending-delete *boolean*

Description	Set to true if the route is marked for deletion.
Context	network-instance name string bgp-rib afi-safi afi-safi-name identityref ipv4-labeled-unicast rib-in-out rib-in-post route prefix (ipv4-prefix ipv6-prefix) neighbor (ipv4-address-with-zone ipv6-address-with-zone) path-id number pending-delete <i>boolean</i>
Tree	pending-delete
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

received-mpls-label (*number* | *keyword*)

Description	Received MPLS label value
Context	network-instance name string bgp-rib afi-safi afi-safi-name identityref ipv4-labeled-unicast rib-in-out rib-in-post route prefix (ipv4-prefix ipv6-prefix) neighbor (ipv4-address-with-zone ipv6-address-with-zone) path-id number received-mpls-label (<i>number</i> <i>keyword</i>)
Tree	received-mpls-label
Range	16 to 1048575
Options	<ul style="list-style-type: none"> IPV4_EXPLICIT_NULL

	<ul style="list-style-type: none"> IPV6_EXPLICIT_NULL IMPLICIT_NULL
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b
Max. Elements	1

stale-route *boolean*

Description	Set to true if the route is stale due to BGP graceful restart.
Context	network-instance name <i>string</i> bgp-rib afi-safi afi-safi-name identityref ipv4-labeled-unicast rib-in-out rib-in-post route prefix (<i>ipv4-prefix</i> <i>ipv6-prefix</i>) neighbor (<i>ipv4-address-with-zone</i> <i>ipv6-address-with-zone</i>) path-id number stale-route <i>boolean</i>
Tree	stale-route
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

tie-break-reason *keyword*

Description	Indicates the reason why a BGP route is sorted behind the next best route. The BGP best path displays a value of 'none'.
Context	network-instance name <i>string</i> bgp-rib afi-safi afi-safi-name identityref ipv4-labeled-unicast rib-in-out rib-in-post route prefix (<i>ipv4-prefix</i> <i>ipv6-prefix</i>) neighbor (<i>ipv4-address-with-zone</i> <i>ipv6-address-with-zone</i>) path-id number tie-break-reason <i>keyword</i>
Tree	tie-break-reason
Options	<ul style="list-style-type: none"> unknown none origin as-path-length next-hop-cost med local-pref aggregate originator-id cluster-list extended-community aigp

- missing-attribute
- rtm-pref
- owner
- eigrp-labeled
- vpn-route
- ebgp-route
- peer-ip
- local-peer
- multi-path
- vpn-rd
- next-hop-type
- invalid-route
- origin-validation
- long-live-gr-stale
- default-originate
- fib-install-disabled
- peer-router-id
- path-identifier

Configurable

False

Platforms

7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

used-route *boolean***Description**

Indicates true if the route is being used for forwarding.

Context

[network-instance name](#) *string* [bgp-rib](#) [afi-safi](#) [afi-safi-name](#) [identityref](#) [ipv4-labeled-unicast](#) [rib-in-out](#) [rib-in-post](#) [route](#) [prefix](#) ([ipv4-prefix](#) | [ipv6-prefix](#)) [neighbor](#) ([ipv4-address-with-zone](#) | [ipv6-address-with-zone](#)) [path-id](#) [number](#) [used-route](#) *boolean*

Tree[used-route](#)**Configurable**

False

Platforms

7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

valid-route *boolean***Description**

Indicates true if the route is valid.

Context

[network-instance name](#) *string* [bgp-rib](#) [afi-safi](#) [afi-safi-name](#) [identityref](#) [ipv4-labeled-unicast](#) [rib-in-out](#) [rib-in-post](#) [route](#) [prefix](#) ([ipv4-prefix](#) | [ipv6-prefix](#))

	neighbor (<i>ipv4-address-with-zone</i> <i>ipv6-address-with-zone</i>) path-id <i>number</i> valid-route <i>boolean</i>
Tree	valid-route
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

rib-in-pre

Description	Container for the pre-import-policy version of BGP routes learned from BGP neighbors
Context	network-instance name <i>string</i> bgp-rib afi-safi afi-safi-name <i>identityref</i> ipv4-labeled-unicast rib-in-out rib-in-pre
Tree	rib-in-pre
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

route [prefix](#) (*ipv4-prefix* | *ipv6-prefix*) [neighbor](#) (*ipv4-address-with-zone* | *ipv6-address-with-zone*) [path-id](#) *number*

Description	List of IPv4 routes
Context	network-instance name <i>string</i> bgp-rib afi-safi afi-safi-name <i>identityref</i> ipv4-labeled-unicast rib-in-out rib-in-pre route prefix (<i>ipv4-prefix</i> <i>ipv6-prefix</i>) neighbor (<i>ipv4-address-with-zone</i> <i>ipv6-address-with-zone</i>) path-id <i>number</i>
Tree	route
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

prefix (*ipv4-prefix* | *ipv6-prefix*)

Description	Enter the prefix context
Context	network-instance name <i>string</i> bgp-rib afi-safi afi-safi-name <i>identityref</i> ipv4-labeled-unicast rib-in-out rib-in-pre route prefix (<i>ipv4-prefix</i> <i>ipv6-prefix</i>) neighbor (<i>ipv4-address-with-zone</i> <i>ipv6-address-with-zone</i>) path-id <i>number</i>
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

neighbor (*ipv4-address-with-zone* | *ipv6-address-with-zone*)

Description	If the route was learned from a BGP neighbor, this is the IPv4 or IPv6 address of that neighbor.
Context	network-instance name <i>string</i> bgp-rib afi-safi afi-safi-name identityref ipv4-labeled-unicast rib-in-out rib-in-pre route prefix (<i>ipv4-prefix</i> <i>ipv6-prefix</i>) neighbor (<i>ipv4-address-with-zone</i> <i>ipv6-address-with-zone</i>) path-id <i>number</i>
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

path-id *number*

Description	Path identifier of the BGP route
Context	network-instance name <i>string</i> bgp-rib afi-safi afi-safi-name identityref ipv4-labeled-unicast rib-in-out rib-in-pre route prefix (<i>ipv4-prefix</i> <i>ipv6-prefix</i>) neighbor (<i>ipv4-address-with-zone</i> <i>ipv6-address-with-zone</i>) path-id <i>number</i>
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

attr-id *reference*

Description	Leaf reference to networkinstance/protocols/bgp/rib/attr-sets/attr-set/index
Context	network-instance name <i>string</i> bgp-rib afi-safi afi-safi-name identityref ipv4-labeled-unicast rib-in-out rib-in-pre route prefix (<i>ipv4-prefix</i> <i>ipv6-prefix</i>) neighbor (<i>ipv4-address-with-zone</i> <i>ipv6-address-with-zone</i>) path-id <i>number</i> attr-id <i>reference</i>
Tree	attr-id
Reference	network-instance name <i>string</i> bgp-rib attr-sets attr-set index <i>number</i>
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

received-mpls-label (*number* | *keyword*)

Description	Received MPLS label value
Context	network-instance name <i>string</i> bgp-rib afi-safi afi-safi-name identityref ipv4-labeled-unicast rib-in-out rib-in-pre route prefix (<i>ipv4-prefix</i> <i>ipv6-prefix</i>) neighbor (<i>ipv4-address-with-zone</i> <i>ipv6-address-with-zone</i>) path-id <i>number</i> received-mpls-label (<i>number</i> <i>keyword</i>)
Tree	received-mpls-label

Range	16 to 1048575
Options	<ul style="list-style-type: none"> • IPV4_EXPLICIT_NULL • IPV6_EXPLICIT_NULL • IMPLICIT_NULL
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b
Max. Elements	1

rib-out-post

Description	Container for the post-export-policy version of BGP routes advertised to BGP neighbors.
Context	network-instance name <i>string</i> bgp-rib afi-safi afi-safi-name identityref ipv4-labeled-unicast rib-in-out rib-out-post
Tree	rib-out-post
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

route prefix (*ipv4-prefix* | *ipv6-prefix*) neighbor (*ipv4-address-with-zone* | *ipv6-address-with-zone*) path-id number

Description	List of IPv4 routes.
Context	network-instance name <i>string</i> bgp-rib afi-safi afi-safi-name identityref ipv4-labeled-unicast rib-in-out rib-out-post route prefix (<i>ipv4-prefix</i> <i>ipv6-prefix</i>) neighbor (<i>ipv4-address-with-zone</i> <i>ipv6-address-with-zone</i>) path-id number
Tree	route
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

prefix (*ipv4-prefix* | *ipv6-prefix*)

Description	Enter the prefix context
Context	network-instance name <i>string</i> bgp-rib afi-safi afi-safi-name identityref ipv4-labeled-unicast rib-in-out rib-out-post route prefix (<i>ipv4-prefix</i> <i>ipv6-prefix</i>) neighbor (<i>ipv4-address-with-zone</i> <i>ipv6-address-with-zone</i>) path-id number
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

neighbor (*ipv4-address-with-zone* | *ipv6-address-with-zone*)

Description	If the route was learned from a BGP neighbor, this is the IPv4 or IPv6 address of that neighbor.
Context	network-instance name <i>string</i> bgp-rib afi-safi afi-safi-name identityref ipv4-labeled-unicast rib-in-out rib-out-post route prefix (<i>ipv4-prefix</i> <i>ipv6-prefix</i>) neighbor (<i>ipv4-address-with-zone</i> <i>ipv6-address-with-zone</i>) path-id <i>number</i>
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

path-id *number*

Description	Path identifier of the BGP route
Context	network-instance name <i>string</i> bgp-rib afi-safi afi-safi-name identityref ipv4-labeled-unicast rib-in-out rib-out-post route prefix (<i>ipv4-prefix</i> <i>ipv6-prefix</i>) neighbor (<i>ipv4-address-with-zone</i> <i>ipv6-address-with-zone</i>) path-id <i>number</i>
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

advertised-mpls-label (*number* | *keyword*)

Description	Advertised MPLS label value
Context	network-instance name <i>string</i> bgp-rib afi-safi afi-safi-name identityref ipv4-labeled-unicast rib-in-out rib-out-post route prefix (<i>ipv4-prefix</i> <i>ipv6-prefix</i>) neighbor (<i>ipv4-address-with-zone</i> <i>ipv6-address-with-zone</i>) path-id <i>number</i> advertised-mpls-label (<i>number</i> <i>keyword</i>)
Tree	advertised-mpls-label
Range	16 to 1048575
Options	<ul style="list-style-type: none"> • IPV4_EXPLICIT_NULL • IPV6_EXPLICIT_NULL • IMPLICIT_NULL
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b
Max. Elements	1

attr-id *reference*

Description	Leaf reference to networkinstance/protocols/bgp/rib/attr-sets/attr-set/index .
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Context	network-instance name <i>string</i> bgp-rib afi-safi afi-safi-name identityref ipv4-labeled-unicast rib-in-out rib-out-post route prefix (ipv4-prefix ipv6-prefix) neighbor (ipv4-address-with-zone ipv6-address-with-zone) path-id <i>number</i> attr-id <i>reference</i>
Tree	attr-id
Reference	network-instance name <i>string</i> bgp-rib attr-sets attr-set index <i>number</i>
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

ipv4-unicast

Description	Container for RIB state of IPv4-unicast routes
Context	network-instance name <i>string</i> bgp-rib afi-safi afi-safi-name identityref ipv4-unicast
Tree	ipv4-unicast
Configurable	False
Platforms	Supported on all platforms

local-rib

Description	Container for local RIB, containing all imported routes from other protocols plus the post-import-policy version of all IPv4 routes learned from all BGP neighbors
Context	network-instance name <i>string</i> bgp-rib afi-safi afi-safi-name identityref ipv4-unicast local-rib
Tree	local-rib
Configurable	False
Platforms	Supported on all platforms

[route](#) [prefix](#) ([ipv4-prefix](#) | [ipv6-prefix](#)) [neighbor](#) ([ipv4-address-with-zone](#) | [ipv6-address-with-zone](#)) [origin-protocol](#) [identityref](#) [path-id](#) *number*

Description	List of IPv4 routes in the local RIB
Context	network-instance name <i>string</i> bgp-rib afi-safi afi-safi-name identityref ipv4-unicast local-rib route prefix (ipv4-prefix ipv6-prefix) neighbor (ipv4-address-with-zone ipv6-address-with-zone) origin-protocol identityref path-id <i>number</i>
Tree	route
Configurable	False

Platforms Supported on all platforms

prefix (*ipv4-prefix* | *ipv6-prefix*)

Description Enter the prefix context

Context [network-instance name](#) *string* [bgp-rib](#) [afi-safi](#) [afi-safi-name](#) [identityref](#) [ipv4-unicast](#) [local-rib](#) [route](#) [prefix](#) (*ipv4-prefix* | *ipv6-prefix*) [neighbor](#) (*ipv4-address-with-zone* | *ipv6-address-with-zone*) [origin-protocol](#) [identityref](#) [path-id](#) *number*

Configurable False

Platforms Supported on all platforms

neighbor (*ipv4-address-with-zone* | *ipv6-address-with-zone*)

Description If the route was learned from a BGP neighbor, this is the IPv4 or IPv6 address of that neighbor.

Context [network-instance name](#) *string* [bgp-rib](#) [afi-safi](#) [afi-safi-name](#) [identityref](#) [ipv4-unicast](#) [local-rib](#) [route](#) [prefix](#) (*ipv4-prefix* | *ipv6-prefix*) [neighbor](#) (*ipv4-address-with-zone* | *ipv6-address-with-zone*) [origin-protocol](#) [identityref](#) [path-id](#) *number*

Configurable False

Platforms Supported on all platforms

origin-protocol *identityref*

Description If the route was imported from another protocol, this is the protocol name.

Context [network-instance name](#) *string* [bgp-rib](#) [afi-safi](#) [afi-safi-name](#) [identityref](#) [ipv4-unicast](#) [local-rib](#) [route](#) [prefix](#) (*ipv4-prefix* | *ipv6-prefix*) [neighbor](#) (*ipv4-address-with-zone* | *ipv6-address-with-zone*) [origin-protocol](#) [identityref](#) [path-id](#) *number*

Options

- **aggregate**
Locally configured aggregate route
- **arp-nd**
IP route added by ARP ND.
- **bgp**
Border Gateway Protocol version 4
- **bgp-label**
Border Gateway Protocol labeled routes
- **bgp-evpn**
BGP Ethernet VPN (EVPN)
- **bgp-ipvpn**

BGP IP VPN

- dhcp
IP (default) route added by DHCP.
- gribi
A gRIBI route
- host
A host route
- isis
IS-IS
- local
A directly connected route
- linux
IP route added by the linux kernel.
- ndk1
Route added by an agent application using the NDK
- ndk2
Route added by an agent application using the NDK
- ospfv2
OSPFv2
- ospfv3
OSPFv3
- static
Locally configured static route

Configurable

False

Platforms

Supported on all platforms

path-id number**Description**

Path identifier of the BGP route

Context

[network-instance name](#) *string* [bgp-rib](#) [afi-safi](#) [afi-safi-name](#) [identityref](#) [ipv4-unicast](#) [local-rib](#) [route](#) [prefix](#) ([ipv4-prefix](#) | [ipv6-prefix](#)) [neighbor](#) ([ipv4-address-with-zone](#) | [ipv6-address-with-zone](#)) [origin-protocol](#) [identityref](#) [path-id](#) *number*

Configurable

False

Platforms

Supported on all platforms

attr-id reference

Description	Leaf reference to networkinstance/bgp-rib/attr-sets/attr-set/index
Context	network-instance name <i>string</i> bgp-rib afi-safi afi-safi-name identityref ipv4-unicast local-rib route prefix (ipv4-prefix ipv6-prefix) neighbor (ipv4-address-with-zone ipv6-address-with-zone) origin-protocol identityref path-id number attr-id reference
Tree	attr-id
Reference	network-instance name <i>string</i> bgp-rib attr-sets attr-set index number
Configurable	False
Platforms	Supported on all platforms

best-route boolean

Description	Set to true if the route is the BGP best path for the prefix.
Context	network-instance name <i>string</i> bgp-rib afi-safi afi-safi-name identityref ipv4-unicast local-rib route prefix (ipv4-prefix ipv6-prefix) neighbor (ipv4-address-with-zone ipv6-address-with-zone) origin-protocol identityref path-id number best-route boolean
Tree	best-route
Configurable	False
Platforms	Supported on all platforms

group-best boolean

Description	Set to true if the route is the best BGP route amongst all routes received from one particular neighbor AS
Context	network-instance name <i>string</i> bgp-rib afi-safi afi-safi-name identityref ipv4-unicast local-rib route prefix (ipv4-prefix ipv6-prefix) neighbor (ipv4-address-with-zone ipv6-address-with-zone) origin-protocol identityref path-id number group-best boolean
Tree	group-best
Configurable	False
Platforms	Supported on all platforms

invalid-reason

Description	Enter the invalid-reason context
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Context	network-instance name <i>string</i> bgp-rib afi-safi afi-safi-name identityref ipv4-unicast local-rib route prefix (ipv4-prefix ipv6-prefix) neighbor (ipv4-address-with-zone ipv6-address-with-zone) origin-protocol identityref path-id number invalid-reason
Tree	invalid-reason
Configurable	False
Platforms	Supported on all platforms

as-loop *boolean*

Description	Indicates true if the BGP route has an AS path loop that exceeds the configured threshold.
Context	network-instance name <i>string</i> bgp-rib afi-safi afi-safi-name identityref ipv4-unicast local-rib route prefix (ipv4-prefix ipv6-prefix) neighbor (ipv4-address-with-zone ipv6-address-with-zone) origin-protocol identityref path-id number invalid-reason as-loop <i>boolean</i>
Tree	as-loop
Configurable	False
Platforms	Supported on all platforms

cluster-loop *boolean*

Description	Indicates true if the BGP route has a cluster-list loop.
Context	network-instance name <i>string</i> bgp-rib afi-safi afi-safi-name identityref ipv4-unicast local-rib route prefix (ipv4-prefix ipv6-prefix) neighbor (ipv4-address-with-zone ipv6-address-with-zone) origin-protocol identityref path-id number invalid-reason cluster-loop <i>boolean</i>
Tree	cluster-loop
Configurable	False
Platforms	Supported on all platforms

fib-programming-failed *boolean*

Description	Indicates true if FIB programming failed
Context	network-instance name <i>string</i> bgp-rib afi-safi afi-safi-name identityref ipv4-unicast local-rib route prefix (ipv4-prefix ipv6-prefix) neighbor (ipv4-address-with-zone ipv6-address-with-zone) origin-protocol identityref path-id number invalid-reason fib-programming-failed <i>boolean</i>
Tree	fib-programming-failed
Configurable	False

Platforms Supported on all platforms

label-allocation-failed *boolean*

Description Indicates true if dynamic-label-block has no more free labels

Context [network-instance name](#) *string* [bgp-rib](#) [afi-safi](#) [afi-safi-name](#) *identityref* [ipv4-unicast](#) [local-rib](#) [route](#) [prefix](#) (*ipv4-prefix* | *ipv6-prefix*) [neighbor](#) (*ipv4-address-with-zone* | *ipv6-address-with-zone*) [origin-protocol](#) *identityref* [path-id](#) *number* [invalid-reason](#) [label-allocation-failed](#) *boolean*

Tree [label-allocation-failed](#)

Configurable False

Platforms Supported on all platforms

next-hop-unresolved *boolean*

Description Indicates true if the BGP route has a BGP next-hop that cannot be resolved to an outgoing interface.

Context [network-instance name](#) *string* [bgp-rib](#) [afi-safi](#) [afi-safi-name](#) *identityref* [ipv4-unicast](#) [local-rib](#) [route](#) [prefix](#) (*ipv4-prefix* | *ipv6-prefix*) [neighbor](#) (*ipv4-address-with-zone* | *ipv6-address-with-zone*) [origin-protocol](#) *identityref* [path-id](#) *number* [invalid-reason](#) [next-hop-unresolved](#) *boolean*

Tree [next-hop-unresolved](#)

Configurable False

Platforms Supported on all platforms

rejected-route *boolean*

Description Indicates true if the route was rejected by an import policy.

Context [network-instance name](#) *string* [bgp-rib](#) [afi-safi](#) [afi-safi-name](#) *identityref* [ipv4-unicast](#) [local-rib](#) [route](#) [prefix](#) (*ipv4-prefix* | *ipv6-prefix*) [neighbor](#) (*ipv4-address-with-zone* | *ipv6-address-with-zone*) [origin-protocol](#) *identityref* [path-id](#) *number* [invalid-reason](#) [rejected-route](#) *boolean*

Tree [rejected-route](#)

Configurable False

Platforms Supported on all platforms

last-modified *string*

Description	Time of the last modification of the route stored in the BGP RIB. For a route learned from a BGP neighbor the initial value is the same as last-updatereceived. If an import policy later changed some attribute of the route last-modified would be updated to reflect the time of this change.
Context	network-instance name <i>string</i> bgp-rib afi-safi afi-safi-name identityref ipv4-unicast local-rib route prefix (ipv4-prefix ipv6-prefix) neighbor (ipv4-address-with-zone ipv6-address-with-zone) origin-protocol identityref path-id number last-modified <i>string</i>
Tree	last-modified
String Length	20 to 32
Configurable	False
Platforms	Supported on all platforms

neighbor-as *number*

Description	The last external AS to advertise the route into the local AS
Context	network-instance name <i>string</i> bgp-rib afi-safi afi-safi-name identityref ipv4-unicast local-rib route prefix (ipv4-prefix ipv6-prefix) neighbor (ipv4-address-with-zone ipv6-address-with-zone) origin-protocol identityref path-id number neighbor-as <i>number</i>
Tree	neighbor-as
Range	1 to 4294967295
Configurable	False
Platforms	Supported on all platforms

pending-delete *boolean*

Description	Set to true if the route is marked for deletion.
Context	network-instance name <i>string</i> bgp-rib afi-safi afi-safi-name identityref ipv4-unicast local-rib route prefix (ipv4-prefix ipv6-prefix) neighbor (ipv4-address-with-zone ipv6-address-with-zone) origin-protocol identityref path-id number pending-delete <i>boolean</i>
Tree	pending-delete
Configurable	False
Platforms	Supported on all platforms

stale-route *boolean*

Description	Set to true if the route is stale due to BGP graceful restart.
Context	network-instance name <i>string</i> bgp-rib afi-safi afi-safi-name identityref ipv4-unicast local-rib route prefix (ipv4-prefix ipv6-prefix) neighbor (ipv4-address-with-zone ipv6-address-with-zone) origin-protocol identityref path-id number stale-route <i>boolean</i>
Tree	stale-route
Configurable	False
Platforms	Supported on all platforms

tie-break-reason *keyword*

Description	Indicates the reason why a BGP route is sorted behind the next best route. The BGP best path displays a value of 'none'.
Context	network-instance name <i>string</i> bgp-rib afi-safi afi-safi-name identityref ipv4-unicast local-rib route prefix (ipv4-prefix ipv6-prefix) neighbor (ipv4-address-with-zone ipv6-address-with-zone) origin-protocol identityref path-id number tie-break-reason <i>keyword</i>
Tree	tie-break-reason
Options	<ul style="list-style-type: none"> • unknown • none • origin • as-path-length • next-hop-cost • med • local-pref • aggregate • originator-id • cluster-list • extended-community • aigp • missing-attribute • rtm-pref • owner • eigrp-labeled • vpn-route • ebgp-route

- peer-ip
- local-peer
- multi-path
- vpn-rd
- next-hop-type
- invalid-route
- origin-validation
- long-live-gr-stale
- default-originate
- fib-install-disabled
- peer-router-id
- path-identifier

Configurable	False
Platforms	Supported on all platforms

used-route *boolean*

Description	Indicates true if the route is being used for forwarding.
Context	network-instance name <i>string</i> bgp-rib afi-safi afi-safi-name identityref ipv4-unicast local-rib route prefix (ipv4-prefix ipv6-prefix) neighbor (ipv4-address-with-zone ipv6-address-with-zone) origin-protocol identityref path-id number used-route <i>boolean</i>
Tree	used-route
Configurable	False
Platforms	Supported on all platforms

valid-route *boolean*

Description	Indicates true if the route is valid.
Context	network-instance name <i>string</i> bgp-rib afi-safi afi-safi-name identityref ipv4-unicast local-rib route prefix (ipv4-prefix ipv6-prefix) neighbor (ipv4-address-with-zone ipv6-address-with-zone) origin-protocol identityref path-id number valid-route <i>boolean</i>
Tree	valid-route
Configurable	False
Platforms	Supported on all platforms

rib-in-out

Description	Container for BGP routes learned and advertised to BGP neighbors
Context	network-instance name <i>string</i> bgp-rib afi-safi afi-safi-name <i>identityref</i> ipv4-unicast rib-in-out
Tree	rib-in-out
Configurable	False
Platforms	Supported on all platforms

rib-in-post

Description	Container for the post-import-policy version of BGP routes learned from BGP neighbors
Context	network-instance name <i>string</i> bgp-rib afi-safi afi-safi-name <i>identityref</i> ipv4-unicast rib-in-out rib-in-post
Tree	rib-in-post
Configurable	False
Platforms	Supported on all platforms

route prefix (*ipv4-prefix* | *ipv6-prefix*) **neighbor** (*ipv4-address-with-zone* | *ipv6-address-with-zone*) **path-id** *number*

Description	List of IPv4 routes
Context	network-instance name <i>string</i> bgp-rib afi-safi afi-safi-name <i>identityref</i> ipv4-unicast rib-in-out rib-in-post route prefix (<i>ipv4-prefix</i> <i>ipv6-prefix</i>) neighbor (<i>ipv4-address-with-zone</i> <i>ipv6-address-with-zone</i>) path-id <i>number</i>
Tree	route
Configurable	False
Platforms	Supported on all platforms

prefix (*ipv4-prefix* | *ipv6-prefix*)

Description	Enter the prefix context
Context	network-instance name <i>string</i> bgp-rib afi-safi afi-safi-name <i>identityref</i> ipv4-unicast rib-in-out rib-in-post route prefix (<i>ipv4-prefix</i> <i>ipv6-prefix</i>) neighbor (<i>ipv4-address-with-zone</i> <i>ipv6-address-with-zone</i>) path-id <i>number</i>
Configurable	False
Platforms	Supported on all platforms

neighbor (*ipv4-address-with-zone* | *ipv6-address-with-zone*)

Description	If the route was learned from a BGP neighbor, this is the IPv4 or IPv6 address of that neighbor.
Context	network-instance name <i>string</i> bgp-rib afi-safi afi-safi-name identityref ipv4-unicast rib-in-out rib-in-post route prefix (<i>ipv4-prefix</i> <i>ipv6-prefix</i>) neighbor (<i>ipv4-address-with-zone</i> <i>ipv6-address-with-zone</i>) path-id <i>number</i>
Configurable	False
Platforms	Supported on all platforms

path-id *number*

Description	Path identifier of the BGP route
Context	network-instance name <i>string</i> bgp-rib afi-safi afi-safi-name identityref ipv4-unicast rib-in-out rib-in-post route prefix (<i>ipv4-prefix</i> <i>ipv6-prefix</i>) neighbor (<i>ipv4-address-with-zone</i> <i>ipv6-address-with-zone</i>) path-id <i>number</i>
Configurable	False
Platforms	Supported on all platforms

attr-id *reference*

Description	Leaf reference to networkinstance/protocols/bgp/rib/attr-sets/attr-set/index
Context	network-instance name <i>string</i> bgp-rib afi-safi afi-safi-name identityref ipv4-unicast rib-in-out rib-in-post route prefix (<i>ipv4-prefix</i> <i>ipv6-prefix</i>) neighbor (<i>ipv4-address-with-zone</i> <i>ipv6-address-with-zone</i>) path-id <i>number</i> attr-id <i>reference</i>
Tree	attr-id
Reference	network-instance name <i>string</i> bgp-rib attr-sets attr-set index <i>number</i>
Configurable	False
Platforms	Supported on all platforms

best-route *boolean*

Description	Set to true if the route is the BGP best path for the prefix.
Context	network-instance name <i>string</i> bgp-rib afi-safi afi-safi-name identityref ipv4-unicast rib-in-out rib-in-post route prefix (<i>ipv4-prefix</i> <i>ipv6-prefix</i>) neighbor (<i>ipv4-address-with-zone</i> <i>ipv6-address-with-zone</i>) path-id <i>number</i> best-route <i>boolean</i>
Tree	best-route

Configurable	False
Platforms	Supported on all platforms

group-best *boolean*

Description	Set to true if the route is the best BGP route amongst all routes received from one particular neighbor AS
Context	network-instance name <i>string</i> bgp-rib afi-safi afi-safi-name identityref ipv4-unicast rib-in-out rib-in-post route prefix (ipv4-prefix ipv6-prefix) neighbor (ipv4-address-with-zone ipv6-address-with-zone) path-id number group-best <i>boolean</i>
Tree	group-best
Configurable	False
Platforms	Supported on all platforms

internal-tags *string*

Description	Internal route tag written in the route/tunnel tables or BGP rib The internal-tag value is shown with the format 'type-string = hex-value-string'. For example:
Context	network-instance name <i>string</i> bgp-rib afi-safi afi-safi-name identityref ipv4-unicast rib-in-out rib-in-post route prefix (ipv4-prefix ipv6-prefix) neighbor (ipv4-address-with-zone ipv6-address-with-zone) path-id number internal-tags <i>string</i>
Tree	internal-tags
Configurable	False
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b
Max. Elements	2

invalid-reason

Description	Enter the invalid-reason context
Context	network-instance name <i>string</i> bgp-rib afi-safi afi-safi-name identityref ipv4-unicast rib-in-out rib-in-post route prefix (ipv4-prefix ipv6-prefix) neighbor (ipv4-address-with-zone ipv6-address-with-zone) path-id number invalid-reason
Tree	invalid-reason
Configurable	False

Platforms Supported on all platforms

as-loop *boolean*

Description Indicates true if the BGP route has an AS path loop that exceeds the configured threshold.

Context [network-instance name](#) *string* [bgp-rib](#) [afi-safi](#) [afi-safi-name](#) [identityref](#) [ipv4-unicast](#) [rib-in-out](#) [rib-in-post](#) [route](#) [prefix](#) ([ipv4-prefix](#) | [ipv6-prefix](#)) [neighbor](#) ([ipv4-address-with-zone](#) | [ipv6-address-with-zone](#)) [path-id](#) *number* [invalid-reason](#) [as-loop](#) *boolean*

Tree [as-loop](#)

Configurable False

Platforms Supported on all platforms

cluster-loop *boolean*

Description Indicates true if the BGP route has a cluster-list loop.

Context [network-instance name](#) *string* [bgp-rib](#) [afi-safi](#) [afi-safi-name](#) [identityref](#) [ipv4-unicast](#) [rib-in-out](#) [rib-in-post](#) [route](#) [prefix](#) ([ipv4-prefix](#) | [ipv6-prefix](#)) [neighbor](#) ([ipv4-address-with-zone](#) | [ipv6-address-with-zone](#)) [path-id](#) *number* [invalid-reason](#) [cluster-loop](#) *boolean*

Tree [cluster-loop](#)

Configurable False

Platforms Supported on all platforms

fib-programming-failed *boolean*

Description Indicates true if FIB programming failed

Context [network-instance name](#) *string* [bgp-rib](#) [afi-safi](#) [afi-safi-name](#) [identityref](#) [ipv4-unicast](#) [rib-in-out](#) [rib-in-post](#) [route](#) [prefix](#) ([ipv4-prefix](#) | [ipv6-prefix](#)) [neighbor](#) ([ipv4-address-with-zone](#) | [ipv6-address-with-zone](#)) [path-id](#) *number* [invalid-reason](#) [fib-programming-failed](#) *boolean*

Tree [fib-programming-failed](#)

Configurable False

Platforms Supported on all platforms

label-allocation-failed *boolean*

Description Indicates true if dynamic-label-block has no more free labels

Context	network-instance name <i>string</i> bgp-rib afi-safi afi-safi-name identityref ipv4-unicast rib-in-out rib-in-post route prefix (ipv4-prefix ipv6-prefix) neighbor (ipv4-address-with-zone ipv6-address-with-zone) path-id number invalid-reason label-allocation-failed <i>boolean</i>
Tree	label-allocation-failed
Configurable	False
Platforms	Supported on all platforms

next-hop-unresolved *boolean*

Description	Indicates true if the BGP route has a BGP next-hop that cannot be resolved to an outgoing interface.
Context	network-instance name <i>string</i> bgp-rib afi-safi afi-safi-name identityref ipv4-unicast rib-in-out rib-in-post route prefix (ipv4-prefix ipv6-prefix) neighbor (ipv4-address-with-zone ipv6-address-with-zone) path-id number invalid-reason next-hop-unresolved <i>boolean</i>
Tree	next-hop-unresolved
Configurable	False
Platforms	Supported on all platforms

rejected-route *boolean*

Description	Indicates true if the route was rejected by an import policy.
Context	network-instance name <i>string</i> bgp-rib afi-safi afi-safi-name identityref ipv4-unicast rib-in-out rib-in-post route prefix (ipv4-prefix ipv6-prefix) neighbor (ipv4-address-with-zone ipv6-address-with-zone) path-id number invalid-reason rejected-route <i>boolean</i>
Tree	rejected-route
Configurable	False
Platforms	Supported on all platforms

last-modified *string*

Description	Time of the last modification of the route stored in the BGP RIB. For a route learned from a BGP neighbor the initial value is the same as last-updatereceived. If an import policy later changed some attribute of the route last-modified would be updated to reflect the time of this change.
Context	network-instance name <i>string</i> bgp-rib afi-safi afi-safi-name identityref ipv4-unicast rib-in-out rib-in-post route prefix (ipv4-prefix ipv6-prefix) neighbor (ipv4-address-with-zone ipv6-address-with-zone) path-id number last-modified <i>string</i>

Tree	last-modified
String Length	20 to 32
Configurable	False
Platforms	Supported on all platforms

neighbor-as *number*

Description	The last external AS to advertise the route into the local AS
Context	network-instance name string bgp-rib afi-safi afi-safi-name identityref ipv4-unicast rib-in-out rib-in-post route prefix (ipv4-prefix ipv6-prefix) neighbor (ipv4-address-with-zone ipv6-address-with-zone) path-id number neighbor-as number
Tree	neighbor-as
Range	1 to 4294967295
Configurable	False
Platforms	Supported on all platforms

pending-delete *boolean*

Description	Set to true if the route is marked for deletion.
Context	network-instance name string bgp-rib afi-safi afi-safi-name identityref ipv4-unicast rib-in-out rib-in-post route prefix (ipv4-prefix ipv6-prefix) neighbor (ipv4-address-with-zone ipv6-address-with-zone) path-id number pending-delete boolean
Tree	pending-delete
Configurable	False
Platforms	Supported on all platforms

stale-route *boolean*

Description	Set to true if the route is stale due to BGP graceful restart.
Context	network-instance name string bgp-rib afi-safi afi-safi-name identityref ipv4-unicast rib-in-out rib-in-post route prefix (ipv4-prefix ipv6-prefix) neighbor (ipv4-address-with-zone ipv6-address-with-zone) path-id number stale-route boolean
Tree	stale-route
Configurable	False
Platforms	Supported on all platforms

tie-break-reason *keyword*

Description	Indicates the reason why a BGP route is sorted behind the next best route. The BGP best path displays a value of 'none'.
Context	network-instance name <i>string</i> bgp-rib afi-safi afi-safi-name identityref ipv4-unicast rib-in-out rib-in-post route prefix (ipv4-prefix ipv6-prefix) neighbor (ipv4-address-with-zone ipv6-address-with-zone) path-id <i>number</i> tie-break-reason <i>keyword</i>
Tree	tie-break-reason
Options	<ul style="list-style-type: none"> • unknown • none • origin • as-path-length • next-hop-cost • med • local-pref • aggregate • originator-id • cluster-list • extended-community • aigp • missing-attribute • rtm-pref • owner • eigrp-labeled • vpn-route • ebgp-route • peer-ip • local-peer • multi-path • vpn-rd • next-hop-type • invalid-route • origin-validation • long-live-gr-stale • default-originate • fib-install-disabled

- peer-router-id
- path-identifier

Configurable

False

Platforms

Supported on all platforms

used-route *boolean***Description**

Indicates true if the route is being used for forwarding.

Context

[network-instance name](#) *string* [bgp-rib](#) [afi-safi](#) [afi-safi-name](#) [identityref](#) [ipv4-unicast](#) [rib-in-out](#) [rib-in-post](#) [route](#) [prefix](#) ([ipv4-prefix](#) | [ipv6-prefix](#)) [neighbor](#) ([ipv4-address-with-zone](#) | [ipv6-address-with-zone](#)) [path-id](#) [number](#) [used-route](#) *boolean*

Tree[used-route](#)**Configurable**

False

Platforms

Supported on all platforms

valid-route *boolean***Description**

Indicates true if the route is valid.

Context

[network-instance name](#) *string* [bgp-rib](#) [afi-safi](#) [afi-safi-name](#) [identityref](#) [ipv4-unicast](#) [rib-in-out](#) [rib-in-post](#) [route](#) [prefix](#) ([ipv4-prefix](#) | [ipv6-prefix](#)) [neighbor](#) ([ipv4-address-with-zone](#) | [ipv6-address-with-zone](#)) [path-id](#) [number](#) [valid-route](#) *boolean*

Tree[valid-route](#)**Configurable**

False

Platforms

Supported on all platforms

rib-in-pre**Description**

Container for the pre-import-policy version of BGP routes learned from BGP neighbors

Context

[network-instance name](#) *string* [bgp-rib](#) [afi-safi](#) [afi-safi-name](#) [identityref](#) [ipv4-unicast](#) [rib-in-out](#) [rib-in-pre](#)

Tree[rib-in-pre](#)**Configurable**

False

Platforms

Supported on all platforms

route prefix (*ipv4-prefix | ipv6-prefix*) **neighbor** (*ipv4-address-with-zone | ipv6-address-with-zone*) **path-id number**

Description	List of IPv4 routes
Context	network-instance name <i>string</i> bgp-rib afi-safi afi-safi-name identityref ipv4-unicast rib-in-out rib-in-pre route prefix (<i>ipv4-prefix ipv6-prefix</i>) neighbor (<i>ipv4-address-with-zone ipv6-address-with-zone</i>) path-id <i>number</i>
Tree	route
Configurable	False
Platforms	Supported on all platforms

prefix (*ipv4-prefix | ipv6-prefix*)

Description	Enter the prefix context
Context	network-instance name <i>string</i> bgp-rib afi-safi afi-safi-name identityref ipv4-unicast rib-in-out rib-in-pre route prefix (<i>ipv4-prefix ipv6-prefix</i>) neighbor (<i>ipv4-address-with-zone ipv6-address-with-zone</i>) path-id <i>number</i>
Configurable	False
Platforms	Supported on all platforms

neighbor (*ipv4-address-with-zone | ipv6-address-with-zone*)

Description	If the route was learned from a BGP neighbor, this is the IPv4 or IPv6 address of that neighbor.
Context	network-instance name <i>string</i> bgp-rib afi-safi afi-safi-name identityref ipv4-unicast rib-in-out rib-in-pre route prefix (<i>ipv4-prefix ipv6-prefix</i>) neighbor (<i>ipv4-address-with-zone ipv6-address-with-zone</i>) path-id <i>number</i>
Configurable	False
Platforms	Supported on all platforms

path-id number

Description	Path identifier of the BGP route
Context	network-instance name <i>string</i> bgp-rib afi-safi afi-safi-name identityref ipv4-unicast rib-in-out rib-in-pre route prefix (<i>ipv4-prefix ipv6-prefix</i>) neighbor (<i>ipv4-address-with-zone ipv6-address-with-zone</i>) path-id <i>number</i>
Configurable	False
Platforms	Supported on all platforms

attr-id reference

Description	Leaf reference to networkinstance/protocols/bgp/rib/attr-sets/attr-set/index
Context	network-instance name <i>string</i> bgp-rib afi-safi afi-safi-name identityref ipv4-unicast rib-in-out rib-in-pre route prefix (ipv4-prefix ipv6-prefix) neighbor (ipv4-address-with-zone ipv6-address-with-zone) path-id <i>number</i> attr-id <i>reference</i>
Tree	attr-id
Reference	network-instance name <i>string</i> bgp-rib attr-sets attr-set index <i>number</i>
Configurable	False
Platforms	Supported on all platforms

rib-out-post

Description	Container for the post-export-policy version of BGP routes advertised to BGP neighbors
Context	network-instance name <i>string</i> bgp-rib afi-safi afi-safi-name identityref ipv4-unicast rib-in-out rib-out-post
Tree	rib-out-post
Configurable	False
Platforms	Supported on all platforms

route [prefix](#) ([ipv4-prefix](#) | [ipv6-prefix](#)) [neighbor](#) ([ipv4-address-with-zone](#) | [ipv6-address-with-zone](#)) [path-id](#) *number*

Description	List of IPv4 routes
Context	network-instance name <i>string</i> bgp-rib afi-safi afi-safi-name identityref ipv4-unicast rib-in-out rib-out-post route prefix (ipv4-prefix ipv6-prefix) neighbor (ipv4-address-with-zone ipv6-address-with-zone) path-id <i>number</i>
Tree	route
Configurable	False
Platforms	Supported on all platforms

prefix ([ipv4-prefix](#) | [ipv6-prefix](#))

Description	Enter the prefix context
Context	network-instance name <i>string</i> bgp-rib afi-safi afi-safi-name identityref ipv4-unicast rib-in-out rib-out-post route prefix (ipv4-prefix ipv6-prefix) neighbor (ipv4-address-with-zone ipv6-address-with-zone) path-id <i>number</i>

Configurable	False
Platforms	Supported on all platforms

neighbor (*ipv4-address-with-zone* | *ipv6-address-with-zone*)

Description	If the route was learned from a BGP neighbor, this is the IPv4 or IPv6 address of that neighbor.
Context	network-instance name <i>string</i> bgp-rib afi-safi afi-safi-name identityref ipv4-unicast rib-in-out rib-out-post route prefix (<i>ipv4-prefix</i> <i>ipv6-prefix</i>) neighbor (<i>ipv4-address-with-zone</i> <i>ipv6-address-with-zone</i>) path-id <i>number</i>
Configurable	False
Platforms	Supported on all platforms

path-id *number*

Description	Path identifier of the BGP route
Context	network-instance name <i>string</i> bgp-rib afi-safi afi-safi-name identityref ipv4-unicast rib-in-out rib-out-post route prefix (<i>ipv4-prefix</i> <i>ipv6-prefix</i>) neighbor (<i>ipv4-address-with-zone</i> <i>ipv6-address-with-zone</i>) path-id <i>number</i>
Configurable	False
Platforms	Supported on all platforms

attr-id *reference*

Description	Leaf reference to networkinstance/protocols/bgp/rib/ attr-sets/attr-set/index
Context	network-instance name <i>string</i> bgp-rib afi-safi afi-safi-name identityref ipv4-unicast rib-in-out rib-out-post route prefix (<i>ipv4-prefix</i> <i>ipv6-prefix</i>) neighbor (<i>ipv4-address-with-zone</i> <i>ipv6-address-with-zone</i>) path-id <i>number</i> attr-id <i>reference</i>
Tree	attr-id
Reference	network-instance name <i>string</i> bgp-rib attr-sets attr-set index <i>number</i>
Configurable	False
Platforms	Supported on all platforms

ipv6-labeled-unicast

Description	Container for RIB state of labeled IPv6-unicast routes.
Context	network-instance name <i>string</i> bgp-rib afi-safi afi-safi-name identityref ipv6-labeled-unicast

Tree	ipv6-labeled-unicast
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

local-rib

Description	Container for local RIB, containing all imported routes from other protocols plus the post-import-policy version of all label-IPv4 routes learned from all BGP neighbors.
Context	network-instance name <i>string</i> bgp-rib afi-safi afi-safi-name <i>identityref</i> ipv6-labeled-unicast local-rib
Tree	local-rib
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

route prefix (*ipv4-prefix | ipv6-prefix*) **neighbor** (*ipv4-address-with-zone | ipv6-address-with-zone*) [origin-protocol](#) *identityref* [path-id](#) *number*

Description	List of label-IPv6 routes in the local RIB.
Context	network-instance name <i>string</i> bgp-rib afi-safi afi-safi-name <i>identityref</i> ipv6-labeled-unicast local-rib route prefix (<i>ipv4-prefix ipv6-prefix</i>) neighbor (<i>ipv4-address-with-zone ipv6-address-with-zone</i>) origin-protocol <i>identityref</i> path-id <i>number</i>
Tree	route
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

prefix (*ipv4-prefix | ipv6-prefix*)

Description	Enter the prefix context
Context	network-instance name <i>string</i> bgp-rib afi-safi afi-safi-name <i>identityref</i> ipv6-labeled-unicast local-rib route prefix (<i>ipv4-prefix ipv6-prefix</i>) neighbor (<i>ipv4-address-with-zone ipv6-address-with-zone</i>) origin-protocol <i>identityref</i> path-id <i>number</i>
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

neighbor (*ipv4-address-with-zone* | *ipv6-address-with-zone*)

Description	If the route was learned from a BGP neighbor, this is the IPv4 or IPv6 address of that neighbor.
Context	network-instance name <i>string</i> bgp-rib afi-safi afi-safi-name identityref ipv6-labeled-unicast local-rib route prefix (<i>ipv4-prefix</i> <i>ipv6-prefix</i>) neighbor (<i>ipv4-address-with-zone</i> <i>ipv6-address-with-zone</i>) origin-protocol identityref path-id <i>number</i>
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

origin-protocol *identityref*

Description	If the route was imported from another protocol, this is the protocol name.
Context	network-instance name <i>string</i> bgp-rib afi-safi afi-safi-name identityref ipv6-labeled-unicast local-rib route prefix (<i>ipv4-prefix</i> <i>ipv6-prefix</i>) neighbor (<i>ipv4-address-with-zone</i> <i>ipv6-address-with-zone</i>) origin-protocol identityref path-id <i>number</i>
Options	<ul style="list-style-type: none"> • aggregate Locally configured aggregate route • arp-nd IP route added by ARP ND. • bgp Border Gateway Protocol version 4 • bgp-label Border Gateway Protocol labeled routes • bgp-evpn BGP Ethernet VPN (EVPN) • bgp-ipvpn BGP IP VPN • dhcp IP (default) route added by DHCP. • gribi A gRIBI route • host A host route • isis IS-IS

- local
A directly connected route
- linux
IP route added by the linux kernel.
- ndk1
Route added by an agent application using the NDK
- ndk2
Route added by an agent application using the NDK
- ospfv2
OSPFv2
- ospfv3
OSPFv3
- static
Locally configured static route

Configurable

False

Platforms

7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

path-id number**Description**

Path identifier of the BGP route

Context

[network-instance name](#) *string* [bgp-rib](#) [afi-safi](#) [afi-safi-name](#) [identityref](#) [ipv6-labeled-unicast](#) [local-rib](#) [route](#) [prefix](#) (*ipv4-prefix* | *ipv6-prefix*) [neighbor](#) (*ipv4-address-with-zone* | *ipv6-address-with-zone*) [origin-protocol](#) [identityref](#) [path-id number](#)

Configurable

False

Platforms

7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

attr-id reference**Description**

Leaf reference to networkinstance/bgp-rib/attr-sets/attr-set/index

Context

[network-instance name](#) *string* [bgp-rib](#) [afi-safi](#) [afi-safi-name](#) [identityref](#) [ipv6-labeled-unicast](#) [local-rib](#) [route](#) [prefix](#) (*ipv4-prefix* | *ipv6-prefix*) [neighbor](#) (*ipv4-address-with-zone* | *ipv6-address-with-zone*) [origin-protocol](#) [identityref](#) [path-id number](#) [attr-id reference](#)

Tree[attr-id](#)**Reference**[network-instance name](#) *string* [bgp-rib](#) [attr-sets](#) [attr-set](#) [index](#) *number***Configurable**

False

Platforms

7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

best-route *boolean*

Description	Set to true if the route is the BGP best path for the prefix.
Context	network-instance name <i>string</i> bgp-rib afi-safi afi-safi-name identityref ipv6-labeled-unicast local-rib route prefix (ipv4-prefix ipv6-prefix) neighbor (ipv4-address-with-zone ipv6-address-with-zone) origin-protocol identityref path-id <i>number</i> best-route <i>boolean</i>
Tree	best-route
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

group-best *boolean*

Description	Set to true if the route is the best BGP route amongst all routes received from one particular neighbor AS
Context	network-instance name <i>string</i> bgp-rib afi-safi afi-safi-name identityref ipv6-labeled-unicast local-rib route prefix (ipv4-prefix ipv6-prefix) neighbor (ipv4-address-with-zone ipv6-address-with-zone) origin-protocol identityref path-id <i>number</i> group-best <i>boolean</i>
Tree	group-best
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

invalid-reason

Description	Enter the invalid-reason context
Context	network-instance name <i>string</i> bgp-rib afi-safi afi-safi-name identityref ipv6-labeled-unicast local-rib route prefix (ipv4-prefix ipv6-prefix) neighbor (ipv4-address-with-zone ipv6-address-with-zone) origin-protocol identityref path-id <i>number</i> invalid-reason
Tree	invalid-reason
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

as-loop *boolean*

Description	Indicates true if the BGP route has an AS path loop that exceeds the configured threshold.
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Context	network-instance name <i>string</i> bgp-rib afi-safi afi-safi-name identityref ipv6-labeled-unicast local-rib route prefix (ipv4-prefix ipv6-prefix) neighbor (ipv4-address-with-zone ipv6-address-with-zone) origin-protocol identityref path-id number invalid-reason as-loop <i>boolean</i>
Tree	as-loop
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

cluster-loop *boolean*

Description	Indicates true if the BGP route has a cluster-list loop.
Context	network-instance name <i>string</i> bgp-rib afi-safi afi-safi-name identityref ipv6-labeled-unicast local-rib route prefix (ipv4-prefix ipv6-prefix) neighbor (ipv4-address-with-zone ipv6-address-with-zone) origin-protocol identityref path-id number invalid-reason cluster-loop <i>boolean</i>
Tree	cluster-loop
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

fib-programming-failed *boolean*

Description	Indicates true if FIB programming failed
Context	network-instance name <i>string</i> bgp-rib afi-safi afi-safi-name identityref ipv6-labeled-unicast local-rib route prefix (ipv4-prefix ipv6-prefix) neighbor (ipv4-address-with-zone ipv6-address-with-zone) origin-protocol identityref path-id number invalid-reason fib-programming-failed <i>boolean</i>
Tree	fib-programming-failed
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

label-allocation-failed *boolean*

Description	Indicates true if dynamic-label-block has no more free labels
Context	network-instance name <i>string</i> bgp-rib afi-safi afi-safi-name identityref ipv6-labeled-unicast local-rib route prefix (ipv4-prefix ipv6-prefix) neighbor (ipv4-address-with-zone ipv6-address-with-zone) origin-protocol identityref path-id number invalid-reason label-allocation-failed <i>boolean</i>
Tree	label-allocation-failed
Configurable	False

Platforms 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

next-hop-unresolved *boolean*

Description Indicates true if the BGP route has a BGP next-hop that cannot be resolved to an outgoing interface.

Context [network-instance name string](#) [bgp-rib afi-safi afi-safi-name identityref](#) [ipv6-labeled-unicast local-rib route prefix \(ipv4-prefix | ipv6-prefix\)](#) [neighbor \(ipv4-address-with-zone | ipv6-address-with-zone\)](#) [origin-protocol identityref](#) [path-id number invalid-reason next-hop-unresolved boolean](#)

Tree [next-hop-unresolved](#)

Configurable False

Platforms 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

rejected-route *boolean*

Description Indicates true if the route was rejected by an import policy.

Context [network-instance name string](#) [bgp-rib afi-safi afi-safi-name identityref](#) [ipv6-labeled-unicast local-rib route prefix \(ipv4-prefix | ipv6-prefix\)](#) [neighbor \(ipv4-address-with-zone | ipv6-address-with-zone\)](#) [origin-protocol identityref](#) [path-id number invalid-reason rejected-route boolean](#)

Tree [rejected-route](#)

Configurable False

Platforms 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

last-modified *string*

Description Time of the last modification of the route stored in the BGP RIB. For a route learned from a BGP neighbor the initial value is the same as last-updatereceived. If an import policy later changed some attribute of the route last-modified would be updated to reflect the time of this change.

Context [network-instance name string](#) [bgp-rib afi-safi afi-safi-name identityref](#) [ipv6-labeled-unicast local-rib route prefix \(ipv4-prefix | ipv6-prefix\)](#) [neighbor \(ipv4-address-with-zone | ipv6-address-with-zone\)](#) [origin-protocol identityref](#) [path-id number last-modified string](#)

Tree [last-modified](#)

String Length 20 to 32

Configurable False

Platforms 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

neighbor-as *number*

Description	The last external AS to advertise the route into the local AS
Context	network-instance name <i>string</i> bgp-rib afi-safi afi-safi-name identityref ipv6-labeled-unicast local-rib route prefix (ipv4-prefix ipv6-prefix) neighbor (ipv4-address-with-zone ipv6-address-with-zone) origin-protocol identityref path-id <i>number</i> neighbor-as <i>number</i>
Tree	neighbor-as
Range	1 to 4294967295
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

pending-delete *boolean*

Description	Set to true if the route is marked for deletion.
Context	network-instance name <i>string</i> bgp-rib afi-safi afi-safi-name identityref ipv6-labeled-unicast local-rib route prefix (ipv4-prefix ipv6-prefix) neighbor (ipv4-address-with-zone ipv6-address-with-zone) origin-protocol identityref path-id <i>number</i> pending-delete <i>boolean</i>
Tree	pending-delete
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

received-mpls-label (*number* | *keyword*)

Description	Received MPLS label value
Context	network-instance name <i>string</i> bgp-rib afi-safi afi-safi-name identityref ipv6-labeled-unicast local-rib route prefix (ipv4-prefix ipv6-prefix) neighbor (ipv4-address-with-zone ipv6-address-with-zone) origin-protocol identityref path-id <i>number</i> received-mpls-label (<i>number</i> <i>keyword</i>)
Tree	received-mpls-label
Range	16 to 1048575
Options	<ul style="list-style-type: none"> • IPV4_EXPLICIT_NULL • IPV6_EXPLICIT_NULL • IMPLICIT_NULL
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b
Max. Elements	1

stale-route *boolean*

Description	Set to true if the route is stale due to BGP graceful restart.
Context	network-instance name <i>string</i> bgp-rib afi-safi afi-safi-name identityref ipv6-labeled-unicast local-rib route prefix (ipv4-prefix ipv6-prefix) neighbor (ipv4-address-with-zone ipv6-address-with-zone) origin-protocol identityref path-id number stale-route <i>boolean</i>
Tree	stale-route
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

tie-break-reason *keyword*

Description	Indicates the reason why a BGP route is sorted behind the next best route. The BGP best path displays a value of 'none'.
Context	network-instance name <i>string</i> bgp-rib afi-safi afi-safi-name identityref ipv6-labeled-unicast local-rib route prefix (ipv4-prefix ipv6-prefix) neighbor (ipv4-address-with-zone ipv6-address-with-zone) origin-protocol identityref path-id number tie-break-reason <i>keyword</i>
Tree	tie-break-reason
Options	<ul style="list-style-type: none"> • unknown • none • origin • as-path-length • next-hop-cost • med • local-pref • aggregate • originator-id • cluster-list • extended-community • aigp • missing-attribute • rtm-pref • owner • eigrp-labeled • vpn-route • ebgp-route

- peer-ip
- local-peer
- multi-path
- vpn-rd
- next-hop-type
- invalid-route
- origin-validation
- long-live-gr-stale
- default-originate
- fib-install-disabled
- peer-router-id
- path-identifier

Configurable

False

Platforms

7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

used-route *boolean***Description**

Indicates true if the route is being used for forwarding.

Context

[network-instance name](#) *string* [bgp-rib](#) [afi-safi](#) [afi-safi-name](#) [identityref](#) [ipv6-labeled-unicast](#) [local-rib](#) [route](#) [prefix](#) ([ipv4-prefix](#) | [ipv6-prefix](#)) [neighbor](#) ([ipv4-address-with-zone](#) | [ipv6-address-with-zone](#)) [origin-protocol](#) [identityref](#) [path-id](#) [number](#) [used-route](#) *boolean*

Tree[used-route](#)**Configurable**

False

Platforms

7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

valid-route *boolean***Description**

Indicates true if the route is valid.

Context

[network-instance name](#) *string* [bgp-rib](#) [afi-safi](#) [afi-safi-name](#) [identityref](#) [ipv6-labeled-unicast](#) [local-rib](#) [route](#) [prefix](#) ([ipv4-prefix](#) | [ipv6-prefix](#)) [neighbor](#) ([ipv4-address-with-zone](#) | [ipv6-address-with-zone](#)) [origin-protocol](#) [identityref](#) [path-id](#) [number](#) [valid-route](#) *boolean*

Tree[valid-route](#)**Configurable**

False

Platforms

7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

rib-in-out

Description	Container for BGP routes learned and advertised to BGP neighbors.
Context	network-instance name <i>string</i> bgp-rib afi-safi afi-safi-name identityref ipv6-labeled-unicast rib-in-out
Tree	rib-in-out
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

rib-in-post

Description	Container for the post-import-policy version of BGP routes learned from BGP neighbors.
Context	network-instance name <i>string</i> bgp-rib afi-safi afi-safi-name identityref ipv6-labeled-unicast rib-in-out rib-in-post
Tree	rib-in-post
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

route prefix (*ipv4-prefix* | *ipv6-prefix*) **neighbor** (*ipv4-address-with-zone* | *ipv6-address-with-zone*) **path-id** *number*

Description	List of label-IPv6 routes
Context	network-instance name <i>string</i> bgp-rib afi-safi afi-safi-name identityref ipv6-labeled-unicast rib-in-out rib-in-post route prefix (<i>ipv4-prefix</i> <i>ipv6-prefix</i>) neighbor (<i>ipv4-address-with-zone</i> <i>ipv6-address-with-zone</i>) path-id <i>number</i>
Tree	route
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

prefix (*ipv4-prefix* | *ipv6-prefix*)

Description	Enter the prefix context
Context	network-instance name <i>string</i> bgp-rib afi-safi afi-safi-name identityref ipv6-labeled-unicast rib-in-out rib-in-post route prefix (<i>ipv4-prefix</i> <i>ipv6-prefix</i>) neighbor (<i>ipv4-address-with-zone</i> <i>ipv6-address-with-zone</i>) path-id <i>number</i>
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

neighbor (*ipv4-address-with-zone* | *ipv6-address-with-zone*)

Description	If the route was learned from a BGP neighbor, this is the IPv4 or IPv6 address of that neighbor.
Context	network-instance name <i>string</i> bgp-rib afi-safi afi-safi-name identityref ipv6-labeled-unicast rib-in-out rib-in-post route prefix (<i>ipv4-prefix</i> <i>ipv6-prefix</i>) neighbor (<i>ipv4-address-with-zone</i> <i>ipv6-address-with-zone</i>) path-id <i>number</i>
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

path-id *number*

Description	Path identifier of the BGP route
Context	network-instance name <i>string</i> bgp-rib afi-safi afi-safi-name identityref ipv6-labeled-unicast rib-in-out rib-in-post route prefix (<i>ipv4-prefix</i> <i>ipv6-prefix</i>) neighbor (<i>ipv4-address-with-zone</i> <i>ipv6-address-with-zone</i>) path-id <i>number</i>
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

attr-id *reference*

Description	Leaf reference to networkinstance/protocols/bgp/rib/attr-sets/attr-set/index.
Context	network-instance name <i>string</i> bgp-rib afi-safi afi-safi-name identityref ipv6-labeled-unicast rib-in-out rib-in-post route prefix (<i>ipv4-prefix</i> <i>ipv6-prefix</i>) neighbor (<i>ipv4-address-with-zone</i> <i>ipv6-address-with-zone</i>) path-id <i>number</i> attr-id <i>reference</i>
Tree	attr-id
Reference	network-instance name <i>string</i> bgp-rib attr-sets attr-set index <i>number</i>
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

best-route *boolean*

Description	Set to true if the route is the BGP best path for the prefix.
Context	network-instance name <i>string</i> bgp-rib afi-safi afi-safi-name identityref ipv6-labeled-unicast rib-in-out rib-in-post route prefix (<i>ipv4-prefix</i> <i>ipv6-prefix</i>) neighbor (<i>ipv4-address-with-zone</i> <i>ipv6-address-with-zone</i>) path-id <i>number</i> best-route <i>boolean</i>
Tree	best-route

Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

group-best *boolean*

Description	Set to true if the route is the best BGP route amongst all routes received from one particular neighbor AS
Context	network-instance name <i>string</i> bgp-rib afi-safi afi-safi-name identityref ipv6-labeled-unicast rib-in-out rib-in-post route prefix (ipv4-prefix ipv6-prefix) neighbor (ipv4-address-with-zone ipv6-address-with-zone) path-id number group-best <i>boolean</i>
Tree	group-best
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

internal-tags *string*

Description	Internal route tag written in the route/tunnel tables or BGP rib The internal-tag value is shown with the format 'type-string = hex-value-string'. For example:
Context	network-instance name <i>string</i> bgp-rib afi-safi afi-safi-name identityref ipv6-labeled-unicast rib-in-out rib-in-post route prefix (ipv4-prefix ipv6-prefix) neighbor (ipv4-address-with-zone ipv6-address-with-zone) path-id number internal-tags <i>string</i>
Tree	internal-tags
Configurable	False
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b
Max. Elements	2

invalid-reason

Description	Enter the invalid-reason context
Context	network-instance name <i>string</i> bgp-rib afi-safi afi-safi-name identityref ipv6-labeled-unicast rib-in-out rib-in-post route prefix (ipv4-prefix ipv6-prefix) neighbor (ipv4-address-with-zone ipv6-address-with-zone) path-id number invalid-reason
Tree	invalid-reason
Configurable	False

Platforms 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

as-loop *boolean*

Description Indicates true if the BGP route has an AS path loop that exceeds the configured threshold.

Context [network-instance name](#) *string* [bgp-rib](#) [afi-safi](#) [afi-safi-name](#) [identityref](#) [ipv6-labeled-unicast](#) [rib-in-out](#) [rib-in-post](#) [route](#) [prefix](#) ([ipv4-prefix](#) | [ipv6-prefix](#)) [neighbor](#) ([ipv4-address-with-zone](#) | [ipv6-address-with-zone](#)) [path-id](#) [number](#) [invalid-reason](#) [as-loop](#) *boolean*

Tree [as-loop](#)

Configurable False

Platforms 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

cluster-loop *boolean*

Description Indicates true if the BGP route has a cluster-list loop.

Context [network-instance name](#) *string* [bgp-rib](#) [afi-safi](#) [afi-safi-name](#) [identityref](#) [ipv6-labeled-unicast](#) [rib-in-out](#) [rib-in-post](#) [route](#) [prefix](#) ([ipv4-prefix](#) | [ipv6-prefix](#)) [neighbor](#) ([ipv4-address-with-zone](#) | [ipv6-address-with-zone](#)) [path-id](#) [number](#) [invalid-reason](#) [cluster-loop](#) *boolean*

Tree [cluster-loop](#)

Configurable False

Platforms 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

fib-programming-failed *boolean*

Description Indicates true if FIB programming failed

Context [network-instance name](#) *string* [bgp-rib](#) [afi-safi](#) [afi-safi-name](#) [identityref](#) [ipv6-labeled-unicast](#) [rib-in-out](#) [rib-in-post](#) [route](#) [prefix](#) ([ipv4-prefix](#) | [ipv6-prefix](#)) [neighbor](#) ([ipv4-address-with-zone](#) | [ipv6-address-with-zone](#)) [path-id](#) [number](#) [invalid-reason](#) [fib-programming-failed](#) *boolean*

Tree [fib-programming-failed](#)

Configurable False

Platforms 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

label-allocation-failed *boolean*

Description Indicates true if dynamic-label-block has no more free labels

Context	network-instance name <i>string</i> bgp-rib afi-safi afi-safi-name identityref ipv6-labeled-unicast rib-in-out rib-in-post route prefix (ipv4-prefix ipv6-prefix) neighbor (ipv4-address-with-zone ipv6-address-with-zone) path-id <i>number</i> invalid-reason label-allocation-failed <i>boolean</i>
Tree	label-allocation-failed
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

next-hop-unresolved *boolean*

Description	Indicates true if the BGP route has a BGP next-hop that cannot be resolved to an outgoing interface.
Context	network-instance name <i>string</i> bgp-rib afi-safi afi-safi-name identityref ipv6-labeled-unicast rib-in-out rib-in-post route prefix (ipv4-prefix ipv6-prefix) neighbor (ipv4-address-with-zone ipv6-address-with-zone) path-id <i>number</i> invalid-reason next-hop-unresolved <i>boolean</i>
Tree	next-hop-unresolved
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

rejected-route *boolean*

Description	Indicates true if the route was rejected by an import policy.
Context	network-instance name <i>string</i> bgp-rib afi-safi afi-safi-name identityref ipv6-labeled-unicast rib-in-out rib-in-post route prefix (ipv4-prefix ipv6-prefix) neighbor (ipv4-address-with-zone ipv6-address-with-zone) path-id <i>number</i> invalid-reason rejected-route <i>boolean</i>
Tree	rejected-route
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

last-modified *string*

Description	Time of the last modification of the route stored in the BGP RIB. For a route learned from a BGP neighbor the initial value is the same as last-updatereceived. If an import policy later changed some attribute of the route last-modified would be updated to reflect the time of this change.
Context	network-instance name <i>string</i> bgp-rib afi-safi afi-safi-name identityref ipv6-labeled-unicast rib-in-out rib-in-post route prefix (ipv4-prefix ipv6-prefix) neighbor (ipv4-address-with-zone ipv6-address-with-zone) path-id <i>number</i> last-modified <i>string</i>

Tree	last-modified
String Length	20 to 32
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

neighbor-as *number*

Description	The last external AS to advertise the route into the local AS
Context	network-instance name string bgp-rib afi-safi afi-safi-name identityref ipv6-labeled-unicast rib-in-out rib-in-post route prefix (ipv4-prefix ipv6-prefix) neighbor (ipv4-address-with-zone ipv6-address-with-zone) path-id number neighbor-as <i>number</i>
Tree	neighbor-as
Range	1 to 4294967295
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

pending-delete *boolean*

Description	Set to true if the route is marked for deletion.
Context	network-instance name string bgp-rib afi-safi afi-safi-name identityref ipv6-labeled-unicast rib-in-out rib-in-post route prefix (ipv4-prefix ipv6-prefix) neighbor (ipv4-address-with-zone ipv6-address-with-zone) path-id number pending-delete <i>boolean</i>
Tree	pending-delete
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

received-mpls-label (*number* | *keyword*)

Description	Received MPLS label value
Context	network-instance name string bgp-rib afi-safi afi-safi-name identityref ipv6-labeled-unicast rib-in-out rib-in-post route prefix (ipv4-prefix ipv6-prefix) neighbor (ipv4-address-with-zone ipv6-address-with-zone) path-id number received-mpls-label (<i>number</i> <i>keyword</i>)
Tree	received-mpls-label
Range	16 to 1048575
Options	<ul style="list-style-type: none"> • IPV4_EXPLICIT_NULL

	<ul style="list-style-type: none"> IPV6_EXPLICIT_NULL IMPLICIT_NULL
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b
Max. Elements	1

stale-route *boolean*

Description	Set to true if the route is stale due to BGP graceful restart.
Context	network-instance name <i>string</i> bgp-rib afi-safi afi-safi-name identityref ipv6-labeled-unicast rib-in-out rib-in-post route prefix (ipv4-prefix ipv6-prefix) neighbor (ipv4-address-with-zone ipv6-address-with-zone) path-id number stale-route <i>boolean</i>
Tree	stale-route
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

tie-break-reason *keyword*

Description	Indicates the reason why a BGP route is sorted behind the next best route. The BGP best path displays a value of 'none'.
Context	network-instance name <i>string</i> bgp-rib afi-safi afi-safi-name identityref ipv6-labeled-unicast rib-in-out rib-in-post route prefix (ipv4-prefix ipv6-prefix) neighbor (ipv4-address-with-zone ipv6-address-with-zone) path-id number tie-break-reason <i>keyword</i>
Tree	tie-break-reason
Options	<ul style="list-style-type: none"> unknown none origin as-path-length next-hop-cost med local-pref aggregate originator-id cluster-list extended-community aigp

- missing-attribute
- rtm-pref
- owner
- eigrp-labeled
- vpn-route
- ebgp-route
- peer-ip
- local-peer
- multi-path
- vpn-rd
- next-hop-type
- invalid-route
- origin-validation
- long-live-gr-stale
- default-originate
- fib-install-disabled
- peer-router-id
- path-identifier

Configurable

False

Platforms

7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

used-route *boolean***Description**

Indicates true if the route is being used for forwarding.

Context

[network-instance name](#) *string* [bgp-rib](#) [afi-safi](#) [afi-safi-name](#) [identityref](#) [ipv6-labeled-unicast](#) [rib-in-out](#) [rib-in-post](#) [route](#) [prefix](#) ([ipv4-prefix](#) | [ipv6-prefix](#)) [neighbor](#) ([ipv4-address-with-zone](#) | [ipv6-address-with-zone](#)) [path-id](#) [number](#) [used-route](#) *boolean*

Tree[used-route](#)**Configurable**

False

Platforms

7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

valid-route *boolean***Description**

Indicates true if the route is valid.

Context

[network-instance name](#) *string* [bgp-rib](#) [afi-safi](#) [afi-safi-name](#) [identityref](#) [ipv6-labeled-unicast](#) [rib-in-out](#) [rib-in-post](#) [route](#) [prefix](#) ([ipv4-prefix](#) | [ipv6-prefix](#))

	neighbor (<i>ipv4-address-with-zone</i> <i>ipv6-address-with-zone</i>) path-id <i>number</i> valid-route <i>boolean</i>
Tree	valid-route
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

rib-in-pre

Description	Container for the pre-import-policy version of BGP routes learned from BGP neighbors.
Context	network-instance name <i>string</i> bgp-rib afi-safi afi-safi-name <i>identityref</i> ipv6-labeled-unicast rib-in-out rib-in-pre
Tree	rib-in-pre
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

route [prefix](#) (*ipv4-prefix* | *ipv6-prefix*) [neighbor](#) (*ipv4-address-with-zone* | *ipv6-address-with-zone*) [path-id](#) *number*

Description	List of label-IPv6 routes.
Context	network-instance name <i>string</i> bgp-rib afi-safi afi-safi-name <i>identityref</i> ipv6-labeled-unicast rib-in-out rib-in-pre route prefix (<i>ipv4-prefix</i> <i>ipv6-prefix</i>) neighbor (<i>ipv4-address-with-zone</i> <i>ipv6-address-with-zone</i>) path-id <i>number</i>
Tree	route
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

prefix (*ipv4-prefix* | *ipv6-prefix*)

Description	Enter the prefix context
Context	network-instance name <i>string</i> bgp-rib afi-safi afi-safi-name <i>identityref</i> ipv6-labeled-unicast rib-in-out rib-in-pre route prefix (<i>ipv4-prefix</i> <i>ipv6-prefix</i>) neighbor (<i>ipv4-address-with-zone</i> <i>ipv6-address-with-zone</i>) path-id <i>number</i>
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

neighbor (*ipv4-address-with-zone* | *ipv6-address-with-zone*)

Description	If the route was learned from a BGP neighbor, this is the IPv4 or IPv6 address of that neighbor.
Context	network-instance name <i>string</i> bgp-rib afi-safi afi-safi-name identityref ipv6-labeled-unicast rib-in-out rib-in-pre route prefix (<i>ipv4-prefix</i> <i>ipv6-prefix</i>) neighbor (<i>ipv4-address-with-zone</i> <i>ipv6-address-with-zone</i>) path-id <i>number</i>
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

path-id *number*

Description	Path identifier of the BGP route
Context	network-instance name <i>string</i> bgp-rib afi-safi afi-safi-name identityref ipv6-labeled-unicast rib-in-out rib-in-pre route prefix (<i>ipv4-prefix</i> <i>ipv6-prefix</i>) neighbor (<i>ipv4-address-with-zone</i> <i>ipv6-address-with-zone</i>) path-id <i>number</i>
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

attr-id *reference*

Description	Leaf reference to networkinstance/protocols/bgp/rib/attr-sets/attr-set/index.
Context	network-instance name <i>string</i> bgp-rib afi-safi afi-safi-name identityref ipv6-labeled-unicast rib-in-out rib-in-pre route prefix (<i>ipv4-prefix</i> <i>ipv6-prefix</i>) neighbor (<i>ipv4-address-with-zone</i> <i>ipv6-address-with-zone</i>) path-id <i>number</i> attr-id <i>reference</i>
Tree	attr-id
Reference	network-instance name <i>string</i> bgp-rib attr-sets attr-set index <i>number</i>
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

received-mpls-label (*number* | *keyword*)

Description	Received MPLS label value
Context	network-instance name <i>string</i> bgp-rib afi-safi afi-safi-name identityref ipv6-labeled-unicast rib-in-out rib-in-pre route prefix (<i>ipv4-prefix</i> <i>ipv6-prefix</i>) neighbor (<i>ipv4-address-with-zone</i> <i>ipv6-address-with-zone</i>) path-id <i>number</i> received-mpls-label (<i>number</i> <i>keyword</i>)
Tree	received-mpls-label

Range	16 to 1048575
Options	<ul style="list-style-type: none"> • IPV4_EXPLICIT_NULL • IPV6_EXPLICIT_NULL • IMPLICIT_NULL
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b
Max. Elements	1

rib-out-post

Description	Container for the post-export-policy version of BGP routes advertised to BGP neighbors.
Context	network-instance name <i>string</i> bgp-rib afi-safi afi-safi-name identityref ipv6-labeled-unicast rib-in-out rib-out-post
Tree	rib-out-post
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

route prefix (*ipv4-prefix* | *ipv6-prefix*) neighbor (*ipv4-address-with-zone* | *ipv6-address-with-zone*) path-id number

Description	List of label-IPv6 routes.
Context	network-instance name <i>string</i> bgp-rib afi-safi afi-safi-name identityref ipv6-labeled-unicast rib-in-out rib-out-post route prefix (<i>ipv4-prefix</i> <i>ipv6-prefix</i>) neighbor (<i>ipv4-address-with-zone</i> <i>ipv6-address-with-zone</i>) path-id number
Tree	route
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

prefix (*ipv4-prefix* | *ipv6-prefix*)

Description	Enter the prefix context
Context	network-instance name <i>string</i> bgp-rib afi-safi afi-safi-name identityref ipv6-labeled-unicast rib-in-out rib-out-post route prefix (<i>ipv4-prefix</i> <i>ipv6-prefix</i>) neighbor (<i>ipv4-address-with-zone</i> <i>ipv6-address-with-zone</i>) path-id number
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

neighbor (*ipv4-address-with-zone* | *ipv6-address-with-zone*)

Description	If the route was learned from a BGP neighbor, this is the IPv4 or IPv6 address of that neighbor.
Context	network-instance name <i>string</i> bgp-rib afi-safi afi-safi-name identityref ipv6-labeled-unicast rib-in-out rib-out-post route prefix (<i>ipv4-prefix</i> <i>ipv6-prefix</i>) neighbor (<i>ipv4-address-with-zone</i> <i>ipv6-address-with-zone</i>) path-id <i>number</i>
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

path-id *number*

Description	Path identifier of the BGP route
Context	network-instance name <i>string</i> bgp-rib afi-safi afi-safi-name identityref ipv6-labeled-unicast rib-in-out rib-out-post route prefix (<i>ipv4-prefix</i> <i>ipv6-prefix</i>) neighbor (<i>ipv4-address-with-zone</i> <i>ipv6-address-with-zone</i>) path-id <i>number</i>
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

advertised-mpls-label (*number* | *keyword*)

Description	Advertised MPLS label value
Context	network-instance name <i>string</i> bgp-rib afi-safi afi-safi-name identityref ipv6-labeled-unicast rib-in-out rib-out-post route prefix (<i>ipv4-prefix</i> <i>ipv6-prefix</i>) neighbor (<i>ipv4-address-with-zone</i> <i>ipv6-address-with-zone</i>) path-id <i>number</i> advertised-mpls-label (<i>number</i> <i>keyword</i>)
Tree	advertised-mpls-label
Range	16 to 1048575
Options	<ul style="list-style-type: none"> • IPV4_EXPLICIT_NULL • IPV6_EXPLICIT_NULL • IMPLICIT_NULL
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b
Max. Elements	1

attr-id *reference*

Description	Leaf reference to networkinstance/protocols/bgp/rib/attr-sets/attr-set/index .
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Context	network-instance name <i>string</i> bgp-rib afi-safi afi-safi-name identityref ipv6-labeled-unicast rib-in-out rib-out-post route prefix (ipv4-prefix ipv6-prefix) neighbor (ipv4-address-with-zone ipv6-address-with-zone) path-id <i>number</i> attr-id <i>reference</i>
Tree	attr-id
Reference	network-instance name <i>string</i> bgp-rib attr-sets attr-set index <i>number</i>
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

ipv6-unicast

Description	Container for RIB state of IPv6-unicast routes.
Context	network-instance name <i>string</i> bgp-rib afi-safi afi-safi-name identityref ipv6-unicast
Tree	ipv6-unicast
Configurable	False
Platforms	Supported on all platforms

local-rib

Description	Container for local RIB, containing all imported routes from other protocols plus the post-import-policy version of all IPv4 routes learned from all BGP neighbors.
Context	network-instance name <i>string</i> bgp-rib afi-safi afi-safi-name identityref ipv6-unicast local-rib
Tree	local-rib
Configurable	False
Platforms	Supported on all platforms

route [prefix](#) ([ipv4-prefix](#) | [ipv6-prefix](#)) [neighbor](#) ([ipv4-address-with-zone](#) | [ipv6-address-with-zone](#)) [origin-protocol](#) [identityref](#) [path-id](#) *number*

Description	List of IPv6 routes in the local RIB.
Context	network-instance name <i>string</i> bgp-rib afi-safi afi-safi-name identityref ipv6-unicast local-rib route prefix (ipv4-prefix ipv6-prefix) neighbor (ipv4-address-with-zone ipv6-address-with-zone) origin-protocol identityref path-id <i>number</i>
Tree	route
Configurable	False

Platforms Supported on all platforms

prefix (*ipv4-prefix* | *ipv6-prefix*)

Description Enter the prefix context

Context [network-instance name](#) *string* [bgp-rib](#) [afi-safi](#) [afi-safi-name](#) [identityref](#) [ipv6-unicast](#) [local-rib](#) [route](#) [prefix](#) (*ipv4-prefix* | *ipv6-prefix*) [neighbor](#) (*ipv4-address-with-zone* | *ipv6-address-with-zone*) [origin-protocol](#) [identityref](#) [path-id](#) *number*

Configurable False

Platforms Supported on all platforms

neighbor (*ipv4-address-with-zone* | *ipv6-address-with-zone*)

Description If the route was learned from a BGP neighbor, this is the IPv4 or IPv6 address of that neighbor.

Context [network-instance name](#) *string* [bgp-rib](#) [afi-safi](#) [afi-safi-name](#) [identityref](#) [ipv6-unicast](#) [local-rib](#) [route](#) [prefix](#) (*ipv4-prefix* | *ipv6-prefix*) [neighbor](#) (*ipv4-address-with-zone* | *ipv6-address-with-zone*) [origin-protocol](#) [identityref](#) [path-id](#) *number*

Configurable False

Platforms Supported on all platforms

origin-protocol *identityref*

Description If the route was imported from another protocol, this is the protocol name.

Context [network-instance name](#) *string* [bgp-rib](#) [afi-safi](#) [afi-safi-name](#) [identityref](#) [ipv6-unicast](#) [local-rib](#) [route](#) [prefix](#) (*ipv4-prefix* | *ipv6-prefix*) [neighbor](#) (*ipv4-address-with-zone* | *ipv6-address-with-zone*) [origin-protocol](#) [identityref](#) [path-id](#) *number*

Options

- **aggregate**
Locally configured aggregate route
- **arp-nd**
IP route added by ARP ND.
- **bgp**
Border Gateway Protocol version 4
- **bgp-label**
Border Gateway Protocol labeled routes
- **bgp-evpn**
BGP Ethernet VPN (EVPN)
- **bgp-ipvpn**

BGP IP VPN

- dhcp
IP (default) route added by DHCP.
- gribi
A gRIBI route
- host
A host route
- isis
IS-IS
- local
A directly connected route
- linux
IP route added by the linux kernel.
- ndk1
Route added by an agent application using the NDK
- ndk2
Route added by an agent application using the NDK
- ospfv2
OSPFv2
- ospfv3
OSPFv3
- static
Locally configured static route

Configurable

False

Platforms

Supported on all platforms

path-id number**Description**

Path identifier of the BGP route

Context

[network-instance name](#) *string* [bgp-rib](#) [afi-safi](#) [afi-safi-name](#) [identityref](#) [ipv6-unicast](#) [local-rib](#) [route](#) [prefix](#) ([ipv4-prefix](#) | [ipv6-prefix](#)) [neighbor](#) ([ipv4-address-with-zone](#) | [ipv6-address-with-zone](#)) [origin-protocol](#) [identityref](#) [path-id](#) [number](#)

Configurable

False

Platforms

Supported on all platforms

attr-id reference

Description	Leaf reference to networkinstance/protocols/bgp/rib/attr-sets/attr-set/index
Context	network-instance name <i>string</i> bgp-rib afi-safi afi-safi-name identityref ipv6-unicast local-rib route prefix (ipv4-prefix ipv6-prefix) neighbor (ipv4-address-with-zone ipv6-address-with-zone) origin-protocol identityref path-id number attr-id reference
Tree	attr-id
Reference	network-instance name <i>string</i> bgp-rib attr-sets attr-set index number
Configurable	False
Platforms	Supported on all platforms

best-route boolean

Description	Set to true if the route is the BGP best path for the prefix.
Context	network-instance name <i>string</i> bgp-rib afi-safi afi-safi-name identityref ipv6-unicast local-rib route prefix (ipv4-prefix ipv6-prefix) neighbor (ipv4-address-with-zone ipv6-address-with-zone) origin-protocol identityref path-id number best-route boolean
Tree	best-route
Configurable	False
Platforms	Supported on all platforms

group-best boolean

Description	Set to true if the route is the best BGP route amongst all routes received from one particular neighbor AS
Context	network-instance name <i>string</i> bgp-rib afi-safi afi-safi-name identityref ipv6-unicast local-rib route prefix (ipv4-prefix ipv6-prefix) neighbor (ipv4-address-with-zone ipv6-address-with-zone) origin-protocol identityref path-id number group-best boolean
Tree	group-best
Configurable	False
Platforms	Supported on all platforms

invalid-reason

Description	Enter the invalid-reason context
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Context	network-instance name <i>string</i> bgp-rib afi-safi afi-safi-name identityref ipv6-unicast local-rib route prefix (ipv4-prefix ipv6-prefix) neighbor (ipv4-address-with-zone ipv6-address-with-zone) origin-protocol identityref path-id number invalid-reason
Tree	invalid-reason
Configurable	False
Platforms	Supported on all platforms

as-loop *boolean*

Description	Indicates true if the BGP route has an AS path loop that exceeds the configured threshold.
Context	network-instance name <i>string</i> bgp-rib afi-safi afi-safi-name identityref ipv6-unicast local-rib route prefix (ipv4-prefix ipv6-prefix) neighbor (ipv4-address-with-zone ipv6-address-with-zone) origin-protocol identityref path-id number invalid-reason as-loop <i>boolean</i>
Tree	as-loop
Configurable	False
Platforms	Supported on all platforms

cluster-loop *boolean*

Description	Indicates true if the BGP route has a cluster-list loop.
Context	network-instance name <i>string</i> bgp-rib afi-safi afi-safi-name identityref ipv6-unicast local-rib route prefix (ipv4-prefix ipv6-prefix) neighbor (ipv4-address-with-zone ipv6-address-with-zone) origin-protocol identityref path-id number invalid-reason cluster-loop <i>boolean</i>
Tree	cluster-loop
Configurable	False
Platforms	Supported on all platforms

fib-programming-failed *boolean*

Description	Indicates true if FIB programming failed
Context	network-instance name <i>string</i> bgp-rib afi-safi afi-safi-name identityref ipv6-unicast local-rib route prefix (ipv4-prefix ipv6-prefix) neighbor (ipv4-address-with-zone ipv6-address-with-zone) origin-protocol identityref path-id number invalid-reason fib-programming-failed <i>boolean</i>
Tree	fib-programming-failed
Configurable	False

Platforms Supported on all platforms

label-allocation-failed *boolean*

Description Indicates true if dynamic-label-block has no more free labels

Context [network-instance name](#) *string* [bgp-rib](#) [afi-safi](#) [afi-safi-name](#) *identityref* [ipv6-unicast](#) [local-rib](#) [route](#) [prefix](#) (*ipv4-prefix* | *ipv6-prefix*) [neighbor](#) (*ipv4-address-with-zone* | *ipv6-address-with-zone*) [origin-protocol](#) *identityref* [path-id](#) *number* [invalid-reason](#) [label-allocation-failed](#) *boolean*

Tree [label-allocation-failed](#)

Configurable False

Platforms Supported on all platforms

next-hop-unresolved *boolean*

Description Indicates true if the BGP route has a BGP next-hop that cannot be resolved to an outgoing interface.

Context [network-instance name](#) *string* [bgp-rib](#) [afi-safi](#) [afi-safi-name](#) *identityref* [ipv6-unicast](#) [local-rib](#) [route](#) [prefix](#) (*ipv4-prefix* | *ipv6-prefix*) [neighbor](#) (*ipv4-address-with-zone* | *ipv6-address-with-zone*) [origin-protocol](#) *identityref* [path-id](#) *number* [invalid-reason](#) [next-hop-unresolved](#) *boolean*

Tree [next-hop-unresolved](#)

Configurable False

Platforms Supported on all platforms

rejected-route *boolean*

Description Indicates true if the route was rejected by an import policy.

Context [network-instance name](#) *string* [bgp-rib](#) [afi-safi](#) [afi-safi-name](#) *identityref* [ipv6-unicast](#) [local-rib](#) [route](#) [prefix](#) (*ipv4-prefix* | *ipv6-prefix*) [neighbor](#) (*ipv4-address-with-zone* | *ipv6-address-with-zone*) [origin-protocol](#) *identityref* [path-id](#) *number* [invalid-reason](#) [rejected-route](#) *boolean*

Tree [rejected-route](#)

Configurable False

Platforms Supported on all platforms

last-modified *string*

Description	Time of the last modification of the route stored in the BGP RIB. For a route learned from a BGP neighbor the initial value is the same as last-updatereceived. If an import policy later changed some attribute of the route last-modified would be updated to reflect the time of this change.
Context	network-instance name <i>string</i> bgp-rib afi-safi afi-safi-name <i>identityref</i> ipv6-unicast local-rib route prefix (ipv4-prefix ipv6-prefix) neighbor (ipv4-address-with-zone ipv6-address-with-zone) origin-protocol <i>identityref</i> path-id <i>number</i> last-modified <i>string</i>
Tree	last-modified
String Length	20 to 32
Configurable	False
Platforms	Supported on all platforms

neighbor-as *number*

Description	The last external AS to advertise the route into the local AS
Context	network-instance name <i>string</i> bgp-rib afi-safi afi-safi-name <i>identityref</i> ipv6-unicast local-rib route prefix (ipv4-prefix ipv6-prefix) neighbor (ipv4-address-with-zone ipv6-address-with-zone) origin-protocol <i>identityref</i> path-id <i>number</i> neighbor-as <i>number</i>
Tree	neighbor-as
Range	1 to 4294967295
Configurable	False
Platforms	Supported on all platforms

pending-delete *boolean*

Description	Set to true if the route is marked for deletion.
Context	network-instance name <i>string</i> bgp-rib afi-safi afi-safi-name <i>identityref</i> ipv6-unicast local-rib route prefix (ipv4-prefix ipv6-prefix) neighbor (ipv4-address-with-zone ipv6-address-with-zone) origin-protocol <i>identityref</i> path-id <i>number</i> pending-delete <i>boolean</i>
Tree	pending-delete
Configurable	False
Platforms	Supported on all platforms

stale-route *boolean*

Description	Set to true if the route is stale due to BGP graceful restart.
Context	network-instance name <i>string</i> bgp-rib afi-safi afi-safi-name identityref ipv6-unicast local-rib route prefix (ipv4-prefix ipv6-prefix) neighbor (ipv4-address-with-zone ipv6-address-with-zone) origin-protocol identityref path-id <i>number</i> stale-route <i>boolean</i>
Tree	stale-route
Configurable	False
Platforms	Supported on all platforms

tie-break-reason *keyword*

Description	Indicates the reason why a BGP route is sorted behind the next best route. The BGP best path displays a value of 'none'.
Context	network-instance name <i>string</i> bgp-rib afi-safi afi-safi-name identityref ipv6-unicast local-rib route prefix (ipv4-prefix ipv6-prefix) neighbor (ipv4-address-with-zone ipv6-address-with-zone) origin-protocol identityref path-id <i>number</i> tie-break-reason <i>keyword</i>
Tree	tie-break-reason
Options	<ul style="list-style-type: none"> • unknown • none • origin • as-path-length • next-hop-cost • med • local-pref • aggregate • originator-id • cluster-list • extended-community • aigp • missing-attribute • rtm-pref • owner • eigrp-labeled • vpn-route • ebgp-route

- peer-ip
- local-peer
- multi-path
- vpn-rd
- next-hop-type
- invalid-route
- origin-validation
- long-live-gr-stale
- default-originate
- fib-install-disabled
- peer-router-id
- path-identifier

Configurable	False
Platforms	Supported on all platforms

used-route *boolean*

Description	Indicates true if the route is being used for forwarding.
Context	network-instance name <i>string</i> bgp-rib afi-safi afi-safi-name identityref ipv6-unicast local-rib route prefix (ipv4-prefix ipv6-prefix) neighbor (ipv4-address-with-zone ipv6-address-with-zone) origin-protocol identityref path-id number used-route <i>boolean</i>
Tree	used-route
Configurable	False
Platforms	Supported on all platforms

valid-route *boolean*

Description	Indicates true if the route is valid.
Context	network-instance name <i>string</i> bgp-rib afi-safi afi-safi-name identityref ipv6-unicast local-rib route prefix (ipv4-prefix ipv6-prefix) neighbor (ipv4-address-with-zone ipv6-address-with-zone) origin-protocol identityref path-id number valid-route <i>boolean</i>
Tree	valid-route
Configurable	False
Platforms	Supported on all platforms

rib-in-out

Description	Container for BGP routes learned and advertised to BGP neighbors.
Context	network-instance name <i>string</i> bgp-rib afi-safi afi-safi-name identityref ipv6-unicast rib-in-out
Tree	rib-in-out
Configurable	False
Platforms	Supported on all platforms

rib-in-post

Description	Container for the post-import-policy version of BGP routes learned from BGP neighbors.
Context	network-instance name <i>string</i> bgp-rib afi-safi afi-safi-name identityref ipv6-unicast rib-in-out rib-in-post
Tree	rib-in-post
Configurable	False
Platforms	Supported on all platforms

route prefix (*ipv4-prefix* | *ipv6-prefix*) **neighbor** (*ipv4-address-with-zone* | *ipv6-address-with-zone*) **path-id** *number*

Description	List of IPv6 routes
Context	network-instance name <i>string</i> bgp-rib afi-safi afi-safi-name identityref ipv6-unicast rib-in-out rib-in-post route prefix (<i>ipv4-prefix</i> <i>ipv6-prefix</i>) neighbor (<i>ipv4-address-with-zone</i> <i>ipv6-address-with-zone</i>) path-id <i>number</i>
Tree	route
Configurable	False
Platforms	Supported on all platforms

prefix (*ipv4-prefix* | *ipv6-prefix*)

Description	Enter the prefix context
Context	network-instance name <i>string</i> bgp-rib afi-safi afi-safi-name identityref ipv6-unicast rib-in-out rib-in-post route prefix (<i>ipv4-prefix</i> <i>ipv6-prefix</i>) neighbor (<i>ipv4-address-with-zone</i> <i>ipv6-address-with-zone</i>) path-id <i>number</i>
Configurable	False
Platforms	Supported on all platforms

neighbor (*ipv4-address-with-zone* | *ipv6-address-with-zone*)

Description	If the route was learned from a BGP neighbor, this is the IPv4 or IPv6 address of that neighbor.
Context	network-instance name <i>string</i> bgp-rib afi-safi afi-safi-name identityref ipv6-unicast rib-in-out rib-in-post route prefix (<i>ipv4-prefix</i> <i>ipv6-prefix</i>) neighbor (<i>ipv4-address-with-zone</i> <i>ipv6-address-with-zone</i>) path-id <i>number</i>
Configurable	False
Platforms	Supported on all platforms

path-id *number*

Description	Path identifier of the BGP route
Context	network-instance name <i>string</i> bgp-rib afi-safi afi-safi-name identityref ipv6-unicast rib-in-out rib-in-post route prefix (<i>ipv4-prefix</i> <i>ipv6-prefix</i>) neighbor (<i>ipv4-address-with-zone</i> <i>ipv6-address-with-zone</i>) path-id <i>number</i>
Configurable	False
Platforms	Supported on all platforms

attr-id *reference*

Description	Leaf reference to networkinstance/protocols/bgp/rib/attr-sets/attr-set/index.
Context	network-instance name <i>string</i> bgp-rib afi-safi afi-safi-name identityref ipv6-unicast rib-in-out rib-in-post route prefix (<i>ipv4-prefix</i> <i>ipv6-prefix</i>) neighbor (<i>ipv4-address-with-zone</i> <i>ipv6-address-with-zone</i>) path-id <i>number</i> attr-id <i>reference</i>
Tree	attr-id
Reference	network-instance name <i>string</i> bgp-rib attr-sets attr-set index <i>number</i>
Configurable	False
Platforms	Supported on all platforms

best-route *boolean*

Description	Set to true if the route is the BGP best path for the prefix.
Context	network-instance name <i>string</i> bgp-rib afi-safi afi-safi-name identityref ipv6-unicast rib-in-out rib-in-post route prefix (<i>ipv4-prefix</i> <i>ipv6-prefix</i>) neighbor (<i>ipv4-address-with-zone</i> <i>ipv6-address-with-zone</i>) path-id <i>number</i> best-route <i>boolean</i>
Tree	best-route

Configurable	False
Platforms	Supported on all platforms

group-best *boolean*

Description	Set to true if the route is the best BGP route amongst all routes received from one particular neighbor AS
Context	network-instance name <i>string</i> bgp-rib afi-safi afi-safi-name identityref ipv6-unicast rib-in-out rib-in-post route prefix (ipv4-prefix ipv6-prefix) neighbor (ipv4-address-with-zone ipv6-address-with-zone) path-id number group-best <i>boolean</i>
Tree	group-best
Configurable	False
Platforms	Supported on all platforms

internal-tags *string*

Description	Internal route tag written in the route/tunnel tables or BGP rib The internal-tag value is shown with the format 'type-string = hex-value-string'. For example:
Context	network-instance name <i>string</i> bgp-rib afi-safi afi-safi-name identityref ipv6-unicast rib-in-out rib-in-post route prefix (ipv4-prefix ipv6-prefix) neighbor (ipv4-address-with-zone ipv6-address-with-zone) path-id number internal-tags <i>string</i>
Tree	internal-tags
Configurable	False
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b
Max. Elements	2

invalid-reason

Description	Enter the invalid-reason context
Context	network-instance name <i>string</i> bgp-rib afi-safi afi-safi-name identityref ipv6-unicast rib-in-out rib-in-post route prefix (ipv4-prefix ipv6-prefix) neighbor (ipv4-address-with-zone ipv6-address-with-zone) path-id number invalid-reason
Tree	invalid-reason
Configurable	False

Platforms Supported on all platforms

as-loop *boolean*

Description Indicates true if the BGP route has an AS path loop that exceeds the configured threshold.

Context [network-instance name](#) *string* [bgp-rib](#) [afi-safi](#) [afi-safi-name](#) [identityref](#) [ipv6-unicast](#) [rib-in-out](#) [rib-in-post](#) [route](#) [prefix](#) ([ipv4-prefix](#) | [ipv6-prefix](#)) [neighbor](#) ([ipv4-address-with-zone](#) | [ipv6-address-with-zone](#)) [path-id](#) [number](#) [invalid-reason](#) [as-loop](#) *boolean*

Tree [as-loop](#)

Configurable False

Platforms Supported on all platforms

cluster-loop *boolean*

Description Indicates true if the BGP route has a cluster-list loop.

Context [network-instance name](#) *string* [bgp-rib](#) [afi-safi](#) [afi-safi-name](#) [identityref](#) [ipv6-unicast](#) [rib-in-out](#) [rib-in-post](#) [route](#) [prefix](#) ([ipv4-prefix](#) | [ipv6-prefix](#)) [neighbor](#) ([ipv4-address-with-zone](#) | [ipv6-address-with-zone](#)) [path-id](#) [number](#) [invalid-reason](#) [cluster-loop](#) *boolean*

Tree [cluster-loop](#)

Configurable False

Platforms Supported on all platforms

fib-programming-failed *boolean*

Description Indicates true if FIB programming failed

Context [network-instance name](#) *string* [bgp-rib](#) [afi-safi](#) [afi-safi-name](#) [identityref](#) [ipv6-unicast](#) [rib-in-out](#) [rib-in-post](#) [route](#) [prefix](#) ([ipv4-prefix](#) | [ipv6-prefix](#)) [neighbor](#) ([ipv4-address-with-zone](#) | [ipv6-address-with-zone](#)) [path-id](#) [number](#) [invalid-reason](#) [fib-programming-failed](#) *boolean*

Tree [fib-programming-failed](#)

Configurable False

Platforms Supported on all platforms

label-allocation-failed *boolean*

Description Indicates true if dynamic-label-block has no more free labels

Context	network-instance name <i>string</i> bgp-rib afi-safi afi-safi-name identityref ipv6-unicast rib-in-out rib-in-post route prefix (ipv4-prefix ipv6-prefix) neighbor (ipv4-address-with-zone ipv6-address-with-zone) path-id number invalid-reason label-allocation-failed <i>boolean</i>
Tree	label-allocation-failed
Configurable	False
Platforms	Supported on all platforms

next-hop-unresolved *boolean*

Description	Indicates true if the BGP route has a BGP next-hop that cannot be resolved to an outgoing interface.
Context	network-instance name <i>string</i> bgp-rib afi-safi afi-safi-name identityref ipv6-unicast rib-in-out rib-in-post route prefix (ipv4-prefix ipv6-prefix) neighbor (ipv4-address-with-zone ipv6-address-with-zone) path-id number invalid-reason next-hop-unresolved <i>boolean</i>
Tree	next-hop-unresolved
Configurable	False
Platforms	Supported on all platforms

rejected-route *boolean*

Description	Indicates true if the route was rejected by an import policy.
Context	network-instance name <i>string</i> bgp-rib afi-safi afi-safi-name identityref ipv6-unicast rib-in-out rib-in-post route prefix (ipv4-prefix ipv6-prefix) neighbor (ipv4-address-with-zone ipv6-address-with-zone) path-id number invalid-reason rejected-route <i>boolean</i>
Tree	rejected-route
Configurable	False
Platforms	Supported on all platforms

last-modified *string*

Description	Time of the last modification of the route stored in the BGP RIB. For a route learned from a BGP neighbor the initial value is the same as <code>last-updatereceived</code> . If an import policy later changed some attribute of the route <code>last-modified</code> would be updated to reflect the time of this change.
Context	network-instance name <i>string</i> bgp-rib afi-safi afi-safi-name identityref ipv6-unicast rib-in-out rib-in-post route prefix (ipv4-prefix ipv6-prefix) neighbor (ipv4-address-with-zone ipv6-address-with-zone) path-id number last-modified <i>string</i>

Tree	last-modified
String Length	20 to 32
Configurable	False
Platforms	Supported on all platforms

neighbor-as *number*

Description	The last external AS to advertise the route into the local AS
Context	network-instance name string bgp-rib afi-safi afi-safi-name identityref ipv6-unicast rib-in-out rib-in-post route prefix (ipv4-prefix ipv6-prefix) neighbor (ipv4-address-with-zone ipv6-address-with-zone) path-id number neighbor-as number
Tree	neighbor-as
Range	1 to 4294967295
Configurable	False
Platforms	Supported on all platforms

pending-delete *boolean*

Description	Set to true if the route is marked for deletion.
Context	network-instance name string bgp-rib afi-safi afi-safi-name identityref ipv6-unicast rib-in-out rib-in-post route prefix (ipv4-prefix ipv6-prefix) neighbor (ipv4-address-with-zone ipv6-address-with-zone) path-id number pending-delete boolean
Tree	pending-delete
Configurable	False
Platforms	Supported on all platforms

stale-route *boolean*

Description	Set to true if the route is stale due to BGP graceful restart.
Context	network-instance name string bgp-rib afi-safi afi-safi-name identityref ipv6-unicast rib-in-out rib-in-post route prefix (ipv4-prefix ipv6-prefix) neighbor (ipv4-address-with-zone ipv6-address-with-zone) path-id number stale-route boolean
Tree	stale-route
Configurable	False
Platforms	Supported on all platforms

tie-break-reason keyword

Description	Indicates the reason why a BGP route is sorted behind the next best route. The BGP best path displays a value of 'none'.
Context	network-instance name <i>string</i> bgp-rib afi-safi afi-safi-name identityref ipv6-unicast rib-in-out rib-in-post route prefix (ipv4-prefix ipv6-prefix) neighbor (ipv4-address-with-zone ipv6-address-with-zone) path-id <i>number</i> tie-break-reason <i>keyword</i>
Tree	tie-break-reason
Options	<ul style="list-style-type: none">• unknown• none• origin• as-path-length• next-hop-cost• med• local-pref• aggregate• originator-id• cluster-list• extended-community• aigp• missing-attribute• rtm-pref• owner• eigrp-labeled• vpn-route• ebgp-route• peer-ip• local-peer• multi-path• vpn-rd• next-hop-type• invalid-route• origin-validation• long-live-gr-stale• default-originate• fib-install-disabled

	<ul style="list-style-type: none"> peer-router-id path-identifier
Configurable	False
Platforms	Supported on all platforms

used-route *boolean*

Description	Indicates true if the route is being used for forwarding.
Context	network-instance name <i>string</i> bgp-rib afi-safi afi-safi-name identityref ipv6-unicast rib-in-out rib-in-post route prefix (ipv4-prefix ipv6-prefix) neighbor (ipv4-address-with-zone ipv6-address-with-zone) path-id <i>number</i> used-route <i>boolean</i>
Tree	used-route
Configurable	False
Platforms	Supported on all platforms

valid-route *boolean*

Description	Indicates true if the route is valid.
Context	network-instance name <i>string</i> bgp-rib afi-safi afi-safi-name identityref ipv6-unicast rib-in-out rib-in-post route prefix (ipv4-prefix ipv6-prefix) neighbor (ipv4-address-with-zone ipv6-address-with-zone) path-id <i>number</i> valid-route <i>boolean</i>
Tree	valid-route
Configurable	False
Platforms	Supported on all platforms

rib-in-pre

Description	Container for the pre-import-policy version of BGP routes learned from BGP neighbors.
Context	network-instance name <i>string</i> bgp-rib afi-safi afi-safi-name identityref ipv6-unicast rib-in-out rib-in-pre
Tree	rib-in-pre
Configurable	False
Platforms	Supported on all platforms

route prefix (*ipv4-prefix* | *ipv6-prefix*) **neighbor** (*ipv4-address-with-zone* | *ipv6-address-with-zone*) **path-id** *number*

Description	List of IPv6 routes.
Context	network-instance name <i>string</i> bgp-rib afi-safi afi-safi-name identityref ipv6-unicast rib-in-out rib-in-pre route prefix (<i>ipv4-prefix</i> <i>ipv6-prefix</i>) neighbor (<i>ipv4-address-with-zone</i> <i>ipv6-address-with-zone</i>) path-id <i>number</i>
Tree	route
Configurable	False
Platforms	Supported on all platforms

prefix (*ipv4-prefix* | *ipv6-prefix*)

Description	Enter the prefix context
Context	network-instance name <i>string</i> bgp-rib afi-safi afi-safi-name identityref ipv6-unicast rib-in-out rib-in-pre route prefix (<i>ipv4-prefix</i> <i>ipv6-prefix</i>) neighbor (<i>ipv4-address-with-zone</i> <i>ipv6-address-with-zone</i>) path-id <i>number</i>
Configurable	False
Platforms	Supported on all platforms

neighbor (*ipv4-address-with-zone* | *ipv6-address-with-zone*)

Description	If the route was learned from a BGP neighbor, this is the IPv4 or IPv6 address of that neighbor.
Context	network-instance name <i>string</i> bgp-rib afi-safi afi-safi-name identityref ipv6-unicast rib-in-out rib-in-pre route prefix (<i>ipv4-prefix</i> <i>ipv6-prefix</i>) neighbor (<i>ipv4-address-with-zone</i> <i>ipv6-address-with-zone</i>) path-id <i>number</i>
Configurable	False
Platforms	Supported on all platforms

path-id *number*

Description	Path identifier of the BGP route
Context	network-instance name <i>string</i> bgp-rib afi-safi afi-safi-name identityref ipv6-unicast rib-in-out rib-in-pre route prefix (<i>ipv4-prefix</i> <i>ipv6-prefix</i>) neighbor (<i>ipv4-address-with-zone</i> <i>ipv6-address-with-zone</i>) path-id <i>number</i>
Configurable	False
Platforms	Supported on all platforms

attr-id reference

Description	Leaf reference to networkinstance/protocols/bgp/rib/attr-sets/attr-set/index.
Context	network-instance name <i>string</i> bgp-rib afi-safi afi-safi-name identityref ipv6-unicast rib-in-out rib-in-pre route prefix (ipv4-prefix ipv6-prefix) neighbor (ipv4-address-with-zone ipv6-address-with-zone) path-id <i>number</i> attr-id reference
Tree	attr-id
Reference	network-instance name <i>string</i> bgp-rib attr-sets attr-set index <i>number</i>
Configurable	False
Platforms	Supported on all platforms

rib-out-post

Description	Container for the post-export-policy version of BGP routes advertised to BGP neighbors.
Context	network-instance name <i>string</i> bgp-rib afi-safi afi-safi-name identityref ipv6-unicast rib-in-out rib-out-post
Tree	rib-out-post
Configurable	False
Platforms	Supported on all platforms

route prefix ([ipv4-prefix](#) | [ipv6-prefix](#)) **neighbor** ([ipv4-address-with-zone](#) | [ipv6-address-with-zone](#)) [path-id](#) *number*

Description	List of IPv6 routes.
Context	network-instance name <i>string</i> bgp-rib afi-safi afi-safi-name identityref ipv6-unicast rib-in-out rib-out-post route prefix (ipv4-prefix ipv6-prefix) neighbor (ipv4-address-with-zone ipv6-address-with-zone) path-id <i>number</i>
Tree	route
Configurable	False
Platforms	Supported on all platforms

prefix ([ipv4-prefix](#) | [ipv6-prefix](#))

Description	Enter the prefix context
Context	network-instance name <i>string</i> bgp-rib afi-safi afi-safi-name identityref ipv6-unicast rib-in-out rib-out-post route prefix (ipv4-prefix ipv6-prefix) neighbor (ipv4-address-with-zone ipv6-address-with-zone) path-id <i>number</i>

Configurable	False
Platforms	Supported on all platforms

neighbor (*ipv4-address-with-zone* | *ipv6-address-with-zone*)

Description	If the route was learned from a BGP neighbor, this is the IPv4 or IPv6 address of that neighbor.
Context	network-instance name <i>string</i> bgp-rib afi-safi afi-safi-name identityref ipv6-unicast rib-in-out rib-out-post route prefix (<i>ipv4-prefix</i> <i>ipv6-prefix</i>) neighbor (<i>ipv4-address-with-zone</i> <i>ipv6-address-with-zone</i>) path-id <i>number</i>
Configurable	False
Platforms	Supported on all platforms

path-id *number*

Description	Path identifier of the BGP route
Context	network-instance name <i>string</i> bgp-rib afi-safi afi-safi-name identityref ipv6-unicast rib-in-out rib-out-post route prefix (<i>ipv4-prefix</i> <i>ipv6-prefix</i>) neighbor (<i>ipv4-address-with-zone</i> <i>ipv6-address-with-zone</i>) path-id <i>number</i>
Configurable	False
Platforms	Supported on all platforms

attr-id *reference*

Description	Leaf reference to networkinstance/protocols/bgp/rib/attr-sets/attr-set/index.
Context	network-instance name <i>string</i> bgp-rib afi-safi afi-safi-name identityref ipv6-unicast rib-in-out rib-out-post route prefix (<i>ipv4-prefix</i> <i>ipv6-prefix</i>) neighbor (<i>ipv4-address-with-zone</i> <i>ipv6-address-with-zone</i>) path-id <i>number</i> attr-id <i>reference</i>
Tree	attr-id
Reference	network-instance name <i>string</i> bgp-rib attr-sets attr-set index <i>number</i>
Configurable	False
Platforms	Supported on all platforms

I3vpn-ipv4-unicast

Description	Container for RIB state of VPN-IPv4 unicast routes.
Context	network-instance name <i>string</i> bgp-rib afi-safi afi-safi-name identityref I3vpn-ipv4-unicast

Tree	l3vpn-ipv4-unicast
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

local-rib

Description	<p>Container for local RIB</p> <p>Includes the post import-policy RIB-INs corresponding to VPN-IPv4 routes received from default net-instance BGP peers (post import-policy means after processing by the BGP import policy attached to the default net-instance peer and after processing by the vrf-import policy of importing IP VRF network instances) plus the post vrf-export policy “imported” routes from local IP-VRF network instances.</p>
Context	network-instance name <i>string</i> bgp-rib afi-safi afi-safi-name identityref l3vpn-ipv4-unicast local-rib
Tree	local-rib
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

route [route-distinguisher](#) ([route-distinguisher-type-0](#) | [route-distinguisher-type-1](#) | [route-distinguisher-type-2](#) | [route-distinguisher-type-2b](#)) [prefix](#) ([ipv4-prefix](#) | [ipv6-prefix](#)) [neighbor](#) ([ipv4-address-with-zone](#) | [ipv6-address-with-zone](#)) [path-id](#) *number*

Description	List of VPN-IPv4 unicast routes in the local RIB.
Context	network-instance name <i>string</i> bgp-rib afi-safi afi-safi-name identityref l3vpn-ipv4-unicast local-rib route route-distinguisher (route-distinguisher-type-0 route-distinguisher-type-1 route-distinguisher-type-2 route-distinguisher-type-2b) prefix (ipv4-prefix ipv6-prefix) neighbor (ipv4-address-with-zone ipv6-address-with-zone) path-id <i>number</i>
Tree	route
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

route-distinguisher ([route-distinguisher-type-0](#) | [route-distinguisher-type-1](#) | [route-distinguisher-type-2](#) | [route-distinguisher-type-2b](#))

Description	The route distinguisher encoded in the NLRI.
Context	network-instance name <i>string</i> bgp-rib afi-safi afi-safi-name identityref l3vpn-ipv4-unicast local-rib route route-distinguisher (route-distinguisher-type-0 route-distinguisher-type-1 route-distinguisher-type-2 route-distinguisher-

type-2b [prefix](#) (*ipv4-prefix* | *ipv6-prefix*) [neighbor](#) (*ipv4-address-with-zone* | *ipv6-address-with-zone*) [path-id](#) *number*

Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

prefix (*ipv4-prefix* | *ipv6-prefix*)

Description	Enter the prefix context
Context	network-instance <i>name</i> string bgp-rib afi-safi afi-safi-name identityref I3vpn-ipv4-unicast local-rib route route-distinguisher (<i>route-distinguisher-type-0</i> <i>route-distinguisher-type-1</i> <i>route-distinguisher-type-2</i> <i>route-distinguisher-type-2b</i>) prefix (<i>ipv4-prefix</i> <i>ipv6-prefix</i>) neighbor (<i>ipv4-address-with-zone</i> <i>ipv6-address-with-zone</i>) path-id <i>number</i>
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

neighbor (*ipv4-address-with-zone* | *ipv6-address-with-zone*)

Description	If the route was learned from a BGP neighbor, this is the IPv4 or IPv6 address of that neighbor.
Context	network-instance <i>name</i> string bgp-rib afi-safi afi-safi-name identityref I3vpn-ipv4-unicast local-rib route route-distinguisher (<i>route-distinguisher-type-0</i> <i>route-distinguisher-type-1</i> <i>route-distinguisher-type-2</i> <i>route-distinguisher-type-2b</i>) prefix (<i>ipv4-prefix</i> <i>ipv6-prefix</i>) neighbor (<i>ipv4-address-with-zone</i> <i>ipv6-address-with-zone</i>) path-id <i>number</i>
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

path-id *number*

Description	Path identifier of the BGP route
Context	network-instance <i>name</i> string bgp-rib afi-safi afi-safi-name identityref I3vpn-ipv4-unicast local-rib route route-distinguisher (<i>route-distinguisher-type-0</i> <i>route-distinguisher-type-1</i> <i>route-distinguisher-type-2</i> <i>route-distinguisher-type-2b</i>) prefix (<i>ipv4-prefix</i> <i>ipv6-prefix</i>) neighbor (<i>ipv4-address-with-zone</i> <i>ipv6-address-with-zone</i>) path-id <i>number</i>
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

attr-id reference

Description	Leaf reference to networkinstance/bgp-rib/attr-sets/attr-set/index
Context	network-instance name <i>string</i> bgp-rib afi-safi afi-safi-name identityref I3vpn-ipv4-unicast local-rib route route-distinguisher (route-distinguisher-type-0 route-distinguisher-type-1 route-distinguisher-type-2 route-distinguisher-type-2b) prefix (ipv4-prefix ipv6-prefix) neighbor (ipv4-address-with-zone ipv6-address-with-zone) path-id number attr-id reference
Tree	attr-id
Reference	network-instance name <i>string</i> bgp-rib attr-sets attr-set index <i>number</i>
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

best-route boolean

Description	Set to true if the route is the BGP best path for the prefix.
Context	network-instance name <i>string</i> bgp-rib afi-safi afi-safi-name identityref I3vpn-ipv4-unicast local-rib route route-distinguisher (route-distinguisher-type-0 route-distinguisher-type-1 route-distinguisher-type-2 route-distinguisher-type-2b) prefix (ipv4-prefix ipv6-prefix) neighbor (ipv4-address-with-zone ipv6-address-with-zone) path-id number best-route boolean
Tree	best-route
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

group-best boolean

Description	Set to true if the route is the best BGP route amongst all routes received from one particular neighbor AS
Context	network-instance name <i>string</i> bgp-rib afi-safi afi-safi-name identityref I3vpn-ipv4-unicast local-rib route route-distinguisher (route-distinguisher-type-0 route-distinguisher-type-1 route-distinguisher-type-2 route-distinguisher-type-2b) prefix (ipv4-prefix ipv6-prefix) neighbor (ipv4-address-with-zone ipv6-address-with-zone) path-id number group-best boolean
Tree	group-best
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

imported-ip-vrf-network-instances *reference*

Description	List of IP-VRF network instances that imported the route
Context	network-instance name <i>string</i> bgp-rib afi-safi afi-safi-name identityref I3vpn-ipv4-unicast local-rib route route-distinguisher (route-distinguisher-type-0 route-distinguisher-type-1 route-distinguisher-type-2 route-distinguisher-type-2b) prefix (ipv4-prefix ipv6-prefix) neighbor (ipv4-address-with-zone ipv6-address-with-zone) path-id <i>number</i> imported-ip-vrf-network-instances <i>reference</i>
Tree	imported-ip-vrf-network-instances
Reference	network-instance name <i>string</i>
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

invalid-reason

Description	Enter the invalid-reason context
Context	network-instance name <i>string</i> bgp-rib afi-safi afi-safi-name identityref I3vpn-ipv4-unicast local-rib route route-distinguisher (route-distinguisher-type-0 route-distinguisher-type-1 route-distinguisher-type-2 route-distinguisher-type-2b) prefix (ipv4-prefix ipv6-prefix) neighbor (ipv4-address-with-zone ipv6-address-with-zone) path-id <i>number</i> invalid-reason
Tree	invalid-reason
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

as-loop *boolean*

Description	Indicates true if the BGP route has an AS path loop that exceeds the configured threshold.
Context	network-instance name <i>string</i> bgp-rib afi-safi afi-safi-name identityref I3vpn-ipv4-unicast local-rib route route-distinguisher (route-distinguisher-type-0 route-distinguisher-type-1 route-distinguisher-type-2 route-distinguisher-type-2b) prefix (ipv4-prefix ipv6-prefix) neighbor (ipv4-address-with-zone ipv6-address-with-zone) path-id <i>number</i> invalid-reason as-loop <i>boolean</i>
Tree	as-loop
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

cluster-loop *boolean*

Description	Indicates true if the BGP route has a cluster-list loop.
Context	network-instance name <i>string</i> bgp-rib afi-safi afi-safi-name identityref I3vpn-ipv4-unicast local-rib route route-distinguisher (route-distinguisher-type-0 route-distinguisher-type-1 route-distinguisher-type-2 route-distinguisher-type-2b) prefix (ipv4-prefix ipv6-prefix) neighbor (ipv4-address-with-zone ipv6-address-with-zone) path-id <i>number</i> invalid-reason cluster-loop <i>boolean</i>
Tree	cluster-loop
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

fib-programming-failed *boolean*

Description	Indicates true if FIB programming failed
Context	network-instance name <i>string</i> bgp-rib afi-safi afi-safi-name identityref I3vpn-ipv4-unicast local-rib route route-distinguisher (route-distinguisher-type-0 route-distinguisher-type-1 route-distinguisher-type-2 route-distinguisher-type-2b) prefix (ipv4-prefix ipv6-prefix) neighbor (ipv4-address-with-zone ipv6-address-with-zone) path-id <i>number</i> invalid-reason fib-programming-failed <i>boolean</i>
Tree	fib-programming-failed
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

label-allocation-failed *boolean*

Description	Indicates true if dynamic-label-block has no more free labels
Context	network-instance name <i>string</i> bgp-rib afi-safi afi-safi-name identityref I3vpn-ipv4-unicast local-rib route route-distinguisher (route-distinguisher-type-0 route-distinguisher-type-1 route-distinguisher-type-2 route-distinguisher-type-2b) prefix (ipv4-prefix ipv6-prefix) neighbor (ipv4-address-with-zone ipv6-address-with-zone) path-id <i>number</i> invalid-reason label-allocation-failed <i>boolean</i>
Tree	label-allocation-failed
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

next-hop-unresolved *boolean*

Description	Indicates true if the BGP route has a BGP next-hop that cannot be resolved to an outgoing interface.
Context	network-instance name <i>string</i> bgp-rib afi-safi afi-safi-name identityref l3vpn-ipv4-unicast local-rib route route-distinguisher (route-distinguisher-type-0 route-distinguisher-type-1 route-distinguisher-type-2 route-distinguisher-type-2b) prefix (ipv4-prefix ipv6-prefix) neighbor (ipv4-address-with-zone ipv6-address-with-zone) path-id <i>number</i> invalid-reason next-hop-unresolved <i>boolean</i>
Tree	next-hop-unresolved
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

rejected-route *boolean*

Description	Indicates true if the route was rejected by an import policy.
Context	network-instance name <i>string</i> bgp-rib afi-safi afi-safi-name identityref l3vpn-ipv4-unicast local-rib route route-distinguisher (route-distinguisher-type-0 route-distinguisher-type-1 route-distinguisher-type-2 route-distinguisher-type-2b) prefix (ipv4-prefix ipv6-prefix) neighbor (ipv4-address-with-zone ipv6-address-with-zone) path-id <i>number</i> invalid-reason rejected-route <i>boolean</i>
Tree	rejected-route
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

last-modified *string*

Description	Time of the last modification of the route stored in the BGP RIB. For a route learned from a BGP neighbor the initial value is the same as last-updatereceived. If an import policy later changed some attribute of the route last-modified would be updated to reflect the time of this change.
Context	network-instance name <i>string</i> bgp-rib afi-safi afi-safi-name identityref l3vpn-ipv4-unicast local-rib route route-distinguisher (route-distinguisher-type-0 route-distinguisher-type-1 route-distinguisher-type-2 route-distinguisher-type-2b) prefix (ipv4-prefix ipv6-prefix) neighbor (ipv4-address-with-zone ipv6-address-with-zone) path-id <i>number</i> last-modified <i>string</i>
Tree	last-modified
String Length	20 to 32
Configurable	False

Platforms 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

neighbor-as *number*

Description The last external AS to advertise the route into the local AS

Context [network-instance name](#) *string* [bgp-rib](#) [afi-safi](#) [afi-safi-name](#) [identityref I3vpn-ipv4-unicast](#) [local-rib](#) [route](#) [route-distinguisher](#) ([route-distinguisher-type-0](#) | [route-distinguisher-type-1](#) | [route-distinguisher-type-2](#) | [route-distinguisher-type-2b](#)) [prefix](#) ([ipv4-prefix](#) | [ipv6-prefix](#)) [neighbor](#) ([ipv4-address-with-zone](#) | [ipv6-address-with-zone](#)) [path-id](#) *number* **neighbor-as** *number*

Tree [neighbor-as](#)

Range 1 to 4294967295

Configurable False

Platforms 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

pending-delete *boolean*

Description Set to true if the route is marked for deletion.

Context [network-instance name](#) *string* [bgp-rib](#) [afi-safi](#) [afi-safi-name](#) [identityref I3vpn-ipv4-unicast](#) [local-rib](#) [route](#) [route-distinguisher](#) ([route-distinguisher-type-0](#) | [route-distinguisher-type-1](#) | [route-distinguisher-type-2](#) | [route-distinguisher-type-2b](#)) [prefix](#) ([ipv4-prefix](#) | [ipv6-prefix](#)) [neighbor](#) ([ipv4-address-with-zone](#) | [ipv6-address-with-zone](#)) [path-id](#) *number* **pending-delete** *boolean*

Tree [pending-delete](#)

Configurable False

Platforms 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

received-mpls-label (*number* | *keyword*)

Description Received MPLS label value

Context [network-instance name](#) *string* [bgp-rib](#) [afi-safi](#) [afi-safi-name](#) [identityref I3vpn-ipv4-unicast](#) [local-rib](#) [route](#) [route-distinguisher](#) ([route-distinguisher-type-0](#) | [route-distinguisher-type-1](#) | [route-distinguisher-type-2](#) | [route-distinguisher-type-2b](#)) [prefix](#) ([ipv4-prefix](#) | [ipv6-prefix](#)) [neighbor](#) ([ipv4-address-with-zone](#) | [ipv6-address-with-zone](#)) [path-id](#) *number* **received-mpls-label** (*number* | *keyword*)

Tree [received-mpls-label](#)

Range 16 to 1048575

Options

- IPV4_EXPLICIT_NULL
- IPV6_EXPLICIT_NULL

	<ul style="list-style-type: none"> • IMPLICIT_NULL
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b
Max. Elements	1

stale-route *boolean*

Description	Set to true if the route is stale due to BGP graceful restart.
Context	network-instance name <i>string</i> bgp-rib afi-safi afi-safi-name identityref l3vpn-ipv4-unicast local-rib route route-distinguisher (route-distinguisher-type-0 route-distinguisher-type-1 route-distinguisher-type-2 route-distinguisher-type-2b) prefix (ipv4-prefix ipv6-prefix) neighbor (ipv4-address-with-zone ipv6-address-with-zone) path-id <i>number</i> stale-route <i>boolean</i>
Tree	stale-route
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

tie-break-reason *keyword*

Description	Indicates the reason why a BGP route is sorted behind the next best route. The BGP best path displays a value of 'none'.
Context	network-instance name <i>string</i> bgp-rib afi-safi afi-safi-name identityref l3vpn-ipv4-unicast local-rib route route-distinguisher (route-distinguisher-type-0 route-distinguisher-type-1 route-distinguisher-type-2 route-distinguisher-type-2b) prefix (ipv4-prefix ipv6-prefix) neighbor (ipv4-address-with-zone ipv6-address-with-zone) path-id <i>number</i> tie-break-reason <i>keyword</i>
Tree	tie-break-reason
Options	<ul style="list-style-type: none"> • unknown • none • origin • as-path-length • next-hop-cost • med • local-pref • aggregate • originator-id • cluster-list • extended-community • aigp

- missing-attribute
- rtm-pref
- owner
- eigrp-labeled
- vpn-route
- ebgp-route
- peer-ip
- local-peer
- multi-path
- vpn-rd
- next-hop-type
- invalid-route
- origin-validation
- long-live-gr-stale
- default-originate
- fib-install-disabled
- peer-router-id
- path-identifier

Configurable

False

Platforms

7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

used-route *boolean***Description**

Indicates true if the route is being used for forwarding.

Context

[network-instance name](#) *string* [bgp-rib](#) [afi-safi](#) [afi-safi-name](#) [identityref](#) [l3vpn-ipv4-unicast](#) [local-rib](#) [route](#) [route-distinguisher](#) ([route-distinguisher-type-0](#) | [route-distinguisher-type-1](#) | [route-distinguisher-type-2](#) | [route-distinguisher-type-2b](#)) [prefix](#) ([ipv4-prefix](#) | [ipv6-prefix](#)) [neighbor](#) ([ipv4-address-with-zone](#) | [ipv6-address-with-zone](#)) [path-id](#) *number* [used-route](#) *boolean*

Tree[used-route](#)**Configurable**

False

Platforms

7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

valid-route *boolean***Description**

Indicates true if the route is valid.

Context

[network-instance name](#) *string* [bgp-rib](#) [afi-safi](#) [afi-safi-name](#) [identityref](#) [l3vpn-ipv4-unicast](#) [local-rib](#) [route](#) [route-distinguisher](#) ([route-distinguisher-type-0](#) |

route-distinguisher-type-1 | route-distinguisher-type-2 | route-distinguisher-type-2b **prefix** (*ipv4-prefix | ipv6-prefix*) **neighbor** (*ipv4-address-with-zone | ipv6-address-with-zone*) **path-id** **number** **valid-route** **boolean**

Tree	valid-route
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

rib-in-out

Description	Container for BGP routes learned and advertised to BGP neighbors.
Context	network-instance name <i>string</i> bgp-rib afi-safi afi-safi-name <i>identityref</i> l3vpn-ipv4-unicast rib-in-out
Tree	rib-in-out
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

rib-in-post

Description	Container for the post-import-policy version of BGP routes learned from BGP neighbors.
Context	network-instance name <i>string</i> bgp-rib afi-safi afi-safi-name <i>identityref</i> l3vpn-ipv4-unicast rib-in-out rib-in-post
Tree	rib-in-post
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

route [route-distinguisher](#) (*route-distinguisher-type-0 | route-distinguisher-type-1 | route-distinguisher-type-2 | route-distinguisher-type-2b*) **prefix** (*ipv4-prefix | ipv6-prefix*) **neighbor** (*ipv4-address-with-zone | ipv6-address-with-zone*) **path-id** **number**

Description	List of VPN-IPv4 unicast routes
Context	network-instance name <i>string</i> bgp-rib afi-safi afi-safi-name <i>identityref</i> l3vpn-ipv4-unicast rib-in-out rib-in-post route route-distinguisher (<i>route-distinguisher-type-0 route-distinguisher-type-1 route-distinguisher-type-2 route-distinguisher-type-2b</i>) prefix (<i>ipv4-prefix ipv6-prefix</i>) neighbor (<i>ipv4-address-with-zone ipv6-address-with-zone</i>) path-id number
Tree	route
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

route-distinguisher (*route-distinguisher-type-0 | route-distinguisher-type-1 | route-distinguisher-type-2 | route-distinguisher-type-2b*)

Description	The route distinguisher encoded in the NLRI.
Context	network-instance name <i>string</i> bgp-rib afi-safi afi-safi-name identityref l3vpn-ipv4-unicast rib-in-out rib-in-post route route-distinguisher (<i>route-distinguisher-type-0 route-distinguisher-type-1 route-distinguisher-type-2 route-distinguisher-type-2b</i>) prefix (<i>ipv4-prefix ipv6-prefix</i>) neighbor (<i>ipv4-address-with-zone ipv6-address-with-zone</i>) path-id <i>number</i>
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

prefix (*ipv4-prefix | ipv6-prefix*)

Description	Enter the prefix context
Context	network-instance name <i>string</i> bgp-rib afi-safi afi-safi-name identityref l3vpn-ipv4-unicast rib-in-out rib-in-post route route-distinguisher (<i>route-distinguisher-type-0 route-distinguisher-type-1 route-distinguisher-type-2 route-distinguisher-type-2b</i>) prefix (<i>ipv4-prefix ipv6-prefix</i>) neighbor (<i>ipv4-address-with-zone ipv6-address-with-zone</i>) path-id <i>number</i>
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

neighbor (*ipv4-address-with-zone | ipv6-address-with-zone*)

Description	If the route was learned from a BGP neighbor, this is the IPv4 or IPv6 address of that neighbor.
Context	network-instance name <i>string</i> bgp-rib afi-safi afi-safi-name identityref l3vpn-ipv4-unicast rib-in-out rib-in-post route route-distinguisher (<i>route-distinguisher-type-0 route-distinguisher-type-1 route-distinguisher-type-2 route-distinguisher-type-2b</i>) prefix (<i>ipv4-prefix ipv6-prefix</i>) neighbor (<i>ipv4-address-with-zone ipv6-address-with-zone</i>) path-id <i>number</i>
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

path-id *number*

Description	Path identifier of the BGP route
Context	network-instance name <i>string</i> bgp-rib afi-safi afi-safi-name identityref l3vpn-ipv4-unicast rib-in-out rib-in-post route route-distinguisher (<i>route-distinguisher-type-0 route-distinguisher-type-1 route-distinguisher-type-2</i>)

	<i>route-distinguisher-type-2b</i>) prefix (<i>ipv4-prefix</i> <i>ipv6-prefix</i>) neighbor (<i>ipv4-address-with-zone</i> <i>ipv6-address-with-zone</i>) path-id <i>number</i>
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

attr-id *reference*

Description	Leaf reference to networkinstance/protocols/bgp/rib/ attr-sets/attr-set/index.
Context	network-instance name <i>string</i> bgp-rib afi-safi afi-safi-name identityref l3vpn-ipv4-unicast rib-in-out rib-in-post route route-distinguisher (<i>route-distinguisher-type-0</i> <i>route-distinguisher-type-1</i> <i>route-distinguisher-type-2</i> <i>route-distinguisher-type-2b</i>) prefix (<i>ipv4-prefix</i> <i>ipv6-prefix</i>) neighbor (<i>ipv4-address-with-zone</i> <i>ipv6-address-with-zone</i>) path-id <i>number</i> attr-id <i>reference</i>
Tree	attr-id
Reference	network-instance name <i>string</i> bgp-rib attr-sets attr-set index <i>number</i>
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

best-route *boolean*

Description	Set to true if the route is the BGP best path for the prefix.
Context	network-instance name <i>string</i> bgp-rib afi-safi afi-safi-name identityref l3vpn-ipv4-unicast rib-in-out rib-in-post route route-distinguisher (<i>route-distinguisher-type-0</i> <i>route-distinguisher-type-1</i> <i>route-distinguisher-type-2</i> <i>route-distinguisher-type-2b</i>) prefix (<i>ipv4-prefix</i> <i>ipv6-prefix</i>) neighbor (<i>ipv4-address-with-zone</i> <i>ipv6-address-with-zone</i>) path-id <i>number</i> best-route <i>boolean</i>
Tree	best-route
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

group-best *boolean*

Description	Set to true if the route is the best BGP route amongst all routes received from one particular neighbor AS
Context	network-instance name <i>string</i> bgp-rib afi-safi afi-safi-name identityref l3vpn-ipv4-unicast rib-in-out rib-in-post route route-distinguisher (<i>route-distinguisher-type-0</i> <i>route-distinguisher-type-1</i> <i>route-distinguisher-type-2</i> <i>route-distinguisher-type-2b</i>) prefix (<i>ipv4-prefix</i> <i>ipv6-prefix</i>) neighbor (<i>ipv4-address-with-zone</i> <i>ipv6-address-with-zone</i>) path-id <i>number</i> group-best <i>boolean</i>

Tree	group-best
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

imported-ip-vrf-network-instances *reference*

Description	List of IP-VRF network instances that imported the route
Context	network-instance name <i>string</i> bgp-rib afi-safi afi-safi-name identityref l3vpn-ipv4-unicast rib-in-out rib-in-post route route-distinguisher (route-distinguisher-type-0 route-distinguisher-type-1 route-distinguisher-type-2 route-distinguisher-type-2b) prefix (ipv4-prefix ipv6-prefix) neighbor (ipv4-address-with-zone ipv6-address-with-zone) path-id <i>number</i> imported-ip-vrf-network-instances <i>reference</i>
Tree	imported-ip-vrf-network-instances
Reference	network-instance name <i>string</i>
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

internal-tags *string*

Description	Internal route tag written in the route/tunnel tables or BGP rib The internal-tag value is shown with the format 'type-string = hex-value-string'. For example:
Context	network-instance name <i>string</i> bgp-rib afi-safi afi-safi-name identityref l3vpn-ipv4-unicast rib-in-out rib-in-post route route-distinguisher (route-distinguisher-type-0 route-distinguisher-type-1 route-distinguisher-type-2 route-distinguisher-type-2b) prefix (ipv4-prefix ipv6-prefix) neighbor (ipv4-address-with-zone ipv6-address-with-zone) path-id <i>number</i> internal-tags <i>string</i>
Tree	internal-tags
Configurable	False
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b
Max. Elements	2

invalid-reason

Description	Enter the invalid-reason context
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Context	network-instance name <i>string</i> bgp-rib afi-safi afi-safi-name identityref l3vpn-ipv4-unicast rib-in-out rib-in-post route route-distinguisher (route-distinguisher-type-0 route-distinguisher-type-1 route-distinguisher-type-2 route-distinguisher-type-2b) prefix (ipv4-prefix ipv6-prefix) neighbor (ipv4-address-with-zone ipv6-address-with-zone) path-id number invalid-reason
Tree	invalid-reason
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

as-loop *boolean*

Description	Indicates true if the BGP route has an AS path loop that exceeds the configured threshold.
Context	network-instance name <i>string</i> bgp-rib afi-safi afi-safi-name identityref l3vpn-ipv4-unicast rib-in-out rib-in-post route route-distinguisher (route-distinguisher-type-0 route-distinguisher-type-1 route-distinguisher-type-2 route-distinguisher-type-2b) prefix (ipv4-prefix ipv6-prefix) neighbor (ipv4-address-with-zone ipv6-address-with-zone) path-id number invalid-reason as-loop <i>boolean</i>
Tree	as-loop
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

cluster-loop *boolean*

Description	Indicates true if the BGP route has a cluster-list loop.
Context	network-instance name <i>string</i> bgp-rib afi-safi afi-safi-name identityref l3vpn-ipv4-unicast rib-in-out rib-in-post route route-distinguisher (route-distinguisher-type-0 route-distinguisher-type-1 route-distinguisher-type-2 route-distinguisher-type-2b) prefix (ipv4-prefix ipv6-prefix) neighbor (ipv4-address-with-zone ipv6-address-with-zone) path-id number invalid-reason cluster-loop <i>boolean</i>
Tree	cluster-loop
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

fib-programming-failed *boolean*

Description	Indicates true if FIB programming failed
Context	network-instance name <i>string</i> bgp-rib afi-safi afi-safi-name identityref l3vpn-ipv4-unicast rib-in-out rib-in-post route route-distinguisher (route-

distinguisher-type-0 | *route-distinguisher-type-1* | *route-distinguisher-type-2* | *route-distinguisher-type-2b*) *prefix* (*ipv4-prefix* | *ipv6-prefix*) *neighbor* (*ipv4-address-with-zone* | *ipv6-address-with-zone*) *path-id* *number* *invalid-reason* *fib-programming-failed* *boolean*

Tree	fib-programming-failed
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

label-allocation-failed *boolean*

Description	Indicates true if dynamic-label-block has no more free labels
Context	network-instance <i>name</i> <i>string</i> bgp-rib afi-safi afi-safi-name <i>identityref</i> l3vpn-ipv4-unicast rib-in-out rib-in-post route route-distinguisher (<i>route-distinguisher-type-0</i> <i>route-distinguisher-type-1</i> <i>route-distinguisher-type-2</i> <i>route-distinguisher-type-2b</i>) <i>prefix</i> (<i>ipv4-prefix</i> <i>ipv6-prefix</i>) <i>neighbor</i> (<i>ipv4-address-with-zone</i> <i>ipv6-address-with-zone</i>) <i>path-id</i> <i>number</i> <i>invalid-reason</i> label-allocation-failed <i>boolean</i>
Tree	label-allocation-failed
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

next-hop-unresolved *boolean*

Description	Indicates true if the BGP route has a BGP next-hop that cannot be resolved to an outgoing interface.
Context	network-instance <i>name</i> <i>string</i> bgp-rib afi-safi afi-safi-name <i>identityref</i> l3vpn-ipv4-unicast rib-in-out rib-in-post route route-distinguisher (<i>route-distinguisher-type-0</i> <i>route-distinguisher-type-1</i> <i>route-distinguisher-type-2</i> <i>route-distinguisher-type-2b</i>) <i>prefix</i> (<i>ipv4-prefix</i> <i>ipv6-prefix</i>) <i>neighbor</i> (<i>ipv4-address-with-zone</i> <i>ipv6-address-with-zone</i>) <i>path-id</i> <i>number</i> <i>invalid-reason</i> next-hop-unresolved <i>boolean</i>
Tree	next-hop-unresolved
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

rejected-route *boolean*

Description	Indicates true if the route was rejected by an import policy.
Context	network-instance <i>name</i> <i>string</i> bgp-rib afi-safi afi-safi-name <i>identityref</i> l3vpn-ipv4-unicast rib-in-out rib-in-post route route-distinguisher (<i>route-distinguisher-type-0</i> <i>route-distinguisher-type-1</i> <i>route-distinguisher-type-2</i>

| *route-distinguisher-type-2b* [prefix](#) (*ipv4-prefix* | *ipv6-prefix*) [neighbor](#) (*ipv4-address-with-zone* | *ipv6-address-with-zone*) [path-id](#) *number* [invalid-reason](#) [rejected-route](#) *boolean*

Tree	rejected-route
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

last-modified *string*

Description	Time of the last modification of the route stored in the BGP RIB. For a route learned from a BGP neighbor the initial value is the same as last-updatereceived. If an import policy later changed some attribute of the route last-modified would be updated to reflect the time of this change.
Context	network-instance <i>name</i> <i>string</i> bgp-rib afi-safi afi-safi-name identityref l3vpn-ipv4-unicast rib-in-out rib-in-post route route-distinguisher (<i>route-distinguisher-type-0</i> <i>route-distinguisher-type-1</i> <i>route-distinguisher-type-2</i> <i>route-distinguisher-type-2b</i>) prefix (<i>ipv4-prefix</i> <i>ipv6-prefix</i>) neighbor (<i>ipv4-address-with-zone</i> <i>ipv6-address-with-zone</i>) path-id <i>number</i> last-modified <i>string</i>
Tree	last-modified
String Length	20 to 32
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

neighbor-as *number*

Description	The last external AS to advertise the route into the local AS
Context	network-instance <i>name</i> <i>string</i> bgp-rib afi-safi afi-safi-name identityref l3vpn-ipv4-unicast rib-in-out rib-in-post route route-distinguisher (<i>route-distinguisher-type-0</i> <i>route-distinguisher-type-1</i> <i>route-distinguisher-type-2</i> <i>route-distinguisher-type-2b</i>) prefix (<i>ipv4-prefix</i> <i>ipv6-prefix</i>) neighbor (<i>ipv4-address-with-zone</i> <i>ipv6-address-with-zone</i>) path-id <i>number</i> neighbor-as <i>number</i>
Tree	neighbor-as
Range	1 to 4294967295
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

pending-delete *boolean*

Description	Set to true if the route is marked for deletion.
Context	network-instance name <i>string</i> bgp-rib afi-safi afi-safi-name identityref l3vpn-ipv4-unicast rib-in-out rib-in-post route route-distinguisher (route-distinguisher-type-0 route-distinguisher-type-1 route-distinguisher-type-2 route-distinguisher-type-2b) prefix (ipv4-prefix ipv6-prefix) neighbor (ipv4-address-with-zone ipv6-address-with-zone) path-id number pending-delete <i>boolean</i>
Tree	pending-delete
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

received-mpls-label (*number* | *keyword*)

Description	Received MPLS label value
Context	network-instance name <i>string</i> bgp-rib afi-safi afi-safi-name identityref l3vpn-ipv4-unicast rib-in-out rib-in-post route route-distinguisher (route-distinguisher-type-0 route-distinguisher-type-1 route-distinguisher-type-2 route-distinguisher-type-2b) prefix (ipv4-prefix ipv6-prefix) neighbor (ipv4-address-with-zone ipv6-address-with-zone) path-id number received-mpls-label (<i>number</i> <i>keyword</i>)
Tree	received-mpls-label
Range	16 to 1048575
Options	<ul style="list-style-type: none"> • IPV4_EXPLICIT_NULL • IPV6_EXPLICIT_NULL • IMPLICIT_NULL
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b
Max. Elements	1

stale-route *boolean*

Description	Set to true if the route is stale due to BGP graceful restart.
Context	network-instance name <i>string</i> bgp-rib afi-safi afi-safi-name identityref l3vpn-ipv4-unicast rib-in-out rib-in-post route route-distinguisher (route-distinguisher-type-0 route-distinguisher-type-1 route-distinguisher-type-2 route-distinguisher-type-2b) prefix (ipv4-prefix ipv6-prefix) neighbor (ipv4-address-with-zone ipv6-address-with-zone) path-id number stale-route <i>boolean</i>

Tree	stale-route
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

tie-break-reason *keyword*

Description	Indicates the reason why a BGP route is sorted behind the next best route. The BGP best path displays a value of 'none'.
Context	network-instance name <i>string</i> bgp-rib afi-safi afi-safi-name identityref l3vpn-ipv4-unicast rib-in-out rib-in-post route route-distinguisher (route-distinguisher-type-0 route-distinguisher-type-1 route-distinguisher-type-2 route-distinguisher-type-2b) prefix (ipv4-prefix ipv6-prefix) neighbor (ipv4-address-with-zone ipv6-address-with-zone) path-id <i>number</i> tie-break-reason <i>keyword</i>
Tree	tie-break-reason
Options	<ul style="list-style-type: none"> • unknown • none • origin • as-path-length • next-hop-cost • med • local-pref • aggregate • originator-id • cluster-list • extended-community • aigp • missing-attribute • rtm-pref • owner • eigrp-labeled • vpn-route • ebgp-route • peer-ip • local-peer • multi-path • vpn-rd • next-hop-type

- invalid-route
- origin-validation
- long-live-gr-stale
- default-originate
- fib-install-disabled
- peer-router-id
- path-identifier

Configurable

False

Platforms

7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

used-route *boolean***Description**

Indicates true if the route is being used for forwarding.

Context

[network-instance name](#) *string* [bgp-rib](#) [afi-safi](#) [afi-safi-name](#) [identityref](#) [l3vpn-ipv4-unicast](#) [rib-in-out](#) [rib-in-post](#) [route](#) [route-distinguisher](#) ([route-distinguisher-type-0](#) | [route-distinguisher-type-1](#) | [route-distinguisher-type-2](#) | [route-distinguisher-type-2b](#)) [prefix](#) ([ipv4-prefix](#) | [ipv6-prefix](#)) [neighbor](#) ([ipv4-address-with-zone](#) | [ipv6-address-with-zone](#)) [path-id](#) *number* **used-route** *boolean*

Tree[used-route](#)**Configurable**

False

Platforms

7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

valid-route *boolean***Description**

Indicates true if the route is valid.

Context

[network-instance name](#) *string* [bgp-rib](#) [afi-safi](#) [afi-safi-name](#) [identityref](#) [l3vpn-ipv4-unicast](#) [rib-in-out](#) [rib-in-post](#) [route](#) [route-distinguisher](#) ([route-distinguisher-type-0](#) | [route-distinguisher-type-1](#) | [route-distinguisher-type-2](#) | [route-distinguisher-type-2b](#)) [prefix](#) ([ipv4-prefix](#) | [ipv6-prefix](#)) [neighbor](#) ([ipv4-address-with-zone](#) | [ipv6-address-with-zone](#)) [path-id](#) *number* **valid-route** *boolean*

Tree[valid-route](#)**Configurable**

False

Platforms

7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

rib-in-pre

Description	Container for the pre-import-policy version of BGP routes learned from BGP neighbors.
Context	network-instance name <i>string</i> bgp-rib afi-safi afi-safi-name identityref l3vpn-ipv4-unicast rib-in-out rib-in-pre
Tree	rib-in-pre
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

route [route-distinguisher](#) ([route-distinguisher-type-0](#) | [route-distinguisher-type-1](#) | [route-distinguisher-type-2](#) | [route-distinguisher-type-2b](#)) [prefix](#) ([ipv4-prefix](#) | [ipv6-prefix](#)) [neighbor](#) ([ipv4-address-with-zone](#) | [ipv6-address-with-zone](#)) [path-id](#) *number*

Description	List of VPN-IPv4 unicast routes learned from BGP neighbors.
Context	network-instance name <i>string</i> bgp-rib afi-safi afi-safi-name identityref l3vpn-ipv4-unicast rib-in-out rib-in-pre route route-distinguisher (route-distinguisher-type-0 route-distinguisher-type-1 route-distinguisher-type-2 route-distinguisher-type-2b) prefix (ipv4-prefix ipv6-prefix) neighbor (ipv4-address-with-zone ipv6-address-with-zone) path-id <i>number</i>
Tree	route
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

route-distinguisher ([route-distinguisher-type-0](#) | [route-distinguisher-type-1](#) | [route-distinguisher-type-2](#) | [route-distinguisher-type-2b](#))

Description	The route distinguisher encoded in the NLRI.
Context	network-instance name <i>string</i> bgp-rib afi-safi afi-safi-name identityref l3vpn-ipv4-unicast rib-in-out rib-in-pre route route-distinguisher (route-distinguisher-type-0 route-distinguisher-type-1 route-distinguisher-type-2 route-distinguisher-type-2b) prefix (ipv4-prefix ipv6-prefix) neighbor (ipv4-address-with-zone ipv6-address-with-zone) path-id <i>number</i>
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

prefix ([ipv4-prefix](#) | [ipv6-prefix](#))

Description	Enter the prefix context
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Context	network-instance name <i>string</i> bgp-rib afi-safi afi-safi-name identityref l3vpn-ipv4-unicast rib-in-out rib-in-pre route route-distinguisher (route-distinguisher-type-0 route-distinguisher-type-1 route-distinguisher-type-2 route-distinguisher-type-2b) prefix (ipv4-prefix ipv6-prefix) neighbor (ipv4-address-with-zone ipv6-address-with-zone) path-id <i>number</i>
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

neighbor ([ipv4-address-with-zone](#) | [ipv6-address-with-zone](#))

Description	If the route was learned from a BGP neighbor, this is the IPv4 or IPv6 address of that neighbor.
Context	network-instance name <i>string</i> bgp-rib afi-safi afi-safi-name identityref l3vpn-ipv4-unicast rib-in-out rib-in-pre route route-distinguisher (route-distinguisher-type-0 route-distinguisher-type-1 route-distinguisher-type-2 route-distinguisher-type-2b) prefix (ipv4-prefix ipv6-prefix) neighbor (ipv4-address-with-zone ipv6-address-with-zone) path-id <i>number</i>
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

path-id *number*

Description	Path identifier of the BGP route
Context	network-instance name <i>string</i> bgp-rib afi-safi afi-safi-name identityref l3vpn-ipv4-unicast rib-in-out rib-in-pre route route-distinguisher (route-distinguisher-type-0 route-distinguisher-type-1 route-distinguisher-type-2 route-distinguisher-type-2b) prefix (ipv4-prefix ipv6-prefix) neighbor (ipv4-address-with-zone ipv6-address-with-zone) path-id <i>number</i>
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

attr-id *reference*

Description	Leaf reference to networkinstance/protocols/bgp/rib/attr-sets/attr-set/index .
Context	network-instance name <i>string</i> bgp-rib afi-safi afi-safi-name identityref l3vpn-ipv4-unicast rib-in-out rib-in-pre route route-distinguisher (route-distinguisher-type-0 route-distinguisher-type-1 route-distinguisher-type-2 route-distinguisher-type-2b) prefix (ipv4-prefix ipv6-prefix) neighbor (ipv4-address-with-zone ipv6-address-with-zone) path-id <i>number</i> attr-id <i>reference</i>
Tree	attr-id
Reference	network-instance name <i>string</i> bgp-rib attr-sets attr-set index <i>number</i>

Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

imported-ip-vrf-network-instances *reference*

Description	List of IP-VRF network instances that imported the route
Context	network-instance name <i>string</i> bgp-rib afi-safi afi-safi-name identityref l3vpn-ipv4-unicast rib-in-out rib-in-pre route route-distinguisher (route-distinguisher-type-0 route-distinguisher-type-1 route-distinguisher-type-2 route-distinguisher-type-2b) prefix (ipv4-prefix ipv6-prefix) neighbor (ipv4-address-with-zone ipv6-address-with-zone) path-id <i>number</i> imported-ip-vrf-network-instances <i>reference</i>
Tree	imported-ip-vrf-network-instances
Reference	network-instance name <i>string</i>
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

received-mpls-label (*number* | *keyword*)

Description	Received MPLS label value
Context	network-instance name <i>string</i> bgp-rib afi-safi afi-safi-name identityref l3vpn-ipv4-unicast rib-in-out rib-in-pre route route-distinguisher (route-distinguisher-type-0 route-distinguisher-type-1 route-distinguisher-type-2 route-distinguisher-type-2b) prefix (ipv4-prefix ipv6-prefix) neighbor (ipv4-address-with-zone ipv6-address-with-zone) path-id <i>number</i> received-mpls-label (<i>number</i> <i>keyword</i>)
Tree	received-mpls-label
Range	16 to 1048575
Options	<ul style="list-style-type: none"> • IPV4_EXPLICIT_NULL • IPV6_EXPLICIT_NULL • IMPLICIT_NULL
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b
Max. Elements	1

rib-out-post

Description	Container for the post-export-policy version of BGP routes advertised to BGP neighbors.
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Context	network-instance name <i>string</i> bgp-rib afi-safi afi-safi-name identityref l3vpn-ipv4-unicast rib-in-out rib-out-post
Tree	rib-out-post
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

route [route-distinguisher](#) ([route-distinguisher-type-0](#) | [route-distinguisher-type-1](#) | [route-distinguisher-type-2](#) | [route-distinguisher-type-2b](#)) [prefix](#) ([ipv4-prefix](#) | [ipv6-prefix](#)) [neighbor](#) ([ipv4-address-with-zone](#) | [ipv6-address-with-zone](#)) [path-id](#) *number*

Description	List of VPN-IPv4 unicast routes.
Context	network-instance name <i>string</i> bgp-rib afi-safi afi-safi-name identityref l3vpn-ipv4-unicast rib-in-out rib-out-post route route-distinguisher (route-distinguisher-type-0 route-distinguisher-type-1 route-distinguisher-type-2 route-distinguisher-type-2b) prefix (ipv4-prefix ipv6-prefix) neighbor (ipv4-address-with-zone ipv6-address-with-zone) path-id <i>number</i>
Tree	route
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

route-distinguisher ([route-distinguisher-type-0](#) | [route-distinguisher-type-1](#) | [route-distinguisher-type-2](#) | [route-distinguisher-type-2b](#))

Description	The route distinguisher encoded in the NLRI.
Context	network-instance name <i>string</i> bgp-rib afi-safi afi-safi-name identityref l3vpn-ipv4-unicast rib-in-out rib-out-post route route-distinguisher (route-distinguisher-type-0 route-distinguisher-type-1 route-distinguisher-type-2 route-distinguisher-type-2b) prefix (ipv4-prefix ipv6-prefix) neighbor (ipv4-address-with-zone ipv6-address-with-zone) path-id <i>number</i>
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

prefix ([ipv4-prefix](#) | [ipv6-prefix](#))

Description	Enter the prefix context
Context	network-instance name <i>string</i> bgp-rib afi-safi afi-safi-name identityref l3vpn-ipv4-unicast rib-in-out rib-out-post route route-distinguisher (route-distinguisher-type-0 route-distinguisher-type-1 route-distinguisher-type-2 route-distinguisher-type-2b) prefix (ipv4-prefix ipv6-prefix) neighbor (ipv4-address-with-zone ipv6-address-with-zone) path-id <i>number</i>

Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

neighbor (*ipv4-address-with-zone* | *ipv6-address-with-zone*)

Description	If the route was learned from a BGP neighbor, this is the IPv4 or IPv6 address of that neighbor.
Context	network-instance name string bgp-rib afi-safi afi-safi-name identityref l3vpn-ipv4-unicast rib-in-out rib-out-post route route-distinguisher (route-distinguisher-type-0 route-distinguisher-type-1 route-distinguisher-type-2 route-distinguisher-type-2b) prefix (ipv4-prefix ipv6-prefix) neighbor (ipv4-address-with-zone ipv6-address-with-zone) path-id number
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

path-id *number*

Description	Path identifier of the BGP route
Context	network-instance name string bgp-rib afi-safi afi-safi-name identityref l3vpn-ipv4-unicast rib-in-out rib-out-post route route-distinguisher (route-distinguisher-type-0 route-distinguisher-type-1 route-distinguisher-type-2 route-distinguisher-type-2b) prefix (ipv4-prefix ipv6-prefix) neighbor (ipv4-address-with-zone ipv6-address-with-zone) path-id number
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

advertised-mpls-label (*number* | *keyword*)

Description	Advertised MPLS label value
Context	network-instance name string bgp-rib afi-safi afi-safi-name identityref l3vpn-ipv4-unicast rib-in-out rib-out-post route route-distinguisher (route-distinguisher-type-0 route-distinguisher-type-1 route-distinguisher-type-2 route-distinguisher-type-2b) prefix (ipv4-prefix ipv6-prefix) neighbor (ipv4-address-with-zone ipv6-address-with-zone) path-id number advertised-mpls-label (number keyword)
Tree	advertised-mpls-label
Range	16 to 1048575
Options	<ul style="list-style-type: none"> • IPV4_EXPLICIT_NULL • IPV6_EXPLICIT_NULL • IMPLICIT_NULL

Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b
Max. Elements	1

attr-id reference

Description	Leaf reference to networkinstance/protocols/bgp/rib/attr-sets/attr-set/index.
Context	network-instance name <i>string</i> bgp-rib afi-safi afi-safi-name identityref l3vpn-ipv4-unicast rib-in-out rib-out-post route route-distinguisher (route-distinguisher-type-0 route-distinguisher-type-1 route-distinguisher-type-2 route-distinguisher-type-2b) prefix (ipv4-prefix ipv6-prefix) neighbor (ipv4-address-with-zone ipv6-address-with-zone) path-id <i>number</i> attr-id <i>reference</i>
Tree	attr-id
Reference	network-instance name <i>string</i> bgp-rib attr-sets attr-set index <i>number</i>
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

l3vpn-ipv6-unicast

Description	Container for RIB state of VPN-IPv6 unicast routes.
Context	network-instance name <i>string</i> bgp-rib afi-safi afi-safi-name identityref l3vpn-ipv6-unicast
Tree	l3vpn-ipv6-unicast
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

local-rib

Description	Container for local RIB Includes the post import-policy RIB-INS corresponding to VPN-IPv6 routes received from default net-instance BGP peers (post import-policy means after processing by the BGP import policy attached to the default net-instance peer and after processing by the vrf-import policy of importing IP VRF network instances) plus the post vrf-export policy “imported” routes from local IP-VRF network instances.
Context	network-instance name <i>string</i> bgp-rib afi-safi afi-safi-name identityref l3vpn-ipv6-unicast local-rib
Tree	local-rib
Configurable	False

Platforms 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

route route-distinguisher (*route-distinguisher-type-0 | route-distinguisher-type-1 | route-distinguisher-type-2 | route-distinguisher-type-2b*) **prefix** (*ipv4-prefix | ipv6-prefix*) **neighbor** (*ipv4-address-with-zone | ipv6-address-with-zone*) **path-id** *number*

Description List of VPN-IPv6 unicast routes in the local RIB.

Context [network-instance name](#) *string* [bgp-rib](#) [afi-safi](#) [afi-safi-name](#) [identityref I3vpn-ipv6-unicast local-rib](#) [route route-distinguisher](#) (*route-distinguisher-type-0 | route-distinguisher-type-1 | route-distinguisher-type-2 | route-distinguisher-type-2b*) [prefix](#) (*ipv4-prefix | ipv6-prefix*) [neighbor](#) (*ipv4-address-with-zone | ipv6-address-with-zone*) [path-id](#) *number*

Tree [route](#)

Configurable False

Platforms 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

route-distinguisher (*route-distinguisher-type-0 | route-distinguisher-type-1 | route-distinguisher-type-2 | route-distinguisher-type-2b*)

Description The route distinguisher encoded in the NLRI.

Context [network-instance name](#) *string* [bgp-rib](#) [afi-safi](#) [afi-safi-name](#) [identityref I3vpn-ipv6-unicast local-rib](#) [route route-distinguisher](#) (*route-distinguisher-type-0 | route-distinguisher-type-1 | route-distinguisher-type-2 | route-distinguisher-type-2b*) [prefix](#) (*ipv4-prefix | ipv6-prefix*) [neighbor](#) (*ipv4-address-with-zone | ipv6-address-with-zone*) [path-id](#) *number*

Configurable False

Platforms 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

prefix (*ipv4-prefix | ipv6-prefix*)

Description Enter the prefix context

Context [network-instance name](#) *string* [bgp-rib](#) [afi-safi](#) [afi-safi-name](#) [identityref I3vpn-ipv6-unicast local-rib](#) [route route-distinguisher](#) (*route-distinguisher-type-0 | route-distinguisher-type-1 | route-distinguisher-type-2 | route-distinguisher-type-2b*) [prefix](#) (*ipv4-prefix | ipv6-prefix*) [neighbor](#) (*ipv4-address-with-zone | ipv6-address-with-zone*) [path-id](#) *number*

Configurable False

Platforms 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

neighbor (*ipv4-address-with-zone* | *ipv6-address-with-zone*)

Description	If the route was learned from a BGP neighbor, this is the IPv4 or IPv6 address of that neighbor.
Context	network-instance name <i>string</i> bgp-rib afi-safi afi-safi-name identityref I3vpn-ipv6-unicast local-rib route route-distinguisher (route-distinguisher-type-0 route-distinguisher-type-1 route-distinguisher-type-2 route-distinguisher-type-2b) prefix (ipv4-prefix ipv6-prefix) neighbor (ipv4-address-with-zone ipv6-address-with-zone) path-id <i>number</i>
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

path-id *number*

Description	Path identifier of the BGP route
Context	network-instance name <i>string</i> bgp-rib afi-safi afi-safi-name identityref I3vpn-ipv6-unicast local-rib route route-distinguisher (route-distinguisher-type-0 route-distinguisher-type-1 route-distinguisher-type-2 route-distinguisher-type-2b) prefix (ipv4-prefix ipv6-prefix) neighbor (ipv4-address-with-zone ipv6-address-with-zone) path-id <i>number</i>
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

attr-id *reference*

Description	Leaf reference to networkinstance/bgp-rib/attr-sets/attr-set/index
Context	network-instance name <i>string</i> bgp-rib afi-safi afi-safi-name identityref I3vpn-ipv6-unicast local-rib route route-distinguisher (route-distinguisher-type-0 route-distinguisher-type-1 route-distinguisher-type-2 route-distinguisher-type-2b) prefix (ipv4-prefix ipv6-prefix) neighbor (ipv4-address-with-zone ipv6-address-with-zone) path-id <i>number</i> attr-id <i>reference</i>
Tree	attr-id
Reference	network-instance name <i>string</i> bgp-rib attr-sets attr-set index <i>number</i>
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

best-route *boolean*

Description	Set to true if the route is the BGP best path for the prefix.
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Context	network-instance name <i>string</i> bgp-rib afi-safi afi-safi-name identityref I3vpn-ipv6-unicast local-rib route route-distinguisher (route-distinguisher-type-0 route-distinguisher-type-1 route-distinguisher-type-2 route-distinguisher-type-2b) prefix (ipv4-prefix ipv6-prefix) neighbor (ipv4-address-with-zone ipv6-address-with-zone) path-id number best-route boolean
Tree	best-route
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

group-best *boolean*

Description	Set to true if the route is the best BGP route amongst all routes received from one particular neighbor AS
Context	network-instance name <i>string</i> bgp-rib afi-safi afi-safi-name identityref I3vpn-ipv6-unicast local-rib route route-distinguisher (route-distinguisher-type-0 route-distinguisher-type-1 route-distinguisher-type-2 route-distinguisher-type-2b) prefix (ipv4-prefix ipv6-prefix) neighbor (ipv4-address-with-zone ipv6-address-with-zone) path-id number group-best boolean
Tree	group-best
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

imported-ip-vrf-network-instances *reference*

Description	List of IP-VRF network instances that imported the route
Context	network-instance name <i>string</i> bgp-rib afi-safi afi-safi-name identityref I3vpn-ipv6-unicast local-rib route route-distinguisher (route-distinguisher-type-0 route-distinguisher-type-1 route-distinguisher-type-2 route-distinguisher-type-2b) prefix (ipv4-prefix ipv6-prefix) neighbor (ipv4-address-with-zone ipv6-address-with-zone) path-id number imported-ip-vrf-network-instances reference
Tree	imported-ip-vrf-network-instances
Reference	network-instance name <i>string</i>
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

invalid-reason

Description	Enter the invalid-reason context
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Context	network-instance name <i>string</i> bgp-rib afi-safi afi-safi-name identityref I3vpn-ipv6-unicast local-rib route route-distinguisher (route-distinguisher-type-0 route-distinguisher-type-1 route-distinguisher-type-2 route-distinguisher-type-2b) prefix (ipv4-prefix ipv6-prefix) neighbor (ipv4-address-with-zone ipv6-address-with-zone) path-id number invalid-reason
Tree	invalid-reason
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

as-loop *boolean*

Description	Indicates true if the BGP route has an AS path loop that exceeds the configured threshold.
Context	network-instance name <i>string</i> bgp-rib afi-safi afi-safi-name identityref I3vpn-ipv6-unicast local-rib route route-distinguisher (route-distinguisher-type-0 route-distinguisher-type-1 route-distinguisher-type-2 route-distinguisher-type-2b) prefix (ipv4-prefix ipv6-prefix) neighbor (ipv4-address-with-zone ipv6-address-with-zone) path-id number invalid-reason as-loop <i>boolean</i>
Tree	as-loop
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

cluster-loop *boolean*

Description	Indicates true if the BGP route has a cluster-list loop.
Context	network-instance name <i>string</i> bgp-rib afi-safi afi-safi-name identityref I3vpn-ipv6-unicast local-rib route route-distinguisher (route-distinguisher-type-0 route-distinguisher-type-1 route-distinguisher-type-2 route-distinguisher-type-2b) prefix (ipv4-prefix ipv6-prefix) neighbor (ipv4-address-with-zone ipv6-address-with-zone) path-id number invalid-reason cluster-loop <i>boolean</i>
Tree	cluster-loop
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

fib-programming-failed *boolean*

Description	Indicates true if FIB programming failed
Context	network-instance name <i>string</i> bgp-rib afi-safi afi-safi-name identityref I3vpn-ipv6-unicast local-rib route route-distinguisher (route-distinguisher-type-0 route-distinguisher-type-1 route-distinguisher-type-2 route-distinguisher-type-2b) prefix (ipv4-prefix ipv6-prefix) neighbor (ipv4-address-with-zone

	ipv6-address-with-zone) path-id number invalid-reason fib-programming-failed boolean
Tree	fib-programming-failed
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

label-allocation-failed *boolean*

Description	Indicates true if dynamic-label-block has no more free labels
Context	network-instance name string bgp-rib afi-safi afi-safi-name identityref I3vpn-ipv6-unicast local-rib route route-distinguisher (route-distinguisher-type-0 route-distinguisher-type-1 route-distinguisher-type-2 route-distinguisher-type-2b) prefix (ipv4-prefix ipv6-prefix) neighbor (ipv4-address-with-zone ipv6-address-with-zone) path-id number invalid-reason label-allocation-failed boolean
Tree	label-allocation-failed
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

next-hop-unresolved *boolean*

Description	Indicates true if the BGP route has a BGP next-hop that cannot be resolved to an outgoing interface.
Context	network-instance name string bgp-rib afi-safi afi-safi-name identityref I3vpn-ipv6-unicast local-rib route route-distinguisher (route-distinguisher-type-0 route-distinguisher-type-1 route-distinguisher-type-2 route-distinguisher-type-2b) prefix (ipv4-prefix ipv6-prefix) neighbor (ipv4-address-with-zone ipv6-address-with-zone) path-id number invalid-reason next-hop-unresolved boolean
Tree	next-hop-unresolved
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

rejected-route *boolean*

Description	Indicates true if the route was rejected by an import policy.
Context	network-instance name string bgp-rib afi-safi afi-safi-name identityref I3vpn-ipv6-unicast local-rib route route-distinguisher (route-distinguisher-type-0 route-distinguisher-type-1 route-distinguisher-type-2 route-distinguisher-type-2b) prefix (ipv4-prefix ipv6-prefix) neighbor (ipv4-address-with-zone

	ipv6-address-with-zone) path-id number invalid-reason rejected-route boolean
Tree	rejected-route
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

last-modified *string*

Description	Time of the last modification of the route stored in the BGP RIB. For a route learned from a BGP neighbor the initial value is the same as last-updatereceived. If an import policy later changed some attribute of the route last-modified would be updated to reflect the time of this change.
Context	network-instance name string bgp-rib afi-safi afi-safi-name identityref I3vpn-ipv6-unicast local-rib route route-distinguisher (route-distinguisher-type-0 route-distinguisher-type-1 route-distinguisher-type-2 route-distinguisher-type-2b) prefix (ipv4-prefix ipv6-prefix) neighbor (ipv4-address-with-zone ipv6-address-with-zone) path-id number last-modified string
Tree	last-modified
String Length	20 to 32
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

neighbor-as *number*

Description	The last external AS to advertise the route into the local AS
Context	network-instance name string bgp-rib afi-safi afi-safi-name identityref I3vpn-ipv6-unicast local-rib route route-distinguisher (route-distinguisher-type-0 route-distinguisher-type-1 route-distinguisher-type-2 route-distinguisher-type-2b) prefix (ipv4-prefix ipv6-prefix) neighbor (ipv4-address-with-zone ipv6-address-with-zone) path-id number neighbor-as number
Tree	neighbor-as
Range	1 to 4294967295
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

pending-delete *boolean*

Description	Set to true if the route is marked for deletion.
Context	network-instance name string bgp-rib afi-safi afi-safi-name identityref I3vpn-ipv6-unicast local-rib route route-distinguisher (route-distinguisher-type-0

route-distinguisher-type-1 | *route-distinguisher-type-2* | *route-distinguisher-type-2b*) [prefix](#) (*ipv4-prefix* | *ipv6-prefix*) [neighbor](#) (*ipv4-address-with-zone* | *ipv6-address-with-zone*) [path-id](#) *number* [pending-delete](#) *boolean*

Tree	pending-delete
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

received-mpls-label (*number* | *keyword*)

Description	Received MPLS label value
Context	network-instance <i>name</i> <i>string</i> bgp-rib afi-safi afi-safi-name identityref I3vpn-ipv6-unicast local-rib route route-distinguisher (<i>route-distinguisher-type-0</i> <i>route-distinguisher-type-1</i> <i>route-distinguisher-type-2</i> <i>route-distinguisher-type-2b</i>) prefix (<i>ipv4-prefix</i> <i>ipv6-prefix</i>) neighbor (<i>ipv4-address-with-zone</i> <i>ipv6-address-with-zone</i>) path-id <i>number</i> received-mpls-label (<i>number</i> <i>keyword</i>)
Tree	received-mpls-label
Range	16 to 1048575
Options	<ul style="list-style-type: none"> • <code>IPV4_EXPLICIT_NULL</code> • <code>IPV6_EXPLICIT_NULL</code> • <code>IMPLICIT_NULL</code>
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b
Max. Elements	1

stale-route *boolean*

Description	Set to true if the route is stale due to BGP graceful restart.
Context	network-instance <i>name</i> <i>string</i> bgp-rib afi-safi afi-safi-name identityref I3vpn-ipv6-unicast local-rib route route-distinguisher (<i>route-distinguisher-type-0</i> <i>route-distinguisher-type-1</i> <i>route-distinguisher-type-2</i> <i>route-distinguisher-type-2b</i>) prefix (<i>ipv4-prefix</i> <i>ipv6-prefix</i>) neighbor (<i>ipv4-address-with-zone</i> <i>ipv6-address-with-zone</i>) path-id <i>number</i> stale-route <i>boolean</i>
Tree	stale-route
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

tie-break-reason *keyword*

Description	Indicates the reason why a BGP route is sorted behind the next best route. The BGP best path displays a value of 'none'.
Context	network-instance name <i>string</i> bgp-rib afi-safi afi-safi-name identityref l3vpn-ipv6-unicast local-rib route route-distinguisher (route-distinguisher-type-0 route-distinguisher-type-1 route-distinguisher-type-2 route-distinguisher-type-2b) prefix (ipv4-prefix ipv6-prefix) neighbor (ipv4-address-with-zone ipv6-address-with-zone) path-id <i>number</i> tie-break-reason <i>keyword</i>
Tree	tie-break-reason
Options	<ul style="list-style-type: none"> • unknown • none • origin • as-path-length • next-hop-cost • med • local-pref • aggregate • originator-id • cluster-list • extended-community • aigp • missing-attribute • rtm-pref • owner • eigrp-labeled • vpn-route • ebgp-route • peer-ip • local-peer • multi-path • vpn-rd • next-hop-type • invalid-route • origin-validation • long-live-gr-stale • default-originate

- fib-install-disabled
- peer-router-id
- path-identifier

Configurable

False

Platforms

7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

used-route *boolean***Description**

Indicates true if the route is being used for forwarding.

Context

[network-instance name](#) *string* [bgp-rib](#) [afi-safi](#) [afi-safi-name](#) [identityref I3vpn-ipv6-unicast](#) [local-rib](#) [route](#) [route-distinguisher](#) ([route-distinguisher-type-0](#) | [route-distinguisher-type-1](#) | [route-distinguisher-type-2](#) | [route-distinguisher-type-2b](#)) [prefix](#) ([ipv4-prefix](#) | [ipv6-prefix](#)) [neighbor](#) ([ipv4-address-with-zone](#) | [ipv6-address-with-zone](#)) [path-id](#) *number* [used-route](#) *boolean*

Tree[used-route](#)**Configurable**

False

Platforms

7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

valid-route *boolean***Description**

Indicates true if the route is valid.

Context

[network-instance name](#) *string* [bgp-rib](#) [afi-safi](#) [afi-safi-name](#) [identityref I3vpn-ipv6-unicast](#) [local-rib](#) [route](#) [route-distinguisher](#) ([route-distinguisher-type-0](#) | [route-distinguisher-type-1](#) | [route-distinguisher-type-2](#) | [route-distinguisher-type-2b](#)) [prefix](#) ([ipv4-prefix](#) | [ipv6-prefix](#)) [neighbor](#) ([ipv4-address-with-zone](#) | [ipv6-address-with-zone](#)) [path-id](#) *number* [valid-route](#) *boolean*

Tree[valid-route](#)**Configurable**

False

Platforms

7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

rib-in-out**Description**

Container for BGP routes learned and advertised to BGP neighbors.

Context

[network-instance name](#) *string* [bgp-rib](#) [afi-safi](#) [afi-safi-name](#) [identityref I3vpn-ipv6-unicast](#) [rib-in-out](#)

Tree[rib-in-out](#)**Configurable**

False

Platforms

7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

rib-in-post

Description	Container for the post-import-policy version of BGP routes learned from BGP neighbors.
Context	network-instance name <i>string</i> bgp-rib afi-safi afi-safi-name identityref l3vpn-ipv6-unicast rib-in-out rib-in-post
Tree	rib-in-post
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

route [route-distinguisher](#) ([route-distinguisher-type-0](#) | [route-distinguisher-type-1](#) | [route-distinguisher-type-2](#) | [route-distinguisher-type-2b](#)) [prefix](#) ([ipv4-prefix](#) | [ipv6-prefix](#)) [neighbor](#) ([ipv4-address-with-zone](#) | [ipv6-address-with-zone](#)) [path-id](#) *number*

Description	List of VPN-IPv6 unicast routes
Context	network-instance name <i>string</i> bgp-rib afi-safi afi-safi-name identityref l3vpn-ipv6-unicast rib-in-out rib-in-post route route-distinguisher (route-distinguisher-type-0 route-distinguisher-type-1 route-distinguisher-type-2 route-distinguisher-type-2b) prefix (ipv4-prefix ipv6-prefix) neighbor (ipv4-address-with-zone ipv6-address-with-zone) path-id <i>number</i>
Tree	route
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

route-distinguisher ([route-distinguisher-type-0](#) | [route-distinguisher-type-1](#) | [route-distinguisher-type-2](#) | [route-distinguisher-type-2b](#))

Description	The route distinguisher encoded in the NLRI.
Context	network-instance name <i>string</i> bgp-rib afi-safi afi-safi-name identityref l3vpn-ipv6-unicast rib-in-out rib-in-post route route-distinguisher (route-distinguisher-type-0 route-distinguisher-type-1 route-distinguisher-type-2 route-distinguisher-type-2b) prefix (ipv4-prefix ipv6-prefix) neighbor (ipv4-address-with-zone ipv6-address-with-zone) path-id <i>number</i>
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

prefix ([ipv4-prefix](#) | [ipv6-prefix](#))

Description	Enter the prefix context
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Context	network-instance name <i>string</i> bgp-rib afi-safi afi-safi-name identityref l3vpn-ipv6-unicast rib-in-out rib-in-post route route-distinguisher (route-distinguisher-type-0 route-distinguisher-type-1 route-distinguisher-type-2 route-distinguisher-type-2b) prefix (ipv4-prefix ipv6-prefix) neighbor (ipv4-address-with-zone ipv6-address-with-zone) path-id <i>number</i>
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

neighbor ([ipv4-address-with-zone](#) | [ipv6-address-with-zone](#))

Description	If the route was learned from a BGP neighbor, this is the IPv4 or IPv6 address of that neighbor.
Context	network-instance name <i>string</i> bgp-rib afi-safi afi-safi-name identityref l3vpn-ipv6-unicast rib-in-out rib-in-post route route-distinguisher (route-distinguisher-type-0 route-distinguisher-type-1 route-distinguisher-type-2 route-distinguisher-type-2b) prefix (ipv4-prefix ipv6-prefix) neighbor (ipv4-address-with-zone ipv6-address-with-zone) path-id <i>number</i>
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

path-id *number*

Description	Path identifier of the BGP route
Context	network-instance name <i>string</i> bgp-rib afi-safi afi-safi-name identityref l3vpn-ipv6-unicast rib-in-out rib-in-post route route-distinguisher (route-distinguisher-type-0 route-distinguisher-type-1 route-distinguisher-type-2 route-distinguisher-type-2b) prefix (ipv4-prefix ipv6-prefix) neighbor (ipv4-address-with-zone ipv6-address-with-zone) path-id <i>number</i>
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

attr-id *reference*

Description	Leaf reference to networkinstance/protocols/bgp/rib/ attr-sets/attr-set/index .
Context	network-instance name <i>string</i> bgp-rib afi-safi afi-safi-name identityref l3vpn-ipv6-unicast rib-in-out rib-in-post route route-distinguisher (route-distinguisher-type-0 route-distinguisher-type-1 route-distinguisher-type-2 route-distinguisher-type-2b) prefix (ipv4-prefix ipv6-prefix) neighbor (ipv4-address-with-zone ipv6-address-with-zone) path-id <i>number</i> attr-id <i>reference</i>
Tree	attr-id
Reference	network-instance name <i>string</i> bgp-rib attr-sets attr-set index <i>number</i>

Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

best-route *boolean*

Description	Set to true if the route is the BGP best path for the prefix.
Context	network-instance name <i>string</i> bgp-rib afi-safi afi-safi-name identityref l3vpn-ipv6-unicast rib-in-out rib-in-post route route-distinguisher (route-distinguisher-type-0 route-distinguisher-type-1 route-distinguisher-type-2 route-distinguisher-type-2b) prefix (ipv4-prefix ipv6-prefix) neighbor (ipv4-address-with-zone ipv6-address-with-zone) path-id <i>number</i> best-route <i>boolean</i>
Tree	best-route
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

group-best *boolean*

Description	Set to true if the route is the best BGP route amongst all routes received from one particular neighbor AS
Context	network-instance name <i>string</i> bgp-rib afi-safi afi-safi-name identityref l3vpn-ipv6-unicast rib-in-out rib-in-post route route-distinguisher (route-distinguisher-type-0 route-distinguisher-type-1 route-distinguisher-type-2 route-distinguisher-type-2b) prefix (ipv4-prefix ipv6-prefix) neighbor (ipv4-address-with-zone ipv6-address-with-zone) path-id <i>number</i> group-best <i>boolean</i>
Tree	group-best
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

imported-ip-vrf-network-instances *reference*

Description	List of IP-VRF network instances that imported the route
Context	network-instance name <i>string</i> bgp-rib afi-safi afi-safi-name identityref l3vpn-ipv6-unicast rib-in-out rib-in-post route route-distinguisher (route-distinguisher-type-0 route-distinguisher-type-1 route-distinguisher-type-2 route-distinguisher-type-2b) prefix (ipv4-prefix ipv6-prefix) neighbor (ipv4-address-with-zone ipv6-address-with-zone) path-id <i>number</i> imported-ip-vrf-network-instances <i>reference</i>
Tree	imported-ip-vrf-network-instances
Reference	network-instance name <i>string</i>

Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

internal-tags *string*

Description	Internal route tag written in the route/tunnel tables or BGP rib The internal-tag value is shown with the format 'type-string = hex-value-string'. For example:
Context	network-instance name <i>string</i> bgp-rib afi-safi afi-safi-name identityref l3vpn-ipv6-unicast rib-in-out rib-in-post route route-distinguisher (route-distinguisher-type-0 route-distinguisher-type-1 route-distinguisher-type-2 route-distinguisher-type-2b) prefix (ipv4-prefix ipv6-prefix) neighbor (ipv4-address-with-zone ipv6-address-with-zone) path-id number internal-tags <i>string</i>
Tree	internal-tags
Configurable	False
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b
Max. Elements	2

invalid-reason

Description	Enter the invalid-reason context
Context	network-instance name <i>string</i> bgp-rib afi-safi afi-safi-name identityref l3vpn-ipv6-unicast rib-in-out rib-in-post route route-distinguisher (route-distinguisher-type-0 route-distinguisher-type-1 route-distinguisher-type-2 route-distinguisher-type-2b) prefix (ipv4-prefix ipv6-prefix) neighbor (ipv4-address-with-zone ipv6-address-with-zone) path-id number invalid-reason
Tree	invalid-reason
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

as-loop *boolean*

Description	Indicates true if the BGP route has an AS path loop that exceeds the configured threshold.
Context	network-instance name <i>string</i> bgp-rib afi-safi afi-safi-name identityref l3vpn-ipv6-unicast rib-in-out rib-in-post route route-distinguisher (route-distinguisher-type-0 route-distinguisher-type-1 route-distinguisher-type-2 route-distinguisher-type-2b) prefix (ipv4-prefix ipv6-prefix) neighbor (ipv4-

	address-with-zone ipv6-address-with-zone) path-id number invalid-reason as-loop boolean
Tree	as-loop
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

cluster-loop *boolean*

Description	Indicates true if the BGP route has a cluster-list loop.
Context	network-instance name string bgp-rib afi-safi afi-safi-name identityref l3vpn-ipv6-unicast rib-in-out rib-in-post route route-distinguisher (route-distinguisher-type-0 route-distinguisher-type-1 route-distinguisher-type-2 route-distinguisher-type-2b) prefix (ipv4-prefix ipv6-prefix) neighbor (ipv4-address-with-zone ipv6-address-with-zone) path-id number invalid-reason cluster-loop boolean
Tree	cluster-loop
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

fib-programming-failed *boolean*

Description	Indicates true if FIB programming failed
Context	network-instance name string bgp-rib afi-safi afi-safi-name identityref l3vpn-ipv6-unicast rib-in-out rib-in-post route route-distinguisher (route-distinguisher-type-0 route-distinguisher-type-1 route-distinguisher-type-2 route-distinguisher-type-2b) prefix (ipv4-prefix ipv6-prefix) neighbor (ipv4-address-with-zone ipv6-address-with-zone) path-id number invalid-reason fib-programming-failed boolean
Tree	fib-programming-failed
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

label-allocation-failed *boolean*

Description	Indicates true if dynamic-label-block has no more free labels
Context	network-instance name string bgp-rib afi-safi afi-safi-name identityref l3vpn-ipv6-unicast rib-in-out rib-in-post route route-distinguisher (route-distinguisher-type-0 route-distinguisher-type-1 route-distinguisher-type-2 route-distinguisher-type-2b) prefix (ipv4-prefix ipv6-prefix) neighbor (ipv4-address-with-zone ipv6-address-with-zone) path-id number invalid-reason label-allocation-failed boolean

Tree	label-allocation-failed
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

next-hop-unresolved *boolean*

Description	Indicates true if the BGP route has a BGP next-hop that cannot be resolved to an outgoing interface.
Context	network-instance name <i>string</i> bgp-rib afi-safi afi-safi-name identityref l3vpn-ipv6-unicast rib-in-out rib-in-post route route-distinguisher (route-distinguisher-type-0 route-distinguisher-type-1 route-distinguisher-type-2 route-distinguisher-type-2b) prefix (ipv4-prefix ipv6-prefix) neighbor (ipv4-address-with-zone ipv6-address-with-zone) path-id <i>number</i> invalid-reason next-hop-unresolved <i>boolean</i>
Tree	next-hop-unresolved
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

rejected-route *boolean*

Description	Indicates true if the route was rejected by an import policy.
Context	network-instance name <i>string</i> bgp-rib afi-safi afi-safi-name identityref l3vpn-ipv6-unicast rib-in-out rib-in-post route route-distinguisher (route-distinguisher-type-0 route-distinguisher-type-1 route-distinguisher-type-2 route-distinguisher-type-2b) prefix (ipv4-prefix ipv6-prefix) neighbor (ipv4-address-with-zone ipv6-address-with-zone) path-id <i>number</i> invalid-reason rejected-route <i>boolean</i>
Tree	rejected-route
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

last-modified *string*

Description	Time of the last modification of the route stored in the BGP RIB. For a route learned from a BGP neighbor the initial value is the same as last-updatereceived. If an import policy later changed some attribute of the route last-modified would be updated to reflect the time of this change.
Context	network-instance name <i>string</i> bgp-rib afi-safi afi-safi-name identityref l3vpn-ipv6-unicast rib-in-out rib-in-post route route-distinguisher (route-distinguisher-type-0 route-distinguisher-type-1 route-distinguisher-type-2 route-distinguisher-type-2b) prefix (ipv4-prefix ipv6-prefix) neighbor (ipv4-

	address-with-zone ipv6-address-with-zone) path-id number last-modified string
Tree	last-modified
String Length	20 to 32
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

neighbor-as *number*

Description	The last external AS to advertise the route into the local AS
Context	network-instance name string bgp-rib afi-safi afi-safi-name identityref l3vpn-ipv6-unicast rib-in-out rib-in-post route route-distinguisher (route-distinguisher-type-0 route-distinguisher-type-1 route-distinguisher-type-2 route-distinguisher-type-2b) prefix (ipv4-prefix ipv6-prefix) neighbor (ipv4-address-with-zone ipv6-address-with-zone) path-id number neighbor-as number
Tree	neighbor-as
Range	1 to 4294967295
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

pending-delete *boolean*

Description	Set to true if the route is marked for deletion.
Context	network-instance name string bgp-rib afi-safi afi-safi-name identityref l3vpn-ipv6-unicast rib-in-out rib-in-post route route-distinguisher (route-distinguisher-type-0 route-distinguisher-type-1 route-distinguisher-type-2 route-distinguisher-type-2b) prefix (ipv4-prefix ipv6-prefix) neighbor (ipv4-address-with-zone ipv6-address-with-zone) path-id number pending-delete boolean
Tree	pending-delete
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

received-mpls-label (*number* | *keyword*)

Description	Received MPLS label value
Context	network-instance name string bgp-rib afi-safi afi-safi-name identityref l3vpn-ipv6-unicast rib-in-out rib-in-post route route-distinguisher (route-distinguisher-type-0 route-distinguisher-type-1 route-distinguisher-type-2

	<i>route-distinguisher-type-2b</i>) prefix (<i>ipv4-prefix</i> <i>ipv6-prefix</i>) neighbor (<i>ipv4-address-with-zone</i> <i>ipv6-address-with-zone</i>) path-id <i>number</i> received-mpls-label (<i>number</i> <i>keyword</i>)
Tree	received-mpls-label
Range	16 to 1048575
Options	<ul style="list-style-type: none"> • IPV4_EXPLICIT_NULL • IPV6_EXPLICIT_NULL • IMPLICIT_NULL
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b
Max. Elements	1

stale-route *boolean*

Description	Set to true if the route is stale due to BGP graceful restart.
Context	network-instance <i>name</i> <i>string</i> bgp-rib afi-safi afi-safi-name identityref l3vpn-ipv6-unicast rib-in-out rib-in-post route route-distinguisher (<i>route-distinguisher-type-0</i> <i>route-distinguisher-type-1</i> <i>route-distinguisher-type-2</i> <i>route-distinguisher-type-2b</i>) prefix (<i>ipv4-prefix</i> <i>ipv6-prefix</i>) neighbor (<i>ipv4-address-with-zone</i> <i>ipv6-address-with-zone</i>) path-id <i>number</i> stale-route <i>boolean</i>
Tree	stale-route
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

tie-break-reason *keyword*

Description	Indicates the reason why a BGP route is sorted behind the next best route. The BGP best path displays a value of 'none'.
Context	network-instance <i>name</i> <i>string</i> bgp-rib afi-safi afi-safi-name identityref l3vpn-ipv6-unicast rib-in-out rib-in-post route route-distinguisher (<i>route-distinguisher-type-0</i> <i>route-distinguisher-type-1</i> <i>route-distinguisher-type-2</i> <i>route-distinguisher-type-2b</i>) prefix (<i>ipv4-prefix</i> <i>ipv6-prefix</i>) neighbor (<i>ipv4-address-with-zone</i> <i>ipv6-address-with-zone</i>) path-id <i>number</i> tie-break-reason <i>keyword</i>
Tree	tie-break-reason
Options	<ul style="list-style-type: none"> • unknown • none • origin

- as-path-length
- next-hop-cost
- med
- local-pref
- aggregate
- originator-id
- cluster-list
- extended-community
- aigp
- missing-attribute
- rtm-pref
- owner
- eigrp-labeled
- vpn-route
- ebgp-route
- peer-ip
- local-peer
- multi-path
- vpn-rd
- next-hop-type
- invalid-route
- origin-validation
- long-live-gr-stale
- default-originate
- fib-install-disabled
- peer-router-id
- path-identifier

Configurable

False

Platforms

7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

used-route *boolean***Description**

Indicates true if the route is being used for forwarding.

Context

[network-instance name](#) *string* [bgp-rib](#) [afi-safi](#) [afi-safi-name](#) [identityref](#)
[l3vpn-ipv6-unicast](#) [rib-in-out](#) [rib-in-post](#) [route](#) [route-distinguisher](#) ([route-distinguisher-type-0](#) | [route-distinguisher-type-1](#) | [route-distinguisher-type-2](#) | [route-distinguisher-type-2b](#)) [prefix](#) ([ipv4-prefix](#) | [ipv6-prefix](#)) [neighbor](#) ([ipv4-](#)

	<i>address-with-zone ipv6-address-with-zone</i>) path-id <i>number</i> used-route <i>boolean</i>
Tree	used-route
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

valid-route *boolean*

Description	Indicates true if the route is valid.
Context	network-instance <i>name</i> <i>string</i> bgp-rib afi-safi afi-safi-name <i>identityref</i> l3vpn-ipv6-unicast rib-in-out rib-in-post route-distinguisher (route-distinguisher-type-0 route-distinguisher-type-1 route-distinguisher-type-2 route-distinguisher-type-2b) prefix (ipv4-prefix ipv6-prefix) neighbor (ipv4-address-with-zone ipv6-address-with-zone) path-id <i>number</i> valid-route <i>boolean</i>
Tree	valid-route
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

rib-in-pre

Description	Container for the pre-import-policy version of BGP routes learned from BGP neighbors.
Context	network-instance <i>name</i> <i>string</i> bgp-rib afi-safi afi-safi-name <i>identityref</i> l3vpn-ipv6-unicast rib-in-out rib-in-pre
Tree	rib-in-pre
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

route [route-distinguisher](#) ([route-distinguisher-type-0](#) | [route-distinguisher-type-1](#) | [route-distinguisher-type-2](#) | [route-distinguisher-type-2b](#)) [prefix](#) ([ipv4-prefix](#) | [ipv6-prefix](#)) [neighbor](#) ([ipv4-address-with-zone](#) | [ipv6-address-with-zone](#)) [path-id](#) *number*

Description	List of VPN-IPv6 unicast routes learned from BGP neighbors.
Context	network-instance <i>name</i> <i>string</i> bgp-rib afi-safi afi-safi-name <i>identityref</i> l3vpn-ipv6-unicast rib-in-out rib-in-pre route route-distinguisher (route-distinguisher-type-0 route-distinguisher-type-1 route-distinguisher-type-2 route-distinguisher-type-2b) prefix (ipv4-prefix ipv6-prefix) neighbor (ipv4-address-with-zone ipv6-address-with-zone) path-id <i>number</i>
Tree	route

Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

route-distinguisher (*route-distinguisher-type-0 | route-distinguisher-type-1 | route-distinguisher-type-2 | route-distinguisher-type-2b*)

Description	The route distinguisher encoded in the NLRI.
Context	network-instance name <i>string</i> bgp-rib afi-safi afi-safi-name identityref l3vpn-ipv6-unicast rib-in-out rib-in-pre route route-distinguisher (<i>route-distinguisher-type-0 route-distinguisher-type-1 route-distinguisher-type-2 route-distinguisher-type-2b</i>) prefix (<i>ipv4-prefix ipv6-prefix</i>) neighbor (<i>ipv4-address-with-zone ipv6-address-with-zone</i>) path-id <i>number</i>
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

prefix (*ipv4-prefix | ipv6-prefix*)

Description	Enter the prefix context
Context	network-instance name <i>string</i> bgp-rib afi-safi afi-safi-name identityref l3vpn-ipv6-unicast rib-in-out rib-in-pre route route-distinguisher (<i>route-distinguisher-type-0 route-distinguisher-type-1 route-distinguisher-type-2 route-distinguisher-type-2b</i>) prefix (<i>ipv4-prefix ipv6-prefix</i>) neighbor (<i>ipv4-address-with-zone ipv6-address-with-zone</i>) path-id <i>number</i>
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

neighbor (*ipv4-address-with-zone | ipv6-address-with-zone*)

Description	If the route was learned from a BGP neighbor, this is the IPv4 or IPv6 address of that neighbor.
Context	network-instance name <i>string</i> bgp-rib afi-safi afi-safi-name identityref l3vpn-ipv6-unicast rib-in-out rib-in-pre route route-distinguisher (<i>route-distinguisher-type-0 route-distinguisher-type-1 route-distinguisher-type-2 route-distinguisher-type-2b</i>) prefix (<i>ipv4-prefix ipv6-prefix</i>) neighbor (<i>ipv4-address-with-zone ipv6-address-with-zone</i>) path-id <i>number</i>
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

path-id number

Description	Path identifier of the BGP route
Context	network-instance name <i>string</i> bgp-rib afi-safi afi-safi-name identityref l3vpn-ipv6-unicast rib-in-out rib-in-pre route route-distinguisher (route-distinguisher-type-0 route-distinguisher-type-1 route-distinguisher-type-2 route-distinguisher-type-2b) prefix (ipv4-prefix ipv6-prefix) neighbor (ipv4-address-with-zone ipv6-address-with-zone) path-id <i>number</i>
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

attr-id reference

Description	Leaf reference to networkinstance/protocols/bgp/rib/attr-sets/attr-set/index.
Context	network-instance name <i>string</i> bgp-rib afi-safi afi-safi-name identityref l3vpn-ipv6-unicast rib-in-out rib-in-pre route route-distinguisher (route-distinguisher-type-0 route-distinguisher-type-1 route-distinguisher-type-2 route-distinguisher-type-2b) prefix (ipv4-prefix ipv6-prefix) neighbor (ipv4-address-with-zone ipv6-address-with-zone) path-id <i>number</i> attr-id <i>reference</i>
Tree	attr-id
Reference	network-instance name <i>string</i> bgp-rib attr-sets attr-set index <i>number</i>
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

imported-ip-vrf-network-instances reference

Description	List of IP-VRF network instances that imported the route
Context	network-instance name <i>string</i> bgp-rib afi-safi afi-safi-name identityref l3vpn-ipv6-unicast rib-in-out rib-in-pre route route-distinguisher (route-distinguisher-type-0 route-distinguisher-type-1 route-distinguisher-type-2 route-distinguisher-type-2b) prefix (ipv4-prefix ipv6-prefix) neighbor (ipv4-address-with-zone ipv6-address-with-zone) path-id <i>number</i> imported-ip-vrf-network-instances <i>reference</i>
Tree	imported-ip-vrf-network-instances
Reference	network-instance name <i>string</i>
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

received-mpls-label (*number* | *keyword*)

Description	Received MPLS label value
Context	network-instance name <i>string</i> bgp-rib afi-safi afi-safi-name identityref l3vpn-ipv6-unicast rib-in-out rib-in-pre route route-distinguisher (route-distinguisher-type-0 route-distinguisher-type-1 route-distinguisher-type-2 route-distinguisher-type-2b) prefix (ipv4-prefix ipv6-prefix) neighbor (ipv4-address-with-zone ipv6-address-with-zone) path-id <i>number</i> received-mpls-label (<i>number</i> <i>keyword</i>)
Tree	received-mpls-label
Range	16 to 1048575
Options	<ul style="list-style-type: none"> • IPV4_EXPLICIT_NULL • IPV6_EXPLICIT_NULL • IMPLICIT_NULL
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b
Max. Elements	1

rib-out-post

Description	Container for the post-export-policy version of BGP routes advertised to BGP neighbors.
Context	network-instance name <i>string</i> bgp-rib afi-safi afi-safi-name identityref l3vpn-ipv6-unicast rib-in-out rib-out-post
Tree	rib-out-post
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

route [route-distinguisher](#) ([route-distinguisher-type-0](#) | [route-distinguisher-type-1](#) | [route-distinguisher-type-2](#) | [route-distinguisher-type-2b](#)) [prefix](#) ([ipv4-prefix](#) | [ipv6-prefix](#)) [neighbor](#) ([ipv4-address-with-zone](#) | [ipv6-address-with-zone](#)) [path-id](#) *number*

Description	List of VPN-IPv6 unicast routes.
Context	network-instance name <i>string</i> bgp-rib afi-safi afi-safi-name identityref l3vpn-ipv6-unicast rib-in-out rib-out-post route route-distinguisher (route-distinguisher-type-0 route-distinguisher-type-1 route-distinguisher-type-2 route-distinguisher-type-2b) prefix (ipv4-prefix ipv6-prefix) neighbor (ipv4-address-with-zone ipv6-address-with-zone) path-id <i>number</i>
Tree	route

Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

route-distinguisher (*route-distinguisher-type-0* | *route-distinguisher-type-1* | *route-distinguisher-type-2* | *route-distinguisher-type-2b*)

Description	The route distinguisher encoded in the NLRI.
Context	network-instance name <i>string</i> bgp-rib afi-safi afi-safi-name identityref l3vpn-ipv6-unicast rib-in-out rib-out-post route route-distinguisher (<i>route-distinguisher-type-0</i> <i>route-distinguisher-type-1</i> <i>route-distinguisher-type-2</i> <i>route-distinguisher-type-2b</i>) prefix (<i>ipv4-prefix</i> <i>ipv6-prefix</i>) neighbor (<i>ipv4-address-with-zone</i> <i>ipv6-address-with-zone</i>) path-id <i>number</i>
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

prefix (*ipv4-prefix* | *ipv6-prefix*)

Description	Enter the prefix context
Context	network-instance name <i>string</i> bgp-rib afi-safi afi-safi-name identityref l3vpn-ipv6-unicast rib-in-out rib-out-post route route-distinguisher (<i>route-distinguisher-type-0</i> <i>route-distinguisher-type-1</i> <i>route-distinguisher-type-2</i> <i>route-distinguisher-type-2b</i>) prefix (<i>ipv4-prefix</i> <i>ipv6-prefix</i>) neighbor (<i>ipv4-address-with-zone</i> <i>ipv6-address-with-zone</i>) path-id <i>number</i>
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

neighbor (*ipv4-address-with-zone* | *ipv6-address-with-zone*)

Description	If the route was learned from a BGP neighbor, this is the IPv4 or IPv6 address of that neighbor.
Context	network-instance name <i>string</i> bgp-rib afi-safi afi-safi-name identityref l3vpn-ipv6-unicast rib-in-out rib-out-post route route-distinguisher (<i>route-distinguisher-type-0</i> <i>route-distinguisher-type-1</i> <i>route-distinguisher-type-2</i> <i>route-distinguisher-type-2b</i>) prefix (<i>ipv4-prefix</i> <i>ipv6-prefix</i>) neighbor (<i>ipv4-address-with-zone</i> <i>ipv6-address-with-zone</i>) path-id <i>number</i>
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

path-id number

Description	Path identifier of the BGP route
Context	network-instance name <i>string</i> bgp-rib afi-safi afi-safi-name identityref l3vpn-ipv6-unicast rib-in-out rib-out-post route route-distinguisher (route-distinguisher-type-0 route-distinguisher-type-1 route-distinguisher-type-2 route-distinguisher-type-2b) prefix (ipv4-prefix ipv6-prefix) neighbor (ipv4-address-with-zone ipv6-address-with-zone) path-id <i>number</i>
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

advertised-mpls-label (*number* | *keyword*)

Description	Advertised MPLS label value
Context	network-instance name <i>string</i> bgp-rib afi-safi afi-safi-name identityref l3vpn-ipv6-unicast rib-in-out rib-out-post route route-distinguisher (route-distinguisher-type-0 route-distinguisher-type-1 route-distinguisher-type-2 route-distinguisher-type-2b) prefix (ipv4-prefix ipv6-prefix) neighbor (ipv4-address-with-zone ipv6-address-with-zone) path-id <i>number</i> advertised-mpls-label (<i>number</i> <i>keyword</i>)
Tree	advertised-mpls-label
Range	16 to 1048575
Options	<ul style="list-style-type: none"> • IPV4_EXPLICIT_NULL • IPV6_EXPLICIT_NULL • IMPLICIT_NULL
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b
Max. Elements	1

attr-id reference

Description	Leaf reference to networkinstance/protocols/bgp/rib/attr-sets/attr-set/index.
Context	network-instance name <i>string</i> bgp-rib afi-safi afi-safi-name identityref l3vpn-ipv6-unicast rib-in-out rib-out-post route route-distinguisher (route-distinguisher-type-0 route-distinguisher-type-1 route-distinguisher-type-2 route-distinguisher-type-2b) prefix (ipv4-prefix ipv6-prefix) neighbor (ipv4-address-with-zone ipv6-address-with-zone) path-id <i>number</i> attr-id <i>reference</i>
Tree	attr-id
Reference	network-instance name <i>string</i> bgp-rib attr-sets attr-set index <i>number</i>

Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

route-target

Description	Container for RIB state of RTC routes.
Context	network-instance name <i>string</i> bgp-rib afi-safi afi-safi-name identityref route-target
Tree	route-target
Configurable	False
Platforms	7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

rib-in-out

Description	Container for BGP routes learned and advertised to BGP neighbors.
Context	network-instance name <i>string</i> bgp-rib afi-safi afi-safi-name identityref route-target rib-in-out
Tree	rib-in-out
Configurable	False
Platforms	7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

rib-in-post

Description	Container for the post-import-policy version of BGP routes learned from BGP neighbors.
Context	network-instance name <i>string</i> bgp-rib afi-safi afi-safi-name identityref route-target rib-in-out rib-in-post
Tree	rib-in-post
Configurable	False
Platforms	7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

route origin-as *number* **route-target-prefix** *string* **neighbor** (*ipv4-address-with-zone* | *ipv6-address-with-zone*) **path-id** *number*

Description	List of RTC routes in the RIB-IN, after import-policy modification.
Context	network-instance name <i>string</i> bgp-rib afi-safi afi-safi-name identityref route-target rib-in-out rib-in-post route origin-as <i>number</i> route-target-prefix <i>string</i> neighbor (<i>ipv4-address-with-zone</i> <i>ipv6-address-with-zone</i>) path-id <i>number</i>
Tree	route
Configurable	False
Platforms	7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

origin-as *number*

Description	The origin AS of the RTC route
Context	network-instance name <i>string</i> bgp-rib afi-safi afi-safi-name identityref route-target rib-in-out rib-in-post route origin-as <i>number</i> route-target-prefix <i>string</i> neighbor (<i>ipv4-address-with-zone</i> <i>ipv6-address-with-zone</i>) path-id <i>number</i>
Range	1 to 4294967295
Configurable	False
Platforms	7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

route-target-prefix *string*

Description	The RTC prefix in the format number1:number2/length, where number1 is an IPv4 address or a 2-byte ASN or a 4-byte ASN, number2 is a 2-byte or 4-byte administrative value and length is a number of bits between 0 and 96 The default RTC prefix is represented by 0:0/0
Context	network-instance name <i>string</i> bgp-rib afi-safi afi-safi-name identityref route-target rib-in-out rib-in-post route origin-as <i>number</i> route-target-prefix <i>string</i> neighbor (<i>ipv4-address-with-zone</i> <i>ipv6-address-with-zone</i>) path-id <i>number</i>
Configurable	False
Platforms	7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

neighbor (*ipv4-address-with-zone* | *ipv6-address-with-zone*)

Description	If the route was learned from a BGP neighbor, this is the IPv4 or IPv6 address of that neighbor.
Context	network-instance name string bgp-rib afi-safi afi-safi-name identityref route-target rib-in-out rib-in-post route origin-as number route-target-prefix string neighbor (<i>ipv4-address-with-zone</i> <i>ipv6-address-with-zone</i>) path-id number
Configurable	False
Platforms	7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

path-id *number*

Description	Path identifier of the BGP route
Context	network-instance name string bgp-rib afi-safi afi-safi-name identityref route-target rib-in-out rib-in-post route origin-as number route-target-prefix string neighbor (<i>ipv4-address-with-zone</i> <i>ipv6-address-with-zone</i>) path-id number
Configurable	False
Platforms	7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

attr-id *reference*

Description	Leaf reference to networkinstance/protocols/bgp/rib/ attr-sets/attr-set/index.
Context	network-instance name string bgp-rib afi-safi afi-safi-name identityref route-target rib-in-out rib-in-post route origin-as number route-target-prefix string neighbor (<i>ipv4-address-with-zone</i> <i>ipv6-address-with-zone</i>) path-id number attr-id reference
Tree	attr-id
Reference	network-instance name string bgp-rib attr-sets attr-set index number
Configurable	False
Platforms	7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

best-route *boolean*

Description	Set to true if the route is the BGP best path for the prefix.
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Context	network-instance name <i>string</i> bgp-rib afi-safi afi-safi-name identityref route-target rib-in-out rib-in-post route origin-as <i>number</i> route-target-prefix <i>string</i> neighbor (<i>ipv4-address-with-zone</i> <i>ipv6-address-with-zone</i>) path-id <i>number</i> best-route <i>boolean</i>
Tree	best-route
Configurable	False
Platforms	7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

group-best *boolean*

Description	Set to true if the route is the best BGP route amongst all routes received from one particular neighbor AS
Context	network-instance name <i>string</i> bgp-rib afi-safi afi-safi-name identityref route-target rib-in-out rib-in-post route origin-as <i>number</i> route-target-prefix <i>string</i> neighbor (<i>ipv4-address-with-zone</i> <i>ipv6-address-with-zone</i>) path-id <i>number</i> group-best <i>boolean</i>
Tree	group-best
Configurable	False
Platforms	7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

internal-tags *string*

Description	Internal route tag written in the route/tunnel tables or BGP rib The internal-tag value is shown with the format 'type-string = hex-value-string'. For example:
Context	network-instance name <i>string</i> bgp-rib afi-safi afi-safi-name identityref route-target rib-in-out rib-in-post route origin-as <i>number</i> route-target-prefix <i>string</i> neighbor (<i>ipv4-address-with-zone</i> <i>ipv6-address-with-zone</i>) path-id <i>number</i> internal-tags <i>string</i>
Tree	internal-tags
Configurable	False
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b
Max. Elements	2

invalid-reason

Description	Enter the invalid-reason context
Context	network-instance name <i>string</i> bgp-rib afi-safi afi-safi-name identityref route-target rib-in-out rib-in-post route origin-as <i>number</i> route-target-prefix <i>string</i> neighbor (ipv4-address-with-zone ipv6-address-with-zone) path-id <i>number</i> invalid-reason
Tree	invalid-reason
Configurable	False
Platforms	7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

as-loop *boolean*

Description	Indicates true if the BGP route has an AS path loop that exceeds the configured threshold.
Context	network-instance name <i>string</i> bgp-rib afi-safi afi-safi-name identityref route-target rib-in-out rib-in-post route origin-as <i>number</i> route-target-prefix <i>string</i> neighbor (ipv4-address-with-zone ipv6-address-with-zone) path-id <i>number</i> invalid-reason as-loop <i>boolean</i>
Tree	as-loop
Configurable	False
Platforms	7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

cluster-loop *boolean*

Description	Indicates true if the BGP route has a cluster-list loop.
Context	network-instance name <i>string</i> bgp-rib afi-safi afi-safi-name identityref route-target rib-in-out rib-in-post route origin-as <i>number</i> route-target-prefix <i>string</i> neighbor (ipv4-address-with-zone ipv6-address-with-zone) path-id <i>number</i> invalid-reason cluster-loop <i>boolean</i>
Tree	cluster-loop
Configurable	False
Platforms	7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

fib-programming-failed *boolean*

Description	Indicates true if FIB programming failed
Context	network-instance name <i>string</i> bgp-rib afi-safi afi-safi-name identityref route-target rib-in-out rib-in-post route origin-as <i>number</i> route-target-prefix <i>string</i> neighbor (ipv4-address-with-zone ipv6-address-with-zone) path-id <i>number</i> invalid-reason fib-programming-failed <i>boolean</i>
Tree	fib-programming-failed
Configurable	False
Platforms	7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

label-allocation-failed *boolean*

Description	Indicates true if dynamic-label-block has no more free labels
Context	network-instance name <i>string</i> bgp-rib afi-safi afi-safi-name identityref route-target rib-in-out rib-in-post route origin-as <i>number</i> route-target-prefix <i>string</i> neighbor (ipv4-address-with-zone ipv6-address-with-zone) path-id <i>number</i> invalid-reason label-allocation-failed <i>boolean</i>
Tree	label-allocation-failed
Configurable	False
Platforms	7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

next-hop-unresolved *boolean*

Description	Indicates true if the BGP route has a BGP next-hop that cannot be resolved to an outgoing interface.
Context	network-instance name <i>string</i> bgp-rib afi-safi afi-safi-name identityref route-target rib-in-out rib-in-post route origin-as <i>number</i> route-target-prefix <i>string</i> neighbor (ipv4-address-with-zone ipv6-address-with-zone) path-id <i>number</i> invalid-reason next-hop-unresolved <i>boolean</i>
Tree	next-hop-unresolved
Configurable	False
Platforms	7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

rejected-route *boolean*

Description	Indicates true if the route was rejected by an import policy.
Context	network-instance name <i>string</i> bgp-rib afi-safi afi-safi-name identityref route-target rib-in-out rib-in-post route origin-as <i>number</i> route-target-prefix <i>string</i> neighbor (ipv4-address-with-zone ipv6-address-with-zone) path-id <i>number</i> invalid-reason rejected-route <i>boolean</i>
Tree	rejected-route
Configurable	False
Platforms	7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

last-modified *string*

Description	Time of the last modification of the route stored in the BGP RIB. For a route learned from a BGP neighbor the initial value is the same as last-updatereceived. If an import policy later changed some attribute of the route last-modified would be updated to reflect the time of this change.
Context	network-instance name <i>string</i> bgp-rib afi-safi afi-safi-name identityref route-target rib-in-out rib-in-post route origin-as <i>number</i> route-target-prefix <i>string</i> neighbor (ipv4-address-with-zone ipv6-address-with-zone) path-id <i>number</i> last-modified <i>string</i>
Tree	last-modified
String Length	20 to 32
Configurable	False
Platforms	7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

neighbor-as *number*

Description	The last external AS to advertise the route into the local AS
Context	network-instance name <i>string</i> bgp-rib afi-safi afi-safi-name identityref route-target rib-in-out rib-in-post route origin-as <i>number</i> route-target-prefix <i>string</i> neighbor (ipv4-address-with-zone ipv6-address-with-zone) path-id <i>number</i> neighbor-as <i>number</i>
Tree	neighbor-as
Range	1 to 4294967295
Configurable	False

Platforms 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

pending-delete *boolean*

Description Set to true if the route is marked for deletion.

Context [network-instance name](#) *string* [bgp-rib](#) [afi-safi](#) [afi-safi-name](#) [identityref](#) [route-target](#) [rib-in-out](#) [rib-in-post](#) [route](#) [origin-as](#) *number* [route-target-prefix](#) *string* [neighbor](#) (*ipv4-address-with-zone* | *ipv6-address-with-zone*) [path-id](#) *number* [pending-delete](#) *boolean*

Tree [pending-delete](#)

Configurable False

Platforms 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

stale-route *boolean*

Description Set to true if the route is stale due to BGP graceful restart.

Context [network-instance name](#) *string* [bgp-rib](#) [afi-safi](#) [afi-safi-name](#) [identityref](#) [route-target](#) [rib-in-out](#) [rib-in-post](#) [route](#) [origin-as](#) *number* [route-target-prefix](#) *string* [neighbor](#) (*ipv4-address-with-zone* | *ipv6-address-with-zone*) [path-id](#) *number* [stale-route](#) *boolean*

Tree [stale-route](#)

Configurable False

Platforms 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

tie-break-reason *keyword*

Description Indicates the reason why a BGP route is sorted behind the next best route. The BGP best path displays a value of 'none'.

Context [network-instance name](#) *string* [bgp-rib](#) [afi-safi](#) [afi-safi-name](#) [identityref](#) [route-target](#) [rib-in-out](#) [rib-in-post](#) [route](#) [origin-as](#) *number* [route-target-prefix](#) *string* [neighbor](#) (*ipv4-address-with-zone* | *ipv6-address-with-zone*) [path-id](#) *number* [tie-break-reason](#) *keyword*

Tree [tie-break-reason](#)

Options

- unknown
- none

- origin
- as-path-length
- next-hop-cost
- med
- local-pref
- aggregate
- originator-id
- cluster-list
- extended-community
- aigp
- missing-attribute
- rtm-pref
- owner
- eigrp-labeled
- vpn-route
- ebgp-route
- peer-ip
- local-peer
- multi-path
- vpn-rd
- next-hop-type
- invalid-route
- origin-validation
- long-live-gr-stale
- default-originate
- fib-install-disabled
- peer-router-id
- path-identifier

Configurable

False

Platforms

7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

used-route *boolean***Description**

Indicates true if the route is being used for forwarding.

Context	network-instance name <i>string</i> bgp-rib afi-safi afi-safi-name identityref route-target rib-in-out rib-in-post route origin-as <i>number</i> route-target-prefix <i>string</i> neighbor (<i>ipv4-address-with-zone</i> <i>ipv6-address-with-zone</i>) path-id <i>number</i> used-route <i>boolean</i>
Tree	used-route
Configurable	False
Platforms	7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

valid-route *boolean*

Description	Indicates true if the route is valid.
Context	network-instance name <i>string</i> bgp-rib afi-safi afi-safi-name identityref route-target rib-in-out rib-in-post route origin-as <i>number</i> route-target-prefix <i>string</i> neighbor (<i>ipv4-address-with-zone</i> <i>ipv6-address-with-zone</i>) path-id <i>number</i> valid-route <i>boolean</i>
Tree	valid-route
Configurable	False
Platforms	7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

rib-in-pre

Description	Container for the pre-import-policy version of BGP routes learned from BGP neighbors.
Context	network-instance name <i>string</i> bgp-rib afi-safi afi-safi-name identityref route-target rib-in-out rib-in-pre
Tree	rib-in-pre
Configurable	False
Platforms	7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

route [origin-as](#) *number* [route-target-prefix](#) *string* [neighbor](#) (*ipv4-address-with-zone* | *ipv6-address-with-zone*) [path-id](#) *number*

Description	List of RTC routes in the RIB-IN, before import-policy modification.
--------------------	--

Context	network-instance name <i>string</i> bgp-rib afi-safi afi-safi-name identityref route-target rib-in-out rib-in-pre route origin-as <i>number</i> route-target-prefix <i>string</i> neighbor (<i>ipv4-address-with-zone</i> <i>ipv6-address-with-zone</i>) path-id <i>number</i>
Tree	route
Configurable	False
Platforms	7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

origin-as *number*

Description	The origin AS of the RTC route
Context	network-instance name <i>string</i> bgp-rib afi-safi afi-safi-name identityref route-target rib-in-out rib-in-pre route origin-as <i>number</i> route-target-prefix <i>string</i> neighbor (<i>ipv4-address-with-zone</i> <i>ipv6-address-with-zone</i>) path-id <i>number</i>
Range	1 to 4294967295
Configurable	False
Platforms	7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

route-target-prefix *string*

Description	The RTC prefix in the format number1:number2/length, where number1 is an IPv4 address or a 2-byte ASN or a 4-byte ASN, number2 is a 2-byte or 4-byte administrative value and length is a number of bits between 0 and 96 The default RTC prefix is represented by 0:0/0
Context	network-instance name <i>string</i> bgp-rib afi-safi afi-safi-name identityref route-target rib-in-out rib-in-pre route origin-as <i>number</i> route-target-prefix <i>string</i> neighbor (<i>ipv4-address-with-zone</i> <i>ipv6-address-with-zone</i>) path-id <i>number</i>
Configurable	False
Platforms	7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

neighbor (*ipv4-address-with-zone* | *ipv6-address-with-zone*)

Description	If the route was learned from a BGP neighbor, this is the IPv4 or IPv6 address of that neighbor.
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Context	network-instance name <i>string</i> bgp-rib afi-safi afi-safi-name identityref route-target rib-in-out rib-in-pre route origin-as <i>number</i> route-target-prefix <i>string</i> neighbor (<i>ipv4-address-with-zone</i> <i>ipv6-address-with-zone</i>) path-id <i>number</i>
Configurable	False
Platforms	7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

path-id *number*

Description	Path identifier of the BGP route
Context	network-instance name <i>string</i> bgp-rib afi-safi afi-safi-name identityref route-target rib-in-out rib-in-pre route origin-as <i>number</i> route-target-prefix <i>string</i> neighbor (<i>ipv4-address-with-zone</i> <i>ipv6-address-with-zone</i>) path-id <i>number</i>
Configurable	False
Platforms	7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

attr-id *reference*

Description	Leaf reference to networkinstance/protocols/bgp/rib/attr-sets/attr-set/index.
Context	network-instance name <i>string</i> bgp-rib afi-safi afi-safi-name identityref route-target rib-in-out rib-in-pre route origin-as <i>number</i> route-target-prefix <i>string</i> neighbor (<i>ipv4-address-with-zone</i> <i>ipv6-address-with-zone</i>) path-id <i>number</i> attr-id <i>reference</i>
Tree	attr-id
Reference	network-instance name <i>string</i> bgp-rib attr-sets attr-set index <i>number</i>
Configurable	False
Platforms	7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

rib-out-post

Description	Container for the post-export-policy version of BGP routes advertised to BGP neighbors.
Context	network-instance name <i>string</i> bgp-rib afi-safi afi-safi-name identityref route-target rib-in-out rib-out-post
Tree	rib-out-post

Configurable	False
Platforms	7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

route origin-as number route-target-prefix string neighbor (ipv4-address-with-zone | ipv6-address-with-zone) path-id number

Description	List of RTC routes in the RIB-OUT, after export-policy modification.
Context	network-instance name string bgp-rib afi-safi afi-safi-name identityref route-target rib-in-out rib-out-post route origin-as number route-target-prefix string neighbor (ipv4-address-with-zone ipv6-address-with-zone) path-id number
Tree	route
Configurable	False
Platforms	7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

origin-as number

Description	The origin AS of the RTC route
Context	network-instance name string bgp-rib afi-safi afi-safi-name identityref route-target rib-in-out rib-out-post route origin-as number route-target-prefix string neighbor (ipv4-address-with-zone ipv6-address-with-zone) path-id number
Range	1 to 4294967295
Configurable	False
Platforms	7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

route-target-prefix string

Description	The RTC prefix in the format number1:number2/length, where number1 is an IPv4 address or a 2-byte ASN or a 4-byte ASN, number2 is a 2-byte or 4-byte administrative value and length is a number of bits between 0 and 96 The default RTC prefix is represented by 0:0/0
Context	network-instance name string bgp-rib afi-safi afi-safi-name identityref route-target rib-in-out rib-out-post route origin-as number route-target-prefix string neighbor (ipv4-address-with-zone ipv6-address-with-zone) path-id number
Configurable	False

Platforms 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

neighbor (*ipv4-address-with-zone* | *ipv6-address-with-zone*)

Description If the route was learned from a BGP neighbor, this is the IPv4 or IPv6 address of that neighbor.

Context [network-instance name](#) *string* [bgp-rib](#) [afi-safi](#) [afi-safi-name](#) [identityref](#) [route-target](#) [rib-in-out](#) [rib-out-post](#) [route](#) [origin-as](#) *number* [route-target-prefix](#) *string* [neighbor](#) (*ipv4-address-with-zone* | *ipv6-address-with-zone*) [path-id](#) *number*

Configurable False

Platforms 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

path-id *number*

Description Path identifier of the BGP route

Context [network-instance name](#) *string* [bgp-rib](#) [afi-safi](#) [afi-safi-name](#) [identityref](#) [route-target](#) [rib-in-out](#) [rib-out-post](#) [route](#) [origin-as](#) *number* [route-target-prefix](#) *string* [neighbor](#) (*ipv4-address-with-zone* | *ipv6-address-with-zone*) [path-id](#) *number*

Configurable False

Platforms 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

attr-id *reference*

Description Leaf reference to networkinstance/protocols/bgp/rib/attr-sets/attr-set/index.

Context [network-instance name](#) *string* [bgp-rib](#) [afi-safi](#) [afi-safi-name](#) [identityref](#) [route-target](#) [rib-in-out](#) [rib-out-post](#) [route](#) [origin-as](#) *number* [route-target-prefix](#) *string* [neighbor](#) (*ipv4-address-with-zone* | *ipv6-address-with-zone*) [path-id](#) *number* [attr-id](#) *reference*

Tree [attr-id](#)

Reference [network-instance name](#) *string* [bgp-rib](#) [attr-sets](#) [attr-set](#) [index](#) *number*

Configurable False

Platforms 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

attr-sets

Description	Container for BGP RIB path attribute sets that can be shared by one or more BGP routes.
Context	network-instance name <i>string</i> bgp-rib attr-sets
Tree	attr-sets
Configurable	False
Platforms	Supported on all platforms

attr-set *index number*

Description	List of attribute sets.
Context	network-instance name <i>string</i> bgp-rib attr-sets attr-set index number
Tree	attr-set
Configurable	False
Platforms	Supported on all platforms

index number

Description	A unique internal identifier of the attribute set.
Context	network-instance name <i>string</i> bgp-rib attr-sets attr-set index number
Configurable	False
Platforms	Supported on all platforms

aggregator

Description	Enter the aggregator context
Context	network-instance name <i>string</i> bgp-rib attr-sets attr-set index number aggregator
Tree	aggregator
Configurable	False
Platforms	Supported on all platforms

address (*ipv4-address* | *ipv6-address*)

Description	The router ID of the BGP router that formed the aggregate route.
--------------------	--

Context	network-instance name <i>string</i> bgp-rib attr-sets attr-set index <i>number</i> aggregator address (<i>ipv4-address</i> <i>ipv6-address</i>)
Tree	address
Configurable	False
Platforms	Supported on all platforms

as-number *number*

Description	The 2byte or 4byte AS number of the router that formed the aggregate route.
Context	network-instance name <i>string</i> bgp-rib attr-sets attr-set index <i>number</i> aggregator as-number <i>number</i>
Tree	as-number
Range	1 to 4294967295
Configurable	False
Platforms	Supported on all platforms

aigp *number*

Description	The value in the AIGP path attribute.
Context	network-instance name <i>string</i> bgp-rib attr-sets attr-set index <i>number</i> aigp <i>number</i>
Tree	aigp
Configurable	False
Platforms	Supported on all platforms

as-path

Description	A container for the AS path attribute of the attribute set.
Context	network-instance name <i>string</i> bgp-rib attr-sets attr-set index <i>number</i> as-path
Tree	as-path
Configurable	False
Platforms	Supported on all platforms

segment [as-path-index](#) *number*

Description	A list of segments. Each segment has a type and a list of one or more AS numbers.
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Context	network-instance name <i>string</i> bgp-rib attr-sets attr-set index <i>number</i> as-path segment as-path-index <i>number</i>
Tree	segment
Configurable	False
Platforms	Supported on all platforms

as-path-index *number*

Description	RIB attribute AS Path index
Context	network-instance name <i>string</i> bgp-rib attr-sets attr-set index <i>number</i> as-path segment as-path-index <i>number</i>
Configurable	False
Platforms	Supported on all platforms

member *number*

Description	A list of AS numbers (each of which is a 2byte-ASN or a 4byte-ASN) that belong to the AS path segment.
Context	network-instance name <i>string</i> bgp-rib attr-sets attr-set index <i>number</i> as-path segment as-path-index <i>number</i> member <i>number</i>
Tree	member
Configurable	False
Platforms	Supported on all platforms

type *keyword*

Description	The type of the AS path segment.
Context	network-instance name <i>string</i> bgp-rib attr-sets attr-set index <i>number</i> as-path segment as-path-index <i>number</i> type <i>keyword</i>
Tree	type
Options	<ul style="list-style-type: none"> • as-set • as-sequence • as-confed-sequence • as-confed-set
Configurable	False
Platforms	Supported on all platforms

atomic-aggregate *boolean*

Description	Set to true to indicate the presence of the ATOMIC_AGGREGATE path attribute.
Context	network-instance name <i>string</i> bgp-rib attr-sets attr-set index <i>number</i> atomic-aggregate <i>boolean</i>
Tree	atomic-aggregate
Configurable	False
Platforms	Supported on all platforms

cluster-list (*ipv4-address* | *ipv6-address*)

Description	The list of IPv4 addresses in the CLUSTER_LIST path attribute.
Context	network-instance name <i>string</i> bgp-rib attr-sets attr-set index <i>number</i> cluster-list (ipv4-address ipv6-address)
Tree	cluster-list
Configurable	False
Platforms	Supported on all platforms

communities

Description	Container for different types of BGP communities
Context	network-instance name <i>string</i> bgp-rib attr-sets attr-set index <i>number</i> communities
Tree	communities
Configurable	False
Platforms	Supported on all platforms

community *string*

Description	List of standard 4-byte community values in the COMMUNITY path attribute. Each should be displayed in the format <0..65355>:<0..65355>
Context	network-instance name <i>string</i> bgp-rib attr-sets attr-set index <i>number</i> communities community <i>string</i>
Tree	community
Configurable	False
Platforms	Supported on all platforms

ext-community *string*

Description	List of extended 8-byte community values in the COMMUNITY path attribute.
Context	network-instance name <i>string</i> bgp-rib attr-sets attr-set index number communities ext-community <i>string</i>
Tree	ext-community
Configurable	False
Platforms	Supported on all platforms

large-community *string*

Description	List of large 12-byte community values in the LARGE_COMMUNITY path attribute. Each should be displayed in the format: <0..4294967295>:<0..4294967295>:< 0..4294967295>
Context	network-instance name <i>string</i> bgp-rib attr-sets attr-set index number communities large-community <i>string</i>
Tree	large-community
String Length	1 to 72
Configurable	False
Platforms	Supported on all platforms

local-pref *number*

Description	The value of the LOCAL_PREF path attribute.
Context	network-instance name <i>string</i> bgp-rib attr-sets attr-set index number local-pref <i>number</i>
Tree	local-pref
Configurable	False
Platforms	Supported on all platforms

med *number*

Description	The value of the MULTI_EXIT_DISC path attribute.
Context	network-instance name <i>string</i> bgp-rib attr-sets attr-set index number med <i>number</i>
Tree	med
Configurable	False

Platforms Supported on all platforms

next-hop (*ipv4-address-with-zone* | *ipv6-address-with-zone*)

Description The IPv4 or IPv6 address of the BGP next-hop (extracted from the NEXT_HOP field of the UPDATE or the MP_REACH_NLRI next-hop).

Context [network-instance name](#) *string* [bgp-rib attr-sets attr-set index](#) *number* [next-hop](#) (*ipv4-address-with-zone* | *ipv6-address-with-zone*)

Tree [next-hop](#)

Configurable False

Platforms Supported on all platforms

origin *keyword*

Description The value of the ORIGIN path attribute

Context [network-instance name](#) *string* [bgp-rib attr-sets attr-set index](#) *number* [origin](#) *keyword*

Tree [origin](#)

Options

- [igp](#)
- [egp](#)
- [incomplete](#)

Configurable False

Platforms Supported on all platforms

originator-id (*ipv4-address* | *ipv6-address*)

Description The address in the ORIGINATOR_ID attribute added by a route reflector.

Context [network-instance name](#) *string* [bgp-rib attr-sets attr-set index](#) *number* [originator-id](#) (*ipv4-address* | *ipv6-address*)

Tree [originator-id](#)

Configurable False

Platforms Supported on all platforms

pmsi-tunnel

Description A container for the Provider Multicast Service Interface Tunnel Attribute (PTA) of the attribute set.

Context	network-instance name <i>string</i> bgp-rib attr-sets attr-set index <i>number</i> pmsi-tunnel
Tree	pmsi-tunnel
Configurable	False
Platforms	Supported on all platforms

flags

Description	A container for the PTA Flags
Context	network-instance name <i>string</i> bgp-rib attr-sets attr-set index <i>number</i> pmsi-tunnel flags
Tree	flags
Configurable	False
Platforms	Supported on all platforms

assisted-replication-type *keyword*

Description	The value of the assisted-replication role type.
Context	network-instance name <i>string</i> bgp-rib attr-sets attr-set index <i>number</i> pmsi-tunnel flags assisted-replication-type <i>keyword</i>
Tree	assisted-replication-type
Options	<ul style="list-style-type: none"> • none • ar-replicator • ar-leaf • reserved
Configurable	False
Platforms	Supported on all platforms

leaf-information-required *boolean*

Description	The value of the Leaf Information Required (LIR) flag.
Context	network-instance name <i>string</i> bgp-rib attr-sets attr-set index <i>number</i> pmsi-tunnel flags leaf-information-required <i>boolean</i>
Tree	leaf-information-required
Configurable	False
Platforms	Supported on all platforms

pruned-flood-list

Description	A container for the optimized ingress replication pruned flood list flags.
Context	network-instance name <i>string</i> bgp-rib attr-sets attr-set index <i>number</i> pmsi-tunnel flags pruned-flood-list
Tree	pruned-flood-list
Configurable	False
Platforms	Supported on all platforms

broadcast-multicast *keyword*

Description	The value of the broadcast-multicast flag.
Context	network-instance name <i>string</i> bgp-rib attr-sets attr-set index <i>number</i> pmsi-tunnel flags pruned-flood-list broadcast-multicast <i>keyword</i>
Tree	broadcast-multicast
Options	<ul style="list-style-type: none"> • 0 • 1
Configurable	False
Platforms	Supported on all platforms

unknown-unicast *keyword*

Description	The value of the unknown-unicast flag.
Context	network-instance name <i>string</i> bgp-rib attr-sets attr-set index <i>number</i> pmsi-tunnel flags pruned-flood-list unknown-unicast <i>keyword</i>
Tree	unknown-unicast
Options	<ul style="list-style-type: none"> • 0 • 1
Configurable	False
Platforms	Supported on all platforms

label

Description	The encoded label value and type in the PMSI Tunnel Attribute
Context	network-instance name <i>string</i> bgp-rib attr-sets attr-set index <i>number</i> pmsi-tunnel label

Tree	label
Configurable	False
Platforms	Supported on all platforms

value number

Description	The value of the label field If the route is an EVPN MPLS route, the mpls-label is read out of the 20-bit high order value. If the route is an EVPN VXLAN route, the vni is read out of the 24-bit value. If the route is an EVPN SRv6 route, this field is set to zero if no transposition is used and set to a non-zero value if transposition is used.
Context	network-instance name string bgp-rib attr-sets attr-set index number pmsi-tunnel label value number
Tree	value
Range	0 to 16777215
Configurable	False
Platforms	Supported on all platforms

value-type keyword

Description	Whether the encoded label value is an mpls-label, a vni or a transposed function or argument
Context	network-instance name string bgp-rib attr-sets attr-set index number pmsi-tunnel label value-type keyword
Tree	value-type
Options	<ul style="list-style-type: none"> • mpls-label • vni • transposed-srv6-function
Configurable	False
Platforms	Supported on all platforms

tunnel-endpoint (*ipv4-address* | *ipv6-address*)

Description	The value of the tunnel-endpoint in the PMSI Tunnel Attribute.
Context	network-instance name string bgp-rib attr-sets attr-set index number pmsi-tunnel tunnel-endpoint (<i>ipv4-address</i> <i>ipv6-address</i>)
Tree	tunnel-endpoint

Configurable	False
Platforms	Supported on all platforms

tunnel-type *keyword*

Description	The value of the tunnel-type in the PMSI Tunnel Attribute
Context	network-instance name <i>string</i> bgp-rib attr-sets attr-set index <i>number</i> pmsi-tunnel tunnel-type <i>keyword</i>
Tree	tunnel-type
Options	<ul style="list-style-type: none"> • no-tunnel • rsvp-te-p2mp • mldp-p2mp • pim-ssm • pim-sm • bidir-pim • ingress-replication • mldp-mp2mp • assisted-replication • bier
Configurable	False
Platforms	Supported on all platforms

prefix-sid

Description	This container defines Prefix SID TLVs
Context	network-instance name <i>string</i> bgp-rib attr-sets attr-set index <i>number</i> prefix-sid
Tree	prefix-sid
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

tlv *type identityref*

Description	List of TLV types in the LSDB for the specified LSP.
Context	network-instance name <i>string</i> bgp-rib attr-sets attr-set index <i>number</i> prefix-sid tlv type <i>identityref</i>
Tree	tlv

Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

type *identityref*

Description	The type of TLV being described. The type of TLV is expressed as a canonical name.
Context	network-instance name <i>string</i> bgp-rib attr-sets attr-set index number prefix-sid tlv type <i>identityref</i>
Options	<ul style="list-style-type: none"> label-index Label index TLV srgb-originator SRGB originator TLV srv6-l3-service SRv6 L3 service TLV srv6-l2-service SRv6 L2 service TLV
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

label-index

Description	This container defines TLV 1.
Context	network-instance name <i>string</i> bgp-rib attr-sets attr-set index number prefix-sid tlv type <i>identityref</i> label-index
Tree	label-index
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

label-index *number*

Description	32-bit value representing the index value in the SRGB space
Context	network-instance name <i>string</i> bgp-rib attr-sets attr-set index number prefix-sid tlv type <i>identityref</i> label-index label-index number
Tree	label-index
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

srgb-originator

Description	This container defines TLV 3.
Context	network-instance name <i>string</i> bgp-rib attr-sets attr-set index <i>number</i> prefix-sid tlv type <i>identityref</i> srgb-originator
Tree	srgb-originator
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

srgb *string*

Description	List of SRGB ranges, each in the format <first-label>:<number-of-labels>
Context	network-instance name <i>string</i> bgp-rib attr-sets attr-set index <i>number</i> prefix-sid tlv type <i>identityref</i> srgb-originator srgb <i>string</i>
Tree	srgb
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

unknown-attributes

Description	Container for unknown path attributes
Context	network-instance name <i>string</i> bgp-rib attr-sets attr-set index <i>number</i> unknown-attributes
Tree	unknown-attributes
Configurable	False
Platforms	Supported on all platforms

unknown-attribute [unknown-attr-index](#) *number*

Description	List of unknown BGP path attributes
Context	network-instance name <i>string</i> bgp-rib attr-sets attr-set index <i>number</i> unknown-attributes unknown-attribute unknown-attr-index <i>number</i>
Tree	unknown-attribute
Configurable	False
Platforms	Supported on all platforms

unknown-attr-index *number*

Description	RIB attribute unknown attribute index
Context	network-instance name <i>string</i> bgp-rib attr-sets attr-set index <i>number</i> unknown-attributes unknown-attribute unknown-attr-index <i>number</i>
Configurable	False
Platforms	Supported on all platforms

attr-len *number*

Description	The length of the unknown path attribute
Context	network-instance name <i>string</i> bgp-rib attr-sets attr-set index <i>number</i> unknown-attributes unknown-attribute unknown-attr-index <i>number</i> attr-len <i>number</i>
Tree	attr-len
Configurable	False
Platforms	Supported on all platforms

attr-type *number*

Description	The type code of the unknown path attribute
Context	network-instance name <i>string</i> bgp-rib attr-sets attr-set index <i>number</i> unknown-attributes unknown-attribute unknown-attr-index <i>number</i> attr-type <i>number</i>
Tree	attr-type
Configurable	False
Platforms	Supported on all platforms

extended *boolean*

Description	Set to true if the unknown path attribute has the extended length flag is set to 1.
Context	network-instance name <i>string</i> bgp-rib attr-sets attr-set index <i>number</i> unknown-attributes unknown-attribute unknown-attr-index <i>number</i> extended <i>boolean</i>
Tree	extended
Configurable	False
Platforms	Supported on all platforms

optional *boolean*

Description	Set to true if the unknown path attribute has the optional flag is set to 1.
Context	network-instance name <i>string</i> bgp-rib attr-sets attr-set index <i>number</i> unknown-attributes unknown-attribute unknown-attr-index <i>number</i> optional <i>boolean</i>
Tree	optional
Configurable	False
Platforms	Supported on all platforms

partial *boolean*

Description	Set to true if the unknown path attribute has the partial flag is set to 1.
Context	network-instance name <i>string</i> bgp-rib attr-sets attr-set index <i>number</i> unknown-attributes unknown-attribute unknown-attr-index <i>number</i> partial <i>boolean</i>
Tree	partial
Configurable	False
Platforms	Supported on all platforms

transitive *boolean*

Description	Set to true if the unknown path attribute has the transitive flag is set to 1.
Context	network-instance name <i>string</i> bgp-rib attr-sets attr-set index <i>number</i> unknown-attributes unknown-attribute unknown-attr-index <i>number</i> transitive <i>boolean</i>
Tree	transitive
Configurable	False
Platforms	Supported on all platforms

bridge-table

Description	Enable the bridge-table context
Context	network-instance name <i>string</i> bridge-table
Tree	bridge-table
Configurable	True

Platforms 7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

discard-unknown-dest-mac *boolean*

Description Discard frames with unknown destination mac addresses. The source mac address of the discarded frame is learned as long as the mac is valid, mac-learning is enabled, and the number of entries has not reached the maximum-entries threshold.

Context [network-instance name](#) *string* [bridge-table discard-unknown-dest-mac](#) *boolean*

Tree [discard-unknown-dest-mac](#)

Default false

Configurable True

Platforms 7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

mac-duplication

Description Configuration of the MAC duplication procedures.

Context [network-instance name](#) *string* [bridge-table mac-duplication](#)

Tree [mac-duplication](#)

Configurable True

Platforms 7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

action *keyword*

Description Action to take on the subinterface (if action is use-net-instance-action) upon detecting at least one mac addresses as duplicate on the subinterface. In particular:

Context [network-instance name](#) *string* [bridge-table mac-duplication action](#) *keyword*

Tree [action](#)

Default stop-learning

Options

- stop-learning
- blackhole

- oper-down

Configurable

True

Platforms

7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

admin-state *keyword***Description**

Configurable state of the mac-duplication procedures. Mac-duplication detects duplicate macs that move between different subinterfaces or a subinterface and an evpn destination.

Context[network-instance name](#) *string* [bridge-table](#) [mac-duplication](#) [admin-state](#) *keyword***Tree**[admin-state](#)**Default**

enable

Options

- enable
- disable

Configurable

True

Platforms

7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

duplicate-entries**Description**

Enter the duplicate-entries context

Context[network-instance name](#) *string* [bridge-table](#) [mac-duplication](#) [duplicate-entries](#)**Tree**[duplicate-entries](#)**Configurable**

False

Platforms

7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

mac [address](#) *string***Description**

macs duplicate on the bridging instance

Context[network-instance name](#) *string* [bridge-table](#) [mac-duplication](#) [duplicate-entries](#) [mac address](#) *string***Tree**[mac](#)

Configurable	False
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

address string

Description	Enter the address context
Context	network-instance name string bridge-table mac-duplication duplicate-entries mac address string
Configurable	False
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

destination string

Description	the name of the destination the duplicate mac is installed against in the fdb.
Context	network-instance name string bridge-table mac-duplication duplicate-entries mac address string destination string
Tree	destination
Configurable	False
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

destination-index number

Description	A system-wide unique identifier of a subinterface object (system allocated).
Context	network-instance name string bridge-table mac-duplication duplicate-entries mac address string destination-index number
Tree	destination-index
Configurable	False
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

destination-type *keyword*

Description	the type of the destination the duplicate mac is installed against in the fdb.
Context	network-instance name <i>string</i> bridge-table mac-duplication duplicate-entries mac address <i>string</i> destination-type <i>keyword</i>
Tree	destination-type
Options	<ul style="list-style-type: none"> • sub-interface • blackhole • irb-interface • vxlan • reserved • evpn-mpls • connection-point
Configurable	False
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

dup-detect-time *string*

Description	The date and time when the mac was declared duplicate
Context	network-instance name <i>string</i> bridge-table mac-duplication duplicate-entries mac address <i>string</i> dup-detect-time <i>string</i>
Tree	dup-detect-time
String Length	20 to 32
Configurable	False
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

hold-down-time-remaining (*keyword* | *number*)

Description	remaining hold down time for duplicate mac
Context	network-instance name <i>string</i> bridge-table mac-duplication duplicate-entries mac address <i>string</i> hold-down-time-remaining (<i>keyword</i> <i>number</i>)
Tree	hold-down-time-remaining
Units	seconds

Options	• indefinite
Configurable	False
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

hold-down-time (*keyword* | *number*)

Description	Time to wait from the moment a mac is declared duplicate to the mac is flushed from the bridge table. When the duplicate mac is flushed, the monitoring process for the mac is restarted.
Context	network-instance name string bridge-table mac-duplication hold-down-time (<i>keyword</i> <i>number</i>)
Tree	hold-down-time
Range	2 to 60
Default	9
Units	minutes
Options	• indefinite
Configurable	True
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

monitoring-window *number*

Description	Monitoring window for detecting duplication on a given mac address. A mac is declared as duplicate if it exceeds the num-moves within the monitoring-window.
Context	network-instance name string bridge-table mac-duplication monitoring-window <i>number</i>
Tree	monitoring-window
Range	1 to 15
Default	3
Units	minutes
Configurable	True
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

num-moves *number*

Description	Number of moves a mac is allowed within the monitoring-window, before it is declared duplicate.
Context	network-instance name <i>string</i> bridge-table mac-duplication num-moves <i>number</i>
Tree	num-moves
Range	3 to 10
Default	5
Configurable	True
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

mac-learning

Description	Enter the mac-learning context
Context	network-instance name <i>string</i> bridge-table mac-learning
Tree	mac-learning
Configurable	True
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

admin-state *keyword*

Description	Configurable state of the learning procedures for dynamic mac addresses. If disabled, the existing macs in the bridge-table will be kept (and refreshed if new frames arrive for them) but no new mac addresses will be learned. Frames with unknown mac addresses are not dropped, unless discard-unknown-src-mac is configured.
Context	network-instance name <i>string</i> bridge-table mac-learning admin-state <i>keyword</i>
Tree	admin-state
Default	enable
Options	<ul style="list-style-type: none"> • enable • disable
Configurable	True

Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b
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aging

Description	Enter the aging context
Context	network-instance name <i>string</i> bridge-table mac-learning aging
Tree	aging
Configurable	True
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

admin-state *keyword*

Description	Configurable state of the aging for the dynamic mac entries in the bridge table. If disabled, dynamically learned mac entries will be programmed in the bridge table until the network instance is disabled.
Context	network-instance name <i>string</i> bridge-table mac-learning aging admin-state <i>keyword</i>
Tree	admin-state
Default	enable
Options	<ul style="list-style-type: none"> • enable • disable
Configurable	True
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

age-time *number*

Description	Configurable aging time for dynamically learned mac addresses
Context	network-instance name <i>string</i> bridge-table mac-learning aging age-time <i>number</i>
Tree	age-time
Range	60 to 86400
Default	300

Configurable	True
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

learnt-entries

Description	Enter the learnt-entries context
Context	network-instance name <i>string</i> bridge-table mac-learning learnt-entries
Tree	learnt-entries
Configurable	False
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

mac [address](#) *string*

Description	macs learnt on the bridging instance
Context	network-instance name <i>string</i> bridge-table mac-learning learnt-entries mac address <i>string</i>
Tree	mac
Configurable	False
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

address *string*

Description	Enter the address context
Context	network-instance name <i>string</i> bridge-table mac-learning learnt-entries mac address <i>string</i>
Configurable	False
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

aging (*number* | *keyword*)

Description	remaining age time for learnt macs
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Context	network-instance name <i>string</i> bridge-table mac-learning learnt-entries mac address <i>string</i> aging (<i>number</i> <i>keyword</i>)
Tree	aging
Units	seconds
Options	<ul style="list-style-type: none"> disabled
Configurable	False
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

destination *string*

Description	the name of the subinterface where the mac is learnt against.
Context	network-instance name <i>string</i> bridge-table mac-learning learnt-entries mac address <i>string</i> destination <i>string</i>
Tree	destination
Configurable	False
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

last-update *string*

Description	The date and time of the last update of this learnt mac
Context	network-instance name <i>string</i> bridge-table mac-learning learnt-entries mac address <i>string</i> last-update <i>string</i>
Tree	last-update
String Length	20 to 32
Configurable	False
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

mac-relearn-only *boolean*

Description	The value of this leaf indicates that network-instance will not learn any new mac addresses, but will relearn any that are already programmed
Context	network-instance name <i>string</i> bridge-table mac-learning mac-relearn-only <i>boolean</i>

Tree	mac-relearn-only
Default	true
Configurable	False
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

oper-mac-learning *keyword*

Description	The operational state of mac-learning on this network instance.
Context	network-instance name <i>string</i> bridge-table mac-learning oper-mac-learning <i>keyword</i>
Tree	oper-mac-learning
Options	<ul style="list-style-type: none"> • up Component or process is operational • down Component or process is not operational • empty Component slot is empty • downloading Component is downloading image into memory • booting Component is booting downloaded image • starting Component image operational, application processes starting • failed Component or process has failed • synchronizing Component is currently being synchronized • upgrading Component is currently being upgraded • low-power Component is offline due to insufficient system power • degraded Component or process is in a degraded state • warm-reboot Component or process is currently warm rebooting

This state is set during a warm reboot immediately following initiation of the reboot, continuing after startup until the system has completed audit. In this state the system will not accept configuration changes.

- waiting

Component or process is currently waiting

This state can be set by event handler when the `reinvoke-with-delay` action is used, and indicates that the event handler is waiting for the provided delay before reinvoking the instance.

Configurable

False

Platforms

7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

oper-mac-learning-disabled-reason *keyword*

Description

The reason for the mac-learning being disabled on this network instance

Context

[network-instance name](#) *string* [bridge-table](#) [mac-learning](#) [oper-mac-learning-disabled-reason](#) *keyword*

Tree

[oper-mac-learning-disabled-reason](#)

Options

- admin-disabled

Configurable

False

Platforms

7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

mac-limit

Description

Bridge Table size and thresholds.

Context

[network-instance name](#) *string* [bridge-table](#) [mac-limit](#)

Tree

[mac-limit](#)

Configurable

True

Platforms

7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

maximum-entries *number*

Description

Maximum number of mac addresses allowed in the bridge-table.

Context	network-instance name <i>string</i> bridge-table mac-limit maximum-entries <i>number</i>
Tree	maximum-entries
Range	1 to 250000
Default	250
Configurable	True
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

warning-threshold-pct *number*

Description	Percentage of the configured max-number-macs over which a warning is triggered. The warning message is cleared when the percentage drops below the configured percentage minus 5%
Context	network-instance name <i>string</i> bridge-table mac-limit warning-threshold-pct <i>number</i>
Tree	warning-threshold-pct
Range	6 to 100
Default	95
Configurable	True
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

mac-table

Description	Enter the mac-table context
Context	network-instance name <i>string</i> bridge-table mac-table
Tree	mac-table
Configurable	False
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

mac *address* *string*

Description	macs learnt on the bridging instance
Context	network-instance name <i>string</i> bridge-table mac-table mac <i>address</i> <i>string</i>

Tree	mac
Configurable	False
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

address *string*

Description	Enter the address context
Context	network-instance name string bridge-table mac-table mac address string
Configurable	False
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

destination *string*

Description	the name of the destination where the mac is programmed against.
Context	network-instance name string bridge-table mac-table mac address string destination string
Tree	destination
Configurable	False
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

destination-index *number*

Description	A system-wide unique identifier of a subinterface object (system allocated).
Context	network-instance name string bridge-table mac-table mac address string destination-index number
Tree	destination-index
Configurable	False
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

destination-type *keyword*

Description	the type of the destination the mac installed against in the fdb.
Context	network-instance name <i>string</i> bridge-table mac-table mac address <i>string</i> destination-type <i>keyword</i>
Tree	destination-type
Options	<ul style="list-style-type: none"> • sub-interface • blackhole • irb-interface • vxlan • reserved • evpn-mpls • connection-point
Configurable	False
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

failed-slots *number*

Description	The list of slot IDs corresponding to the linecards that did not successfully program the mac
Context	network-instance name <i>string</i> bridge-table mac-table mac address <i>string</i> failed-slots <i>number</i>
Tree	failed-slots
Range	1 to 8
Configurable	False
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

is-protected *boolean*

Description	Indicates if the mac is protected in the hardware.
Context	network-instance name <i>string</i> bridge-table mac-table mac address <i>string</i> is-protected <i>boolean</i>
Tree	is-protected
Configurable	False

Platforms 7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

last-update *string*

Description The date and time of the last update of this mac

Context [network-instance name](#) *string* [bridge-table](#) [mac-table](#) [mac address](#) *string* [last-update](#) *string*

Tree [last-update](#)

String Length 20 to 32

Configurable False

Platforms 7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

not-programmed-reason *keyword*

Description The reason why the mac is not programmed

Context [network-instance name](#) *string* [bridge-table](#) [mac-table](#) [mac address](#) *string* [not-programmed-reason](#) *keyword*

Tree [not-programmed-reason](#)

Options

- mac-limit
- failed-on-slots
- no-destination-index
- reserved

Configurable False

Platforms 7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

type *keyword*

Description the type of the mac installed in the fib.

Context [network-instance name](#) *string* [bridge-table](#) [mac-table](#) [mac address](#) *string* [type](#) *keyword*

Tree [type](#)

Options

- static

- duplicate
- learnt
- irb-interface
- evpn
- evpn-static
- irb-interface-anycast
- proxy-anti-spoof
- reserved
- eth-cfm
- irb-interface-vrrp

Configurable

False

Platforms

7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

protect-anycast-gw-mac *boolean***Description**

Protect anycast gateway mac's installed in the FDB, when this mac-vrf is part of an IRB.

Context

[network-instance name](#) *string* [bridge-table](#) [protect-anycast-gw-mac](#) *boolean*

Tree

[protect-anycast-gw-mac](#)

Default

false

Configurable

True

Platforms

7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

proxy-arp**Description**

Enable the proxy-arp context

Context

[network-instance name](#) *string* [bridge-table](#) [proxy-arp](#)

Tree

[proxy-arp](#)

Configurable

True

Platforms

7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5

admin-state *keyword*

Description	Configurable state of the layer-2 proxy ARP/ND table
Context	network-instance name <i>string</i> bridge-table proxy-arp admin-state <i>keyword</i>
Tree	admin-state
Default	enable
Options	<ul style="list-style-type: none"> • enable • disable
Configurable	True
Platforms	7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5

duplicate-entries

Description	Enter the duplicate-entries context
Context	network-instance name <i>string</i> bridge-table proxy-arp duplicate-entries
Tree	duplicate-entries
Configurable	False
Platforms	7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5

neighbor [ipv4-address](#) *string*

Description	List of duplicate proxy ARP entries.
Context	network-instance name <i>string</i> bridge-table proxy-arp duplicate-entries neighbor ipv4-address <i>string</i>
Tree	neighbor
Configurable	False
Platforms	7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5

ipv4-address *string*

Description	IPv4 address of the proxy ARP entry
Context	network-instance name <i>string</i> bridge-table proxy-arp duplicate-entries neighbor ipv4-address <i>string</i>
Configurable	False

Platforms 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5

detect-time *string*

Description The date and time when the proxy entry was declared duplicate

Context [network-instance name](#) *string* [bridge-table](#) [proxy-arp](#) [duplicate-entries](#) [neighbor ipv4-address](#) *string* **detect-time** *string*

Tree [detect-time](#)

String Length 20 to 32

Configurable False

Platforms 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5

hold-down-time-remaining (*keyword* | *number*)

Description Remaining hold down time for the duplicate proxy entry

Context [network-instance name](#) *string* [bridge-table](#) [proxy-arp](#) [duplicate-entries](#) [neighbor ipv4-address](#) *string* **hold-down-time-remaining** (*keyword* | *number*)

Tree [hold-down-time-remaining](#)

Units seconds

Options

- indefinite

Configurable False

Platforms 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5

is-immutable *boolean*

Description The immutable property of the proxy entry

Context [network-instance name](#) *string* [bridge-table](#) [proxy-arp](#) [duplicate-entries](#) [neighbor ipv4-address](#) *string* **is-immutable** *boolean*

Tree [is-immutable](#)

Default false

Configurable False

Platforms 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5

link-layer-address *string*

Description	The resolving MAC address of the proxy entry
Context	network-instance name <i>string</i> bridge-table proxy-arp duplicate-entries neighbor ipv4-address <i>string</i> link-layer-address <i>string</i>
Tree	link-layer-address
Configurable	False
Platforms	7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5

state *keyword*

Description	The state of the proxy entry
Context	network-instance name <i>string</i> bridge-table proxy-arp duplicate-entries neighbor ipv4-address <i>string</i> state <i>keyword</i>
Tree	state
Options	<ul style="list-style-type: none"> • active • in-active • pending
Configurable	False
Platforms	7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5

dynamic-entries

Description	Enter the dynamic-entries context
Context	network-instance name <i>string</i> bridge-table proxy-arp dynamic-entries
Tree	dynamic-entries
Configurable	False
Platforms	7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5

neighbor [ipv4-address](#) *string*

Description	List of dynamic proxy ARP entries
Context	network-instance name <i>string</i> bridge-table proxy-arp dynamic-entries neighbor ipv4-address <i>string</i>

Tree	neighbor
Configurable	False
Platforms	7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5

ipv4-address *string*

Description	IPv4 address of the proxy ARP entry
Context	network-instance name <i>string</i> bridge-table proxy-arp dynamic-entries neighbor ipv4-address <i>string</i>
Configurable	False
Platforms	7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5

aging (*number* | *keyword*)

Description	The remaining age time for learnt proxy entry
Context	network-instance name <i>string</i> bridge-table proxy-arp dynamic-entries neighbor ipv4-address <i>string</i> aging (<i>number</i> <i>keyword</i>)
Tree	aging
Units	seconds
Options	<ul style="list-style-type: none"> disabled
Configurable	False
Platforms	7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5

is-immutable *boolean*

Description	The immutable property of the proxy entry
Context	network-instance name <i>string</i> bridge-table proxy-arp dynamic-entries neighbor ipv4-address <i>string</i> is-immutable <i>boolean</i>
Tree	is-immutable
Default	false
Configurable	False
Platforms	7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5

last-update *string*

Description	The date and time of the last update of this proxy entry
Context	network-instance name <i>string</i> bridge-table proxy-arp dynamic-entries neighbor ipv4-address <i>string</i> last-update <i>string</i>
Tree	last-update
String Length	20 to 32
Configurable	False
Platforms	7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5

link-layer-address *string*

Description	The resolving MAC address of the proxy entry
Context	network-instance name <i>string</i> bridge-table proxy-arp dynamic-entries neighbor ipv4-address <i>string</i> link-layer-address <i>string</i>
Tree	link-layer-address
Configurable	False
Platforms	7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5

state *keyword*

Description	The state of the proxy entry
Context	network-instance name <i>string</i> bridge-table proxy-arp dynamic-entries neighbor ipv4-address <i>string</i> state <i>keyword</i>
Tree	state
Options	<ul style="list-style-type: none"> • active • in-active • pending
Configurable	False
Platforms	7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5

dynamic-learning

Description	Enter the dynamic-learning context
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Context	network-instance name <i>string</i> bridge-table proxy-arp dynamic-learning
Tree	dynamic-learning
Configurable	True
Platforms	7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5

admin-state *keyword*

Description	Configurable state of the learning procedures for dynamic ARP/ND entries The dynamic ARP/ND entries are learned out of snooped GARP/ARP/ND messages on bridged sub-interfaces. These entries will be shown as dynamic, as opposed to EVPN entries or static entries. If the admin-state is disabled, the existing ARP/ND entries in the proxy table will be kept (and refreshed).
Context	network-instance name <i>string</i> bridge-table proxy-arp dynamic-learning admin-state <i>keyword</i>
Tree	admin-state
Default	disable
Options	<ul style="list-style-type: none"> • enable • disable
Configurable	True
Platforms	7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5

age-time (*keyword* | *number*)

Description	Aging timer value for the proxy entries When the aging expires, the entry is flushed.
Context	network-instance name <i>string</i> bridge-table proxy-arp dynamic-learning age-time (<i>keyword</i> <i>number</i>)
Tree	age-time
Range	60 to 86400
Default	never
Units	seconds
Options	<ul style="list-style-type: none"> • never
Configurable	True

Platforms 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5

send-refresh (*number* | *keyword*)

Description Configures the proxy refresh interval
The interval determines the frequency at which the system generates three ARP Requests or Neighbor Solicitations with the intend to refresh the proxy entry. The refresh is sent within the age-time window.

Context [network-instance name](#) *string* [bridge-table proxy-arp dynamic-learning send-refresh](#) (*number* | *keyword*)

Tree [send-refresh](#)

Range 120 to 86400

Default never

Options

- never

Configurable True

Platforms 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5

evpn

Description How proxy arp interacts with evpn

Context [network-instance name](#) *string* [bridge-table proxy-arp evpn](#)

Tree [evpn](#)

Configurable True

Platforms 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5

flood

Description How ARP frames received on a proxy service are flooded into the EVPN network

Context [network-instance name](#) *string* [bridge-table proxy-arp evpn flood](#)

Tree [flood](#)

Configurable True

Platforms 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L

gratuitous-arp *boolean*

Description	Whether to flood GARP requests or replies into EVPN
Context	network-instance name <i>string</i> bridge-table proxy-arp evpn flood gratuitous-arp <i>boolean</i>
Tree	gratuitous-arp
Default	true
Configurable	True
Platforms	7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L

unknown-arp-req *boolean*

Description	Whether to flood ARP requests (with source squelching) when there is no hit in the bridge-table-proxy-arp table
Context	network-instance name <i>string</i> bridge-table proxy-arp evpn flood unknown-arp-req <i>boolean</i>
Tree	unknown-arp-req
Default	true
Configurable	True
Platforms	7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L

internal-tags

Description	Configuration and state of internal tags
Context	network-instance name <i>string</i> bridge-table proxy-arp evpn internal-tags
Tree	internal-tags
Configurable	True
Platforms	Supported on all platforms

set-tag-set *reference*

Description	Reference to a tag-set defined under routing-policy
Context	network-instance name <i>string</i> bridge-table proxy-arp evpn internal-tags set-tag-set <i>reference</i>
Tree	set-tag-set
Reference	routing-policy tag-set name <i>string</i>
Configurable	True

Platforms	Supported on all platforms
Max. Elements	1

evpn-entries

Description	Enter the evpn-entries context
Context	network-instance name <i>string</i> bridge-table proxy-arp evpn-entries
Tree	evpn-entries
Configurable	False
Platforms	7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5

neighbor [ipv4-address](#) *string*

Description	List of EVPN proxy ARP entries.
Context	network-instance name <i>string</i> bridge-table proxy-arp evpn-entries neighbor ipv4-address <i>string</i>
Tree	neighbor
Configurable	False
Platforms	7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5

ipv4-address *string*

Description	IPv4 address of the proxy ARP entry
Context	network-instance name <i>string</i> bridge-table proxy-arp evpn-entries neighbor ipv4-address <i>string</i>
Configurable	False
Platforms	7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5

is-immutable *boolean*

Description	The immutable property of the proxy entry
Context	network-instance name <i>string</i> bridge-table proxy-arp evpn-entries neighbor ipv4-address <i>string</i> is-immutable <i>boolean</i>
Tree	is-immutable
Default	false

Configurable	False
Platforms	7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5

last-update *string*

Description	The date and time of the last update of this proxy entry
Context	network-instance name <i>string</i> bridge-table proxy-arp evpn-entries neighbor ipv4-address <i>string</i> last-update <i>string</i>
Tree	last-update
String Length	20 to 32
Configurable	False
Platforms	7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5

link-layer-address *string*

Description	The resolving MAC address of the proxy entry
Context	network-instance name <i>string</i> bridge-table proxy-arp evpn-entries neighbor ipv4-address <i>string</i> link-layer-address <i>string</i>
Tree	link-layer-address
Configurable	False
Platforms	7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5

state *keyword*

Description	The state of the proxy entry
Context	network-instance name <i>string</i> bridge-table proxy-arp evpn-entries neighbor ipv4-address <i>string</i> state <i>keyword</i>
Tree	state
Options	<ul style="list-style-type: none"> • active • in-active • pending
Configurable	False
Platforms	7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5

ip-duplication

Description	Configuration of the proxy ARP/ND IP duplication procedures
Context	network-instance name <i>string</i> bridge-table proxy-arp ip-duplication
Tree	ip-duplication
Configurable	True
Platforms	7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5

anti-spoof-mac *string*

Description	MAC address associated with the optional anti-spoofing mechanism
Context	network-instance name <i>string</i> bridge-table proxy-arp ip-duplication anti-spoof-mac <i>string</i>
Tree	anti-spoof-mac
Configurable	True
Platforms	7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5

hold-down-time (*keyword* | *number*)

Description	Time to wait from the moment an IP is declared duplicate to the time the IP is removed from the proxy ARP/ND table When the duplicate IP is removed, the monitoring process for the IP address is restarted.
Context	network-instance name <i>string</i> bridge-table proxy-arp ip-duplication hold-down-time (<i>keyword</i> <i>number</i>)
Tree	hold-down-time
Range	2 to 60
Default	9
Units	minutes
Options	<ul style="list-style-type: none"> indefinite
Configurable	True
Platforms	7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5

monitoring-window *number*

Description	Monitoring window for detecting duplication on a given ip address in the proxy ARP/ND table An IP is declared duplicate if it exceeds the num-moves within the monitoring-window.
Context	network-instance name <i>string</i> bridge-table proxy-arp ip-duplication monitoring-window <i>number</i>
Tree	monitoring-window
Range	1 to 15
Default	3
Units	minutes
Configurable	True
Platforms	7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5

num-moves *number*

Description	Number of moves in the proxy ARP/ND table that an IP is allowed within the monitoring-window When the number of moves exceeds this value, the IP address is declared duplicate.
Context	network-instance name <i>string</i> bridge-table proxy-arp ip-duplication num-moves <i>number</i>
Tree	num-moves
Range	3 to 10
Default	5
Configurable	True
Platforms	7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5

static-blackhole *boolean*

Description	Whether the anti-spoof MAC is programmed as a black hole static-mac in the mac-table
Context	network-instance name <i>string</i> bridge-table proxy-arp ip-duplication static-blackhole <i>boolean</i>
Tree	static-blackhole

Default	false
Configurable	True
Platforms	7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5

oper-down-reason *keyword*

Description	The reason the proxy-type is down on the network-instance
Context	network-instance name <i>string</i> bridge-table proxy-arp oper-down-reason <i>keyword</i>
Tree	oper-down-reason
Options	<ul style="list-style-type: none"> • admin-down • no-mcid • tag-set-not-resolved
Configurable	False
Platforms	7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5

process-arp-probes *boolean*

Description	<p>Determines whether the router processes ARP probe messages.</p> <p>When set to true, ARP probe messages used by the hosts for Duplicate Address Detection are processed, replied if a proxy-arp entry is hit or reinjected into the data path. When set to false, ARP probe messages are flooded to the remote nodes if unknown-arp-requests are configured to be flooded. ARP probe messages are identified as ARP Requests that use IP address 0.0.0.0 as sender's address.</p>
Context	network-instance name <i>string</i> bridge-table proxy-arp process-arp-probes <i>boolean</i>
Tree	process-arp-probes
Default	true
Configurable	True
Platforms	7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5

static-entries

Description	Enter the static-entries context
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Context	network-instance name <i>string</i> bridge-table proxy-arp static-entries
Tree	static-entries
Configurable	True
Platforms	7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5

neighbor [ipv4-address](#) *string*

Description	List of static proxy ARP entries that map an IPv4 address to a MAC address To configure a static proxy ARP entry a value must be written into this leaf, as well as the link-layer-address leaf.
Context	network-instance name <i>string</i> bridge-table proxy-arp static-entries neighbor ipv4-address <i>string</i>
Tree	neighbor
Configurable	True
Platforms	7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5

ipv4-address *string*

Description	IPv4 address resolved by the proxy ARP entry To configure a static neighbor entry a value must be written into this leaf, as well as the link-layer-address leaf.
Context	network-instance name <i>string</i> bridge-table proxy-arp static-entries neighbor ipv4-address <i>string</i>
Configurable	True
Platforms	7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5

is-immutable *boolean*

Description	The immutable property of the proxy entry
Context	network-instance name <i>string</i> bridge-table proxy-arp static-entries neighbor ipv4-address <i>string</i> is-immutable <i>boolean</i>
Tree	is-immutable
Default	false
Configurable	False

Platforms 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5

last-update *string*

Description The date and time of the last update of this proxy entry

Context [network-instance name](#) *string* [bridge-table proxy-arp static-entries neighbor ipv4-address](#) *string* [last-update](#) *string*

Tree [last-update](#)

String Length 20 to 32

Configurable False

Platforms 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5

link-layer-address *string*

Description The resolving MAC address of the proxy entry
To configure a static proxy entry a value must be written into this leaf and the ip-address leaf.

Context [network-instance name](#) *string* [bridge-table proxy-arp static-entries neighbor ipv4-address](#) *string* [link-layer-address](#) *string*

Tree [link-layer-address](#)

Configurable True

Platforms 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5

state *keyword*

Description The state of the proxy entry

Context [network-instance name](#) *string* [bridge-table proxy-arp static-entries neighbor ipv4-address](#) *string* [state](#) *keyword*

Tree [state](#)

Options

- active
- in-active
- pending

Configurable False

Platforms 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5

statistics

Description	Enter the statistics context
Context	network-instance name <i>string</i> bridge-table proxy-arp statistics
Tree	statistics
Configurable	False
Platforms	7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5

active-entries *number*

Description	The total number of active proxy ARP entries.
Context	network-instance name <i>string</i> bridge-table proxy-arp statistics active-entries <i>number</i>
Tree	active-entries
Default	0
Configurable	False
Platforms	7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5

in-active-entries *number*

Description	The total number of inactive proxy ARP entries.
Context	network-instance name <i>string</i> bridge-table proxy-arp statistics in-active-entries <i>number</i>
Tree	in-active-entries
Default	0
Configurable	False
Platforms	7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5

neighbor-origin [origin](#) *keyword*

Description	The origin of the proxy entry installed in the table
Context	network-instance name <i>string</i> bridge-table proxy-arp statistics neighbor-origin origin <i>keyword</i>
Tree	neighbor-origin

Configurable	False
Platforms	7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5

origin *keyword*

Description	Enter the origin context
Context	network-instance name <i>string</i> bridge-table proxy-arp statistics neighbor-origin origin <i>keyword</i>
Options	<ul style="list-style-type: none"> • static • dynamic • evpn • duplicate
Configurable	False
Platforms	7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5

active-entries *number*

Description	The total number of active proxy ARP entries.
Context	network-instance name <i>string</i> bridge-table proxy-arp statistics neighbor-origin origin <i>keyword</i> active-entries <i>number</i>
Tree	active-entries
Default	0
Configurable	False
Platforms	7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5

in-active-entries *number*

Description	The total number of inactive proxy ARP entries.
Context	network-instance name <i>string</i> bridge-table proxy-arp statistics neighbor-origin origin <i>keyword</i> in-active-entries <i>number</i>
Tree	in-active-entries
Default	0
Configurable	False
Platforms	7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5

pending-entries *number*

Description	The total number of pending proxy ARP entries.
Context	network-instance name <i>string</i> bridge-table proxy-arp statistics neighbor-origin origin <i>keyword</i> pending-entries <i>number</i>
Tree	pending-entries
Default	0
Configurable	False
Platforms	7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5

total-entries *number*

Description	The total number of proxy ARP entries.
Context	network-instance name <i>string</i> bridge-table proxy-arp statistics neighbor-origin origin <i>keyword</i> total-entries <i>number</i>
Tree	total-entries
Default	0
Configurable	False
Platforms	7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5

pending-entries *number*

Description	The total number of pending proxy ARP entries.
Context	network-instance name <i>string</i> bridge-table proxy-arp statistics pending-entries <i>number</i>
Tree	pending-entries
Default	0
Configurable	False
Platforms	7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5

total-entries *number*

Description	The total number of proxy ARP entries.
Context	network-instance name <i>string</i> bridge-table proxy-arp statistics total-entries <i>number</i>

Tree	total-entries
Default	0
Configurable	False
Platforms	7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5

table-entries

Description	Enter the table-entries context
Context	network-instance name <i>string</i> bridge-table proxy-arp table-entries
Tree	table-entries
Configurable	False
Platforms	7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5

neighbor [ipv4-address](#) *string*

Description	List of static and dynamic proxy ARP entries that map an IPv4 address to a MAC address
Context	network-instance name <i>string</i> bridge-table proxy-arp table-entries neighbor ipv4-address <i>string</i>
Tree	neighbor
Configurable	False
Platforms	7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5

[ipv4-address](#) *string*

Description	IPv4 address resolved by the proxy ARP entry
Context	network-instance name <i>string</i> bridge-table proxy-arp table-entries neighbor ipv4-address <i>string</i>
Configurable	False
Platforms	7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5

is-immutable *boolean*

Description	The immutable property of the proxy entry
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Context	network-instance name <i>string</i> bridge-table proxy-arp table-entries neighbor ipv4-address <i>string</i> is-immutable <i>boolean</i>
Tree	is-immutable
Default	false
Configurable	False
Platforms	7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5

last-update *string*

Description	The date and time of the last update of this proxy entry
Context	network-instance name <i>string</i> bridge-table proxy-arp table-entries neighbor ipv4-address <i>string</i> last-update <i>string</i>
Tree	last-update
String Length	20 to 32
Configurable	False
Platforms	7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5

link-layer-address *string*

Description	The resolving MAC address of the proxy entry
Context	network-instance name <i>string</i> bridge-table proxy-arp table-entries neighbor ipv4-address <i>string</i> link-layer-address <i>string</i>
Tree	link-layer-address
Configurable	False
Platforms	7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5

origin *keyword*

Description	The origin of the proxy entry
Context	network-instance name <i>string</i> bridge-table proxy-arp table-entries neighbor ipv4-address <i>string</i> origin <i>keyword</i>
Tree	origin
Options	<ul style="list-style-type: none"> • static • dynamic • evpn

- duplicate

Configurable

False

Platforms

7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5

state keyword**Description**

The state of the proxy entry

Context[network-instance name](#) *string* [bridge-table proxy-arp table-entries neighbor ipv4-address](#) *string* **state** *keyword***Tree**[state](#)**Options**

- active
- in-active
- pending

Configurable

False

Platforms

7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5

table-size number**Description**

Maximum number of entries allowed in the proxy table of the network-instance

Context[network-instance name](#) *string* [bridge-table proxy-arp table-size](#) *number***Tree**[table-size](#)**Range**

1 to 8192

Default

250

Configurable

True

Platforms

7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5

trace-options**Description**

Debug trace-options for Proxy-ARP

Context[network-instance name](#) *string* [bridge-table proxy-arp trace-options](#)**Tree**[trace-options](#)**Configurable**

True

Platforms 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5

flag *name keyword*

Description Tracing parameters

Context [network-instance name](#) *string* [bridge-table](#) [proxy-arp](#) [trace-options](#) [flag name](#) *keyword*

Tree [flag](#)

Configurable True

Platforms 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5

name *keyword*

Description Enter the name context

Context [network-instance name](#) *string* [bridge-table](#) [proxy-arp](#) [trace-options](#) [flag name](#) *keyword*

Options

- request
Trace all ARP request protocol packets snooped or generated for proxy-ARP
- reply
Trace all ARP reply protocol packets snooped or generated for proxy-ARP

Configurable True

Platforms 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5

modifier *keyword*

Description Enter the modifier context

Context [network-instance name](#) *string* [bridge-table](#) [proxy-arp](#) [trace-options](#) [flag name](#) *keyword* [modifier](#) *keyword*

Tree [modifier](#)

Options

- detail
Enables detailed tracing
Includes both, received and sent packets.
- receive

Enables tracing for the received packets

- send

Enables tracing for the sent packets

Configurable	True
Platforms	7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5

proxy-nd

Description	Enable the proxy-nd context
Context	network-instance name <i>string</i> bridge-table proxy-nd
Tree	proxy-nd
Configurable	True
Platforms	7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5

admin-state *keyword*

Description	Configurable state of the layer-2 proxy ARP/ND table
Context	network-instance name <i>string</i> bridge-table proxy-nd admin-state <i>keyword</i>
Tree	admin-state
Default	enable
Options	<ul style="list-style-type: none"> • enable • disable
Configurable	True
Platforms	7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5

duplicate-entries

Description	Enter the duplicate-entries context
Context	network-instance name <i>string</i> bridge-table proxy-nd duplicate-entries
Tree	duplicate-entries
Configurable	False
Platforms	7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5

neighbor ipv6-address *string*

Description	List of duplicate proxy ND entries
Context	network-instance name <i>string</i> bridge-table proxy-nd duplicate-entries neighbor ipv6-address <i>string</i>
Tree	neighbor
Configurable	False
Platforms	7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5

ipv6-address *string*

Description	IPv6 address of the proxy ND entry
Context	network-instance name <i>string</i> bridge-table proxy-nd duplicate-entries neighbor ipv6-address <i>string</i>
Configurable	False
Platforms	7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5

detect-time *string*

Description	The date and time when the proxy entry was declared duplicate
Context	network-instance name <i>string</i> bridge-table proxy-nd duplicate-entries neighbor ipv6-address <i>string</i> detect-time <i>string</i>
Tree	detect-time
String Length	20 to 32
Configurable	False
Platforms	7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5

evpn-override *boolean*

Description	The evpn-override property of the proxy entry
Context	network-instance name <i>string</i> bridge-table proxy-nd duplicate-entries neighbor ipv6-address <i>string</i> evpn-override <i>boolean</i>
Tree	evpn-override
Default	false
Configurable	False

Platforms 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5

hold-down-time-remaining (*keyword | number*)

Description Remaining hold down time for the duplicate proxy entry

Context [network-instance name](#) *string* [bridge-table](#) [proxy-nd](#) [duplicate-entries](#)
[neighbor ipv6-address](#) *string* [hold-down-time-remaining](#) (*keyword | number*)

Tree [hold-down-time-remaining](#)

Units seconds

Options

- indefinite

Configurable False

Platforms 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5

is-immutable *boolean*

Description The immutable property of the proxy entry

Context [network-instance name](#) *string* [bridge-table](#) [proxy-nd](#) [duplicate-entries](#)
[neighbor ipv6-address](#) *string* [is-immutable](#) *boolean*

Tree [is-immutable](#)

Default false

Configurable False

Platforms 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5

link-layer-address *string*

Description The resolving MAC address of the proxy entry

Context [network-instance name](#) *string* [bridge-table](#) [proxy-nd](#) [duplicate-entries](#)
[neighbor ipv6-address](#) *string* [link-layer-address](#) *string*

Tree [link-layer-address](#)

Configurable False

Platforms 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5

state *keyword*

Description	The state of the proxy entry
Context	network-instance name <i>string</i> bridge-table proxy-nd duplicate-entries neighbor ipv6-address <i>string</i> state <i>keyword</i>
Tree	state
Options	<ul style="list-style-type: none"> • active • in-active • pending
Configurable	False
Platforms	7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5

type *keyword*

Description	The type of the neighbor entry
Context	network-instance name <i>string</i> bridge-table proxy-nd duplicate-entries neighbor ipv6-address <i>string</i> type <i>keyword</i>
Tree	type
Options	<ul style="list-style-type: none"> • router • host
Configurable	False
Platforms	7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5

dynamic-entries

Description	Enter the dynamic-entries context
Context	network-instance name <i>string</i> bridge-table proxy-nd dynamic-entries
Tree	dynamic-entries
Configurable	False
Platforms	7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5

neighbor ipv6-address *string*

Description	List of dynamic proxy ND entries
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Context	network-instance name <i>string</i> bridge-table proxy-nd dynamic-entries neighbor ipv6-address <i>string</i>
Tree	neighbor
Configurable	False
Platforms	7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5

ipv6-address *string*

Description	IPv6 address of the proxy ND entry
Context	network-instance name <i>string</i> bridge-table proxy-nd dynamic-entries neighbor ipv6-address <i>string</i>
Configurable	False
Platforms	7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5

aging (*number* | *keyword*)

Description	The remaining age time for learnt proxy entry
Context	network-instance name <i>string</i> bridge-table proxy-nd dynamic-entries neighbor ipv6-address <i>string</i> aging (<i>number</i> <i>keyword</i>)
Tree	aging
Units	seconds
Options	<ul style="list-style-type: none"> disabled
Configurable	False
Platforms	7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5

evpn-override *boolean*

Description	The evpn-override property of the proxy entry
Context	network-instance name <i>string</i> bridge-table proxy-nd dynamic-entries neighbor ipv6-address <i>string</i> evpn-override <i>boolean</i>
Tree	evpn-override
Default	false
Configurable	False
Platforms	7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5

is-immutable *boolean*

Description	The immutable property of the proxy entry
Context	network-instance name <i>string</i> bridge-table proxy-nd dynamic-entries neighbor ipv6-address <i>string</i> is-immutable <i>boolean</i>
Tree	is-immutable
Default	false
Configurable	False
Platforms	7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5

last-update *string*

Description	The date and time of the last update of this proxy entry
Context	network-instance name <i>string</i> bridge-table proxy-nd dynamic-entries neighbor ipv6-address <i>string</i> last-update <i>string</i>
Tree	last-update
String Length	20 to 32
Configurable	False
Platforms	7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5

link-layer-address *string*

Description	The resolving MAC address of the proxy entry
Context	network-instance name <i>string</i> bridge-table proxy-nd dynamic-entries neighbor ipv6-address <i>string</i> link-layer-address <i>string</i>
Tree	link-layer-address
Configurable	False
Platforms	7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5

state *keyword*

Description	The state of the proxy entry
Context	network-instance name <i>string</i> bridge-table proxy-nd dynamic-entries neighbor ipv6-address <i>string</i> state <i>keyword</i>
Tree	state

Options	<ul style="list-style-type: none"> • active • in-active • pending
Configurable	False
Platforms	7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5

type *keyword*

Description	The type of the neighbor entry
Context	network-instance name <i>string</i> bridge-table proxy-nd dynamic-entries neighbor ipv6-address <i>string</i> type <i>keyword</i>
Tree	type
Options	<ul style="list-style-type: none"> • router • host
Configurable	False
Platforms	7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5

dynamic-learning

Description	Enter the dynamic-learning context
Context	network-instance name <i>string</i> bridge-table proxy-nd dynamic-learning
Tree	dynamic-learning
Configurable	True
Platforms	7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5

admin-state *keyword*

Description	Configurable state of the learning procedures for dynamic ARP/ND entries The dynamic ARP/ND entries are learned out of snooped GARP/ARP/ND messages on bridged sub-interfaces. These entries will be shown as dynamic, as opposed to EVPN entries or static entries. If the admin-state is disabled, the existing ARP/ND entries in the proxy table will be kept (and refreshed).
Context	network-instance name <i>string</i> bridge-table proxy-nd dynamic-learning admin-state <i>keyword</i>

Tree	admin-state
Default	disable
Options	<ul style="list-style-type: none"> • enable • disable
Configurable	True
Platforms	7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5

age-time (*keyword* | *number*)

Description	Aging timer value for the proxy entries When the aging expires, the entry is flushed.
Context	network-instance name <i>string</i> bridge-table proxy-nd dynamic-learning age-time (<i>keyword</i> <i>number</i>)
Tree	age-time
Range	60 to 86400
Default	never
Units	seconds
Options	<ul style="list-style-type: none"> • never
Configurable	True
Platforms	7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5

send-refresh (*number* | *keyword*)

Description	Configures the proxy refresh interval The interval determines the frequency at which the system generates three ARP Requests or Neighbor Solicitations with the intend to refresh the proxy entry. The refresh is sent within the age-time window.
Context	network-instance name <i>string</i> bridge-table proxy-nd dynamic-learning send-refresh (<i>number</i> <i>keyword</i>)
Tree	send-refresh
Range	120 to 86400
Default	never
Options	<ul style="list-style-type: none"> • never
Configurable	True

Platforms 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5

evpn

Description How proxy ARP/ND interacts with EVPN

Context [network-instance name](#) *string* [bridge-table](#) [proxy-nd](#) [evpn](#)

Tree [evpn](#)

Configurable True

Platforms 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5

advertise-neighbor-type *keyword*

Description Whether to advertise router entries or host entries into EVPN MAC/IP routes
It also specifies whether to reply to Neighbor Solicitations for EVPN entries with the router flag set or unset.

Context [network-instance name](#) *string* [bridge-table](#) [proxy-nd](#) [evpn](#) [advertise-neighbor-type](#) *keyword*

Tree [advertise-neighbor-type](#)

Default router

Options

- router
- host
- router-host

Configurable True

Platforms 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5

flood

Description How Neighbor Discovery frames received on a proxy service are flooded into the EVPN network

Context [network-instance name](#) *string* [bridge-table](#) [proxy-nd](#) [evpn](#) [flood](#)

Tree [flood](#)

Configurable True

Platforms 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L

unknown-neighbor-advertise-host *boolean*

Description	Whether to flood Neighbor Advertisement (NA) replies, for type host, into the EVPN network
Context	network-instance name <i>string</i> bridge-table proxy-nd evpn flood unknown-neighbor-advertise-host <i>boolean</i>
Tree	unknown-neighbor-advertise-host
Default	true
Configurable	True
Platforms	7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L

unknown-neighbor-advertise-router *boolean*

Description	Whether to flood Neighbor Advertisement (NA) replies, for type router, into the EVPN network
Context	network-instance name <i>string</i> bridge-table proxy-nd evpn flood unknown-neighbor-advertise-router <i>boolean</i>
Tree	unknown-neighbor-advertise-router
Default	true
Configurable	True
Platforms	7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L

unknown-neighbor-solicitation *boolean*

Description	Whether to flood Neighbor Solicitation (NS) messages (with source squelching) into the EVPN network
Context	network-instance name <i>string</i> bridge-table proxy-nd evpn flood unknown-neighbor-solicitation <i>boolean</i>
Tree	unknown-neighbor-solicitation
Default	true
Configurable	True
Platforms	7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L

internal-tags

Description	Configuration and state of internal tags
Context	network-instance name <i>string</i> bridge-table proxy-nd evpn internal-tags

Tree	internal-tags
Configurable	True
Platforms	Supported on all platforms

set-tag-set *reference*

Description	Reference to a tag-set defined under routing-policy
Context	network-instance name <i>string</i> bridge-table proxy-nd evpn internal-tags set-tag-set <i>reference</i>
Tree	set-tag-set
Reference	routing-policy tag-set name <i>string</i>
Configurable	True
Platforms	Supported on all platforms
Max. Elements	1

evpn-entries

Description	Enter the evpn-entries context
Context	network-instance name <i>string</i> bridge-table proxy-nd evpn-entries
Tree	evpn-entries
Configurable	False
Platforms	7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5

neighbor [ipv6-address](#) *string*

Description	List of EVPN proxy ND entries.
Context	network-instance name <i>string</i> bridge-table proxy-nd evpn-entries neighbor ipv6-address <i>string</i>
Tree	neighbor
Configurable	False
Platforms	7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5

ipv6-address *string*

Description	IPv6 address of the proxy ND entry
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Context	network-instance name <i>string</i> bridge-table proxy-nd evpn-entries neighbor ipv6-address <i>string</i>
Configurable	False
Platforms	7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5

evpn-override *boolean*

Description	The evpn-override property of the proxy entry
Context	network-instance name <i>string</i> bridge-table proxy-nd evpn-entries neighbor ipv6-address <i>string</i> evpn-override <i>boolean</i>
Tree	evpn-override
Default	false
Configurable	False
Platforms	7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5

is-immutable *boolean*

Description	The immutable property of the proxy entry
Context	network-instance name <i>string</i> bridge-table proxy-nd evpn-entries neighbor ipv6-address <i>string</i> is-immutable <i>boolean</i>
Tree	is-immutable
Default	false
Configurable	False
Platforms	7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5

last-update *string*

Description	The date and time of the last update of this proxy entry
Context	network-instance name <i>string</i> bridge-table proxy-nd evpn-entries neighbor ipv6-address <i>string</i> last-update <i>string</i>
Tree	last-update
String Length	20 to 32
Configurable	False
Platforms	7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5

link-layer-address *string*

Description	The resolving MAC address of the proxy entry
Context	network-instance name <i>string</i> bridge-table proxy-nd evpn-entries neighbor ipv6-address <i>string</i> link-layer-address <i>string</i>
Tree	link-layer-address
Configurable	False
Platforms	7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5

state *keyword*

Description	The state of the proxy entry
Context	network-instance name <i>string</i> bridge-table proxy-nd evpn-entries neighbor ipv6-address <i>string</i> state <i>keyword</i>
Tree	state
Options	<ul style="list-style-type: none"> • active • in-active • pending
Configurable	False
Platforms	7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5

type *keyword*

Description	The type of the neighbor entry
Context	network-instance name <i>string</i> bridge-table proxy-nd evpn-entries neighbor ipv6-address <i>string</i> type <i>keyword</i>
Tree	type
Options	<ul style="list-style-type: none"> • router • host
Configurable	False
Platforms	7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5

ip-duplication

Description	Configuration of the proxy ARP/ND IP duplication procedures
Context	network-instance name <i>string</i> bridge-table proxy-nd ip-duplication
Tree	ip-duplication
Configurable	True
Platforms	7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5

anti-spoof-mac *string*

Description	MAC address associated with the optional anti-spoofing mechanism
Context	network-instance name <i>string</i> bridge-table proxy-nd ip-duplication anti-spoof-mac <i>string</i>
Tree	anti-spoof-mac
Configurable	True
Platforms	7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5

hold-down-time (*keyword* | *number*)

Description	Time to wait from the moment an IP is declared duplicate to the time the IP is removed from the proxy ARP/ND table When the duplicate IP is removed, the monitoring process for the IP address is restarted.
Context	network-instance name <i>string</i> bridge-table proxy-nd ip-duplication hold-down-time (<i>keyword</i> <i>number</i>)
Tree	hold-down-time
Range	2 to 60
Default	9
Units	minutes
Options	<ul style="list-style-type: none"> indefinite
Configurable	True
Platforms	7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5

monitoring-window *number*

Description	Monitoring window for detecting duplication on a given ip address in the proxy ARP/ND table An IP is declared duplicate if it exceeds the num-moves within the monitoring-window.
Context	network-instance name <i>string</i> bridge-table proxy-nd ip-duplication monitoring-window <i>number</i>
Tree	monitoring-window
Range	1 to 15
Default	3
Units	minutes
Configurable	True
Platforms	7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5

num-moves *number*

Description	Number of moves in the proxy ARP/ND table that an IP is allowed within the monitoring-window When the number of moves exceeds this value, the IP address is declared duplicate.
Context	network-instance name <i>string</i> bridge-table proxy-nd ip-duplication num-moves <i>number</i>
Tree	num-moves
Range	3 to 10
Default	5
Configurable	True
Platforms	7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5

static-blackhole *boolean*

Description	Whether the anti-spoof MAC is programmed as a black hole static-mac in the mac-table
Context	network-instance name <i>string</i> bridge-table proxy-nd ip-duplication static-blackhole <i>boolean</i>
Tree	static-blackhole

Default	false
Configurable	True
Platforms	7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5

oper-down-reason *keyword*

Description	The reason the proxy-type is down on the network-instance
Context	network-instance name <i>string</i> bridge-table proxy-nd oper-down-reason <i>keyword</i>
Tree	oper-down-reason
Options	<ul style="list-style-type: none"> • admin-down • no-mcid • tag-set-not-resolved
Configurable	False
Platforms	7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5

process-dad-neighbor-solicitations *boolean*

Description	<p>Determines whether the router processes Neighbor Solicitation DAD messages</p> <p>When set to true, Neighbor Solicitation DAD messages used by the hosts for Duplicate Address Detection are processed, replied if a proxy ND entry is hit, or reinjected into the data path. When set to false, Neighbor Solicitation DAD messages are flooded to the remote nodes if unknown-neighbor-solicitation is configured so that unknown Neighbor Solicitation messages are flooded.</p>
Context	network-instance name <i>string</i> bridge-table proxy-nd process-dad-neighbor-solicitations <i>boolean</i>
Tree	process-dad-neighbor-solicitations
Default	true
Configurable	True
Platforms	7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5

static-entries

Description	Enter the static-entries context
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Context	network-instance name <i>string</i> bridge-table proxy-nd static-entries
Tree	static-entries
Configurable	True
Platforms	7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5

neighbor [ipv6-address](#) *string*

Description	List of static proxy ND entries that map an IPv6 address to a MAC address To configure a static proxy ND entry a value must be written into this leaf, as well as the link-layer-address leaf.
Context	network-instance name <i>string</i> bridge-table proxy-nd static-entries neighbor ipv6-address <i>string</i>
Tree	neighbor
Configurable	True
Platforms	7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5

ipv6-address *string*

Description	IPv6 address resolved by the proxy ND entry To configure a static neighbor entry a value must be written into this leaf, as well as the link-layer-address leaf.
Context	network-instance name <i>string</i> bridge-table proxy-nd static-entries neighbor ipv6-address <i>string</i>
Configurable	True
Platforms	7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5

evpn-override *boolean*

Description	The evpn-override property of the proxy entry
Context	network-instance name <i>string</i> bridge-table proxy-nd static-entries neighbor ipv6-address <i>string</i> evpn-override <i>boolean</i>
Tree	evpn-override
Default	false
Configurable	False

Platforms 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5

is-immutable *boolean*

Description The immutable property of the proxy entry

Context [network-instance name](#) *string* [bridge-table](#) [proxy-nd](#) [static-entries](#) [neighbor](#) [ipv6-address](#) *string* **is-immutable** *boolean*

Tree [is-immutable](#)

Default false

Configurable False

Platforms 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5

last-update *string*

Description The date and time of the last update of this proxy entry

Context [network-instance name](#) *string* [bridge-table](#) [proxy-nd](#) [static-entries](#) [neighbor](#) [ipv6-address](#) *string* **last-update** *string*

Tree [last-update](#)

String Length 20 to 32

Configurable False

Platforms 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5

link-layer-address *string*

Description The resolving MAC address of the proxy entry
To configure a static proxy entry a value must be written into this leaf and the ip-address leaf.

Context [network-instance name](#) *string* [bridge-table](#) [proxy-nd](#) [static-entries](#) [neighbor](#) [ipv6-address](#) *string* **link-layer-address** *string*

Tree [link-layer-address](#)

Configurable True

Platforms 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5

state keyword

Description	The state of the proxy entry
Context	network-instance name <i>string</i> bridge-table proxy-nd static-entries neighbor ipv6-address <i>string</i> state <i>keyword</i>
Tree	state
Options	<ul style="list-style-type: none"> • active • in-active • pending
Configurable	False
Platforms	7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5

type keyword

Description	The type of the neighbor entry
Context	network-instance name <i>string</i> bridge-table proxy-nd static-entries neighbor ipv6-address <i>string</i> type <i>keyword</i>
Tree	type
Default	router
Options	<ul style="list-style-type: none"> • router • host
Configurable	True
Platforms	7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5

statistics

Description	Enter the statistics context
Context	network-instance name <i>string</i> bridge-table proxy-nd statistics
Tree	statistics
Configurable	False
Platforms	7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5

active-entries *number*

Description	The total number of active proxy ARP entries.
Context	network-instance name <i>string</i> bridge-table proxy-nd statistics active-entries <i>number</i>
Tree	active-entries
Default	0
Configurable	False
Platforms	7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5

in-active-entries *number*

Description	The total number of inactive proxy ARP entries.
Context	network-instance name <i>string</i> bridge-table proxy-nd statistics in-active-entries <i>number</i>
Tree	in-active-entries
Default	0
Configurable	False
Platforms	7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5

neighbor-origin [origin](#) *keyword*

Description	The origin of the proxy entry installed in the table
Context	network-instance name <i>string</i> bridge-table proxy-nd statistics neighbor-origin origin <i>keyword</i>
Tree	neighbor-origin
Configurable	False
Platforms	7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5

origin *keyword*

Description	Enter the origin context
Context	network-instance name <i>string</i> bridge-table proxy-nd statistics neighbor-origin origin <i>keyword</i>
Options	<ul style="list-style-type: none"> static

	<ul style="list-style-type: none"> dynamic evpn duplicate
Configurable	False
Platforms	7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5

active-entries *number*

Description	The total number of active proxy ARP entries.
Context	network-instance name <i>string</i> bridge-table proxy-nd statistics neighbor-origin origin <i>keyword</i> active-entries <i>number</i>
Tree	active-entries
Default	0
Configurable	False
Platforms	7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5

in-active-entries *number*

Description	The total number of inactive proxy ARP entries.
Context	network-instance name <i>string</i> bridge-table proxy-nd statistics neighbor-origin origin <i>keyword</i> in-active-entries <i>number</i>
Tree	in-active-entries
Default	0
Configurable	False
Platforms	7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5

pending-entries *number*

Description	The total number of pending proxy ARP entries.
Context	network-instance name <i>string</i> bridge-table proxy-nd statistics neighbor-origin origin <i>keyword</i> pending-entries <i>number</i>
Tree	pending-entries
Default	0
Configurable	False

Platforms 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5

total-entries *number*

Description The total number of proxy ARP entries.

Context [network-instance name](#) *string* [bridge-table](#) [proxy-nd](#) [statistics](#) [neighbor-origin](#) [origin](#) *keyword* **total-entries** *number*

Tree [total-entries](#)

Default 0

Configurable False

Platforms 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5

pending-entries *number*

Description The total number of pending proxy ARP entries.

Context [network-instance name](#) *string* [bridge-table](#) [proxy-nd](#) [statistics](#) [pending-entries](#) *number*

Tree [pending-entries](#)

Default 0

Configurable False

Platforms 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5

total-entries *number*

Description The total number of proxy ARP entries.

Context [network-instance name](#) *string* [bridge-table](#) [proxy-nd](#) [statistics](#) **total-entries** *number*

Tree [total-entries](#)

Default 0

Configurable False

Platforms 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5

table-entries

Description	Enter the table-entries context
Context	network-instance name <i>string</i> bridge-table proxy-nd table-entries
Tree	table-entries
Configurable	False
Platforms	7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5

neighbor [ipv6-address](#) *string*

Description	List of proxy ND entries that map an IPv6 address to a MAC address
Context	network-instance name <i>string</i> bridge-table proxy-nd table-entries neighbor ipv6-address <i>string</i>
Tree	neighbor
Configurable	False
Platforms	7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5

ipv6-address *string*

Description	IPv6 address resolved by the proxy ND entry
Context	network-instance name <i>string</i> bridge-table proxy-nd table-entries neighbor ipv6-address <i>string</i>
Configurable	False
Platforms	7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5

evpn-override *boolean*

Description	The evpn-override property of the proxy entry
Context	network-instance name <i>string</i> bridge-table proxy-nd table-entries neighbor ipv6-address <i>string</i> evpn-override <i>boolean</i>
Tree	evpn-override
Default	false
Configurable	False
Platforms	7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5

is-immutable *boolean*

Description	The immutable property of the proxy entry
Context	network-instance name <i>string</i> bridge-table proxy-nd table-entries neighbor ipv6-address <i>string</i> is-immutable <i>boolean</i>
Tree	is-immutable
Default	false
Configurable	False
Platforms	7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5

last-update *string*

Description	The date and time of the last update of this proxy entry
Context	network-instance name <i>string</i> bridge-table proxy-nd table-entries neighbor ipv6-address <i>string</i> last-update <i>string</i>
Tree	last-update
String Length	20 to 32
Configurable	False
Platforms	7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5

link-layer-address *string*

Description	The resolving MAC address of the proxy entry
Context	network-instance name <i>string</i> bridge-table proxy-nd table-entries neighbor ipv6-address <i>string</i> link-layer-address <i>string</i>
Tree	link-layer-address
Configurable	False
Platforms	7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5

origin *keyword*

Description	The origin of the proxy entry
Context	network-instance name <i>string</i> bridge-table proxy-nd table-entries neighbor ipv6-address <i>string</i> origin <i>keyword</i>
Tree	origin

Options	<ul style="list-style-type: none"> • static • dynamic • evpn • duplicate
Configurable	False
Platforms	7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5

state *keyword*

Description	The state of the proxy entry
Context	network-instance name <i>string</i> bridge-table proxy-nd table-entries neighbor ipv6-address <i>string</i> state <i>keyword</i>
Tree	state
Options	<ul style="list-style-type: none"> • active • in-active • pending
Configurable	False
Platforms	7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5

type *keyword*

Description	The type of the neighbor entry
Context	network-instance name <i>string</i> bridge-table proxy-nd table-entries neighbor ipv6-address <i>string</i> type <i>keyword</i>
Tree	type
Options	<ul style="list-style-type: none"> • router • host
Configurable	False
Platforms	7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5

table-size *number*

Description	Maximum number of entries allowed in the proxy table of the network-instance
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Context	network-instance name <i>string</i> bridge-table proxy-nd table-size <i>number</i>
Tree	table-size
Range	1 to 8192
Default	250
Configurable	True
Platforms	7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5

trace-options

Description	Debug traceoptions for Proxy-ARP
Context	network-instance name <i>string</i> bridge-table proxy-nd trace-options
Tree	trace-options
Configurable	True
Platforms	7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5

flag *name keyword*

Description	Tracing parameters
Context	network-instance name <i>string</i> bridge-table proxy-nd trace-options flag name <i>keyword</i>
Tree	flag
Configurable	True
Platforms	7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5

name *keyword*

Description	Enter the name context
Context	network-instance name <i>string</i> bridge-table proxy-nd trace-options flag name <i>keyword</i>
Options	<ul style="list-style-type: none"> • solicitation Trace all Neighbor Solicitation packets snooped or generated for proxy ND • advertisement Trace all Neighbor Advertisement packets snooped or generated for proxy ND

Configurable	True
Platforms	7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5

modifier *keyword*

Description	Enter the modifier context
Context	network-instance name <i>string</i> bridge-table proxy-nd trace-options flag name <i>keyword</i> modifier <i>keyword</i>
Tree	modifier
Options	<ul style="list-style-type: none"> • detail To enable detailed tracing, including both received and sent packets • receive To enable tracing for the received packets • send To enable tracing for the sent packets

Configurable	True
Platforms	7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5

reserved-macs

Description	Enter the reserved-macs context
Context	network-instance name <i>string</i> bridge-table reserved-macs
Tree	reserved-macs
Configurable	False
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

mac *address string*

Description	reserved macs on the bridging instance
Context	network-instance name <i>string</i> bridge-table reserved-macs mac address <i>string</i>
Tree	mac
Configurable	False

Platforms 7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

address *string*

Description Enter the address context

Context [network-instance name](#) *string* [bridge-table](#) [reserved-macs](#) [mac address](#) *string*

Configurable False

Platforms 7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

users [application](#) *string*

Description applications reserving this mac

Context [network-instance name](#) *string* [bridge-table](#) [reserved-macs](#) [mac address](#) *string* [users](#) [application](#) *string*

Tree [users](#)

Configurable False

Platforms 7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

application *string*

Description Enter the application context

Context [network-instance name](#) *string* [bridge-table](#) [reserved-macs](#) [mac address](#) *string* [users](#) [application](#) *string*

Configurable False

Platforms 7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

static-mac

Description Enter the static-mac context

Context [network-instance name](#) *string* [bridge-table](#) [static-mac](#)

Tree	static-mac
Configurable	True
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

mac [address string](#)

Description	static macs configured on the bridging instance
Context	network-instance name string bridge-table static-mac mac address string
Tree	mac
Configurable	True
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

address [string](#)

Description	Enter the address context
Context	network-instance name string bridge-table static-mac mac address string
Configurable	True
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

destination ([keyword](#) | [subinterface-all](#) | [name](#))

Description	the destination where the mac is programmed against.
Context	network-instance name string bridge-table static-mac mac address string destination (keyword subinterface-all name)
Tree	destination
String Length	5 to 25
Options	<ul style="list-style-type: none"> • blackhole
Configurable	True
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

statistics

Description	Enter the statistics context
Context	network-instance name <i>string</i> bridge-table statistics
Tree	statistics
Configurable	False
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

active-entries *number*

Description	The total number of entries that are active in the mac-table.
Context	network-instance name <i>string</i> bridge-table statistics active-entries <i>number</i>
Tree	active-entries
Default	0
Configurable	False
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

failed-entries *number*

Description	The total number of macs, which have not been programmed on atleast one slot
Context	network-instance name <i>string</i> bridge-table statistics failed-entries <i>number</i>
Tree	failed-entries
Default	0
Configurable	False
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

mac-type *type* *keyword*

Description	the type of the mac installed in the fib.
Context	network-instance name <i>string</i> bridge-table statistics mac-type <i>type</i> <i>keyword</i>
Tree	mac-type

Configurable	False
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

type *keyword*

Description	Enter the type context
Context	network-instance name <i>string</i> bridge-table statistics mac-type type <i>keyword</i>
Options	<ul style="list-style-type: none"> • static • duplicate • learnt • irb-interface • evpn • evpn-static • irb-interface-anycast • proxy-anti-spoof • reserved • eth-cfm • irb-interface-vrrp

Configurable	False
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

active-entries *number*

Description	The total number of entries of this type that are active in the mac-table.
Context	network-instance name <i>string</i> bridge-table statistics mac-type type <i>keyword</i> active-entries <i>number</i>
Tree	active-entries
Default	0
Configurable	False
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

failed-entries *number*

Description	The total number of macs of this type, which have not been programmed on atleast one slot
Context	network-instance name <i>string</i> bridge-table statistics mac-type type <i>keyword</i> failed-entries <i>number</i>
Tree	failed-entries
Default	0
Configurable	False
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

total-entries *number*

Description	The total number of macs of this type , active and inactive, that are present in the mac-table.
Context	network-instance name <i>string</i> bridge-table statistics mac-type type <i>keyword</i> total-entries <i>number</i>
Tree	total-entries
Default	0
Configurable	False
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

total-entries *number*

Description	The total number of macs, active and inactive, that are present in the mac-table.
Context	network-instance name <i>string</i> bridge-table statistics total-entries <i>number</i>
Tree	total-entries
Default	0
Configurable	False
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

description *string*

Description	A user-entered description of this network instance.
Context	network-instance name <i>string</i> description <i>string</i>
Tree	description
String Length	1 to 255
Configurable	True
Platforms	Supported on all platforms

icmp

Description	Enter the icmp context
Context	network-instance name <i>string</i> icmp
Tree	icmp
Configurable	False
Platforms	Supported on all platforms

statistics

Description	ICMP version 4 statistics
Context	network-instance name <i>string</i> icmp statistics
Tree	statistics
Configurable	False
Platforms	Supported on all platforms

last-clear *string*

Description	Timestamp of the last time the interface counters were cleared.
Context	network-instance name <i>string</i> icmp statistics last-clear <i>string</i>
Tree	last-clear
String Length	20 to 32
Configurable	False
Platforms	Supported on all platforms

total

Description	Aggregate statistics, counting all ICMP message types
Context	network-instance name <i>string</i> icmp statistics total
Tree	total
Configurable	False
Platforms	Supported on all platforms

in-error-packets *number*

Description	The number of ICMPv4 messages that the network instance received and extracted successfully to the CPM but when they arrived they were determined to have ICMP-specific errors (bad ICMP checksums, bad length, etc.)
Context	network-instance name <i>string</i> icmp statistics total in-error-packets <i>number</i>
Tree	in-error-packets
Default	0
Configurable	False
Platforms	Supported on all platforms

in-packets *number*

Description	The total number of ICMPv4 messages that the network instance received and extracted successfully to the CPM. Note that this counter includes all those counted by in-error-packets.
Context	network-instance name <i>string</i> icmp statistics total in-packets <i>number</i>
Tree	in-packets
Default	0
Configurable	False
Platforms	Supported on all platforms

out-error-packets *number*

Description	The number of ICMPv4 messages that could not be sent from this network instance due to issues such as 'no route to the source' or 'fragmentation required but not supported'
Context	network-instance name <i>string</i> icmp statistics total out-error-packets <i>number</i>
Tree	out-error-packets

Default	0
Configurable	False
Platforms	Supported on all platforms

out-packets *number*

Description	The total number of ICMPv4 messages that the network instance attempted to send. Note that this counter includes all those counted by out-error-packets.
Context	network-instance name <i>string icmp statistics total out-packets number</i>
Tree	out-packets
Default	0
Configurable	False
Platforms	Supported on all platforms

type name *keyword*

Description	Enter the type list instance
Context	network-instance name <i>string icmp statistics type name keyword</i>
Tree	type
Configurable	False
Platforms	Supported on all platforms

name *keyword*

Description	Enter the name context
Context	network-instance name <i>string icmp statistics type name keyword</i>
Options	<ul style="list-style-type: none"> • echo-reply • dest-unreachable • redirect • echo • rtr-advertisement • rtr-selection • time-exceeded • param-problem • timestamp

- timestamp-reply

Configurable	False
Platforms	Supported on all platforms

in-packets *number*

Description	The total number of ICMPv4 messages of this type that the network instance received and extracted successfully to the CPM.
Context	network-instance name <i>string</i> icmp statistics type name <i>keyword</i> in-packets number
Tree	in-packets
Default	0
Configurable	False
Platforms	Supported on all platforms

out-error-packets *number*

Description	The number of ICMPv4 messages of this type that could not be sent from this network instance due to issues such as 'no route to the source' or 'fragmentation required but not supported'
Context	network-instance name <i>string</i> icmp statistics type name <i>keyword</i> out-error-packets number
Tree	out-error-packets
Default	0
Configurable	False
Platforms	Supported on all platforms

out-packets *number*

Description	The total number of ICMPv4 messages of this type that the network instance attempted to send.
Context	network-instance name <i>string</i> icmp statistics type name <i>keyword</i> out-packets number
Tree	out-packets
Default	0
Configurable	False
Platforms	Supported on all platforms

icmp6

Description	Enter the icmp6 context
Context	network-instance name <i>string</i> icmp6
Tree	icmp6
Configurable	False
Platforms	Supported on all platforms

statistics

Description	ICMP version 6 statistics
Context	network-instance name <i>string</i> icmp6 statistics
Tree	statistics
Configurable	False
Platforms	Supported on all platforms

last-clear *string*

Description	Timestamp of the last time the interface counters were cleared.
Context	network-instance name <i>string</i> icmp6 statistics last-clear <i>string</i>
Tree	last-clear
String Length	20 to 32
Configurable	False
Platforms	Supported on all platforms

total

Description	Aggregate statistics, counting all ICMP message types
Context	network-instance name <i>string</i> icmp6 statistics total
Tree	total
Configurable	False
Platforms	Supported on all platforms

in-error-packets *number*

Description	The number of ICMPv6 messages that the network instance received and extracted successfully to the CPM but when they arrived they were determined to have ICMP-specific errors (bad ICMP checksums, bad length, etc.)
Context	network-instance name <i>string</i> icmp6 statistics total in-error-packets <i>number</i>
Tree	in-error-packets
Default	0
Configurable	False
Platforms	Supported on all platforms

in-packets *number*

Description	The total number of ICMPv6 messages that the network instance received and extracted successfully to the CPM. Note that this counter includes all those counted by in-error-packets.
Context	network-instance name <i>string</i> icmp6 statistics total in-packets <i>number</i>
Tree	in-packets
Default	0
Configurable	False
Platforms	Supported on all platforms

out-error-packets *number*

Description	The number of ICMPv6 messages that could not be sent from this network instance due to issues such as 'no route to the source'
Context	network-instance name <i>string</i> icmp6 statistics total out-error-packets <i>number</i>
Tree	out-error-packets
Default	0
Configurable	False
Platforms	Supported on all platforms

out-packets *number*

Description	The total number of ICMPv6 messages that the network instance attempted to send. Note that this counter includes all those counted by out-error-packets.
--------------------	--

Context	network-instance name <i>string icmp6 statistics total out-packets number</i>
Tree	out-packets
Default	0
Configurable	False
Platforms	Supported on all platforms

type *name keyword*

Description	Enter the type list instance
Context	network-instance name <i>string icmp6 statistics type name keyword</i>
Tree	type
Configurable	False
Platforms	Supported on all platforms

name *keyword*

Description	Enter the name context
Context	network-instance name <i>string icmp6 statistics type name keyword</i>
Options	<ul style="list-style-type: none"> • dest-unreachable • packet-too-big • time-exceeded • param-problem • echo-request • echo-reply • rtr-solicitation • rtr-advertisement • nbr-solicitation • nbr-advertisement • redirect
Configurable	False
Platforms	Supported on all platforms

in-packets *number*

Description	The total number of ICMPv6 messages of this type that the network instance received and extracted successfully to the CPM.
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Context	network-instance name <i>string</i> icmp6 statistics type name <i>keyword</i> in-packets number
Tree	in-packets
Default	0
Configurable	False
Platforms	Supported on all platforms

out-error-packets *number*

Description	The number of ICMPv6 messages of this type that could not be sent from this network instance due to issues such as 'no route to the source'
Context	network-instance name <i>string</i> icmp6 statistics type name <i>keyword</i> out-error-packets number
Tree	out-error-packets
Default	0
Configurable	False
Platforms	Supported on all platforms

out-packets *number*

Description	The total number of ICMPv6 messages of this type that the network instance attempted to send.
Context	network-instance name <i>string</i> icmp6 statistics type name <i>keyword</i> out-packets number
Tree	out-packets
Default	0
Configurable	False
Platforms	Supported on all platforms

inter-instance-policies

Description	Policies for leaking routes between this network instance and other network instances
Context	network-instance name <i>string</i> inter-instance-policies
Tree	inter-instance-policies
Configurable	True

Platforms 7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

apply-policy

Description Container for specifying route leaking import and export policies

Context [network-instance name](#) *string* [inter-instance-policies](#) [apply-policy](#)

Tree [apply-policy](#)

Configurable True

Platforms 7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

export-policy *reference*

Description Policy used to specify the routes of this NI that should be made available for leaking to other NIs

Context [network-instance name](#) *string* [inter-instance-policies](#) [apply-policy](#) [export-policy reference](#)

Tree [export-policy](#)

Reference [routing-policy policy name](#) *string*

Configurable True

Platforms 7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

import-policy *reference*

Description Policy used to specify the routes leaked by other NIs that should be imported into this NI

Context [network-instance name](#) *string* [inter-instance-policies](#) [apply-policy](#) [import-policy reference](#)

Tree [import-policy](#)

Reference [routing-policy policy name](#) *string*

Configurable True

Platforms 7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

interface *name string*

Description	List of subinterfaces used by this network-instance
Context	network-instance name string interface name string
Tree	interface
Configurable	True
Platforms	Supported on all platforms

name *string*

Description	Name of the subinterface bound to this network-instance
Context	network-instance name string interface name string
String Length	1 to 255
Configurable	True
Platforms	Supported on all platforms

bridge-table

Description	Enable the bridge-table context
Context	network-instance name string interface name string bridge-table
Tree	bridge-table
Configurable	True
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

mac-relearn-only *boolean*

Description	The value of this leaf indicates that the interface will not learn any new mac addresses, but will relearn any that are already programmed
Context	network-instance name string interface name string bridge-table mac-relearn-only boolean
Tree	mac-relearn-only
Default	true
Configurable	False

Platforms 7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

multicast-forwarding *keyword*

Description The type of multicast data forwarded by this subinterface.

Context [network-instance name](#) *string* [interface name](#) *string* [bridge-table](#) [multicast-forwarding](#) *keyword*

Tree [multicast-forwarding](#)

Options

- none
- BUM
- unknown-unicast
- broadcast-mcast

Configurable False

Platforms 7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

oper-mac-learning *keyword*

Description The operational state of mac-learning on this subinterface.

Context [network-instance name](#) *string* [interface name](#) *string* [bridge-table](#) [oper-mac-learning](#) *keyword*

Tree [oper-mac-learning](#)

Options

- up
Component or process is operational
- down
Component or process is not operational
- empty
Component slot is empty
- downloading
Component is downloading image into memory
- booting
Component is booting downloaded image
- starting
Component image operational, application processes starting
- failed

- Component or process has failed
- synchronizing
Component is currently being synchronized
- upgrading
Component is currently being upgraded
- low-power
Component is offline due to insufficient system power
- degraded
Component or process is in a degraded state
- warm-reboot
Component or process is currently warm rebooting
This state is set during a warm reboot immediately following initiation of the reboot, continuing after startup until the system has completed audit. In this state the system will not accept configuration changes.
- waiting
Component or process is currently waiting
This state can be set by event handler when the reinvoke-with-delay action is used, and indicates that the event handler is waiting for the provided delay before reinvoking the instance.

Configurable

False

Platforms

7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

oper-mac-learning-disabled-reason *keyword***Description**

The reason for the mac-learning being disabled on this interface

Context[network-instance name](#) *string* [interface name](#) *string* [bridge-table oper-mac-learning-disabled-reason](#) *keyword***Tree**[oper-mac-learning-disabled-reason](#)**Options**

- admin-disabled
- mac-dup-detected

Configurable

False

Platforms

7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

index number

Description	network instance allocated sub interface index
Context	network-instance name <i>string</i> interface name <i>string</i> index number
Tree	index
Default	0
Configurable	False
Platforms	Supported on all platforms

interface-ref

Description	Reference to a subinterface
Context	network-instance name <i>string</i> interface name <i>string</i> interface-ref
Tree	interface-ref
Configurable	True
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

interface reference

Description	Reference to a base interface, for example a port or LAG
Context	network-instance name <i>string</i> interface name <i>string</i> interface-ref interface reference
Tree	interface
Reference	interface name <i>string</i>
Configurable	True
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

subinterface reference

Description	Reference to a subinterface This requires the base interface to be specified using the interface leaf in this container.
Context	network-instance name <i>string</i> interface name <i>string</i> interface-ref subinterface reference
Tree	subinterface

Reference	interface name <i>string</i> subinterface <i>index</i> <i>number</i>
Configurable	True
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

oper-down-reason *keyword*

Description	The reason for the interface being down in the network-instance
Context	network-instance name <i>string</i> interface name <i>string</i> oper-down-reason <i>keyword</i>
Tree	oper-down-reason
Options	<ul style="list-style-type: none"> • ip-addr-missing • ip-addr-overlap • subif-down • net-inst-down • vrf-type-mismatch • mac-dup-detected • associated-mac-vrf-down • mac-vrf-association-missing • ip-vrf-association-missing • associated-ip-vrf-down • evpn-mh-standby • interface-ref-missing
Configurable	False
Platforms	Supported on all platforms

oper-state *keyword*

Description	The operational state of this subinterface.
Context	network-instance name <i>string</i> interface name <i>string</i> oper-state <i>keyword</i>
Tree	oper-state
Options	<ul style="list-style-type: none"> • up Component or process is operational • down Component or process is not operational • empty

- Component slot is empty
- downloading
Component is downloading image into memory
- booting
Component is booting downloaded image
- starting
Component image operational, application processes starting
- failed
Component or process has failed
- synchronizing
Component is currently being synchronized
- upgrading
Component is currently being upgraded
- low-power
Component is offline due to insufficient system power
- degraded
Component or process is in a degraded state
- warm-reboot
Component or process is currently warm rebooting
This state is set during a warm reboot immediately following initiation of the reboot, continuing after startup until the system has completed audit. In this state the system will not accept configuration changes.
- waiting
Component or process is currently waiting
This state can be set by event handler when the `reinvoke-with-delay` action is used, and indicates that the event handler is waiting for the provided delay before reinvoking the instance.

Configurable

False

Platforms

Supported on all platforms

ip-forwarding**Description**

Forwarding options that apply to the entire network instance.

Context[network-instance name](#) *string* [ip-forwarding](#)**Tree**[ip-forwarding](#)**Configurable**

True

Platforms

Supported on all platforms

last-resort-lookup

Description	Enter the last-resort-lookup context
Context	network-instance name <i>string</i> ip-forwarding last-resort-lookup
Tree	last-resort-lookup
Configurable	True
Platforms	Supported on all platforms

network-instance *reference*

Description	A reference to another network-instance in which the system will try to find a matching IP route if this network instance does not have any route to the destination IP
Context	network-instance name <i>string</i> ip-forwarding last-resort-lookup network-instance <i>reference</i>
Tree	network-instance
Reference	network-instance name <i>string</i>
Configurable	True
Platforms	Supported on all platforms

receive-ipv4-check *boolean*

Description	If set to true then the following check is done on every subinterface of the network-instance: if an IPv4 packet is received on a subinterface and the IPv4 oper-status of this subinterface is down the packet is discarded. If this leaf is set to false then received IPv4 packets are accepted on all subinterfaces of the network-instance that are up, even if they do not have any IPv4 addresses.
Context	network-instance name <i>string</i> ip-forwarding receive-ipv4-check <i>boolean</i>
Tree	receive-ipv4-check
Configurable	True
Platforms	Supported on all platforms

receive-ipv6-check *boolean*

Description	If set to true then the following check is done on every subinterface of the network-instance: if an IPv6 packet is received on a subinterface and the IPv6 oper-status of this subinterface is down the packet is discarded. If this leaf is set to false then received IPv6 packets are accepted on all
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	subinterfaces of the network-instance that are up, even if they do not have any IPv6 addresses.
Context	network-instance name <i>string</i> ip-forwarding receive-ipv6-check <i>boolean</i>
Tree	receive-ipv6-check
Configurable	True
Platforms	Supported on all platforms

ip-load-balancing

Description	Container for IP load-balancing options that are specific to the network-instance
Context	network-instance name <i>string</i> ip-load-balancing
Tree	ip-load-balancing
Configurable	True
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

resilient-hash-prefix [ip-prefix](#) ([ipv4-prefix](#) | [ipv6-prefix](#))

Description	List of IPv4 and IPv6 prefixes which should be programmed for resilient ECMP hashing.
Context	network-instance name <i>string</i> ip-load-balancing resilient-hash-prefix ip-prefix (ipv4-prefix ipv6-prefix)
Tree	resilient-hash-prefix
Configurable	True
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

[ip-prefix](#) ([ipv4-prefix](#) | [ipv6-prefix](#))

Description	IPv4 or IPv6 prefix. Active routes in the FIB that exactly match this prefix or that are longer matches of this prefix are provided with resilient-hash programming.
Context	network-instance name <i>string</i> ip-load-balancing resilient-hash-prefix ip-prefix (ipv4-prefix ipv6-prefix)
Configurable	True

Platforms 7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

hash-buckets-per-path *number*

Description The number of times each next-hop is repeated in the fill pattern if there are max-paths ECMP next-hops
A larger number consumes more resources but provides more granularity when flows need to be moved. There is a platform-specific limit to the product of this hash-buckets-per-path value and the max-paths value.

Context [network-instance name](#) *string* [ip-load-balancing resilient-hash-prefix ip-prefix \(ipv4-prefix | ipv6-prefix\)](#) [hash-buckets-per-path number](#)

Tree [hash-buckets-per-path](#)

Range 1 to 32

Default 1

Configurable True

Platforms 7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

max-paths *number*

Description The maximum number of ECMP next-hops per route associated with the resilient-hash prefix
If a matching route has more than this number of ECMP next-hops only the first N are used, where N is the value of this parameter. There is a platform-specific limit to the product of this max-paths value and the hash-buckets-per-path value.

Context [network-instance name](#) *string* [ip-load-balancing resilient-hash-prefix ip-prefix \(ipv4-prefix | ipv6-prefix\)](#) [max-paths number](#)

Tree [max-paths](#)

Range 1 to 64

Default 1

Configurable True

Platforms 7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

ip-tunnel-decapsulation

Description	Container for the IP tunnel decapsulation group function
Context	network-instance name <i>string</i> ip-tunnel-decapsulation
Tree	ip-tunnel-decapsulation
Configurable	True
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

group name *string*

Description	Name of the GRE decapsulation group Each decapsulation group can be used to terminate GRE encapsulated packets, which are then forwarded based on the headers of the underlying payload frame type.
Context	network-instance name <i>string</i> ip-tunnel-decapsulation group name <i>string</i>
Tree	group
Configurable	True
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

name *string*

Description	A unique identifier for the decapsulation group
Context	network-instance name <i>string</i> ip-tunnel-decapsulation group name <i>string</i>
String Length	1 to 255
Configurable	True
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

allowed-payloads *keyword*

Description	Specifies the type of payload packet accepted and forwarded by the associated decapsulation group
Context	network-instance name <i>string</i> ip-tunnel-decapsulation group name <i>string</i> allowed-payloads <i>keyword</i>
Tree	allowed-payloads
Default	mpls
Options	<ul style="list-style-type: none"> mpls Support and forward MPLS encapsulated packets as the payload

	<ul style="list-style-type: none"> • ipv4 Support and forward IPv4 packets as the payload • ipv6 Support and forward IPv6 packets as the payload
Configurable	True
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

termination-subnet [ip-prefix](#) (*ipv4-prefix* | *ipv6-prefix*)

Description	List of decapsulation subnets for the associated decapsulation group
Context	network-instance name <i>string</i> ip-tunnel-decapsulation group name <i>string</i> termination-subnet ip-prefix (<i>ipv4-prefix</i> <i>ipv6-prefix</i>)
Tree	termination-subnet
Configurable	True
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b
Max. Elements	1

ip-prefix (*ipv4-prefix* | *ipv6-prefix*)

Description	IP prefix to match for decapsulation
Context	network-instance name <i>string</i> ip-tunnel-decapsulation group name <i>string</i> termination-subnet ip-prefix (<i>ipv4-prefix</i> <i>ipv6-prefix</i>)
Configurable	True
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

maintenance-policies

Description	Container with maintenance policies
Context	network-instance name <i>string</i> maintenance-policies
Tree	maintenance-policies
Configurable	True
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

policy [maintenance-policy-name](#) *string*

Description	Enter the policy list instance
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Context	network-instance name <i>string</i> maintenance-policies policy maintenance-policy-name <i>string</i>
Tree	policy
Configurable	True
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

maintenance-policy-name *string*

Description	A unique identifying name for the maintenance policy
Context	network-instance name <i>string</i> maintenance-policies policy maintenance-policy-name <i>string</i>
String Length	1 to 255
Configurable	True
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

revert-timer (*number* | *keyword*)

Description	<p>Revert timer for the segment-list.</p> <p>Timer till a revert to primary/best path after it is recovered from a failure. In case of uncolored te-policy, applies to primary segment-list and in case of colored te-policy applies to best candidate path.</p> <p>The default is 0 seconds.</p>
Context	network-instance name <i>string</i> maintenance-policies policy maintenance-policy-name <i>string</i> revert-timer (<i>number</i> <i>keyword</i>)
Tree	revert-timer
Range	1 to 4320
Default	disable
Units	seconds
Options	<ul style="list-style-type: none"> • disable
Configurable	True
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

seamless-bfd

Description	When present, this node attempts to setup a seamless BFD session on every segment-list of every SR policy that uses maintenance-policy, but only if that SR policy is a primary or standby (secondary) candidate path. The
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transition of an Sbfd session from up to down is a trigger for rerouting traffic around a failed primary path.

Context	network-instance name <i>string</i> maintenance-policies policy maintenance-policy-name <i>string</i> seamless-bfd
Tree	seamless-bfd
Configurable	True
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

desired-minimum-transmit-interval *number*

Description	The minimum interval between transmission of BFD control packets This value is advertised to the peer, however the actual interval used is specified by taking the maximum of desired-minimum-transmit-interval and the value of the remote required-minimum-receive interval value. This value is specified as an integer number of microseconds.
Context	network-instance name <i>string</i> maintenance-policies policy maintenance-policy-name <i>string</i> seamless-bfd desired-minimum-transmit-interval <i>number</i>
Tree	desired-minimum-transmit-interval
Range	10000 to 100000000
Default	1000000
Units	microseconds
Configurable	True
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

detection-multiplier *number*

Description	The number of packets that must be missed to declare this session as down The detection interval for the BFD session is calculated by multiplying the value of the negotiated transmission interval by this value.
Context	network-instance name <i>string</i> maintenance-policies policy maintenance-policy-name <i>string</i> seamless-bfd detection-multiplier <i>number</i>
Tree	detection-multiplier
Range	3 to 20
Default	3
Configurable	True
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

hold-down-timer (*number* | *keyword*)

Description	Specifies a hold-down timer value when seamless-bfd is enabled The timer is started when the number of S-BFD sessions that are up drops below the threshold. The TE-policy path is not considered to be up again until the hold-down timer has expired and the number of S-BFD sessions that are up equals or exceeds the threshold. A grace period after session down such that sBFD session flaps does not impact active path. The default is 4 seconds.
Context	network-instance name <i>string</i> maintenance-policies policy maintenance-policy-name <i>string</i> seamless-bfd hold-down-timer (<i>number</i> <i>keyword</i>)
Tree	hold-down-timer
Range	1 to 500
Default	4
Units	seconds
Options	<ul style="list-style-type: none"> • disable
Configurable	True
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

mode *keyword*

Description	Specifies requested protection method ecmp-protected is valid for colored te-policies and programs all the valid segment lists and manages their availability using seamless-BFD for each segment list. Switchover between candidate paths is triggered by the node if number of segment-lists up is less than the threshold on the active policy.ecmp-protected is not valid for uncolored sr-policies. linear is valid for uncolored te-policies and triggers fail-over among active segment-lists, primary to standby / secondary.
Context	network-instance name <i>string</i> maintenance-policies policy maintenance-policy-name <i>string</i> seamless-bfd mode <i>keyword</i>
Tree	mode
Default	none
Options	<ul style="list-style-type: none"> • none • ecmp-protected • linear
Configurable	True
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

return-path-label *number*

Description	The MPLS label to be used to by the far-end device to return the BFD message This label is added as the bottom value in the segment routing label stack and will be used by the far-end device to return BFD message to the originator. This value could either be a MPLS label or a binding SID that will be used at the far-end to match an appropriate polciy to return the traffic.
Context	network-instance name <i>string</i> maintenance-policies policy maintenance-policy-name <i>string</i> seamless-bfd return-path-label <i>number</i>
Tree	return-path-label
Configurable	True
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

threshold *number*

Description	Minimum number of up seamless-BFD sessions for up te-policy
Context	network-instance name <i>string</i> maintenance-policies policy maintenance-policy-name <i>string</i> seamless-bfd threshold <i>number</i>
Tree	threshold
Range	1 to 32
Default	1
Configurable	True
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

wait-for-up-timer *number*

Description	Specifies a wait-for-up timer value when seamless-bfd is enabled This timer takes effect if BFD does not come up, or BFD goes from up to down. The timer is started when BFD is first enabled on a segment-list or BFD transitions from up to down. When the timer expires if BFD is not yet come up, then the path is torn down by removing it from the TTM and the PI and the retry timer is started. The default is 4 seconds.
Context	network-instance name <i>string</i> maintenance-policies policy maintenance-policy-name <i>string</i> seamless-bfd wait-for-up-timer <i>number</i>
Tree	wait-for-up-timer
Range	1 to 1800
Default	4

Units	seconds
Configurable	True
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

mpls

Description	Enable the mpls context
Context	network-instance name <i>string</i> mpls
Tree	mpls
Configurable	True
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

icmp-tunneling *boolean*

Description	<p>When enabled, ICMP messages generated by the router acting in the role of a transit LSR are injected in the forward direction of the LSP, to be turned around and sent back to the sender of the IP payload by the egress LER.</p> <p>If a transit LSR receives an MPLS packet that cannot be forwarded (e.g. label TTL has expired, or the egress subinterface MPLS MTU was exceeded) and the MPLS packet has an IP payload, the router will generate an appropriate ICMP error message. When icmp-tunneling is 'false' the ICMP error message is dropped if there is no IP route back to the source in the network-instance that received the MPLS packet.</p>
Context	network-instance name <i>string</i> mpls icmp-tunneling <i>boolean</i>
Tree	icmp-tunneling
Configurable	True
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

static-entry [top-label](#) *number* [preference](#) *number*

Description	Enter the static-entry list instance
Context	network-instance name <i>string</i> mpls static-entry top-label <i>number</i> preference <i>number</i>
Tree	static-entry
Configurable	True
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

top-label *number*

Description	A received MPLS packet, received on any subinterface, matches this static entry if its top label stack entry contains the label value specified by this leaf.
Context	network-instance name <i>string</i> mpls static-entry top-label number preference number
Range	16 to 1048575
Configurable	True
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

preference *number*

Description	For a given top label value the entry with the lowest preference is selected as the active entry
Context	network-instance name <i>string</i> mpls static-entry top-label number preference number
Range	0 to 255
Configurable	True
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

admin-state *keyword*

Description	Used to disable the entire static route and all its next-hops.
Context	network-instance name <i>string</i> mpls static-entry top-label number preference number admin-state <i>keyword</i>
Tree	admin-state
Default	enable
Options	<ul style="list-style-type: none"> • enable • disable
Configurable	True
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

collect-stats *boolean*

Description	When set to true, stats resources are used to count the number of incoming packets matching the top label value of this static MPLS route
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Context	network-instance name <i>string</i> mpls static-entry top-label <i>number</i> preference number collect-stats <i>boolean</i>
Tree	collect-stats
Default	false
Configurable	True
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

installed *boolean*

Description	Indicates whether the MPLS route entry was programmed in the data path.
Context	network-instance name <i>string</i> mpls static-entry top-label <i>number</i> preference number installed <i>boolean</i>
Tree	installed
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

next-hop-group *reference*

Description	Enter the next-hop-group context
Context	network-instance name <i>string</i> mpls static-entry top-label <i>number</i> preference number next-hop-group <i>reference</i>
Tree	next-hop-group
Reference	network-instance name <i>string</i> next-hop-groups <i>group name</i> <i>string</i>
Configurable	True
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

operation *keyword*

Description	The operation to be performed with the top label.
Context	network-instance name <i>string</i> mpls static-entry top-label <i>number</i> preference number operation <i>keyword</i>
Tree	operation
Default	swap
Options	<ul style="list-style-type: none"> • pop • swap
Configurable	True

Platforms 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

resolved-next-hop-group-id *reference*

Description Enter the resolved-next-hop-group-id context

Context [network-instance name](#) *string* [mpls static-entry top-label number preference number resolved-next-hop-group-id reference](#)

Tree [resolved-next-hop-group-id](#)

Reference [network-instance name](#) *string* [route-table next-hop-group index number](#)

Configurable False

Platforms 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

static-label-block *reference*

Description Enter the static-label-block context

Context [network-instance name](#) *string* [mpls static-label-block reference](#)

Tree [static-label-block](#)

Reference [system mpls label-ranges static name](#) *string*

Configurable True

Platforms 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

static-label-block-status *keyword*

Description Status of the label block.
The label block may show as unavailable if there is pending cleanup.

Context [network-instance name](#) *string* [mpls static-label-block-status keyword](#)

Tree [static-label-block-status](#)

Options

- available
- unavailable

Configurable False

Platforms 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

mpls-forwarding

Description Enter the mpls-forwarding context

Context [network-instance name](#) *string* [mpls-forwarding](#)

Tree	mpls-forwarding
Configurable	True
Platforms	Supported on all platforms

forward-received-packets *boolean*

Description	<p>When set to true, MPLS packets received on any subinterface of the network-instance will be forwarded according to the matching ILM entries.</p> <p>When set to false, MPLS packets are discarded if received on any subinterface of the network-instance.</p> <p>In the default network-instance the default is 'true'.</p>
Context	network-instance name <i>string</i> mpls-forwarding forward-received-packets <i>boolean</i>
Tree	forward-received-packets
Configurable	True
Platforms	Supported on all platforms

mtu

Description	Top-level container for configuration and state data related to network-instance MTU
Context	network-instance name <i>string</i> mtu
Tree	mtu
Configurable	True
Platforms	Supported on all platforms

path-mtu-discovery *boolean*

Description	<p>Enables or disables path MTU discovery in this network-instance</p> <p>This is controlled via the kernel <code>ip_no_pmtu_disc</code> option. Path MTU discovery (PMTUD) is a standardized technique in networking for determining the MTU size on the network path between two hosts, usually with the goal of avoiding IP fragmentation.</p> <p>For IPv4 packets, Path MTU discovery works by setting the Don't Fragment (DF) flag bit in the IP headers of outgoing packets. Then, any device along the path whose MTU is smaller than the packet will drop it, and send back an Internet Control Message Protocol (ICMP) Fragmentation Needed (Type 3, Code 4) message containing its MTU, allowing the source host to reduce</p>
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its Path MTU appropriately. The process is repeated until the MTU is small enough to traverse the entire path without fragmentation.

Context	network-instance name <i>string</i> mtu path-mtu-discovery <i>boolean</i>
Tree	path-mtu-discovery
Default	true
Configurable	True
Platforms	Supported on all platforms

multicast-forwarding-information-base

Description	Enter the multicast-forwarding-information-base context
Context	network-instance name <i>string</i> multicast-forwarding-information-base
Tree	multicast-forwarding-information-base
Configurable	False
Platforms	Supported on all platforms

multicast-route [source](#) (*ipv4-address* | *ipv6-address*) [group](#) (*ipv4-address* | *ipv6-address*)

Description	List of all the MFIB entries in the instance
Context	network-instance name <i>string</i> multicast-forwarding-information-base multicast-route source (<i>ipv4-address</i> <i>ipv6-address</i>) group (<i>ipv4-address</i> <i>ipv6-address</i>)
Tree	multicast-route
Configurable	False
Platforms	Supported on all platforms

[source](#) (*ipv4-address* | *ipv6-address*)

Description	Source IP address of the MFIB entry
Context	network-instance name <i>string</i> multicast-forwarding-information-base multicast-route source (<i>ipv4-address</i> <i>ipv6-address</i>) group (<i>ipv4-address</i> <i>ipv6-address</i>)
Configurable	False
Platforms	Supported on all platforms

group (*ipv4-address* | *ipv6-address*)

Description	Multicast group address of the MFIB entry
Context	network-instance name <i>string</i> multicast-forwarding-information-base multicast-route source (<i>ipv4-address</i> <i>ipv6-address</i>) group (<i>ipv4-address</i> <i>ipv6-address</i>)
Configurable	False
Platforms	Supported on all platforms

last-update *string*

Description	Last update of this MFIB entry
Context	network-instance name <i>string</i> multicast-forwarding-information-base multicast-route source (<i>ipv4-address</i> <i>ipv6-address</i>) group (<i>ipv4-address</i> <i>ipv6-address</i>) last-update <i>string</i>
Tree	last-update
String Length	20 to 32
Configurable	False
Platforms	Supported on all platforms

outgoing-interface *index number*

Description	List of the outgoing interfaces for this MFIB entry
Context	network-instance name <i>string</i> multicast-forwarding-information-base multicast-route source (<i>ipv4-address</i> <i>ipv6-address</i>) group (<i>ipv4-address</i> <i>ipv6-address</i>) outgoing-interface <i>index number</i>
Tree	outgoing-interface
Configurable	False
Platforms	Supported on all platforms

index number

Description	network instance allocated sub interface index
Context	network-instance name <i>string</i> multicast-forwarding-information-base multicast-route source (<i>ipv4-address</i> <i>ipv6-address</i>) group (<i>ipv4-address</i> <i>ipv6-address</i>) outgoing-interface <i>index number</i>
Configurable	False
Platforms	Supported on all platforms

forward *boolean*

Description	Whether the outgoing interface is in forwarding state
Context	network-instance name <i>string</i> multicast-forwarding-information-base multicast-route source (<i>ipv4-address</i> <i>ipv6-address</i>) group (<i>ipv4-address</i> <i>ipv6-address</i>) outgoing-interface index <i>number</i> forward <i>boolean</i>
Tree	forward
Configurable	False
Platforms	Supported on all platforms

outgoing-next-hop-group [index](#) *number*

Description	List of the outgoing tunnel next-hop-groups associated with this MFIB entry
Context	network-instance name <i>string</i> multicast-forwarding-information-base multicast-route source (<i>ipv4-address</i> <i>ipv6-address</i>) group (<i>ipv4-address</i> <i>ipv6-address</i>) outgoing-next-hop-group index <i>number</i>
Tree	outgoing-next-hop-group
Configurable	False
Platforms	Supported on all platforms

index *number*

Description	Next-hop-group allocated index
Context	network-instance name <i>string</i> multicast-forwarding-information-base multicast-route source (<i>ipv4-address</i> <i>ipv6-address</i>) group (<i>ipv4-address</i> <i>ipv6-address</i>) outgoing-next-hop-group index <i>number</i>
Configurable	False
Platforms	Supported on all platforms

forward *boolean*

Description	Whether the outgoing next-hop-group is in forwarding state
Context	network-instance name <i>string</i> multicast-forwarding-information-base multicast-route source (<i>ipv4-address</i> <i>ipv6-address</i>) group (<i>ipv4-address</i> <i>ipv6-address</i>) outgoing-next-hop-group index <i>number</i> forward <i>boolean</i>
Tree	forward
Configurable	False
Platforms	Supported on all platforms

next-hop-groups

Description	Enable the next-hop-groups context
Context	network-instance name <i>string</i> next-hop-groups
Tree	next-hop-groups
Configurable	True
Platforms	Supported on all platforms

group name *string*

Description	Specifies the next hop group.
Context	network-instance name <i>string</i> next-hop-groups group name <i>string</i>
Tree	group
Configurable	True
Platforms	Supported on all platforms

name *string*

Description	Specifies the next hop group name
Context	network-instance name <i>string</i> next-hop-groups group name <i>string</i>
String Length	1 to 255
Configurable	True
Platforms	Supported on all platforms

admin-state *keyword*

Description	Administratively enable or disable this next-hop-group.
Context	network-instance name <i>string</i> next-hop-groups group name <i>string</i> admin-state <i>keyword</i>
Tree	admin-state
Default	enable
Options	<ul style="list-style-type: none"> • enable • disable
Configurable	True
Platforms	Supported on all platforms

blackhole

Description	Enable the blackhole context
Context	network-instance name <i>string</i> next-hop-groups group name <i>string</i> blackhole
Tree	blackhole
Configurable	True
Platforms	Supported on all platforms

generate-icmp *boolean*

Description	When set to true the router generates ICMP unreachable messages for the dropped packets
Context	network-instance name <i>string</i> next-hop-groups group name <i>string</i> blackhole generate-icmp <i>boolean</i>
Tree	generate-icmp
Default	false
Configurable	True
Platforms	Supported on all platforms

nexthop [index](#) *number*

Description	Enter the nexthop list instance
Context	network-instance name <i>string</i> next-hop-groups group name <i>string</i> nexthop index <i>number</i>
Tree	nexthop
Configurable	True
Platforms	Supported on all platforms
Max. Elements	128

index *number*

Description	Numerical index of the next-hop member
Context	network-instance name <i>string</i> next-hop-groups group name <i>string</i> nexthop index <i>number</i>
Configurable	True
Platforms	Supported on all platforms

admin-state *keyword*

Description	Administratively enable or disable this next-hop.
Context	network-instance name <i>string</i> next-hop-groups group name <i>string</i> nexthop index <i>number</i> admin-state <i>keyword</i>
Tree	admin-state
Default	enable
Options	<ul style="list-style-type: none"> • enable • disable
Configurable	True
Platforms	Supported on all platforms

encapsulate-header *keyword*

Description	When forwarding a packet to the specified next-hop the local system performs an encapsulation of the packet, adding the specified header type
Context	network-instance name <i>string</i> next-hop-groups group name <i>string</i> nexthop index <i>number</i> encapsulate-header <i>keyword</i>
Tree	encapsulate-header
Options	<ul style="list-style-type: none"> • gre <p>The encapsulation header is a Generic Routing Encapsulation header</p>
Configurable	True
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

failure-detection

Description	Enter the failure-detection context
Context	network-instance name <i>string</i> next-hop-groups group name <i>string</i> nexthop index <i>number</i> failure-detection
Tree	failure-detection
Configurable	True
Platforms	Supported on all platforms

enable-bfd

Description	Enable the enable-bfd context
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Context	network-instance name <i>string</i> next-hop-groups group name <i>string</i> nexthop index <i>number</i> failure-detection enable-bfd
Tree	enable-bfd
Configurable	True
Platforms	Supported on all platforms

local-address (*ipv4-address* | *ipv6-address*)

Description	The local address to be used for the associated BFD session
Context	network-instance name <i>string</i> next-hop-groups group name <i>string</i> nexthop index <i>number</i> failure-detection enable-bfd local-address (<i>ipv4-address</i> <i>ipv6-address</i>)
Tree	local-address
Configurable	True
Platforms	Supported on all platforms

local-discriminator *number*

Description	The local discriminator to be used for the associated BFD session
Context	network-instance name <i>string</i> next-hop-groups group name <i>string</i> nexthop index <i>number</i> failure-detection enable-bfd local-discriminator <i>number</i>
Tree	local-discriminator
Range	1 to 16384
Configurable	True
Platforms	Supported on all platforms

remote-discriminator *number*

Description	The remote discriminator to be used for the associated BFD session
Context	network-instance name <i>string</i> next-hop-groups group name <i>string</i> nexthop index <i>number</i> failure-detection enable-bfd remote-discriminator <i>number</i>
Tree	remote-discriminator
Range	1 to 16384
Configurable	True
Platforms	Supported on all platforms

gre

Description	Parameters relating to GRE encapsulation
Context	network-instance name <i>string</i> next-hop-groups group name <i>string</i> nexthop index <i>number</i> gre
Tree	gre
Configurable	True
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

destination-ip (*ipv4-address-unicast* | *ipv6-address-unicast*)

Description	Destination IP address to use for the encapsulated packet.
Context	network-instance name <i>string</i> next-hop-groups group name <i>string</i> nexthop index <i>number</i> gre destination-ip (<i>ipv4-address-unicast</i> <i>ipv6-address-unicast</i>)
Tree	destination-ip
Configurable	True
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

source-ip (*ipv4-address-unicast* | *ipv6-address-unicast*)

Description	Source IP address to use for the encapsulated packet.
Context	network-instance name <i>string</i> next-hop-groups group name <i>string</i> nexthop index <i>number</i> gre source-ip (<i>ipv4-address-unicast</i> <i>ipv6-address-unicast</i>)
Tree	source-ip
Configurable	True
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

ip-address (*ipv4-address-with-zone* | *ipv6-address-with-zone*)

Description	The next-hop IPv4 or IPv6 address If the IPv6 address is a link-local address then the zoned format must be used
Context	network-instance name <i>string</i> next-hop-groups group name <i>string</i> nexthop index <i>number</i> ip-address (<i>ipv4-address-with-zone</i> <i>ipv6-address-with-zone</i>)
Tree	ip-address
Configurable	True

Platforms Supported on all platforms

pushed-mpls-label-stack (*number* | *keyword*)

Description A list of MPLS labels to push onto the packet when forwarding to this particular next-hop
Default is none/empty. Pushing an MPLS label stack is not supported unless the resolve flag is set to false.

Context [network-instance name](#) *string* [next-hop-groups group name](#) *string* [nexthop index](#) *number* [pushed-mpls-label-stack](#) (*number* | *keyword*)

Tree [pushed-mpls-label-stack](#)

Range 16 to 1048575

Options

- IPV4_EXPLICIT_NULL
- IPV6_EXPLICIT_NULL
- IMPLICIT_NULL

Configurable True

Platforms 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

Max. Elements 1

resolve *boolean*

Description When set to true, the router is allowed to use any route to resolve the nexthop address to an outgoing interface
When set to false the router is only allowed to use a local route to resolve the next-hop address.

Context [network-instance name](#) *string* [next-hop-groups group name](#) *string* [nexthop index](#) *number* [resolve](#) *boolean*

Tree [resolve](#)

Default true

Configurable True

Platforms Supported on all platforms

oper-down-reason *keyword*

Description The reason the network-instance is down

Context [network-instance name](#) *string* [oper-down-reason](#) *keyword*

Tree [oper-down-reason](#)

Options	<ul style="list-style-type: none"> • admin-down • no-mcid
Configurable	False
Platforms	Supported on all platforms

oper-mac-vrf-mtu *number*

Description	<p>Operational I2-mtu of the mac-vrf network-instance. Calculated as the lowest I2-mtu of the bridged subinterfaces associated to the mac-vrf, minus the vlan tags associated to that subinterface (lowest mtu subinterface).</p> <p>When the mac-vrf has an associated irb subinterface, if the configured irb ip-mtu exceeds the oper-mac-vrf-mtu minus 14 bytes (Ethernet header), then the irb subinterface will remain operationally down.</p> <p>The oper-mac-vrf-mtu is only available in mac-vrf network-instances.</p>
Context	network-instance name <i>string</i> oper-mac-vrf-mtu <i>number</i>
Tree	oper-mac-vrf-mtu
Range	1492 to 9500
Units	bytes
Configurable	False
Platforms	Supported on all platforms

oper-state *keyword*

Description	This leaf contains the operational state of the network instance.
Context	network-instance name <i>string</i> oper-state <i>keyword</i>
Tree	oper-state
Options	<ul style="list-style-type: none"> • up Component or process is operational • down Component or process is not operational • empty Component slot is empty • downloading Component is downloading image into memory • booting Component is booting downloaded image

- starting
Component image operational, application processes starting
- failed
Component or process has failed
- synchronizing
Component is currently being synchronized
- upgrading
Component is currently being upgraded
- low-power
Component is offline due to insufficient system power
- degraded
Component or process is in a degraded state
- warm-reboot
Component or process is currently warm rebooting
This state is set during a warm reboot immediately following initiation of the reboot, continuing after startup until the system has completed audit. In this state the system will not accept configuration changes.
- waiting
Component or process is currently waiting
This state can be set by event handler when the `reinvoke-with-delay` action is used, and indicates that the event handler is waiting for the provided delay before reinvoking the instance.

Configurable

False

Platforms

Supported on all platforms

policy-forwarding

Description

Configuration and operational state relating to policy-forwarding within a network instance.

Context[network-instance name](#) *string* [policy-forwarding](#)**Tree**[policy-forwarding](#)**Configurable**

True

Platforms

7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

interface [subinterface](#) *string*

Description

List of subinterfaces that use the policy forwarding policy.

Context	network-instance name <i>string</i> policy-forwarding interface subinterface <i>string</i>
Tree	interface
Configurable	True
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

subinterface *string*

Description	Name of the subinterface.
Context	network-instance name <i>string</i> policy-forwarding interface subinterface <i>string</i>
String Length	1 to 255
Configurable	True
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

apply-forwarding-policy *reference*

Description	The policy to be applied on the interface. Packets ingress on the referenced interface should be compared to the match criteria within the specified policy, and in the case that these criteria are met, the forwarding actions specified applied.
Context	network-instance name <i>string</i> policy-forwarding interface subinterface <i>string</i> apply-forwarding-policy <i>reference</i>
Tree	apply-forwarding-policy
Reference	network-instance name <i>string</i> policy-forwarding policy <i>policy-id</i> <i>string</i>
Configurable	True
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

interface-ref

Description	Reference to a subinterface
Context	network-instance name <i>string</i> policy-forwarding interface subinterface <i>string</i> interface-ref
Tree	interface-ref
Configurable	True
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

interface reference

Description	Reference to a base interface, for example a port or LAG
Context	network-instance name <i>string</i> policy-forwarding interface subinterface <i>string</i> interface-ref interface <i>reference</i>
Tree	interface
Reference	interface name <i>string</i>
Configurable	True
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

subinterface reference

Description	Reference to a subinterface This requires the base interface to be specified using the interface leaf in this container.
Context	network-instance name <i>string</i> policy-forwarding interface subinterface <i>string</i> interface-ref subinterface <i>reference</i>
Tree	subinterface
Reference	interface name <i>string</i> subinterface index <i>number</i>
Configurable	True
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

policy [policy-id](#) *string*

Description	A forwarding policy is defined to have a set of match criteria, allowing particular fields of a packet's header to be matched, and a set of forwarding actions which determines how the local system should forward the packet.
Context	network-instance name <i>string</i> policy-forwarding policy policy-id <i>string</i>
Tree	policy
Configurable	True
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b
Max. Elements	4

policy-id *string*

Description	A unique name identifying the forwarding policy. This name is used when applying the policy to a particular interface.
Context	network-instance name <i>string</i> policy-forwarding policy policy-id <i>string</i>
String Length	1 to 255
Configurable	True
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

description *string*

Description	Description string for the policy
Context	network-instance name <i>string</i> policy-forwarding policy policy-id <i>string</i> description <i>string</i>
Tree	description
String Length	1 to 255
Configurable	True
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

rule [sequence-id](#) *number*

Description	List of policy forwarding rules.
Context	network-instance name <i>string</i> policy-forwarding policy policy-id <i>string</i> rule sequence-id <i>number</i>
Tree	rule
Configurable	True
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

sequence-id *number*

Description	A number to indicate the relative evaluation order of the different entries; lower numbered entries are evaluated before higher numbered entries
Context	network-instance name <i>string</i> policy-forwarding policy policy-id <i>string</i> rule sequence-id <i>number</i>
Range	0 to 128
Configurable	True
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

action

Description	Container for the actions to be applied to packets matching the policy forwarding rule.
Context	network-instance name <i>string</i> policy-forwarding policy policy-id <i>string</i> rule sequence-id <i>number</i> action
Tree	action
Configurable	True
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

encapsulate-gre

Description	Container for the GRE encapsulation actions to be applied to packets matching the policy forwarding rule.
Context	network-instance name <i>string</i> policy-forwarding policy policy-id <i>string</i> rule sequence-id <i>number</i> action encapsulate-gre
Tree	encapsulate-gre
Configurable	True
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

target id *string*

Description	Identifier for the GRE target group. Each target specified within this list should be treated as a endpoint to which packets should be GRE encapsulated. Where the set of destinations described within a single entry expands to more than one destination IP address, packets should be load shared across the destination using the local system's ECMP hashing mechanisms.
Context	network-instance name <i>string</i> policy-forwarding policy policy-id <i>string</i> rule sequence-id <i>number</i> action encapsulate-gre target id <i>string</i>
Tree	target
Configurable	True
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b
Max. Elements	4

id *string*

Description	A unique identifier for the target.
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Context	network-instance name <i>string</i> policy-forwarding policy policy-id <i>string</i> rule sequence-id <i>number</i> action encapsulate-gre target id <i>string</i>
Configurable	True
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

destination (*ipv4-prefix* | *ipv6-prefix*)

Description	The set of destination addresses that should be encapsulated towards. Where a subnet is specified, each address within the subnet should be treated as an independent destination for encapsulated traffic. Packets should be distributed with ECMP across the set of tunnel destination addresses.
Context	network-instance name <i>string</i> policy-forwarding policy policy-id <i>string</i> rule sequence-id <i>number</i> action encapsulate-gre target id <i>string</i> destination (<i>ipv4-prefix</i> <i>ipv6-prefix</i>)
Tree	destination
Configurable	True
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

ip-ttl *number*

Description	The TTL that should be specified in the IP header of the GRE packet encapsulating the packet matching the rule.
Context	network-instance name <i>string</i> policy-forwarding policy policy-id <i>string</i> rule sequence-id <i>number</i> action encapsulate-gre target id <i>string</i> ip-ttl <i>number</i>
Tree	ip-ttl
Configurable	True
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

source (*ipv4-address* | *ipv6-address*)

Description	The source IP address that should be used when encapsulating packets from the local system.
Context	network-instance name <i>string</i> policy-forwarding policy policy-id <i>string</i> rule sequence-id <i>number</i> action encapsulate-gre target id <i>string</i> source (<i>ipv4-address</i> <i>ipv6-address</i>)
Tree	source
Configurable	True
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

network-instance *reference*

Description	When this leaf is set, packets matching the match criteria for the forwarding rule should be looked up in the network-instance that is referenced rather than the network-instance with which the interface is associated.
Context	network-instance name <i>string</i> policy-forwarding policy policy-id <i>string</i> rule sequence-id <i>number</i> action network-instance <i>reference</i>
Tree	network-instance
Reference	network-instance name <i>string</i>
Configurable	True
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

description *string*

Description	Description string for the rule
Context	network-instance name <i>string</i> policy-forwarding policy policy-id <i>string</i> rule sequence-id <i>number</i> description <i>string</i>
Tree	description
String Length	1 to 255
Configurable	True
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

match

Description	Container for the conditions that determine whether a packet matches this entry
Context	network-instance name <i>string</i> policy-forwarding policy policy-id <i>string</i> rule sequence-id <i>number</i> match
Tree	match
Configurable	True
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

ipv4

Description	Container for match conditions associated with IPv4 header fields If no match conditions are provided then no IPv4 packets are matched.
Context	network-instance name <i>string</i> policy-forwarding policy policy-id <i>string</i> rule sequence-id <i>number</i> match ipv4

Tree	ipv4
Configurable	True
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

destination-ip

Description	Packet matching criteria based on destination IPv4 address
Context	network-instance name <i>string</i> policy-forwarding policy policy-id <i>string</i> rule sequence-id <i>number</i> match ipv4 destination-ip
Tree	destination-ip
Configurable	True
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

prefix *string*

Description	Match a packet if its destination IP address is within the specified IPv4 prefix.
Context	network-instance name <i>string</i> policy-forwarding policy policy-id <i>string</i> rule sequence-id <i>number</i> match ipv4 destination-ip prefix <i>string</i>
Tree	prefix
Configurable	True
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

dscp-set (*number* | *keyword*)

Description	A list of DSCP values to be matched for incoming packets. An OR match should be performed, such that a packet must match one of the values defined in this list. If the field is left empty then any DSCP value matches.
Context	network-instance name <i>string</i> policy-forwarding policy policy-id <i>string</i> rule sequence-id <i>number</i> match ipv4 dscp-set (<i>number</i> <i>keyword</i>)
Tree	dscp-set
Range	0 to 63
Options	<ul style="list-style-type: none"> • CS0 • LE • CS1 • AF11 • AF12 • AF13

- CS2
- AF21
- AF22
- AF23
- CS3
- AF31
- AF32
- AF33
- CS4
- AF41
- AF42
- AF43
- CS5
- EF
- CS6
- CS7

Configurable

True

Platforms

7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

protocol (*number* | *keyword*)**Description**

An IPv4 packet matches this condition if its IP protocol type field matches the specified value

Context

[network-instance name](#) [string](#) [policy-forwarding policy](#) [policy-id](#) [string](#) [rule sequence-id](#) [number](#) [match ipv4 protocol](#) (*number* | *keyword*)

Tree[protocol](#)**Range**

0 to 255

Options

- [ipv6-hop](#)
IPv6 hop-by-hop option
- [icmp](#)
Internet Control Message Protocol
- [igmp](#)
Internet Group Management Protocol
- [gpp](#)
Gateway-to-Gateway Protocol
- [ipv4](#)
IPv4 encapsulation

- st
Stream Protocol
- tcp
Transmission Control Protocol
- egp
Exterior Gateway Protocol
- igp
Interior Gateway Protocol
- udp
User Datagram Protocol
- ipv6
IPv6 encapsulation
- idrp
Inter-Domain Routing Protocol
- rsvp
Resource Reservation Protocol
- gre
Generic Routing Encapsulation
- esp
IPSec Encapsulating Security Payload
- ah
IPSec Authentication Header
- icmp6
IPSec Authentication Header
- no-next-hdr
No Next Header for IPv6
- ipv6-dest-opts
Destination Options for IPv6
- eigrp
Cisco EIGRP
- ospf
OSPFv2 and OSPFv3
- pim
Protocol Independent Multicast
- vrrp
Virtual Router Redundancy Protocol

- l2tp
Layer Two Tunneling Protocol
- sctp
Stream Control Transmission Protocol
- mpls-in-ip
MPLS Encapsulation inside IP
- rohc
Robust Header Compression

Configurable	True
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

source-ip

Description	Packet matching criteria based on source IPv4 address
Context	network-instance name <i>string</i> policy-forwarding policy policy-id <i>string</i> rule sequence-id <i>number</i> match ipv4 source-ip
Tree	source-ip
Configurable	True
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

prefix *string*

Description	Match a packet if its source IP address is within the specified IPv4 prefix.
Context	network-instance name <i>string</i> policy-forwarding policy policy-id <i>string</i> rule sequence-id <i>number</i> match ipv4 source-ip prefix <i>string</i>
Tree	prefix
Configurable	True
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

ipv6

Description	Container for match conditions associated with IPv6 header fields If no match conditions are provided then no IPv6 packets are matched.
Context	network-instance name <i>string</i> policy-forwarding policy policy-id <i>string</i> rule sequence-id <i>number</i> match ipv6
Tree	ipv6
Configurable	True

Platforms 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

dscp-set (*number* | *keyword*)

Description A list of DSCP values to be matched for incoming packets. An OR match should be performed, such that a packet must match one of the values defined in this list. If the field is left empty then any DSCP value matches.

Context [network-instance name](#) *string* [policy-forwarding policy](#) *policy-id* *string* [rule sequence-id](#) *number* [match ipv6 dscp-set](#) (*number* | *keyword*)

Tree [dscp-set](#)

Range 0 to 63

Options

- CS0
- LE
- CS1
- AF11
- AF12
- AF13
- CS2
- AF21
- AF22
- AF23
- CS3
- AF31
- AF32
- AF33
- CS4
- AF41
- AF42
- AF43
- CS5
- EF
- CS6
- CS7

Configurable True

Platforms 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

next-header (*number* | *keyword*)

Description	An IPv6 packet matches this condition if its Next-Header type field matches the specified value
Context	network-instance name <i>string</i> policy-forwarding policy policy-id <i>string</i> rule sequence-id <i>number</i> match ipv6 next-header (<i>number</i> <i>keyword</i>)
Tree	next-header
Range	0 to 255
Options	<ul style="list-style-type: none">• <code>ipv6-hop</code> IPv6 hop-by-hop option• <code>icmp</code> Internet Control Message Protocol• <code>igmp</code> Internet Group Management Protocol• <code>ggp</code> Gateway-to-Gateway Protocol• <code>ipv4</code> IPv4 encapsulation• <code>st</code> Stream Protocol• <code>tcp</code> Transmission Control Protocol• <code>egp</code> Exterior Gateway Protocol• <code>igp</code> Interior Gateway Protocol• <code>udp</code> User Datagram Protocol• <code>ipv6</code> IPv6 encapsulation• <code>idrp</code> Inter-Domain Routing Protocol• <code>rsvp</code> Resource Reservation Protocol• <code>gre</code> Generic Routing Encapsulation

- esp
IPSec Encapsulating Security Payload
- ah
IPSec Authentication Header
- icmp6
IPSec Authentication Header
- no-next-hdr
No Next Header for IPv6
- ipv6-dest-opts
Destination Options for IPv6
- eigrp
Cisco EIGRP
- ospf
OSPFv2 and OSPFv3
- pim
Protocol Independent Multicast
- vrrp
Virtual Router Redundancy Protocol
- l2tp
Layer Two Tunneling Protocol
- sctp
Stream Control Transmission Protocol
- mpls-in-ip
MPLS Encapsulation inside IP
- rohc
Robust Header Compression

Configurable

True

Platforms

7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

source-ip**Description**

Packet matching criteria based on source IPv6 address

Context[network-instance name](#) *string* [policy-forwarding policy](#) [policy-id](#) *string* [rule sequence-id](#) *number* [match ipv6 source-ip](#)**Tree**[source-ip](#)**Configurable**

True

Platforms 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

prefix string

Description Match a packet if its source IP address is within the specified IPv6 prefix.

Context [network-instance name string](#) [policy-forwarding policy policy-id string rule sequence-id number match ipv6 source-ip prefix string](#)

Tree [prefix](#)

Configurable True

Platforms 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

tcam-entries

Description Information about the TCAM entries used to implement the policy forwarding rule

Context [network-instance name string](#) [policy-forwarding policy policy-id string rule sequence-id number tcam-entries](#)

Tree [tcam-entries](#)

Configurable False

Platforms 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

forwarding-complex complex-identifier string

Description List of forwarding complexes in the system

Context [network-instance name string](#) [policy-forwarding policy policy-id string rule sequence-id number tcam-entries forwarding-complex complex-identifier string](#)

Tree [forwarding-complex](#)

Configurable False

Platforms 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

complex-identifier string

Description A forwarding complex in the format (slot-number,complex-number).

Context [network-instance name string](#) [policy-forwarding policy policy-id string rule sequence-id number tcam-entries forwarding-complex complex-identifier string](#)

Configurable False

Platforms 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

tcam-entries *number*

Description The number of TCAM entries required to implement this rule.

Context [network-instance name](#) *string* [policy-forwarding policy](#) [policy-id](#) *string* [rule sequence-id](#) *number* [tcam-entries forwarding-complex](#) [complex-identifier](#) *string* [tcam-entries](#) *number*

Tree [tcam-entries](#)

Configurable False

Platforms 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

type *keyword*

Description The type of the policy

Context [network-instance name](#) *string* [policy-forwarding policy](#) [policy-id](#) *string* [type](#) *keyword*

Tree [type](#)

Default vrf-selection-policy

Options

- pbr-policy
The policy reflects a policy-based routing policy that supports generic PBR actions.
- vrf-selection-policy
The policy is used only to classify incoming packets into corresponding network instances.

Configurable True

Platforms 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

protocols

Description The routing protocols that are enabled for this network-instance.

Context [network-instance name](#) *string* [protocols](#)

Tree [protocols](#)

Configurable True

Platforms Supported on all platforms

bgp

Description	Enable the bgp context
Context	network-instance name <i>string</i> protocols bgp
Tree	bgp
Configurable	True
Platforms	Supported on all platforms

admin-state *keyword*

Description	Administratively enable or disable the entire BGP instance Disable causes all BGP sessions to be taken down immediately, even if admin-state at the group or neighbor level of some of these sessions is still set as enable.
Context	network-instance name <i>string</i> protocols bgp admin-state <i>keyword</i>
Tree	admin-state
Default	enable
Options	<ul style="list-style-type: none"> • enable • disable
Configurable	True
Platforms	Supported on all platforms

afi-safi [afi-safi-name](#) *identityref*

Description	List of address families supported by the BGP instance
Context	network-instance name <i>string</i> protocols bgp afi-safi afi-safi-name <i>identityref</i>
Tree	afi-safi
Configurable	True
Platforms	Supported on all platforms

afi-safi-name *identityref*

Description	The name of a BGP address family, which translates to a specific AFI value and a specific SAFI value
Context	network-instance name <i>string</i> protocols bgp afi-safi afi-safi-name <i>identityref</i>
Options	<ul style="list-style-type: none"> • ipv4-unicast

- Unlabeled IPv4 unicast routes (AFI = 1, SAFI = 1)
- ipv6-unicast
 - Unlabeled IPv6 unicast routes (AFI = 2, SAFI = 1)
- l3vpn-ipv4-unicast
 - VPN-IPv4 unicast address family (AFI = 1, SAFI = 128)
- l3vpn-ipv6-unicast
 - VPN-IPv6 unicast address family (AFI = 2, SAFI = 128)
- ipv4-labeled-unicast
 - Labeled IPv4 unicast routes (AFI 1, SAFI 4)
- ipv6-labeled-unicast
 - Labeled IPv6 unicast routes (AFI 2, SAFI 4)
- evpn
 - EVPN routes (AFI = 25, SAFI = 70)
- route-target
 - Route target constraint routes (AFI 1, SAFI 132)
- sr-policy-ipv4
 - SR-TE Policy (AFI 1, SAFI 73)
- sr-policy-ipv6
 - SR-TE Policy (AFI 2, SAFI 73)

Configurable	True
Platforms	Supported on all platforms

active-routes *number*

Description	The total number of routes belonging to this AFI/SAFI that are installed and used, being best routes
Context	network-instance name <i>string</i> protocols bgp afi-safi afi-safi-name identityref active-routes <i>number</i>
Tree	active-routes
Default	0
Configurable	False
Platforms	Supported on all platforms

add-paths

Description	Configure support for the advertisement and receipt of multiple paths for the AFI/SAFI
--------------------	--

Context	network-instance name <i>string</i> protocols bgp afi-safi afi-safi-name identityref add-paths
Tree	add-paths
Configurable	True
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

receive *boolean*

Description	Enable capability negotiation to receive multiple path advertisements from a single peer for a single NLRI belonging to the AFI/SAFI
Context	network-instance name <i>string</i> protocols bgp afi-safi afi-safi-name identityref add-paths receive <i>boolean</i>
Tree	receive
Configurable	True
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

send *boolean*

Description	Enable capability negotiation to send multiple path advertisements to a single peer for a single NLRI belonging to the AFI/SAFI
Context	network-instance name <i>string</i> protocols bgp afi-safi afi-safi-name identityref add-paths send <i>boolean</i>
Tree	send
Configurable	True
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

send-max *number*

Description	Send the N best paths for a single NLRI, or as many as possible until there are no more valid paths to send. This ensures the best path is advertised but does not limit the additional paths to being 'used' paths.
Context	network-instance name <i>string</i> protocols bgp afi-safi afi-safi-name identityref add-paths send-max <i>number</i>

Tree	send-max
Range	1 to 16
Configurable	True
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

send-multipath

Description	Send the used paths for a single NLRI, including all paths that are multipaths.
Context	network-instance name <i>string</i> protocols bgp afi-safi afi-safi-name identityref add-paths send-multipath
Tree	send-multipath
Configurable	True
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

admin-state *keyword*

Description	This leaf indicates whether the AFI-SAFI is enabled for the instance
Context	network-instance name <i>string</i> protocols bgp afi-safi afi-safi-name identityref admin-state keyword
Tree	admin-state
Default	disable
Options	<ul style="list-style-type: none"> • enable • disable
Configurable	True
Platforms	Supported on all platforms

evpn

Description	Options related to the EVPN address family
Context	network-instance name <i>string</i> protocols bgp afi-safi afi-safi-name identityref evpn
Tree	evpn
Configurable	True

Platforms Supported on all platforms

advertise-ipv6-next-hops *boolean*

Description Enables advertisement of EVPN routes with IPv6 next-hops to peers
If this is set to true and the local-address used towards the peer is an IPv6 address and BGP is supposed to apply next-hop-self then the route is advertised with the IPv6 local-address as the BGP next-hop. If this is set to false, then the EVPN route is advertised with an IPv4 next-hop.

Context [network-instance name](#) *string* [protocols bgp afi-safi](#) [afi-safi-name](#) [identityref evpn advertise-ipv6-next-hops](#) *boolean*

Tree [advertise-ipv6-next-hops](#)

Default false

Configurable True

Platforms Supported on all platforms

default-received-encapsulation *keyword*

Description Indicates the encapsulation considered when the routes are received without BGP encapsulation extended community
Most EVPN routes are usually received with a BGP encapsulation extended community that indicates the encapsulation and therefore how to interpret the value in the received Label fields of the routes. If no encapsulation is received, BGP will validate the route as MPLS or VXLAN or SRv6 depending on how this command is configured.

Context [network-instance name](#) *string* [protocols bgp afi-safi](#) [afi-safi-name](#) [identityref evpn default-received-encapsulation](#) *keyword*

Tree [default-received-encapsulation](#)

Default vxlan

Options

- vxlan
- mpls

Configurable True

Platforms 7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

inter-as-vpn *boolean*

Description	When set to true, received EVPN routes that are not imported by any network-instance are retained in the BGP RIB and considered 'used' so that they can be propagated to any EBGP or IBGP peer. This command supersedes the effect of keep-all-routes.
Context	network-instance name <i>string</i> protocols bgp afi-safi afi-safi-name identityref evpn inter-as-vpn <i>boolean</i>
Tree	inter-as-vpn
Default	false
Configurable	True
Platforms	Supported on all platforms

keep-all-routes *boolean*

Description	When this is set to true all received EVPN routes are retained in the RIB-IN, even those not imported by any network-instance; these routes display as 'rejected' and cannot be propagated to other peers. When this is false, EVPN routes that are not imported by any network-instance are dropped and not retained in the BGP RIB-IN; policy changes affecting received EVPN routes will trigger the sending of ROUTE_REFRESH messages towards all EVPN family peers.
Context	network-instance name <i>string</i> protocols bgp afi-safi afi-safi-name identityref evpn keep-all-routes <i>boolean</i>
Tree	keep-all-routes
Default	false
Configurable	True
Platforms	Supported on all platforms

next-hop-resolution

Description	Options for controlling next-hop resolution procedures
Context	network-instance name <i>string</i> protocols bgp afi-safi afi-safi-name identityref evpn next-hop-resolution
Tree	next-hop-resolution
Configurable	True
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

ipv4-next-hops

Description	Options related to the resolution of BGP next-hops that are IPv4 addresses
Context	network-instance name <i>string</i> protocols bgp afi-safi afi-safi-name identityref evpn next-hop-resolution ipv4-next-hops
Tree	ipv4-next-hops
Configurable	True
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

route-resolution

Description	Options related to resolution using IP routes in the FIB
Context	network-instance name <i>string</i> protocols bgp afi-safi afi-safi-name identityref evpn next-hop-resolution ipv4-next-hops route-resolution
Tree	route-resolution
Configurable	True
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

admin-state *keyword*

Description	Enable or disable route resolution if no resolving tunnel is found
Context	network-instance name <i>string</i> protocols bgp afi-safi afi-safi-name identityref evpn next-hop-resolution ipv4-next-hops route-resolution admin-state <i>keyword</i>
Tree	admin-state
Default	enable
Options	<ul style="list-style-type: none"> • enable • disable
Configurable	True
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

ignore-default-routes *boolean*

Description	Ignore default routes, regardless of route type
Context	network-instance name <i>string</i> protocols bgp afi-safi afi-safi-name <i>identityref</i> evpn next-hop-resolution ipv4-next-hops route-resolution ignore-default-routes <i>boolean</i>
Tree	ignore-default-routes
Default	true
Configurable	True
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

tunnel-resolution

Description	Options related to resolution using tunnels in the tunnel table
Context	network-instance name <i>string</i> protocols bgp afi-safi afi-safi-name <i>identityref</i> evpn next-hop-resolution ipv4-next-hops tunnel-resolution
Tree	tunnel-resolution
Configurable	True
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

allowed-tunnel-types *identityref*

Description	List of allowed tunnel types
Context	network-instance name <i>string</i> protocols bgp afi-safi afi-safi-name <i>identityref</i> evpn next-hop-resolution ipv4-next-hops tunnel-resolution allowed-tunnel-types <i>identityref</i>
Tree	allowed-tunnel-types
Options	<ul style="list-style-type: none"> • bgp-next-hop-resolution-tunnel-type Base type for the types of tunnels that can be used by BGP for next-hop resolution
Configurable	True
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

color-aware

Description	Color-aware next-hop resolution options
Context	network-instance name <i>string</i> protocols bgp afi-safi afi-safi-name identityref evpn next-hop-resolution ipv4-next-hops tunnel-resolution color-aware
Tree	color-aware
Configurable	True
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

ipv6-next-hops

Description	Options related to the resolution of BGP next-hops that are IPv6 addresses
Context	network-instance name <i>string</i> protocols bgp afi-safi afi-safi-name identityref evpn next-hop-resolution ipv6-next-hops
Tree	ipv6-next-hops
Configurable	True
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

route-resolution

Description	Options related to resolution using IP routes in the FIB
Context	network-instance name <i>string</i> protocols bgp afi-safi afi-safi-name identityref evpn next-hop-resolution ipv6-next-hops route-resolution
Tree	route-resolution
Configurable	True
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

admin-state *keyword*

Description	Enable or disable route resolution if no resolving tunnel is found
Context	network-instance name <i>string</i> protocols bgp afi-safi afi-safi-name identityref evpn next-hop-resolution ipv6-next-hops route-resolution admin-state <i>keyword</i>

Tree	admin-state
Default	enable
Options	<ul style="list-style-type: none"> • enable • disable
Configurable	True
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

ignore-default-routes *boolean*

Description	Ignore default routes, regardless of route type
Context	network-instance name string protocols bgp afi-safi afi-safi-name identityref evpn next-hop-resolution ipv6-next-hops route-resolution ignore-default-routes <i>boolean</i>
Tree	ignore-default-routes
Default	true
Configurable	True
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

tunnel-resolution

Description	Options related to resolution using tunnels in the tunnel table
Context	network-instance name string protocols bgp afi-safi afi-safi-name identityref evpn next-hop-resolution ipv6-next-hops tunnel-resolution
Tree	tunnel-resolution
Configurable	True
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

allowed-tunnel-types *identityref*

Description	List of allowed tunnel types
Context	network-instance name string protocols bgp afi-safi afi-safi-name identityref evpn next-hop-resolution ipv6-next-hops tunnel-resolution allowed-tunnel-types <i>identityref</i>

Tree	allowed-tunnel-types
Options	<ul style="list-style-type: none"> bgp-next-hop-resolution-tunnel-type <p>Base type for the types of tunnels that can be used by BGP for next-hop resolution</p>
Configurable	True
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

color-aware

Description	Color-aware next-hop resolution options
Context	network-instance name <i>string</i> protocols bgp afi-safi afi-safi-name <i>identityref</i> evpn next-hop-resolution ipv6-next-hops tunnel-resolution color-aware
Tree	color-aware
Configurable	True
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

next-hop-self-route-reflector *boolean*

Description	<p>When set to true, received EVPN MPLS routes are kept in the RIB and readvertised to the other route reflector clients with a local next-hop and EVI label</p> <p>This command triggers the programming of an EVI label swap operation for each received EVPN MPLS route.</p>
Context	network-instance name <i>string</i> protocols bgp afi-safi afi-safi-name <i>identityref</i> evpn next-hop-self-route-reflector <i>boolean</i>
Tree	next-hop-self-route-reflector
Default	false
Configurable	True
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

rapid-update *boolean*

Description	When this is set to true, EVPN UPDATES advertising reachability and withdrawals are advertised immediately, bypassing the session level min-
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	route-advertisement-interval. When this is false, reachability updates and withdrawals are subject to the MRAI interval.
Context	network-instance name <i>string</i> protocols bgp afi-safi afi-safi-name <i>identityref</i> evpn rapid-update <i>boolean</i>
Tree	rapid-update
Default	false
Configurable	True
Platforms	Supported on all platforms

export-policy *reference*

Description	Apply an export policy to advertised BGP routes
Context	network-instance name <i>string</i> protocols bgp afi-safi afi-safi-name <i>identityref</i> export-policy <i>reference</i>
Tree	export-policy
Reference	routing-policy policy name <i>string</i>
Configurable	True
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b
Max. Elements	14

import-policy *reference*

Description	Apply an import policy to received BGP routes
Context	network-instance name <i>string</i> protocols bgp afi-safi afi-safi-name <i>identityref</i> import-policy <i>reference</i>
Tree	import-policy
Reference	routing-policy policy name <i>string</i>
Configurable	True
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b
Max. Elements	14

ipv4-labeled-unicast

Description	Options related to the labeled IPv4-unicast address family
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Context	network-instance name <i>string</i> protocols bgp afi-safi afi-safi-name <i>identityref</i> ipv4-labeled-unicast
Tree	ipv4-labeled-unicast
Configurable	True
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

advertise-ipv6-next-hops *boolean*

Description	Enables advertisement of IPv4 routes with IPv6 next-hops
Context	network-instance name <i>string</i> protocols bgp afi-safi afi-safi-name <i>identityref</i> ipv4-labeled-unicast advertise-ipv6-next-hops <i>boolean</i>
Tree	advertise-ipv6-next-hops
Default	false
Configurable	True
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

backup-paths

Description	Configure backup paths support for the AFI/SAFI
Context	network-instance name <i>string</i> protocols bgp afi-safi afi-safi-name <i>identityref</i> ipv4-labeled-unicast backup-paths
Tree	backup-paths
Configurable	True
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

install *boolean*

Description	Install a backup path for every NLRI in the address family, when a suitable one exists
Context	network-instance name <i>string</i> protocols bgp afi-safi afi-safi-name <i>identityref</i> ipv4-labeled-unicast backup-paths install <i>boolean</i>
Tree	install
Default	false
Configurable	True
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

convergence

Description	Options for controlling and monitoring routing convergence of the relevant address family
Context	network-instance name <i>string</i> protocols bgp afi-safi afi-safi-name identityref ipv4-labeled-unicast convergence
Tree	convergence
Configurable	True
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

converged-peers *number*

Description	The number of peers that have sent an EOR marker for the address family since the last BGP restart
Context	network-instance name <i>string</i> protocols bgp afi-safi afi-safi-name identityref ipv4-labeled-unicast convergence converged-peers <i>number</i>
Tree	converged-peers
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

convergence-state *keyword*

Description	Enter the convergence-state context
Context	network-instance name <i>string</i> protocols bgp afi-safi afi-safi-name identityref ipv4-labeled-unicast convergence convergence-state <i>keyword</i>
Tree	convergence-state
Options	<ul style="list-style-type: none"> • waiting BGP has recently restarted and no sessions have re-established yet • started BGP has recently restarted and at least one session has re-established with support of the address family • partial BGP has recently restarted and at least one session has advertised an End-of-RIB marker for the address family. • timeout BGP has recently restarted and not all non-slow peers advertised an End-of-RIB marker for the address family before the max-wait-to-advertise timer expired

- converged
All non-slow peers that support the address family have advertised the End-of-RIB marker for the address family

Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

convergence-time *number*

Description	The elapsed time in seconds, starting from the last BGP restart, to reach the converged state for the address family
Context	network-instance name string protocols bgp afi-safi afi-safi-name identityref ipv4-labeled-unicast convergence convergence-time number
Tree	convergence-time
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

first-up-peer-time *number*

Description	The time when the first session supporting the address family came up, measured from the time that the BGP instance restarted
Context	network-instance name string protocols bgp afi-safi afi-safi-name identityref ipv4-labeled-unicast convergence first-up-peer-time number
Tree	first-up-peer-time
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

last-up-peer-time *number*

Description	The time when the last session supporting the address family came up, measured from the time that the BGP instance restarted
Context	network-instance name string protocols bgp afi-safi afi-safi-name identityref ipv4-labeled-unicast convergence last-up-peer-time number
Tree	last-up-peer-time
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

max-wait-to-advertise *number*

Description	The maximum amount of time, in seconds, measured from the time when the first session (configured or dynamic) that supports the address family comes up after a BGP restart, until BGP is allowed to advertise any routes in that address family to any peer The value of this leaf must always be greater than or equal to the operational value of min-wait-to-advertise. The default value is 3x the value of min-wait-to-advertise. A value of 0 means the feature is disabled and there is no additional delay before advertising routes of the address family.
Context	network-instance name <i>string</i> protocols bgp afi-safi afi-safi-name identityref ipv4-labeled-unicast convergence max-wait-to-advertise <i>number</i>
Tree	max-wait-to-advertise
Range	0 to 3600
Default	0
Configurable	True
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

oper-max-wait-to-advertise *number*

Description	The operational value of the max-wait-to-advertise timer for the address family
Context	network-instance name <i>string</i> protocols bgp afi-safi afi-safi-name identityref ipv4-labeled-unicast convergence oper-max-wait-to-advertise <i>number</i>
Tree	oper-max-wait-to-advertise
Range	0 to 10800
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

up-peers *number*

Description	The number of BGP sessions (configured and dynamic) that support the address family and that are currently in the established state
Context	network-instance name <i>string</i> protocols bgp afi-safi afi-safi-name identityref ipv4-labeled-unicast convergence up-peers <i>number</i>
Tree	up-peers
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

up-peers-when-min-expired *number*

Description	The number of BGP sessions (configured and dynamic) that support the address family and that were in established state when the win-wait-to-advertise timer expired
Context	network-instance name <i>string</i> protocols bgp afi-safi afi-safi-name <i>identityref</i> ipv4-labeled-unicast convergence up-peers-when-min-expired <i>number</i>
Tree	up-peers-when-min-expired
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

next-hop-resolution

Description	Options for controlling next-hop resolution procedures
Context	network-instance name <i>string</i> protocols bgp afi-safi afi-safi-name <i>identityref</i> ipv4-labeled-unicast next-hop-resolution
Tree	next-hop-resolution
Configurable	True
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

ipv4-next-hops

Description	Options related to the resolution of BGP next-hops that are IPv4 addresses
Context	network-instance name <i>string</i> protocols bgp afi-safi afi-safi-name <i>identityref</i> ipv4-labeled-unicast next-hop-resolution ipv4-next-hops
Tree	ipv4-next-hops
Configurable	True
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

route-resolution

Description	Options related to resolution using IP routes in the FIB
Context	network-instance name <i>string</i> protocols bgp afi-safi afi-safi-name <i>identityref</i> ipv4-labeled-unicast next-hop-resolution ipv4-next-hops route-resolution
Tree	route-resolution
Configurable	True
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

admin-state *keyword*

Description	Enable or disable route resolution if no resolving tunnel is found
Context	network-instance name <i>string</i> protocols bgp afi-safi afi-safi-name identityref ipv4-labeled-unicast next-hop-resolution ipv4-next-hops route-resolution admin-state <i>keyword</i>
Tree	admin-state
Default	enable
Options	<ul style="list-style-type: none"> • enable • disable
Configurable	True
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

ignore-default-routes *boolean*

Description	Ignore default routes, regardless of route type
Context	network-instance name <i>string</i> protocols bgp afi-safi afi-safi-name identityref ipv4-labeled-unicast next-hop-resolution ipv4-next-hops route-resolution ignore-default-routes <i>boolean</i>
Tree	ignore-default-routes
Default	true
Configurable	True
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

tunnel-resolution

Description	Options related to resolution using tunnels in the tunnel table
Context	network-instance name <i>string</i> protocols bgp afi-safi afi-safi-name identityref ipv4-labeled-unicast next-hop-resolution ipv4-next-hops tunnel-resolution
Tree	tunnel-resolution
Configurable	True
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

allowed-tunnel-types *identityref*

Description	List of allowed tunnel types
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Context	network-instance name <i>string</i> protocols bgp afi-safi afi-safi-name <i>identityref</i> ipv4-labeled-unicast next-hop-resolution ipv4-next-hops tunnel-resolution allowed-tunnel-types <i>identityref</i>
Tree	allowed-tunnel-types
Options	<ul style="list-style-type: none"> bgp-next-hop-resolution-tunnel-type Base type for the types of tunnels that can be used by BGP for next-hop resolution
Configurable	True
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

color-aware

Description	Color-aware next-hop resolution options
Context	network-instance name <i>string</i> protocols bgp afi-safi afi-safi-name <i>identityref</i> ipv4-labeled-unicast next-hop-resolution ipv4-next-hops tunnel-resolution color-aware
Tree	color-aware
Configurable	True
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

ipv6-next-hops

Description	Options related to the resolution of BGP next-hops that are IPv6 addresses
Context	network-instance name <i>string</i> protocols bgp afi-safi afi-safi-name <i>identityref</i> ipv4-labeled-unicast next-hop-resolution ipv6-next-hops
Tree	ipv6-next-hops
Configurable	True
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

route-resolution

Description	Options related to resolution using IP routes in the FIB
Context	network-instance name <i>string</i> protocols bgp afi-safi afi-safi-name <i>identityref</i> ipv4-labeled-unicast next-hop-resolution ipv6-next-hops route-resolution
Tree	route-resolution
Configurable	True
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

admin-state *keyword*

Description	Enable or disable route resolution if no resolving tunnel is found
Context	network-instance name <i>string</i> protocols bgp afi-safi afi-safi-name identityref ipv4-labeled-unicast next-hop-resolution ipv6-next-hops route-resolution admin-state <i>keyword</i>
Tree	admin-state
Default	enable
Options	<ul style="list-style-type: none"> • enable • disable
Configurable	True
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

ignore-default-routes *boolean*

Description	Ignore default routes, regardless of route type
Context	network-instance name <i>string</i> protocols bgp afi-safi afi-safi-name identityref ipv4-labeled-unicast next-hop-resolution ipv6-next-hops route-resolution ignore-default-routes <i>boolean</i>
Tree	ignore-default-routes
Default	true
Configurable	True
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

tunnel-resolution

Description	Options related to resolution using tunnels in the tunnel table
Context	network-instance name <i>string</i> protocols bgp afi-safi afi-safi-name identityref ipv4-labeled-unicast next-hop-resolution ipv6-next-hops tunnel-resolution
Tree	tunnel-resolution
Configurable	True
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

allowed-tunnel-types *identityref*

Description	List of allowed tunnel types
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Context	network-instance name <i>string</i> protocols bgp afi-safi afi-safi-name <i>identityref</i> ipv4-labeled-unicast next-hop-resolution ipv6-next-hops tunnel-resolution allowed-tunnel-types <i>identityref</i>
Tree	allowed-tunnel-types
Options	<ul style="list-style-type: none"> bgp-next-hop-resolution-tunnel-type Base type for the types of tunnels that can be used by BGP for next-hop resolution
Configurable	True
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

color-aware

Description	Color-aware next-hop resolution options
Context	network-instance name <i>string</i> protocols bgp afi-safi afi-safi-name <i>identityref</i> ipv4-labeled-unicast next-hop-resolution ipv6-next-hops tunnel-resolution color-aware
Tree	color-aware
Configurable	True
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

rapid-update *boolean*

Description	When true, label-ipv4 update messages are advertised immediately, bypassing the MRAI When this is false, reachability updates and withdrawals are subject to the MRAI interval.
Context	network-instance name <i>string</i> protocols bgp afi-safi afi-safi-name <i>identityref</i> ipv4-labeled-unicast rapid-update <i>boolean</i>
Tree	rapid-update
Default	false
Configurable	True
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

receive-ipv6-next-hops *boolean*

Description	Enables the advertisement of the RFC 8950 capability to receive IPv4 routes with IPv6 next-hops When set to true, BGP advertises an extended NH encoding (RFC 8950) capability to its peers. This capability indicates that local router is prepared
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to accept BGP routes for the AFI/SAFI with IPv6 next-hops from peers in the scope of the command. When set to false, BGP handles received AFI/SAFI routes with IPv6 next-hops as an error and applies treat-as-withdraw.

Context	network-instance name <i>string</i> protocols bgp afi-safi afi-safi-name <i>identityref</i> ipv4-labeled-unicast receive-ipv6-next-hops <i>boolean</i>
Tree	receive-ipv6-next-hops
Default	false
Configurable	True
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

ipv4-unicast

Description	Options related to the IPv4-unicast address family
Context	network-instance name <i>string</i> protocols bgp afi-safi afi-safi-name <i>identityref</i> ipv4-unicast
Tree	ipv4-unicast
Configurable	True
Platforms	Supported on all platforms

advertise-ipv6-next-hops *boolean*

Description	Enables advertisement of IPv4 routes with IPv6 next-hops
Context	network-instance name <i>string</i> protocols bgp afi-safi afi-safi-name <i>identityref</i> ipv4-unicast advertise-ipv6-next-hops <i>boolean</i>
Tree	advertise-ipv6-next-hops
Default	false
Configurable	True
Platforms	Supported on all platforms

convergence

Description	Options for controlling and monitoring routing convergence of the relevant address family
Context	network-instance name <i>string</i> protocols bgp afi-safi afi-safi-name <i>identityref</i> ipv4-unicast convergence
Tree	convergence
Configurable	True
Platforms	Supported on all platforms

converged-peers *number*

Description	The number of peers that have sent an EOR marker for the address family since the last BGP restart
Context	network-instance name <i>string</i> protocols bgp afi-safi afi-safi-name <i>identityref</i> ipv4-unicast convergence converged-peers <i>number</i>
Tree	converged-peers
Configurable	False
Platforms	Supported on all platforms

convergence-state *keyword*

Description	Enter the convergence-state context
Context	network-instance name <i>string</i> protocols bgp afi-safi afi-safi-name <i>identityref</i> ipv4-unicast convergence convergence-state <i>keyword</i>
Tree	convergence-state
Options	<ul style="list-style-type: none"> • waiting BGP has recently restarted and no sessions have re-established yet • started BGP has recently restarted and at least one session has re-established with support of the address family • partial BGP has recently restarted and at least one session has advertised an End-of-RIB marker for the address family. • timeout BGP has recently restarted and not all non-slow peers advertised an End-of-RIB marker for the address family before the max-wait-to-advertise timer expired • converged All non-slow peers that support the address family have have advertised the End-of-RIB marker for the address family
Configurable	False
Platforms	Supported on all platforms

convergence-time *number*

Description	The elapsed time in seconds, starting from the last BGP restart, to reach the converged state for the address family
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Context	network-instance name <i>string</i> protocols bgp afi-safi afi-safi-name identityref ipv4-unicast convergence convergence-time <i>number</i>
Tree	convergence-time
Configurable	False
Platforms	Supported on all platforms

first-up-peer-time *number*

Description	The time when the first session supporting the address family came up, measured from the time that the BGP instance restarted
Context	network-instance name <i>string</i> protocols bgp afi-safi afi-safi-name identityref ipv4-unicast convergence first-up-peer-time <i>number</i>
Tree	first-up-peer-time
Configurable	False
Platforms	Supported on all platforms

last-up-peer-time *number*

Description	The time when the last session supporting the address family came up, measured from the time that the BGP instance restarted
Context	network-instance name <i>string</i> protocols bgp afi-safi afi-safi-name identityref ipv4-unicast convergence last-up-peer-time <i>number</i>
Tree	last-up-peer-time
Configurable	False
Platforms	Supported on all platforms

max-wait-to-advertise *number*

Description	The maximum amount of time, in seconds, measured from the time when the first session (configured or dynamic) that supports the address family comes up after a BGP restart, until BGP is allowed to advertise any routes in that address family to any peer The value of this leaf must always be greater than or equal to the operational value of min-wait-to-advertise. The default value is 3x the value of min-wait-to-advertise. A value of 0 means the feature is disabled and there is no additional delay before advertising routes of the address family.
Context	network-instance name <i>string</i> protocols bgp afi-safi afi-safi-name identityref ipv4-unicast convergence max-wait-to-advertise <i>number</i>
Tree	max-wait-to-advertise

Range	0 to 3600
Default	0
Configurable	True
Platforms	Supported on all platforms

oper-max-wait-to-advertise *number*

Description	The operational value of the max-wait-to-advertise timer for the address family
Context	network-instance name <i>string</i> protocols bgp afi-safi afi-safi-name <i>identityref</i> ipv4-unicast convergence oper-max-wait-to-advertise <i>number</i>
Tree	oper-max-wait-to-advertise
Range	0 to 10800
Configurable	False
Platforms	Supported on all platforms

up-peers *number*

Description	The number of BGP sessions (configured and dynamic) that support the address family and that are currently in the established state
Context	network-instance name <i>string</i> protocols bgp afi-safi afi-safi-name <i>identityref</i> ipv4-unicast convergence up-peers <i>number</i>
Tree	up-peers
Configurable	False
Platforms	Supported on all platforms

up-peers-when-min-expired *number*

Description	The number of BGP sessions (configured and dynamic) that support the address family and that were in established state when the win-wait-to-advertise timer expired
Context	network-instance name <i>string</i> protocols bgp afi-safi afi-safi-name <i>identityref</i> ipv4-unicast convergence up-peers-when-min-expired <i>number</i>
Tree	up-peers-when-min-expired
Configurable	False
Platforms	Supported on all platforms

next-hop-resolution

Description	Options for controlling next-hop resolution procedures
Context	network-instance name <i>string</i> protocols bgp afi-safi afi-safi-name <i>identityref</i> ipv4-unicast next-hop-resolution
Tree	next-hop-resolution
Configurable	True
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

ipv4-next-hops

Description	Options related to the resolution of BGP next-hops that are IPv4 addresses
Context	network-instance name <i>string</i> protocols bgp afi-safi afi-safi-name <i>identityref</i> ipv4-unicast next-hop-resolution ipv4-next-hops
Tree	ipv4-next-hops
Configurable	True
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

tunnel-resolution

Description	Options related to resolution using tunnels in the tunnel table
Context	network-instance name <i>string</i> protocols bgp afi-safi afi-safi-name <i>identityref</i> ipv4-unicast next-hop-resolution ipv4-next-hops tunnel-resolution
Tree	tunnel-resolution
Configurable	True
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

allowed-tunnel-types *identityref*

Description	List of allowed tunnel types
Context	network-instance name <i>string</i> protocols bgp afi-safi afi-safi-name <i>identityref</i> ipv4-unicast next-hop-resolution ipv4-next-hops tunnel-resolution allowed-tunnel-types <i>identityref</i>
Tree	allowed-tunnel-types
Options	<ul style="list-style-type: none"> bgp-next-hop-resolution-tunnel-type Base type for the types of tunnels that can be used by BGP for next-hop resolution

Configurable	True
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

color-aware

Description	Color-aware next-hop resolution options
Context	network-instance name <i>string</i> protocols bgp afi-safi afi-safi-name identityref ipv4-unicast next-hop-resolution ipv4-next-hops tunnel-resolution color-aware
Tree	color-aware
Configurable	True
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

mode *keyword*

Description	Mode to control the order of tunnel resolution compared to route resolution
Context	network-instance name <i>string</i> protocols bgp afi-safi afi-safi-name identityref ipv4-unicast next-hop-resolution ipv4-next-hops tunnel-resolution mode <i>keyword</i>
Tree	mode
Default	disabled
Options	<ul style="list-style-type: none"> • prefer • require • disabled
Configurable	True
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

ipv6-next-hops

Description	Options related to the resolution of BGP next-hops that are IPv6 addresses
Context	network-instance name <i>string</i> protocols bgp afi-safi afi-safi-name identityref ipv4-unicast next-hop-resolution ipv6-next-hops
Tree	ipv6-next-hops
Configurable	True
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

tunnel-resolution

Description	Options related to resolution using tunnels in the tunnel table
Context	network-instance name <i>string</i> protocols bgp afi-safi afi-safi-name <i>identityref</i> ipv4-unicast next-hop-resolution ipv6-next-hops tunnel-resolution
Tree	tunnel-resolution
Configurable	True
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

allowed-tunnel-types *identityref*

Description	List of allowed tunnel types
Context	network-instance name <i>string</i> protocols bgp afi-safi afi-safi-name <i>identityref</i> ipv4-unicast next-hop-resolution ipv6-next-hops tunnel-resolution allowed-tunnel-types <i>identityref</i>
Tree	allowed-tunnel-types
Options	<ul style="list-style-type: none"> • bgp-next-hop-resolution-tunnel-type Base type for the types of tunnels that can be used by BGP for next-hop resolution
Configurable	True
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

color-aware

Description	Color-aware next-hop resolution options
Context	network-instance name <i>string</i> protocols bgp afi-safi afi-safi-name <i>identityref</i> ipv4-unicast next-hop-resolution ipv6-next-hops tunnel-resolution color-aware
Tree	color-aware
Configurable	True
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

mode *keyword*

Description	Mode to control the order of tunnel resolution compared to route resolution
Context	network-instance name <i>string</i> protocols bgp afi-safi afi-safi-name identityref ipv4-unicast next-hop-resolution ipv6-next-hops tunnel-resolution mode <i>keyword</i>
Tree	mode
Default	disabled
Options	<ul style="list-style-type: none"> • prefer • require • disabled
Configurable	True
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

receive-ipv6-next-hops *boolean*

Description	<p>Enables the advertisement of the RFC 8950 capability to receive IPv4 routes with IPv6 next-hops</p> <p>When set to true, BGP advertises an extended NH encoding (RFC 8950) capability to its peers. This capability indicates that local router is prepared to accept BGP routes for the AFI/SAFI with IPv6 next-hops from peers in the scope of the command. When set to false, BGP handles received AFI/SAFI routes with IPv6 next-hops as an error and applies treat-as-withdraw.</p>
Context	network-instance name <i>string</i> protocols bgp afi-safi afi-safi-name identityref ipv4-unicast receive-ipv6-next-hops <i>boolean</i>
Tree	receive-ipv6-next-hops
Default	false
Configurable	True
Platforms	Supported on all platforms

ipv6-labeled-unicast

Description	Options related to the labeled IPv6-unicast address family
Context	network-instance name <i>string</i> protocols bgp afi-safi afi-safi-name identityref ipv6-labeled-unicast
Tree	ipv6-labeled-unicast

Configurable	True
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

backup-paths

Description	Configure backup paths support for the AFI/SAFI
Context	network-instance name <i>string</i> protocols bgp afi-safi afi-safi-name <i>identityref</i> ipv6-labeled-unicast backup-paths
Tree	backup-paths
Configurable	True
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

install *boolean*

Description	Install a backup path for every NLRI in the address family, when a suitable one exists
Context	network-instance name <i>string</i> protocols bgp afi-safi afi-safi-name <i>identityref</i> ipv6-labeled-unicast backup-paths install <i>boolean</i>
Tree	install
Default	false
Configurable	True
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

convergence

Description	Options for controlling and monitoring routing convergence of the relevant address family
Context	network-instance name <i>string</i> protocols bgp afi-safi afi-safi-name <i>identityref</i> ipv6-labeled-unicast convergence
Tree	convergence
Configurable	True
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

converged-peers *number*

Description	The number of peers that have sent an EOR marker for the address family since the last BGP restart
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Context	network-instance name <i>string</i> protocols bgp afi-safi afi-safi-name identityref ipv6-labeled-unicast convergence converged-peers <i>number</i>
Tree	converged-peers
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

convergence-state *keyword*

Description	Enter the convergence-state context
Context	network-instance name <i>string</i> protocols bgp afi-safi afi-safi-name identityref ipv6-labeled-unicast convergence convergence-state <i>keyword</i>
Tree	convergence-state
Options	<ul style="list-style-type: none"> • waiting BGP has recently restarted and no sessions have re-established yet • started BGP has recently restarted and at least one session has re-established with support of the address family • partial BGP has recently restarted and at least one session has advertised an End-of-RIB marker for the address family. • timeout BGP has recently restarted and not all non-slow peers advertised an End-of-RIB marker for the address family before the max-wait-to-advertise timer expired • converged All non-slow peers that support the address family have have advertised the End-of-RIB marker for the address family
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

convergence-time *number*

Description	The elapsed time in seconds, starting from the last BGP restart, to reach the converged state for the address family
Context	network-instance name <i>string</i> protocols bgp afi-safi afi-safi-name identityref ipv6-labeled-unicast convergence convergence-time <i>number</i>
Tree	convergence-time
Configurable	False

Platforms 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

first-up-peer-time *number*

Description The time when the first session supporting the address family came up, measured from the time that the BGP instance restarted

Context [network-instance name](#) *string* [protocols bgp afi-safi afi-safi-name](#) *identityref* [ipv6-labeled-unicast convergence first-up-peer-time](#) *number*

Tree [first-up-peer-time](#)

Configurable False

Platforms 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

last-up-peer-time *number*

Description The time when the last session supporting the address family came up, measured from the time that the BGP instance restarted

Context [network-instance name](#) *string* [protocols bgp afi-safi afi-safi-name](#) *identityref* [ipv6-labeled-unicast convergence last-up-peer-time](#) *number*

Tree [last-up-peer-time](#)

Configurable False

Platforms 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

max-wait-to-advertise *number*

Description The maximum amount of time, in seconds, measured from the time when the first session (configured or dynamic) that supports the address family comes up after a BGP restart, until BGP is allowed to advertise any routes in that address family to any peer

The value of this leaf must always be greater than or equal to the operational value of min-wait-to-advertise. The default value is 3x the value of min-wait-to-advertise. A value of 0 means the feature is disabled and there is no additional delay before advertising routes of the address family.

Context [network-instance name](#) *string* [protocols bgp afi-safi afi-safi-name](#) *identityref* [ipv6-labeled-unicast convergence max-wait-to-advertise](#) *number*

Tree [max-wait-to-advertise](#)

Range 0 to 3600

Default 0

Configurable True

Platforms 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

oper-max-wait-to-advertise *number*

Description	The operational value of the max-wait-to-advertise timer for the address family
Context	network-instance name <i>string</i> protocols bgp afi-safi afi-safi-name identityref ipv6-labeled-unicast convergence oper-max-wait-to-advertise <i>number</i>
Tree	oper-max-wait-to-advertise
Range	0 to 10800
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

up-peers *number*

Description	The number of BGP sessions (configured and dynamic) that support the address family and that are currently in the established state
Context	network-instance name <i>string</i> protocols bgp afi-safi afi-safi-name identityref ipv6-labeled-unicast convergence up-peers <i>number</i>
Tree	up-peers
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

up-peers-when-min-expired *number*

Description	The number of BGP sessions (configured and dynamic) that support the address family and that were in established state when the win-wait-to-advertise timer expired
Context	network-instance name <i>string</i> protocols bgp afi-safi afi-safi-name identityref ipv6-labeled-unicast convergence up-peers-when-min-expired <i>number</i>
Tree	up-peers-when-min-expired
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

next-hop-resolution

Description	Options for controlling next-hop resolution procedures
Context	network-instance name <i>string</i> protocols bgp afi-safi afi-safi-name identityref ipv6-labeled-unicast next-hop-resolution
Tree	next-hop-resolution

Configurable	True
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

ipv4-next-hops

Description	Options related to the resolution of BGP next-hops that are IPv4 addresses
Context	network-instance name <i>string</i> protocols bgp afi-safi afi-safi-name identityref ipv6-labeled-unicast next-hop-resolution ipv4-next-hops
Tree	ipv4-next-hops
Configurable	True
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

route-resolution

Description	Options related to resolution using IP routes in the FIB
Context	network-instance name <i>string</i> protocols bgp afi-safi afi-safi-name identityref ipv6-labeled-unicast next-hop-resolution ipv4-next-hops route-resolution
Tree	route-resolution
Configurable	True
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

admin-state *keyword*

Description	Enable or disable route resolution if no resolving tunnel is found
Context	network-instance name <i>string</i> protocols bgp afi-safi afi-safi-name identityref ipv6-labeled-unicast next-hop-resolution ipv4-next-hops route-resolution admin-state <i>keyword</i>
Tree	admin-state
Default	enable
Options	<ul style="list-style-type: none"> • enable • disable
Configurable	True
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

ignore-default-routes *boolean*

Description	Ignore default routes, regardless of route type
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Context	network-instance name <i>string</i> protocols bgp afi-safi afi-safi-name <i>identityref</i> ipv6-labeled-unicast next-hop-resolution ipv4-next-hops route-resolution ignore-default-routes <i>boolean</i>
Tree	ignore-default-routes
Default	true
Configurable	True
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

tunnel-resolution

Description	Options related to resolution using tunnels in the tunnel table
Context	network-instance name <i>string</i> protocols bgp afi-safi afi-safi-name <i>identityref</i> ipv6-labeled-unicast next-hop-resolution ipv4-next-hops tunnel-resolution
Tree	tunnel-resolution
Configurable	True
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

allowed-tunnel-types *identityref*

Description	List of allowed tunnel types
Context	network-instance name <i>string</i> protocols bgp afi-safi afi-safi-name <i>identityref</i> ipv6-labeled-unicast next-hop-resolution ipv4-next-hops tunnel-resolution allowed-tunnel-types <i>identityref</i>
Tree	allowed-tunnel-types
Options	<ul style="list-style-type: none"> bgp-next-hop-resolution-tunnel-type Base type for the types of tunnels that can be used by BGP for next-hop resolution
Configurable	True
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

color-aware

Description	Color-aware next-hop resolution options
Context	network-instance name <i>string</i> protocols bgp afi-safi afi-safi-name <i>identityref</i> ipv6-labeled-unicast next-hop-resolution ipv4-next-hops tunnel-resolution color-aware
Tree	color-aware
Configurable	True

Platforms 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

ipv6-next-hops

Description Options related to the resolution of BGP next-hops that are IPv6 addresses

Context [network-instance name](#) *string* [protocols bgp afi-safi afi-safi-name](#) *identityref* [ipv6-labeled-unicast next-hop-resolution ipv6-next-hops](#)

Tree [ipv6-next-hops](#)

Configurable True

Platforms 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

route-resolution

Description Options related to resolution using IP routes in the FIB

Context [network-instance name](#) *string* [protocols bgp afi-safi afi-safi-name](#) *identityref* [ipv6-labeled-unicast next-hop-resolution ipv6-next-hops route-resolution](#)

Tree [route-resolution](#)

Configurable True

Platforms 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

admin-state *keyword*

Description Enable or disable route resolution if no resolving tunnel is found

Context [network-instance name](#) *string* [protocols bgp afi-safi afi-safi-name](#) *identityref* [ipv6-labeled-unicast next-hop-resolution ipv6-next-hops route-resolution admin-state](#) *keyword*

Tree [admin-state](#)

Default enable

Options

- enable
- disable

Configurable True

Platforms 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

ignore-default-routes *boolean*

Description Ignore default routes, regardless of route type

Context	network-instance name <i>string</i> protocols bgp afi-safi afi-safi-name <i>identityref</i> ipv6-labeled-unicast next-hop-resolution ipv6-next-hops route-resolution ignore-default-routes <i>boolean</i>
Tree	ignore-default-routes
Default	true
Configurable	True
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

tunnel-resolution

Description	Options related to resolution using tunnels in the tunnel table
Context	network-instance name <i>string</i> protocols bgp afi-safi afi-safi-name <i>identityref</i> ipv6-labeled-unicast next-hop-resolution ipv6-next-hops tunnel-resolution
Tree	tunnel-resolution
Configurable	True
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

allowed-tunnel-types *identityref*

Description	List of allowed tunnel types
Context	network-instance name <i>string</i> protocols bgp afi-safi afi-safi-name <i>identityref</i> ipv6-labeled-unicast next-hop-resolution ipv6-next-hops tunnel-resolution allowed-tunnel-types <i>identityref</i>
Tree	allowed-tunnel-types
Options	<ul style="list-style-type: none"> • bgp-next-hop-resolution-tunnel-type Base type for the types of tunnels that can be used by BGP for next-hop resolution
Configurable	True
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

color-aware

Description	Color-aware next-hop resolution options
Context	network-instance name <i>string</i> protocols bgp afi-safi afi-safi-name <i>identityref</i> ipv6-labeled-unicast next-hop-resolution ipv6-next-hops tunnel-resolution color-aware
Tree	color-aware
Configurable	True

Platforms 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

rapid-update *boolean*

Description When true, label-ipv6 update messages are advertised immediately, bypassing the MRAI
When this is false, reachability updates and withdrawals are subject to the MRAI interval.

Context [network-instance name](#) *string* [protocols bgp afi-safi afi-safi-name](#) *identityref*
[ipv6-labeled-unicast rapid-update](#) *boolean*

Tree [rapid-update](#)

Default false

Configurable True

Platforms 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

ipv6-unicast

Description Options related to the IPv6-unicast address family

Context [network-instance name](#) *string* [protocols bgp afi-safi afi-safi-name](#) *identityref*
[ipv6-unicast](#)

Tree [ipv6-unicast](#)

Configurable True

Platforms Supported on all platforms

convergence

Description Options for controlling and monitoring routing convergence of the relevant address family

Context [network-instance name](#) *string* [protocols bgp afi-safi afi-safi-name](#) *identityref*
[ipv6-unicast convergence](#)

Tree [convergence](#)

Configurable True

Platforms Supported on all platforms

converged-peers *number*

Description The number of peers that have sent an EOR marker for the address family since the last BGP restart

Context	network-instance name <i>string</i> protocols bgp afi-safi afi-safi-name identityref ipv6-unicast convergence converged-peers <i>number</i>
Tree	converged-peers
Configurable	False
Platforms	Supported on all platforms

convergence-state *keyword*

Description	Enter the convergence-state context
Context	network-instance name <i>string</i> protocols bgp afi-safi afi-safi-name identityref ipv6-unicast convergence convergence-state <i>keyword</i>
Tree	convergence-state
Options	<ul style="list-style-type: none"> • waiting BGP has recently restarted and no sessions have re-established yet • started BGP has recently restarted and at least one session has re-established with support of the address family • partial BGP has recently restarted and at least one session has advertised an End-of-RIB marker for the address family. • timeout BGP has recently restarted and not all non-slow peers advertised an End-of-RIB marker for the address family before the max-wait-to-advertise timer expired • converged All non-slow peers that support the address family have have advertised the End-of-RIB marker for the address family
Configurable	False
Platforms	Supported on all platforms

convergence-time *number*

Description	The elapsed time in seconds, starting from the last BGP restart, to reach the converged state for the address family
Context	network-instance name <i>string</i> protocols bgp afi-safi afi-safi-name identityref ipv6-unicast convergence convergence-time <i>number</i>
Tree	convergence-time
Configurable	False

Platforms Supported on all platforms

first-up-peer-time *number*

Description The time when the first session supporting the address family came up, measured from the time that the BGP instance restarted

Context [network-instance name](#) *string* [protocols bgp afi-safi afi-safi-name](#) *identityref* [ipv6-unicast convergence first-up-peer-time](#) *number*

Tree [first-up-peer-time](#)

Configurable False

Platforms Supported on all platforms

last-up-peer-time *number*

Description The time when the last session supporting the address family came up, measured from the time that the BGP instance restarted

Context [network-instance name](#) *string* [protocols bgp afi-safi afi-safi-name](#) *identityref* [ipv6-unicast convergence last-up-peer-time](#) *number*

Tree [last-up-peer-time](#)

Configurable False

Platforms Supported on all platforms

max-wait-to-advertise *number*

Description The maximum amount of time, in seconds, measured from the time when the first session (configured or dynamic) that supports the address family comes up after a BGP restart, until BGP is allowed to advertise any routes in that address family to any peer

The value of this leaf must always be greater than or equal to the operational value of min-wait-to-advertise. The default value is 3x the value of min-wait-to-advertise. A value of 0 means the feature is disabled and there is no additional delay before advertising routes of the address family.

Context [network-instance name](#) *string* [protocols bgp afi-safi afi-safi-name](#) *identityref* [ipv6-unicast convergence max-wait-to-advertise](#) *number*

Tree [max-wait-to-advertise](#)

Range 0 to 3600

Default 0

Configurable True

Platforms Supported on all platforms

oper-max-wait-to-advertise *number*

Description	The operational value of the max-wait-to-advertise timer for the address family
Context	network-instance name <i>string</i> protocols bgp afi-safi afi-safi-name <i>identityref</i> ipv6-unicast convergence oper-max-wait-to-advertise <i>number</i>
Tree	oper-max-wait-to-advertise
Range	0 to 10800
Configurable	False
Platforms	Supported on all platforms

up-peers *number*

Description	The number of BGP sessions (configured and dynamic) that support the address family and that are currently in the established state
Context	network-instance name <i>string</i> protocols bgp afi-safi afi-safi-name <i>identityref</i> ipv6-unicast convergence up-peers <i>number</i>
Tree	up-peers
Configurable	False
Platforms	Supported on all platforms

up-peers-when-min-expired *number*

Description	The number of BGP sessions (configured and dynamic) that support the address family and that were in established state when the win-wait-to-advertise timer expired
Context	network-instance name <i>string</i> protocols bgp afi-safi afi-safi-name <i>identityref</i> ipv6-unicast convergence up-peers-when-min-expired <i>number</i>
Tree	up-peers-when-min-expired
Configurable	False
Platforms	Supported on all platforms

next-hop-resolution

Description	Options for controlling next-hop resolution procedures
Context	network-instance name <i>string</i> protocols bgp afi-safi afi-safi-name <i>identityref</i> ipv6-unicast next-hop-resolution
Tree	next-hop-resolution

Configurable	True
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

ipv4-next-hops

Description	Options related to the resolution of BGP next-hops that are IPv4 addresses
Context	network-instance name <i>string</i> protocols bgp afi-safi afi-safi-name identityref ipv6-unicast next-hop-resolution ipv4-next-hops
Tree	ipv4-next-hops
Configurable	True
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

tunnel-resolution

Description	Options related to resolution using tunnels in the tunnel table
Context	network-instance name <i>string</i> protocols bgp afi-safi afi-safi-name identityref ipv6-unicast next-hop-resolution ipv4-next-hops tunnel-resolution
Tree	tunnel-resolution
Configurable	True
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

allowed-tunnel-types *identityref*

Description	List of allowed tunnel types
Context	network-instance name <i>string</i> protocols bgp afi-safi afi-safi-name identityref ipv6-unicast next-hop-resolution ipv4-next-hops tunnel-resolution allowed-tunnel-types <i>identityref</i>
Tree	allowed-tunnel-types
Options	<ul style="list-style-type: none"> • bgp-next-hop-resolution-tunnel-type Base type for the types of tunnels that can be used by BGP for next-hop resolution
Configurable	True
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

color-aware

Description	Color-aware next-hop resolution options
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Context	network-instance name <i>string</i> protocols bgp afi-safi afi-safi-name identityref ipv6-unicast next-hop-resolution ipv4-next-hops tunnel-resolution color-aware
Tree	color-aware
Configurable	True
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

mode *keyword*

Description	Mode to control the order of tunnel resolution compared to route resolution
Context	network-instance name <i>string</i> protocols bgp afi-safi afi-safi-name identityref ipv6-unicast next-hop-resolution ipv4-next-hops tunnel-resolution mode keyword
Tree	mode
Default	disabled
Options	<ul style="list-style-type: none"> • prefer • require • disabled
Configurable	True
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

ipv6-next-hops

Description	Options related to the resolution of BGP next-hops that are IPv6 addresses
Context	network-instance name <i>string</i> protocols bgp afi-safi afi-safi-name identityref ipv6-unicast next-hop-resolution ipv6-next-hops
Tree	ipv6-next-hops
Configurable	True
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

tunnel-resolution

Description	Options related to resolution using tunnels in the tunnel table
Context	network-instance name <i>string</i> protocols bgp afi-safi afi-safi-name identityref ipv6-unicast next-hop-resolution ipv6-next-hops tunnel-resolution
Tree	tunnel-resolution

Configurable	True
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

allowed-tunnel-types *identityref*

Description	List of allowed tunnel types
Context	network-instance name <i>string</i> protocols bgp afi-safi afi-safi-name <i>identityref</i> ipv6-unicast next-hop-resolution ipv6-next-hops tunnel-resolution allowed-tunnel-types <i>identityref</i>
Tree	allowed-tunnel-types
Options	<ul style="list-style-type: none"> bgp-next-hop-resolution-tunnel-type Base type for the types of tunnels that can be used by BGP for next-hop resolution
Configurable	True
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

color-aware

Description	Color-aware next-hop resolution options
Context	network-instance name <i>string</i> protocols bgp afi-safi afi-safi-name <i>identityref</i> ipv6-unicast next-hop-resolution ipv6-next-hops tunnel-resolution color-aware
Tree	color-aware
Configurable	True
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

mode *keyword*

Description	Mode to control the order of tunnel resolution compared to route resolution
Context	network-instance name <i>string</i> protocols bgp afi-safi afi-safi-name <i>identityref</i> ipv6-unicast next-hop-resolution ipv6-next-hops tunnel-resolution mode <i>keyword</i>
Tree	mode

Default	disabled
Options	<ul style="list-style-type: none"> • prefer • require • disabled
Configurable	True
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

I3vpn-ipv4-unicast

Description	Options related to the VPN-IPv4 unicast address family
Context	network-instance name <i>string</i> protocols bgp afi-safi afi-safi-name <i>identityref</i> I3vpn-ipv4-unicast
Tree	I3vpn-ipv4-unicast
Configurable	True
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

advertise-ipv6-next-hops *boolean*

Description	Enables advertisement of IPv4 routes with IPv6 next-hops
Context	network-instance name <i>string</i> protocols bgp afi-safi afi-safi-name <i>identityref</i> I3vpn-ipv4-unicast advertise-ipv6-next-hops <i>boolean</i>
Tree	advertise-ipv6-next-hops
Default	false
Configurable	True
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

convergence

Description	Options for controlling and monitoring routing convergence of the relevant address family
Context	network-instance name <i>string</i> protocols bgp afi-safi afi-safi-name <i>identityref</i> I3vpn-ipv4-unicast convergence

Tree	convergence
Configurable	True
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

converged-peers *number*

Description	The number of peers that have sent an EOR marker for the address family since the last BGP restart
Context	network-instance name <i>string</i> protocols bgp afi-safi afi-safi-name identityref l3vpn-ipv4-unicast convergence converged-peers <i>number</i>
Tree	converged-peers
Configurable	False
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

convergence-state *keyword*

Description	Enter the convergence-state context
Context	network-instance name <i>string</i> protocols bgp afi-safi afi-safi-name identityref l3vpn-ipv4-unicast convergence convergence-state <i>keyword</i>
Tree	convergence-state
Options	<ul style="list-style-type: none"> • waiting BGP has recently restarted and no sessions have re-established yet • started BGP has recently restarted and at least one session has re-established with support of the address family • partial BGP has recently restarted and at least one session has advertised an End-of-RIB marker for the address family. • timeout BGP has recently restarted and not all non-slow peers advertised an End-of-RIB marker for the address family before the max-wait-to-advertise timer expired • converged All non-slow peers that support the address family have advertised the End-of-RIB marker for the address family

Configurable	False
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

convergence-time *number*

Description	The elapsed time in seconds, starting from the last BGP restart, to reach the converged state for the address family
Context	network-instance name <i>string</i> protocols bgp afi-safi afi-safi-name identityref l3vpn-ipv4-unicast convergence convergence-time <i>number</i>
Tree	convergence-time
Configurable	False
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

first-up-peer-time *number*

Description	The time when the first session supporting the address family came up, measured from the time that the BGP instance restarted
Context	network-instance name <i>string</i> protocols bgp afi-safi afi-safi-name identityref l3vpn-ipv4-unicast convergence first-up-peer-time <i>number</i>
Tree	first-up-peer-time
Configurable	False
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

last-up-peer-time *number*

Description	The time when the last session supporting the address family came up, measured from the time that the BGP instance restarted
Context	network-instance name <i>string</i> protocols bgp afi-safi afi-safi-name identityref l3vpn-ipv4-unicast convergence last-up-peer-time <i>number</i>
Tree	last-up-peer-time
Configurable	False
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

max-wait-to-advertise *number*

Description	The maximum amount of time, in seconds, measured from the time when the first session (configured or dynamic) that supports the address family comes up after a BGP restart, until BGP is allowed to advertise any routes in that address family to any peer The value of this leaf must always be greater than or equal to the operational value of min-wait-to-advertise. The default value is 3x the value of min-wait-to-advertise. A value of 0 means the feature is disabled and there is no additional delay before advertising routes of the address family.
Context	network-instance name <i>string</i> protocols bgp afi-safi afi-safi-name <i>identityref</i> l3vpn-ipv4-unicast convergence max-wait-to-advertise <i>number</i>
Tree	max-wait-to-advertise
Range	0 to 3600
Default	0
Configurable	True
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

oper-max-wait-to-advertise *number*

Description	The operational value of the max-wait-to-advertise timer for the address family
Context	network-instance name <i>string</i> protocols bgp afi-safi afi-safi-name <i>identityref</i> l3vpn-ipv4-unicast convergence oper-max-wait-to-advertise <i>number</i>
Tree	oper-max-wait-to-advertise
Range	0 to 10800
Configurable	False
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

up-peers *number*

Description	The number of BGP sessions (configured and dynamic) that support the address family and that are currently in the established state
Context	network-instance name <i>string</i> protocols bgp afi-safi afi-safi-name <i>identityref</i> l3vpn-ipv4-unicast convergence up-peers <i>number</i>
Tree	up-peers

Configurable	False
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

up-peers-when-min-expired *number*

Description	The number of BGP sessions (configured and dynamic) that support the address family and that were in established state when the win-wait-to-advertise timer expired
Context	network-instance name <i>string</i> protocols bgp afi-safi afi-safi-name <i>identityref</i> l3vpn-ipv4-unicast convergence up-peers-when-min-expired <i>number</i>
Tree	up-peers-when-min-expired
Configurable	False
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

inter-as-vpn *boolean*

Description	When set to true, received VPN-IPv4 routes that are not imported by any network-instance are retained in the BGP RIB and considered 'used' so that they can be propagated to any EBGP or IBGP peer. This command supersedes the effect of keep-all-routes. This command triggers the programming of a VPN label swap operation for each received VPN-IPv4 route.
Context	network-instance name <i>string</i> protocols bgp afi-safi afi-safi-name <i>identityref</i> l3vpn-ipv4-unicast inter-as-vpn <i>boolean</i>
Tree	inter-as-vpn
Default	false
Configurable	True
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

keep-all-routes *boolean*

Description	When this is set to true all received VPN-IPv4 routes are retained in the RIB-IN, even those not imported by any network-instance; these routes display as 'rejected' and cannot be propagated to other peers
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When this is false, VPN-IPv4 routes that are not imported by any network-instance are dropped and not retained in the BGP RIB-IN; policy changes affecting received VPN-IPv4 routes will trigger the sending of ROUTE_REFRESH messages towards all VPN-IPv4 family peers.

Context	network-instance name <i>string</i> protocols bgp afi-safi afi-safi-name <i>identityref</i> l3vpn-ipv4-unicast keep-all-routes <i>boolean</i>
Tree	keep-all-routes
Default	false
Configurable	True
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

next-hop-self-route-reflector *boolean*

Description	When set to true, received VPN-IPv4 routes are kept in the RIB and readvertised to the other route reflector clients with a local next-hop and VPN label This command triggers the programming of a VPN label swap operation for each received VPN-IPv4 route.
Context	network-instance name <i>string</i> protocols bgp afi-safi afi-safi-name <i>identityref</i> l3vpn-ipv4-unicast next-hop-self-route-reflector <i>boolean</i>
Tree	next-hop-self-route-reflector
Default	false
Configurable	True
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

rapid-update *boolean*

Description	When true, vpn-ipv4 update messages are advertised immediately, bypassing the MRAI When this is false, reachability updates and withdrawals are subject to the MRAI interval.
Context	network-instance name <i>string</i> protocols bgp afi-safi afi-safi-name <i>identityref</i> l3vpn-ipv4-unicast rapid-update <i>boolean</i>
Tree	rapid-update
Default	false
Configurable	True

Platforms 7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

receive-ipv6-next-hops *boolean*

Description Enables the advertisement of the RFC 8950 capability to receive IPv4 routes with IPv6 next-hops

When set to true, BGP advertises an extended NH encoding (RFC 8950) capability to its peers. This capability indicates that local router is prepared to accept BGP routes for the AFI/SAFI with IPv6 next-hops from peers in the scope of the command. When set to false, BGP handles received AFI/SAFI routes with IPv6 next-hops as an error and applies treat-as-withdraw.

Context [network-instance name](#) *string* [protocols bgp afi-safi afi-safi-name](#) *identityref* [l3vpn-ipv4-unicast receive-ipv6-next-hops](#) *boolean*

Tree [receive-ipv6-next-hops](#)

Default false

Configurable True

Platforms 7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

l3vpn-ipv6-unicast

Description Options related to the VPN-IPv6 unicast address family

Context [network-instance name](#) *string* [protocols bgp afi-safi afi-safi-name](#) *identityref* [l3vpn-ipv6-unicast](#)

Tree [l3vpn-ipv6-unicast](#)

Configurable True

Platforms 7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

convergence

Description Options for controlling and monitoring routing convergence of the relevant address family

Context [network-instance name](#) *string* [protocols bgp afi-safi afi-safi-name](#) *identityref* [l3vpn-ipv6-unicast convergence](#)

Tree [convergence](#)

Configurable	True
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

converged-peers *number*

Description	The number of peers that have sent an EOR marker for the address family since the last BGP restart
Context	network-instance name <i>string</i> protocols bgp afi-safi afi-safi-name identityref l3vpn-ipv6-unicast convergence converged-peers <i>number</i>
Tree	converged-peers
Configurable	False
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

convergence-state *keyword*

Description	Enter the convergence-state context
Context	network-instance name <i>string</i> protocols bgp afi-safi afi-safi-name identityref l3vpn-ipv6-unicast convergence convergence-state <i>keyword</i>
Tree	convergence-state
Options	<ul style="list-style-type: none"> waiting BGP has recently restarted and no sessions have re-established yet started BGP has recently restarted and at least one session has re-established with support of the address family partial BGP has recently restarted and at least one session has advertised an End-of-RIB marker for the address family. timeout BGP has recently restarted and not all non-slow peers advertised an End-of-RIB marker for the address family before the max-wait-to-advertise timer expired converged All non-slow peers that support the address family have have advertised the End-of-RIB marker for the address family
Configurable	False

Platforms 7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

convergence-time *number*

Description The elapsed time in seconds, starting from the last BGP restart, to reach the converged state for the address family

Context [network-instance name](#) *string* [protocols bgp afi-safi afi-safi-name](#) *identityref* [l3vpn-ipv6-unicast convergence convergence-time](#) *number*

Tree [convergence-time](#)

Configurable False

Platforms 7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

first-up-peer-time *number*

Description The time when the first session supporting the address family came up, measured from the time that the BGP instance restarted

Context [network-instance name](#) *string* [protocols bgp afi-safi afi-safi-name](#) *identityref* [l3vpn-ipv6-unicast convergence first-up-peer-time](#) *number*

Tree [first-up-peer-time](#)

Configurable False

Platforms 7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

last-up-peer-time *number*

Description The time when the last session supporting the address family came up, measured from the time that the BGP instance restarted

Context [network-instance name](#) *string* [protocols bgp afi-safi afi-safi-name](#) *identityref* [l3vpn-ipv6-unicast convergence last-up-peer-time](#) *number*

Tree [last-up-peer-time](#)

Configurable False

Platforms 7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

max-wait-to-advertise *number*

Description	The maximum amount of time, in seconds, measured from the time when the first session (configured or dynamic) that supports the address family comes up after a BGP restart, until BGP is allowed to advertise any routes in that address family to any peer The value of this leaf must always be greater than or equal to the operational value of min-wait-to-advertise. The default value is 3x the value of min-wait-to-advertise. A value of 0 means the feature is disabled and there is no additional delay before advertising routes of the address family.
Context	network-instance name <i>string</i> protocols bgp afi-safi afi-safi-name <i>identityref</i> l3vpn-ipv6-unicast convergence max-wait-to-advertise <i>number</i>
Tree	max-wait-to-advertise
Range	0 to 3600
Default	0
Configurable	True
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

oper-max-wait-to-advertise *number*

Description	The operational value of the max-wait-to-advertise timer for the address family
Context	network-instance name <i>string</i> protocols bgp afi-safi afi-safi-name <i>identityref</i> l3vpn-ipv6-unicast convergence oper-max-wait-to-advertise <i>number</i>
Tree	oper-max-wait-to-advertise
Range	0 to 10800
Configurable	False
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

up-peers *number*

Description	The number of BGP sessions (configured and dynamic) that support the address family and that are currently in the established state
Context	network-instance name <i>string</i> protocols bgp afi-safi afi-safi-name <i>identityref</i> l3vpn-ipv6-unicast convergence up-peers <i>number</i>
Tree	up-peers

Configurable	False
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

up-peers-when-min-expired *number*

Description	The number of BGP sessions (configured and dynamic) that support the address family and that were in established state when the win-wait-to-advertise timer expired
Context	network-instance name <i>string</i> protocols bgp afi-safi afi-safi-name identityref l3vpn-ipv6-unicast convergence up-peers-when-min-expired <i>number</i>
Tree	up-peers-when-min-expired
Configurable	False
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

inter-as-vpn *boolean*

Description	When set to true, received VPN-IPv6 routes that are not imported by any network-instance are retained in the BGP RIB and considered 'used' so that they can be propagated to any EBGP or IBGP peer. This command supersedes the effect of keep-all-routes. This command triggers the programming of a VPN label swap operation for each received VPN-IPv6 route.
Context	network-instance name <i>string</i> protocols bgp afi-safi afi-safi-name identityref l3vpn-ipv6-unicast inter-as-vpn <i>boolean</i>
Tree	inter-as-vpn
Default	false
Configurable	True
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

keep-all-routes *boolean*

Description	When this is set to true all received VPN-IPv6 routes are retained in the RIB-IN, even those not imported by any network-instance; these routes display as 'rejected' and cannot be propagated to other peers
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When this is false, VPN-IPv6 routes that are not imported by any network-instance are dropped and not retained in the BGP RIB-IN; policy changes affecting received VPN-IPv6 routes will trigger the sending of ROUTE_REFRESH messages towards all VPN-IPv6 family peers.

Context	network-instance name <i>string</i> protocols bgp afi-safi afi-safi-name <i>identityref</i> l3vpn-ipv6-unicast keep-all-routes <i>boolean</i>
Tree	keep-all-routes
Default	false
Configurable	True
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

next-hop-self-route-reflector *boolean*

Description	When set to true, received VPN-IPv6 routes are kept in the RIB and readvertised to the other route reflector clients with a local next-hop and VPN label This command triggers the programming of a VPN label swap operation for each received VPN-IPv6 route.
Context	network-instance name <i>string</i> protocols bgp afi-safi afi-safi-name <i>identityref</i> l3vpn-ipv6-unicast next-hop-self-route-reflector <i>boolean</i>
Tree	next-hop-self-route-reflector
Default	false
Configurable	True
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

rapid-update *boolean*

Description	When true, vpn-ipv6 update messages are advertised immediately, bypassing the MRAI When this is false, reachability updates and withdrawals are subject to the MRAI interval.
Context	network-instance name <i>string</i> protocols bgp afi-safi afi-safi-name <i>identityref</i> l3vpn-ipv6-unicast rapid-update <i>boolean</i>
Tree	rapid-update
Default	false
Configurable	True

Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b
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multipath

Description	Options related to BGP multipath
Context	network-instance name <i>string</i> protocols bgp afi-safi afi-safi-name <i>identityref</i> multipath
Tree	multipath
Configurable	True
Platforms	Supported on all platforms

allow-multiple-as *boolean*

Description	When set to true, BGP is allowed to build a multipath set using BGP routes with different neighbor AS (most recent AS in the AS_PATH) When set to false, BGP is only allowed to use non-best paths for ECMP if they meet the multipath criteria and they have the same neighbor AS as the best path
Context	network-instance name <i>string</i> protocols bgp afi-safi afi-safi-name <i>identityref</i> multipath allow-multiple-as <i>boolean</i>
Tree	allow-multiple-as
Default	true
Configurable	True
Platforms	Supported on all platforms

maximum-paths *number*

Description	The maximum number of BGP ECMP next-hops for BGP routes with an NLRI belonging to the address family of this configuration context
Context	network-instance name <i>string</i> protocols bgp afi-safi afi-safi-name <i>identityref</i> multipath maximum-paths <i>number</i>
Tree	maximum-paths
Range	1 to 64
Default	1
Configurable	True

Platforms 7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

received-routes *number*

Description The total number of routes belonging to this AFI/SAFI received from all peers of the BGP instance

Context [network-instance name](#) *string* [protocols bgp afi-safi afi-safi-name](#) *identityref* [received-routes number](#)

Tree [received-routes](#)

Default 0

Configurable False

Platforms Supported on all platforms

as-path-options

Description Options for handling the AS_PATH in received BGP routes

Context [network-instance name](#) *string* [protocols bgp as-path-options](#)

Tree [as-path-options](#)

Configurable True

Platforms Supported on all platforms

allow-own-as *number*

Description The maximum number of times the global AS number or a local AS number of the BGP instance can appear in any received AS_PATH before it is considered a loop and considered invalid

Context [network-instance name](#) *string* [protocols bgp as-path-options allow-own-as number](#)

Tree [allow-own-as](#)

Default 0

Configurable True

Platforms Supported on all platforms

remove-private-as

Description	Container with options for removing private AS numbers (2-byte and 4-byte) from the advertised AS path towards all peers
Context	network-instance name <i>string</i> protocols bgp as-path-options remove-private-as
Tree	remove-private-as
Configurable	True
Platforms	Supported on all platforms

ignore-peer-as *boolean*

Description	If set to true then do not delete or replace a private AS number that is the same as the peer AS number
Context	network-instance name <i>string</i> protocols bgp as-path-options remove-private-as ignore-peer-as <i>boolean</i>
Tree	ignore-peer-as
Default	false
Configurable	True
Platforms	Supported on all platforms

leading-only *boolean*

Description	If set to true then only delete or replace private AS numbers that appear before the first occurrence of a non-private ASN in the sequence of most recent ASNs in the AS path
Context	network-instance name <i>string</i> protocols bgp as-path-options remove-private-as leading-only <i>boolean</i>
Tree	leading-only
Default	false
Configurable	True
Platforms	Supported on all platforms

mode *keyword*

Description	The method by which private AS numbers are removed from the advertised AS_PATH attribute
--------------------	--

Context	network-instance name <i>string</i> protocols bgp as-path-options remove-private-as mode <i>keyword</i>
Tree	mode
Default	disabled
Options	<ul style="list-style-type: none"> disabled Do not strip or replace any private AS numbers delete Delete private AS numbers, shortening the AS path replace Replace private AS numbers with the local AS number used towards the peer, maintaining the AS path length
Configurable	True
Platforms	Supported on all platforms

authentication

Description	Container with authentication options that apply to all peers of the BGP instance
Context	network-instance name <i>string</i> protocols bgp authentication
Tree	authentication
Configurable	True
Platforms	Supported on all platforms

keychain *reference*

Description	Reference to a keychain. The keychain type must be tcp-md5.
Context	network-instance name <i>string</i> protocols bgp authentication keychain reference
Tree	keychain
Reference	system authentication keychain name <i>string</i>
Configurable	True
Platforms	Supported on all platforms

password *string*

Description	Configures an MD5 authentication password for use with neighboring devices.
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Context	network-instance name <i>string</i> protocols bgp authentication password <i>string</i>
Tree	password
Configurable	True
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

autonomous-system *number*

Description	The global AS number of the BGP instance Values greater than 65535 must be entered in ASPLAIN format.
Context	network-instance name <i>string</i> protocols bgp autonomous-system <i>number</i>
Tree	autonomous-system
Range	1 to 4294967295
Configurable	True
Platforms	Supported on all platforms

best-path-selection

Description	Container with options that control the BGP decision process (tie break between routes for the same NLRI).
Context	network-instance name <i>string</i> protocols bgp best-path-selection
Tree	best-path-selection
Configurable	True
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

advertise-inactive *boolean*

Description	Advertise the best BGP route even if it is inactive due to the programming of a better non-BGP route
Context	network-instance name <i>string</i> protocols bgp best-path-selection advertise-inactive <i>boolean</i>
Tree	advertise-inactive
Default	false
Configurable	True
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

always-compare-med *boolean*

Description	Compare multi-exit discriminator (MED) value from different ASes when selecting the best route. The default behavior is to only compare MEDs for paths received from the same AS.
Context	network-instance name <i>string</i> protocols bgp best-path-selection always-compare-med <i>boolean</i>
Tree	always-compare-med
Default	false
Configurable	True
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

bgp-label

Description	Enable the bgp-label context
Context	network-instance name <i>string</i> protocols bgp bgp-label
Tree	bgp-label
Configurable	True
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

bgp-ipvpn

Description	Enter the bgp-ipvpn context
Context	network-instance name <i>string</i> protocols bgp bgp-label bgp-ipvpn
Tree	bgp-ipvpn
Configurable	True
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

next-hop-resolution

Description	Options for controlling next-hop resolution procedures
Context	network-instance name <i>string</i> protocols bgp bgp-label bgp-ipvpn next-hop-resolution

Tree	next-hop-resolution
Configurable	True
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

ipv4-next-hops

Description	Options related to the resolution of BGP next-hops that are IPv4 addresses
Context	network-instance name <i>string</i> protocols bgp bgp-label bgp-ipvpn next-hop-resolution ipv4-next-hops
Tree	ipv4-next-hops
Configurable	True
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

route-resolution

Description	Options related to resolution using IP routes in the FIB
Context	network-instance name <i>string</i> protocols bgp bgp-label bgp-ipvpn next-hop-resolution ipv4-next-hops route-resolution
Tree	route-resolution
Configurable	True
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

admin-state *keyword*

Description	Enable or disable route resolution if no resolving tunnel is found
Context	network-instance name <i>string</i> protocols bgp bgp-label bgp-ipvpn next-hop-resolution ipv4-next-hops route-resolution admin-state <i>keyword</i>
Tree	admin-state
Default	enable
Options	<ul style="list-style-type: none"> • enable • disable
Configurable	True

Platforms 7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

ignore-default-routes *boolean*

Description Ignore default routes, regardless of route type

Context [network-instance name](#) *string* [protocols bgp bgp-label bgp-ipvpn next-hop-resolution ipv4-next-hops route-resolution ignore-default-routes](#) *boolean*

Tree [ignore-default-routes](#)

Default true

Configurable True

Platforms 7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

tunnel-resolution

Description Options related to resolution using tunnels in the tunnel table

Context [network-instance name](#) *string* [protocols bgp bgp-label bgp-ipvpn next-hop-resolution ipv4-next-hops tunnel-resolution](#)

Tree [tunnel-resolution](#)

Configurable True

Platforms 7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

allowed-tunnel-types *identityref*

Description List of allowed tunnel types

Context [network-instance name](#) *string* [protocols bgp bgp-label bgp-ipvpn next-hop-resolution ipv4-next-hops tunnel-resolution allowed-tunnel-types](#) *identityref*

Tree [allowed-tunnel-types](#)

Options

- [bgp-next-hop-resolution-tunnel-type](#)
Base type for the types of tunnels that can be used by BGP for next-hop resolution

Configurable True

Platforms 7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

color-aware

Description Color-aware next-hop resolution options

Context [network-instance name](#) *string* [protocols bgp bgp-label bgp-ipvpn next-hop-resolution ipv4-next-hops tunnel-resolution color-aware](#)

Tree [color-aware](#)

Configurable True

Platforms 7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

ipv6-next-hops

Description Options related to the resolution of BGP next-hops that are IPv6 addresses

Context [network-instance name](#) *string* [protocols bgp bgp-label bgp-ipvpn next-hop-resolution ipv6-next-hops](#)

Tree [ipv6-next-hops](#)

Configurable True

Platforms 7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

route-resolution

Description Options related to resolution using IP routes in the FIB

Context [network-instance name](#) *string* [protocols bgp bgp-label bgp-ipvpn next-hop-resolution ipv6-next-hops route-resolution](#)

Tree [route-resolution](#)

Configurable True

Platforms 7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

admin-state *keyword*

Description	Enable or disable route resolution if no resolving tunnel is found
Context	network-instance name <i>string</i> protocols bgp bgp-label bgp-ipvpn next-hop-resolution ipv6-next-hops route-resolution admin-state <i>keyword</i>
Tree	admin-state
Default	enable
Options	<ul style="list-style-type: none"> • enable • disable
Configurable	True
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

ignore-default-routes *boolean*

Description	Ignore default routes, regardless of route type
Context	network-instance name <i>string</i> protocols bgp bgp-label bgp-ipvpn next-hop-resolution ipv6-next-hops route-resolution ignore-default-routes <i>boolean</i>
Tree	ignore-default-routes
Default	true
Configurable	True
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

tunnel-resolution

Description	Options related to resolution using tunnels in the tunnel table
Context	network-instance name <i>string</i> protocols bgp bgp-label bgp-ipvpn next-hop-resolution ipv6-next-hops tunnel-resolution
Tree	tunnel-resolution
Configurable	True
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

allowed-tunnel-types *identityref*

Description	List of allowed tunnel types
Context	network-instance name <i>string</i> protocols bgp bgp-label bgp-ipvpn next-hop-resolution ipv6-next-hops tunnel-resolution allowed-tunnel-types <i>identityref</i>
Tree	allowed-tunnel-types
Options	<ul style="list-style-type: none"> • bgp-next-hop-resolution-tunnel-type Base type for the types of tunnels that can be used by BGP for next-hop resolution
Configurable	True
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

color-aware

Description	Color-aware next-hop resolution options
Context	network-instance name <i>string</i> protocols bgp bgp-label bgp-ipvpn next-hop-resolution ipv6-next-hops tunnel-resolution color-aware
Tree	color-aware
Configurable	True
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

bgp-vpn

Description	Enter the bgp-vpn context
Context	network-instance name <i>string</i> protocols bgp bgp-label bgp-vpn
Tree	bgp-vpn
Configurable	True
Platforms	label-management and (inter-as-nhsrr-ipvpn, nhsrr-evpn)

dynamic-label-block *reference*

Description	Reference to a dynamic label block used for non-local BGP VPN routes advertised with next-hop-self
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Context	network-instance name <i>string</i> protocols bgp bgp-label bgp-vpn dynamic-label-block <i>reference</i>
Tree	dynamic-label-block
Reference	system mpls label-ranges dynamic name <i>string</i>
Configurable	True
Platforms	label-management and (inter-as-nhsrr-ipvpn, nhsrr-evpn)

dynamic-label-block-status *keyword*

Description	Status of the label block. The label block may show as unavailable if there is pending cleanup.
Context	network-instance name <i>string</i> protocols bgp bgp-label bgp-vpn dynamic-label-block-status <i>keyword</i>
Tree	dynamic-label-block-status
Options	<ul style="list-style-type: none"> • available • unavailable
Configurable	False
Platforms	label-management and (inter-as-nhsrr-ipvpn, nhsrr-evpn)

convergence

Description	Options for configuring address family independent BGP convergence parameters
Context	network-instance name <i>string</i> protocols bgp convergence
Tree	convergence
Configurable	True
Platforms	Supported on all platforms

min-wait-to-advertise *number*

Description	<p>The minimum amount of time, in seconds, measured from the moment when the first session (configured or dynamic) comes up after a BGP restart, until BGP is allowed to advertise any routes to any peer</p> <p>The sessions that are established when this timer expires determines the set of peers from which EOR is expected in order to declare convergence for an address family. A value of 0 means the feature is disabled and all routes are advertised immediately.</p>
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This timer and associated state machine are only restarted by one of the following triggers:

Context	network-instance name <i>string</i> protocols bgp convergence min-wait-to-advertise <i>number</i>
Tree	min-wait-to-advertise
Range	0 to 3600
Default	0
Configurable	True
Platforms	Supported on all platforms

dynamic-neighbors

Description	Options related to the acceptance and initiation of dynamic BGP sessions
Context	network-instance name <i>string</i> protocols bgp dynamic-neighbors
Tree	dynamic-neighbors
Configurable	True
Platforms	Supported on all platforms

accept

Description	Options related to the acceptance of dynamic BGP sessions from remote peers
Context	network-instance name <i>string</i> protocols bgp dynamic-neighbors accept
Tree	accept
Configurable	True
Platforms	Supported on all platforms

match [prefix](#) (*ipv4-prefix* | *ipv6-prefix*)

Description	<p>List of prefix and group-id combinations from which incoming TCP connections to port 179 will be accepted</p> <p>An incoming TCP connection to port 179 is matched to a list entry if: (a) the source IP does not match a configured BGP neighbor address (b) the list entry prefix is the longest prefix match of the source IP. (c) the source IP is not an IPv6 link-local address associated with an (unnumbered) interface configured for dynamic-neighbor sessions.</p>
Context	network-instance name <i>string</i> protocols bgp dynamic-neighbors accept match prefix (<i>ipv4-prefix</i> <i>ipv6-prefix</i>)

Tree	match
Configurable	True
Platforms	Supported on all platforms

prefix (*ipv4-prefix* | *ipv6-prefix*)

Description	The IP prefix used to match an incoming dynamic BGP session to a group.
Context	network-instance name <i>string</i> protocols bgp dynamic-neighbors accept match prefix (<i>ipv4-prefix</i> <i>ipv6-prefix</i>)
Configurable	True
Platforms	Supported on all platforms

allowed-peer-as *string*

Description	<p>The allowed AS numbers that can establish incoming BGP sessions from this prefix and group-id-range combination</p> <p>If the OPEN message from a peer matched to this prefix contains a MyAS number that is not in this allowed list then a NOTIFICATION is sent to the peer with the indication Bad Peer AS. Each entry in this list can be a single AS number or a range of AS numbers in the format as1..as2</p>
Context	network-instance name <i>string</i> protocols bgp dynamic-neighbors accept match prefix (<i>ipv4-prefix</i> <i>ipv6-prefix</i>) allowed-peer-as <i>string</i>
Tree	allowed-peer-as
Configurable	True
Platforms	Supported on all platforms
Max. Elements	32

peer-group *reference*

Description	<p>Reference to a peer-group</p> <p>When an incoming session is matched to this list entry it is associated with the peer-group referenced by this leaf. The peer-group provides all the parameters needed to complete the establishment of the dynamic session. If the referenced peer-group has a configured peer-as this is ignored by dynamic BGP sessions using the group as a template.</p>
Context	network-instance name <i>string</i> protocols bgp dynamic-neighbors accept match prefix (<i>ipv4-prefix</i> <i>ipv6-prefix</i>) peer-group <i>reference</i>
Tree	peer-group
Reference	network-instance name <i>string</i> protocols bgp group group-name <i>string</i>

Configurable	True
Platforms	Supported on all platforms

max-sessions *number*

Description	The maximum number of incoming BGP sessions that will be accepted by the router A value of 0 means no limit.
Context	network-instance name <i>string</i> protocols bgp dynamic-neighbors accept max-sessions <i>number</i>
Tree	max-sessions
Default	0
Configurable	True
Platforms	Supported on all platforms

interface [interface-name](#) *string*

Description	List of interfaces on which dynamic sessions based on IPv6 link-local address discovery are accepted and initiated.
Context	network-instance name <i>string</i> protocols bgp dynamic-neighbors interface interface-name <i>string</i>
Tree	interface
Configurable	True
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

interface-name *string*

Description	Reference to a specific subinterface of the form <interface-name>.<subinterface-index> The referenced subinterface should be enabled for IPv6 and should be configured to accept and send IPv6 router advertisement messages. The referenced subinterface does not need any IPv4 addresses or global-unicast IPv6 addresses (i.e. it can be an unnumbered interface). When a subinterface is present in this list, incoming TCP connections to the BGP well-known port that are received on this subinterface and sourced from an IPv6 link local address and destined for the IPv6 link local address of the subinterface are automatically accepted.
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When a subinterface is present in this list, received IPv6 router advertisement messages on this subinterface automatically trigger BGP session setup towards the sender of these messages, if there is not already an established session.

Context	network-instance name <i>string</i> protocols bgp dynamic-neighbors interface interface-name <i>string</i>
String Length	5 to 25
Configurable	True
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

allowed-peer-as *string*

Description	Specifies the allowed AS numbers of dynamic BGP neighbors on this interface. If the OPEN message from a peer on this interface contains a MyAS number that is not in this allowed list then a NOTIFICATION is sent to the peer with the indication Bad Peer AS. Each entry in this list can be a single AS number or a range of AS numbers in the string format as1..as2.
Context	network-instance name <i>string</i> protocols bgp dynamic-neighbors interface interface-name <i>string</i> allowed-peer-as <i>string</i>
Tree	allowed-peer-as
Configurable	True
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b
Max. Elements	32

max-sessions *number*

Description	The maximum number of dynamic sessions that are allowed to be setup on the interface as a result of accepting sessions from link-local addresses or initiating sessions by means of receiving IPv6 router advertisements.
Context	network-instance name <i>string</i> protocols bgp dynamic-neighbors interface interface-name <i>string</i> max-sessions <i>number</i>
Tree	max-sessions
Default	1
Configurable	True
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

peer-group *reference*

Description	Reference to a peer-group Specifies the peer-group to associate with dynamic BGP neighbors on this interface. The peer-group provides all the parameters needed to complete the establishment of the dynamic session.
Context	network-instance name <i>string</i> protocols bgp dynamic-neighbors interface interface-name <i>string</i> peer-group reference
Tree	peer-group
Reference	network-instance name <i>string</i> protocols bgp group group-name <i>string</i>
Configurable	True
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

ebgp-default-policy

Description	Options for controlling the default policies that apply to EBGp sessions
Context	network-instance name <i>string</i> protocols bgp ebgp-default-policy
Tree	ebgp-default-policy
Configurable	True
Platforms	Supported on all platforms

export-reject-all *boolean*

Description	When set to true, all outbound routes towards any EBGp peer to which no explicit export policy is applied are treated as though they were rejected by policy
Context	network-instance name <i>string</i> protocols bgp ebgp-default-policy export-reject-all <i>boolean</i>
Tree	export-reject-all
Default	true
Configurable	True
Platforms	Supported on all platforms

import-reject-all *boolean*

Description	When set to true, all inbound routes from any EBGp peer to which no explicit import policy is applied are treated as though they were rejected by policy
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Context	network-instance name <i>string</i> protocols bgp ebgp-default-policy import-reject-all <i>boolean</i>
Tree	import-reject-all
Default	true
Configurable	True
Platforms	Supported on all platforms

export-policy *reference*

Description	Apply an export policy to advertised BGP routes
Context	network-instance name <i>string</i> protocols bgp export-policy <i>reference</i>
Tree	export-policy
Reference	routing-policy policy name <i>string</i>
Configurable	True
Platforms	Supported on all platforms
Max. Elements	14

failure-detection

Description	Options related to methods of detecting BGP session failure
Context	network-instance name <i>string</i> protocols bgp failure-detection
Tree	failure-detection
Configurable	True
Platforms	Supported on all platforms

enable-bfd *boolean*

Description	The true setting enables Bi-directional Forwarding Detection on BGP sessions belonging to the peer group
Context	network-instance name <i>string</i> protocols bgp failure-detection enable-bfd <i>boolean</i>
Tree	enable-bfd
Default	false
Configurable	True
Platforms	Supported on all platforms

fast-failover *boolean*

Description	The true setting causes EBGP and IBGP sessions to drop immediately (and not wait for hold timer expiry) when the local interface that they depend upon for neighbor reachability goes down
Context	network-instance name <i>string</i> protocols bgp failure-detection fast-failover <i>boolean</i>
Tree	fast-failover
Default	true
Configurable	True
Platforms	Supported on all platforms

graceful-restart

Description	Options for controlling the behavior of the router as a graceful restart helper
Context	network-instance name <i>string</i> protocols bgp graceful-restart
Tree	graceful-restart
Configurable	True
Platforms	Supported on all platforms

admin-state *keyword*

Description	Administratively enable or disable graceful restart helper for all address families
Context	network-instance name <i>string</i> protocols bgp graceful-restart admin-state <i>keyword</i>
Tree	admin-state
Default	disable
Options	<ul style="list-style-type: none"> • enable • disable
Configurable	True
Platforms	Supported on all platforms

requested-restart-time *number*

Description	The restart time encoded in this router's GR capability.
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If the neighbor honors this request then this is the maximum time allowed for this router to re-establish its TCP connection after a restart. If this time is exceeded, the neighbor is expected to flush stale routes that it was maintaining on behalf of this router.

Context	network-instance name <i>string</i> protocols bgp graceful-restart requested-restart-time <i>number</i>
Tree	requested-restart-time
Range	1 to 3600
Default	300
Units	seconds
Configurable	True
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

stale-routes-time *number*

Description	The maximum number of seconds that routes received from a helped peer remain stale until they are deleted Routes of AFI/SAFI X received from peer Y are marked stale when peer Y goes down and its previous GR capability included AFI/SAFI X.
Context	network-instance name <i>string</i> protocols bgp graceful-restart stale-routes-time <i>number</i>
Tree	stale-routes-time
Range	1 to 3600
Default	360
Units	seconds
Configurable	True
Platforms	Supported on all platforms

group [group-name](#) *string*

Description	Peer group templates
Context	network-instance name <i>string</i> protocols bgp group group-name <i>string</i>
Tree	group
Configurable	True
Platforms	Supported on all platforms

group-name *string*

Description	The configured name of the peer group
Context	network-instance name <i>string</i> protocols bgp group group-name <i>string</i>
String Length	1 to 64
Configurable	True
Platforms	Supported on all platforms

admin-state *keyword*

Description	Administratively enable or disable the peer group Disable will tear down all the BGP sessions in the group, even if they are administratively enabled at the neighbor level.
Context	network-instance name <i>string</i> protocols bgp group group-name <i>string</i> admin-state <i>keyword</i>
Tree	admin-state
Default	enable
Options	<ul style="list-style-type: none"> • enable • disable
Configurable	True
Platforms	Supported on all platforms

afi-safi [afi-safi-name](#) *identityref*

Description	List of address families supported by the BGP peer group
Context	network-instance name <i>string</i> protocols bgp group group-name <i>string</i> afi-safi afi-safi-name <i>identityref</i>
Tree	afi-safi
Configurable	True
Platforms	Supported on all platforms

afi-safi-name *identityref*

Description	The name of a BGP address family, which translates to a specific AFI value and a specific SAFI value
Context	network-instance name <i>string</i> protocols bgp group group-name <i>string</i> afi-safi afi-safi-name <i>identityref</i>

Options

- ipv4-unicast
Unlabeled IPv4 unicast routes (AFI = 1, SAFI = 1)
- ipv6-unicast
Unlabeled IPv6 unicast routes (AFI = 2, SAFI = 1)
- l3vpn-ipv4-unicast
VPN-IPv4 unicast address family (AFI = 1, SAFI = 128)
- l3vpn-ipv6-unicast
VPN-IPv6 unicast address family (AFI = 2, SAFI = 128)
- ipv4-labeled-unicast
Labeled IPv4 unicast routes (AFI 1, SAFI 4)
- ipv6-labeled-unicast
Labeled IPv6 unicast routes (AFI 2, SAFI 4)
- evpn
EVPN routes (AFI = 25, SAFI = 70)
- route-target
Route target constraint routes (AFI 1, SAFI 132)
- sr-policy-ipv4
SR-TE Policy (AFI 1, SAFI 73)
- sr-policy-ipv6
SR-TE Policy (AFI 2, SAFI 73)

Configurable

True

Platforms

Supported on all platforms

add-paths**Description**

Configure support for the advertisement and receipt of multiple paths for the AFI/SAFI

Context

[network-instance name](#) *string* [protocols bgp group group-name](#) *string* [afi-safi afi-safi-name](#) *identityref* [add-paths](#)

Tree

[add-paths](#)

Configurable

True

Platforms

7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

receive *boolean*

Description	Enable capability negotiation to receive multiple path advertisements from a single peer for a single NLRI belonging to the AFI/SAFI
Context	network-instance name <i>string</i> protocols bgp group group-name <i>string</i> afi-safi afi-safi-name identityref add-paths receive <i>boolean</i>
Tree	receive
Configurable	True
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

send *boolean*

Description	Enable capability negotiation to send multiple path advertisements to a single peer for a single NLRI belonging to the AFI/SAFI
Context	network-instance name <i>string</i> protocols bgp group group-name <i>string</i> afi-safi afi-safi-name identityref add-paths send <i>boolean</i>
Tree	send
Configurable	True
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

send-max *number*

Description	Send the N best paths for a single NLRI, or as many as possible until there are no more valid paths to send. This ensures the best path is advertised but does not limit the additional paths to being 'used' paths.
Context	network-instance name <i>string</i> protocols bgp group group-name <i>string</i> afi-safi afi-safi-name identityref add-paths send-max <i>number</i>
Tree	send-max
Range	1 to 16
Configurable	True
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

send-multipath

Description	Send the used paths for a single NLRI, including all paths that are multipaths.
Context	network-instance name <i>string</i> protocols bgp group group-name <i>string</i> afi-safi afi-safi-name <i>identityref</i> add-paths send-multipath
Tree	send-multipath
Configurable	True
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

admin-state *keyword*

Description	This leaf indicates whether the AFI-SAFI is enabled for the peer group
Context	network-instance name <i>string</i> protocols bgp group group-name <i>string</i> afi-safi afi-safi-name <i>identityref</i> admin-state <i>keyword</i>
Tree	admin-state
Options	<ul style="list-style-type: none"> • enable • disable
Configurable	True
Platforms	Supported on all platforms

evpn

Description	Options related to the EVPN address family
Context	network-instance name <i>string</i> protocols bgp group group-name <i>string</i> afi-safi afi-safi-name <i>identityref</i> evpn
Tree	evpn
Configurable	True
Platforms	Supported on all platforms

advertise-ipv6-next-hops *boolean*

Description	<p>Enables advertisement of EVPN routes with IPv6 next-hops to peers in the peer-group</p> <p>If this is set to true and the local-address used towards the peer is an IPv6 address and BGP is supposed to apply next-hop-self then the route is</p>
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advertised with the IPv6 local-address as the BGP next-hop. If this is set to false, then the EVPN route is advertised with an IPv4 next-hop.

Context	network-instance name <i>string</i> protocols bgp group group-name <i>string</i> afi-safi afi-safi-name <i>identityref</i> evpn advertise-ipv6-next-hops <i>boolean</i>
Tree	advertise-ipv6-next-hops
Configurable	True
Platforms	Supported on all platforms

default-received-encapsulation *keyword*

Description	<p>Indicates the encapsulation considered when the routes are received without BGP encapsulation extended community</p> <p>Most EVPN routes are usually received with a BGP encapsulation extended community that indicates the encapsulation and therefore how to interpret the value in the received Label fields of the routes. If no encapsulation is received, BGP will validate the route as MPLS or VXLAN or SRv6 depending on how this command is configured.</p>
Context	network-instance name <i>string</i> protocols bgp group group-name <i>string</i> afi-safi afi-safi-name <i>identityref</i> evpn default-received-encapsulation <i>keyword</i>
Tree	default-received-encapsulation
Options	<ul style="list-style-type: none"> • vxlan • mpls
Configurable	True
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

prefix-limit-received

Description	Options for configuring the maximum number of EVPN routes allowed to be received from each peer in the peer-group
Context	network-instance name <i>string</i> protocols bgp group group-name <i>string</i> afi-safi afi-safi-name <i>identityref</i> evpn prefix-limit-received
Tree	prefix-limit-received
Configurable	True
Platforms	Supported on all platforms

max-received-routes *number*

Description	Maximum number of EVPN routes that will be accepted from each neighbor, counting routes accepted and rejected by import policies
Context	network-instance name <i>string</i> protocols bgp group group-name <i>string</i> afi-safi afi-safi-name <i>identityref</i> evpn prefix-limit-received max-received-routes <i>number</i>
Tree	max-received-routes
Range	1 to 4294967295
Default	4294967295
Configurable	True
Platforms	Supported on all platforms

warning-threshold-pct *number*

Description	When the number of EVPN routes received from the peer (counting routes accepted and rejected by import policy) reaches this percentage of the max-received-routes limit, BGP raises a warning log event
Context	network-instance name <i>string</i> protocols bgp group group-name <i>string</i> afi-safi afi-safi-name <i>identityref</i> evpn prefix-limit-received warning-threshold-pct <i>number</i>
Tree	warning-threshold-pct
Range	0 to 100
Default	90
Configurable	True
Platforms	Supported on all platforms

export-policy *reference*

Description	Apply an export policy to advertised BGP routes
Context	network-instance name <i>string</i> protocols bgp group group-name <i>string</i> afi-safi afi-safi-name <i>identityref</i> export-policy <i>reference</i>
Tree	export-policy
Reference	routing-policy policy name <i>string</i>
Configurable	True
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

Max. Elements 14

import-policy *reference*

Description Apply an import policy to received BGP routes

Context [network-instance name](#) *string* [protocols bgp group group-name](#) *string* [afi-safi afi-safi-name](#) *identityref* [import-policy reference](#)

Tree [import-policy](#)

Reference [routing-policy policy name](#) *string*

Configurable True

Platforms 7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

Max. Elements 14

ipv4-labeled-unicast

Description Options related to the labeled-IPv4-unicast address family

Context [network-instance name](#) *string* [protocols bgp group group-name](#) *string* [afi-safi afi-safi-name](#) *identityref* [ipv4-labeled-unicast](#)

Tree [ipv4-labeled-unicast](#)

Configurable True

Platforms 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

advertise-ipv6-next-hops *boolean*

Description Enables advertisement of IPv4 routes with IPv6 next-hops

Context [network-instance name](#) *string* [protocols bgp group group-name](#) *string* [afi-safi afi-safi-name](#) *identityref* [ipv4-labeled-unicast advertise-ipv6-next-hops](#) *boolean*

Tree [advertise-ipv6-next-hops](#)

Configurable True

Platforms 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

receive-ipv6-next-hops *boolean*

Description Enables the advertisement of the RFC 8950 capability to receive IPv4 routes with IPv6 next-hops

When set to true, BGP advertises an extended NH encoding (RFC 8950) capability to its peers. This capability indicates that local router is prepared to accept BGP routes for the AFI/SAFI with IPv6 next-hops from peers in the scope of the command. When set to false, BGP handles received AFI/SAFI routes with IPv6 next-hops as an error and applies treat-as-withdraw.

Context	network-instance name <i>string</i> protocols bgp group group-name <i>string</i> afi-safi afi-safi-name <i>identityref</i> ipv4-labeled-unicast receive-ipv6-next-hops <i>boolean</i>
Tree	receive-ipv6-next-hops
Configurable	True
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

ipv4-unicast

Description	Options related to the IPv4-unicast address family
Context	network-instance name <i>string</i> protocols bgp group group-name <i>string</i> afi-safi afi-safi-name <i>identityref</i> ipv4-unicast
Tree	ipv4-unicast
Configurable	True
Platforms	Supported on all platforms

advertise-ipv6-next-hops *boolean*

Description	Enables advertisement of IPv4 routes with IPv6 next-hops
Context	network-instance name <i>string</i> protocols bgp group group-name <i>string</i> afi-safi afi-safi-name <i>identityref</i> ipv4-unicast advertise-ipv6-next-hops <i>boolean</i>
Tree	advertise-ipv6-next-hops
Configurable	True
Platforms	Supported on all platforms

link-bandwidth

Description	Enter the link-bandwidth context
Context	network-instance name <i>string</i> protocols bgp group group-name <i>string</i> afi-safi afi-safi-name <i>identityref</i> ipv4-unicast link-bandwidth
Tree	link-bandwidth
Configurable	True
Platforms	7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

add-next-hop-count-to-received-bgp-routes (*number* | *keyword*)

Description	Determines the weight that is internally added to the received PE-CE BGP routes The configured weight is added to all received BGP PE-CE routes for the purpose of EVPN unequal ECMP. This weight is internal and not added into any link-bandwidth extended community when readvertising the received routes to other ipv4 or ipv6 neighbors.
Context	network-instance name <i>string</i> protocols bgp group group-name <i>string</i> afi-safi afi-safi-name <i>identityref</i> ipv4-unicast link-bandwidth add-next-hop-count-to-received-bgp-routes (<i>number</i> <i>keyword</i>)
Tree	add-next-hop-count-to-received-bgp-routes
Range	1 to 128
Options	<ul style="list-style-type: none"> • <code>disable</code>
Configurable	True
Platforms	7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

prefix-limit-received

Description	Options for configuring the maximum number of IPv4 routes allowed to be received from each peer in the group
Context	network-instance name <i>string</i> protocols bgp group group-name <i>string</i> afi-safi afi-safi-name <i>identityref</i> ipv4-unicast prefix-limit-received
Tree	prefix-limit-received
Configurable	True
Platforms	Supported on all platforms

max-received-routes *number*

Description	Maximum number of IPv4 routes that will be accepted from each neighbor, counting routes accepted and rejected by import policies
Context	network-instance name <i>string</i> protocols bgp group group-name <i>string</i> afi-safi afi-safi-name <i>identityref</i> ipv4-unicast prefix-limit-received max-received-routes <i>number</i>
Tree	max-received-routes
Range	1 to 4294967295
Default	4294967295

Configurable	True
Platforms	Supported on all platforms

prevent-teardown *boolean*

Description	When false the session is immediately torn down when the number of received IPv4 routes exceeds the configured limit.
Context	network-instance name <i>string</i> protocols bgp group group-name <i>string</i> afi-safi afi-safi-name <i>identityref</i> ipv4-unicast prefix-limit-received prevent-teardown <i>boolean</i>
Tree	prevent-teardown
Default	false
Configurable	True
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

warning-threshold-pct *number*

Description	When the number of IPv4 routes received from any group peer (counting routes accepted and rejected by import policy) reaches this percentage of the max-received-routes limit, BGP raises a warning log event
Context	network-instance name <i>string</i> protocols bgp group group-name <i>string</i> afi-safi afi-safi-name <i>identityref</i> ipv4-unicast prefix-limit-received warning-threshold-pct <i>number</i>
Tree	warning-threshold-pct
Range	0 to 100
Default	90
Configurable	True
Platforms	Supported on all platforms

receive-ipv6-next-hops *boolean*

Description	Enables the advertisement of the RFC 8950 capability to receive IPv4 routes with IPv6 next-hops When set to true, BGP advertises an extended NH encoding (RFC 8950) capability to its peers. This capability indicates that local router is prepared to accept BGP routes for the AFI/SAFI with IPv6 next-hops from peers in the scope of the command. When set to false, BGP handles received AFI/SAFI routes with IPv6 next-hops as an error and applies treat-as-withdraw.
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Context	network-instance name <i>string</i> protocols bgp group group-name <i>string</i> afi-safi afi-safi-name <i>identityref</i> ipv4-unicast receive-ipv6-next-hops <i>boolean</i>
Tree	receive-ipv6-next-hops
Configurable	True
Platforms	Supported on all platforms

ipv6-labeled-unicast

Description	Options related to the labeled IPv6-unicast address family
Context	network-instance name <i>string</i> protocols bgp group group-name <i>string</i> afi-safi afi-safi-name <i>identityref</i> ipv6-labeled-unicast
Tree	ipv6-labeled-unicast
Configurable	True
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

ipv6-unicast

Description	Options related to the IPv6-unicast address family
Context	network-instance name <i>string</i> protocols bgp group group-name <i>string</i> afi-safi afi-safi-name <i>identityref</i> ipv6-unicast
Tree	ipv6-unicast
Configurable	True
Platforms	Supported on all platforms

link-bandwidth

Description	Enter the link-bandwidth context
Context	network-instance name <i>string</i> protocols bgp group group-name <i>string</i> afi-safi afi-safi-name <i>identityref</i> ipv6-unicast link-bandwidth
Tree	link-bandwidth
Configurable	True
Platforms	7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

add-next-hop-count-to-received-bgp-routes (*number* | *keyword*)

Description	Determines the weight that is internally added to the received PE-CE BGP routes The configured weight is added to all received BGP PE-CE routes for the purpose of EVPN unequal ECMP. This weight is internal and not added into any link-bandwidth extended community when readvertising the received routes to other ipv4 or ipv6 neighbors.
Context	network-instance name <i>string</i> protocols bgp group group-name <i>string</i> afi-safi afi-safi-name <i>identityref</i> ipv6-unicast link-bandwidth add-next-hop-count-to-received-bgp-routes (<i>number</i> <i>keyword</i>)
Tree	add-next-hop-count-to-received-bgp-routes
Range	1 to 128
Options	<ul style="list-style-type: none"> • <code>disable</code>
Configurable	True
Platforms	7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

prefix-limit-received

Description	Options for configuring the maximum number of IPv6 routes allowed to be received from each peer in the group
Context	network-instance name <i>string</i> protocols bgp group group-name <i>string</i> afi-safi afi-safi-name <i>identityref</i> ipv6-unicast prefix-limit-received
Tree	prefix-limit-received
Configurable	True
Platforms	Supported on all platforms

max-received-routes *number*

Description	Maximum number of IPv6 routes that will be accepted from each neighbor, counting routes accepted and rejected by import policies
Context	network-instance name <i>string</i> protocols bgp group group-name <i>string</i> afi-safi afi-safi-name <i>identityref</i> ipv6-unicast prefix-limit-received max-received-routes <i>number</i>
Tree	max-received-routes
Range	1 to 4294967295
Default	4294967295

Configurable	True
Platforms	Supported on all platforms

prevent-teardown *boolean*

Description	When false the session is immediately torn down when the number of received IPv6 routes exceeds the configured limit.
Context	network-instance name <i>string</i> protocols bgp group group-name <i>string</i> afi-safi afi-safi-name <i>identityref</i> ipv6-unicast prefix-limit-received prevent-teardown <i>boolean</i>
Tree	prevent-teardown
Default	false
Configurable	True
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

warning-threshold-pct *number*

Description	When the number of IPv6 routes received from any group peer (counting routes accepted and rejected by import policy) reaches this percentage of the max-received-routes limit, BGP raises a warning log event
Context	network-instance name <i>string</i> protocols bgp group group-name <i>string</i> afi-safi afi-safi-name <i>identityref</i> ipv6-unicast prefix-limit-received warning-threshold-pct <i>number</i>
Tree	warning-threshold-pct
Range	0 to 100
Default	90
Configurable	True
Platforms	Supported on all platforms

I3vpn-ipv4-unicast

Description	Options related to the VPN-IPv4 unicast address family
Context	network-instance name <i>string</i> protocols bgp group group-name <i>string</i> afi-safi afi-safi-name <i>identityref</i> I3vpn-ipv4-unicast
Tree	I3vpn-ipv4-unicast
Configurable	True

Platforms 7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

advertise-ipv6-next-hops *boolean*

Description Enables advertisement of IPv4 routes with IPv6 next-hops

Context [network-instance name](#) *string* [protocols bgp group group-name](#) *string* [afi-safi afi-safi-name](#) [identityref I3vpn-ipv4-unicast advertise-ipv6-next-hops](#) *boolean*

Tree [advertise-ipv6-next-hops](#)

Configurable True

Platforms 7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

prefix-limit-received

Description Options for configuring the maximum number of VPN-IPv4 unicast routes allowed to be received from each peer in the group

Context [network-instance name](#) *string* [protocols bgp group group-name](#) *string* [afi-safi afi-safi-name](#) [identityref I3vpn-ipv4-unicast prefix-limit-received](#)

Tree [prefix-limit-received](#)

Configurable True

Platforms 7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

max-received-routes *number*

Description Maximum number of VPN-IPv4 routes that will be accepted from each neighbor, counting routes accepted and rejected by import policies

Context [network-instance name](#) *string* [protocols bgp group group-name](#) *string* [afi-safi afi-safi-name](#) [identityref I3vpn-ipv4-unicast prefix-limit-received max-received-routes](#) *number*

Tree [max-received-routes](#)

Range 1 to 4294967295

Default 4294967295

Configurable True

Platforms 7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

prevent-teardown *boolean*

Description When false the session is immediately torn down when the number of received VPN-IPv4 routes exceeds the configured limit.

Context [network-instance name](#) *string* [protocols bgp group group-name](#) *string* [afi-safi](#) [afi-safi-name](#) [identityref I3vpn-ipv4-unicast prefix-limit-received prevent-teardown](#) *boolean*

Tree [prevent-teardown](#)

Default false

Configurable True

Platforms 7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

warning-threshold-pct *number*

Description When the number of VPN-IPv4 routes received from any group peer (counting routes accepted and rejected by import policy) reaches this percentage of the max-received-routes limit, BGP raises a warning log event

Context [network-instance name](#) *string* [protocols bgp group group-name](#) *string* [afi-safi](#) [afi-safi-name](#) [identityref I3vpn-ipv4-unicast prefix-limit-received warning-threshold-pct](#) *number*

Tree [warning-threshold-pct](#)

Range 0 to 100

Default 90

Configurable True

Platforms 7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

receive-ipv6-next-hops *boolean*

Description Enables the advertisement of the RFC 8950 capability to receive IPv4 routes with IPv6 next-hops

When set to true, BGP advertises an extended NH encoding (RFC 8950) capability to its peers. This capability indicates that local router is prepared to accept BGP routes for the AFI/SAFI with IPv6 next-hops from peers in the

scope of the command. When set to false, BGP handles received AFI/SAFI routes with IPv6 next-hops as an error and applies treat-as-withdraw.

Context	network-instance name <i>string</i> protocols bgp group group-name <i>string</i> afi-safi afi-safi-name <i>identityref</i> l3vpn-ipv4-unicast receive-ipv6-next-hops <i>boolean</i>
Tree	receive-ipv6-next-hops
Configurable	True
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

l3vpn-ipv6-unicast

Description	Options related to the VPN-IPv6 unicast address family
Context	network-instance name <i>string</i> protocols bgp group group-name <i>string</i> afi-safi afi-safi-name <i>identityref</i> l3vpn-ipv6-unicast
Tree	l3vpn-ipv6-unicast
Configurable	True
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

prefix-limit-received

Description	Options for configuring the maximum number of VPN-IPv6 unicast routes allowed to be received from each peer in the group
Context	network-instance name <i>string</i> protocols bgp group group-name <i>string</i> afi-safi afi-safi-name <i>identityref</i> l3vpn-ipv6-unicast prefix-limit-received
Tree	prefix-limit-received
Configurable	True
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

max-received-routes *number*

Description	Maximum number of VPN-IPv6 routes that will be accepted from each neighbor, counting routes accepted and rejected by import policies
Context	network-instance name <i>string</i> protocols bgp group group-name <i>string</i> afi-safi afi-safi-name <i>identityref</i> l3vpn-ipv6-unicast prefix-limit-received max-received-routes <i>number</i>

Tree	max-received-routes
Range	1 to 4294967295
Default	4294967295
Configurable	True
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

prevent-teardown *boolean*

Description	When false the session is immediately torn down when the number of received VPN-IPv6 routes exceeds the configured limit.
Context	network-instance name <i>string</i> protocols bgp group group-name <i>string</i> afi-safi afi-safi-name <i>identityref</i> l3vpn-ipv6-unicast prefix-limit-received prevent-teardown <i>boolean</i>
Tree	prevent-teardown
Default	false
Configurable	True
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

warning-threshold-pct *number*

Description	When the number of VPN-IPv6 routes received from any group peer (counting routes accepted and rejected by import policy) reaches this percentage of the max-received-routes limit, BGP raises a warning log event
Context	network-instance name <i>string</i> protocols bgp group group-name <i>string</i> afi-safi afi-safi-name <i>identityref</i> l3vpn-ipv6-unicast prefix-limit-received warning-threshold-pct <i>number</i>
Tree	warning-threshold-pct
Range	0 to 100
Default	90
Configurable	True
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

route-target

Description	Options related to the RT constraint address family
Context	network-instance name <i>string</i> protocols bgp group group-name <i>string</i> afi-safi afi-safi-name <i>identityref</i> route-target
Tree	route-target
Configurable	True
Platforms	7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

prefix-limit-received

Description	Options for configuring the maximum number of RTC routes allowed to be received from the peer
Context	network-instance name <i>string</i> protocols bgp group group-name <i>string</i> afi-safi afi-safi-name <i>identityref</i> route-target prefix-limit-received
Tree	prefix-limit-received
Configurable	True
Platforms	7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

max-received-routes *number*

Description	Maximum number of RTC routes that will be accepted from the neighbor, counting routes accepted and rejected by import policies
Context	network-instance name <i>string</i> protocols bgp group group-name <i>string</i> afi-safi afi-safi-name <i>identityref</i> route-target prefix-limit-received max-received-routes <i>number</i>
Tree	max-received-routes
Range	1 to 4294967295
Default	4294967295
Configurable	True
Platforms	7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

prevent-teardown *boolean*

Description	When false the session is immediately torn down when the number of received RTC routes exceeds the configured limit.
Context	network-instance name <i>string</i> protocols bgp group group-name <i>string</i> afi-safi afi-safi-name <i>identityref</i> route-target prefix-limit-received prevent-teardown <i>boolean</i>
Tree	prevent-teardown
Default	false
Configurable	True
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

warning-threshold-pct *number*

Description	When the number of RTC routes received from the peer (counting routes accepted and rejected by import policy) reaches this percentage of the max-received-routes limit, BGP raises a warning log event
Context	network-instance name <i>string</i> protocols bgp group group-name <i>string</i> afi-safi afi-safi-name <i>identityref</i> route-target prefix-limit-received warning-threshold-pct <i>number</i>
Tree	warning-threshold-pct
Range	0 to 100
Default	90
Configurable	True
Platforms	7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

send-default-route *boolean*

Description	When true the router advertises a synthetically generated default RTC route to each peer in the group
Context	network-instance name <i>string</i> protocols bgp group group-name <i>string</i> afi-safi afi-safi-name <i>identityref</i> route-target send-default-route <i>boolean</i>
Tree	send-default-route
Default	false
Configurable	True

Platforms 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

as-path-options

Description Options for handling the AS_PATH in received BGP routes

Context [network-instance name string protocols bgp group group-name string as-path-options](#)

Tree [as-path-options](#)

Configurable True

Platforms Supported on all platforms

allow-own-as *number*

Description The maximum number of times the global AS number or a local AS number of the BGP instance can appear in any received AS_PATH before it is considered a loop and considered invalid

When this value is changed the new value applies only to the routes received after the change is committed.

Context [network-instance name string protocols bgp group group-name string as-path-options allow-own-as number](#)

Tree [allow-own-as](#)

Configurable True

Platforms Supported on all platforms

remove-private-as

Description Container with options for removing private AS numbers (2-byte and 4-byte) from the advertised AS path towards all peers

Context [network-instance name string protocols bgp group group-name string as-path-options remove-private-as](#)

Tree [remove-private-as](#)

Configurable True

Platforms Supported on all platforms

ignore-peer-as *boolean*

Description	If set to true then do not delete or replace a private AS number that is the same as the peer AS number
Context	network-instance name <i>string</i> protocols bgp group group-name <i>string</i> as-path-options remove-private-as ignore-peer-as <i>boolean</i>
Tree	ignore-peer-as
Default	false
Configurable	True
Platforms	Supported on all platforms

leading-only *boolean*

Description	If set to true then only delete or replace private AS numbers that appear before the first occurrence of a non-private ASN in the sequence of most recent ASNs in the AS path
Context	network-instance name <i>string</i> protocols bgp group group-name <i>string</i> as-path-options remove-private-as leading-only <i>boolean</i>
Tree	leading-only
Default	false
Configurable	True
Platforms	Supported on all platforms

mode *keyword*

Description	The method by which private AS numbers are removed from the advertised AS_PATH attribute
Context	network-instance name <i>string</i> protocols bgp group group-name <i>string</i> as-path-options remove-private-as mode <i>keyword</i>
Tree	mode
Options	<ul style="list-style-type: none"> • disabled Do not strip or replace any private AS numbers • delete Delete private AS numbers, shortening the AS path • replace Replace private AS numbers with the local AS number used towards the peer, maintaining the AS path length
Configurable	True

Platforms Supported on all platforms

replace-peer-as *boolean*

Description If set to true then replace every occurrence of the peer AS number that is present in the advertised AS path with the local AS number used towards the peer

Context [network-instance name](#) *string* [protocols bgp group group-name](#) *string* [as-path-options replace-peer-as](#) *boolean*

Tree [replace-peer-as](#)

Configurable True

Platforms Supported on all platforms

authentication

Description Container with authentication options that apply to all peers in this peer-group

Context [network-instance name](#) *string* [protocols bgp group group-name](#) *string* [authentication](#)

Tree [authentication](#)

Configurable True

Platforms Supported on all platforms

keychain *reference*

Description Reference to a keychain. The keychain type must be tcp-md5.

Context [network-instance name](#) *string* [protocols bgp group group-name](#) *string* [authentication keychain](#) *reference*

Tree [keychain](#)

Reference [system authentication keychain name](#) *string*

Configurable True

Platforms Supported on all platforms

password *string*

Description Configures an MD5 authentication password for use with neighboring devices.

Context	network-instance name <i>string</i> protocols bgp group group-name <i>string</i> authentication password <i>string</i>
Tree	password
Configurable	True
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

description *string*

Description	A user provided description string for the peer group
Context	network-instance name <i>string</i> protocols bgp group group-name <i>string</i> description <i>string</i>
Tree	description
String Length	1 to 255
Configurable	True
Platforms	Supported on all platforms

export-policy *reference*

Description	Apply an export policy to advertised BGP routes
Context	network-instance name <i>string</i> protocols bgp group group-name <i>string</i> export-policy <i>reference</i>
Tree	export-policy
Reference	routing-policy policy name <i>string</i>
Configurable	True
Platforms	Supported on all platforms
Max. Elements	14

failure-detection

Description	Options related to methods of detecting BGP session failure
Context	network-instance name <i>string</i> protocols bgp group group-name <i>string</i> failure-detection
Tree	failure-detection
Configurable	True
Platforms	Supported on all platforms

enable-bfd *boolean*

Description	The true setting enables Bi-directional Forwarding Detection on BGP sessions belonging to the peer group
Context	network-instance name <i>string</i> protocols bgp group group-name <i>string</i> failure-detection enable-bfd <i>boolean</i>
Tree	enable-bfd
Configurable	True
Platforms	Supported on all platforms

fast-failover *boolean*

Description	The true setting causes EBGP and IBGP sessions in the peer group to drop immediately (and not wait for hold timer expiry) when the local interface that they depend upon for neighbor reachability goes down
Context	network-instance name <i>string</i> protocols bgp group group-name <i>string</i> failure-detection fast-failover <i>boolean</i>
Tree	fast-failover
Configurable	True
Platforms	Supported on all platforms

graceful-restart

Description	Options related to router behavior as a graceful restart helper
Context	network-instance name <i>string</i> protocols bgp group group-name <i>string</i> graceful-restart
Tree	graceful-restart
Configurable	True
Platforms	Supported on all platforms

admin-state *keyword*

Description	Administratively enable or disable graceful restart helper for all address families
Context	network-instance name <i>string</i> protocols bgp group group-name <i>string</i> graceful-restart admin-state <i>keyword</i>
Tree	admin-state
Options	<ul style="list-style-type: none"> enable

	<ul style="list-style-type: none"> • disable
Configurable	True
Platforms	Supported on all platforms

requested-restart-time *number*

Description	<p>The restart time encoded in this router's GR capability.</p> <p>If the neighbor honors this request then this is the maximum time allowed for this router to re-establish its TCP connection after a restart. If this time is exceeded, the neighbor is expected to flush stale routes that it was maintaining on behalf of this router.</p>
Context	network-instance name <i>string</i> protocols bgp group group-name <i>string</i> graceful-restart requested-restart-time <i>number</i>
Tree	requested-restart-time
Range	1 to 3600
Default	300
Units	seconds
Configurable	True
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

stale-routes-time *number*

Description	<p>The maximum number of seconds that routes received from a neighbor that is being helped remain stale until they are deleted.</p> <p>Routes of AFI/SAFI X received from peer Y are marked stale when peer Y goes down and its previous GR capability included AFI/SAFI X.</p>
Context	network-instance name <i>string</i> protocols bgp group group-name <i>string</i> graceful-restart stale-routes-time <i>number</i>
Tree	stale-routes-time
Range	1 to 3600
Units	seconds
Configurable	True
Platforms	Supported on all platforms

import-policy *reference*

Description	Apply an import policy to received BGP routes
Context	network-instance name <i>string</i> protocols bgp group group-name <i>string</i> import-policy reference
Tree	import-policy
Reference	routing-policy policy name <i>string</i>
Configurable	True
Platforms	Supported on all platforms
Max. Elements	14

local-as

Description	Options related to the local autonomous-system number advertised by this router to its peers
Context	network-instance name <i>string</i> protocols bgp group group-name <i>string</i> local-as
Tree	local-as
Configurable	True
Platforms	Supported on all platforms

as-number *number*

Description	The local autonomous system number used to override the global ASN on this group of BGP sessions Sets the ASN value that this router sends in its OPEN message towards its peer in the group.
Context	network-instance name <i>string</i> protocols bgp group group-name <i>string</i> local-as as-number <i>number</i>
Tree	as-number
Range	1 to 4294967295
Configurable	True
Platforms	Supported on all platforms

prepend-global-as *boolean*

Description	When set to true, the global ASN value is prepended to the AS path in outbound routes towards each BGP peer in the group
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If a session is EBGP (peer-as is not equal to the local-as) then the local-as is prepended as the final step, so that the local-as is the first element in the AS_PATH received by the peer.

Context	network-instance name <i>string</i> protocols bgp group group-name <i>string</i> local-as prepend-global-as <i>boolean</i>
Tree	prepend-global-as
Configurable	True
Platforms	Supported on all platforms

prepend-local-as *boolean*

Description	When set to true, the local AS value is prepended to the AS path of inbound routes from each EBGP peer belonging to the group
Context	network-instance name <i>string</i> protocols bgp group group-name <i>string</i> local-as prepend-local-as <i>boolean</i>
Tree	prepend-local-as
Configurable	True
Platforms	Supported on all platforms

local-preference *number*

Description	The value of the local-preference attribute that is added to received routes from EBGP peers in the group It is also used to encode the local preference attribute for locally generated BGP routes.
Context	network-instance name <i>string</i> protocols bgp group group-name <i>string</i> local-preference <i>number</i>
Tree	local-preference
Configurable	True
Platforms	Supported on all platforms

maintenance-group *string*

Description	State field to display the maintenance group to which this group belongs to.
Context	network-instance name <i>string</i> protocols bgp group group-name <i>string</i> maintenance-group <i>string</i>
Tree	maintenance-group
Configurable	False

Platforms Supported on all platforms

multihop

Description Configuration parameters specifying the multihop behaviour for IBGP and EBGP peers in the peer group.

Context [network-instance name](#) *string* [protocols bgp group group-name](#) *string* [multihop](#)

Tree [multihop](#)

Configurable True

Platforms Supported on all platforms

admin-state *keyword*

Description When enabled, IBGP and EBGP peers in the group are allowed to be indirectly connected by up to N hops, where N is controlled by the maximum-hops parameter. When disabled, only IBGP peers within the peer group support multihop.

This can be overridden on a per neighbor basis. It is inherited by neighbors in the peer-group only if maximum-hops is also specified.

By default this is disabled.

Context [network-instance name](#) *string* [protocols bgp group group-name](#) *string* [multihop admin-state](#) *keyword*

Tree [admin-state](#)

Options

- enable
- disable

Configurable True

Platforms Supported on all platforms

maximum-hops *number*

Description This sets the maximum number of routing hops towards each peer. It determines the IP TTL value in originated BGP TCP/IP packets. By default the TTL is set to 1 towards EBGP peers and 64 towards IBGP peers. This leaf sets a new IP TTL to use towards both EBGP and IBGP peers in the peer group.

This can be overridden on a per neighbor basis. It is inherited by neighbors in the peer-group only if admin-state is also specified.

Context	network-instance name <i>string</i> protocols bgp group group-name <i>string</i> multihop maximum-hops <i>number</i>
Tree	maximum-hops
Range	1 to 255
Configurable	True
Platforms	Supported on all platforms

next-hop-self *boolean*

Description	When set to true, the next-hop in all IPv4-unicast, IPv6-unicast, EVPN, VPN-IPv4 and VPN-IPv6 BGP routes advertised to all IBGP peers in the peer-group is set equal to the local-address used on each session (or to the router ID if the NLRI is IPv6 and there is no IPv6 local address to use). This is independent of the route origin (EBGP, IBGP-client, IBGP-non-client or redistributed direct/static/aggregate route). When set to false, normal BGP rules from RFC 4271 apply.
Context	network-instance name <i>string</i> protocols bgp group group-name <i>string</i> next-hop-self <i>boolean</i>
Tree	next-hop-self
Default	false
Configurable	True
Platforms	Supported on all platforms

optional-attributes

Description	Enter the optional-attributes context
Context	network-instance name <i>string</i> protocols bgp group group-name <i>string</i> optional-attributes
Tree	optional-attributes
Configurable	True
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

block-prefix-sid *boolean*

Description	Remove the prefix SID optional transitive attribute in all received and sent routes to this peer, or group of peers
Context	network-instance name <i>string</i> protocols bgp group group-name <i>string</i> optional-attributes block-prefix-sid <i>boolean</i>
Tree	block-prefix-sid

Default	false
Configurable	True
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

peer-as *number*

Description	The autonomous system number expected from each peer in the group A configured session with a peer does not come up if this value does not match the AS value reported by the peer in its OPEN message.
Context	network-instance name <i>string</i> protocols bgp group group-name <i>string</i> peer-as number
Tree	peer-as
Range	1 to 4294967295
Configurable	True
Platforms	Supported on all platforms

route-reflector

Description	Container with route reflection configuration options.
Context	network-instance name <i>string</i> protocols bgp group group-name <i>string</i> route-reflector
Tree	route-reflector
Configurable	True
Platforms	Supported on all platforms

client *boolean*

Description	When this is set to true all configured and dynamic BGP sessions that belong to the peer-group are considered RR clients.
Context	network-instance name <i>string</i> protocols bgp group group-name <i>string</i> route-reflector client <i>boolean</i>
Tree	client
Configurable	True
Platforms	Supported on all platforms

cluster-id (*number* | *dotted-quad*)

Description	The cluster-id to insert into the CLUSTER_LIST attribute when reflecting routes received by or sent to each client in the peer-group. The default is inherited from instance level configuration.
Context	network-instance name <i>string</i> protocols bgp group group-name <i>string</i> route-reflector cluster-id (<i>number</i> <i>dotted-quad</i>)
Tree	cluster-id
Range	1 to 4294967295
Configurable	True
Platforms	Supported on all platforms

send-community

Description	Options for controlling the sending of BGP communities to peers in the group
Context	network-instance name <i>string</i> protocols bgp group group-name <i>string</i> send-community
Tree	send-community
Configurable	True
Platforms	Supported on all platforms

large *boolean*

Description	The false setting causes BGP to strip all large (12 byte) BGP communities from all outbound routes advertised to each peer in the group
Context	network-instance name <i>string</i> protocols bgp group group-name <i>string</i> send-community large <i>boolean</i>
Tree	large
Configurable	True
Platforms	Supported on all platforms

standard *boolean*

Description	The false setting causes BGP to strip all standard (4 byte) communities from all outbound routes advertised to each peer in the group
Context	network-instance name <i>string</i> protocols bgp group group-name <i>string</i> send-community standard <i>boolean</i>
Tree	standard

Configurable	True
Platforms	Supported on all platforms

send-default-route

Description	Options for controlling the generation of default routes towards group peers
Context	network-instance name <i>string</i> protocols bgp group group-name <i>string</i> send-default-route
Tree	send-default-route
Configurable	True
Platforms	Supported on all platforms

export-policy *reference*

Description	The name of a policy that should be applied to the advertised default routes, in order to set their attributes to non-default values Only the default-action of this policy is parsed and applied.
Context	network-instance name <i>string</i> protocols bgp group group-name <i>string</i> send-default-route export-policy <i>reference</i>
Tree	export-policy
Reference	routing-policy policy name <i>string</i>
Configurable	True
Platforms	Supported on all platforms

ipv4-unicast *boolean*

Description	Enables the sending of a synthetically generated default IPv4 route [0/0] to each peer in the group
Context	network-instance name <i>string</i> protocols bgp group group-name <i>string</i> send-default-route ipv4-unicast <i>boolean</i>
Tree	ipv4-unicast
Default	false
Configurable	True
Platforms	Supported on all platforms

ipv6-unicast *boolean*

Description	Enables the sending of a synthetically generated default IPv6 route [::/0] to each peer in the group
Context	network-instance name <i>string</i> protocols bgp group group-name <i>string</i> send-default-route ipv6-unicast <i>boolean</i>
Tree	ipv6-unicast
Default	false
Configurable	True
Platforms	Supported on all platforms

statistics

Description	Container for BGP statistics.
Context	network-instance name <i>string</i> protocols bgp group group-name <i>string</i> statistics
Tree	statistics
Configurable	False
Platforms	Supported on all platforms

disabled-peers *number*

Description	The number of configured BGP peers associated with the peer-group that are administratively disabled
Context	network-instance name <i>string</i> protocols bgp group group-name <i>string</i> statistics disabled-peers <i>number</i>
Tree	disabled-peers
Configurable	False
Platforms	Supported on all platforms

dynamic-peers *number*

Description	The number of dynamic BGP peers associated with the peer-group that are currently in the established state, counting sessions resulting from accepted incoming TCP connections and outgoing TCP connections triggered by LLDP auto-discovery
Context	network-instance name <i>string</i> protocols bgp group group-name <i>string</i> statistics dynamic-peers <i>number</i>

Tree	dynamic-peers
Configurable	False
Platforms	Supported on all platforms

path-memory *number*

Description	The total number of bytes required to store the path attribute objects used by received BGP routes associated with the peer-group
Context	network-instance name <i>string</i> protocols bgp group group-name <i>string</i> statistics path-memory <i>number</i>
Tree	path-memory
Default	0
Configurable	False
Platforms	Supported on all platforms

total-active-routes *number*

Description	The total number of received BGP routes that are active (installed for forwarding) and associated with the peer-group, summed across all address families
Context	network-instance name <i>string</i> protocols bgp group group-name <i>string</i> statistics total-active-routes <i>number</i>
Tree	total-active-routes
Default	0
Configurable	False
Platforms	Supported on all platforms

total-paths *number*

Description	The total number of path attribute objects used by received BGP routes associated with the peer-group
Context	network-instance name <i>string</i> protocols bgp group group-name <i>string</i> statistics total-paths <i>number</i>
Tree	total-paths
Default	0
Configurable	False
Platforms	Supported on all platforms

total-peers *number*

Description	The total number of configured BGP peers associated with the peer-group
Context	network-instance name <i>string</i> protocols bgp group group-name <i>string</i> statistics total-peers <i>number</i>
Tree	total-peers
Configurable	False
Platforms	Supported on all platforms

total-prefixes *number*

Description	The total number of unique NLRI contained in all received BGP routes associated with the BGP instance or the peer-group.
Context	network-instance name <i>string</i> protocols bgp group group-name <i>string</i> statistics total-prefixes <i>number</i>
Tree	total-prefixes
Configurable	False
Platforms	Supported on all platforms

total-received-routes *number*

Description	The total number of received BGP routes associated with the peer-group, summed across all address families
Context	network-instance name <i>string</i> protocols bgp group group-name <i>string</i> statistics total-received-routes <i>number</i>
Tree	total-received-routes
Default	0
Configurable	False
Platforms	Supported on all platforms

up-peers *number*

Description	The number of configured BGP peers associated with the peer-group that are currently in the established state
Context	network-instance name <i>string</i> protocols bgp group group-name <i>string</i> statistics up-peers <i>number</i>
Tree	up-peers
Configurable	False

Platforms Supported on all platforms

timers

Description Enter the timers context

Context [network-instance name string protocols bgp group group-name string timers](#)

Tree [timers](#)

Configurable True

Platforms Supported on all platforms

connect-retry *number*

Description The time interval in seconds between successive attempts to establish a session with a peer

Context [network-instance name string protocols bgp group group-name string timers connect-retry number](#)

Tree [connect-retry](#)

Range 1 to 65535

Default 120

Units seconds

Configurable True

Platforms Supported on all platforms

hold-time *number*

Description The hold-time interval in seconds that the router proposes to the peer in its OPEN message

The actual in-use hold-time is negotiated to the lowest value proposed by the two peers. A negotiated value of 0 suppresses the sending of keepalives by both peers.

Context [network-instance name string protocols bgp group group-name string timers hold-time number](#)

Tree [hold-time](#)

Range 0 | 3 to 65535

Default 90

Units seconds

Configurable True

Platforms Supported on all platforms

keepalive-interval *number*

Description The interval in seconds between successive keepalive messages sent to the peer
The period between one keepalive message and the next is the minimum of this configured value and 1/3 of the negotiated hold-time duration. A value of 0 suppresses the sending of keepalives to the peer.

Context [network-instance name](#) *string* [protocols bgp group group-name](#) *string* [timers keepalive-interval](#) *number*

Tree [keepalive-interval](#)

Range 0 to 21845

Units seconds

Configurable True

Platforms Supported on all platforms

minimum-advertisement-interval *number*

Description The value assigned to the MinRouteAdvertisementIntervalTimer of RFC 4271, for both EBGp and IBGP sessions
Each session runs its own independent timer and the timer affects both route advertisements and route withdrawals, regardless of address family. For route withdrawals only, this timer is bypassed if rapid-withdrawal is set to true.

Context [network-instance name](#) *string* [protocols bgp group group-name](#) *string* [timers minimum-advertisement-interval](#) *number*

Tree [minimum-advertisement-interval](#)

Range 1 to 255

Default 5

Units seconds

Configurable True

Platforms Supported on all platforms

prefix-limit-restart-timer *number*

Description Time interval in seconds after which the BGP session is re-established after being torn down due to exceeding any prefix limit (of any address family)

This only applies if prevent-teardown is false.

Context	network-instance name <i>string</i> protocols bgp group group-name <i>string</i> timers prefix-limit-restart-timer <i>number</i>
Tree	prefix-limit-restart-timer
Default	0
Units	seconds
Configurable	True
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

trace-options

Description	Debug traceoptions for BGP
Context	network-instance name <i>string</i> protocols bgp group group-name <i>string</i> trace-options
Tree	trace-options
Configurable	True
Platforms	Supported on all platforms

flag *name keyword*

Description	Tracing parameters
Context	network-instance name <i>string</i> protocols bgp group group-name <i>string</i> trace-options flag name <i>keyword</i>
Tree	flag
Configurable	True
Platforms	Supported on all platforms

name *keyword*

Description	Enter the name context
Context	network-instance name <i>string</i> protocols bgp group group-name <i>string</i> trace-options flag name <i>keyword</i>
Options	<ul style="list-style-type: none"> events Trace all BGP events. packets Trace all BGP protocol packets.

- open
Trace BGP open packets.
- keepalive
Trace BGP keepalive packets.
- graceful-restart
Trace Graceful Restart events.
- timers
Trace routing protocol timer processing.
- route
Trace BGP route table manager.
- notification
Trace Bgp notification.
- socket
Trace socket info.
- update
Trace update info.

Configurable

True

Platforms

Supported on all platforms

modifier *keyword***Description**

Enter the modifier context

Context

[network-instance name](#) *string* [protocols bgp group group-name](#) *string* [trace-options flag name](#) *keyword* [modifier](#) *keyword*

Tree[modifier](#)**Options**

- detail
To enable detailed tracing. Includes both received and sent packets.
- receive
To enable tracing for the packets which are received.
- send
To enable tracing for the sent packets.

Configurable

True

Platforms

Supported on all platforms

transport

Description	Enter the transport context
Context	network-instance name <i>string</i> protocols bgp group group-name <i>string</i> transport
Tree	transport
Configurable	True
Platforms	Supported on all platforms

local-address (*ipv4-address | ipv6-address | subinterface-all*)

Description	The local TCP endpoint of used for all BGP sessions in the group This also the source address for next-hop-self, if it applies. The local-address can be specified as an IP address that is resolvable to a local interface. This address must be the primary address of an interface, otherwise the session will not come up.
Context	network-instance name <i>string</i> protocols bgp group group-name <i>string</i> transport local-address (<i>ipv4-address ipv6-address subinterface-all</i>)
Tree	local-address
String Length	5 to 25
Configurable	True
Platforms	Supported on all platforms

mtu-discovery *boolean*

Description	Turns path mtu discovery for BGP TCP sessions on (true) or off (false)
Context	network-instance name <i>string</i> protocols bgp group group-name <i>string</i> transport mtu-discovery <i>boolean</i>
Tree	mtu-discovery
Configurable	True
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

passive-mode *boolean*

Description	The true setting causes BGP to wait for the peer to initiate the TCP connection
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The false setting causes BGP to initiate a TCP connection whenever the BGP session is started or restarted.

Context	network-instance name <i>string</i> protocols bgp group group-name <i>string</i> transport passive-mode <i>boolean</i>
Tree	passive-mode
Default	false
Configurable	True
Platforms	Supported on all platforms

tcp-mss *number*

Description	The maximum segment size of BGP TCP packets The actual value used in the transmit direction towards a particular peer should be checked at the neighbor level.
Context	network-instance name <i>string</i> protocols bgp group group-name <i>string</i> transport tcp-mss <i>number</i>
Tree	tcp-mss
Range	536 to 9446
Units	bytes
Configurable	True
Platforms	Supported on all platforms

under-maintenance *boolean*

Description	Indicates if this BGP group is in maintenance mode
Context	network-instance name <i>string</i> protocols bgp group group-name <i>string</i> under-maintenance <i>boolean</i>
Tree	under-maintenance
Configurable	False
Platforms	Supported on all platforms

import-policy *reference*

Description	Apply an import policy to received BGP routes
Context	network-instance name <i>string</i> protocols bgp import-policy <i>reference</i>
Tree	import-policy
Reference	routing-policy policy name <i>string</i>

Configurable	True
Platforms	Supported on all platforms
Max. Elements	14

local-preference *number*

Description	The value of the local-preference attribute that is added to received routes from EBGPeers It is also used to encode the local preference attribute for locally generated BGP routes.
Context	network-instance name <i>string</i> protocols bgp local-preference <i>number</i>
Tree	local-preference
Default	100
Configurable	True
Platforms	Supported on all platforms

maintenance-group *string*

Description	State field to display the maintenance group to which this bgp instance belongs to.
Context	network-instance name <i>string</i> protocols bgp maintenance-group <i>string</i>
Tree	maintenance-group
Configurable	False
Platforms	Supported on all platforms

max-ecmp-hash-buckets-per-next-hop-group *number*

Description	Specifies the maximum number of ECMP hash buckets per next-hop-group Weighted ECMP weights are normalized based on this number of hash buckets.
Context	network-instance name <i>string</i> protocols bgp max-ecmp-hash-buckets-per-next-hop-group <i>number</i>
Tree	max-ecmp-hash-buckets-per-next-hop-group
Range	1 to 256
Configurable	True
Platforms	7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5

neighbor peer-address (*ipv4-address-with-zone | ipv6-address-with-zone*)

Description	Create a configured BGP session
Context	network-instance name <i>string</i> protocols bgp neighbor peer-address (<i>ipv4-address-with-zone ipv6-address-with-zone</i>)
Tree	neighbor
Configurable	True
Platforms	Supported on all platforms

peer-address (*ipv4-address-with-zone | ipv6-address-with-zone*)

Description	The transport address of the BGP peer The peer-address must be a valid IPv4 unicast address, IPv6 global unicast address or IPv6 link-local address. An IPv6 link-local address requires the interface scope to be identified, using a format such as fe80::1234%ethernet-1/1.1
Context	network-instance name <i>string</i> protocols bgp neighbor peer-address (<i>ipv4-address-with-zone ipv6-address-with-zone</i>)
Configurable	True
Platforms	Supported on all platforms

admin-state *keyword*

Description	Administratively enable or disable the peer Disable will tear down the BGP session (return it to IDLE state).
Context	network-instance name <i>string</i> protocols bgp neighbor peer-address (<i>ipv4-address-with-zone ipv6-address-with-zone</i>) admin-state <i>keyword</i>
Tree	admin-state
Default	enable
Options	<ul style="list-style-type: none"> • enable • disable
Configurable	True
Platforms	Supported on all platforms

advertised-capabilities *keyword*

Description	List of BGP capabilities advertised by the local routing device to the peer
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Context	network-instance name <i>string</i> protocols bgp neighbor peer-address (<i>ipv4-address-with-zone</i> <i>ipv6-address-with-zone</i>) advertised-capabilities <i>keyword</i>
Tree	advertised-capabilities
Options	<ul style="list-style-type: none"> • MP_BGP • ROUTE_REFRESH • EXT_NH_ENCODING • GRACEFUL_RESTART • 4-OCTET_ASN • ORF_SEND_EXCOMM • ORF_RECEIVE_EXCOMM
Configurable	False
Platforms	Supported on all platforms

afi-safi [afi-safi-name](#) *identityref*

Description	List of address families supported by the BGP neighbor
Context	network-instance name <i>string</i> protocols bgp neighbor peer-address (<i>ipv4-address-with-zone</i> <i>ipv6-address-with-zone</i>) afi-safi afi-safi-name <i>identityref</i>
Tree	afi-safi
Configurable	True
Platforms	Supported on all platforms

afi-safi-name *identityref*

Description	The name of a BGP address family, which translates to a specific AFI value and a specific SAFI value
Context	network-instance name <i>string</i> protocols bgp neighbor peer-address (<i>ipv4-address-with-zone</i> <i>ipv6-address-with-zone</i>) afi-safi afi-safi-name <i>identityref</i>
Options	<ul style="list-style-type: none"> • ipv4-unicast Unlabeled IPv4 unicast routes (AFI = 1, SAFI = 1) • ipv6-unicast Unlabeled IPv6 unicast routes (AFI = 2, SAFI = 1) • l3vpn-ipv4-unicast VPN-IPv4 unicast address family (AFI = 1, SAFI = 128) • l3vpn-ipv6-unicast VPN-IPv6 unicast address family (AFI = 2, SAFI = 128) • ipv4-labeled-unicast

- Labeled IPv4 unicast routes (AFI 1, SAFI 4)
- ipv6-labeled-unicast
- Labeled IPv6 unicast routes (AFI 2, SAFI 4)
- evpn
- EVPN routes (AFI = 25, SAFI = 70)
- route-target
- Route target constraint routes (AFI 1, SAFI 132)
- sr-policy-ipv4
- SR-TE Policy (AFI 1, SAFI 73)
- sr-policy-ipv6
- SR-TE Policy (AFI 2, SAFI 73)

Configurable	True
Platforms	Supported on all platforms

active-routes *number*

Description	The number of routes belonging to this AFI/SAFI received from the peer that are installed and used, being best routes
Context	network-instance name <i>string</i> protocols bgp neighbor peer-address (<i>ipv4-address-with-zone</i> <i>ipv6-address-with-zone</i>) afi-safi afi-safi-name identityref active-routes <i>number</i>
Tree	active-routes
Configurable	False
Platforms	Supported on all platforms

add-paths

Description	Configure support for the advertisement and receipt of multiple paths for the AFI/SAFI
Context	network-instance name <i>string</i> protocols bgp neighbor peer-address (<i>ipv4-address-with-zone</i> <i>ipv6-address-with-zone</i>) afi-safi afi-safi-name identityref add-paths
Tree	add-paths
Configurable	True
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

receive *boolean*

Description	Enable capability negotiation to receive multiple path advertisements from a single peer for a single NLRI belonging to the AFI/SAFI
Context	network-instance name <i>string</i> protocols bgp neighbor peer-address (<i>ipv4-address-with-zone</i> <i>ipv6-address-with-zone</i>) afi-safi afi-safi-name identityref add-paths receive <i>boolean</i>
Tree	receive
Configurable	True
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

send *boolean*

Description	Enable capability negotiation to send multiple path advertisements to a single peer for a single NLRI belonging to the AFI/SAFI
Context	network-instance name <i>string</i> protocols bgp neighbor peer-address (<i>ipv4-address-with-zone</i> <i>ipv6-address-with-zone</i>) afi-safi afi-safi-name identityref add-paths send <i>boolean</i>
Tree	send
Configurable	True
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

send-max *number*

Description	Send the N best paths for a single NLRI, or as many as possible until there are no more valid paths to send. This ensures the best path is advertised but does not limit the additional paths to being 'used' paths.
Context	network-instance name <i>string</i> protocols bgp neighbor peer-address (<i>ipv4-address-with-zone</i> <i>ipv6-address-with-zone</i>) afi-safi afi-safi-name identityref add-paths send-max <i>number</i>
Tree	send-max
Range	1 to 16
Configurable	True

Platforms 7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

send-multipath

Description Send the used paths for a single NLRI, including all paths that are multipaths.

Context [network-instance name](#) [string](#) [protocols](#) [bgp](#) [neighbor](#) [peer-address](#) ([ipv4-address-with-zone](#) | [ipv6-address-with-zone](#)) [afi-safi](#) [afi-safi-name](#) [identityref](#) [add-paths](#) [send-multipath](#)

Tree [send-multipath](#)

Configurable True

Platforms 7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

admin-state *keyword*

Description This leaf indicates whether support for the AFI-SAFI is enabled/advertised to the neighbor

Context [network-instance name](#) [string](#) [protocols](#) [bgp](#) [neighbor](#) [peer-address](#) ([ipv4-address-with-zone](#) | [ipv6-address-with-zone](#)) [afi-safi](#) [afi-safi-name](#) [identityref](#) [admin-state](#) [keyword](#)

Tree [admin-state](#)

Options

- enable
- disable

Configurable True

Platforms Supported on all platforms

evpn

Description Options related to the EVPN address family

Context [network-instance name](#) [string](#) [protocols](#) [bgp](#) [neighbor](#) [peer-address](#) ([ipv4-address-with-zone](#) | [ipv6-address-with-zone](#)) [afi-safi](#) [afi-safi-name](#) [identityref](#) [evpn](#)

Tree [evpn](#)

Configurable True

Platforms Supported on all platforms

advertise-ipv6-next-hops *boolean*

Description	Enables advertisement of EVPN routes with IPv6 next-hops to peers If this is set to true and the local-address used towards the peer is an IPv6 address and BGP is supposed to apply next-hop-self then the route is advertised with the IPv6 local-address as the BGP next-hop. If this is set to false, then the EVPN route is advertised with an IPv4 next-hop.
Context	network-instance name <i>string</i> protocols bgp neighbor peer-address (<i>ipv4-address-with-zone</i> <i>ipv6-address-with-zone</i>) afi-safi afi-safi-name identityref evpn advertise-ipv6-next-hops <i>boolean</i>
Tree	advertise-ipv6-next-hops
Configurable	True
Platforms	Supported on all platforms

default-received-encapsulation *keyword*

Description	Indicates the encapsulation considered when the routes are received without BGP encapsulation extended community Most EVPN routes are usually received with a BGP encapsulation extended community that indicates the encapsulation and therefore how to interpret the value in the received Label fields of the routes. If no encapsulation is received, BGP will validate the route as MPLS or VXLAN or SRV6 depending on how this command is configured.
Context	network-instance name <i>string</i> protocols bgp neighbor peer-address (<i>ipv4-address-with-zone</i> <i>ipv6-address-with-zone</i>) afi-safi afi-safi-name identityref evpn default-received-encapsulation <i>keyword</i>
Tree	default-received-encapsulation
Options	<ul style="list-style-type: none"> • vxlan • mpls
Configurable	True
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

prefix-limit-received

Description	Options for configuring the maximum number of EVPN routes allowed to be received from the peer
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Context	network-instance name <i>string</i> protocols bgp neighbor peer-address (ipv4-address-with-zone ipv6-address-with-zone) afi-safi afi-safi-name identityref evpn prefix-limit-received
Tree	prefix-limit-received
Configurable	True
Platforms	Supported on all platforms

max-received-routes *number*

Description	Maximum number of EVPN routes that will be accepted from the neighbor, counting routes accepted and rejected by import policies
Context	network-instance name <i>string</i> protocols bgp neighbor peer-address (ipv4-address-with-zone ipv6-address-with-zone) afi-safi afi-safi-name identityref evpn prefix-limit-received max-received-routes <i>number</i>
Tree	max-received-routes
Range	1 to 4294967295
Configurable	True
Platforms	Supported on all platforms

warning-threshold-pct *number*

Description	When the number of EVPN routes received from the peer (counting routes accepted and rejected by import policy) reaches this percentage of the max-received-routes limit, BGP raises a warning log event
Context	network-instance name <i>string</i> protocols bgp neighbor peer-address (ipv4-address-with-zone ipv6-address-with-zone) afi-safi afi-safi-name identityref evpn prefix-limit-received warning-threshold-pct <i>number</i>
Tree	warning-threshold-pct
Range	0 to 100
Configurable	True
Platforms	Supported on all platforms

export-policy *reference*

Description	Apply an export policy to advertised BGP routes
Context	network-instance name <i>string</i> protocols bgp neighbor peer-address (ipv4-address-with-zone ipv6-address-with-zone) afi-safi afi-safi-name identityref export-policy <i>reference</i>
Tree	export-policy

Reference	routing-policy policy name <i>string</i>
Configurable	True
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b
Max. Elements	14

import-policy *reference*

Description	Apply an import policy to received BGP routes
Context	network-instance name <i>string</i> protocols bgp neighbor peer-address (ipv4-address-with-zone ipv6-address-with-zone) afi-safi afi-safi-name identityref import-policy reference
Tree	import-policy
Reference	routing-policy policy name <i>string</i>
Configurable	True
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b
Max. Elements	14

ipv4-labeled-unicast

Description	Options related to the labeled IPv4-unicast address family
Context	network-instance name <i>string</i> protocols bgp neighbor peer-address (ipv4-address-with-zone ipv6-address-with-zone) afi-safi afi-safi-name identityref ipv4-labeled-unicast
Tree	ipv4-labeled-unicast
Configurable	True
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

advertise-ipv6-next-hops *boolean*

Description	Enables advertisement of IPv4 routes with IPv6 next-hops
Context	network-instance name <i>string</i> protocols bgp neighbor peer-address (ipv4-address-with-zone ipv6-address-with-zone) afi-safi afi-safi-name identityref ipv4-labeled-unicast advertise-ipv6-next-hops <i>boolean</i>
Tree	advertise-ipv6-next-hops
Configurable	True

Platforms 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

receive-ipv6-next-hops *boolean*

Description Enables the advertisement of the RFC 8950 capability to receive IPv4 routes with IPv6 next-hops

When set to true, BGP advertises an extended NH encoding (RFC 8950) capability to its peers. This capability indicates that local router is prepared to accept BGP routes for the AFI/SAFI with IPv6 next-hops from peers in the scope of the command. When set to false, BGP handles received AFI/SAFI routes with IPv6 next-hops as an error and applies treat-as-withdraw.

Context [network-instance name](#) [string](#) [protocols](#) [bgp](#) [neighbor](#) [peer-address](#) ([ipv4-address-with-zone](#) | [ipv6-address-with-zone](#)) [afi-safi](#) [afi-safi-name](#) [identityref](#) [ipv4-labeled-unicast](#) [receive-ipv6-next-hops](#) *boolean*

Tree [receive-ipv6-next-hops](#)

Configurable True

Platforms 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

ipv4-unicast

Description Options related to the IPv4-unicast address family

Context [network-instance name](#) [string](#) [protocols](#) [bgp](#) [neighbor](#) [peer-address](#) ([ipv4-address-with-zone](#) | [ipv6-address-with-zone](#)) [afi-safi](#) [afi-safi-name](#) [identityref](#) [ipv4-unicast](#)

Tree [ipv4-unicast](#)

Configurable True

Platforms Supported on all platforms

advertise-ipv6-next-hops *boolean*

Description Enables advertisement of IPv4 routes with IPv6 next-hops

Context [network-instance name](#) [string](#) [protocols](#) [bgp](#) [neighbor](#) [peer-address](#) ([ipv4-address-with-zone](#) | [ipv6-address-with-zone](#)) [afi-safi](#) [afi-safi-name](#) [identityref](#) [ipv4-unicast](#) [advertise-ipv6-next-hops](#) *boolean*

Tree [advertise-ipv6-next-hops](#)

Configurable True

Platforms Supported on all platforms

link-bandwidth

Description	Enter the link-bandwidth context
Context	network-instance name <i>string</i> protocols bgp neighbor peer-address (ipv4-address-with-zone ipv6-address-with-zone) afi-safi afi-safi-name identityref ipv4-unicast link-bandwidth
Tree	link-bandwidth
Configurable	True
Platforms	7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

add-next-hop-count-to-received-bgp-routes (*number* | *keyword*)

Description	Determines the weight that is internally added to the received PE-CE BGP routes The configured weight is added to all received BGP PE-CE routes for the purpose of EVPN unequal ECMP. This weight is internal and not added into any link-bandwidth extended community when readvertising the received routes to other ipv4 or ipv6 neighbors.
Context	network-instance name <i>string</i> protocols bgp neighbor peer-address (ipv4-address-with-zone ipv6-address-with-zone) afi-safi afi-safi-name identityref ipv4-unicast link-bandwidth add-next-hop-count-to-received-bgp-routes (<i>number</i> <i>keyword</i>)
Tree	add-next-hop-count-to-received-bgp-routes
Range	1 to 128
Options	<ul style="list-style-type: none"> • <code>disable</code>
Configurable	True
Platforms	7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

prefix-limit-received

Description	Options for configuring the maximum number of IPv4 routes allowed to be received from the peer
Context	network-instance name <i>string</i> protocols bgp neighbor peer-address (ipv4-address-with-zone ipv6-address-with-zone) afi-safi afi-safi-name identityref ipv4-unicast prefix-limit-received
Tree	prefix-limit-received

Configurable	True
Platforms	Supported on all platforms

max-received-routes *number*

Description	Maximum number of IPv4 routes that will be accepted from the neighbor, counting routes accepted and rejected by import policies
Context	network-instance name <i>string</i> protocols bgp neighbor peer-address (<i>ipv4-address-with-zone</i> <i>ipv6-address-with-zone</i>) afi-safi afi-safi-name identityref ipv4-unicast prefix-limit-received max-received-routes <i>number</i>
Tree	max-received-routes
Range	1 to 4294967295
Configurable	True
Platforms	Supported on all platforms

prefix-limit-exceeded *boolean*

Description	Changes from false to true when the number of received IPv4 routes increases to max-received-routes + 1 and remains true until the number of received IPv4 routes decreases back to max-received-routes (applicable if prevent-teardown = true) or until the session is re-established (applicable if prevent-teardown = false)
Context	network-instance name <i>string</i> protocols bgp neighbor peer-address (<i>ipv4-address-with-zone</i> <i>ipv6-address-with-zone</i>) afi-safi afi-safi-name identityref ipv4-unicast prefix-limit-received prefix-limit-exceeded <i>boolean</i>
Tree	prefix-limit-exceeded
Configurable	False
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

prevent-teardown *boolean*

Description	When false the session is immediately torn down when the number of received IPv4 routes exceeds the configured limit.
Context	network-instance name <i>string</i> protocols bgp neighbor peer-address (<i>ipv4-address-with-zone</i> <i>ipv6-address-with-zone</i>) afi-safi afi-safi-name identityref ipv4-unicast prefix-limit-received prevent-teardown <i>boolean</i>
Tree	prevent-teardown
Configurable	True

Platforms 7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

warning-threshold-pct *number*

Description When the number of IPv4 routes received from the peer (counting routes accepted and rejected by import policy) reaches this percentage of the max-received-routes limit, BGP raises a warning log event

Context [network-instance name](#) [string](#) [protocols](#) [bgp](#) [neighbor](#) [peer-address](#) ([ipv4-address-with-zone](#) | [ipv6-address-with-zone](#)) [afi-safi](#) [afi-safi-name](#) [identityref](#) [ipv4-unicast](#) [prefix-limit-received](#) [warning-threshold-pct](#) *number*

Tree [warning-threshold-pct](#)

Range 0 to 100

Configurable True

Platforms Supported on all platforms

receive-ipv6-next-hops *boolean*

Description Enables the advertisement of the RFC 8950 capability to receive IPv4 routes with IPv6 next-hops

When set to true, BGP advertises an extended NH encoding (RFC 8950) capability to its peers. This capability indicates that local router is prepared to accept BGP routes for the AFI/SAFI with IPv6 next-hops from peers in the scope of the command. When set to false, BGP handles received AFI/SAFI routes with IPv6 next-hops as an error and applies treat-as-withdraw.

Context [network-instance name](#) [string](#) [protocols](#) [bgp](#) [neighbor](#) [peer-address](#) ([ipv4-address-with-zone](#) | [ipv6-address-with-zone](#)) [afi-safi](#) [afi-safi-name](#) [identityref](#) [ipv4-unicast](#) [receive-ipv6-next-hops](#) *boolean*

Tree [receive-ipv6-next-hops](#)

Configurable True

Platforms Supported on all platforms

ipv6-labeled-unicast

Description Options related to the labeled-IPv6-unicast address family

Context [network-instance name](#) [string](#) [protocols](#) [bgp](#) [neighbor](#) [peer-address](#) ([ipv4-address-with-zone](#) | [ipv6-address-with-zone](#)) [afi-safi](#) [afi-safi-name](#) [identityref](#) [ipv6-labeled-unicast](#)

Tree [ipv6-labeled-unicast](#)

Configurable	True
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

ipv6-unicast

Description	Options related to the IPv6-unicast address family
Context	network-instance name <i>string</i> protocols bgp neighbor peer-address (ipv4-address-with-zone ipv6-address-with-zone) afi-safi afi-safi-name identityref ipv6-unicast
Tree	ipv6-unicast
Configurable	True
Platforms	Supported on all platforms

link-bandwidth

Description	Enter the link-bandwidth context
Context	network-instance name <i>string</i> protocols bgp neighbor peer-address (ipv4-address-with-zone ipv6-address-with-zone) afi-safi afi-safi-name identityref ipv6-unicast link-bandwidth
Tree	link-bandwidth
Configurable	True
Platforms	7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

add-next-hop-count-to-received-bgp-routes (*number* | *keyword*)

Description	Determines the weight that is internally added to the received PE-CE BGP routes The configured weight is added to all received BGP PE-CE routes for the purpose of EVPN unequal ECMP. This weight is internal and not added into any link-bandwidth extended community when readvertising the received routes to other ipv4 or ipv6 neighbors.
Context	network-instance name <i>string</i> protocols bgp neighbor peer-address (ipv4-address-with-zone ipv6-address-with-zone) afi-safi afi-safi-name identityref ipv6-unicast link-bandwidth add-next-hop-count-to-received-bgp-routes (<i>number</i> <i>keyword</i>)
Tree	add-next-hop-count-to-received-bgp-routes
Range	1 to 128

Options	• disable
Configurable	True
Platforms	7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

prefix-limit-received

Description	Options for configuring the maximum number of IPv6 routes allowed to be received from the peer
Context	network-instance name string protocols bgp neighbor peer-address (ipv4-address-with-zone ipv6-address-with-zone) afi-safi afi-safi-name identityref ipv6-unicast prefix-limit-received
Tree	prefix-limit-received
Configurable	True
Platforms	Supported on all platforms

max-received-routes *number*

Description	Maximum number of IPv6 routes that will be accepted from the neighbor, counting routes accepted and rejected by import policies
Context	network-instance name string protocols bgp neighbor peer-address (ipv4-address-with-zone ipv6-address-with-zone) afi-safi afi-safi-name identityref ipv6-unicast prefix-limit-received max-received-routes number
Tree	max-received-routes
Range	1 to 4294967295
Configurable	True
Platforms	Supported on all platforms

prefix-limit-exceeded *boolean*

Description	Changes from false to true when the number of received IPv6 routes increases to max-received-routes + 1 and remains true until the number of received IPv6 routes decreases back to max-received-routes (applicable if prevent-teardown = true) or until the session is re-established (applicable if prevent-teardown = false)
Context	network-instance name string protocols bgp neighbor peer-address (ipv4-address-with-zone ipv6-address-with-zone) afi-safi afi-safi-name identityref ipv6-unicast prefix-limit-received prefix-limit-exceeded boolean
Tree	prefix-limit-exceeded

Configurable	False
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

prevent-teardown *boolean*

Description	When false the session is immediately torn down when the number of received IPv6 routes exceeds the configured limit.
Context	network-instance name <i>string</i> protocols bgp neighbor peer-address (ipv4-address-with-zone ipv6-address-with-zone) afi-safi afi-safi-name identityref ipv6-unicast prefix-limit-received prevent-teardown <i>boolean</i>
Tree	prevent-teardown
Configurable	True
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

warning-threshold-pct *number*

Description	When the number of IPv6 routes received from the peer (counting routes accepted and rejected by import policy) reaches this percentage of the max-received-routes limit, BGP raises a warning log event
Context	network-instance name <i>string</i> protocols bgp neighbor peer-address (ipv4-address-with-zone ipv6-address-with-zone) afi-safi afi-safi-name identityref ipv6-unicast prefix-limit-received warning-threshold-pct <i>number</i>
Tree	warning-threshold-pct
Range	0 to 100
Configurable	True
Platforms	Supported on all platforms

I3vpn-ipv4-unicast

Description	Options related to the VPN-IPv4 unicast address family
Context	network-instance name <i>string</i> protocols bgp neighbor peer-address (ipv4-address-with-zone ipv6-address-with-zone) afi-safi afi-safi-name identityref I3vpn-ipv4-unicast
Tree	I3vpn-ipv4-unicast
Configurable	True

Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b
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advertise-ipv6-next-hops *boolean*

Description	Enables advertisement of IPv4 routes with IPv6 next-hops
Context	network-instance name <i>string</i> protocols bgp neighbor peer-address (ipv4-address-with-zone ipv6-address-with-zone) afi-safi afi-safi-name identityref l3vpn-ipv4-unicast advertise-ipv6-next-hops <i>boolean</i>
Tree	advertise-ipv6-next-hops
Configurable	True
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

prefix-limit-received

Description	Options for configuring the maximum number of VPN-IPv4 unicast routes allowed to be received from the peer
Context	network-instance name <i>string</i> protocols bgp neighbor peer-address (ipv4-address-with-zone ipv6-address-with-zone) afi-safi afi-safi-name identityref l3vpn-ipv4-unicast prefix-limit-received
Tree	prefix-limit-received
Configurable	True
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

max-received-routes *number*

Description	Maximum number of VPN-IPv4 routes that will be accepted from the neighbor, counting routes accepted and rejected by import policies
Context	network-instance name <i>string</i> protocols bgp neighbor peer-address (ipv4-address-with-zone ipv6-address-with-zone) afi-safi afi-safi-name identityref l3vpn-ipv4-unicast prefix-limit-received max-received-routes <i>number</i>
Tree	max-received-routes
Range	1 to 4294967295
Configurable	True

Platforms 7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

prefix-limit-exceeded *boolean*

Description Changes from false to true when the number of received VPN-IPv4 routes increases to max-received-routes + 1 and remains true until the number of received VPN-IPv4 routes decreases back to max-received-routes (applicable if prevent-teardown = true) or until the session is re-established (applicable if prevent-teardown = false)

Context [network-instance name string protocols bgp neighbor peer-address \(ipv4-address-with-zone | ipv6-address-with-zone\) afi-safi afi-safi-name identityref l3vpn-ipv4-unicast prefix-limit-received prefix-limit-exceeded boolean](#)

Tree [prefix-limit-exceeded](#)

Configurable False

Platforms 7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

prevent-teardown *boolean*

Description When false the session is immediately torn down when the number of received VPN-IPv4 routes exceeds the configured limit.

Context [network-instance name string protocols bgp neighbor peer-address \(ipv4-address-with-zone | ipv6-address-with-zone\) afi-safi afi-safi-name identityref l3vpn-ipv4-unicast prefix-limit-received prevent-teardown boolean](#)

Tree [prevent-teardown](#)

Configurable True

Platforms 7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

warning-threshold-pct *number*

Description When the number of VPN-IPv4 routes received from the peer (counting routes accepted and rejected by import policy) reaches this percentage of the max-received-routes limit, BGP raises a warning log event

Context [network-instance name string protocols bgp neighbor peer-address \(ipv4-address-with-zone | ipv6-address-with-zone\) afi-safi afi-safi-name identityref l3vpn-ipv4-unicast prefix-limit-received warning-threshold-pct number](#)

Tree [warning-threshold-pct](#)

Range	0 to 100
Configurable	True
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

receive-ipv6-next-hops *boolean*

Description	<p>Enables the advertisement of the RFC 8950 capability to receive IPv4 routes with IPv6 next-hops</p> <p>When set to true, BGP advertises an extended NH encoding (RFC 8950) capability to its peers. This capability indicates that local router is prepared to accept BGP routes for the AFI/SAFI with IPv6 next-hops from peers in the scope of the command. When set to false, BGP handles received AFI/SAFI routes with IPv6 next-hops as an error and applies treat-as-withdraw.</p>
Context	network-instance name <i>string</i> protocols bgp neighbor peer-address (<i>ipv4-address-with-zone</i> <i>ipv6-address-with-zone</i>) afi-safi afi-safi-name identityref l3vpn-ipv4-unicast receive-ipv6-next-hops <i>boolean</i>
Tree	receive-ipv6-next-hops
Configurable	True
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

l3vpn-ipv6-unicast

Description	Options related to the VPN-IPv6 unicast address family
Context	network-instance name <i>string</i> protocols bgp neighbor peer-address (<i>ipv4-address-with-zone</i> <i>ipv6-address-with-zone</i>) afi-safi afi-safi-name identityref l3vpn-ipv6-unicast
Tree	l3vpn-ipv6-unicast
Configurable	True
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

prefix-limit-received

Description	Options for configuring the maximum number of VPN-IPv6 unicast routes allowed to be received from the peer
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Context	network-instance name <i>string</i> protocols bgp neighbor peer-address (ipv4-address-with-zone ipv6-address-with-zone) afi-safi afi-safi-name identityref l3vpn-ipv6-unicast prefix-limit-received
Tree	prefix-limit-received
Configurable	True
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

max-received-routes *number*

Description	Maximum number of VPN-IPv6 routes that will be accepted from the neighbor, counting routes accepted and rejected by import policies
Context	network-instance name <i>string</i> protocols bgp neighbor peer-address (ipv4-address-with-zone ipv6-address-with-zone) afi-safi afi-safi-name identityref l3vpn-ipv6-unicast prefix-limit-received max-received-routes <i>number</i>
Tree	max-received-routes
Range	1 to 4294967295
Configurable	True
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

prefix-limit-exceeded *boolean*

Description	Changes from false to true when the number of received VPN-IPv6 routes increases to max-received-routes + 1 and remains true until the number of received VPN-IPv6 routes decreases back to max-received-routes (applicable if prevent-teardown = true) or until the session is re-established (applicable if prevent-teardown = false)
Context	network-instance name <i>string</i> protocols bgp neighbor peer-address (ipv4-address-with-zone ipv6-address-with-zone) afi-safi afi-safi-name identityref l3vpn-ipv6-unicast prefix-limit-received prefix-limit-exceeded <i>boolean</i>
Tree	prefix-limit-exceeded
Configurable	False
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

prevent-teardown *boolean*

Description	When false the session is immediately torn down when the number of received VPN-IPv6 routes exceeds the configured limit.
Context	network-instance name <i>string</i> protocols bgp neighbor peer-address (<i>ipv4-address-with-zone</i> <i>ipv6-address-with-zone</i>) afi-safi afi-safi-name identityref l3vpn-ipv6-unicast prefix-limit-received prevent-teardown <i>boolean</i>
Tree	prevent-teardown
Configurable	True
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

warning-threshold-pct *number*

Description	When the number of VPN-IPv6 routes received from the peer (counting routes accepted and rejected by import policy) reaches this percentage of the max-received-routes limit, BGP raises a warning log event
Context	network-instance name <i>string</i> protocols bgp neighbor peer-address (<i>ipv4-address-with-zone</i> <i>ipv6-address-with-zone</i>) afi-safi afi-safi-name identityref l3vpn-ipv6-unicast prefix-limit-received warning-threshold-pct <i>number</i>
Tree	warning-threshold-pct
Range	0 to 100
Configurable	True
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

oper-state *keyword*

Description	Enter the oper-state context
Context	network-instance name <i>string</i> protocols bgp neighbor peer-address (<i>ipv4-address-with-zone</i> <i>ipv6-address-with-zone</i>) afi-safi afi-safi-name identityref oper-state <i>keyword</i>
Tree	oper-state
Options	<ul style="list-style-type: none"> • up Negotiated operational state of the address family is up • down Negotiated operational state of the address family is down

Configurable	False
Platforms	Supported on all platforms

received-routes *number*

Description	The number of routes belonging to this AFI/SAFI received from the peer, including routes rejected by import policy
Context	network-instance name <i>string</i> protocols bgp neighbor peer-address (<i>ipv4-address-with-zone</i> <i>ipv6-address-with-zone</i>) afi-safi afi-safi-name identityref received-routes <i>number</i>
Tree	received-routes
Configurable	False
Platforms	Supported on all platforms

received-routes-withdrawn-due-to-error *number*

Description	The number of routes belonging to this AFI/SAFI received from the peer that were withdrawn due to an update packet error
Context	network-instance name <i>string</i> protocols bgp neighbor peer-address (<i>ipv4-address-with-zone</i> <i>ipv6-address-with-zone</i>) afi-safi afi-safi-name identityref received-routes-withdrawn-due-to-error <i>number</i>
Tree	received-routes-withdrawn-due-to-error
Configurable	False
Platforms	Supported on all platforms

rejected-routes *number*

Description	The number of routes belonging to this AFI/SAFI received from the peer that were rejected by import policy
Context	network-instance name <i>string</i> protocols bgp neighbor peer-address (<i>ipv4-address-with-zone</i> <i>ipv6-address-with-zone</i>) afi-safi afi-safi-name identityref rejected-routes <i>number</i>
Tree	rejected-routes
Configurable	False
Platforms	Supported on all platforms

route-target

Description	Options related to the RT constraint address family
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Context	network-instance name <i>string</i> protocols bgp neighbor peer-address (ipv4-address-with-zone ipv6-address-with-zone) afi-safi afi-safi-name identityref route-target
Tree	route-target
Configurable	True
Platforms	7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

prefix-limit-received

Description	Options for configuring the maximum number of RTC routes allowed to be received from the peer
Context	network-instance name <i>string</i> protocols bgp neighbor peer-address (ipv4-address-with-zone ipv6-address-with-zone) afi-safi afi-safi-name identityref route-target prefix-limit-received
Tree	prefix-limit-received
Configurable	True
Platforms	7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

max-received-routes *number*

Description	Maximum number of RTC routes that will be accepted from the neighbor, counting routes accepted and rejected by import policies
Context	network-instance name <i>string</i> protocols bgp neighbor peer-address (ipv4-address-with-zone ipv6-address-with-zone) afi-safi afi-safi-name identityref route-target prefix-limit-received max-received-routes <i>number</i>
Tree	max-received-routes
Range	1 to 4294967295
Configurable	True
Platforms	7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

prefix-limit-exceeded *boolean*

Description	Changes from false to true when the number of received routes increases to max-received-routes + 1 and remains true until the number of received routes decreases back to max-received-routes (applicable if prevent-
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	teardown = true) or until the session is re-established (applicable if prevent-teardown = false)
Context	network-instance name <i>string</i> protocols bgp neighbor peer-address (<i>ipv4-address-with-zone</i> <i>ipv6-address-with-zone</i>) afi-safi afi-safi-name identityref route-target prefix-limit-received prefix-limit-exceeded <i>boolean</i>
Tree	prefix-limit-exceeded
Configurable	False
Platforms	7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

prevent-teardown *boolean*

Description	When false the session is immediately torn down when the number of received RTC routes exceeds the configured limit.
Context	network-instance name <i>string</i> protocols bgp neighbor peer-address (<i>ipv4-address-with-zone</i> <i>ipv6-address-with-zone</i>) afi-safi afi-safi-name identityref route-target prefix-limit-received prevent-teardown <i>boolean</i>
Tree	prevent-teardown
Configurable	True
Platforms	7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

warning-threshold-pct *number*

Description	When the number of RTC routes received from the peer (counting routes accepted and rejected by import policy) reaches this percentage of the max-received-routes limit, BGP raises a warning log event
Context	network-instance name <i>string</i> protocols bgp neighbor peer-address (<i>ipv4-address-with-zone</i> <i>ipv6-address-with-zone</i>) afi-safi afi-safi-name identityref route-target prefix-limit-received warning-threshold-pct <i>number</i>
Tree	warning-threshold-pct
Range	0 to 100
Configurable	True
Platforms	7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

send-default-route *boolean*

Description	When true the router advertises a synthetically generated default RTC route to the neighbor
Context	network-instance name <i>string</i> protocols bgp neighbor peer-address (ipv4-address-with-zone ipv6-address-with-zone) afi-safi afi-safi-name identityref route-target send-default-route <i>boolean</i>
Tree	send-default-route
Configurable	True
Platforms	7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

sent-routes *number*

Description	The number of routes belonging to this AFI/SAFI advertised as reachable to the peer
Context	network-instance name <i>string</i> protocols bgp neighbor peer-address (ipv4-address-with-zone ipv6-address-with-zone) afi-safi afi-safi-name identityref sent-routes <i>number</i>
Tree	sent-routes
Configurable	False
Platforms	Supported on all platforms

as-path-options

Description	Options for handling the AS_PATH in received BGP routes
Context	network-instance name <i>string</i> protocols bgp neighbor peer-address (ipv4-address-with-zone ipv6-address-with-zone) as-path-options
Tree	as-path-options
Configurable	True
Platforms	Supported on all platforms

allow-own-as *number*

Description	The maximum number of times the global AS number or a local AS number of the BGP instance can appear in any received AS_PATH before it is considered a loop and considered invalid
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Context	network-instance name string protocols bgp neighbor peer-address (ipv4-address-with-zone ipv6-address-with-zone) as-path-options allow-own-as number
Tree	allow-own-as
Configurable	True
Platforms	Supported on all platforms

remove-private-as

Description	Container with options for removing private AS numbers (2-byte and 4-byte) from the advertised AS path towards all peers
Context	network-instance name string protocols bgp neighbor peer-address (ipv4-address-with-zone ipv6-address-with-zone) as-path-options remove-private-as
Tree	remove-private-as
Configurable	True
Platforms	Supported on all platforms

ignore-peer-as *boolean*

Description	If set to true then do not delete or replace a private AS number that is the same as the peer AS number
Context	network-instance name string protocols bgp neighbor peer-address (ipv4-address-with-zone ipv6-address-with-zone) as-path-options remove-private-as ignore-peer-as boolean
Tree	ignore-peer-as
Default	false
Configurable	True
Platforms	Supported on all platforms

leading-only *boolean*

Description	If set to true then only delete or replace private AS numbers that appear before the first occurrence of a non-private ASN in the sequence of most recent ASNs in the AS path
Context	network-instance name string protocols bgp neighbor peer-address (ipv4-address-with-zone ipv6-address-with-zone) as-path-options remove-private-as leading-only boolean
Tree	leading-only

Default	false
Configurable	True
Platforms	Supported on all platforms

mode *keyword*

Description	The method by which private AS numbers are removed from the advertised AS_PATH attribute
Context	network-instance name <i>string</i> protocols bgp neighbor peer-address (<i>ipv4-address-with-zone</i> <i>ipv6-address-with-zone</i>) as-path-options remove-private-as mode <i>keyword</i>
Tree	mode
Options	<ul style="list-style-type: none"> disabled Do not strip or replace any private AS numbers delete Delete private AS numbers, shortening the AS path replace Replace private AS numbers with the local AS number used towards the peer, maintaining the AS path length
Configurable	True
Platforms	Supported on all platforms

replace-peer-as *boolean*

Description	If set to true then replace every occurrence of the peer AS number that is present in the advertised AS path with the local AS number used towards the peer
Context	network-instance name <i>string</i> protocols bgp neighbor peer-address (<i>ipv4-address-with-zone</i> <i>ipv6-address-with-zone</i>) as-path-options replace-peer-as <i>boolean</i>
Tree	replace-peer-as
Configurable	True
Platforms	Supported on all platforms

authentication

Description	Container with authentication options that apply to this specific peer
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Context	network-instance name string protocols bgp neighbor peer-address (ipv4-address-with-zone ipv6-address-with-zone) authentication
Tree	authentication
Configurable	True
Platforms	Supported on all platforms

keychain *reference*

Description	Reference to a keychain. The keychain type must be tcp-md5.
Context	network-instance name string protocols bgp neighbor peer-address (ipv4-address-with-zone ipv6-address-with-zone) authentication keychain reference
Tree	keychain
Reference	system authentication keychain name string
Configurable	True
Platforms	Supported on all platforms

password *string*

Description	Configures an MD5 authentication password for use with neighboring devices.
Context	network-instance name string protocols bgp neighbor peer-address (ipv4-address-with-zone ipv6-address-with-zone) authentication password string
Tree	password
Configurable	True
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

transmit-active *boolean*

Description	Reads true when the TCP segments being sent to the peer have authentication data.
Context	network-instance name string protocols bgp neighbor peer-address (ipv4-address-with-zone ipv6-address-with-zone) authentication transmit-active boolean
Tree	transmit-active
Configurable	False
Platforms	Supported on all platforms

description *string*

Description	A user provided description string for the peer
Context	network-instance name <i>string</i> protocols bgp neighbor peer-address (<i>ipv4-address-with-zone</i> <i>ipv6-address-with-zone</i>) description <i>string</i>
Tree	description
String Length	1 to 255
Configurable	True
Platforms	Supported on all platforms

discovered-by-lldp *boolean*

Description	Set to true if the peer IP address is known through LLDP (irrespective of whether the final TCP connection was originated by this router or not)
Context	network-instance name <i>string</i> protocols bgp neighbor peer-address (<i>ipv4-address-with-zone</i> <i>ipv6-address-with-zone</i>) discovered-by-lldp <i>boolean</i>
Tree	discovered-by-lldp
Configurable	False
Platforms	Supported on all platforms

dynamic-neighbor *boolean*

Description	Indicates true if the neighbor is a dynamic peer that resulted from an accepted incoming TCP connection or an outgoing TCP connection triggered by LLDP auto-discovery
Context	network-instance name <i>string</i> protocols bgp neighbor peer-address (<i>ipv4-address-with-zone</i> <i>ipv6-address-with-zone</i>) dynamic-neighbor <i>boolean</i>
Tree	dynamic-neighbor
Configurable	False
Platforms	Supported on all platforms

established-transitions *number*

Description	The total number of times the BGP FSM transitioned into the established state for this peer
Context	network-instance name <i>string</i> protocols bgp neighbor peer-address (<i>ipv4-address-with-zone</i> <i>ipv6-address-with-zone</i>) established-transitions <i>number</i>
Tree	established-transitions

Default	0
Configurable	False
Platforms	Supported on all platforms

export-policy *reference*

Description	Apply an export policy to advertised BGP routes
Context	network-instance name <i>string</i> protocols bgp neighbor peer-address (<i>ipv4-address-with-zone</i> <i>ipv6-address-with-zone</i>) export-policy reference
Tree	export-policy
Reference	routing-policy policy name <i>string</i>
Configurable	True
Platforms	Supported on all platforms
Max. Elements	14

failure-detection

Description	Options related to methods of detecting BGP session failure
Context	network-instance name <i>string</i> protocols bgp neighbor peer-address (<i>ipv4-address-with-zone</i> <i>ipv6-address-with-zone</i>) failure-detection
Tree	failure-detection
Configurable	True
Platforms	Supported on all platforms

enable-bfd *boolean*

Description	The true setting enables Bi-directional Forwarding Detection on BGP sessions belonging to the peer group
Context	network-instance name <i>string</i> protocols bgp neighbor peer-address (<i>ipv4-address-with-zone</i> <i>ipv6-address-with-zone</i>) failure-detection enable-bfd <i>boolean</i>
Tree	enable-bfd
Configurable	True
Platforms	Supported on all platforms

fast-failover *boolean*

Description	The true setting the EBGP or IBGP session to drop immediately (and not wait for hold timer expiry) when the local interface that it depends upon for neighbor reachability goes down
Context	network-instance name <i>string</i> protocols bgp neighbor peer-address (<i>ipv4-address-with-zone</i> <i>ipv6-address-with-zone</i>) failure-detection fast-failover <i>boolean</i>
Tree	fast-failover
Configurable	True
Platforms	Supported on all platforms

graceful-restart

Description	Options related to router behavior as a graceful restart helper
Context	network-instance name <i>string</i> protocols bgp neighbor peer-address (<i>ipv4-address-with-zone</i> <i>ipv6-address-with-zone</i>) graceful-restart
Tree	graceful-restart
Configurable	True
Platforms	Supported on all platforms

admin-state *keyword*

Description	Administratively enable or disable graceful restart helper for all address families
Context	network-instance name <i>string</i> protocols bgp neighbor peer-address (<i>ipv4-address-with-zone</i> <i>ipv6-address-with-zone</i>) graceful-restart admin-state <i>keyword</i>
Tree	admin-state
Options	<ul style="list-style-type: none"> • enable • disable
Configurable	True
Platforms	Supported on all platforms

helper-active *boolean*

Description	Set to true when the router is actively helping the neighbor for at least one address family - i.e. for that address family the peer restarted with F=1 in its capability and the stale-routes-time has not expired yet
Context	network-instance name <i>string</i> protocols bgp neighbor peer-address (<i>ipv4-address-with-zone</i> <i>ipv6-address-with-zone</i>) graceful-restart helper-active <i>boolean</i>
Tree	helper-active
Configurable	False
Platforms	Supported on all platforms

last-restart-time *string*

Description	The last time the peer restarted
Context	network-instance name <i>string</i> protocols bgp neighbor peer-address (<i>ipv4-address-with-zone</i> <i>ipv6-address-with-zone</i>) graceful-restart last-restart-time <i>string</i>
Tree	last-restart-time
String Length	20 to 32
Configurable	False
Platforms	Supported on all platforms

neighbor-capability

Description	Container for information about the last GR capability received from the neighbor
Context	network-instance name <i>string</i> protocols bgp neighbor peer-address (<i>ipv4-address-with-zone</i> <i>ipv6-address-with-zone</i>) graceful-restart neighbor-capability
Tree	neighbor-capability
Configurable	False
Platforms	Supported on all platforms

afi-safi *name identityref*

Description	List of AFI/SAFI TLVs that were contained in the neighbor's last GR capability
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Context	network-instance name <i>string</i> protocols bgp neighbor peer-address (<i>ipv4-address-with-zone</i> <i>ipv6-address-with-zone</i>) graceful-restart neighbor-capability afi-safi name <i>identityref</i>
Tree	afi-safi
Configurable	False
Platforms	Supported on all platforms

name *identityref*

Description	Enter the name context
Context	network-instance name <i>string</i> protocols bgp neighbor peer-address (<i>ipv4-address-with-zone</i> <i>ipv6-address-with-zone</i>) graceful-restart neighbor-capability afi-safi name <i>identityref</i>
Options	<ul style="list-style-type: none"> • ipv4-unicast Unlabeled IPv4 unicast routes (AFI = 1, SAFI = 1) • ipv6-unicast Unlabeled IPv6 unicast routes (AFI = 2, SAFI = 1) • l3vpn-ipv4-unicast VPN-IPv4 unicast address family (AFI = 1, SAFI = 128) • l3vpn-ipv6-unicast VPN-IPv6 unicast address family (AFI = 2, SAFI = 128) • ipv4-labeled-unicast Labeled IPv4 unicast routes (AFI 1, SAFI 4) • ipv6-labeled-unicast Labeled IPv6 unicast routes (AFI 2, SAFI 4) • evpn EVPN routes (AFI = 25, SAFI = 70) • route-target Route target constraint routes (AFI 1, SAFI 132) • sr-policy-ipv4 SR-TE Policy (AFI 1, SAFI 73) • sr-policy-ipv6 SR-TE Policy (AFI 2, SAFI 73)
Configurable	False
Platforms	Supported on all platforms

forwarding-preserved *boolean*

Description	The F-bit setting in the AFI/SAFI TLV
Context	network-instance name <i>string</i> protocols bgp neighbor peer-address (ipv4-address-with-zone ipv6-address-with-zone) graceful-restart neighbor-capability afi-safi name identityref forwarding-preserved <i>boolean</i>
Tree	forwarding-preserved
Configurable	False
Platforms	Supported on all platforms

restart-time *number*

Description	The value of the Restart Time in the neighbor's last GR capability
Context	network-instance name <i>string</i> protocols bgp neighbor peer-address (ipv4-address-with-zone ipv6-address-with-zone) graceful-restart neighbor-capability restart-time <i>number</i>
Tree	restart-time
Configurable	False
Platforms	Supported on all platforms

number-of-restarts *number*

Description	The number of times the peer has restarted
Context	network-instance name <i>string</i> protocols bgp neighbor peer-address (ipv4-address-with-zone ipv6-address-with-zone) graceful-restart number-of-restarts <i>number</i>
Tree	number-of-restarts
Configurable	False
Platforms	Supported on all platforms

requested-restart-time *number*

Description	The restart time encoded in this router's GR capability. If the neighbor honors this request then this is the maximum time allowed for this router to re-establish its TCP connection after a restart. If this time is exceeded, the neighbor is expected to flush stale routes that it was maintaining on behalf of this router.
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Context	network-instance name <i>string</i> protocols bgp neighbor peer-address (<i>ipv4-address-with-zone</i> <i>ipv6-address-with-zone</i>) graceful-restart requested-restart-time <i>number</i>
Tree	requested-restart-time
Range	1 to 3600
Default	300
Units	seconds
Configurable	True
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

stale-routes-time *number*

Description	The maximum number of seconds that routes received from a helped peer remain stale until they are deleted Routes of AFI/SAFI X received from peer Y are marked stale when peer Y goes down and its previous GR capability included AFI/SAFI X.
Context	network-instance name <i>string</i> protocols bgp neighbor peer-address (<i>ipv4-address-with-zone</i> <i>ipv6-address-with-zone</i>) graceful-restart stale-routes-time <i>number</i>
Tree	stale-routes-time
Range	1 to 3600
Units	seconds
Configurable	True
Platforms	Supported on all platforms

import-policy *reference*

Description	Apply an import policy to received BGP routes
Context	network-instance name <i>string</i> protocols bgp neighbor peer-address (<i>ipv4-address-with-zone</i> <i>ipv6-address-with-zone</i>) import-policy <i>reference</i>
Tree	import-policy
Reference	routing-policy policy name <i>string</i>
Configurable	True
Platforms	Supported on all platforms
Max. Elements	14

last-established *string*

Description	The time when the session last transitioned into or out of the established state Uptime or downtime of the session can be calculated from this state.
Context	network-instance name <i>string</i> protocols bgp neighbor peer-address (<i>ipv4-address-with-zone</i> <i>ipv6-address-with-zone</i>) last-established <i>string</i>
Tree	last-established
String Length	20 to 32
Configurable	False
Platforms	Supported on all platforms

last-event *keyword*

Description	Enter the last-event context
Context	network-instance name <i>string</i> protocols bgp neighbor peer-address (<i>ipv4-address-with-zone</i> <i>ipv6-address-with-zone</i>) last-event <i>keyword</i>
Tree	last-event
Options	<ul style="list-style-type: none"> • none • start • stop • open • close • openFail • error • connectRetry • holdTime • keepAlive • rcvOpen • rcvKeepAlive • rcvUpdate • rcvNotify • startPassive • parseError • outOfMemory • rtmLimitExceed • outOfProtNHIndex

- outOfNHIndex
- labelAllocFailed
- lspldAllocFailed
- collisionResolution
- adminShutdown
- adminReset
- configChange
- maxPrefixExceed
- maxPfxExcdLog
- trackingPolMismatch
- receivedMalformedAttr
- adminResetHard
- peerDamping

Configurable

False

Platforms

Supported on all platforms

last-state *keyword***Description**

Previous state of the session

Context[network-instance name](#) *string* [protocols](#) [bgp neighbor peer-address](#) (*ipv4-address-with-zone* | *ipv6-address-with-zone*) [last-state](#) *keyword***Tree**[last-state](#)**Options**

- idle
- connect
- active
- opensent
- openconfirm
- established

Configurable

False

Platforms

Supported on all platforms

local-as**Description**

Options related to the local autonomous-system number advertised by this router to the peer

Context[network-instance name](#) *string* [protocols](#) [bgp neighbor peer-address](#) (*ipv4-address-with-zone* | *ipv6-address-with-zone*) [local-as](#)

Tree	local-as
Configurable	True
Platforms	Supported on all platforms

as-number *number*

Description	The local autonomous system number used to override the global ASN on this session Sets the ASN value that this router sends in its OPEN message towards its peer.
Context	network-instance name <i>string</i> protocols bgp neighbor peer-address (<i>ipv4-address-with-zone</i> <i>ipv6-address-with-zone</i>) local-as as-number <i>number</i>
Tree	as-number
Range	1 to 4294967295
Configurable	True
Platforms	Supported on all platforms

prepend-global-as *boolean*

Description	When set to true, the global ASN value is prepended to the AS path in outbound routes towards the peer If a session is EBGP (peer-as is not equal to the local-as) then the local-as is prepended as the final step, so that the local-as is the first element in the AS_PATH received by the peer.
Context	network-instance name <i>string</i> protocols bgp neighbor peer-address (<i>ipv4-address-with-zone</i> <i>ipv6-address-with-zone</i>) local-as prepend-global-as <i>boolean</i>
Tree	prepend-global-as
Configurable	True
Platforms	Supported on all platforms

prepend-local-as *boolean*

Description	When set to true, the local AS value is prepended to the AS path of inbound routes from the peer
Context	network-instance name <i>string</i> protocols bgp neighbor peer-address (<i>ipv4-address-with-zone</i> <i>ipv6-address-with-zone</i>) local-as prepend-local-as <i>boolean</i>
Tree	prepend-local-as

Configurable	True
Platforms	Supported on all platforms

local-preference *number*

Description	The value of the local-preference attribute that is added to received routes from the peer, if it is EBGP It is also used to encode the local preference attribute for locally generated BGP routes.
Context	network-instance name string protocols bgp neighbor peer-address (ipv4-address-with-zone ipv6-address-with-zone) local-preference number
Tree	local-preference
Configurable	True
Platforms	Supported on all platforms

maintenance-group *string*

Description	State field to display the maintenance group to which this neighbor belongs to.
Context	network-instance name string protocols bgp neighbor peer-address (ipv4-address-with-zone ipv6-address-with-zone) maintenance-group string
Tree	maintenance-group
Configurable	False
Platforms	Supported on all platforms

multihop

Description	Configuration parameters specifying the multihop behaviour for an EBGP peer. This is not applicable to an IBGP peer.
Context	network-instance name string protocols bgp neighbor peer-address (ipv4-address-with-zone ipv6-address-with-zone) multihop
Tree	multihop
Configurable	True
Platforms	Supported on all platforms

admin-state *keyword*

Description	When enabled, the peer is allowed to be indirectly connected by up to N hops, where N is controlled by the maximum-hops parameter. When disabled, multihop is allowed only if the peer type is IBGP. This overrides the group setting for admin-state.
Context	network-instance name <i>string</i> protocols bgp neighbor peer-address (<i>ipv4-address-with-zone</i> <i>ipv6-address-with-zone</i>) multihop admin-state <i>keyword</i>
Tree	admin-state
Options	<ul style="list-style-type: none"> • enable • disable
Configurable	True
Platforms	Supported on all platforms

maximum-hops *number*

Description	This sets the maximum number of routing hops towards the peer. It determines the IP TTL value in originated BGP TCP/IP packets. By default the TTL is set to 1 towards an EBGP peer and 64 towards an IBGP peer. This overrides the group setting for maximum-hops.
Context	network-instance name <i>string</i> protocols bgp neighbor peer-address (<i>ipv4-address-with-zone</i> <i>ipv6-address-with-zone</i>) multihop maximum-hops <i>number</i>
Tree	maximum-hops
Range	1 to 255
Configurable	True
Platforms	Supported on all platforms

next-hop-self *boolean*

Description	When set to true, the next-hop in all IPv4-unicast, IPv6-unicast and EVPN BGP routes advertised to the peer, if IBGP, is set equal to the local-address used on this session (or to the router ID if the NLRI is IPv6 and there is no IPv6 local address to use). This is independent of the route origin (EBGP, IBGP-client, IBGP-non-client or redistributed direct/static/aggregate route). When set to false, normal BGP rules from RFC 4271 apply.
Context	network-instance name <i>string</i> protocols bgp neighbor peer-address (<i>ipv4-address-with-zone</i> <i>ipv6-address-with-zone</i>) next-hop-self <i>boolean</i>
Tree	next-hop-self

Configurable	True
Platforms	Supported on all platforms

optional-attributes

Description	Enter the optional-attributes context
Context	network-instance name <i>string</i> protocols bgp neighbor peer-address (ipv4-address-with-zone ipv6-address-with-zone) optional-attributes
Tree	optional-attributes
Configurable	True
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

block-prefix-sid *boolean*

Description	Remove the prefix SID optional transitive attribute in all received and sent routes to this peer, or group of peers
Context	network-instance name <i>string</i> protocols bgp neighbor peer-address (ipv4-address-with-zone ipv6-address-with-zone) optional-attributes block-prefix-sid <i>boolean</i>
Tree	block-prefix-sid
Configurable	True
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

peer-as *number*

Description	The autonomous system number expected from the peer A configured session with a peer does not come up if this value does not match the AS value reported by the peer in its OPEN message.
Context	network-instance name <i>string</i> protocols bgp neighbor peer-address (ipv4-address-with-zone ipv6-address-with-zone) peer-as <i>number</i>
Tree	peer-as
Range	1 to 4294967295
Configurable	True
Platforms	Supported on all platforms

peer-group *reference*

Description	A reference to the peer-group template to use for this BGP session
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This is not immutable.

Context	network-instance name <i>string</i> protocols bgp neighbor peer-address (<i>ipv4-address-with-zone</i> <i>ipv6-address-with-zone</i>) peer-group <i>reference</i>
Tree	peer-group
Reference	network-instance name <i>string</i> protocols bgp group group-name <i>string</i>
Configurable	True
Platforms	Supported on all platforms

peer-router-id *string*

Description	The BGP identifier advertised by the peer in its OPEN message
Context	network-instance name <i>string</i> protocols bgp neighbor peer-address (<i>ipv4-address-with-zone</i> <i>ipv6-address-with-zone</i>) peer-router-id <i>string</i>
Tree	peer-router-id
Configurable	False
Platforms	Supported on all platforms

peer-type *keyword*

Description	The session type. The type is EBGP when the local AS and peer AS are different, and the type is IBGP when the local AS and peer AS have the same value.
Context	network-instance name <i>string</i> protocols bgp neighbor peer-address (<i>ipv4-address-with-zone</i> <i>ipv6-address-with-zone</i>) peer-type <i>keyword</i>
Tree	peer-type
Options	<ul style="list-style-type: none"> • <code>ibgp</code> Indicates that the peer is IBGP (<code>local-as == peer-as</code>). • <code>ebgp</code> Indicates that the peer is EBGP (<code>local-as != peer-as</code>).
Configurable	False
Platforms	Supported on all platforms

received-afi-safi *identityref*

Description	List of multiprotocol BGP address families supported by the peer, derived from the AFI/SAFI list in the MP-BGP capability received by the local routing device from the peer
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Context	network-instance name string protocols bgp neighbor peer-address (ipv4-address-with-zone ipv6-address-with-zone) received-afi-safi identityref
Tree	received-afi-safi
Options	<ul style="list-style-type: none"> • ipv4-unicast Unlabeled IPv4 unicast routes (AFI = 1, SAFI = 1) • ipv6-unicast Unlabeled IPv6 unicast routes (AFI = 2, SAFI = 1) • l3vpn-ipv4-unicast VPN-IPv4 unicast address family (AFI = 1, SAFI = 128) • l3vpn-ipv6-unicast VPN-IPv6 unicast address family (AFI = 2, SAFI = 128) • ipv4-labeled-unicast Labeled IPv4 unicast routes (AFI 1, SAFI 4) • ipv6-labeled-unicast Labeled IPv6 unicast routes (AFI 2, SAFI 4) • evpn EVPN routes (AFI = 25, SAFI = 70) • route-target Route target constraint routes (AFI 1, SAFI 132) • sr-policy-ipv4 SR-TE Policy (AFI 1, SAFI 73) • sr-policy-ipv6 SR-TE Policy (AFI 2, SAFI 73)
Configurable	False
Platforms	Supported on all platforms

received-capabilities *keyword*

Description	List of BGP capabilities received by the local routing device from the peer
Context	network-instance name string protocols bgp neighbor peer-address (ipv4-address-with-zone ipv6-address-with-zone) received-capabilities keyword
Tree	received-capabilities
Options	<ul style="list-style-type: none"> • MP_BGP • ROUTE_REFRESH • EXT_NH_ENCODING • GRACEFUL_RESTART

- 4-OCTET_ASN
- ORF_SEND_EXCOMM
- ORF_RECEIVE_EXCOMM
- ADD_PATH
- LONG_LIVED_GR

Configurable

False

Platforms

Supported on all platforms

received-end-of-rib *identityref***Description**

List of address families for which the peer has signaled the End of RIB marker

Context[network-instance name](#) *string protocols bgp neighbor peer-address (ipv4-address-with-zone | ipv6-address-with-zone)* [received-end-of-rib identityref](#)**Tree**[received-end-of-rib](#)**Options**

- ipv4-unicast
Unlabeled IPv4 unicast routes (AFI = 1, SAFI = 1)
- ipv6-unicast
Unlabeled IPv6 unicast routes (AFI = 2, SAFI = 1)
- l3vpn-ipv4-unicast
VPN-IPv4 unicast address family (AFI = 1, SAFI = 128)
- l3vpn-ipv6-unicast
VPN-IPv6 unicast address family (AFI = 2, SAFI = 128)
- ipv4-labeled-unicast
Labeled IPv4 unicast routes (AFI 1, SAFI 4)
- ipv6-labeled-unicast
Labeled IPv6 unicast routes (AFI 2, SAFI 4)
- evpn
EVPN routes (AFI = 25, SAFI = 70)
- route-target
Route target constraint routes (AFI 1, SAFI 132)
- sr-policy-ipv4
SR-TE Policy (AFI 1, SAFI 73)
- sr-policy-ipv6
SR-TE Policy (AFI 2, SAFI 73)

Configurable

False

Platforms Supported on all platforms

received-messages

Description Container for state information about BGP messages received from the peer.

Context [network-instance name string protocols bgp neighbor peer-address \(ipv4-address-with-zone | ipv6-address-with-zone\) received-messages](#)

Tree [received-messages](#)

Configurable False

Platforms Supported on all platforms

last-notification-error-code *keyword*

Description The error code in the last NOTIFICATION received from this peer.

Context [network-instance name string protocols bgp neighbor peer-address \(ipv4-address-with-zone | ipv6-address-with-zone\) received-messages last-notification-error-code keyword](#)

Tree [last-notification-error-code](#)

Options

- Message Header Error
- Open Message Error
- Update Message Error
- Hold Timer Error
- Finite State Machine Error
- Cease

Configurable False

Platforms Supported on all platforms

last-notification-error-subcode *keyword*

Description The error subcode in the last NOTIFICATION received from the peer.

Context [network-instance name string protocols bgp neighbor peer-address \(ipv4-address-with-zone | ipv6-address-with-zone\) received-messages last-notification-error-subcode keyword](#)

Tree [last-notification-error-subcode](#)

Options

- Connection Not Synchronized
- Bad Message Length
- Bad Message Type

- Unsupported Version Number
- Bad Peer As
- Bad BGP Identifier
- Unsupported Optional Parameter
- Unacceptable Hold Time
- UPDATE Message Error subcodes
- Malformed Attribute List
- Unrecognized Well-known Attribute
- Missing Well-known Attribute
- Attribute Flags Error
- Attribute Length Error
- Invalid ORIGIN Attribute
- Invalid NEXT_HOP Attribute
- Optional Attribute Error
- Invalid Network Field
- Malformed AS_PATH
- Maximum Number of Prefixes Reached
- Administrative Shutdown
- Peer De-configured
- Administrative Reset
- Connection Rejected
- Other Configuration Change
- Connection Collision Resolution
- Out of Resources
- Unspecific
- Hard Reset
- Unsupported Capability

Configurable

False

Platforms

Supported on all platforms

last-notification-time *string***Description**

Timestamp representing the time of the last Notification message received from the peer.

Context

[network-instance name](#) *string* [protocols bgp neighbor peer-address](#) (*ipv4-address-with-zone | ipv6-address-with-zone*) [received-messages last-notification-time](#) *string*

Tree	last-notification-time
String Length	20 to 32
Configurable	False
Platforms	Supported on all platforms

last-update-time *string*

Description	The timestamp when the last UPDATE was received from this peer.
Context	network-instance name <i>string</i> protocols bgp neighbor peer-address (<i>ipv4-address-with-zone</i> <i>ipv6-address-with-zone</i>) received-messages last-update-time <i>string</i>
Tree	last-update-time
String Length	20 to 32
Configurable	False
Platforms	Supported on all platforms

malformed-updates *number*

Description	Number of BGP UPDATE messages received from the peer that were malformed but recoverable through treat-as-withdraw or attribute-discard (i.e. without session reset)
Context	network-instance name <i>string</i> protocols bgp neighbor peer-address (<i>ipv4-address-with-zone</i> <i>ipv6-address-with-zone</i>) received-messages malformed-updates <i>number</i>
Tree	malformed-updates
Default	0
Configurable	False
Platforms	Supported on all platforms

queue-depth *number*

Description	The number of messages received from the peer currently queued.
Context	network-instance name <i>string</i> protocols bgp neighbor peer-address (<i>ipv4-address-with-zone</i> <i>ipv6-address-with-zone</i>) received-messages queue-depth <i>number</i>
Tree	queue-depth
Configurable	False
Platforms	Supported on all platforms

route-refresh *number*

Description	Number of BGP ROUTE_REFRESH messages received from the peer over the lifetime of its configuration or since the last clear.
Context	network-instance name <i>string</i> protocols bgp neighbor peer-address (<i>ipv4-address-with-zone ipv6-address-with-zone</i>) received-messages route-refresh <i>number</i>
Tree	route-refresh
Default	0
Configurable	False
Platforms	Supported on all platforms

total-messages *number*

Description	Total number of BGP messages received from the peer over the lifetime of its configuration or since the last clear.
Context	network-instance name <i>string</i> protocols bgp neighbor peer-address (<i>ipv4-address-with-zone ipv6-address-with-zone</i>) received-messages total-messages <i>number</i>
Tree	total-messages
Default	0
Configurable	False
Platforms	Supported on all platforms

total-non-updates *number*

Description	Number of BGP NON UPDATE messages received from the peer over the lifetime of its configuration or since the last clear.
Context	network-instance name <i>string</i> protocols bgp neighbor peer-address (<i>ipv4-address-with-zone ipv6-address-with-zone</i>) received-messages total-non-updates <i>number</i>
Tree	total-non-updates
Configurable	False
Platforms	Supported on all platforms

total-notifications *number*

Description	Number of BGP Notification messages received from the peer over the lifetime of its configuration or since the last clear.
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Context	network-instance name <i>string</i> protocols bgp neighbor peer-address (<i>ipv4-address-with-zone</i> <i>ipv6-address-with-zone</i>) received-messages total-notifications <i>number</i>
Tree	total-notifications
Configurable	False
Platforms	Supported on all platforms

total-updates *number*

Description	Number of BGP UPDATE messages received from the peer over the lifetime of its configuration or since the last clear.
Context	network-instance name <i>string</i> protocols bgp neighbor peer-address (<i>ipv4-address-with-zone</i> <i>ipv6-address-with-zone</i>) received-messages total-updates <i>number</i>
Tree	total-updates
Default	0
Configurable	False
Platforms	Supported on all platforms

route-reflector

Description	Container with route reflection configuration options.
Context	network-instance name <i>string</i> protocols bgp neighbor peer-address (<i>ipv4-address-with-zone</i> <i>ipv6-address-with-zone</i>) route-reflector
Tree	route-reflector
Configurable	True
Platforms	Supported on all platforms

client *boolean*

Description	When this is set to true this BGP session is considered an RR client.
Context	network-instance name <i>string</i> protocols bgp neighbor peer-address (<i>ipv4-address-with-zone</i> <i>ipv6-address-with-zone</i>) route-reflector client <i>boolean</i>
Tree	client
Configurable	True
Platforms	Supported on all platforms

cluster-id (*number* | *dotted-quad*)

Description	The cluster-id to insert into the CLUSTER_LIST attribute when reflecting routes received by or sent to this client. The default is inherited from group or instance level configuration.
Context	network-instance name <i>string</i> protocols bgp neighbor peer-address (<i>ipv4-address-with-zone</i> <i>ipv6-address-with-zone</i>) route-reflector cluster-id (<i>number</i> <i>dotted-quad</i>)
Tree	cluster-id
Range	1 to 4294967295
Configurable	True
Platforms	Supported on all platforms

send-community

Description	Options for controlling the sending of BGP communities to the peer
Context	network-instance name <i>string</i> protocols bgp neighbor peer-address (<i>ipv4-address-with-zone</i> <i>ipv6-address-with-zone</i>) send-community
Tree	send-community
Configurable	True
Platforms	Supported on all platforms

large *boolean*

Description	The false setting causes BGP to strip all large (12 byte) BGP communities from all outbound routes advertised to the peer
Context	network-instance name <i>string</i> protocols bgp neighbor peer-address (<i>ipv4-address-with-zone</i> <i>ipv6-address-with-zone</i>) send-community large <i>boolean</i>
Tree	large
Configurable	True
Platforms	Supported on all platforms

standard *boolean*

Description	The false setting causes BGP to strip all standard (4 byte) communities from all outbound routes advertised to the peer
Context	network-instance name <i>string</i> protocols bgp neighbor peer-address (<i>ipv4-address-with-zone</i> <i>ipv6-address-with-zone</i>) send-community standard <i>boolean</i>

Tree	standard
Configurable	True
Platforms	Supported on all platforms

send-default-route

Description	Options for controlling the generation of default routes towards the peer
Context	network-instance name string protocols bgp neighbor peer-address (ipv4-address-with-zone ipv6-address-with-zone) send-default-route
Tree	send-default-route
Configurable	True
Platforms	Supported on all platforms

export-policy *reference*

Description	The name of a policy that should be applied to the advertised default routes, in order to set their attributes to non-default values Only the default-action of this policy is parsed and applied.
Context	network-instance name string protocols bgp neighbor peer-address (ipv4-address-with-zone ipv6-address-with-zone) send-default-route export-policy reference
Tree	export-policy
Reference	routing-policy policy name string
Configurable	True
Platforms	Supported on all platforms

ipv4-unicast *boolean*

Description	Enables the sending of a synthetically generated default IPv4 route [0/0] to the peer
Context	network-instance name string protocols bgp neighbor peer-address (ipv4-address-with-zone ipv6-address-with-zone) send-default-route ipv4-unicast boolean
Tree	ipv4-unicast
Configurable	True
Platforms	Supported on all platforms

ipv6-unicast *boolean*

Description	Enables the sending of a synthetically generated default IPv6 route [::/0] to the peer
Context	network-instance name <i>string</i> protocols bgp neighbor peer-address (<i>ipv4-address-with-zone</i> <i>ipv6-address-with-zone</i>) send-default-route ipv6-unicast boolean
Tree	ipv6-unicast
Configurable	True
Platforms	Supported on all platforms

sent-end-of-rib *identityref*

Description	List of address families for which this router sent the peer an End of RIB marker
Context	network-instance name <i>string</i> protocols bgp neighbor peer-address (<i>ipv4-address-with-zone</i> <i>ipv6-address-with-zone</i>) sent-end-of-rib identityref
Tree	sent-end-of-rib
Options	<ul style="list-style-type: none"> • ipv4-unicast Unlabeled IPv4 unicast routes (AFI = 1, SAFI = 1) • ipv6-unicast Unlabeled IPv6 unicast routes (AFI = 2, SAFI = 1) • l3vpn-ipv4-unicast VPN-IPv4 unicast address family (AFI = 1, SAFI = 128) • l3vpn-ipv6-unicast VPN-IPv6 unicast address family (AFI = 2, SAFI = 128) • ipv4-labeled-unicast Labeled IPv4 unicast routes (AFI 1, SAFI 4) • ipv6-labeled-unicast Labeled IPv6 unicast routes (AFI 2, SAFI 4) • evpn EVPN routes (AFI = 25, SAFI = 70) • route-target Route target constraint routes (AFI 1, SAFI 132) • sr-policy-ipv4 SR-TE Policy (AFI 1, SAFI 73) • sr-policy-ipv6

SR-TE Policy (AFI 2, SAFI 73)

Configurable	False
Platforms	Supported on all platforms

sent-messages

Description	Container for state information about BGP messages sent to the peer.
Context	network-instance name string protocols bgp neighbor peer-address (ipv4-address-with-zone ipv6-address-with-zone) sent-messages
Tree	sent-messages
Configurable	False
Platforms	Supported on all platforms

last-notification-error-code *keyword*

Description	The error code in the last NOTIFICATION sent to this peer.
Context	network-instance name string protocols bgp neighbor peer-address (ipv4-address-with-zone ipv6-address-with-zone) sent-messages last-notification-error-code <i>keyword</i>
Tree	last-notification-error-code
Options	<ul style="list-style-type: none"> • Message Header Error • Open Message Error • Update Message Error • Hold Timer Error • Finite State Machine Error • Cease
Configurable	False
Platforms	Supported on all platforms

last-notification-error-subcode *keyword*

Description	The error subcode in the last NOTIFICATION sent to this peer.
Context	network-instance name string protocols bgp neighbor peer-address (ipv4-address-with-zone ipv6-address-with-zone) sent-messages last-notification-error-subcode <i>keyword</i>
Tree	last-notification-error-subcode
Options	<ul style="list-style-type: none"> • Connection Not Synchronized

- Bad Message Length
- Bad Message Type
- Unsupported Version Number
- Bad Peer As
- Bad BGP Identifier
- Unsupported Optional Parameter
- Unacceptable Hold Time
- UPDATE Message Error subcodes
- Malformed Attribute List
- Unrecognized Well-known Attribute
- Missing Well-known Attribute
- Attribute Flags Error
- Attribute Length Error
- Invalid ORIGIN Attribute
- Invalid NEXT_HOP Attribute
- Optional Attribute Error
- Invalid Network Field
- Malformed AS_PATH
- Maximum Number of Prefixes Reached
- Administrative Shutdown
- Peer De-configured
- Administrative Reset
- Connection Rejected
- Other Configuration Change
- Connection Collision Resolution
- Out of Resources
- Unspecific
- Hard Reset
- Unsupported Capability

Configurable

False

Platforms

Supported on all platforms

last-notification-time *string***Description**

Timestamp representing the time of the last Notification message sent to the peer.

Context	network-instance name <i>string</i> protocols bgp neighbor peer-address (<i>ipv4-address-with-zone</i> <i>ipv6-address-with-zone</i>) sent-messages last-notification-time <i>string</i>
Tree	last-notification-time
String Length	20 to 32
Configurable	False
Platforms	Supported on all platforms

queue-depth *number*

Description	The number of messages queued to be sent to the peer.
Context	network-instance name <i>string</i> protocols bgp neighbor peer-address (<i>ipv4-address-with-zone</i> <i>ipv6-address-with-zone</i>) sent-messages queue-depth <i>number</i>
Tree	queue-depth
Configurable	False
Platforms	Supported on all platforms

route-refresh *number*

Description	Number of BGP ROUTE_REFRESH messages sent to the peer over the lifetime of its configuration or since the last clear.
Context	network-instance name <i>string</i> protocols bgp neighbor peer-address (<i>ipv4-address-with-zone</i> <i>ipv6-address-with-zone</i>) sent-messages route-refresh <i>number</i>
Tree	route-refresh
Default	0
Configurable	False
Platforms	Supported on all platforms

total-messages *number*

Description	Total number of BGP messages sent to the peer over the lifetime of its configuration or since the last clear.
Context	network-instance name <i>string</i> protocols bgp neighbor peer-address (<i>ipv4-address-with-zone</i> <i>ipv6-address-with-zone</i>) sent-messages total-messages <i>number</i>
Tree	total-messages
Default	0

Configurable	False
Platforms	Supported on all platforms

total-non-updates *number*

Description	Number of BGP NON UPDATE messages sent to the peer over the lifetime of its configuration or since the last clear.
Context	network-instance name <i>string</i> protocols bgp neighbor peer-address (ipv4-address-with-zone ipv6-address-with-zone) sent-messages total-non-updates <i>number</i>
Tree	total-non-updates
Configurable	False
Platforms	Supported on all platforms

total-notifications *number*

Description	Number of BGP Notification messages sent to the peer over the lifetime of its configuration or since the last clear.
Context	network-instance name <i>string</i> protocols bgp neighbor peer-address (ipv4-address-with-zone ipv6-address-with-zone) sent-messages total-notifications <i>number</i>
Tree	total-notifications
Configurable	False
Platforms	Supported on all platforms

total-updates *number*

Description	Number of BGP UPDATE messages sent to the peer over the lifetime of its configuration or since the last clear.
Context	network-instance name <i>string</i> protocols bgp neighbor peer-address (ipv4-address-with-zone ipv6-address-with-zone) sent-messages total-updates <i>number</i>
Tree	total-updates
Default	0
Configurable	False
Platforms	Supported on all platforms

session-state *keyword*

Description	Current state of the session
Context	network-instance name <i>string</i> protocols bgp neighbor peer-address (<i>ipv4-address-with-zone</i> <i>ipv6-address-with-zone</i>) session-state <i>keyword</i>
Tree	session-state
Options	<ul style="list-style-type: none"> • idle • connect • active • opensent • openconfirm • established
Configurable	False
Platforms	Supported on all platforms

slow-peer *keyword*

Description	Set to 'yes' if, after the last BGP restart, the session was in a lesser state than established when the min-wait-to-advertise timer expired Set to unknown if the min-wait-to-advertise time has not yet elapsed.
Context	network-instance name <i>string</i> protocols bgp neighbor peer-address (<i>ipv4-address-with-zone</i> <i>ipv6-address-with-zone</i>) slow-peer <i>keyword</i>
Tree	slow-peer
Options	<ul style="list-style-type: none"> • yes • no • unknown
Configurable	False
Platforms	Supported on all platforms

timers

Description	Enter the timers context
Context	network-instance name <i>string</i> protocols bgp neighbor peer-address (<i>ipv4-address-with-zone</i> <i>ipv6-address-with-zone</i>) timers
Tree	timers
Configurable	True

Platforms Supported on all platforms

connect-retry *number*

Description The time interval in seconds between successive attempts to establish a session with a peer

Context [network-instance name](#) *string* [protocols](#) [bgp](#) [neighbor](#) [peer-address](#) (*ipv4-address-with-zone* | *ipv6-address-with-zone*) [timers](#) [connect-retry](#) *number*

Tree [connect-retry](#)

Range 1 to 65535

Units seconds

Configurable True

Platforms Supported on all platforms

hold-time *number*

Description The hold-time interval in seconds that the router proposes to the peer in its OPEN message

The actual in-use hold-time is negotiated to the lowest value proposed by the two peers. A negotiated value of 0 suppresses the sending of keepalives by both peers.

Context [network-instance name](#) *string* [protocols](#) [bgp](#) [neighbor](#) [peer-address](#) (*ipv4-address-with-zone* | *ipv6-address-with-zone*) [timers](#) [hold-time](#) *number*

Tree [hold-time](#)

Range 0 | 3 to 65535

Units seconds

Configurable True

Platforms Supported on all platforms

keepalive-interval *number*

Description The interval in seconds between successive keepalive messages sent to the peer

The period between one keepalive message and the next is the minimum of this configured (or inherited) value and 1/3 of the negotiated hold-time duration. A value of 0 suppresses the sending of keepalives to the peer.

Context [network-instance name](#) *string* [protocols](#) [bgp](#) [neighbor](#) [peer-address](#) (*ipv4-address-with-zone* | *ipv6-address-with-zone*) [timers](#) [keepalive-interval](#) *number*

Tree	keepalive-interval
Range	0 to 21845
Units	seconds
Configurable	True
Platforms	Supported on all platforms

minimum-advertisement-interval *number*

Description	<p>The value assigned to the MinRouteAdvertisementIntervalTimer of RFC 4271, for both EBGp and IBGP sessions</p> <p>Each session runs its own independent timer and the timer affects both route advertisements and route withdrawals, regardless of address family. For route withdrawals only, this timer is bypassed if rapid-withdrawal is set to true.</p>
Context	network-instance name <i>string</i> protocols bgp neighbor peer-address (<i>ipv4-address-with-zone</i> <i>ipv6-address-with-zone</i>) timers minimum-advertisement-interval <i>number</i>
Tree	minimum-advertisement-interval
Range	1 to 255
Units	seconds
Configurable	True
Platforms	Supported on all platforms

negotiated-hold-time *number*

Description	<p>The operational hold-time</p> <p>It is negotiated to the lowest value proposed by the two peers. A negotiated value of 0 suppresses the sending of keepalives by both peers.</p>
Context	network-instance name <i>string</i> protocols bgp neighbor peer-address (<i>ipv4-address-with-zone</i> <i>ipv6-address-with-zone</i>) timers negotiated-hold-time <i>number</i>
Tree	negotiated-hold-time
Configurable	False
Platforms	Supported on all platforms

negotiated-keepalive-interval *number*

Description	The operational keepalive interval
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It is the minimum of the configured value and 1/3 of the negotiated-hold-time. A value of 0 suppresses the sending of keepalives to the peer.

Context	network-instance name <i>string</i> protocols bgp neighbor peer-address (<i>ipv4-address-with-zone</i> <i>ipv6-address-with-zone</i>) timers negotiated-keepalive-interval <i>number</i>
Tree	negotiated-keepalive-interval
Configurable	False
Platforms	Supported on all platforms

next-connect-retry-time *string*

Description	The time when the next connect retry attempt will occur
Context	network-instance name <i>string</i> protocols bgp neighbor peer-address (<i>ipv4-address-with-zone</i> <i>ipv6-address-with-zone</i>) timers next-connect-retry-time <i>string</i>
Tree	next-connect-retry-time
String Length	20 to 32
Configurable	False
Platforms	Supported on all platforms

prefix-limit-restart-timer *number*

Description	Time interval in seconds after which the BGP session is re-established after being torn down due to exceeding any prefix limit (of any address family) This only applies if prevent-teardown is false.
Context	network-instance name <i>string</i> protocols bgp neighbor peer-address (<i>ipv4-address-with-zone</i> <i>ipv6-address-with-zone</i>) timers prefix-limit-restart-timer <i>number</i>
Tree	prefix-limit-restart-timer
Units	seconds
Configurable	True
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

trace-options

Description	Debug traceoptions for BGP
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Context	network-instance name <i>string</i> protocols bgp neighbor peer-address (<i>ipv4-address-with-zone ipv6-address-with-zone</i>) trace-options
Tree	trace-options
Configurable	True
Platforms	Supported on all platforms

flag *name keyword*

Description	Tracing parameters
Context	network-instance name <i>string</i> protocols bgp neighbor peer-address (<i>ipv4-address-with-zone ipv6-address-with-zone</i>) trace-options flag name <i>keyword</i>
Tree	flag
Configurable	True
Platforms	Supported on all platforms

name *keyword*

Description	Enter the name context
Context	network-instance name <i>string</i> protocols bgp neighbor peer-address (<i>ipv4-address-with-zone ipv6-address-with-zone</i>) trace-options flag name <i>keyword</i>
Options	<ul style="list-style-type: none"> • events Trace all BGP events. • packets Trace all BGP protocol packets. • open Trace BGP open packets. • keepalive Trace BGP keepalive packets. • graceful-restart Trace Graceful Restart events. • timers Trace routing protocol timer processing. • route Trace BGP route table manager. • notification

- Trace Bgp notification.
- socket
 - Trace socket info.
- update
 - Trace update info.

Configurable	True
Platforms	Supported on all platforms

modifier *keyword*

Description	Enter the modifier context
Context	network-instance name <i>string</i> protocols bgp neighbor peer-address (<i>ipv4-address-with-zone</i> <i>ipv6-address-with-zone</i>) trace-options flag name keyword modifier keyword
Tree	modifier
Options	<ul style="list-style-type: none"> • detail <ul style="list-style-type: none"> To enable detailed tracing. Includes both received and sent packets. • receive <ul style="list-style-type: none"> To enable tracing for the packets which are received. • send <ul style="list-style-type: none"> To enable tracing for the sent packets.
Configurable	True
Platforms	Supported on all platforms

transport

Description	Enter the transport context
Context	network-instance name <i>string</i> protocols bgp neighbor peer-address (<i>ipv4-address-with-zone</i> <i>ipv6-address-with-zone</i>) transport
Tree	transport
Configurable	True
Platforms	Supported on all platforms

local-address (*ipv4-address* | *ipv6-address* | *subinterface-all*)

Description	The local TCP endpoint of used for the BGP session
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This also the source address for next-hop-self, if it applies. The local-address can be specified as an IP address that is resolvable to a local interface.

This address must be the primary address of an interface, otherwise the session will not come up.

Context	network-instance name string protocols bgp neighbor peer-address (ipv4-address-with-zone ipv6-address-with-zone) transport local-address (ipv4-address ipv6-address subinterface-all)
Tree	local-address
String Length	5 to 25
Configurable	True
Platforms	Supported on all platforms

local-port *number*

Description	Local TCP port used for the TCP connection to the peer
Context	network-instance name string protocols bgp neighbor peer-address (ipv4-address-with-zone ipv6-address-with-zone) transport local-port number
Tree	local-port
Configurable	False
Platforms	Supported on all platforms

mtu-discovery *boolean*

Description	Turns path mtu discovery on (true) or off (false)
Context	network-instance name string protocols bgp neighbor peer-address (ipv4-address-with-zone ipv6-address-with-zone) transport mtu-discovery boolean
Tree	mtu-discovery
Configurable	True
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

passive-mode *boolean*

Description	The true setting causes BGP to wait for the peer to initiate the TCP connection The false setting causes BGP to initiate a TCP connection whenever the BGP session is started or restarted.
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Context	network-instance name string protocols bgp neighbor peer-address (ipv4-address-with-zone ipv6-address-with-zone) transport passive-mode boolean
Tree	passive-mode
Configurable	True
Platforms	Supported on all platforms

remote-port *number*

Description	Remote TCP port used by the peer for its TCP connection to the local router
Context	network-instance name string protocols bgp neighbor peer-address (ipv4-address-with-zone ipv6-address-with-zone) transport remote-port number
Tree	remote-port
Configurable	False
Platforms	Supported on all platforms

tcp-mss *number*

Description	The maximum segment size of BGP TCP packets The configured value of this leaf is the TCP MSS value advertised to the peer during TCP connection setup (in the TCP MSS option), reduced if necessary to accommodate the outgoing interface IP MTU. The state value of this leaf is the operational TCP MSS used in the data transmit direction towards the peer. It may be less than the received TCP MSS option value due to adjustment for TCP options used in the transit direction and/or the path MTU discovery process (if enabled).
Context	network-instance name string protocols bgp neighbor peer-address (ipv4-address-with-zone ipv6-address-with-zone) transport tcp-mss number
Tree	tcp-mss
Range	536 to 9446
Units	bytes
Configurable	True
Platforms	Supported on all platforms

under-maintenance *boolean*

Description	State field to determine if this bgp neighbor is in maintenance mode.
Context	network-instance name string protocols bgp neighbor peer-address (ipv4-address-with-zone ipv6-address-with-zone) under-maintenance boolean

Tree	under-maintenance
Configurable	False
Platforms	Supported on all platforms

oper-state *keyword*

Description	Enter the oper-state context
Context	network-instance name <i>string</i> protocols bgp oper-state <i>keyword</i>
Tree	oper-state
Options	<ul style="list-style-type: none"> • up Operational state of BGP is up. • down Operational state of BGP is down.
Configurable	False
Platforms	Supported on all platforms

preference

Description	Options for controlling the route table preference of BGP routes
Context	network-instance name <i>string</i> protocols bgp preference
Tree	preference
Configurable	True
Platforms	Supported on all platforms

ebgp *number*

Description	The default route table preference for all EBGp learned routes BGP import policies can override this preference value on a route by route basis.
Context	network-instance name <i>string</i> protocols bgp preference ebgp <i>number</i>
Tree	ebgp
Range	1 to 255
Default	170
Configurable	True
Platforms	Supported on all platforms

ibgp number

Description	The default route table preference for all IBGP learned routes BGP import policies can override this preference value on a route by route basis.
Context	network-instance name <i>string</i> protocols bgp preference ibgp number
Tree	ibgp
Range	1 to 255
Default	170
Configurable	True
Platforms	Supported on all platforms

rib-management

Description	Enter the rib-management context
Context	network-instance name <i>string</i> protocols bgp rib-management
Tree	rib-management
Configurable	True
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

table [address-family identityref](#)

Description	List of RIB tables maintained by BGP running in this network-instance
Context	network-instance name <i>string</i> protocols bgp rib-management table address-family identityref
Tree	table
Configurable	True
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

address-family [identityref](#)

Description	BGP address family
Context	network-instance name <i>string</i> protocols bgp rib-management table address-family identityref
Options	<ul style="list-style-type: none"> ipv4-unicast Unlabeled IPv4 unicast routes (AFI = 1, SAFI = 1)

- ipv6-unicast
Unlabeled IPv6 unicast routes (AFI = 2, SAFI = 1)
- l3vpn-ipv4-unicast
VPN-IPv4 unicast address family (AFI = 1, SAFI = 128)
- l3vpn-ipv6-unicast
VPN-IPv6 unicast address family (AFI = 2, SAFI = 128)
- ipv4-labeled-unicast
Labeled IPv4 unicast routes (AFI 1, SAFI 4)
- ipv6-labeled-unicast
Labeled IPv6 unicast routes (AFI 2, SAFI 4)
- evpn
EVPN routes (AFI = 25, SAFI = 70)
- route-target
Route target constraint routes (AFI 1, SAFI 132)
- sr-policy-ipv4
SR-TE Policy (AFI 1, SAFI 73)
- sr-policy-ipv6
SR-TE Policy (AFI 2, SAFI 73)

Configurable	True
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

route-table-import *reference*

Description	Apply a route policy to accept routes that should be installed in the BGP RIB table
Context	network-instance name <i>string</i> protocols bgp rib-management table address-family <i>identityref</i> route-table-import <i>reference</i>
Tree	route-table-import
Reference	routing-policy policy name <i>string</i>
Configurable	True
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

route-advertisement

Description	Options for controlling route advertisement behavior
Context	network-instance name <i>string</i> protocols bgp route-advertisement
Tree	route-advertisement

Configurable	True
Platforms	Supported on all platforms

rapid-withdrawal *boolean*

Description	The true setting enables rapid-withdraw towards BGP peers If there is only one BGP route for an NLRI in BGP RIB, and this route is withdrawn or becomes invalid, rapid-withdraw causes BGP to immediately send a withdrawal of the BGP route even if the min-route-advertisement timer has not expired.
Context	network-instance name <i>string</i> protocols bgp route-advertisement rapid-withdrawal <i>boolean</i>
Tree	rapid-withdrawal
Default	false
Configurable	True
Platforms	Supported on all platforms

wait-for-fib-install *boolean*

Description	The true setting causes BGP to NOT advertise initial reachability to a prefix, or a change of reachability to a prefix, until it receives acknowledgment from FIB manager that the route change has been applied Does not apply to route withdrawals.
Context	network-instance name <i>string</i> protocols bgp route-advertisement wait-for-fib-install <i>boolean</i>
Tree	wait-for-fib-install
Default	true
Configurable	True
Platforms	Supported on all platforms

route-reflector

Description	Container with route reflection configuration options.
Context	network-instance name <i>string</i> protocols bgp route-reflector
Tree	route-reflector
Configurable	True
Platforms	Supported on all platforms

client *boolean*

Description	When this is set to true all configured and dynamic sessions of the BGP instance are considered RR clients, subject to overrides at more specific levels of configuration.
Context	network-instance name <i>string</i> protocols bgp route-reflector client <i>boolean</i>
Tree	client
Default	false
Configurable	True
Platforms	Supported on all platforms

cluster-id (*number* | *dotted-quad*)

Description	The cluster-id to insert into the CLUSTER_LIST attribute when reflecting routes received by or sent to clients in this scope of this container. The default is the router-id.
Context	network-instance name <i>string</i> protocols bgp route-reflector cluster-id (<i>number</i> <i>dotted-quad</i>)
Tree	cluster-id
Range	1 to 4294967295
Configurable	True
Platforms	Supported on all platforms

router-id (*ipv4-address* | *ipv6-address*)

Description	The BGP identifier used by this BGP instance in all of its OPEN messages. Any non-zero value is supported.
Context	network-instance name <i>string</i> protocols bgp router-id (<i>ipv4-address</i> <i>ipv6-address</i>)
Tree	router-id
Configurable	True
Platforms	Supported on all platforms

segment-routing-mpls

Description	BGP support for segment routing using MPLS dataplane
Context	network-instance name <i>string</i> protocols bgp segment-routing-mpls

Tree	segment-routing-mpls
Configurable	True
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

admin-state *keyword*

Description	Enable SR-MPLS support within BGP
Context	network-instance name <i>string</i> protocols bgp segment-routing-mpls admin-state <i>keyword</i>
Tree	admin-state
Default	disable
Options	<ul style="list-style-type: none"> • enable • disable
Configurable	True
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

send-community

Description	Options for controlling the sending of BGP communities to all peers
Context	network-instance name <i>string</i> protocols bgp send-community
Tree	send-community
Configurable	True
Platforms	Supported on all platforms

large *boolean*

Description	The false setting causes BGP to strip all large (12 byte) BGP communities from all outbound routes advertised to peers
Context	network-instance name <i>string</i> protocols bgp send-community large <i>boolean</i>
Tree	large
Default	true
Configurable	True
Platforms	Supported on all platforms

standard *boolean*

Description	The false setting causes BGP to strip all standard (4 byte) communities from all outbound routes advertised to peers
Context	network-instance name <i>string</i> protocols bgp send-community standard <i>boolean</i>
Tree	standard
Default	true
Configurable	True
Platforms	Supported on all platforms

statistics

Description	Container for BGP statistics.
Context	network-instance name <i>string</i> protocols bgp statistics
Tree	statistics
Configurable	False
Platforms	Supported on all platforms

disabled-peers *number*

Description	The number of configured BGP peers that are administratively disabled
Context	network-instance name <i>string</i> protocols bgp statistics disabled-peers <i>number</i>
Tree	disabled-peers
Configurable	False
Platforms	Supported on all platforms

dynamic-peers *number*

Description	The number of dynamic BGP peers that are currently in the established state, counting sessions resulting from accepted incoming TCP connections and outgoing TCP connections triggered by LLDP auto-discovery
Context	network-instance name <i>string</i> protocols bgp statistics dynamic-peers <i>number</i>
Tree	dynamic-peers
Configurable	False
Platforms	Supported on all platforms

path-memory *number*

Description	The total number of bytes required to store the path attribute objects used by all received BGP routes
Context	network-instance name <i>string</i> protocols bgp statistics path-memory <i>number</i>
Tree	path-memory
Default	0
Configurable	False
Platforms	Supported on all platforms

total-active-routes *number*

Description	The total number of received BGP routes that are active (installed for forwarding), summed across all address families
Context	network-instance name <i>string</i> protocols bgp statistics total-active-routes <i>number</i>
Tree	total-active-routes
Default	0
Configurable	False
Platforms	Supported on all platforms

total-paths *number*

Description	The total number of path attribute objects used by all received BGP routes
Context	network-instance name <i>string</i> protocols bgp statistics total-paths <i>number</i>
Tree	total-paths
Default	0
Configurable	False
Platforms	Supported on all platforms

total-peers *number*

Description	The total number of configured BGP peers
Context	network-instance name <i>string</i> protocols bgp statistics total-peers <i>number</i>
Tree	total-peers
Configurable	False

Platforms Supported on all platforms

total-prefixes *number*

Description The total number of unique NLRI contained in all received BGP routes associated with the BGP instance or the peer-group.

Context [network-instance name](#) *string* [protocols bgp statistics total-prefixes](#) *number*

Tree [total-prefixes](#)

Configurable False

Platforms Supported on all platforms

total-received-routes *number*

Description The total number of received BGP routes, summed across all address families

Context [network-instance name](#) *string* [protocols bgp statistics total-received-routes](#) *number*

Tree [total-received-routes](#)

Default 0

Configurable False

Platforms Supported on all platforms

up-peers *number*

Description The number of configured BGP peers that are currently in the established state

Context [network-instance name](#) *string* [protocols bgp statistics up-peers](#) *number*

Tree [up-peers](#)

Configurable False

Platforms Supported on all platforms

trace-options

Description Debug traceoptions for BGP

Context [network-instance name](#) *string* [protocols bgp trace-options](#)

Tree [trace-options](#)

Configurable True

Platforms Supported on all platforms

flag *name keyword*

Description Tracing parameters

Context [network-instance name](#) *string* [protocols bgp trace-options flag name](#) *keyword*

Tree [flag](#)

Configurable True

Platforms Supported on all platforms

name *keyword*

Description Enter the name context

Context [network-instance name](#) *string* [protocols bgp trace-options flag name](#) *keyword*

Options

- events
Trace all BGP events.
- packets
Trace all BGP protocol packets.
- open
Trace BGP open packets.
- keepalive
Trace BGP keepalive packets.
- graceful-restart
Trace Graceful Restart events.
- timers
Trace routing protocol timer processing.
- route
Trace BGP route table manager.
- notification
Trace Bgp notification.
- socket
Trace socket info.
- update
Trace update info.

Configurable True

Platforms Supported on all platforms

modifier *keyword*

Description	Enter the modifier context
Context	network-instance name <i>string</i> protocols bgp trace-options flag name <i>keyword</i> modifier <i>keyword</i>
Tree	modifier
Options	<ul style="list-style-type: none"> • detail To enable detailed tracing. Includes both received and sent packets. • receive To enable tracing for the packets which are received. • send To enable tracing for the sent packets.
Configurable	True
Platforms	Supported on all platforms

transport

Description	Options related to the TCP transport of BGP sessions
Context	network-instance name <i>string</i> protocols bgp transport
Tree	transport
Configurable	True
Platforms	Supported on all platforms

mtu-discovery *boolean*

Description	Turns path mtu discovery for BGP TCP sessions on (true) or off (false) If this is unconfigured then the setting comes from <code>network-instance/mtu/path-mtu-discovery</code> . Changing the value of <code>network-instance/mtu/path-mtu-discovery</code> takes effect only for new connections established after the change
Context	network-instance name <i>string</i> protocols bgp transport mtu-discovery <i>boolean</i>
Tree	mtu-discovery
Configurable	True
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

single-hop-connected-check *boolean*

Description	<p>Control whether a single-hop BGP session should be allowed to setup if its 'related interface' is down.</p> <p>If single-hop-connected-check is false, a single-hop BGP session (EBGP or IBGP) to any IPv4 or IPv6 neighbor address is permitted to establish if there is ANY valid (IPv6 global unicast, IPv4 link-local, or IPv4 global) route to that neighbor address, regardless of whether the 'related interface' is up or down.</p> <p>If single-hop-connected-check is true (default value), a single-hop BGP session (EBGP or IBGP) to any IPv4 or IPv6 neighbor address is only permitted to transition from idle to a higher state if the 'related interface' is up.</p> <p>The 'related interface' of a single hop peer is the subinterface associated with the IPv6 link local neighbor address or else the subinterface with a primary or secondary IP address and prefix-length that covers the neighbor address.</p>
Context	network-instance name <i>string</i> protocols bgp transport single-hop-connected-check <i>boolean</i>
Tree	single-hop-connected-check
Default	true
Configurable	True
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

tcp-mss *number*

Description	<p>The maximum segment size of BGP TCP packets</p> <p>The actual value used in the transmit direction towards a particular peer should be checked at the neighbor level.</p>
Context	network-instance name <i>string</i> protocols bgp transport tcp-mss <i>number</i>
Tree	tcp-mss
Range	536 to 9446
Default	1024
Configurable	True
Platforms	Supported on all platforms

under-maintenance *boolean*

Description	State field to determine if the bgp instance is in maintenance mode.
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Context	network-instance name <i>string</i> protocols bgp under-maintenance <i>boolean</i>
Tree	under-maintenance
Configurable	False
Platforms	Supported on all platforms

bgp-evpn

Description	Enable the bgp-evpn context
Context	network-instance name <i>string</i> protocols bgp-evpn
Tree	bgp-evpn
Configurable	True
Platforms	7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

bgp-instance [id reference](#)

Description	bgp evpn instances configured in net-instance
Context	network-instance name <i>string</i> protocols bgp-evpn bgp-instance id reference
Tree	bgp-instance
Configurable	True
Platforms	7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b
Max. Elements	1

id [reference](#)

Description	Enter the id context
Context	network-instance name <i>string</i> protocols bgp-evpn bgp-instance id reference
Reference	network-instance name <i>string</i> protocols bgp-vpn bgp-instance id number
Configurable	True
Platforms	7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

admin-state *keyword*

Description	Configurable state of the bgp evpn instance.
Context	network-instance name <i>string</i> protocols bgp-evpn bgp-instance id <i>reference</i> admin-state <i>keyword</i>
Tree	admin-state
Default	enable
Options	<ul style="list-style-type: none"> • enable • disable
Configurable	True
Platforms	7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

ecmp *number*

Description	The supported range of ECMP values for layer-2 aliasing (in mac-vrf or vpws instances) or layer-3 ecmp (in routed instances)
Context	network-instance name <i>string</i> protocols bgp-evpn bgp-instance id <i>reference</i> ecmp <i>number</i>
Tree	ecmp
Range	1 to 64
Default	1
Configurable	True
Platforms	7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

encapsulation-type *keyword*

Description	encap type of the bgp evpn instance.
Context	network-instance name <i>string</i> protocols bgp-evpn bgp-instance id <i>reference</i> encapsulation-type <i>keyword</i>
Tree	encapsulation-type
Default	vxlan
Options	<ul style="list-style-type: none"> • vxlan • mpls

Configurable	True
Platforms	7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

evi number

Description	EVPN Instance identifier associated to the bgp-evpn instance. Used for auto-derivation of: In addition, the evi value is used for the EVPN Multi-Homing Designated Forwarder (DF) Election.
Context	network-instance name <i>string</i> protocols bgp-evpn bgp-instance id <i>reference</i> evi number
Tree	evi
Range	1 to 65535
Configurable	True
Platforms	7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

internal-tags

Description	Configuration and state of internal tags
Context	network-instance name <i>string</i> protocols bgp-evpn bgp-instance id <i>reference</i> internal-tags
Tree	internal-tags
Configurable	True
Platforms	Supported on all platforms

set-tag-set *reference*

Description	Reference to a tag-set defined under routing-policy
Context	network-instance name <i>string</i> protocols bgp-evpn bgp-instance id <i>reference</i> internal-tags set-tag-set <i>reference</i>
Tree	set-tag-set
Reference	routing-policy tag-set name <i>string</i>
Configurable	True
Platforms	Supported on all platforms

Max. Elements 1

mpls

Description Enable the mpls context

Context [network-instance name](#) *string* [protocols bgp-evpn bgp-instance id](#) *reference*
[mpls](#)

Tree [mpls](#)

Configurable True

Platforms 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

bridge-table

Description Enable the bridge-table context

Context [network-instance name](#) *string* [protocols bgp-evpn bgp-instance id](#) *reference*
[mpls bridge-table](#)

Tree [bridge-table](#)

Configurable True

Platforms 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

ingress-multicast-mpls-label *number*

Description The ingress label allocated for Broadcast, Unknown unicast and Multicast traffic

The ingress multicast mpls label is advertised by the EVPN Inclusive Multicast Ethernet Tag (IMET) route and it is expected on received EVPN packets that were generated as BUM packets.

Context [network-instance name](#) *string* [protocols bgp-evpn bgp-instance id](#) *reference*
[mpls bridge-table ingress-multicast-mpls-label](#) *number*

Tree [ingress-multicast-mpls-label](#)

Range 16 to 1048575

Configurable False

Platforms 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

ingress-unicast-mpls-label *number*

Description The ingress label allocated for unicast traffic

The ingress unicast mpls label is advertised by the EVPN MAC/IP Advertisement routes and it is expected on received EVPN packets that were generated as unicast packets.

Context	network-instance name <i>string</i> protocols bgp-evpn bgp-instance id <i>reference</i> mpls bridge-table ingress-unicast-mpls-label <i>number</i>
Tree	ingress-unicast-mpls-label
Range	16 to 1048575
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

multicast-destinations

Description	Enter the multicast-destinations context
Context	network-instance name <i>string</i> protocols bgp-evpn bgp-instance id <i>reference</i> mpls bridge-table multicast-destinations
Tree	multicast-destinations
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

destination [tep](#) ([ipv4-address](#) | [ipv6-address](#)) [evi-label](#) *number* [tunnel-id](#) *number*

Description	Enter the destination list instance
Context	network-instance name <i>string</i> protocols bgp-evpn bgp-instance id <i>reference</i> mpls bridge-table multicast-destinations destination tep (ipv4-address ipv6-address) evi-label <i>number</i> tunnel-id <i>number</i>
Tree	destination
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

[tep](#) ([ipv4-address](#) | [ipv6-address](#))

Description	The IP address that identifies the remote EVPN Termination Endpoint (TEP).
Context	network-instance name <i>string</i> protocols bgp-evpn bgp-instance id <i>reference</i> mpls bridge-table multicast-destinations destination tep (ipv4-address ipv6-address) evi-label <i>number</i> tunnel-id <i>number</i>
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

evi-label number

Description	EVI label of the destination.
Context	network-instance name <i>string</i> protocols bgp-evpn bgp-instance id reference mpls bridge-table multicast-destinations destination tep (ipv4-address ipv6-address) evi-label number tunnel-id number
Range	16 to 1048575
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

tunnel-id number

Description	tunnel identifier of the destination.
Context	network-instance name <i>string</i> protocols bgp-evpn bgp-instance id reference mpls bridge-table multicast-destinations destination tep (ipv4-address ipv6-address) evi-label number tunnel-id number
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

destination-index number

Description	A system-wide unique identifier of this evpn-mpls destination object (system allocated).
Context	network-instance name <i>string</i> protocols bgp-evpn bgp-instance id reference mpls bridge-table multicast-destinations destination tep (ipv4-address ipv6-address) evi-label number tunnel-id number destination-index number
Tree	destination-index
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

multicast-forwarding keyword

Description	The type of multicast data forwarded by this evpn-mpls destination.
Context	network-instance name <i>string</i> protocols bgp-evpn bgp-instance id reference mpls bridge-table multicast-destinations destination tep (ipv4-address ipv6-address) evi-label number tunnel-id number multicast-forwarding keyword
Tree	multicast-forwarding
Options	<ul style="list-style-type: none"> • none

- BUM
- unknown-unicast
- broadcast-mcast

Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

not-programmed-reason *keyword*

Description	The reason why the destination is not programmed in the floodlist
Context	network-instance name <i>string</i> protocols bgp-evpn bgp-instance id <i>reference</i> mpls bridge-table multicast-destinations destination tep (<i>ipv4-address</i> <i>ipv6-address</i>) evi-label number tunnel-id number not-programmed-reason <i>keyword</i>
Tree	not-programmed-reason
Options	<ul style="list-style-type: none"> • no-destination-index • multicast-limit
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

multicast-limit

Description	Multicast limits per vxlan interface.
Context	network-instance name <i>string</i> protocols bgp-evpn bgp-instance id <i>reference</i> mpls bridge-table multicast-destinations multicast-limit
Tree	multicast-limit
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

current-usage *number*

Description	Maximum number of multicast vxlan-destinations in use on this bgp-evpn mpls instance.
Context	network-instance name <i>string</i> protocols bgp-evpn bgp-instance id <i>reference</i> mpls bridge-table multicast-destinations multicast-limit current-usage <i>number</i>
Tree	current-usage
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

maximum-entries *number*

Description	Maximum number of multicast vxlan-destinations allowed on a bgp-evpn mpls instance.
Context	network-instance name <i>string</i> protocols bgp-evpn bgp-instance id <i>reference</i> mpls bridge-table multicast-destinations multicast-limit maximum-entries <i>number</i>
Tree	maximum-entries
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

split-horizon-group *reference*

Description	The split-horizon-group associated to the evpn-mpls instance
Context	network-instance name <i>string</i> protocols bgp-evpn bgp-instance id <i>reference</i> mpls bridge-table split-horizon-group <i>reference</i>
Tree	split-horizon-group
Reference	network-instance name <i>string</i> bridge-table <i>string</i>
Configurable	True
Platforms	bridged and bt-split-horizon-groups and evpn-mpls-shg

statistics

Description	Enter the statistics context
Context	network-instance name <i>string</i> protocols bgp-evpn bgp-instance id <i>reference</i> mpls bridge-table statistics
Tree	statistics
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

active-entries *number*

Description	The total number of entries that are active on the evpn-mpls instance.
Context	network-instance name <i>string</i> protocols bgp-evpn bgp-instance id <i>reference</i> mpls bridge-table statistics active-entries <i>number</i>
Tree	active-entries
Default	0

Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

failed-entries *number*

Description	The total number of macs, which have not been programmed on at least one slot.
Context	network-instance name <i>string</i> protocols bgp-evpn bgp-instance id <i>reference</i> mpls bridge-table statistics failed-entries <i>number</i>
Tree	failed-entries
Default	0
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

mac-type *type keyword*

Description	The type of the mac on the evpn-mpls instance.
Context	network-instance name <i>string</i> protocols bgp-evpn bgp-instance id <i>reference</i> mpls bridge-table statistics mac-type type <i>keyword</i>
Tree	mac-type
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

type *keyword*

Description	Enter the type context
Context	network-instance name <i>string</i> protocols bgp-evpn bgp-instance id <i>reference</i> mpls bridge-table statistics mac-type type <i>keyword</i>
Options	<ul style="list-style-type: none"> • static • duplicate • learnt • irb-interface • evpn • evpn-static • irb-interface-anycast • proxy-anti-spoof • reserved

- eth-cfm
- irb-interface-vrrp

Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

active-entries *number*

Description	The total number of entries of this type on the evpn-mpls instance.
Context	network-instance name <i>string</i> protocols bgp-evpn bgp-instance id <i>reference</i> mpls bridge-table statistics mac-type type <i>keyword</i> active-entries <i>number</i>
Tree	active-entries
Default	0
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

failed-entries *number*

Description	The total number of macs of this type, which have not been programmed on at least one slot
Context	network-instance name <i>string</i> protocols bgp-evpn bgp-instance id <i>reference</i> mpls bridge-table statistics mac-type type <i>keyword</i> failed-entries <i>number</i>
Tree	failed-entries
Default	0
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

total-entries *number*

Description	The total number of macs of this type, active and inactive, on the evpn-mpls instance.
Context	network-instance name <i>string</i> protocols bgp-evpn bgp-instance id <i>reference</i> mpls bridge-table statistics mac-type type <i>keyword</i> total-entries <i>number</i>
Tree	total-entries
Default	0
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

total-entries *number*

Description	The total number of macs, active and inactive, on the evpn-mpls instance.
Context	network-instance name <i>string</i> protocols bgp-evpn bgp-instance id <i>reference</i> mpls bridge-table statistics total-entries <i>number</i>
Tree	total-entries
Default	0
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

unicast-destinations

Description	Enter the unicast-destinations context
Context	network-instance name <i>string</i> protocols bgp-evpn bgp-instance id <i>reference</i> mpls bridge-table unicast-destinations
Tree	unicast-destinations
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

destination [tep](#) (*ipv4-address* | *ipv6-address*) [evi-label](#) *number* [tunnel-id](#) *number*

Description	Enter the destination list instance
Context	network-instance name <i>string</i> protocols bgp-evpn bgp-instance id <i>reference</i> mpls bridge-table unicast-destinations destination tep (<i>ipv4-address</i> <i>ipv6-address</i>) evi-label <i>number</i> tunnel-id <i>number</i>
Tree	destination
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

tep (*ipv4-address* | *ipv6-address*)

Description	The IP address that identifies the remote EVPN Termination Endpoint (TEP).
Context	network-instance name <i>string</i> protocols bgp-evpn bgp-instance id <i>reference</i> mpls bridge-table unicast-destinations destination tep (<i>ipv4-address</i> <i>ipv6-address</i>) evi-label <i>number</i> tunnel-id <i>number</i>
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

evi-label number

Description	EVI label of the destination.
Context	network-instance name <i>string</i> protocols bgp-evpn bgp-instance id reference mpls bridge-table unicast-destinations destination tep (ipv4-address ipv6-address) evi-label number tunnel-id number
Range	16 to 1048575
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

tunnel-id number

Description	tunnel identifier of the destination.
Context	network-instance name <i>string</i> protocols bgp-evpn bgp-instance id reference mpls bridge-table unicast-destinations destination tep (ipv4-address ipv6-address) evi-label number tunnel-id number
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

destination-index number

Description	A system-wide unique identifier of this evpn-mpls destination object (system allocated).
Context	network-instance name <i>string</i> protocols bgp-evpn bgp-instance id reference mpls bridge-table unicast-destinations destination tep (ipv4-address ipv6-address) evi-label number tunnel-id number destination-index number
Tree	destination-index
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

mac-table

Description	Enter the mac-table context
Context	network-instance name <i>string</i> protocols bgp-evpn bgp-instance id reference mpls bridge-table unicast-destinations destination tep (ipv4-address ipv6-address) evi-label number tunnel-id number mac-table
Tree	mac-table
Configurable	False

Platforms 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

mac address string

Description macs learnt on the bridging instance

Context [network-instance name string protocols bgp-evpn bgp-instance id reference mpls bridge-table unicast-destinations destination tep \(ipv4-address | ipv6-address\) evi-label number tunnel-id number mac-table mac address string](#)

Tree [mac](#)

Configurable False

Platforms 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

address string

Description Enter the address context

Context [network-instance name string protocols bgp-evpn bgp-instance id reference mpls bridge-table unicast-destinations destination tep \(ipv4-address | ipv6-address\) evi-label number tunnel-id number mac-table mac address string](#)

Configurable False

Platforms 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

failed-slots number

Description The list of slot IDs corresponding to the linecards that did not successfully program the mac

Context [network-instance name string protocols bgp-evpn bgp-instance id reference mpls bridge-table unicast-destinations destination tep \(ipv4-address | ipv6-address\) evi-label number tunnel-id number mac-table mac address string failed-slots number](#)

Tree [failed-slots](#)

Range 1 to 8

Configurable False

Platforms 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

last-update string

Description The date and time of the last update of this mac

Context [network-instance name string protocols bgp-evpn bgp-instance id reference mpls bridge-table unicast-destinations destination tep \(ipv4-address | ipv6-](#)

	<i>address</i>) <i>evi-label number tunnel-id number mac-table mac address string last-update string</i>
Tree	<i>last-update</i>
String Length	20 to 32
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

not-programmed-reason *keyword*

Description	The reason why the mac is not programmed
Context	<i>network-instance name string protocols bgp-evpn bgp-instance id reference mpls bridge-table unicast-destinations destination tep (ipv4-address ipv6-address) evi-label number tunnel-id number mac-table mac address string not-programmed-reason keyword</i>
Tree	<i>not-programmed-reason</i>
Options	<ul style="list-style-type: none"> • mac-limit • failed-on-slots • no-destination-index • reserved
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

type *keyword*

Description	the type of the mac installed in the fib.
Context	<i>network-instance name string protocols bgp-evpn bgp-instance id reference mpls bridge-table unicast-destinations destination tep (ipv4-address ipv6-address) evi-label number tunnel-id number mac-table mac address string type keyword</i>
Tree	<i>type</i>
Options	<ul style="list-style-type: none"> • static • duplicate • learnt • irb-interface • evpn • evpn-static • irb-interface-anycast • proxy-anti-spoof

- reserved
- eth-cfm
- irb-interface-vrrp

Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

not-programmed-reason *keyword*

Description	The reason why the evpn-mpls destination is not programmed.
Context	network-instance name <i>string</i> protocols bgp-evpn bgp-instance id <i>reference</i> mpls bridge-table unicast-destinations destination tep (ipv4-address ipv6-address) evi-label number tunnel-id number not-programmed-reason keyword
Tree	not-programmed-reason
Options	<ul style="list-style-type: none"> • no-destination-index
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

statistics

Description	Enter the statistics context
Context	network-instance name <i>string</i> protocols bgp-evpn bgp-instance id <i>reference</i> mpls bridge-table unicast-destinations destination tep (ipv4-address ipv6-address) evi-label number tunnel-id number statistics
Tree	statistics
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

active-entries *number*

Description	The total number of entries that are active on the sub-interface.
Context	network-instance name <i>string</i> protocols bgp-evpn bgp-instance id <i>reference</i> mpls bridge-table unicast-destinations destination tep (ipv4-address ipv6-address) evi-label number tunnel-id number statistics active-entries number
Tree	active-entries
Default	0
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

failed-entries *number*

Description	The total number of macs, which have not been programmed on atleast one slot
Context	network-instance name <i>string</i> protocols bgp-evpn bgp-instance id <i>reference</i> mpls bridge-table unicast-destinations destination tep (ipv4-address ipv6-address) evi-label number tunnel-id number statistics failed-entries <i>number</i>
Tree	failed-entries
Default	0
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

mac-type *type keyword*

Description	the type of the mac on the sub-interface.
Context	network-instance name <i>string</i> protocols bgp-evpn bgp-instance id <i>reference</i> mpls bridge-table unicast-destinations destination tep (ipv4-address ipv6-address) evi-label number tunnel-id number statistics mac-type type <i>keyword</i>
Tree	mac-type
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

type *keyword*

Description	Enter the type context
Context	network-instance name <i>string</i> protocols bgp-evpn bgp-instance id <i>reference</i> mpls bridge-table unicast-destinations destination tep (ipv4-address ipv6-address) evi-label number tunnel-id number statistics mac-type type <i>keyword</i>
Options	<ul style="list-style-type: none"> • static • duplicate • learnt • irb-interface • evpn • evpn-static • irb-interface-anycast • proxy-anti-spoof • reserved • eth-cfm

- irb-interface-vrrp

Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

active-entries *number*

Description	The total number of entries of this type on the sub-interface
Context	network-instance name <i>string</i> protocols bgp-evpn bgp-instance id <i>reference</i> mpls bridge-table unicast-destinations destination tep (ipv4-address ipv6-address) <i>evi-label number tunnel-id number statistics mac-type type keyword active-entries number</i>
Tree	active-entries
Default	0
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

failed-entries *number*

Description	The total number of macs of this type, which have not been programmed on atleast one slot
Context	network-instance name <i>string</i> protocols bgp-evpn bgp-instance id <i>reference</i> mpls bridge-table unicast-destinations destination tep (ipv4-address ipv6-address) <i>evi-label number tunnel-id number statistics mac-type type keyword failed-entries number</i>
Tree	failed-entries
Default	0
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

total-entries *number*

Description	The total number of macs of this type , active and inactive, on the sub-interface.
Context	network-instance name <i>string</i> protocols bgp-evpn bgp-instance id <i>reference</i> mpls bridge-table unicast-destinations destination tep (ipv4-address ipv6-address) <i>evi-label number tunnel-id number statistics mac-type type keyword total-entries number</i>
Tree	total-entries
Default	0

Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

total-entries *number*

Description	The total number of macs, active and inactive, on the sub-interface.
Context	network-instance name <i>string</i> protocols bgp-evpn bgp-instance id <i>reference</i> mpls bridge-table unicast-destinations destination tep (ipv4-address ipv6-address) evi-label number tunnel-id number statistics total-entries <i>number</i>
Tree	total-entries
Default	0
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

es-destination *esi string*

Description	Enter the es-destination list instance
Context	network-instance name <i>string</i> protocols bgp-evpn bgp-instance id <i>reference</i> mpls bridge-table unicast-destinations es-destination esi <i>string</i>
Tree	es-destination
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

esi *string*

Description	The 10-byte Ethernet Segment Identifier of the ethernet segment. ESI-0 or MAX-ESI values are not allowed.
Context	network-instance name <i>string</i> protocols bgp-evpn bgp-instance id <i>reference</i> mpls bridge-table unicast-destinations es-destination esi <i>string</i>
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

destination [tep \(ipv4-address | ipv6-address\)](#) [evi-label number tunnel-id number](#)

Description	Add a list entry for destination
Context	network-instance name <i>string</i> protocols bgp-evpn bgp-instance id <i>reference</i> mpls bridge-table unicast-destinations es-destination esi string destination tep (ipv4-address ipv6-address) evi-label number tunnel-id number

Tree	destination
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

tep (*ipv4-address* | *ipv6-address*)

Description	The IP address that identifies the remote EVPN Termination Endpoint (TEP).
Context	network-instance name <i>string</i> protocols bgp-evpn bgp-instance id <i>reference</i> mpls bridge-table unicast-destinations es-destination esi <i>string</i> destination tep (ipv4-address ipv6-address) evi-label <i>number</i> tunnel-id <i>number</i>
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

evi-label *number*

Description	EVI label of this next-hop.
Context	network-instance name <i>string</i> protocols bgp-evpn bgp-instance id <i>reference</i> mpls bridge-table unicast-destinations es-destination esi <i>string</i> destination tep (ipv4-address ipv6-address) evi-label <i>number</i> tunnel-id <i>number</i>
Range	16 to 1048575
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

tunnel-id *number*

Description	tunnel identifier of the next-hop.
Context	network-instance name <i>string</i> protocols bgp-evpn bgp-instance id <i>reference</i> mpls bridge-table unicast-destinations es-destination esi <i>string</i> destination tep (ipv4-address ipv6-address) evi-label <i>number</i> tunnel-id <i>number</i>
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

destination-index *number*

Description	A system-wide unique identifier of this evpn-mpls destination object (system allocated).
Context	network-instance name <i>string</i> protocols bgp-evpn bgp-instance id <i>reference</i> mpls bridge-table unicast-destinations es-destination esi <i>string</i> destination-index <i>number</i>

Tree	destination-index
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

mac-table

Description	Enter the mac-table context
Context	network-instance name <i>string</i> protocols bgp-evpn bgp-instance id <i>reference</i> mpls bridge-table unicast-destinations es-destination esi <i>string</i> mac-table
Tree	mac-table
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

mac [address](#) *string*

Description	macs learnt on the bridging instance
Context	network-instance name <i>string</i> protocols bgp-evpn bgp-instance id <i>reference</i> mpls bridge-table unicast-destinations es-destination esi <i>string</i> mac-table mac address <i>string</i>
Tree	mac
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

[address](#) *string*

Description	Enter the address context
Context	network-instance name <i>string</i> protocols bgp-evpn bgp-instance id <i>reference</i> mpls bridge-table unicast-destinations es-destination esi <i>string</i> mac-table mac address <i>string</i>
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

failed-slots *number*

Description	The list of slot IDs corresponding to the linecards that did not successfully program the mac
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Context	network-instance name <i>string</i> protocols bgp-evpn bgp-instance id <i>reference</i> mpls bridge-table unicast-destinations es-destination esi <i>string</i> mac-table mac address <i>string</i> failed-slots <i>number</i>
Tree	failed-slots
Range	1 to 8
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

last-update *string*

Description	The date and time of the last update of this mac
Context	network-instance name <i>string</i> protocols bgp-evpn bgp-instance id <i>reference</i> mpls bridge-table unicast-destinations es-destination esi <i>string</i> mac-table mac address <i>string</i> last-update <i>string</i>
Tree	last-update
String Length	20 to 32
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

not-programmed-reason *keyword*

Description	The reason why the mac is not programmed
Context	network-instance name <i>string</i> protocols bgp-evpn bgp-instance id <i>reference</i> mpls bridge-table unicast-destinations es-destination esi <i>string</i> mac-table mac address <i>string</i> not-programmed-reason <i>keyword</i>
Tree	not-programmed-reason
Options	<ul style="list-style-type: none"> • mac-limit • failed-on-slots • no-destination-index • reserved
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

type *keyword*

Description	the type of the mac installed in the fib.
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Context	network-instance name <i>string</i> protocols bgp-evpn bgp-instance id <i>reference</i> mpls bridge-table unicast-destinations es-destination esi <i>string</i> mac-table mac address <i>string</i> type <i>keyword</i>
Tree	type
Options	<ul style="list-style-type: none"> • static • duplicate • learnt • irb-interface • evpn • evpn-static • irb-interface-anycast • proxy-anti-spoof • reserved • eth-cfm • irb-interface-vrrp
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

statistics

Description	Enter the statistics context
Context	network-instance name <i>string</i> protocols bgp-evpn bgp-instance id <i>reference</i> mpls bridge-table unicast-destinations es-destination esi <i>string</i> statistics
Tree	statistics
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

active-entries *number*

Description	The total number of entries that are active on the sub-interface.
Context	network-instance name <i>string</i> protocols bgp-evpn bgp-instance id <i>reference</i> mpls bridge-table unicast-destinations es-destination esi <i>string</i> statistics active-entries <i>number</i>
Tree	active-entries
Default	0
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

failed-entries *number*

Description	The total number of macs, which have not been programmed on atleast one slot
Context	network-instance name <i>string</i> protocols bgp-evpn bgp-instance id <i>reference</i> mpls bridge-table unicast-destinations es-destination esi <i>string</i> statistics failed-entries <i>number</i>
Tree	failed-entries
Default	0
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

mac-type *type keyword*

Description	the type of the mac on the sub-interface.
Context	network-instance name <i>string</i> protocols bgp-evpn bgp-instance id <i>reference</i> mpls bridge-table unicast-destinations es-destination esi <i>string</i> statistics mac-type type <i>keyword</i>
Tree	mac-type
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

type *keyword*

Description	Enter the type context
Context	network-instance name <i>string</i> protocols bgp-evpn bgp-instance id <i>reference</i> mpls bridge-table unicast-destinations es-destination esi <i>string</i> statistics mac-type type <i>keyword</i>
Options	<ul style="list-style-type: none"> • static • duplicate • learnt • irb-interface • evpn • evpn-static • irb-interface-anycast • proxy-anti-spoof • reserved • eth-cfm

- irb-interface-vrrp

Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

active-entries *number*

Description	The total number of entries of this type on the sub-interface
Context	network-instance name <i>string</i> protocols bgp-evpn bgp-instance id <i>reference</i> mpls bridge-table unicast-destinations es-destination esi <i>string</i> statistics mac-type type <i>keyword</i> active-entries <i>number</i>
Tree	active-entries
Default	0
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

failed-entries *number*

Description	The total number of macs of this type, which have not been programmed on atleast one slot
Context	network-instance name <i>string</i> protocols bgp-evpn bgp-instance id <i>reference</i> mpls bridge-table unicast-destinations es-destination esi <i>string</i> statistics mac-type type <i>keyword</i> failed-entries <i>number</i>
Tree	failed-entries
Default	0
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

total-entries *number*

Description	The total number of macs of this type , active and inactive, on the sub-interface.
Context	network-instance name <i>string</i> protocols bgp-evpn bgp-instance id <i>reference</i> mpls bridge-table unicast-destinations es-destination esi <i>string</i> statistics mac-type type <i>keyword</i> total-entries <i>number</i>
Tree	total-entries
Default	0
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

total-entries *number*

Description	The total number of macs, active and inactive, on the sub-interface.
Context	network-instance name <i>string</i> protocols bgp-evpn bgp-instance id <i>reference</i> mpls bridge-table unicast-destinations es-destination esi <i>string</i> statistics total-entries <i>number</i>
Tree	total-entries
Default	0
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

control-word *boolean*

Description	Configures the use of control-word for EVPN MPLS packets When set to true, the router pushes the control-word below the bottom of the stack label. This prevents the Provider routers from mistakenly decode the payload of EVPN packets as an IP header and disorder packets of the same flow.
Context	network-instance name <i>string</i> protocols bgp-evpn bgp-instance id <i>reference</i> mpls control-word <i>boolean</i>
Tree	control-word
Default	false
Configurable	True
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

flow-label *boolean*

Description	Configures the use of flow-label for EVPN MPLS packets When set to true, the router signals the use of the Flow Aware Transport (FAT) label in the F flag of the Layer 2 attributes extended community sent along with the EVPN routes (AD per EVI for VPWS or Inclusive Multicast Ethernet Tag route for MAC-VRF). For EVPN VPWS network instances, if the local and remote flags are set to 1 and match, the flow label is pushed at the bottom of the stack. On reception, the flow label is also expected and packets without it are dropped. If there is a mismatch between the local and remote F flags, the EVPN destination is removed.
Context	network-instance name <i>string</i> protocols bgp-evpn bgp-instance id <i>reference</i> mpls flow-label <i>boolean</i>
Tree	flow-label

Default	false
Configurable	True
Platforms	flow-aware-transport-label-evpn-mpls-vpws

next-hop-resolution

Description	Options related to the resolution of IPv4 or IPv6 BGP next-hops to Tunnels
Context	network-instance name <i>string</i> protocols bgp-evpn bgp-instance id <i>reference</i> mpls next-hop-resolution
Tree	next-hop-resolution
Configurable	True
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

allowed-tunnel-types *identityref*

Description	list of allowed tunnel types
Context	network-instance name <i>string</i> protocols bgp-evpn bgp-instance id <i>reference</i> mpls next-hop-resolution allowed-tunnel-types <i>identityref</i>
Tree	allowed-tunnel-types
Options	<ul style="list-style-type: none"> • bgp-next-hop-resolution-tunnel-type Base type for the types of tunnels that can be used by BGP for next-hop resolution
Configurable	True
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b
Min. Elements	1

color-aware

Description	Color-aware next-hop resolution options
Context	network-instance name <i>string</i> protocols bgp-evpn bgp-instance id <i>reference</i> mpls next-hop-resolution color-aware
Tree	color-aware
Configurable	True
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

route-table

Description	Enable the route-table context
Context	network-instance name <i>string</i> protocols bgp-evpn bgp-instance id <i>reference</i> mpls route-table
Tree	route-table
Configurable	True
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

ingress-mpls-label *number*

Description	The ingress label allocated for Routed traffic The ingress mpls label is advertised by the Route-Type 5(RT5) route and it is expected on received routed EVPN packets.
Context	network-instance name <i>string</i> protocols bgp-evpn bgp-instance id <i>reference</i> mpls route-table ingress-mpls-label <i>number</i>
Tree	ingress-mpls-label
Range	16 to 1048575
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

oper-down-reason *keyword*

Description	The reason for the bgp-instance being down
Context	network-instance name <i>string</i> protocols bgp-evpn bgp-instance id <i>reference</i> oper-down-reason <i>keyword</i>
Tree	oper-down-reason
Options	<ul style="list-style-type: none"> • admin-disabled • no-next-hop-address • no-evi • network-instance-oper-down • no-vxlan-interface • ethernet-segment-multiple-subinterfaces • vxlan_interface_no_source_ip_address • bgp-vpn-instance-oper-down • no-mpls-label • no-mcid

	<ul style="list-style-type: none"> • no-local-attachment-circuit • no-remote-attachment-circuit • tag-set-not-resolved
Configurable	False
Platforms	7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

oper-state *keyword*

Description	This leaf contains the operational state of bgp-instance.
Context	network-instance name <i>string</i> protocols bgp-evpn bgp-instance id <i>reference</i> oper-state <i>keyword</i>
Tree	oper-state
Options	<ul style="list-style-type: none"> • up Component or process is operational • down Component or process is not operational • empty Component slot is empty • downloading Component is downloading image into memory • booting Component is booting downloaded image • starting Component image operational, application processes starting • failed Component or process has failed • synchronizing Component is currently being synchronized • upgrading Component is currently being upgraded • low-power Component is offline due to insufficient system power • degraded Component or process is in a degraded state • warm-reboot

Component or process is currently warm rebooting

This state is set during a warm reboot immediately following initiation of the reboot, continuing after startup until the system has completed audit. In this state the system will not accept configuration changes.

- waiting

Component or process is currently waiting

This state can be set by event handler when the `reinvoke-with-delay` action is used, and indicates that the event handler is waiting for the provided delay before reinvoking the instance.

Configurable

False

Platforms

7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

routes

Description

Enter the routes context

Context

[network-instance name](#) *string* [protocols](#) [bgp-evpn](#) [bgp-instance id](#) *reference* [routes](#)

Tree

[routes](#)

Configurable

True

Platforms

7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

bridge-table

Description

Enable the bridge-table context

Context

[network-instance name](#) *string* [protocols](#) [bgp-evpn](#) [bgp-instance id](#) *reference* [routes](#) [bridge-table](#)

Tree

[bridge-table](#)

Configurable

True

Platforms

7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

inclusive-mcast

Description

Enter the inclusive-mcast context

Context	network-instance name <i>string</i> protocols bgp-evpn bgp-instance id <i>reference</i> routes bridge-table inclusive-mcast
Tree	inclusive-mcast
Configurable	True
Platforms	7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

advertise *boolean*

Description	If set to true an inclusive multicast route will be advertised in this evpn instance.
Context	network-instance name <i>string</i> protocols bgp-evpn bgp-instance id <i>reference</i> routes bridge-table inclusive-mcast advertise <i>boolean</i>
Tree	advertise
Default	true
Configurable	True
Platforms	7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

originating-ip (*ipv4-address* | *ipv6-address*)

Description	The originating ip-address that the inclusive multicast route will be advertised with in this evpn instance
Context	network-instance name <i>string</i> protocols bgp-evpn bgp-instance id <i>reference</i> routes bridge-table inclusive-mcast originating-ip (<i>ipv4-address</i> <i>ipv6-address</i>)
Tree	originating-ip
Configurable	True
Platforms	7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

mac-ip

Description	Enter the mac-ip context
Context	network-instance name <i>string</i> protocols bgp-evpn bgp-instance id <i>reference</i> routes bridge-table mac-ip
Tree	mac-ip

Configurable	True
Platforms	7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

advertise *boolean*

Description	If set to true then local mac's and local mac-ip pairs will be advertised in this evpn instance
Context	network-instance name <i>string</i> protocols bgp-evpn bgp-instance id <i>reference</i> routes bridge-table mac-ip advertise <i>boolean</i>
Tree	advertise
Default	true
Configurable	True
Platforms	7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

advertise-arp-nd-extended-community *boolean*

Description	ARP/ND extended community
Context	network-instance name <i>string</i> protocols bgp-evpn bgp-instance id <i>reference</i> routes bridge-table mac-ip advertise-arp-nd-extended-community <i>boolean</i>
Tree	advertise-arp-nd-extended-community
Default	false
Configurable	True
Platforms	7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

advertise-arp-nd-only-with-mac-table-entry *boolean*

Description	If set to true then local mac-ip records will be advertised in this evpn instance only when we have a local mac in the mac-table
Context	network-instance name <i>string</i> protocols bgp-evpn bgp-instance id <i>reference</i> routes bridge-table mac-ip advertise-arp-nd-only-with-mac-table-entry <i>boolean</i>
Tree	advertise-arp-nd-only-with-mac-table-entry
Default	false

Configurable	True
Platforms	7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

next-hop (*keyword* | *ipv4-address* | *ipv6-address*)

Description	The ip-address that will be used as the bgp next-hop for all routes advertised in this evpn instance.
Context	network-instance name <i>string</i> protocols bgp-evpn bgp-instance id <i>reference</i> routes bridge-table next-hop (<i>keyword</i> <i>ipv4-address</i> <i>ipv6-address</i>)
Tree	next-hop
Default	use-system-ipv4-address
Options	<ul style="list-style-type: none"> • use-system-ipv4-address
Configurable	True
Platforms	7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

vlan-aware-bundle-eth-tag *number*

Description	<p>Configures the Ethernet Tag ID to be encoded in the EVPN routes for control-plane interoperability mode with VLAN-aware bundle services.</p> <p>When set to a non-zero value, all the EVPN routes advertised for the MAC-VRF will be advertised with this value into the ethernet-tag-id field of the routes.</p> <p>On reception of EVPN routes with non-zero ethernet-tag-id, BGP will import the routes based on the import route-target as usual. However, the system checks the received ethernet-tag-id field and will process only those routes whose ethernet-tag-id match the local vlan-aware-bundle-eth-tag value.</p>
Context	network-instance name <i>string</i> protocols bgp-evpn bgp-instance id <i>reference</i> routes bridge-table vlan-aware-bundle-eth-tag <i>number</i>
Tree	vlan-aware-bundle-eth-tag
Range	0 to 16777215
Default	0
Configurable	True
Platforms	7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

route-table

Description	Enable the route-table context
Context	network-instance name <i>string</i> protocols bgp-evpn bgp-instance id <i>reference</i> routes route-table
Tree	route-table
Configurable	True
Platforms	7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

ip-prefix

Description	Enter the ip-prefix context
Context	network-instance name <i>string</i> protocols bgp-evpn bgp-instance id <i>reference</i> routes route-table ip-prefix
Tree	ip-prefix
Configurable	True
Platforms	7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

evpn-link-bandwidth

Description	Enter the evpn-link-bandwidth context
Context	network-instance name <i>string</i> protocols bgp-evpn bgp-instance id <i>reference</i> routes route-table ip-prefix evpn-link-bandwidth
Tree	evpn-link-bandwidth
Configurable	True
Platforms	7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

advertise

Description	Enable the advertise context
Context	network-instance name <i>string</i> protocols bgp-evpn bgp-instance id <i>reference</i> routes route-table ip-prefix evpn-link-bandwidth advertise
Tree	advertise

Configurable	True
Platforms	7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

maximum-dynamic-weight *number*

Description	Determines the maximum weight to be advertised in the evpn-link-bandwidth extended community If weight 'dynamic' is configured, the actual advertised weight is the minimum of the number of BGP PE-CE paths for the prefix and the configured maximum weight.
Context	network-instance name <i>string</i> protocols bgp-evpn bgp-instance id <i>reference</i> routes route-table ip-prefix evpn-link-bandwidth advertise maximum-dynamic-weight <i>number</i>
Tree	maximum-dynamic-weight
Range	1 to 128
Default	128
Configurable	True
Platforms	7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

weight (*number* | *keyword*)

Description	Determines the weight to be advertised in the evpn-link-bandwidth extended community If set to dynamic, the weight is dynamically set based on the number of BGP PE-CE paths for the IP Prefix that is advertised in an EVPN IP Prefix route. Alternatively, the weight can be set to a fixed integer value in the range 1..128. The dynamic weight only considers BGP PE-CE paths.
Context	network-instance name <i>string</i> protocols bgp-evpn bgp-instance id <i>reference</i> routes route-table ip-prefix evpn-link-bandwidth advertise weight (<i>number</i> <i>keyword</i>)
Tree	weight
Range	1 to 128
Default	dynamic
Options	<ul style="list-style-type: none"> dynamic
Configurable	True

Platforms 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

weighted-ecmp

Description Enter the weighted-ecmp context

Context [network-instance name](#) *string* [protocols bgp-evpn bgp-instance id](#) *reference* [routes route-table ip-prefix evpn-link-bandwidth weighted-ecmp](#)

Tree [weighted-ecmp](#)

Configurable True

Platforms 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

admin-state *keyword*

Description Setting enable triggers weighted ECMP programming for all eligible multipath EVPN IFL routes

When set to enable, the router processes the evpn-link-bandwidth extended community when installing an ECMP set for an EVPN IP-Prefix route in the ip-vrf route table. Flows to an IP Prefix received with a weight and a zero-ESI are sprayed based on the weight. If the EVPN IP Prefix route received with the weight has a non-zero ESI, the weight is divided into the number of PEs attached to the Ethernet Segment (and rounded up if the result is not an integer). The command also enables the weighted ECMP functionality for BGP CEs that are configured with the parameter evpn-link-bandwidth add-weight-to-received-bgp-routes <weight>.

Context [network-instance name](#) *string* [protocols bgp-evpn bgp-instance id](#) *reference* [routes route-table ip-prefix evpn-link-bandwidth weighted-ecmp admin-state keyword](#)

Tree [admin-state](#)

Default disable

Options

- enable
- disable

Configurable True

Platforms 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

max-ecmp-hash-buckets-per-next-hop-group *number*

Description	Specifies the maximum number of ECMP hash buckets per next-hop-group Weighted ECMP weights are normalized based on this number of hash buckets.
Context	network-instance name <i>string</i> protocols bgp-evpn bgp-instance id <i>reference</i> routes route-table ip-prefix evpn-link-bandwidth weighted-ecmp max-ecmp-hash-buckets-per-next-hop-group <i>number</i>
Tree	max-ecmp-hash-buckets-per-next-hop-group
Range	1 to 256
Configurable	True
Platforms	7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

mac-ip

Description	Enter the mac-ip context
Context	network-instance name <i>string</i> protocols bgp-evpn bgp-instance id <i>reference</i> routes route-table mac-ip
Tree	mac-ip
Configurable	True
Platforms	7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

advertise-gateway-mac *boolean*

Description	If set to true in an ip-vrf where bgp-evpn is enabled, a MAC/IP route containing the gateway-MAC is advertised. This gateway-MAC matches the MAC advertised along with the EVPN IFL routes type 5 for the ip-vrf network-instance. This advertisement is needed so that the EVPN IFL (Interface-Less) model in the ip-vrf can interoperate with a remote system working in EVPN IFF (Interface-ful) Unnumbered mode.
Context	network-instance name <i>string</i> protocols bgp-evpn bgp-instance id <i>reference</i> routes route-table mac-ip advertise-gateway-mac <i>boolean</i>
Tree	advertise-gateway-mac
Default	false

Configurable	True
Platforms	7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

vxlan-interface *reference*

Description	Identifier of vxlan-interface used in this bgp-instance.
Context	network-instance name <i>string</i> protocols bgp-evpn bgp-instance id <i>reference</i> vxlan-interface <i>reference</i>
Tree	vxlan-interface
Reference	network-instance name <i>string</i> vxlan-interface name <i>string</i>
Configurable	True
Platforms	7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5

bgp-ipvpn

Description	Enable the bgp-ipvpn context
Context	network-instance name <i>string</i> protocols bgp-ipvpn
Tree	bgp-ipvpn
Configurable	True
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

bgp-instance *id* *reference*

Description	bgp ipvpn instances configured in net-instance
Context	network-instance name <i>string</i> protocols bgp-ipvpn bgp-instance id <i>reference</i>
Tree	bgp-instance
Configurable	True
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b
Max. Elements	1

id *reference*

Description	Enter the id context
Context	network-instance name <i>string</i> protocols bgp-ipvpn bgp-instance id <i>reference</i>

Reference	network-instance name <i>string</i> protocols bgp-vpn bgp-instance id <i>number</i>
Configurable	True
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

admin-state *keyword*

Description	Configurable state of the bgp-ipvpn instance.
Context	network-instance name <i>string</i> protocols bgp-ipvpn bgp-instance id <i>reference</i> admin-state <i>keyword</i>
Tree	admin-state
Default	enable
Options	<ul style="list-style-type: none"> • enable • disable
Configurable	True
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

ecmp *number*

Description	The supported range of ECMP values for layer-3 ecmp.
Context	network-instance name <i>string</i> protocols bgp-ipvpn bgp-instance id <i>reference</i> ecmp <i>number</i>
Tree	ecmp
Range	1 to 64
Default	1
Configurable	True
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

encapsulation-type *keyword*

Description	Encap type of the bgp ipvpn instance.
Context	network-instance name <i>string</i> protocols bgp-ipvpn bgp-instance id <i>reference</i> encapsulation-type <i>keyword</i>
Tree	encapsulation-type
Default	mpls
Options	<ul style="list-style-type: none"> • mpls
Configurable	True

Platforms 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

mpls

Description Enable the mpls context

Context [network-instance name](#) *string* [protocols bgp-ipvpn bgp-instance id](#) *reference* [mpls](#)

Tree [mpls](#)

Configurable True

Platforms 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

ingress-mpls-label *number*

Description The ingress label allocated for Routed traffic
The ingress mpls label is advertised by the vpn route and it is expected on received routed packets.

Context [network-instance name](#) *string* [protocols bgp-ipvpn bgp-instance id](#) *reference* [mpls ingress-mpls-label](#) *number*

Tree [ingress-mpls-label](#)

Range 16 to 1048575

Configurable False

Platforms 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

next-hop-resolution

Description Options related to the resolution of IPv4 or IPv6 BGP next-hops to Tunnels

Context [network-instance name](#) *string* [protocols bgp-ipvpn bgp-instance id](#) *reference* [mpls next-hop-resolution](#)

Tree [next-hop-resolution](#)

Configurable True

Platforms 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

allowed-tunnel-types *identityref*

Description List of allowed tunnel types

Context [network-instance name](#) *string* [protocols bgp-ipvpn bgp-instance id](#) *reference* [mpls next-hop-resolution allowed-tunnel-types](#) *identityref*

Tree	allowed-tunnel-types
Options	<ul style="list-style-type: none"> • bgp-next-hop-resolution-tunnel-type <p>Base type for the types of tunnels that can be used by BGP for next-hop resolution</p>
Configurable	True
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b
Min. Elements	1

color-aware

Description	Color-aware next-hop resolution options
Context	network-instance name <i>string</i> protocols bgp-ipvpn bgp-instance id <i>reference</i> mpls next-hop-resolution color-aware
Tree	color-aware
Configurable	True
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

oper-down-reason *keyword*

Description	The reason for the bgp-instance being down
Context	network-instance name <i>string</i> protocols bgp-ipvpn bgp-instance id <i>reference</i> oper-down-reason <i>keyword</i>
Tree	oper-down-reason
Options	<ul style="list-style-type: none"> • admin-disabled • no-nexthop-address • network-instance-oper-down • bgp-vpn-instance-oper-down • no-mpls-label • tag-set-not-resolved
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

oper-state *keyword*

Description	This leaf contains the operational state of bgp-instance.
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Context	<code>network-instance name</code> <i>string</i> <code>protocols bgp-ipvpn</code> <code>bgp-instance id</code> <i>reference</i> <code>oper-state</code> <i>keyword</i>
Tree	<code>oper-state</code>
Options	<ul style="list-style-type: none"> • <code>up</code> Component or process is operational • <code>down</code> Component or process is not operational • <code>empty</code> Component slot is empty • <code>downloading</code> Component is downloading image into memory • <code>booting</code> Component is booting downloaded image • <code>starting</code> Component image operational, application processes starting • <code>failed</code> Component or process has failed • <code>synchronizing</code> Component is currently being synchronized • <code>upgrading</code> Component is currently being upgraded • <code>low-power</code> Component is offline due to insufficient system power • <code>degraded</code> Component or process is in a degraded state • <code>warm-reboot</code> Component or process is currently warm rebooting This state is set during a warm reboot immediately following initiation of the reboot, continuing after startup until the system has completed audit. In this state the system will not accept configuration changes. • <code>waiting</code> Component or process is currently waiting This state can be set by event handler when the <code>reinvoke-with-delay</code> action is used, and indicates that the event handler is waiting for the provided delay before reinvoking the instance.
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

bgp-vpn

Description	Enable the bgp-vpn context
Context	network-instance name <i>string</i> protocols bgp-vpn
Tree	bgp-vpn
Configurable	True
Platforms	Supported on all platforms

backup-paths

Description	Configuration of BGP VPN fast reroute
Context	network-instance name <i>string</i> protocols bgp-vpn backup-paths
Tree	backup-paths
Configurable	True
Platforms	bgp-backup-path-frr-evpn, bgp-backup-path-frr-vpn

ipv4-unicast

Description	Configuration of IPv4 unicast backup paths
Context	network-instance name <i>string</i> protocols bgp-vpn backup-paths ipv4-unicast
Tree	ipv4-unicast
Configurable	True
Platforms	bgp-backup-path-frr-evpn, bgp-backup-path-frr-vpn

install *boolean*

Description	Install a backup path for every NLRI in the address family, when a suitable one exists
Context	network-instance name <i>string</i> protocols bgp-vpn backup-paths ipv4-unicast install <i>boolean</i>
Tree	install
Default	false
Configurable	True
Platforms	bgp-backup-path-frr-evpn, bgp-backup-path-frr-vpn

ipv6-unicast

Description	Configuration of IPv6 unicast backup paths
Context	network-instance name <i>string</i> protocols bgp-vpn backup-paths ipv6-unicast
Tree	ipv6-unicast
Configurable	True
Platforms	bgp-backup-path-frr-evpn, bgp-backup-path-frr-vpn

install *boolean*

Description	Install a backup path for every NLRI in the address family, when a suitable one exists
Context	network-instance name <i>string</i> protocols bgp-vpn backup-paths ipv6-unicast install <i>boolean</i>
Tree	install
Default	false
Configurable	True
Platforms	bgp-backup-path-frr-evpn, bgp-backup-path-frr-vpn

bgp-instance [id](#) *number*

Description	List of bgp-vpn instances configured in the network-instance. Only one instance allowed in the current release.
Context	network-instance name <i>string</i> protocols bgp-vpn bgp-instance id <i>number</i>
Tree	bgp-instance
Configurable	True
Platforms	Supported on all platforms
Max. Elements	2

id *number*

Description	The index of the bgp-vpn instance
Context	network-instance name <i>string</i> protocols bgp-vpn bgp-instance id <i>number</i>
Range	1 to 2
Configurable	True
Platforms	Supported on all platforms

export-policy *reference*

Description	Apply an export policy to advertised BGP routes
Context	network-instance name <i>string</i> protocols bgp-vpn bgp-instance id <i>number</i> export-policy <i>reference</i>
Tree	export-policy
Reference	routing-policy policy name <i>string</i>
Configurable	True
Platforms	Supported on all platforms
Max. Elements	14

import-policy *reference*

Description	Apply an import policy to received BGP routes
Context	network-instance name <i>string</i> protocols bgp-vpn bgp-instance id <i>number</i> import-policy <i>reference</i>
Tree	import-policy
Reference	routing-policy policy name <i>string</i>
Configurable	True
Platforms	Supported on all platforms
Max. Elements	14

oper-down-reason *keyword*

Description	Reason for bgp-instance being down
Context	network-instance name <i>string</i> protocols bgp-vpn bgp-instance id <i>number</i> oper-down-reason <i>keyword</i>
Tree	oper-down-reason
Options	<ul style="list-style-type: none"> • no-loopback-address-or-rd • no-autonomous-system-or-rt • network-instance-oper-down • bad-rd-format • none
Configurable	False
Platforms	Supported on all platforms

route-distinguisher

Description	Route Distinguisher (RD) of the bgp-vpn instance.
Context	network-instance name <i>string</i> protocols bgp-vpn bgp-instance id <i>number</i> route-distinguisher
Tree	route-distinguisher
Configurable	True
Platforms	Supported on all platforms

rd ([route-distinguisher-type-0](#) | [route-distinguisher-type-1](#) | [route-distinguisher-type-2](#) | [route-distinguisher-type-2b](#))

Description	Route Distinguisher (RD) in the bgp-vpn instance. When used for evpn and if not configured, the RD is auto-derived as <ip-address>:<evi> where 'ip-address' is the ipv4 address associated to the subinterface lo0.1.
Context	network-instance name <i>string</i> protocols bgp-vpn bgp-instance id <i>number</i> route-distinguisher rd (route-distinguisher-type-0 route-distinguisher-type-1 route-distinguisher-type-2 route-distinguisher-type-2b)
Tree	rd
Configurable	True
Platforms	Supported on all platforms

route-distinguisher-origin *keyword*

Description	Origin of the operational Route Distinguisher (RD) of the bgp-vpn instance. 'Auto-derived-from-evi' refers to an RD that is automatically allocated with the format <ip-address>:<evi> where 'ip-address' is the ipv4 address associated to the subinterface lo0.1. 'Auto-derived-from-system-ip:0' refers to the RD for the EVPN Ethernet Segment routes that is automatically allocated with the format <ip-address>:0 where 'ip-address' is the ipv4 address associated to the subinterface lo0.1. 'Manual' refers to an RD that is configured. 'None' indicates that the RD is neither configured nor auto-derived.
Context	network-instance name <i>string</i> protocols bgp-vpn bgp-instance id <i>number</i> route-distinguisher route-distinguisher-origin <i>keyword</i>
Tree	route-distinguisher-origin
Options	<ul style="list-style-type: none"> • auto-derived-from-evi • auto-derived-from-system-ip:0 • manual

- none

Configurable	False
Platforms	Supported on all platforms

route-target

Description	Route Target (RT) of the bgp-vpn instance.
Context	network-instance name <i>string</i> protocols bgp-vpn bgp-instance id <i>number</i> route-target
Tree	route-target
Configurable	True
Platforms	Supported on all platforms

export-route-target-origin *keyword*

Description	Origin of the operational export Route Target (RT) of the bgp-vpn instance. 'Auto-derived-from-evi' refers to an RT that is automatically allocated with the format <asn>:<evi> where 'asn' is the autonomous-system-number configured in the network-instance default. 'Auto-derived-from-esi-bytes-1-6' refers to the ES-import RT for the EVPN Ethernet Segment routes that is derived from bytes 1 to 6 of the Ethernet Segment Identifier of the route. 'Manual' refers to an export RT that is configured. 'None' indicates that the export RT is neither configured nor auto-derived.
Context	network-instance name <i>string</i> protocols bgp-vpn bgp-instance id <i>number</i> route-target export-route-target-origin <i>keyword</i>
Tree	export-route-target-origin
Options	<ul style="list-style-type: none"> • auto-derived-from-evi • auto-derived-from-esi-bytes-1-6 • manual • none
Configurable	False
Platforms	Supported on all platforms

export-rt (*string* | *string* | *string* | *string* | *string* | *string* | *string* | *string*)

Description	Export Route Target (RT) in the bgp-vpn instance. When used for evpn and if not configured, the RT is auto-derived with the format <asn>:<evi> where 'asn' is the autonomous-system configured in the network-instance default.
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Context	network-instance name <i>string</i> protocols bgp-vpn bgp-instance id <i>number</i> route-target export-rt (<i>string</i> <i>string</i> <i>string</i> <i>string</i> <i>string</i> <i>string</i> <i>string</i> <i>string</i>)
Tree	export-rt
Configurable	True
Platforms	Supported on all platforms

import-route-target-origin *keyword*

Description	Origin of the operational import Route Target (RT) of the bgp-vpn instance. 'Auto-derived-from-evi' refers to an RT that is automatically allocated with the format <asn>:<evi> where 'asn' is the autonomous-system-number configured in the network-instance default. 'Auto-derived-from-esi-bytes-1-6' refers to the ES-import RT for the EVPN Ethernet Segment routes that is derived from bytes 1 to 6 of the Ethernet Segment Identifier of the route. 'Manual' refers to an import RT that is configured. 'None' indicates that the import RT is neither configured nor auto-derived.
Context	network-instance name <i>string</i> protocols bgp-vpn bgp-instance id <i>number</i> route-target import-route-target-origin <i>keyword</i>
Tree	import-route-target-origin
Options	<ul style="list-style-type: none"> • auto-derived-from-evi • auto-derived-from-esi-bytes-1-6 • manual • none
Configurable	False
Platforms	Supported on all platforms

import-rt (*string* | *string* | *string* | *string* | *string* | *string* | *string* | *string*)

Description	Import Route Target (RT) in the bgp-vpn instance. When used for evpn and if not configured, the RT is auto-derived with the format <asn>:<evi> where 'asn' is the autonomous-system configured in the network-instance default.
Context	network-instance name <i>string</i> protocols bgp-vpn bgp-instance id <i>number</i> route-target import-rt (<i>string</i> <i>string</i> <i>string</i> <i>string</i> <i>string</i> <i>string</i> <i>string</i> <i>string</i> <i>string</i>)
Tree	import-rt
Configurable	True
Platforms	Supported on all platforms

combined-ecmp

Description	Combine BGP owners into the same ECMP set When enabled, candidate BGP PE-CE routes and BGP VPN routes (EVPN IFL or VPN-IP) to the same prefix are combined into a single ECMP set. A single route with a combined next hop group is installed in the route table. If different BGP owners are combined and have different configured ecmp maximum values, the minimum of the maximum configured values is considered for the combined ECMP set.
Context	network-instance name <i>string</i> protocols bgp-vpn combined-ecmp
Tree	combined-ecmp
Configurable	True
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

gribi

Description	Container for gRIBI configuration and state.
Context	network-instance name <i>string</i> protocols gribi
Tree	gribi
Configurable	True
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

admin-state *keyword*

Description	Administratively enable or disable gRIBI support. The enable setting only has an effect when the network-instance type is ip-vrf or default. When this is set to disable all IP entries and next-hop-groups associated with the network-instance are deleted from the gRIBI server database and the recovery of this state depends on the gRIBI clients to re-signal all of the deleted entries. While in a disabled state, no entries are accepted for this network-instance. (This is the same behavior when the network-instance does not exist at all.)
Context	network-instance name <i>string</i> protocols gribi admin-state <i>keyword</i>
Tree	admin-state
Default	enable
Options	<ul style="list-style-type: none"> enable

	<ul style="list-style-type: none"> • disable
Configurable	True
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

default-metric *number*

Description	Set the route table metric to use for all gRIBI-created IPv4 and IPv6 routes
Context	network-instance name <i>string</i> protocols gribi default-metric number
Tree	default-metric
Default	1
Configurable	True
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

default-preference *number*

Description	Lower values indicate a higher degree of preference when deciding the route to use from different protocols.
Context	network-instance name <i>string</i> protocols gribi default-preference number
Tree	default-preference
Range	0 to 255
Default	6
Configurable	True
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

max-ecmp-hash-buckets-per-next-hop-group *number*

Description	<p>Specifies the maximum number of ECMP hash buckets per next-hop-group. An error is returned to any gRIBI client that attempts to program more than this number of next-hops in a single next-hop-group.</p> <p>Weighted ECMP weights are normalized based on this number of hash buckets.</p>
Context	network-instance name <i>string</i> protocols gribi max-ecmp-hash-buckets-per-next-hop-group number
Tree	max-ecmp-hash-buckets-per-next-hop-group
Range	1 to 256
Default	256
Configurable	True

Platforms 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

maximum-routes *number*

Description Specifies the maximum number of gRIBI routes (sum of IPv4 and IPv6 entries).
A value of 0 signifies no limit.

Context [network-instance name](#) *string* [protocols gribi maximum-routes](#) *number*

Tree [maximum-routes](#)

Default 0

Configurable True

Platforms 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

oper-state *keyword*

Description The operational state of gRIBI with respect to programming of entries in this network network-instance
By default, even with no configuration, the state is up in all network-instances of type ip-vrf and default

Context [network-instance name](#) *string* [protocols gribi oper-state](#) *keyword*

Tree [oper-state](#)

Options

- up
Component or process is operational
- down
Component or process is not operational
- empty
Component slot is empty
- downloading
Component is downloading image into memory
- booting
Component is booting downloaded image
- starting
Component image operational, application processes starting
- failed
Component or process has failed
- synchronizing
Component is currently being synchronized

- upgrading
Component is currently being upgraded
- low-power
Component is offline due to insufficient system power
- degraded
Component or process is in a degraded state
- warm-reboot
Component or process is currently warm rebooting
This state is set during a warm reboot immediately following initiation of the reboot, continuing after startup until the system has completed audit. In this state the system will not accept configuration changes.
- waiting
Component or process is currently waiting
This state can be set by event handler when the reinvoke-with-delay action is used, and indicates that the event handler is waiting for the provided delay before reinvoking the instance.

Configurable

False

Platforms

7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

igmp-snooping

Description

Enable the igmp-snooping context

Context[network-instance name](#) *string* protocols [igmp-snooping](#)**Tree**[igmp-snooping](#)**Configurable**

True

Platforms

7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5

admin-state *keyword*

Description

Administratively enable or disable the IGMP instance

Context[network-instance name](#) *string* protocols [igmp-snooping](#) [admin-state](#) *keyword***Tree**[admin-state](#)**Default**

disable

Options

- enable
- disable

Configurable

True

Platforms 7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5

interface *interface-name string*

Description List of IGMP interfaces

Context [network-instance name string protocols igmp-snooping interface interface-name string](#)

Tree [interface](#)

Configurable True

Platforms 7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5

interface-name *string*

Description Reference to a specific subinterface of the form <interface-name>.<subinterface-index>

Context [network-instance name string protocols igmp-snooping interface interface-name string](#)

String Length 5 to 25

Configurable True

Platforms 7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5

fast-leave *boolean*

Description Allow IGMP fast leave processing
When enabled, the multicast state is removed immediately upon receiving an IGMP leave message.

Context [network-instance name string protocols igmp-snooping interface interface-name string fast-leave boolean](#)

Tree [fast-leave](#)

Default false

Configurable True

Platforms 7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5

import-policy *reference*

Description	Apply an import policy. The length of the policy name should not exceed 32 characters.
Context	network-instance name <i>string</i> protocols igmp-snooping interface interface-name <i>string</i> import-policy reference
Tree	import-policy
Reference	routing-policy policy name <i>string</i>
Configurable	True
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

is-mrouter-port *boolean*

Description	Interface is a multicast router port
Context	network-instance name <i>string</i> protocols igmp-snooping interface interface-name <i>string</i> is-mrouter-port boolean
Tree	is-mrouter-port
Configurable	False
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5

maximum-number-group-sources *number*

Description	Maximum number of IGMP group/source combinations for this interface
Context	network-instance name <i>string</i> protocols igmp-snooping interface interface-name <i>string</i> maximum-number-group-sources number
Tree	maximum-number-group-sources
Range	1 to 4096
Configurable	True
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5

maximum-number-groups *number*

Description	Maximum number of IGMP Groups for this interface
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Context	network-instance name <i>string</i> protocols igmp-snooping interface interface-name <i>string</i> maximum-number-groups <i>number</i>
Tree	maximum-number-groups
Range	1 to 4096
Configurable	True
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5

maximum-number-sources *number*

Description	Maximum number of IGMP sources per group for this interface
Context	network-instance name <i>string</i> protocols igmp-snooping interface interface-name <i>string</i> maximum-number-sources <i>number</i>
Tree	maximum-number-sources
Range	1 to 512
Configurable	True
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5

membership-group-count *number*

Description	The number of multicast groups which have been learned
Context	network-instance name <i>string</i> protocols igmp-snooping interface interface-name <i>string</i> membership-group-count <i>number</i>
Tree	membership-group-count
Configurable	False
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5

membership-groups

Description	List of IGMP Membership information
Context	network-instance name <i>string</i> protocols igmp-snooping interface interface-name <i>string</i> membership-groups
Tree	membership-groups
Configurable	False
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5

group *group string*

Description	Multicast group membership
Context	network-instance name <i>string</i> protocols igmp-snooping interface interface-name <i>string</i> membership-groups group group <i>string</i>
Tree	group
Configurable	False
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5

group *string*

Description	Multicast address.
Context	network-instance name <i>string</i> protocols igmp-snooping interface interface-name <i>string</i> membership-groups group group <i>string</i>
Configurable	False
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5

expiry-time *number*

Description	The time left before multicast group timeout
Context	network-instance name <i>string</i> protocols igmp-snooping interface interface-name <i>string</i> membership-groups group group <i>string</i> expiry-time <i>number</i>
Tree	expiry-time
Units	seconds
Configurable	False
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5

filter-mode *keyword*

Description	Enter the filter-mode context
Context	network-instance name <i>string</i> protocols igmp-snooping interface interface-name <i>string</i> membership-groups group group <i>string</i> filter-mode <i>keyword</i>
Tree	filter-mode
Options	<ul style="list-style-type: none"> include

In include mode, reception of packets sent to the specified multicast address is requested only from those IP source addresses listed in the source-list parameter

- exclude

In exclude mode, reception of packets sent to the given multicast address is requested from all IP source addresses except those listed in the source-list parameter.

Configurable	False
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5

group-type *keyword*

Description	Enter the group-type context
Context	network-instance name <i>string</i> protocols igmp-snooping interface interface-name <i>string</i> membership-groups group group <i>string</i> group-type <i>keyword</i>
Tree	group-type
Options	<ul style="list-style-type: none"> • static This group entry was statically configured. • dynamic This group entry was learned by the protocol. • bgp-smet This group entry was learned from a bgp SMET route. • bgp-sync This group entry was learned from a bgp JOIN SYNC route.
Configurable	False
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5

igmp-compatibility-mode *keyword*

Description	Compatibility with older version routers
Context	network-instance name <i>string</i> protocols igmp-snooping interface interface-name <i>string</i> membership-groups group group <i>string</i> igmp-compatibility-mode <i>keyword</i>
Tree	igmp-compatibility-mode
Options	<ul style="list-style-type: none"> • 1 • 2

- 3

Configurable

False

Platforms

7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5

source *source string***Description**

Source addresses of multicast

Context[network-instance name string protocols igmp-snooping interface interface-name string membership-groups group group string source source string](#)**Tree**[source](#)**Configurable**

False

Platforms

7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5

source *string***Description**

Source address of multicast

Context[network-instance name string protocols igmp-snooping interface interface-name string membership-groups group group string source source string](#)**Configurable**

False

Platforms

7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5

expiry-time *number***Description**

The time left before multicast group timeout

Context[network-instance name string protocols igmp-snooping interface interface-name string membership-groups group group string source source string expiry-time number](#)**Tree**[expiry-time](#)**Units**

seconds

Configurable

False

Platforms

7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5

forwarding-state *keyword*

Description	Traffic forwarding state on this port
Context	network-instance name <i>string</i> protocols igmp-snooping interface interface-name <i>string</i> membership-groups group group <i>string</i> source source <i>string</i> forwarding-state <i>keyword</i>
Tree	forwarding-state
Options	<ul style="list-style-type: none"> • forward • block
Configurable	False
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5

source-type *keyword*

Description	Enter the source-type context
Context	network-instance name <i>string</i> protocols igmp-snooping interface interface-name <i>string</i> membership-groups group group <i>string</i> source source <i>string</i> source-type <i>keyword</i>
Tree	source-type
Options	<ul style="list-style-type: none"> • static This group entry was statically configured. • dynamic This group entry was learned by the protocol. • bgp-smet This group entry was learned from a bgp SMET route. • bgp-sync This group entry was learned from a bgp JOIN SYNC route.
Configurable	False
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5

up-time *string*

Description	The time elapsed since this entry was created
Context	network-instance name <i>string</i> protocols igmp-snooping interface interface-name <i>string</i> membership-groups group group <i>string</i> source source <i>string</i> up-time <i>string</i>

Tree	up-time
String Length	20 to 32
Configurable	False
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5

up-time *string*

Description	The time elapsed since this entry was created
Context	network-instance name <i>string</i> protocols igmp-snooping interface interface-name <i>string</i> membership-groups group group <i>string</i> up-time <i>string</i>
Tree	up-time
String Length	20 to 32
Configurable	False
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5

v1-host-timer *number*

Description	The time remaining until the local router will assume that there are no longer any version 1 members
Context	network-instance name <i>string</i> protocols igmp-snooping interface interface-name <i>string</i> membership-groups group group <i>string</i> v1-host-timer <i>number</i>
Tree	v1-host-timer
Units	seconds
Configurable	False
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5

v2-host-timer *number*

Description	The time remaining until the local router will assume that there are no longer any version 2 members
Context	network-instance name <i>string</i> protocols igmp-snooping interface interface-name <i>string</i> membership-groups group group <i>string</i> v2-host-timer <i>number</i>
Tree	v2-host-timer
Units	seconds
Configurable	False

Platforms 7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5

mrouter-port *boolean*

Description Operate port as a multicast router port

Context [network-instance name](#) *string* [protocols igmp-snooping interface interface-name](#) *string* **mrouter-port** *boolean*

Tree [mrouter-port](#)

Default false

Configurable True

Platforms 7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5

query-interval *number*

Description Interval at which the router sends the IGMP membership queries

Context [network-instance name](#) *string* [protocols igmp-snooping interface interface-name](#) *string* **query-interval** *number*

Tree [query-interval](#)

Range 2 to 1024

Default 125

Configurable True

Platforms 7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5

query-last-member-interval *number*

Description Interval at which Group-Specific-Query packets are transmitted

When used along with EVPN multi-homing, the result of this value multiplied by the interface robust-count must be a value equal to or less than 25.5 seconds. This is due to the fact that the maximum response time field in the EVPN Multicast Leave Synch route has a limit of 255 units of 1/10 second, and this field encodes the result of $[(\text{query-last-member-interval} * 10) * \text{robust-count}]$.

If the result of that operation is greater than 255, the maximum response time in the EVPN Multicast Leave Synch route is still 255.

Context [network-instance name](#) *string* [protocols igmp-snooping interface interface-name](#) *string* **query-last-member-interval** *number*

Tree	query-last-member-interval
Range	1 to 5
Default	1
Configurable	True
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5

query-response-interval *number*

Description	Time to wait to receive a response to the IGMP membership query from the host
Context	network-instance name <i>string</i> protocols igmp-snooping interface interface-name <i>string</i> query-response-interval <i>number</i>
Tree	query-response-interval
Range	1 to 1023
Default	10
Configurable	True
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5

robust-count *number*

Description	<p>Tune IGMP robustness to allow for expected packet loss</p> <p>The robust-count variable allows tuning for the expected packet loss on a subnet. If a subnet anticipates losses, the robust-count variable can be increased.</p> <p>When used along with EVPN multi-homing, the result of this value multiplied by the interface query-last-member-interval must be a value equal to or less than 25.5 seconds. This is due to the fact that the maximum response time field in the EVPN Multicast Leave Synch route has a limit of 255 units of 1/10 second, and this field encodes the result of [(query-last-member-interval* 10) * robust-count].</p> <p>If the result of that operation is greater than 255, the maximum response time in the EVPN Multicast Leave Synch route is still 255.</p>
Context	network-instance name <i>string</i> protocols igmp-snooping interface interface-name <i>string</i> robust-count <i>number</i>
Tree	robust-count
Range	2 to 10
Default	2

Configurable	True
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5

router-alert-check *boolean*

Description	Enable or disable router alert checking for IGMP messages received on this interface
Context	network-instance name <i>string</i> protocols igmp-snooping interface interface-name <i>string</i> router-alert-check <i>boolean</i>
Tree	router-alert-check
Default	true
Configurable	True
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5

send-queries *boolean*

Description	Generate IGMP general queries
Context	network-instance name <i>string</i> protocols igmp-snooping interface interface-name <i>string</i> send-queries <i>boolean</i>
Tree	send-queries
Default	false
Configurable	True
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5

static-membership-groups

Description	Container to configure static <S,G>s for this interface.
Context	network-instance name <i>string</i> protocols igmp-snooping interface interface-name <i>string</i> static-membership-groups
Tree	static-membership-groups
Configurable	True
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5

group *group string*

Description	Enter the group list instance
Context	network-instance name string protocols igmp-snooping interface interface-name string static-membership-groups group group string
Tree	group
Configurable	True
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5

group *string*

Description	group address.
Context	network-instance name string protocols igmp-snooping interface interface-name string static-membership-groups group group string
Configurable	True
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5

source *source string*

Description	Multicast source address list
Context	network-instance name string protocols igmp-snooping interface interface-name string static-membership-groups group group string source source string
Tree	source
Configurable	True
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5

source *string*

Description	Multicast source address.
Context	network-instance name string protocols igmp-snooping interface interface-name string static-membership-groups group group string source source string
Configurable	True
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5

starg

Description	any source address (*,G)
Context	network-instance name <i>string</i> protocols igmp-snooping interface interface-name <i>string</i> static-membership-groups group group <i>string</i> starg
Tree	starg
Configurable	True
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5

statistics

Description	IGMP sub-interface statistics
Context	network-instance name <i>string</i> protocols igmp-snooping interface interface-name <i>string</i> statistics
Tree	statistics
Configurable	False
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5

error

Description	Error message statistics
Context	network-instance name <i>string</i> protocols igmp-snooping interface interface-name <i>string</i> statistics error
Tree	error
Configurable	False
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5

bad-encoding *number*

Description	Badly encoded packets
Context	network-instance name <i>string</i> protocols igmp-snooping interface interface-name <i>string</i> statistics error bad-encoding <i>number</i>
Tree	bad-encoding
Default	0
Configurable	False

Platforms 7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5

bad-igmp-checksum *number*

Description Number of times a packet is discarded because of a bad IGMP header checksum

Context [network-instance name](#) *string* [protocols igmp-snooping interface interface-name](#) *string* [statistics error bad-igmp-checksum](#) *number*

Tree [bad-igmp-checksum](#)

Default 0

Configurable False

Platforms 7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5

bad-length *number*

Description Bad length

Context [network-instance name](#) *string* [protocols igmp-snooping interface interface-name](#) *string* [statistics error bad-length](#) *number*

Tree [bad-length](#)

Default 0

Configurable False

Platforms 7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5

discarded-bgp-join-sync *number*

Description Bgp join sync routes

Context [network-instance name](#) *string* [protocols igmp-snooping interface interface-name](#) *string* [statistics error discarded-bgp-join-sync](#) *number*

Tree [discarded-bgp-join-sync](#)

Default 0

Configurable False

Platforms 7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5

discarded-bgp-leave-sync *number*

Description	Bgp leave sync routes
Context	network-instance name <i>string</i> protocols igmp-snooping interface interface-name <i>string</i> statistics error discarded-bgp-leave-sync <i>number</i>
Tree	discarded-bgp-leave-sync
Default	0
Configurable	False
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5

import-policy-drops *number*

Description	Number of times the host IP address or group or source IP addresses specified in the import policy are matched
Context	network-instance name <i>string</i> protocols igmp-snooping interface interface-name <i>string</i> statistics error import-policy-drops <i>number</i>
Tree	import-policy-drops
Default	0
Configurable	False
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

local-scope *number*

Description	Link-local scope multicast group address
Context	network-instance name <i>string</i> protocols igmp-snooping interface interface-name <i>string</i> statistics error local-scope <i>number</i>
Tree	local-scope
Default	0
Configurable	False
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5

missing-router-alert *number*

Description	Router alert flag is not set
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Context	network-instance name <i>string</i> protocols igmp-snooping interface interface-name <i>string</i> statistics error missing-router-alert <i>number</i>
Tree	missing-router-alert
Default	0
Configurable	False
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5

out-of-memory-discarded-packets *number*

Description	Number of times a join is discarded because the router ran out of memory
Context	network-instance name <i>string</i> protocols igmp-snooping interface interface-name <i>string</i> statistics error out-of-memory-discarded-packets <i>number</i>
Tree	out-of-memory-discarded-packets
Default	0
Configurable	False
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5

reached-maximum-number-group-sources *number*

Description	Number of times a join is discarded because the maximum number of group-source combinations is reached
Context	network-instance name <i>string</i> protocols igmp-snooping interface interface-name <i>string</i> statistics error reached-maximum-number-group-sources <i>number</i>
Tree	reached-maximum-number-group-sources
Default	0
Configurable	False
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5

reached-maximum-number-groups *number*

Description	Number of times a join is discarded because the maximum number of groups is reached
Context	network-instance name <i>string</i> protocols igmp-snooping interface interface-name <i>string</i> statistics error reached-maximum-number-groups <i>number</i>
Tree	reached-maximum-number-groups

Default	0
Configurable	False
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5

reached-maximum-number-sources *number*

Description	Number of times a join is discarded because the maximum number of sources per group is reached
Context	network-instance name <i>string</i> protocols igmp-snooping interface interface-name <i>string</i> statistics error reached-maximum-number-sources <i>number</i>
Tree	reached-maximum-number-sources
Default	0
Configurable	False
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5

send-query-configured-discarded-packets *number*

Description	Number of times a query is discarded because send-queries is configured in the sub-interface
Context	network-instance name <i>string</i> protocols igmp-snooping interface interface-name <i>string</i> statistics error send-query-configured-discarded-packets <i>number</i>
Tree	send-query-configured-discarded-packets
Default	0
Configurable	False
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5

unknown-type *number*

Description	Unknown type
Context	network-instance name <i>string</i> protocols igmp-snooping interface interface-name <i>string</i> statistics error unknown-type <i>number</i>
Tree	unknown-type
Default	0
Configurable	False

Platforms 7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5

wrong-version *number*

Description Wrong version

Context [network-instance name](#) *string* [protocols igmp-snooping interface interface-name](#) *string* [statistics error wrong-version](#) *number*

Tree [wrong-version](#)

Default 0

Configurable False

Platforms 7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5

zero-source-ip-address *number*

Description Number of times a packet is discarded because it has a zero source IP address

Context [network-instance name](#) *string* [protocols igmp-snooping interface interface-name](#) *string* [statistics error zero-source-ip-address](#) *number*

Tree [zero-source-ip-address](#)

Default 0

Configurable False

Platforms 7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5

forwarded

Description Forward message statistics

Context [network-instance name](#) *string* [protocols igmp-snooping interface interface-name](#) *string* [statistics forwarded](#)

Tree [forwarded](#)

Configurable False

Platforms 7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5

error-packets *number*

Description	Forwarding Errors
Context	network-instance name <i>string</i> protocols igmp-snooping interface interface-name <i>string</i> statistics forwarded error-packets <i>number</i>
Tree	error-packets
Default	0
Configurable	False
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5

general-queries *number*

Description	General Queries
Context	network-instance name <i>string</i> protocols igmp-snooping interface interface-name <i>string</i> statistics forwarded general-queries <i>number</i>
Tree	general-queries
Default	0
Configurable	False
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5

group-queries *number*

Description	Group Specific Queries
Context	network-instance name <i>string</i> protocols igmp-snooping interface interface-name <i>string</i> statistics forwarded group-queries <i>number</i>
Tree	group-queries
Default	0
Configurable	False
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5

group-source-queries *number*

Description	Group and Source Specific Queries
Context	network-instance name <i>string</i> protocols igmp-snooping interface interface-name <i>string</i> statistics forwarded group-source-queries <i>number</i>

Tree	group-source-queries
Default	0
Configurable	False
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5

leave-messages *number*

Description	Leave messages
Context	network-instance name <i>string</i> protocols igmp-snooping interface interface-name <i>string</i> statistics forwarded leave-messages <i>number</i>
Tree	leave-messages
Default	0
Configurable	False
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5

unknown-type *number*

Description	Unknown IGMP types
Context	network-instance name <i>string</i> protocols igmp-snooping interface interface-name <i>string</i> statistics forwarded unknown-type <i>number</i>
Tree	unknown-type
Default	0
Configurable	False
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5

v1-reports *number*

Description	V1 Reports
Context	network-instance name <i>string</i> protocols igmp-snooping interface interface-name <i>string</i> statistics forwarded v1-reports <i>number</i>
Tree	v1-reports
Default	0
Configurable	False
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5

v2-reports *number*

Description	V2 Reports
Context	network-instance name <i>string</i> protocols igmp-snooping interface interface-name <i>string</i> statistics forwarded v2-reports <i>number</i>
Tree	v2-reports
Default	0
Configurable	False
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5

v3-reports *number*

Description	V3 Reports
Context	network-instance name <i>string</i> protocols igmp-snooping interface interface-name <i>string</i> statistics forwarded v3-reports <i>number</i>
Tree	v3-reports
Default	0
Configurable	False
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5

multicast-states

Description	Multicast state count for this network instance
Context	network-instance name <i>string</i> protocols igmp-snooping interface interface-name <i>string</i> statistics multicast-states
Tree	multicast-states
Configurable	False
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5

source-group-entries *number*

Description	The number of (S,G)s
Context	network-instance name <i>string</i> protocols igmp-snooping interface interface-name <i>string</i> statistics multicast-states source-group-entries <i>number</i>
Tree	source-group-entries

Default	0
Configurable	False
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5

star-group-entries *number*

Description	The number of (*,G)s
Context	network-instance name <i>string</i> protocols igmp-snooping interface interface-name <i>string</i> statistics multicast-states star-group-entries <i>number</i>
Tree	star-group-entries
Default	0
Configurable	False
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5

received

Description	Received message statistics
Context	network-instance name <i>string</i> protocols igmp-snooping interface interface-name <i>string</i> statistics received
Tree	received
Configurable	False
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5

bgp-join-sync *number*

Description	Bgp join sync routes
Context	network-instance name <i>string</i> protocols igmp-snooping interface interface-name <i>string</i> statistics received bgp-join-sync <i>number</i>
Tree	bgp-join-sync
Default	0
Configurable	False
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5

bgp-leave-sync *number*

Description	Bgp leave sync routes
Context	network-instance name <i>string</i> protocols igmp-snooping interface interface-name <i>string</i> statistics received bgp-leave-sync <i>number</i>
Tree	bgp-leave-sync
Default	0
Configurable	False
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5

discarded-packets *number*

Description	Total number of discarded IGMP packets
Context	network-instance name <i>string</i> protocols igmp-snooping interface interface-name <i>string</i> statistics received discarded-packets <i>number</i>
Tree	discarded-packets
Default	0
Configurable	False
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5

general-queries *number*

Description	General Queries
Context	network-instance name <i>string</i> protocols igmp-snooping interface interface-name <i>string</i> statistics received general-queries <i>number</i>
Tree	general-queries
Default	0
Configurable	False
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5

group-queries *number*

Description	Group Specific Queries
Context	network-instance name <i>string</i> protocols igmp-snooping interface interface-name <i>string</i> statistics received group-queries <i>number</i>

Tree	group-queries
Default	0
Configurable	False
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5

group-source-queries *number*

Description	Group and Source Specific Queries
Context	network-instance name <i>string</i> protocols igmp-snooping interface interface-name <i>string</i> statistics received group-source-queries <i>number</i>
Tree	group-source-queries
Default	0
Configurable	False
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5

leave-messages *number*

Description	Leave messages
Context	network-instance name <i>string</i> protocols igmp-snooping interface interface-name <i>string</i> statistics received leave-messages <i>number</i>
Tree	leave-messages
Default	0
Configurable	False
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5

v1-reports *number*

Description	V1 Reports
Context	network-instance name <i>string</i> protocols igmp-snooping interface interface-name <i>string</i> statistics received v1-reports <i>number</i>
Tree	v1-reports
Default	0
Configurable	False
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5

v2-reports *number*

Description	V2 Reports
Context	network-instance name <i>string</i> protocols igmp-snooping interface interface-name <i>string</i> statistics received v2-reports <i>number</i>
Tree	v2-reports
Default	0
Configurable	False
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5

v3-reports *number*

Description	V3 Reports
Context	network-instance name <i>string</i> protocols igmp-snooping interface interface-name <i>string</i> statistics received v3-reports <i>number</i>
Tree	v3-reports
Default	0
Configurable	False
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5

transmitted

Description	Transmit message statistics
Context	network-instance name <i>string</i> protocols igmp-snooping interface interface-name <i>string</i> statistics transmitted
Tree	transmitted
Configurable	False
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5

bgp-join-sync *number*

Description	Bgp join sync routes
Context	network-instance name <i>string</i> protocols igmp-snooping interface interface-name <i>string</i> statistics transmitted bgp-join-sync <i>number</i>
Tree	bgp-join-sync

Default	0
Configurable	False
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5

bgp-leave-sync *number*

Description	Bgp leave sync routes
Context	network-instance name <i>string</i> protocols igmp-snooping interface interface-name <i>string</i> statistics transmitted bgp-leave-sync <i>number</i>
Tree	bgp-leave-sync
Default	0
Configurable	False
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5

error-packets *number*

Description	Transmission error IGMP packets
Context	network-instance name <i>string</i> protocols igmp-snooping interface interface-name <i>string</i> statistics transmitted error-packets <i>number</i>
Tree	error-packets
Default	0
Configurable	False
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5

general-queries *number*

Description	General Queries
Context	network-instance name <i>string</i> protocols igmp-snooping interface interface-name <i>string</i> statistics transmitted general-queries <i>number</i>
Tree	general-queries
Default	0
Configurable	False
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5

group-queries *number*

Description	Group Specific Queries
Context	network-instance name <i>string</i> protocols igmp-snooping interface interface-name <i>string</i> statistics transmitted group-queries <i>number</i>
Tree	group-queries
Default	0
Configurable	False
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5

group-source-queries *number*

Description	Group and Source Specific Queries
Context	network-instance name <i>string</i> protocols igmp-snooping interface interface-name <i>string</i> statistics transmitted group-source-queries <i>number</i>
Tree	group-source-queries
Default	0
Configurable	False
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5

leave-messages *number*

Description	Leave messages
Context	network-instance name <i>string</i> protocols igmp-snooping interface interface-name <i>string</i> statistics transmitted leave-messages <i>number</i>
Tree	leave-messages
Default	0
Configurable	False
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5

v1-reports *number*

Description	V1 Reports
Context	network-instance name <i>string</i> protocols igmp-snooping interface interface-name <i>string</i> statistics transmitted v1-reports <i>number</i>

Tree	v1-reports
Default	0
Configurable	False
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5

v2-reports *number*

Description	V2 Reports
Context	network-instance name <i>string</i> protocols igmp-snooping interface interface-name <i>string</i> statistics transmitted v2-reports <i>number</i>
Tree	v2-reports
Default	0
Configurable	False
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5

v3-reports *number*

Description	V3 Reports
Context	network-instance name <i>string</i> protocols igmp-snooping interface interface-name <i>string</i> statistics transmitted v3-reports <i>number</i>
Tree	v3-reports
Default	0
Configurable	False
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5

version *number*

Description	IGMP Version
Context	network-instance name <i>string</i> protocols igmp-snooping interface interface-name <i>string</i> version <i>number</i>
Tree	version
Range	1 to 3
Default	3
Configurable	True

Platforms 7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5

multicast-routers *address string*

Description Enter the multicast-router list instance

Context [network-instance name string protocols igmp-snooping multicast-routers address string](#)

Tree [multicast-routers](#)

Configurable False

Platforms 7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5

address *string*

Description The source IP address used by queries sent out by this multicast router

Context [network-instance name string protocols igmp-snooping multicast-routers address string](#)

Configurable False

Platforms 7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5

expiry-time *number*

Description The time remaining before this multicast router is aged out

Context [network-instance name string protocols igmp-snooping multicast-routers address string expiry-time number](#)

Tree [expiry-time](#)

Units seconds

Configurable False

Platforms 7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5

igmp-v3-states

Description Enter the igmp-v3-states context

Context [network-instance name string protocols igmp-snooping multicast-routers address string igmp-v3-states](#)

Tree	igmp-v3-states
Configurable	False
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5

general-query-interval *number*

Description	The General Query Interval used by this multicast router
Context	network-instance name <i>string</i> protocols igmp-snooping multicast-routers address <i>string</i> igmp-v3-states general-query-interval <i>number</i>
Tree	general-query-interval
Units	seconds
Configurable	False
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5

general-response-interval *number*

Description	The General Query Response interval used by this multicast router
Context	network-instance name <i>string</i> protocols igmp-snooping multicast-routers address <i>string</i> igmp-v3-states general-response-interval <i>number</i>
Tree	general-response-interval
Units	seconds
Configurable	False
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5

robust-count *number*

Description	The Robust Count value used by this multicast router
Context	network-instance name <i>string</i> protocols igmp-snooping multicast-routers address <i>string</i> igmp-v3-states robust-count <i>number</i>
Tree	robust-count
Configurable	False
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5

interface string

Description	Interface behind which this multicast router is located
Context	network-instance name string protocols igmp-snooping multicast-routers address string interface string
Tree	interface
String Length	5 to 25
Configurable	False
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5

up-time string

Description	The time since this multicast router has been known in this service
Context	network-instance name string protocols igmp-snooping multicast-routers address string up-time string
Tree	up-time
String Length	20 to 32
Configurable	False
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5

version number

Description	The version of the protocol that is sent by this multicast router
Context	network-instance name string protocols igmp-snooping multicast-routers address string version number
Tree	version
Range	1 to 3
Configurable	False
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5

oper-state keyword

Description	Used to report operational state of the IGMP instance.
Context	network-instance name string protocols igmp-snooping oper-state keyword

Tree	oper-state
Options	<ul style="list-style-type: none"> • up Component or process is operational • down Component or process is not operational • empty Component slot is empty • downloading Component is downloading image into memory • booting Component is booting downloaded image • starting Component image operational, application processes starting • failed Component or process has failed • synchronizing Component is currently being synchronized • upgrading Component is currently being upgraded • low-power Component is offline due to insufficient system power • degraded Component or process is in a degraded state • warm-reboot Component or process is currently warm rebooting This state is set during a warm reboot immediately following initiation of the reboot, continuing after startup until the system has completed audit. In this state the system will not accept configuration changes. • waiting Component or process is currently waiting This state can be set by event handler when the reinvoke-with-delay action is used, and indicates that the event handler is waiting for the provided delay before reinvoking the instance.
Configurable	False
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5

proxy-evpn-membership-group-count *number*

Description	The number of multicast groups proxy-evpn-membership-groups
Context	network-instance name <i>string</i> protocols igmp-snooping proxy-evpn-membership-group-count <i>number</i>
Tree	proxy-evpn-membership-group-count
Configurable	False
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5

proxy-evpn-membership-groups

Description	EVPN Proxy Database created for the network-instance The content of this table is used by the router to proxy the reports towards the remote PEs via BGP EVPN SMET (Selective Multicast Ethernet Tag) routes .
Context	network-instance name <i>string</i> protocols igmp-snooping proxy-evpn-membership-groups
Tree	proxy-evpn-membership-groups
Configurable	False
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5

group [group](#) *string*

Description	Multicast group membership
Context	network-instance name <i>string</i> protocols igmp-snooping proxy-evpn-membership-groups group group <i>string</i>
Tree	group
Configurable	False
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5

group *string*

Description	Multicast address
Context	network-instance name <i>string</i> protocols igmp-snooping proxy-evpn-membership-groups group group <i>string</i>

Configurable	False
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5

filter-mode *keyword*

Description	Enter the filter-mode context
Context	network-instance name <i>string</i> protocols igmp-snooping proxy-evpn-membership-groups group group <i>string</i> filter-mode <i>keyword</i>
Tree	filter-mode
Options	<ul style="list-style-type: none"> include In include mode, reception of packets sent to the specified multicast address is requested only from those IP source addresses listed in the source-list parameter exclude In exclude mode, reception of packets sent to the given multicast address is requested from all IP source addresses except those listed in the source-list parameter.

Configurable	False
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5

source [source](#) *string*

Description	Source addresses of multicast
Context	network-instance name <i>string</i> protocols igmp-snooping proxy-evpn-membership-groups group group <i>string</i> source source <i>string</i>
Tree	source
Configurable	False
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5

source *string*

Description	Source address of multicast
Context	network-instance name <i>string</i> protocols igmp-snooping proxy-evpn-membership-groups group group <i>string</i> source source <i>string</i>
Configurable	False

Platforms 7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5

up-time *string*

Description The time elapsed since this entry was created

Context [network-instance name](#) *string* [protocols igmp-snooping proxy-evpn-membership-groups group group](#) *string* [source source](#) *string* [up-time](#) *string*

Tree [up-time](#)

String Length 20 to 32

Configurable False

Platforms 7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5

up-time *string*

Description The time elapsed since this entry was created

Context [network-instance name](#) *string* [protocols igmp-snooping proxy-evpn-membership-groups group group](#) *string* [up-time](#) *string*

Tree [up-time](#)

String Length 20 to 32

Configurable False

Platforms 7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5

v1-support *boolean*

Description IGMP Version 1 is supported

Context [network-instance name](#) *string* [protocols igmp-snooping proxy-evpn-membership-groups group group](#) *string* [v1-support](#) *boolean*

Tree [v1-support](#)

Configurable False

Platforms 7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5

v2-support *boolean*

Description IGMP Version 2 is supported

Context	network-instance name <i>string</i> protocols igmp-snooping proxy- evpn-membership-groups group group <i>string</i> v2-support <i>boolean</i>
Tree	v2-support
Configurable	False
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5

v3-support *boolean*

Description	IGMP Version 3 is supported
Context	network-instance name <i>string</i> protocols igmp-snooping proxy- evpn-membership-groups group group <i>string</i> v3-support <i>boolean</i>
Tree	v3-support
Configurable	False
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5

proxy-membership-group-count *number*

Description	The number of multicast groups which have been learned
Context	network-instance name <i>string</i> protocols igmp-snooping proxy- membership-group-count <i>number</i>
Tree	proxy-membership-group-count
Configurable	False
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5

proxy-membership-groups

Description	Proxy Database created for the network-instance The content of this table is used by the router to proxy the reports towards the Querier, when the Querier is attached to a sub-interface.
Context	network-instance name <i>string</i> protocols igmp-snooping proxy- membership-groups
Tree	proxy-membership-groups
Configurable	False
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5

group *group string*

Description	Multicast group membership
Context	network-instance name <i>string</i> protocols igmp-snooping proxy-membership-groups group <i>group string</i>
Tree	group
Configurable	False
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5

group *string*

Description	Multicast address
Context	network-instance name <i>string</i> protocols igmp-snooping proxy-membership-groups group <i>group string</i>
Configurable	False
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5

filter-mode *keyword*

Description	Enter the filter-mode context
Context	network-instance name <i>string</i> protocols igmp-snooping proxy-membership-groups group <i>group string</i> filter-mode <i>keyword</i>
Tree	filter-mode
Options	<ul style="list-style-type: none"> • include In include mode, reception of packets sent to the specified multicast address is requested only from those IP source addresses listed in the source-list parameter • exclude In exclude mode, reception of packets sent to the given multicast address is requested from all IP source addresses except those listed in the source-list parameter.
Configurable	False
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5

source *source string*

Description	Source addresses of multicast
Context	network-instance name string protocols igmp-snooping proxy-membership-groups group group string source source string
Tree	source
Configurable	False
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5

source *string*

Description	Source address of multicast
Context	network-instance name string protocols igmp-snooping proxy-membership-groups group group string source source string
Configurable	False
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5

up-time *string*

Description	The time elapsed since this entry was created
Context	network-instance name string protocols igmp-snooping proxy-membership-groups group group string source source string up-time string
Tree	up-time
String Length	20 to 32
Configurable	False
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5

up-time *string*

Description	The time elapsed since this entry was created
Context	network-instance name string protocols igmp-snooping proxy-membership-groups group group string up-time string
Tree	up-time
String Length	20 to 32
Configurable	False

Platforms 7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5

querier

Description Enter the querier context

Context [network-instance name](#) *string* [protocols igmp-snooping querier](#)

Tree [querier](#)

Configurable False

Platforms 7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5

address *string*

Description The source IP address used by queries sent out by this multicast router

Context [network-instance name](#) *string* [protocols igmp-snooping querier address](#) *string*

Tree [address](#)

Configurable False

Platforms 7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5

expiry-time *number*

Description The time remaining before this multicast router is aged out

Context [network-instance name](#) *string* [protocols igmp-snooping querier expiry-time](#) *number*

Tree [expiry-time](#)

Units seconds

Configurable False

Platforms 7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5

igmp-v3-states

Description Enter the igmp-v3-states context

Context [network-instance name](#) *string* [protocols igmp-snooping querier igmp-v3-states](#)

Tree	igmp-v3-states
Configurable	False
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5

general-query-interval *number*

Description	The General Query Interval used by this multicast router
Context	network-instance name <i>string</i> protocols igmp-snooping querier igmp-v3-states general-query-interval <i>number</i>
Tree	general-query-interval
Units	seconds
Configurable	False
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5

general-response-interval *number*

Description	The General Query Response interval used by this multicast router
Context	network-instance name <i>string</i> protocols igmp-snooping querier igmp-v3-states general-response-interval <i>number</i>
Tree	general-response-interval
Units	seconds
Configurable	False
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5

robust-count *number*

Description	The Robust Count value used by this multicast router
Context	network-instance name <i>string</i> protocols igmp-snooping querier igmp-v3-states robust-count <i>number</i>
Tree	robust-count
Configurable	False
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5

interface string

Description	Interface behind which this multicast router is located
Context	network-instance name string protocols igmp-snooping querier interface string
Tree	interface
String Length	5 to 25
Configurable	False
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5

up-time string

Description	The time since this multicast router has been known in this service
Context	network-instance name string protocols igmp-snooping querier up-time string
Tree	up-time
String Length	20 to 32
Configurable	False
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5

version number

Description	The version of the protocol that is sent by this multicast router
Context	network-instance name string protocols igmp-snooping querier version number
Tree	version
Range	1 to 3
Configurable	False
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5

query-interval number

Description	Interval at which the router sends the IGMP membership queries
Context	network-instance name string protocols igmp-snooping query-interval number

Tree	query-interval
Range	1 to 65535
Default	125
Configurable	True
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5

query-source-address *string*

Description	Source IP address used when generating IGMP queries
Context	network-instance name <i>string</i> protocols igmp-snooping query-source-address <i>string</i>
Tree	query-source-address
Configurable	True
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5

report-source-address *string*

Description	Source IP address used when generating IGMP reports
Context	network-instance name <i>string</i> protocols igmp-snooping report-source-address <i>string</i>
Tree	report-source-address
Configurable	True
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5

robust-count *number*

Description	Configures the IGMP robustness to allow for the expected IGMP packet loss The robust-count variable allows tuning for the expected packet loss on a subnet. If a subnet anticipates losses, the robust-count variable can be increased.
Context	network-instance name <i>string</i> protocols igmp-snooping robust-count <i>number</i>
Tree	robust-count
Range	1 to 255
Default	2
Configurable	True

Platforms 7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5

trace-options

Description Enter the trace-options context

Context [network-instance name](#) *string* [protocols igmp-snooping trace-options](#)

Tree [trace-options](#)

Configurable True

Platforms 7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5

trace

Description Tracing parameter flags

Context [network-instance name](#) *string* [protocols igmp-snooping trace-options trace](#)

Tree [trace](#)

Configurable True

Platforms 7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5

packet

Description Trace IGMP Packet types

Context [network-instance name](#) *string* [protocols igmp-snooping trace-options trace packet](#)

Tree [packet](#)

Configurable True

Platforms 7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5

interface [interface-name](#) *string*

Description List of interfaces to trace

Context [network-instance name](#) *string* [protocols igmp-snooping trace-options trace packet interface interface-name](#) *string*

Tree [interface](#)

Configurable True

Platforms 7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5

Max. Elements 8

interface-name *string*

Description Reference to a specific subinterface of the form <interface-name>.<subinterface-index>

Context [network-instance name](#) *string* [protocols igmp-snooping trace-options trace packet interface interface-name](#) *string*

String Length 5 to 25

Configurable True

Platforms 7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5

modifier *keyword*

Description Enter the modifier context

Context [network-instance name](#) *string* [protocols igmp-snooping trace-options trace packet modifier](#) *keyword*

Tree [modifier](#)

Options

- **dropped**
Enable tracing for the packets which are dropped
- **ingress-and-dropped**
Enable tracing for the packets which are sent or received
- **egress-ingress-and-dropped**
Enable tracing for the packets which are sent, received or dropped

Configurable True

Platforms 7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5

source-mac [source-mac](#) *string*

Description List of source mac addresses to trace

Context [network-instance name](#) *string* [protocols igmp-snooping trace-options trace packet source-mac source-mac](#) *string*

Tree [source-mac](#)

Configurable True

Platforms 7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5

Max. Elements 8

source-mac *string*

Description Enter the source-mac context

Context [network-instance name](#) *string* [protocols igmp-snooping trace-options trace packet source-mac source-mac](#) *string*

Configurable True

Platforms 7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5

transmitted-bgp-smet-routes *number*

Description Transmitted BGP SMET routes

Context [network-instance name](#) *string* [protocols igmp-snooping transmitted-bgp-smet-routes](#) *number*

Tree [transmitted-bgp-smet-routes](#)

Configurable False

Platforms 7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5

vxlan-destination [vtep \(ipv4-address | ipv6-address\)](#) *vni number*

Description Enter the vxlan-destination list instance

Context [network-instance name](#) *string* [protocols igmp-snooping vxlan-destination vtep \(ipv4-address | ipv6-address\) vni number](#)

Tree [vxlan-destination](#)

Configurable False

Platforms 7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5

vtep (*ipv4-address | ipv6-address*)

Description The IP address that identifies the remote VXLAN Termination Endpoint (VTEP).

Context [network-instance name](#) *string* [protocols igmp-snooping vxlan-destination vtep \(ipv4-address | ipv6-address\) vni number](#)

Configurable	False
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5

vni number

Description	VXLAN Network Identifier of the destination.
Context	network-instance name <i>string</i> protocols igmp-snooping vxlan-destination vtep (<i>ipv4-address</i> <i>ipv6-address</i>) vni number
Range	1 to 16777215
Configurable	False
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5

index number

Description	the next-hop-group-id (system allocated) for resolving the VXLAN termination endpoint
Context	network-instance name <i>string</i> protocols igmp-snooping vxlan-destination vtep (<i>ipv4-address</i> <i>ipv6-address</i>) vni number index number
Tree	index
Configurable	False
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5

is-evpn-proxy boolean

Description	vxlan-interface supports evpn-proxy
Context	network-instance name <i>string</i> protocols igmp-snooping vxlan-destination vtep (<i>ipv4-address</i> <i>ipv6-address</i>) vni number is-evpn-proxy <i>boolean</i>
Tree	is-evpn-proxy
Configurable	False
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5

is-mrouter-port boolean

Description	vxlan-interface is a multicast router port
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Context	network-instance name <i>string</i> protocols igmp-snooping vxlan-destination vtep (<i>ipv4-address</i> <i>ipv6-address</i>) vni number is-mrouter-port <i>boolean</i>
Tree	is-mrouter-port
Configurable	False
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5

is-sbd *boolean*

Description	vxlan-interface is a supplementary broadcast domain
Context	network-instance name <i>string</i> protocols igmp-snooping vxlan-destination vtep (<i>ipv4-address</i> <i>ipv6-address</i>) vni number is-sbd <i>boolean</i>
Tree	is-sbd
Configurable	False
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5

membership-group-count *number*

Description	The number of multicast groups which have been learned
Context	network-instance name <i>string</i> protocols igmp-snooping vxlan-destination vtep (<i>ipv4-address</i> <i>ipv6-address</i>) vni number membership-group-count <i>number</i>
Tree	membership-group-count
Configurable	False
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5

membership-groups

Description	List of IGMP Membership information
Context	network-instance name <i>string</i> protocols igmp-snooping vxlan-destination vtep (<i>ipv4-address</i> <i>ipv6-address</i>) vni number membership-groups
Tree	membership-groups
Configurable	False
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5

group *group string*

Description	Multicast group membership
Context	network-instance name string protocols igmp-snooping vxlan-destination vtep (ipv4-address ipv6-address) vni number membership-groups group group string
Tree	group
Configurable	False
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5

group *string*

Description	Multicast address.
Context	network-instance name string protocols igmp-snooping vxlan-destination vtep (ipv4-address ipv6-address) vni number membership-groups group group string
Configurable	False
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5

expiry-time *number*

Description	The time left before multicast group timeout
Context	network-instance name string protocols igmp-snooping vxlan-destination vtep (ipv4-address ipv6-address) vni number membership-groups group group string expiry-time number
Tree	expiry-time
Units	seconds
Configurable	False
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5

filter-mode *keyword*

Description	Enter the filter-mode context
Context	network-instance name string protocols igmp-snooping vxlan-destination vtep (ipv4-address ipv6-address) vni number membership-groups group group string filter-mode keyword

Tree	filter-mode
Options	<ul style="list-style-type: none"> include In include mode, reception of packets sent to the specified multicast address is requested only from those IP source addresses listed in the source-list parameter exclude In exclude mode, reception of packets sent to the given multicast address is requested from all IP source addresses except those listed in the source-list parameter.
Configurable	False
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5

group-type *keyword*

Description	Enter the group-type context
Context	network-instance name string protocols igmp-snooping vxlan-destination vtep (ipv4-address ipv6-address) vni number membership-groups group group string group-type keyword
Tree	group-type
Options	<ul style="list-style-type: none"> static This group entry was statically configured. dynamic This group entry was learned by the protocol. bgp-smet This group entry was learned from a bgp SMET route. bgp-sync This group entry was learned from a bgp JOIN SYNC route.
Configurable	False
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5

igmp-compatibility-mode *keyword*

Description	Compatibility with older version routers
Context	network-instance name string protocols igmp-snooping vxlan-destination vtep (ipv4-address ipv6-address) vni number membership-groups group group string igmp-compatibility-mode keyword

Tree	igmp-compatibility-mode
Options	<ul style="list-style-type: none"> • 1 • 2 • 3
Configurable	False
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5

source [source string](#)

Description	Source addresses of multicast
Context	network-instance name string protocols igmp-snooping vxlan-destination vtep (ipv4-address ipv6-address) vni number membership-groups group group string source source string
Tree	source
Configurable	False
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5

source string

Description	Source address of multicast
Context	network-instance name string protocols igmp-snooping vxlan-destination vtep (ipv4-address ipv6-address) vni number membership-groups group group string source source string
Configurable	False
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5

expiry-time number

Description	The time left before multicast group timeout
Context	network-instance name string protocols igmp-snooping vxlan-destination vtep (ipv4-address ipv6-address) vni number membership-groups group group string source source string expiry-time number
Tree	expiry-time
Units	seconds
Configurable	False

Platforms 7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5

forwarding-state *keyword*

Description Traffic forwardeding state on this port

Context [network-instance name string protocols igmp-snooping vxlan-destination vtep \(ipv4-address | ipv6-address\) vni number membership-groups group group string source source string forwarding-state keyword](#)

Tree [forwarding-state](#)

Options

- forward
- block

Configurable False

Platforms 7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5

source-type *keyword*

Description Enter the source-type context

Context [network-instance name string protocols igmp-snooping vxlan-destination vtep \(ipv4-address | ipv6-address\) vni number membership-groups group group string source source string source-type keyword](#)

Tree [source-type](#)

Options

- static
This group entry was statically configured.
- dynamic
This group entry was learned by the protocol.
- bgp-smet
This group entry was learned from a bgp SMET route.
- bgp-sync
This group entry was learned from a bgp JOIN SYNC route.

Configurable False

Platforms 7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5

up-time *string*

Description The time elapsed since this entry was created

Context	network-instance name string protocols igmp-snooping vxlan-destination vtep (ipv4-address ipv6-address) vni number membership-groups group group string source source string up-time string
Tree	up-time
String Length	20 to 32
Configurable	False
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5

up-time string

Description	The time elapsed since this entry was created
Context	network-instance name string protocols igmp-snooping vxlan-destination vtep (ipv4-address ipv6-address) vni number membership-groups group group string up-time string
Tree	up-time
String Length	20 to 32
Configurable	False
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5

v1-host-timer number

Description	The time remaining until the local router will assume that there are no longer any version 1 members
Context	network-instance name string protocols igmp-snooping vxlan-destination vtep (ipv4-address ipv6-address) vni number membership-groups group group string v1-host-timer number
Tree	v1-host-timer
Units	seconds
Configurable	False
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5

v2-host-timer number

Description	The time remaining until the local router will assume that there are no longer any version 2 members
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Context	network-instance name <i>string</i> protocols igmp-snooping vxlan-destination vtep (ipv4-address ipv6-address) vni number membership-groups group group <i>string</i> v2-host-timer <i>number</i>
Tree	v2-host-timer
Units	seconds
Configurable	False
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5

statistics

Description	vxlan-interface statistics
Context	network-instance name <i>string</i> protocols igmp-snooping vxlan-destination vtep (ipv4-address ipv6-address) vni number statistics
Tree	statistics
Configurable	False
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5

discarded-smet *number*

Description	Total number of discarded smet routes
Context	network-instance name <i>string</i> protocols igmp-snooping vxlan-destination vtep (ipv4-address ipv6-address) vni number statistics discarded-smet <i>number</i>
Tree	discarded-smet
Default	0
Configurable	False
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5

received-smet *number*

Description	Total number of received smet routes
Context	network-instance name <i>string</i> protocols igmp-snooping vxlan-destination vtep (ipv4-address ipv6-address) vni number statistics received-smet <i>number</i>
Tree	received-smet
Default	0

Configurable	False
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5

isis

Description	Enable the isis context
Context	network-instance name <i>string</i> protocols isis
Tree	isis
Configurable	True
Platforms	Supported on all platforms

dynamic-label-block *reference*

Description	Reference to a dynamic label block Configuration of this label block is mandatory in order to enable segment routing MPLS (SR-MPLS) in IS-IS. Dynamic adjacency SID labels come from this label block. This label block is not advertised as an SRLB in the router capabilities TLV.
Context	network-instance name <i>string</i> protocols isis dynamic-label-block reference
Tree	dynamic-label-block
Reference	system mpls label-ranges dynamic name <i>string</i>
Configurable	True
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

dynamic-label-block-status *keyword*

Description	Status of the label block. The label block may show as unavailable if there is pending cleanup.
Context	network-instance name <i>string</i> protocols isis dynamic-label-block-status keyword
Tree	dynamic-label-block-status
Options	<ul style="list-style-type: none"> • available • unavailable
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

instance *name string*

Description	List of IS-IS protocol instances associated with this network-instance. Only a single instance is supported for now
Context	network-instance name string protocols isis instance name string
Tree	instance
Configurable	True
Platforms	Supported on all platforms

name *string*

Description	The name of the IS-IS instance
Context	network-instance name string protocols isis instance name string
String Length	1 to 255
Configurable	True
Platforms	Supported on all platforms

admin-state *keyword*

Description	Used to administratively enable or disable the IS-IS instance
Context	network-instance name string protocols isis instance name string admin-state keyword
Tree	admin-state
Default	disable
Options	<ul style="list-style-type: none"> • enable • disable
Configurable	True
Platforms	Supported on all platforms

attached-bit

Description	This container provides option for handling the ATTached bit in L1 LSPs
Context	network-instance name string protocols isis instance name string attached-bit
Tree	attached-bit
Configurable	True

Platforms Supported on all platforms

ignore *boolean*

Description When set to true, if the attached bit is set on an incoming Level 1 LSP, the local system ignores it. In this case the local system does not set a default route to the L1L2 router advertising the PDU with the attached bit set.

Context [network-instance name string protocols isis instance name string attached-bit ignore boolean](#)

Tree [ignore](#)

Default false

Configurable True

Platforms Supported on all platforms

suppress *boolean*

Description When set to true, if the local IS acts as a L1L2 router, then the attached bit is not advertised in locally generated L1 LSPs.

Context [network-instance name string protocols isis instance name string attached-bit suppress boolean](#)

Tree [suppress](#)

Default false

Configurable True

Platforms Supported on all platforms

authentication

Description Container for specifying authentication options that apply to the entire IS-IS instance or to an entire level.
The settings in this container only apply to PDUs without an authentication behavior specified at a more granular level.

Context [network-instance name string protocols isis instance name string authentication](#)

Tree [authentication](#)

Configurable True

Platforms Supported on all platforms

csnp-authentication

Description	Container with options to control the authentication of CSNP PDUs
Context	network-instance name <i>string</i> protocols isis instance name <i>string</i> authentication csnp-authentication
Tree	csnp-authentication
Configurable	True
Platforms	Supported on all platforms

check-received *keyword*

Description	Specifies the type of authentication checks done for received PDUs of the specified type.
Context	network-instance name <i>string</i> protocols isis instance name <i>string</i> authentication csnp-authentication check-received <i>keyword</i>
Tree	check-received
Options	<ul style="list-style-type: none"> strict Strict authentication option. Reject all packets that do not have an authentication TLV or that do have an authentication TLV that cannot be validated. loose Loose authentication option. Accept packets received without an authentication TLV; validate packets received with an authentication TLV and reject those packets that cannot be validated. disable This enum disables authentication checks. Do not check authentication TLV (if any) of received PDUs; authentication TLV may still be added self-generated PDUs
Configurable	True
Platforms	Supported on all platforms

generate *boolean*

Description	When set to true, IS-IS is instructed to add an authentication TLV to every transmitted PDU of the specified type
Context	network-instance name <i>string</i> protocols isis instance name <i>string</i> authentication csnp-authentication generate <i>boolean</i>
Tree	generate
Configurable	True

Platforms Supported on all platforms

hello-authentication

Description Container with options to control the authentication of Hello PDUs

Context [network-instance name](#) *string* [protocols isis instance name](#) *string*
[authentication hello-authentication](#)

Tree [hello-authentication](#)

Configurable True

Platforms Supported on all platforms

check-received *keyword*

Description Specifies the type of authentication checks done for received PDUs of the specified type.

Context [network-instance name](#) *string* [protocols isis instance name](#) *string*
[authentication hello-authentication check-received](#) *keyword*

Tree [check-received](#)

Options

- strict
Strict authentication option. Reject all packets that do not have an authentication TLV or that do have an authentication TLV that cannot be validated.
- loose
Loose authentication option. Accept packets received without an authentication TLV; validate packets received with an authentication TLV and reject those packets that cannot be validated.
- disable
This enum disables authentication checks. Do not check authentication TLV (if any) of received PDUs; authentication TLV may still be added self-generated PDUs

Configurable True

Platforms Supported on all platforms

generate *boolean*

Description When set to true, IS-IS is instructed to add an authentication TLV to every transmitted PDU of the specified type

Context [network-instance name](#) *string* [protocols isis instance name](#) *string*
[authentication hello-authentication generate](#) *boolean*

Tree	generate
Configurable	True
Platforms	Supported on all platforms

key

Description	Container to specify the secret key and crypto algorithm to use for the authentication of PDUs when the behavior is controlled at this level of the configuration hierarchy
Context	network-instance name string protocols isis instance name string authentication key
Tree	key
Configurable	True
Platforms	Supported on all platforms

auth-password *string*

Description	The secret key to use for authentication of PDUs
Context	network-instance name string protocols isis instance name string authentication key auth-password string
Tree	auth-password
Configurable	True
Platforms	Supported on all platforms

crypto-algorithm *keyword*

Description	The cryptographic algorithm used with the keying material to secure the messages.
Context	network-instance name string protocols isis instance name string authentication key crypto-algorithm keyword
Tree	crypto-algorithm
Options	<ul style="list-style-type: none"> • <code>cleartext</code> The authentication-key is encoded in plaintext. • <code>hmac-md5</code> The authentication-key is used to generate a 16-byte (128 bit) MD5 digest using the HMAC algorithm (RFC 2104). • <code>hmac-sha-256</code>

The authentication-key is used to generate a SHA2 digest using the HMAC algorithm (RFC 2104). The SHA-256 variant of SHA2 produces an output of 32 bytes (256 bits).

Configurable	True
Platforms	Supported on all platforms

keychain *reference*

Description	Specifies a keychain to use for the authentication of PDUs when the behavior is controlled at this level of the configuration hierarchy.
Context	network-instance name <i>string</i> protocols isis instance name <i>string</i> authentication keychain reference
Tree	keychain
Reference	system authentication keychain name <i>string</i>
Configurable	True
Platforms	Supported on all platforms

Isp-authentication

Description	Container with options to control the authentication of Link State PDUs
Context	network-instance name <i>string</i> protocols isis instance name <i>string</i> authentication Isp-authentication
Tree	Isp-authentication
Configurable	True
Platforms	Supported on all platforms

check-received *keyword*

Description	Specifies the type of authentication checks done for received PDUs of the specified type.
Context	network-instance name <i>string</i> protocols isis instance name <i>string</i> authentication Isp-authentication check-received <i>keyword</i>
Tree	check-received
Options	<ul style="list-style-type: none"> strict <p>Strict authentication option. Reject all packets that do not have an authentication TLV or that do have an authentication TLV that cannot be validated.</p> <ul style="list-style-type: none"> loose

Loose authentication option. Accept packets received without an authentication TLV; validate packets received with an authentication TLV and reject those packets that cannot be validated.

- disable

This enum disables authentication checks. Do not check authentication TLV (if any) of received PDUs; authentication TLV may still be added self-generated PDUs

Configurable	True
Platforms	Supported on all platforms

generate *boolean*

Description	When set to true, IS-IS is instructed to add an authentication TLV to every transmitted PDU of the specified type
Context	network-instance name <i>string</i> protocols isis instance name <i>string</i> authentication lsp-authentication generate <i>boolean</i>
Tree	generate
Configurable	True
Platforms	Supported on all platforms

psnp-authentication

Description	Container with options to control the authentication of PSNP PDUs
Context	network-instance name <i>string</i> protocols isis instance name <i>string</i> authentication psnp-authentication
Tree	psnp-authentication
Configurable	True
Platforms	Supported on all platforms

check-received *keyword*

Description	Specifies the type of authentication checks done for received PDUs of the specified type.
Context	network-instance name <i>string</i> protocols isis instance name <i>string</i> authentication psnp-authentication check-received <i>keyword</i>
Tree	check-received
Options	<ul style="list-style-type: none"> • strict

Strict authentication option. Reject all packets that do not have an authentication TLV or that do have an authentication TLV that cannot be validated.

- loose

Loose authentication option. Accept packets received without an authentication TLV; validate packets received with an authentication TLV and reject those packets that cannot be validated.

- disable

This enum disables authentication checks. Do not check authentication TLV (if any) of received PDUs; authentication TLV may still be added self-generated PDUs

Configurable	True
Platforms	Supported on all platforms

generate *boolean*

Description	When set to true, IS-IS is instructed to add an authentication TLV to every transmitted PDU of the specified type
Context	network-instance name <i>string</i> protocols isis instance name <i>string</i> authentication psnp-authentication generate <i>boolean</i>
Tree	generate
Configurable	True
Platforms	Supported on all platforms

auto-cost

Description	Enter the auto-cost context
Context	network-instance name <i>string</i> protocols isis instance name <i>string</i> auto-cost
Tree	auto-cost
Configurable	True
Platforms	Supported on all platforms

reference-bandwidth *number*

Description	Configures the reference bandwidth that provides the basis for interface metrics based on link bandwidth. If the reference bandwidth is defined, then the cost is calculated using the following formula: $\text{cost} = \text{reference-bandwidth} / \text{bandwidth}$
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When a large reference-bandwidth value is configured, a metric calculation may result in a value higher than the supported protocol cost value. If this occurs, IS-IS automatically reverts to the maximum configurable cost metric.

If the reference bandwidth is not configured then all interfaces have a default metric of 10.

Note: To use metrics in excess of 63, wide metrics must be deployed

Context	network-instance name <i>string</i> protocols isis instance name <i>string</i> auto-cost reference-bandwidth <i>number</i>
Tree	reference-bandwidth
Range	1 to 8000000000
Units	kbps
Configurable	True
Platforms	Supported on all platforms

enable-csnp-on-p2p-links *boolean*

Description	Enable/disable the transmission of periodic CSNP PDUs on point-to-point interfaces When this is set to false, CSNP PDUs will only be sent on a P2P interface when the adjacency is initialized. This setting has no effect on broadcast interfaces.
Context	network-instance name <i>string</i> protocols isis instance name <i>string</i> enable-csnp-on-p2p-links <i>boolean</i>
Tree	enable-csnp-on-p2p-links
Default	true
Configurable	True
Platforms	Supported on all platforms

export-policy *reference*

Description	Apply an export policy to redistribute non-ISIS routes into ISIS
Context	network-instance name <i>string</i> protocols isis instance name <i>string</i> export-policy <i>reference</i>
Tree	export-policy
Reference	routing-policy policy name <i>string</i>
Configurable	True
Platforms	Supported on all platforms

graceful-restart

Description	Container for options related to IS-IS graceful restart
Context	network-instance name <i>string</i> protocols isis instance name <i>string</i> graceful-restart
Tree	graceful-restart
Configurable	True
Platforms	Supported on all platforms

acceptable-duration *number*

Description	Initial value of the Remaining Time that is advertised in the Restart TLV with Restart Acknowledgement flag set when this router starts to help another router that has just (re)entered Restart mode.
Context	network-instance name <i>string</i> protocols isis instance name <i>string</i> graceful-restart acceptable-duration <i>number</i>
Tree	acceptable-duration
Range	1 to 20000
Default	60
Units	seconds
Configurable	True
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

helper-mode *boolean*

Description	Enable or disable the IS-IS graceful restart helper function When this leaf is set, the local system supports retaining forwarding information during a neighbor router's restart.
Context	network-instance name <i>string</i> protocols isis instance name <i>string</i> graceful-restart helper-mode <i>boolean</i>
Tree	helper-mode
Default	false
Configurable	True
Platforms	Supported on all platforms

hello-padding *keyword*

Description	Specifies the use of IS-IS Hello PDU padding all interfaces This can be overridden by interface configuration.
Context	network-instance name <i>string</i> protocols isis instance name <i>string</i> hello-padding <i>keyword</i>
Tree	hello-padding
Default	disable
Options	<ul style="list-style-type: none"> strict Strict padding option. Hello padding is done continuously, regardless of adjacency state or interface type. loose Loose padding option. On p2p interfaces hello PDUs are padded from the initial detection of a new neighbor until the adjacency transitions to the INIT state. On broadcast interfaces hello padding is done until there is at least one UP adjacency on the interface. adaptive Adaptive padding option. On p2p interfaces hello PDUs are padded until the sender declares the adjacency to be UP (based on 3-way handshake or the classic algorithm described in ISO 10589. If the p2p neighbor does not support the adjacency state TLV, then padding continues. On broadcast interfaces hello padding is done until there is at least one UP adjacency on the interface. disable This enum disables hello PDU padding
Configurable	True
Platforms	Supported on all platforms

hostnames

Description	Enter the hostnames context
Context	network-instance name <i>string</i> protocols isis instance name <i>string</i> hostnames
Tree	hostnames
Configurable	False
Platforms	Supported on all platforms

system-id *host-system-id* *string*

Description	List of system IDs that have discovered hostnames.
Context	network-instance name <i>string</i> protocols isis instance name <i>string</i> hostnames system-id <i>host-system-id</i> <i>string</i>
Tree	system-id
Configurable	False
Platforms	Supported on all platforms

host-system-id *string*

Description	The system ID
Context	network-instance name <i>string</i> protocols isis instance name <i>string</i> hostnames system-id <i>host-system-id</i> <i>string</i>
String Length	14
Configurable	False
Platforms	Supported on all platforms

hostname *string*

Description	The hostname of the system.
Context	network-instance name <i>string</i> protocols isis instance name <i>string</i> hostnames system-id <i>host-system-id</i> <i>string</i> hostname <i>string</i>
Tree	hostname
Configurable	False
Platforms	Supported on all platforms

iid-tlv *boolean*

Description	ISIS Instance Identifier TLV. When set to true, IID-TLV identifies the unique instance as well as the topology/topologies to which the PDU applies.
Context	network-instance name <i>string</i> protocols isis instance name <i>string</i> iid-tlv <i>boolean</i>
Tree	iid-tlv
Default	false
Configurable	True

Platforms 7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

instance-id *number*

Description ISIS instance number

Context [network-instance name string protocols isis instance name string instance-id number](#)

Tree [instance-id](#)

Range 0 to 127

Default 0

Configurable True

Platforms 7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

inter-level-propagation-policies

Description Container with options to control the propagation of prefixes between levels

Context [network-instance name string protocols isis instance name string inter-level-propagation-policies](#)

Tree [inter-level-propagation-policies](#)

Configurable True

Platforms Supported on all platforms

level1-to-level2

Description Container with options to control the propagation of prefixes from level 1 to level 2.
By default all L1 prefixes are propagated without summarization into L2.

Context [network-instance name string protocols isis instance name string inter-level-propagation-policies level1-to-level2](#)

Tree [level1-to-level2](#)

Configurable True

Platforms Supported on all platforms

summary-address [ip-prefix](#) (*ipv4-prefix* | *ipv6-prefix*)

Description	List of summarization prefixes
Context	network-instance name <i>string</i> protocols isis instance name <i>string</i> inter-level-propagation-policies level1-to-level2 summary-address ip-prefix (<i>ipv4-prefix</i> <i>ipv6-prefix</i>)
Tree	summary-address
Configurable	True
Platforms	Supported on all platforms

ip-prefix (*ipv4-prefix* | *ipv6-prefix*)

Description	An IP prefix advertised into L2 that summarizes one or more L1 prefixes and causes them to be suppressed
Context	network-instance name <i>string</i> protocols isis instance name <i>string</i> inter-level-propagation-policies level1-to-level2 summary-address ip-prefix (<i>ipv4-prefix</i> <i>ipv6-prefix</i>)
Configurable	True
Platforms	Supported on all platforms

route-tag *number*

Description	Specifies route tag value to assign to the summary route
Context	network-instance name <i>string</i> protocols isis instance name <i>string</i> inter-level-propagation-policies level1-to-level2 summary-address ip-prefix (<i>ipv4-prefix</i> <i>ipv6-prefix</i>) route-tag <i>number</i>
Tree	route-tag
Range	1 to 4294967295
Configurable	True
Platforms	Supported on all platforms

interface [interface-name](#) *string*

Description	List of IS-IS interfaces
Context	network-instance name <i>string</i> protocols isis instance name <i>string</i> interface interface-name <i>string</i>
Tree	interface
Configurable	True

Platforms Supported on all platforms

interface-name *string*

Description Name of the IS-IS interface

Context [network-instance name](#) *string* [protocols isis instance name](#) *string* [interface interface-name](#) *string*

String Length 1 to 255

Configurable True

Platforms Supported on all platforms

adjacency [neighbor-system-id](#) *string* [adjacency-level](#) *string*

Description List of adjacencies formed through this interface.

Context [network-instance name](#) *string* [protocols isis instance name](#) *string* [interface interface-name](#) *string* [adjacency neighbor-system-id](#) *string* [adjacency-level](#) *string*

Tree [adjacency](#)

Configurable False

Platforms Supported on all platforms

neighbor-system-id *string*

Description The neighbor router's system ID.

Context [network-instance name](#) *string* [protocols isis instance name](#) *string* [interface interface-name](#) *string* [adjacency neighbor-system-id](#) *string* [adjacency-level](#) *string*

String Length 14

Configurable False

Platforms Supported on all platforms

adjacency-level *string*

Description The level of the adjacency that is formed.

Context [network-instance name](#) *string* [protocols isis instance name](#) *string* [interface interface-name](#) *string* [adjacency neighbor-system-id](#) *string* [adjacency-level](#) *string*

Configurable False

Platforms Supported on all platforms

area-address *string*

Description Area address of the neighbor.

Context [network-instance name](#) *string* [protocols isis instance name](#) *string* [interface interface-name](#) *string* [adjacency neighbor-system-id](#) *string* [adjacency-level](#) *string* [area-address](#) *string*

Tree [area-address](#)

String Length 2 to 38

Configurable False

Platforms Supported on all platforms

designated-is-system-id *string*

Description System id of the designated IS router.

Context [network-instance name](#) *string* [protocols isis instance name](#) *string* [interface interface-name](#) *string* [adjacency neighbor-system-id](#) *string* [adjacency-level](#) *string* [designated-is-system-id](#) *string*

Tree [designated-is-system-id](#)

String Length 14

Configurable False

Platforms Supported on all platforms

down-reason *keyword*

Description The reason why the adjacency is down.

Context [network-instance name](#) *string* [protocols isis instance name](#) *string* [interface interface-name](#) *string* [adjacency neighbor-system-id](#) *string* [adjacency-level](#) *string* [down-reason](#) *keyword*

Tree [down-reason](#)

Options

- 3-way-handshake-failed
- address-mismatch
- hold-timer-expired
- area-mismatch
- bad-hello
- bfd-session-down
- interface-down

- interface-level-disabled
- level-changed
- level-mismatch
- mt-topology-changed
- mt-topology-mismatch
- remote-system-id-changed
- isis-protocol-disabled
- unknown

Configurable	False
Platforms	Supported on all platforms

last-up-down-transition *string*

Description	The last time when the adjacency entered the up or down state.
Context	network-instance name <i>string</i> protocols isis instance name <i>string</i> interface interface-name <i>string</i> adjacency neighbor-system-id <i>string</i> adjacency-level <i>string</i> last-up-down-transition <i>string</i>
Tree	last-up-down-transition
String Length	20 to 32
Configurable	False
Platforms	Supported on all platforms

local-extended-circuit-id *number*

Description	Local extended circuit ID.
Context	network-instance name <i>string</i> protocols isis instance name <i>string</i> interface interface-name <i>string</i> adjacency neighbor-system-id <i>string</i> adjacency-level <i>string</i> local-extended-circuit-id <i>number</i>
Tree	local-extended-circuit-id
Configurable	False
Platforms	Supported on all platforms

neighbor-circuit-type *keyword*

Description	The circuit type signalled by the neighbor.
Context	network-instance name <i>string</i> protocols isis instance name <i>string</i> interface interface-name <i>string</i> adjacency neighbor-system-id <i>string</i> adjacency-level <i>string</i> neighbor-circuit-type <i>keyword</i>

Tree	neighbor-circuit-type
Default	L1L2
Options	<ul style="list-style-type: none"> • L1 This enum describes ISIS level 1 • L2 This enum describes ISIS level 2 • L1L2 This enum describes ISIS level 1-2
Configurable	False
Platforms	Supported on all platforms

neighbor-extended-circuit-id *number*

Description	Extended circuit ID assigned by the neighbor.
Context	network-instance name <i>string</i> protocols isis instance name <i>string</i> interface interface-name <i>string</i> adjacency neighbor-system-id <i>string</i> adjacency-level <i>string</i> neighbor-extended-circuit-id <i>number</i>
Tree	neighbor-extended-circuit-id
Configurable	False
Platforms	Supported on all platforms

neighbor-hostname *string*

Description	The hostname of the neighbor, as learned by TLV 137.
Context	network-instance name <i>string</i> protocols isis instance name <i>string</i> interface interface-name <i>string</i> adjacency neighbor-system-id <i>string</i> adjacency-level <i>string</i> neighbor-hostname <i>string</i>
Tree	neighbor-hostname
Configurable	False
Platforms	Supported on all platforms

neighbor-ipv4 *string*

Description	The IPv4 address of the neighbor.
Context	network-instance name <i>string</i> protocols isis instance name <i>string</i> interface interface-name <i>string</i> adjacency neighbor-system-id <i>string</i> adjacency-level <i>string</i> neighbor-ipv4 <i>string</i>

Tree	neighbor-ipv4
Configurable	False
Platforms	Supported on all platforms

neighbor-ipv6 *string*

Description	The IPv6 address of the neighbor.
Context	network-instance name <i>string</i> protocols isis instance name <i>string</i> interface interface-name <i>string</i> adjacency neighbor-system-id <i>string</i> adjacency-level <i>string</i> neighbor-ipv6 <i>string</i>
Tree	neighbor-ipv6
Configurable	False
Platforms	Supported on all platforms

neighbor-last-restart (*keyword | date-and-time-delta*)

Description	The last time the neighbor restarted under protection of graceful restart.
Context	network-instance name <i>string</i> protocols isis instance name <i>string</i> interface interface-name <i>string</i> adjacency neighbor-system-id <i>string</i> adjacency-level <i>string</i> neighbor-last-restart (<i>keyword date-and-time-delta</i>)
Tree	neighbor-last-restart
String Length	20 to 32
Options	<ul style="list-style-type: none"> • never
Configurable	False
Platforms	Supported on all platforms

neighbor-priority *number*

Description	The priority signalled by the neighbor to become the DIS on a LAN
Context	network-instance name <i>string</i> protocols isis instance name <i>string</i> interface interface-name <i>string</i> adjacency neighbor-system-id <i>string</i> adjacency-level <i>string</i> neighbor-priority <i>number</i>
Tree	neighbor-priority
Range	0 to 127
Configurable	False
Platforms	Supported on all platforms

neighbor-restart-capable *boolean*

Description	Reads true when the neighbor has signalled that it is restart capable.
Context	network-instance name <i>string</i> protocols isis instance name <i>string</i> interface interface-name <i>string</i> adjacency neighbor-system-id <i>string</i> adjacency-level <i>string</i> neighbor-restart-capable <i>boolean</i>
Tree	neighbor-restart-capable
Configurable	False
Platforms	Supported on all platforms

neighbor-restart-status *keyword*

Description	The status of the neighbor with respect to graceful restart
Context	network-instance name <i>string</i> protocols isis instance name <i>string</i> interface interface-name <i>string</i> adjacency neighbor-system-id <i>string</i> adjacency-level <i>string</i> neighbor-restart-status <i>keyword</i>
Tree	neighbor-restart-status
Options	<ul style="list-style-type: none"> • not-helping • helping
Configurable	False
Platforms	Supported on all platforms

neighbor-restarts *number*

Description	The number of times the neighbor has restarted under protection of graceful restart.
Context	network-instance name <i>string</i> protocols isis instance name <i>string</i> interface interface-name <i>string</i> adjacency neighbor-system-id <i>string</i> adjacency-level <i>string</i> neighbor-restarts <i>number</i>
Tree	neighbor-restarts
Configurable	False
Platforms	Supported on all platforms

neighbor-snpa *string*

Description	The SNPA of the neighbor.
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Context	network-instance name <i>string</i> protocols isis instance name <i>string</i> interface interface-name <i>string</i> adjacency neighbor-system-id <i>string</i> adjacency-level <i>string</i> neighbor-snpa <i>string</i>
Tree	neighbor-snpa
String Length	0 to 20
Configurable	False
Platforms	Supported on all platforms

nlpid *keyword*

Description	List of protocols supported by the adjacency.
Context	network-instance name <i>string</i> protocols isis instance name <i>string</i> interface interface-name <i>string</i> adjacency neighbor-system-id <i>string</i> adjacency-level <i>string</i> nlpid <i>keyword</i>
Tree	nlpid
Options	<ul style="list-style-type: none"> • IPv4 NLPID 0xCC corresponding to IPv4 • IPv6 NLPID 0x8E corresponding to IPv6 • CLNS NLPID 0x81 corresponding to CLNS
Configurable	False
Platforms	Supported on all platforms

remaining-holdtime *number*

Description	The time remaining until the hold timer will expire.
Context	network-instance name <i>string</i> protocols isis instance name <i>string</i> interface interface-name <i>string</i> adjacency neighbor-system-id <i>string</i> adjacency-level <i>string</i> remaining-holdtime <i>number</i>
Tree	remaining-holdtime
Units	seconds
Configurable	False
Platforms	Supported on all platforms

state *keyword*

Description	The current state of the adjacency.
Context	network-instance name <i>string</i> protocols isis instance name <i>string</i> interface interface-name <i>string</i> adjacency neighbor-system-id <i>string</i> adjacency-level <i>string</i> state <i>keyword</i>
Tree	state
Options	<ul style="list-style-type: none"> • up This state describes that adjacency is established. • down This state describes that adjacency is NOT established. • init This state describes that adjacency is establishing. • failed This state describes that adjacency is failed.
Configurable	False
Platforms	Supported on all platforms

up-down-transitions *number*

Description	The total number of transitions from Up state to a lower state, since the last clear.
Context	network-instance name <i>string</i> protocols isis instance name <i>string</i> interface interface-name <i>string</i> adjacency neighbor-system-id <i>string</i> adjacency-level <i>string</i> up-down-transitions <i>number</i>
Tree	up-down-transitions
Default	0
Configurable	False
Platforms	Supported on all platforms

admin-state *keyword*

Description	Used to administratively enable or disable the IS-IS protocol on a routed subinterface
Context	network-instance name <i>string</i> protocols isis instance name <i>string</i> interface interface-name <i>string</i> admin-state <i>keyword</i>
Tree	admin-state

Default	enable
Options	<ul style="list-style-type: none"> • enable • disable
Configurable	True
Platforms	Supported on all platforms

authentication

Description	Container for specifying authentication options that apply to the IS-IS instance.
Context	network-instance name string protocols isis instance name string interface interface-name string authentication
Tree	authentication
Configurable	True
Platforms	Supported on all platforms

hello-authentication

Description	Container with options to control the authentication of Hello PDUs
Context	network-instance name string protocols isis instance name string interface interface-name string authentication hello-authentication
Tree	hello-authentication
Configurable	True
Platforms	Supported on all platforms

check-received *keyword*

Description	Specifies the type of authentication checks done for received PDUs of the specified type.
Context	network-instance name string protocols isis instance name string interface interface-name string authentication hello-authentication check-received keyword
Tree	check-received
Options	<ul style="list-style-type: none"> • strict Strict authentication option. Reject all packets that do not have an authentication TLV or that do have an authentication TLV that cannot be validated. • loose

Loose authentication option. Accept packets received without an authentication TLV; validate packets received with an authentication TLV and reject those packets that cannot be validated.

- disable

This enum disables authentication checks. Do not check authentication TLV (if any) of received PDUs; authentication TLV may still be added self-generated PDUs

Configurable	True
Platforms	Supported on all platforms

generate *boolean*

Description	When set to true, IS-IS is instructed to add an authentication TLV to every transmitted PDU of the specified type
Context	network-instance name <i>string</i> protocols isis instance name <i>string</i> interface interface-name <i>string</i> authentication hello-authentication generate <i>boolean</i>
Tree	generate
Configurable	True
Platforms	Supported on all platforms

key

Description	Container to specify the secret key and crypto algorithm to use for the authentication of Hello PDUs on this interface
Context	network-instance name <i>string</i> protocols isis instance name <i>string</i> interface interface-name <i>string</i> authentication key
Tree	key
Configurable	True
Platforms	Supported on all platforms

auth-password *string*

Description	The secret key to use for authentication of Hello PDUs
Context	network-instance name <i>string</i> protocols isis instance name <i>string</i> interface interface-name <i>string</i> authentication key auth-password <i>string</i>
Tree	auth-password
Configurable	True
Platforms	Supported on all platforms

crypto-algorithm *keyword*

Description	The cryptographic algorithm used with the keying material to secure the messages.
Context	network-instance name <i>string</i> protocols isis instance name <i>string</i> interface interface-name <i>string</i> authentication key crypto-algorithm <i>keyword</i>
Tree	crypto-algorithm
Options	<ul style="list-style-type: none"> • cleartext The authentication-key is encoded in plaintext. • hmac-md5 The authentication-key is used to generate a 16-byte (128 bit) MD5 digest using the HMAC algorithm (RFC 2104). • hmac-sha-256 The authentication-key is used to generate a SHA2 digest using the HMAC algorithm (RFC 2104).The SHA-256 variant of SHA2 produces an output of 32 bytes (256 bits).
Configurable	True
Platforms	Supported on all platforms

keychain *reference*

Description	Specifies a keychain to use for the authentication of Hello PDUs on this interface.
Context	network-instance name <i>string</i> protocols isis instance name <i>string</i> interface interface-name <i>string</i> authentication keychain <i>reference</i>
Tree	keychain
Reference	system authentication keychain name <i>string</i>
Configurable	True
Platforms	Supported on all platforms

circuit-id *number*

Description	The circuit ID assigned by this IS-IS router to its interface.
Context	network-instance name <i>string</i> protocols isis instance name <i>string</i> interface interface-name <i>string</i> circuit-id <i>number</i>
Tree	circuit-id
Configurable	False
Platforms	Supported on all platforms

circuit-type *keyword*

Description	Specifies the circuit type as either point-to-point or broadcast
Context	network-instance name <i>string</i> protocols isis instance name <i>string</i> interface interface-name <i>string</i> circuit-type <i>keyword</i>
Tree	circuit-type
Options	<ul style="list-style-type: none"> point-to-point This enum describes a point-to-point interface broadcast This enum describes a broadcast interface
Configurable	True
Platforms	Supported on all platforms

delay

Description	Enter the delay context
Context	network-instance name <i>string</i> protocols isis instance name <i>string</i> interface interface-name <i>string</i> delay
Tree	delay
Configurable	True
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

delay-selection *keyword*

Description	Delay source advertised by IGP for the interface
Context	network-instance name <i>string</i> protocols isis instance name <i>string</i> interface interface-name <i>string</i> delay delay-selection <i>keyword</i>
Tree	delay-selection
Default	static-preferred
Options	<ul style="list-style-type: none"> static dynamic static-preferred dynamic-preferred
Configurable	True
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

unidirectional-minimum-link-delay *number*

Description	Operational Unidirectional link delay advertised by ISIS
Context	network-instance name <i>string</i> protocols isis instance name <i>string</i> interface interface-name <i>string</i> delay unidirectional-minimum-link-delay <i>number</i>
Tree	unidirectional-minimum-link-delay
Units	microseconds
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

hello-padding *keyword*

Description	Specifies the use of IS-IS Hello PDU padding on the interface
Context	network-instance name <i>string</i> protocols isis instance name <i>string</i> interface interface-name <i>string</i> hello-padding <i>keyword</i>
Tree	hello-padding
Options	<ul style="list-style-type: none"> strict Strict padding option. Hello padding is done continuously, regardless of adjacency state or interface type. loose Loose padding option. On p2p interfaces hello PDUs are padded from the initial detection of a new neighbor until the adjacency transitions to the INIT state. On broadcast interfaces hello padding is done until there is at least one UP adjacency on the interface. adaptive Adaptive padding option. On p2p interfaces hello PDUs are padded until the sender declares the adjacency to be UP (based on 3-way handshake or the classic algorithm described in ISO 10589. If the p2p neighbor does not support the adjacency state TLV, then padding continues. On broadcast interfaces hello padding is done until there is at least one UP adjacency on the interface. disable This enum disables hello PDU padding
Configurable	True
Platforms	Supported on all platforms

interface-ref

Description	Reference to a subinterface
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Context	network-instance name <i>string</i> protocols isis instance name <i>string</i> interface interface-name <i>string</i> interface-ref
Tree	interface-ref
Configurable	True
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

interface reference

Description	Reference to a base interface, for example a port or LAG
Context	network-instance name <i>string</i> protocols isis instance name <i>string</i> interface interface-name <i>string</i> interface-ref interface reference
Tree	interface
Reference	interface name <i>string</i>
Configurable	True
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

subinterface reference

Description	Reference to a subinterface This requires the base interface to be specified using the interface leaf in this container.
Context	network-instance name <i>string</i> protocols isis instance name <i>string</i> interface interface-name <i>string</i> interface-ref subinterface reference
Tree	subinterface
Reference	interface name <i>string</i> subinterface index <i>number</i>
Configurable	True
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

ipv4-unicast

Description	Enter the ipv4-unicast context
Context	network-instance name <i>string</i> protocols isis instance name <i>string</i> interface interface-name <i>string</i> ipv4-unicast
Tree	ipv4-unicast

Configurable	True
Platforms	Supported on all platforms

admin-state *keyword*

Description	When set to true, the interface and level supports IPv4 unicast routing
Context	network-instance name <i>string</i> protocols isis instance name <i>string</i> interface interface-name <i>string</i> ipv4-unicast admin-state <i>keyword</i>
Tree	admin-state
Default	enable
Options	<ul style="list-style-type: none"> • enable • disable
Configurable	True
Platforms	Supported on all platforms

enable-bfd *boolean*

Description	Enable BFD for IPv4
Context	network-instance name <i>string</i> protocols isis instance name <i>string</i> interface interface-name <i>string</i> ipv4-unicast enable-bfd <i>boolean</i>
Tree	enable-bfd
Default	false
Configurable	True
Platforms	Supported on all platforms

include-bfd-tlv *boolean*

Description	Specifies whether a BFD-enabled TLV is included for IPv4 on this IS-IS interface.
Context	network-instance name <i>string</i> protocols isis instance name <i>string</i> interface interface-name <i>string</i> ipv4-unicast include-bfd-tlv <i>boolean</i>
Tree	include-bfd-tlv
Default	false
Configurable	True
Platforms	Supported on all platforms

ipv6-unicast

Description	Enter the ipv6-unicast context
Context	network-instance name <i>string</i> protocols isis instance name <i>string</i> interface interface-name <i>string</i> ipv6-unicast
Tree	ipv6-unicast
Configurable	True
Platforms	Supported on all platforms

admin-state *keyword*

Description	When set to true, the interface and level supports IPv6 unicast routing
Context	network-instance name <i>string</i> protocols isis instance name <i>string</i> interface interface-name <i>string</i> ipv6-unicast admin-state <i>keyword</i>
Tree	admin-state
Default	enable
Options	<ul style="list-style-type: none"> • enable • disable
Configurable	True
Platforms	Supported on all platforms

enable-bfd *boolean*

Description	Enable BFD for IPv6
Context	network-instance name <i>string</i> protocols isis instance name <i>string</i> interface interface-name <i>string</i> ipv6-unicast enable-bfd <i>boolean</i>
Tree	enable-bfd
Default	false
Configurable	True
Platforms	Supported on all platforms

include-bfd-tlv *boolean*

Description	Specifies whether a BFD-enabled TLV is included for IPv6 on this IS-IS interface.
Context	network-instance name <i>string</i> protocols isis instance name <i>string</i> interface interface-name <i>string</i> ipv6-unicast include-bfd-tlv <i>boolean</i>

Tree	include-bfd-tlv
Default	false
Configurable	True
Platforms	Supported on all platforms

ldp-synchronization

Description	Container with configuration options and state that pertains to the operation of LDP-IGP synchronization on this interface
Context	network-instance name <i>string</i> protocols isis instance name <i>string</i> interface interface-name <i>string</i> ldp-synchronization
Tree	ldp-synchronization
Configurable	True
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

disable

Description	Disable LDP-IGP synchronization procedures on this interface, even if synchronization is enabled globally
Context	network-instance name <i>string</i> protocols isis instance name <i>string</i> interface interface-name <i>string</i> ldp-synchronization disable
Tree	disable
Configurable	True
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

duration *number*

Description	The length of time that the IGP interface has been in sync or out of sync
Context	network-instance name <i>string</i> protocols isis instance name <i>string</i> interface interface-name <i>string</i> ldp-synchronization duration <i>number</i>
Tree	duration
Units	seconds
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

end-of-lib *boolean*

Description	<p>When set to true, the IGP restores the normal metric for the IGP adjacency when learning from LDP that all label-FEC mappings have been received from the LDP peer, even if there is remaining time on the hold-down-timer.</p> <p>When set to false, the IGP always waits for the full duration of the hold-down-timer to restore the normal metric for the IGP adjacency.</p> <p>This overrides the global/instance level setting</p>
Context	network-instance name <i>string</i> protocols isis instance name <i>string</i> interface interface-name <i>string</i> ldp-synchronization end-of-lib <i>boolean</i>
Tree	end-of-lib
Configurable	True
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

hold-down-timer *number*

Description	<p>The maximum amount of time that the IGP advertises a maximum metric for an interface, measured from the time that the LDP adjacency is re-established after going down.</p> <p>This overrides the global/instance level setting</p>
Context	network-instance name <i>string</i> protocols isis instance name <i>string</i> interface interface-name <i>string</i> ldp-synchronization hold-down-timer <i>number</i>
Tree	hold-down-timer
Range	1 to 1800
Units	seconds
Configurable	True
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

sync-state *keyword*

Description	The current state of the interface with respect to LDP-IGP sync
Context	network-instance name <i>string</i> protocols isis instance name <i>string</i> interface interface-name <i>string</i> ldp-synchronization sync-state <i>keyword</i>
Tree	sync-state
Options	<ul style="list-style-type: none"> wait-for-LDP-adjacency <p>The IGP is waiting for the LDP adjacency to come up. The interface is being advertised with max-metric</p> hold-down-timer-active

The LDP adjacency has come up and the IGP has started the hold-down-timer, waiting for either end-of-lib or hold-down-timer expiry. The interface is being advertised with max-metric

- end-of-lib-received

The IGP received end-of-lib and has switched to normal operation. The interface is being advertised with a normal metric

- hold-down-timer-expired

The IGP did not receive end-of-lib (or was configured to ignore it) but hold-down-timer has expired and normal metric is restored

- manual-exit

A tools command was performed to exit ldp-sync. Normal operation is resumed, max-metric is removed

- disabled

ldp-sync is not applicable on this interface

Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

level *level-number number*

Description	List of IS-IS levels supported by this interface
Context	network-instance name <i>string</i> protocols isis instance name <i>string</i> interface interface-name <i>string</i> level level-number <i>number</i>
Tree	level
Configurable	True
Platforms	Supported on all platforms
Max. Elements	2

level-number *number*

Description	Specifies the IS-IS protocol level to which these attributes are applied.
Context	network-instance name <i>string</i> protocols isis instance name <i>string</i> interface interface-name <i>string</i> level level-number <i>number</i>
Range	1 to 2
Configurable	True
Platforms	Supported on all platforms

authentication

Description	Container for specifying authentication options that apply to the IS-IS instance.
Context	network-instance name string protocols isis instance name string interface interface-name string level level-number number authentication
Tree	authentication
Configurable	True
Platforms	Supported on all platforms

hello-authentication

Description	Container with options to control the authentication of Hello PDUs
Context	network-instance name string protocols isis instance name string interface interface-name string level level-number number authentication hello-authentication
Tree	hello-authentication
Configurable	True
Platforms	Supported on all platforms

check-received *keyword*

Description	Specifies the type of authentication checks done for received PDUs of the specified type.
Context	network-instance name string protocols isis instance name string interface interface-name string level level-number number authentication hello-authentication check-received keyword
Tree	check-received
Options	<ul style="list-style-type: none"> strict Strict authentication option. Reject all packets that do not have an authentication TLV or that do have an authentication TLV that cannot be validated. loose Loose authentication option. Accept packets received without an authentication TLV; validate packets received with an authentication TLV and reject those packets that cannot be validated. disable

This enum disables authentication checks. Do not check authentication TLV (if any) of received PDUs; authentication TLV may still be added self-generated PDUs

Configurable	True
Platforms	Supported on all platforms

generate *boolean*

Description	When set to true, IS-IS is instructed to add an authentication TLV to every transmitted PDU of the specified type
Context	network-instance name <i>string</i> protocols isis instance name <i>string</i> interface interface-name <i>string</i> level level-number <i>number</i> authentication hello-authentication generate <i>boolean</i>
Tree	generate
Configurable	True
Platforms	Supported on all platforms

key

Description	Container to specify the secret key and crypto algorithm to use for the authentication of Hello PDUs on this interface
Context	network-instance name <i>string</i> protocols isis instance name <i>string</i> interface interface-name <i>string</i> level level-number <i>number</i> authentication key
Tree	key
Configurable	True
Platforms	Supported on all platforms

auth-password *string*

Description	The secret key to use for authentication of Hello PDUs
Context	network-instance name <i>string</i> protocols isis instance name <i>string</i> interface interface-name <i>string</i> level level-number <i>number</i> authentication key auth-password <i>string</i>
Tree	auth-password
Configurable	True
Platforms	Supported on all platforms

crypto-algorithm *keyword*

Description	The cryptographic algorithm used with the keying material to secure the messages.
Context	network-instance name <i>string</i> protocols isis instance name <i>string</i> interface interface-name <i>string</i> level level-number <i>number</i> authentication key crypto-algorithm <i>keyword</i>
Tree	crypto-algorithm
Options	<ul style="list-style-type: none"> • cleartext The authentication-key is encoded in plaintext. • hmac-md5 The authentication-key is used to generate a 16-byte (128 bit) MD5 digest using the HMAC algorithm (RFC 2104). • hmac-sha-256 The authentication-key is used to generate a SHA2 digest using the HMAC algorithm (RFC 2104).The SHA-256 variant of SHA2 produces an output of 32 bytes (256 bits).
Configurable	True
Platforms	Supported on all platforms

keychain *reference*

Description	Specifies a keychain to use for the authentication of Hello PDUs on this interface.
Context	network-instance name <i>string</i> protocols isis instance name <i>string</i> interface interface-name <i>string</i> level level-number <i>number</i> authentication keychain reference
Tree	keychain
Reference	system authentication keychain name <i>string</i>
Configurable	True
Platforms	Supported on all platforms

disable *boolean*

Description	Disable the Level for the interface.
Context	network-instance name <i>string</i> protocols isis instance name <i>string</i> interface interface-name <i>string</i> level level-number <i>number</i> disable <i>boolean</i>
Tree	disable

Default	false
Configurable	True
Platforms	Supported on all platforms

ipv6-unicast-metric *number*

Description	Specifies the interface metric associated with the IPv6-unicast multi-topology. The default is based on reference-bandwidth, or else if this is not configured the default is 10.
Context	network-instance name <i>string</i> protocols isis instance name <i>string</i> interface interface-name <i>string</i> level level-number <i>number</i> ipv6-unicast-metric <i>number</i>
Tree	ipv6-unicast-metric
Range	0 to 16777215
Configurable	True
Platforms	Supported on all platforms

metric *number*

Description	Specifies the interface metric associated with the native routing topology. The default is based on reference-bandwidth, or else if this is not configured the default is 10.
Context	network-instance name <i>string</i> protocols isis instance name <i>string</i> interface interface-name <i>string</i> level level-number <i>number</i> metric <i>number</i>
Tree	metric
Range	0 to 16777215
Configurable	True
Platforms	Supported on all platforms

passive *boolean*

Description	When set to true the interface is configured as a passive interface for this level and does not send IIH PDUs or try to form an adjacency with other routers.
Context	network-instance name <i>string</i> protocols isis instance name <i>string</i> interface interface-name <i>string</i> level level-number <i>number</i> passive <i>boolean</i>
Tree	passive
Configurable	True

Platforms 7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

priority *number*

Description ISIS neighbor priority for becoming Designated IS (LAN hello PDU only).

Context [network-instance name](#) *string* [protocols isis instance name](#) *string* [interface interface-name](#) *string* [level level-number](#) *number* [priority number](#)

Tree [priority](#)

Range 0 to 127

Default 64

Configurable True

Platforms Supported on all platforms

statistics

Description Interface per level statistics

Context [network-instance name](#) *string* [protocols isis instance name](#) *string* [interface interface-name](#) *string* [level level-number](#) *number* [statistics](#)

Tree [statistics](#)

Configurable False

Platforms Supported on all platforms

pdu [pdu-name](#) *keyword*

Description List of PDUs processed by the IS-IS instance since the IS-IS manager restarted

Context [network-instance name](#) *string* [protocols isis instance name](#) *string* [interface interface-name](#) *string* [level level-number](#) *number* [statistics pdu pdu-name](#) *keyword*

Tree [pdu](#)

Configurable False

Platforms Supported on all platforms

pdu-name *keyword*

Description The PDU type that was processed

Context	network-instance name <i>string</i> protocols isis instance name <i>string</i> interface interface-name <i>string</i> level level-number <i>number</i> statistics pdu pdu-name <i>keyword</i>
Options	<ul style="list-style-type: none"> • LSP Link State PDU • IIH IS-to-IS Hello PDU • CSNP Complete Sequence Number PDU • PSNP Partial Sequence Number PDU • Unknown Unknown PDU type
Configurable	False
Platforms	Supported on all platforms

dropped *number*

Description	The number of PDUs that were received and dropped
Context	network-instance name <i>string</i> protocols isis instance name <i>string</i> interface interface-name <i>string</i> level level-number <i>number</i> statistics pdu pdu-name <i>keyword</i> dropped <i>number</i>
Tree	dropped
Default	0
Configurable	False
Platforms	Supported on all platforms

processed *number*

Description	The number of PDUs that were received and processed
Context	network-instance name <i>string</i> protocols isis instance name <i>string</i> interface interface-name <i>string</i> level level-number <i>number</i> statistics pdu pdu-name <i>keyword</i> processed <i>number</i>
Tree	processed
Default	0
Configurable	False
Platforms	Supported on all platforms

received *number*

Description	The number of PDUs that were received
Context	network-instance name <i>string</i> protocols isis instance name <i>string</i> interface interface-name <i>string</i> level level-number <i>number</i> statistics pdu pdu-name keyword received <i>number</i>
Tree	received
Default	0
Configurable	False
Platforms	Supported on all platforms

sent *number*

Description	The number of PDUs that were transmitted
Context	network-instance name <i>string</i> protocols isis instance name <i>string</i> interface interface-name <i>string</i> level level-number <i>number</i> statistics pdu pdu-name keyword sent <i>number</i>
Tree	sent
Default	0
Configurable	False
Platforms	Supported on all platforms

timers

Description	Enter the timers context
Context	network-instance name <i>string</i> protocols isis instance name <i>string</i> interface interface-name <i>string</i> level level-number <i>number</i> timers
Tree	timers
Configurable	True
Platforms	Supported on all platforms

hello-interval *number*

Description	ISIS hello-interval value. The default is 3 seconds on Designated IS interfaces and 9 seconds for non-DIS and p2p interfaces
Context	network-instance name <i>string</i> protocols isis instance name <i>string</i> interface interface-name <i>string</i> level level-number <i>number</i> timers hello-interval <i>number</i>
Tree	hello-interval

Range	1 to 20000
Default	9
Units	seconds
Configurable	True
Platforms	Supported on all platforms

hello-multiplier *number*

Description	<p>ISIS hello-multiplier value.</p> <p>The neighbor hold time is (hello multiplier x hello interval) on non-designated intermediate system broadcast interfaces and point-to-point interfaces and (hello multiplier x hello interval / 3) on designated intermediate system broadcast interfaces.</p> <p>The hold time is the time in which the neighbor expects to receive the next Hello PDU. If the neighbor receives a Hello within this time, the hold time is reset. If the neighbor does not receive a Hello within the hold time, it brings the adjacency down.</p>
Context	network-instance name string protocols isis instance name string interface interface-name string level level-number number timers hello-multiplier number
Tree	hello-multiplier
Range	2 to 100
Default	3
Configurable	True
Platforms	Supported on all platforms

loopfree-alternate-exclude *boolean*

Description	Enable/disable Loopfree Alternative at interface level.
Context	network-instance name string protocols isis instance name string interface interface-name string loopfree-alternate-exclude boolean
Tree	loopfree-alternate-exclude
Default	false
Configurable	True
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

oper-state *keyword*

Description	The operational state of the IS-IS interface. This simply tracks the operational state of the subinterface.
Context	network-instance name <i>string</i> protocols isis instance name <i>string</i> interface interface-name <i>string</i> oper-state <i>keyword</i>
Tree	oper-state
Options	<ul style="list-style-type: none"> • up Component or process is operational • down Component or process is not operational • empty Component slot is empty • downloading Component is downloading image into memory • booting Component is booting downloaded image • starting Component image operational, application processes starting • failed Component or process has failed • synchronizing Component is currently being synchronized • upgrading Component is currently being upgraded • low-power Component is offline due to insufficient system power • degraded Component or process is in a degraded state • warm-reboot Component or process is currently warm rebooting This state is set during a warm reboot immediately following initiation of the reboot, continuing after startup until the system has completed audit. In this state the system will not accept configuration changes. • waiting Component or process is currently waiting

This state can be set by event handler when the `reinvoke-with-delay` action is used, and indicates that the event handler is waiting for the provided delay before reinvoking the instance.

Configurable	False
Platforms	Supported on all platforms

passive *boolean*

Description	When set to true the interface is configured as a passive interface and does not send IIH PDUs or try to form an adjacency with other routers.
Context	network-instance name <i>string</i> protocols isis instance name <i>string</i> interface interface-name <i>string</i> <i>passive</i> <i>boolean</i>
Tree	passive
Default	false
Configurable	True
Platforms	Supported on all platforms

segment-routing

Description	Container with interface-specific segment routing options
Context	network-instance name <i>string</i> protocols isis instance name <i>string</i> interface interface-name <i>string</i> segment-routing
Tree	segment-routing
Configurable	True
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

mpls

Description	SR-MPLS interface options
Context	network-instance name <i>string</i> protocols isis instance name <i>string</i> interface interface-name <i>string</i> segment-routing mpls
Tree	mpls
Configurable	True
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

ipv4-adjacency-sid

Description	The IPv4 adjacency SID associated with the interface
Context	network-instance name <i>string</i> protocols isis instance name <i>string</i> interface interface-name <i>string</i> segment-routing mpls ipv4-adjacency-sid
Tree	ipv4-adjacency-sid
Configurable	True
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

assignment *keyword*

Description	<p>The method that should be used to allocate an adjacency SID or multiple adjacency SIDs for this interface.</p> <p>This overrides the top level configuration to assign dynamic adjacency SIDs to all interfaces.</p>
Context	network-instance name <i>string</i> protocols isis instance name <i>string</i> interface interface-name <i>string</i> segment-routing mpls ipv4-adjacency-sid assignment keyword
Tree	assignment
Options	<ul style="list-style-type: none"> • static <p>The user will statically configure an adjacency SID for the interface. This option is not available if the interface type is not point-to-point.</p> • dynamic <p>IS-IS should dynamically allocate one or more dynamic adjacency SIDs for this interface.</p> • none <p>No adjacency SIDs should be allocated for this interface.</p>
Configurable	True
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

programmed-sids [label-value](#) *number*

Description	The list of IPv4 adjacency SIDs that have been programmed in association with this interface
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Context	network-instance name <i>string</i> protocols isis instance name <i>string</i> interface interface-name <i>string</i> segment-routing mpls ipv4-adjacency-sid programmed-sids label-value <i>number</i>
Tree	programmed-sids
Configurable	False
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

label-value *number*

Description	The adjacency SID represented by the MPLS label value.
Context	network-instance name <i>string</i> protocols isis instance name <i>string</i> interface interface-name <i>string</i> segment-routing mpls ipv4-adjacency-sid programmed-sids label-value <i>number</i>
Range	16 to 1048575
Configurable	False
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

adjacency-level *keyword*

Description	The level of the adjacency that is formed. Only populated for dynamic adjacency SIDs on broadcast interfaces.
Context	network-instance name <i>string</i> protocols isis instance name <i>string</i> interface interface-name <i>string</i> segment-routing mpls ipv4-adjacency-sid programmed-sids label-value <i>number</i> adjacency-level <i>keyword</i>
Tree	adjacency-level
Default	L1L2
Options	<ul style="list-style-type: none"> • L1 This enum describes ISIS level 1 • L2 This enum describes ISIS level 2 • L1L2 This enum describes ISIS level 1-2
Configurable	False

Platforms 7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

neighbor-system-id *string*

Description The neighbor router's system ID.

Context [network-instance name *string*](#) [protocols isis instance name *string*](#) [interface interface-name *string*](#) [segment-routing mpls ipv4-adjacency-sid programmed-sids label-value *number*](#) [neighbor-system-id *string*](#)

Tree [neighbor-system-id](#)

String Length 14

Configurable False

Platforms 7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

static *number*

Description Configure a static adjacency SID represented by an MPLS label value.

Context [network-instance name *string*](#) [protocols isis instance name *string*](#) [interface interface-name *string*](#) [segment-routing mpls ipv4-adjacency-sid static *number*](#)

Tree [static](#)

Range 16 to 1048575

Configurable True

Platforms 7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

ipv4-node-sid

Description Configuration of IPv4 node SID.
The (primary) IPv4 address of this interface is advertised as a prefix SID with the node-SID flag set. The associated label is derived from the label index configured in this container.

Context [network-instance name *string*](#) [protocols isis instance name *string*](#) [interface interface-name *string*](#) [segment-routing mpls ipv4-node-sid](#)

Tree [ipv4-node-sid](#)

Configurable True

Platforms 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

index number

Description Label index to add to SRGB base.
This causes the V-flag and L-flag in the prefix SID subTLV to be set to zero.

Context [network-instance name](#) *string* [protocols isis instance name](#) *string* [interface interface-name](#) *string* [segment-routing mpls ipv4-node-sid index number](#)

Tree [index](#)

Range 0 to 1048575

Configurable True

Platforms 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

ipv6-adjacency-sid

Description The IPv6 adjacency SID associated with the interface

Context [network-instance name](#) *string* [protocols isis instance name](#) *string* [interface interface-name](#) *string* [segment-routing mpls ipv6-adjacency-sid](#)

Tree [ipv6-adjacency-sid](#)

Configurable True

Platforms 7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

assignment keyword

Description The method that should be used to allocate an adjacency SID or multiple adjacency SIDs for this interface.
This overrides the top level configuration to assign dynamic adjacency SIDs to all interfaces.

Context [network-instance name](#) *string* [protocols isis instance name](#) *string* [interface interface-name](#) *string* [segment-routing mpls ipv6-adjacency-sid assignment keyword](#)

Tree [assignment](#)

Options

- static
The user will statically configure an adjacency SID for the interface. This option is not available if the interface type is not point-to-point.
- dynamic

IS-IS should dynamically allocate one or more dynamic adjacency SIDs for this interface.

- none

No adjacency SIDs should be allocated for this interface.

Configurable True

Platforms 7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

programmed-sids *label-value number*

Description The list of IPv4 adjacency SIDs that have been programmed in association with this interface

Context [network-instance name string protocols isis instance name string interface interface-name string segment-routing mpls ipv6-adjacency-sid programmed-sids label-value number](#)

Tree [programmed-sids](#)

Configurable False

Platforms 7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

label-value *number*

Description The adjacency SID represented by the MPLS label value.

Context [network-instance name string protocols isis instance name string interface interface-name string segment-routing mpls ipv6-adjacency-sid programmed-sids label-value number](#)

Range 16 to 1048575

Configurable False

Platforms 7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

adjacency-level *keyword*

Description The level of the adjacency that is formed.

Only populated for dynamic adjacency SIDs on broadcast interfaces.

Context	network-instance name <i>string</i> protocols isis instance name <i>string</i> interface interface-name <i>string</i> segment-routing mpls ipv6-adjacency-sid programmed-sids label-value <i>number</i> adjacency-level <i>keyword</i>
Tree	adjacency-level
Default	L1L2
Options	<ul style="list-style-type: none"> • L1 This enum describes ISIS level 1 • L2 This enum describes ISIS level 2 • L1L2 This enum describes ISIS level 1-2
Configurable	False
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

neighbor-system-id *string*

Description	The neighbor router's system ID.
Context	network-instance name <i>string</i> protocols isis instance name <i>string</i> interface interface-name <i>string</i> segment-routing mpls ipv6-adjacency-sid programmed-sids label-value <i>number</i> neighbor-system-id <i>string</i>
Tree	neighbor-system-id
String Length	14
Configurable	False
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

static *number*

Description	Configure a static adjacency SID represented by an MPLS label value.
Context	network-instance name <i>string</i> protocols isis instance name <i>string</i> interface interface-name <i>string</i> segment-routing mpls ipv6-adjacency-sid static <i>number</i>
Tree	static
Range	16 to 1048575
Configurable	True

Platforms 7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

ipv6-node-sid

Description Configuration of IPv6 node SID.
The (primary) IPv6 address of this interface is advertised as a prefix SID with the node-SID flag set. The associated label is derived from the label index configured in this container.

Context [network-instance name](#) *string* [protocols isis instance name](#) *string* [interface interface-name](#) *string* [segment-routing mpls ipv6-node-sid](#)

Tree [ipv6-node-sid](#)

Configurable True

Platforms 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

index number

Description Label index to add to SRGB base.
This causes the V-flag and L-flag in the prefix SID subTLV to be set to zero.

Context [network-instance name](#) *string* [protocols isis instance name](#) *string* [interface interface-name](#) *string* [segment-routing mpls ipv6-node-sid index number](#)

Tree [index](#)

Range 0 to 1048575

Configurable True

Platforms 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

statistics

Description Statistics associated with this IS-IS interface.

Context [network-instance name](#) *string* [protocols isis instance name](#) *string* [interface interface-name](#) *string* [statistics](#)

Tree [statistics](#)

Configurable False

Platforms Supported on all platforms

adjacency-changes *number*

Description	Number of times an adjacency state change has occurred on this circuit(summed across all adjacencies).
Context	network-instance name <i>string</i> protocols isis instance name <i>string</i> interface interface-name <i>string</i> statistics adjacency-changes <i>number</i>
Tree	adjacency-changes
Default	0
Configurable	False
Platforms	Supported on all platforms

adjacency-number *number*

Description	Number of adjacencies on this circuit.
Context	network-instance name <i>string</i> protocols isis instance name <i>string</i> interface interface-name <i>string</i> statistics adjacency-number <i>number</i>
Tree	adjacency-number
Default	0
Configurable	False
Platforms	Supported on all platforms

area-address-mismatches *number*

Description	Number of times an IS-IS L1 hello was received on this circuit with a area address field different from that for this system
Context	network-instance name <i>string</i> protocols isis instance name <i>string</i> interface interface-name <i>string</i> statistics area-address-mismatches <i>number</i>
Tree	area-address-mismatches
Default	0
Configurable	False
Platforms	Supported on all platforms

authentication-failures *number*

Description	Number of times an IS-IS control PDU with the correct auth type has failed to pass authentication validation on the interface.
Context	network-instance name <i>string</i> protocols isis instance name <i>string</i> interface interface-name <i>string</i> statistics authentication-failures <i>number</i>

Tree	authentication-failures
Default	0
Configurable	False
Platforms	Supported on all platforms

authentication-type-failures *number*

Description	Number of times an IS-IS control PDU with an auth type field different from that for this system has been received on the interface.
Context	network-instance name <i>string</i> protocols isis instance name <i>string</i> interface interface-name <i>string</i> statistics authentication-type-failures <i>number</i>
Tree	authentication-type-failures
Default	0
Configurable	False
Platforms	Supported on all platforms

designated-is-changes *number*

Description	Number of times the Designated IS has changed on this circuit.
Context	network-instance name <i>string</i> protocols isis instance name <i>string</i> interface interface-name <i>string</i> statistics designated-is-changes <i>number</i>
Tree	designated-is-changes
Default	0
Configurable	False
Platforms	Supported on all platforms

max-area-address-mismatches *number*

Description	Number of times an IS-IS control PDU with a max area address field different from that for this system has been received on the interface.
Context	network-instance name <i>string</i> protocols isis instance name <i>string</i> interface interface-name <i>string</i> statistics max-area-address-mismatches <i>number</i>
Tree	max-area-address-mismatches
Default	0
Configurable	False
Platforms	Supported on all platforms

rejected-adjacencies *number*

Description	Number of times an adjacency has been rejected on this circuit.
Context	network-instance name <i>string</i> protocols isis instance name <i>string</i> interface interface-name <i>string</i> statistics rejected-adjacencies <i>number</i>
Tree	rejected-adjacencies
Default	0
Configurable	False
Platforms	Supported on all platforms

system-id-length-mismatches *number*

Description	Number of times an IS-IS control PDU with a system ID field length different from that for this system has been received on the interface.
Context	network-instance name <i>string</i> protocols isis instance name <i>string</i> interface interface-name <i>string</i> statistics system-id-length-mismatches <i>number</i>
Tree	system-id-length-mismatches
Default	0
Configurable	False
Platforms	Supported on all platforms

timers

Description	Enter the timers context
Context	network-instance name <i>string</i> protocols isis instance name <i>string</i> interface interface-name <i>string</i> timers
Tree	timers
Configurable	True
Platforms	Supported on all platforms

csnp-interval *number*

Description	The interval, specified in seconds, at which periodic CSNP packets should be transmitted by the local IS on this interface.
Context	network-instance name <i>string</i> protocols isis instance name <i>string</i> interface interface-name <i>string</i> timers csnp-interval <i>number</i>
Tree	csnp-interval

Range	1 to 65535
Default	10
Units	seconds
Configurable	True
Platforms	Supported on all platforms

Isp-pacing-interval *number*

Description	<p>Controls the interval between (bursts of) LSPs sent from the interface. The interval applies to all LSPs: LSPs generated by the router, and LSPs received from other routers and re-flooded.</p> <p>The burst interval is 100 ms if the <code>Isp-pacing-interval</code> < 100 ms and otherwise it is 1 second. For example, if the <code>Isp-pacing-interval</code> is 2 ms, at most 50 LSPs are sent every 100 ms. On the other hand, if the <code>Isp-pacing-interval</code> is 100 ms, at most 10 LSPs are sent every 1 second.</p> <p>If a value of 0 is configured, no LSPs are sent from the interface.</p> <p>The default pacing interval of 100 milliseconds means that a maximum of 10 LSPs are sent in a burst every second.</p>
Context	network-instance name <i>string</i> protocols isis instance name <i>string</i> interface interface-name <i>string</i> timers lsp-pacing-interval <i>number</i>
Tree	lsp-pacing-interval
Range	0 to 100000
Default	100
Units	milliseconds
Configurable	True
Platforms	Supported on all platforms

trace-options

Description	Interface level debug trace options for IS-IS
Context	network-instance name <i>string</i> protocols isis instance name <i>string</i> interface interface-name <i>string</i> trace-options
Tree	trace-options
Configurable	True
Platforms	Supported on all platforms

trace keyword

Description	List of tracing options
Context	network-instance name <i>string</i> protocols isis instance name <i>string</i> interface interface-name <i>string</i> trace-options trace <i>keyword</i>
Tree	trace
Options	<ul style="list-style-type: none"> • adjacencies • packets-all • packets-p2p-hello • packets-l1-hello • packets-l2-hello • packets-l1-psnp • packets-l2-psnp • packets-l1-csnp • packets-l2-csnp • packets-l1-lsp • packets-l2-lsp
Configurable	True
Platforms	Supported on all platforms

weighted-ecmp

Description	Enter the weighted-ecmp context
Context	network-instance name <i>string</i> protocols isis instance name <i>string</i> interface interface-name <i>string</i> weighted-ecmp
Tree	weighted-ecmp
Configurable	True
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

load-balancing-weight (*number* | *keyword*)

Description	The load-balancing weight of the interface, which applies when weighted ECMP is enabled and the interface is part of a multipath set.
Context	network-instance name <i>string</i> protocols isis instance name <i>string</i> interface interface-name <i>string</i> weighted-ecmp load-balancing-weight (<i>number</i> <i>keyword</i>)
Tree	load-balancing-weight

Range	1 to 4294967295
Default	auto
Options	<ul style="list-style-type: none"> • auto Load-balancing weight is based on the bandwidth of the parent interface (port or LAG) • none The interface should not participate in weighted ECMP
Configurable	True
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

ipv4-unicast

Description	Enables/disables IPv4 routing in this ISIS instance.
Context	network-instance name <i>string</i> protocols isis instance name <i>string</i> ipv4-unicast
Tree	ipv4-unicast
Configurable	True
Platforms	Supported on all platforms

admin-state *keyword*

Description	When set to true, the IS-IS instance supports IPv4 unicast routing
Context	network-instance name <i>string</i> protocols isis instance name <i>string</i> ipv4-unicast admin-state <i>keyword</i>
Tree	admin-state
Default	enable
Options	<ul style="list-style-type: none"> • enable • disable
Configurable	True
Platforms	Supported on all platforms

ipv6-unicast

Description	Enables/disables IPv6 routing in this ISIS instance.
Context	network-instance name <i>string</i> protocols isis instance name <i>string</i> ipv6-unicast

Tree	ipv6-unicast
Configurable	True
Platforms	Supported on all platforms

admin-state *keyword*

Description	When set to true, the IS-IS instance supports IPv6 unicast routing
Context	network-instance name string protocols isis instance name string ipv6-unicast admin-state keyword
Tree	admin-state
Default	enable
Options	<ul style="list-style-type: none"> • enable • disable
Configurable	True
Platforms	Supported on all platforms

multi-topology *boolean*

Description	When set to true, IS-IS multi-topology TLVs are used for IPv6 routing and support for native IPv6 TLVs is disabled.
Context	network-instance name string protocols isis instance name string ipv6-unicast multi-topology boolean
Tree	multi-topology
Default	false
Configurable	True
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

ldp-synchronization

Description	Enable LDP-IGP synchronization procedures on all P2P interfaces and all LAN interfaces with a single adjacency, except on interfaces where the functionality is explicitly disabled
Context	network-instance name string protocols isis instance name string ldp-synchronization
Tree	ldp-synchronization
Configurable	True

Platforms 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

end-of-lib *boolean*

Description When set to true, the IGP restores the normal metric for the IGP adjacency when learning from LDP that all label-FEC mappings have been received from the LDP peer, even if there is remaining time on the hold-down-timer.

When set to false, the IGP always waits for the full duration of the hold-down-timer to restore the normal metric for the IGP adjacency

Context [network-instance name](#) *string* [protocols isis instance name](#) *string* [ldp-synchronization end-of-lib](#) *boolean*

Tree [end-of-lib](#)

Default false

Configurable True

Platforms 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

hold-down-timer *number*

Description The maximum amount of time that the IGP advertises a maximum metric for an interface, measured from the time that the LDP adjacency is re-established after going down

Context [network-instance name](#) *string* [protocols isis instance name](#) *string* [ldp-synchronization hold-down-timer](#) *number*

Tree [hold-down-timer](#)

Range 1 to 1800

Default 60

Units seconds

Configurable True

Platforms 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

level [level-number](#) *number*

Description List of IS-IS levels supported by this IS (router)

Context [network-instance name](#) *string* [protocols isis instance name](#) *string* [level level-number](#) *number*

Tree [level](#)

Configurable True

Platforms Supported on all platforms

Max. Elements 2

level-number *number*

Description Specifies the IS-IS protocol level to which these attributes are applied.

Context [network-instance name](#) *string* [protocols isis instance name](#) *string* [level level-number](#) *number*

Range 1 to 2

Configurable True

Platforms Supported on all platforms

authentication

Description Container for specifying authentication options that apply to the entire IS-IS instance or to an entire level.
The settings in this container only apply to PDUs without an authentication behavior specified at a more granular level.

Context [network-instance name](#) *string* [protocols isis instance name](#) *string* [level level-number](#) *number* [authentication](#)

Tree [authentication](#)

Configurable True

Platforms Supported on all platforms

csnp-authentication

Description Container with options to control the authentication of CSNP PDUs

Context [network-instance name](#) *string* [protocols isis instance name](#) *string* [level level-number](#) *number* [authentication csnp-authentication](#)

Tree [csnp-authentication](#)

Configurable True

Platforms Supported on all platforms

check-received *keyword*

Description Specifies the type of authentication checks done for received PDUs of the specified type.

Context [network-instance name](#) *string* [protocols isis instance name](#) *string* [level level-number](#) *number* [authentication csnp-authentication check-received](#) *keyword*

Tree	check-received
Options	<ul style="list-style-type: none"> • strict Strict authentication option. Reject all packets that do not have an authentication TLV or that do have an authentication TLV that cannot be validated. • loose Loose authentication option. Accept packets received without an authentication TLV; validate packets received with an authentication TLV and reject those packets that cannot be validated. • disable This enum disables authentication checks. Do not check authentication TLV (if any) of received PDUs; authentication TLV may still be added self-generated PDUs
Configurable	True
Platforms	Supported on all platforms

generate *boolean*

Description	When set to true, IS-IS is instructed to add an authentication TLV to every transmitted PDU of the specified type
Context	network-instance name <i>string</i> protocols isis instance name <i>string</i> level level-number <i>number</i> authentication csnp-authentication generate <i>boolean</i>
Tree	generate
Configurable	True
Platforms	Supported on all platforms

hello-authentication

Description	Container with options to control the authentication of Hello PDUs
Context	network-instance name <i>string</i> protocols isis instance name <i>string</i> level level-number <i>number</i> authentication hello-authentication
Tree	hello-authentication
Configurable	True
Platforms	Supported on all platforms

check-received *keyword*

Description	Specifies the type of authentication checks done for received PDUs of the specified type.
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Context	network-instance name <i>string</i> protocols isis instance name <i>string</i> level level-number <i>number</i> authentication hello-authentication check-received <i>keyword</i>
Tree	check-received
Options	<ul style="list-style-type: none"> • strict Strict authentication option. Reject all packets that do not have an authentication TLV or that do have an authentication TLV that cannot be validated. • loose Loose authentication option. Accept packets received without an authentication TLV; validate packets received with an authentication TLV and reject those packets that cannot be validated. • disable This enum disables authentication checks. Do not check authentication TLV (if any) of received PDUs; authentication TLV may still be added self-generated PDUs
Configurable	True
Platforms	Supported on all platforms

generate *boolean*

Description	When set to true, IS-IS is instructed to add an authentication TLV to every transmitted PDU of the specified type
Context	network-instance name <i>string</i> protocols isis instance name <i>string</i> level level-number <i>number</i> authentication hello-authentication generate <i>boolean</i>
Tree	generate
Configurable	True
Platforms	Supported on all platforms

key

Description	Container to specify the secret key and crypto algorithm to use for the authentication of PDUs when the behavior is controlled at this level of the configuration hierarchy
Context	network-instance name <i>string</i> protocols isis instance name <i>string</i> level level-number <i>number</i> authentication key
Tree	key
Configurable	True
Platforms	Supported on all platforms

auth-password *string*

Description	The secret key to use for authentication of PDUs
Context	network-instance name <i>string</i> protocols isis instance name <i>string</i> level level-number <i>number</i> authentication key auth-password <i>string</i>
Tree	auth-password
Configurable	True
Platforms	Supported on all platforms

crypto-algorithm *keyword*

Description	The cryptographic algorithm used with the keying material to secure the messages.
Context	network-instance name <i>string</i> protocols isis instance name <i>string</i> level level-number <i>number</i> authentication key crypto-algorithm <i>keyword</i>
Tree	crypto-algorithm
Options	<ul style="list-style-type: none"> • cleartext The authentication-key is encoded in plaintext. • hmac-md5 The authentication-key is used to generate a 16-byte (128 bit) MD5 digest using the HMAC algorithm (RFC 2104). • hmac-sha-256 The authentication-key is used to generate a SHA2 digest using the HMAC algorithm (RFC 2104).The SHA-256 variant of SHA2 produces an output of 32 bytes (256 bits).
Configurable	True
Platforms	Supported on all platforms

keychain *reference*

Description	Specifies a keychain to use for the authentication of PDUs when the behavior is controlled at this level of the configuration hierarchy.
Context	network-instance name <i>string</i> protocols isis instance name <i>string</i> level level-number <i>number</i> authentication keychain <i>reference</i>
Tree	keychain
Reference	system authentication keychain name <i>string</i>
Configurable	True
Platforms	Supported on all platforms

Isp-authentication

Description	Container with options to control the authentication of Link State PDUs
Context	network-instance name string protocols isis instance name string level level-number number authentication Isp-authentication
Tree	Isp-authentication
Configurable	True
Platforms	Supported on all platforms

check-received *keyword*

Description	Specifies the type of authentication checks done for received PDUs of the specified type.
Context	network-instance name string protocols isis instance name string level level-number number authentication Isp-authentication check-received keyword
Tree	check-received
Options	<ul style="list-style-type: none"> strict Strict authentication option. Reject all packets that do not have an authentication TLV or that do have an authentication TLV that cannot be validated. loose Loose authentication option. Accept packets received without an authentication TLV; validate packets received with an authentication TLV and reject those packets that cannot be validated. disable This enum disables authentication checks. Do not check authentication TLV (if any) of received PDUs; authentication TLV may still be added self-generated PDUs
Configurable	True
Platforms	Supported on all platforms

generate *boolean*

Description	When set to true, IS-IS is instructed to add an authentication TLV to every transmitted PDU of the specified type
Context	network-instance name string protocols isis instance name string level level-number number authentication Isp-authentication generate boolean
Tree	generate
Configurable	True

Platforms Supported on all platforms

psnp-authentication

Description Container with options to control the authentication of PSNP PDUs

Context [network-instance name string protocols isis instance name string level level-number number authentication psnp-authentication](#)

Tree [psnp-authentication](#)

Configurable True

Platforms Supported on all platforms

check-received *keyword*

Description Specifies the type of authentication checks done for received PDUs of the specified type.

Context [network-instance name string protocols isis instance name string level level-number number authentication psnp-authentication check-received keyword](#)

Tree [check-received](#)

Options

- strict
Strict authentication option. Reject all packets that do not have an authentication TLV or that do have an authentication TLV that cannot be validated.
- loose
Loose authentication option. Accept packets received without an authentication TLV; validate packets received with an authentication TLV and reject those packets that cannot be validated.
- disable
This enum disables authentication checks. Do not check authentication TLV (if any) of received PDUs; authentication TLV may still be added self-generated PDUs

Configurable True

Platforms Supported on all platforms

generate *boolean*

Description When set to true, IS-IS is instructed to add an authentication TLV to every transmitted PDU of the specified type

Context [network-instance name string protocols isis instance name string level level-number number authentication psnp-authentication generate boolean](#)

Tree	generate
Configurable	True
Platforms	Supported on all platforms

link-state-database

Description	State representation of the ISIS LSDB.
Context	network-instance name string protocols isis instance name string level level-number number link-state-database
Tree	link-state-database
Configurable	False
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

Isp [Isp-id string](#)

Description	List of LSPs in the LSDB.
Context	network-instance name string protocols isis instance name string level level-number number link-state-database Isp Isp-id string
Tree	Isp
Configurable	False
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

Isp-id [string](#)

Description	The value specifies the LSP Id and is given in the format as 6 octets of adjacency system-id followed by 1 octet Lan-ID and 1 octet LSP Number.
Context	network-instance name string protocols isis instance name string level level-number number link-state-database Isp Isp-id string
String Length	20
Configurable	False
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

checksum *number*

Description	Checksum of the LSP.
Context	network-instance name <i>string</i> protocols isis instance name <i>string</i> level level-number <i>number</i> link-state-database lsp lsp-id <i>string</i> checksum <i>number</i>
Tree	checksum
Configurable	False
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

flags *keyword*

Description	LSP Type-Block flags.
Context	network-instance name <i>string</i> protocols isis instance name <i>string</i> level level-number <i>number</i> link-state-database lsp lsp-id <i>string</i> flags <i>keyword</i>
Tree	flags
Options	<ul style="list-style-type: none"> • partition-repair When set, the originator supports partition repair. • attached-error When set, the originator is attached to another area using the referred metric. • attached-expense When set, the originator is attached to another area using the referred metric. • attached-delay When set, the originator is attached to another area using the referred metric. • attached-default When set, the originator is attached to another area using the referred metric. • overload When set, the originator is overloaded, and must be avoided in path calculation.
Configurable	False
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

id-length *number*

Description	Length of the ID field of NSAP addresses and NETs used in this routing domain.
Context	network-instance name <i>string</i> protocols isis instance name <i>string</i> level level-number <i>number</i> link-state-database lsp lsp-id <i>string</i> id-length <i>number</i>
Tree	id-length
Configurable	False
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

is-type *number*

Description	Type of neighboring system.
Context	network-instance name <i>string</i> protocols isis instance name <i>string</i> level level-number <i>number</i> link-state-database lsp lsp-id <i>string</i> is-type <i>number</i>
Tree	is-type
Range	1 to 3
Configurable	False
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

maximum-area-addresses *number*

Description	Number of area addresses permitted for this ISs area 0 indicates the IS only supports three area addresses (by default). Any number inclusive of 1 and 254 indicates the number of areas allowed.
Context	network-instance name <i>string</i> protocols isis instance name <i>string</i> level level-number <i>number</i> link-state-database lsp lsp-id <i>string</i> maximum-area-addresses <i>number</i>
Tree	maximum-area-addresses
Configurable	False
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

pdu-length *number*

Description	Total length of the LSP.
Context	network-instance name <i>string</i> protocols isis instance name <i>string</i> level level-number <i>number</i> link-state-database lsp lsp-id <i>string</i> pdu-length <i>number</i>
Tree	pdu-length
Configurable	False
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

pdu-type *keyword*

Description	Link State PDU type.
Context	network-instance name <i>string</i> protocols isis instance name <i>string</i> level level-number <i>number</i> link-state-database lsp lsp-id <i>string</i> pdu-type <i>keyword</i>
Tree	pdu-type
Options	<ul style="list-style-type: none"> level-1 This enum describes ISIS level 1 PDU. level-2 This enum describes ISIS level 2 PDU.
Configurable	False
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

remaining-lifetime *number*

Description	Remaining lifetime in seconds before the LSP expiration.
Context	network-instance name <i>string</i> protocols isis instance name <i>string</i> level level-number <i>number</i> link-state-database lsp lsp-id <i>string</i> remaining-lifetime <i>number</i>
Tree	remaining-lifetime
Units	seconds
Configurable	False
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

sequence-number *number*

Description	Sequence number of the LSP.
Context	network-instance name <i>string</i> protocols isis instance name <i>string</i> level level-number <i>number</i> link-state-database lsp lsp-id <i>string</i> sequence-number <i>number</i>
Tree	sequence-number
Configurable	False
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

tlvs

Description	This container defines Link State PDU State TLVs.
Context	network-instance name <i>string</i> protocols isis instance name <i>string</i> level level-number <i>number</i> link-state-database lsp lsp-id <i>string</i> tlvs
Tree	tlvs
Configurable	False
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

tlv *type identityref*

Description	List of TLV types in the LSDB for the specified LSP.
Context	network-instance name <i>string</i> protocols isis instance name <i>string</i> level level-number <i>number</i> link-state-database lsp lsp-id <i>string</i> tlvs tlv type identityref
Tree	tlv
Configurable	False
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

type *identityref*

Description	The type of TLV being described. The type of TLV is expressed as a canonical name.
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Context	<code>network-instance name string protocols isis instance name string level level-number number link-state-database lsp lsp-id string tlvs tlv type identityref</code>
Options	<ul style="list-style-type: none"> • area-addresses ISIS TLV 1 • iis-neighbors ISIS TLV 2 • instance-id ISIS TLV 7 An Instance Identifier (IID) to uniquely identify an IS-IS instance. When the IID = 0, the list of supported ITIDs MUST NOT be present. An IID-TLV with IID = 0 MUST NOT appear in an SNP or LSP. When the TLV appears (with a non-zero IID) in an SNP or LSP, exactly one ITID. MUST be present indicating the topology with which the PDU is associated. If no ITIDs or multiple ITIDs are present or the IID is zero, then the PDU MUST be ignored • authentication ISIS TLV 10 • purge-oi ISIS TLV 13 If an IS generates a purge, it SHOULD include this TLV in the purge with its own system ID. If an IS receives a purge that does not include this TLV, then it SHOULD add this TLV with both its own system ID and the system ID of the IS from which it received the purge. This allows ISs receiving purges to log the system ID of the originator, or the upstream source of the purge. • lsp-buffer-size ISIS TLV 14. The maximum MTU that the advertising system can receive, expressed in bytes. • extended-is-reachability ISIS TLV 22. An extended IS reachability TLV that has a different data structure to TLV 2 that introduces the use of sub-TLV object-group. • is-neighbor-attribute ISIS TLV 23. Identical in format to TLV 22 and included in Original LSPs or Extended LSPs. Regardless of the type of LSP in which the TLVs appear, the information pertains to the neighbor relationship between the Originating System and the IS identified in the TLV • isis-alias-id ISIS TLV 24. IS-Alias TLV which extension-capable ISs to recognize the Originating System of an Extended LSP set. It identifies the Normal system-id of the Originating System • ipv4-internal-reachability

ISIS TLV 128. TLV defines IP addresses within the routing domain reachable directly via one or more interfaces on this Intermediate system

- nlpid

ISIS TLV 129. TLV defines the set Network Layer Protocol Identifiers for Network Layer protocols that this Intermediate System is capable of relaying

- ipv4-external-reachability

ISIS TLV 130. TLV defines IP addresses outside the routing domain reachable via interfaces on this Intermediate system. This is permitted to appear multiple times, and in an LSP with any LSP number. However, this field must not appear in pseudonode LSPs

- ipv4-interface-addresses

ISIS TLV 132. The IP address of one or more interfaces corresponding to the SNPAs enabled on this Intermediate system (i.e., one or more IP addresses of this router). This is permitted to appear multiple times, and in an LSP with any LSP number.

- ipv4-te-router-id

ISIS TLV 134. Traffic Engineering router ID TLV that contains the 4-octet router ID of the router originating the LSP

- extended-ipv4-reachability

ISIS TLV 135. Extended IP reachability TLV that provides for a 32-bit metric and adds one bit to indicate that a prefix has been redistributed _down_ in the hierarchy

- dynamic-name

ISIS TLV 137. The Dynamic hostname TLV is optional. This TLV may be present in any fragment of a non-pseudonode LSP. The value field identifies the symbolic name of the router originating the LSP. This symbolic name can be the FQDN for the router, it can be a subset of the FQDN, or it can be any string operators want to use for the router.

- ipv4-srlg

ISIS TLV 138. IPv4 Shared Risk Link Group TLV

- ipv6-srlg

ISIS TLV 139. IPv6 Shared Risk Link Group

- ipv6-te-router-id

ISIS TLV 140. The IPv6 TE Router ID TLV contains a 16-octet IPv6 address. A stable global IPv6 address **MUST** be used, so that the router ID provides a routable address, regardless of the state of a node's interfaces. If a router does not implement traffic engineering, it **MAY** include or omit the IPv6 TE Router ID TLV. If a router implements traffic engineering for IPv6, it **MUST** include this TLV in its LSP. This TLV **MUST NOT** be included more than once in an LSP.

- mt-isn

ISIS TLV 222. TLV is aligned with extended IS reachability TLV type 22 beside an additional two bytes in front at the beginning of the TLV that indicate MT membership.

- mt-is-neighbor-attribute

ISIS TLV 223. It is identical in format to TLV 222. In the event that there is a need to advertise in Extended LSPs such information associated with neighbors of the Originating System, it is necessary to define new TLVs to carry the sub-TLV information.

- multi-topology

ISIS TLV 229. This MT TLV can advertise up to 127 MTs. It is announced in IiHs and LSP fragment 0, and can occur multiple times. The resulting MT set SHOULD be the union of all the MT TLV occurrences in the packet. Any other IS-IS PDU occurrence of this TLV MUST be ignored. Lack of MT TLV in hellos and fragment zero LSPs MUST be interpreted as participation of the advertising interface or router in MT ID #0 only. If a router advertises MT TLV, it has to advertise all the MTs it participates in, specifically including topology ID #0 also.

- ipv6-interface-addresses

ISIS TLV 232. IPv6 Interface Address TLV that maps directly to the IP Interface Address TLV in [RFC1195]. We necessarily modify the contents to be 0-15 16-octet IPv6 interface addresses instead of 0-63 4-octet IPv4 interface addresses

- mt-ipv4-reachability

ISIS TLV 235. TLV is aligned with extended IP reachability TLV type 135 beside an additional two bytes in front to indicate MT membership

- ipv6-reachability

ISIS TLV 236. The IPv6 Reachability TLV describes network reachability through the specification of a routing prefix, metric information, a bit to indicate if the prefix is being advertised down from a higher level, a bit to indicate if the prefix is being distributed from another routing protocol, and OPTIONALLY the existence of Sub-TLVs to allow for later extension.

- mt-ipv6-reachability

ISIS TLV 237. TLV is aligned with IPv6 Reachability TLV type 236 beside an additional two bytes in front to indicate MT membership.

- router-capability

ISIS TLV 242. IS-IS TLV named CAPABILITY, formed of multiple sub-TLVs, which allows a router to announce its capabilities within an IS-IS level or the entire routing domain.

Configurable

False

Platforms

7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

area-address

Description	This container defines TLV 1.
Context	network-instance name <i>string</i> protocols isis instance name <i>string</i> level level-number <i>number</i> link-state-database lsp lsp-id <i>string</i> tlvs tlv type identityref area-address
Tree	area-address
Configurable	False
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

address *string*

Description	Area address(es) of the IS. Set of manual area addresses of this IS.
Context	network-instance name <i>string</i> protocols isis instance name <i>string</i> level level-number <i>number</i> link-state-database lsp lsp-id <i>string</i> tlvs tlv type identityref area-address address <i>string</i>
Tree	address
String Length	2 to 38
Configurable	False
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

authentication

Description	This container defines authentication information of the node.
Context	network-instance name <i>string</i> protocols isis instance name <i>string</i> level level-number <i>number</i> link-state-database lsp lsp-id <i>string</i> tlvs tlv type identityref authentication
Tree	authentication
Configurable	False
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

authentication-key *string*

Description	Authentication key to be used.
Context	network-instance name <i>string</i> protocols isis instance name <i>string</i> level level-number <i>number</i> link-state-database lsp lsp-id <i>string</i> tlvs tlv type <i>identityref</i> authentication authentication-key <i>string</i>
Tree	authentication-key
Configurable	False
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

crypto-type *keyword*

Description	Enter the crypto-type context
Context	network-instance name <i>string</i> protocols isis instance name <i>string</i> level level-number <i>number</i> link-state-database lsp lsp-id <i>string</i> tlvs tlv type <i>identityref</i> authentication crypto-type <i>keyword</i>
Tree	crypto-type
Options	<ul style="list-style-type: none"> • cleartext • crypto • hmac-md5
Configurable	False
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

extended-ipv4-reachability

Description	This container defines list of IPv4 extended reachability information.
Context	network-instance name <i>string</i> protocols isis instance name <i>string</i> level level-number <i>number</i> link-state-database lsp lsp-id <i>string</i> tlvs tlv type <i>identityref</i> extended-ipv4-reachability
Tree	extended-ipv4-reachability
Configurable	False
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

prefixes

Description	This container describes IS prefixes.
Context	network-instance name <i>string</i> protocols isis instance name <i>string</i> level level-number <i>number</i> link-state-database lsp lsp-id <i>string</i> tlvs tlv type identityref extended-ipv4-reachability prefixes
Tree	prefixes
Configurable	False
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

prefix [prefix](#) *string*

Description	This list describes IPv4 extended prefixes and attributes.
Context	network-instance name <i>string</i> protocols isis instance name <i>string</i> level level-number <i>number</i> link-state-database lsp lsp-id <i>string</i> tlvs tlv type identityref extended-ipv4-reachability prefixes prefix prefix <i>string</i>
Tree	prefix
Configurable	False
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

prefix *string*

Description	IPv4 prefix contained within extended reachability TLVs.
Context	network-instance name <i>string</i> protocols isis instance name <i>string</i> level level-number <i>number</i> link-state-database lsp lsp-id <i>string</i> tlvs tlv type identityref extended-ipv4-reachability prefixes prefix prefix <i>string</i>
Configurable	False
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

metric *number*

Description	ISIS metric value.
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Context	network-instance name <i>string</i> protocols isis instance name <i>string</i> level level-number <i>number</i> link-state-database lsp lsp-id <i>string</i> tlvs tlv type <i>identityref</i> extended-ipv4-reachability prefixes prefix prefix <i>string</i> metric <i>number</i>
Tree	metric
Range	0 to 16777215
Configurable	False
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

s-bit *boolean*

Description	The Sub-TLV present bit. If UNSET, the octets of Sub-TLVs are not present. Otherwise, the bit is set and the octet following the prefix will contain the length of the Sub-TLV portion of the structure.
Context	network-instance name <i>string</i> protocols isis instance name <i>string</i> level level-number <i>number</i> link-state-database lsp lsp-id <i>string</i> tlvs tlv type <i>identityref</i> extended-ipv4-reachability prefixes prefix prefix <i>string</i> s-bit <i>boolean</i>
Tree	s-bit
Configurable	False
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

subtlvs

Description	This container describes IS prefix sub-TLVs.
Context	network-instance name <i>string</i> protocols isis instance name <i>string</i> level level-number <i>number</i> link-state-database lsp lsp-id <i>string</i> tlvs tlv type <i>identityref</i> extended-ipv4-reachability prefixes prefix prefix <i>string</i> subtlvs
Tree	subtlvs
Configurable	False
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

subtlv *type identityref*

Description	List of subTLV types in the LSDB for the specified TLV.
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Context	network-instance name <i>string</i> protocols isis instance name <i>string</i> level level-number <i>number</i> link-state-database lsp lsp-id <i>string</i> tlvs tlv type <i>identityref</i> extended-ipv4-reachability prefixes prefix prefix <i>string</i> subtlvs subtlv type <i>identityref</i>
Tree	subtlv
Configurable	False
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b
type <i>identityref</i>	
Description	The type of subTLV being described. The type of subTLV is expressed as a canonical name.
Context	network-instance name <i>string</i> protocols isis instance name <i>string</i> level level-number <i>number</i> link-state-database lsp lsp-id <i>string</i> tlvs tlv type <i>identityref</i> extended-ipv4-reachability prefixes prefix prefix <i>string</i> subtlvs subtlv type <i>identityref</i>
Options	<ul style="list-style-type: none"> • is-reachability-subtlvs-type Base identity for an ISIS TLV 22, 23, 222, 223, 141 SUB-TLV type. • ip-reachability-subtlvs-type Base identity for an ISIS TLV 135, 235, 236, 237 SUB-TLV type. • router-capability-subtlvs-type Base identity for an ISIS TLV 242 SUB-TLV type.
Configurable	False
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b
flags	
Description	This container defines sub-TLV 4.
Context	network-instance name <i>string</i> protocols isis instance name <i>string</i> level level-number <i>number</i> link-state-database lsp lsp-id <i>string</i> tlvs tlv type <i>identityref</i> extended-ipv4-reachability prefixes prefix prefix <i>string</i> subtlvs subtlv type <i>identityref</i> flags
Tree	flags
Configurable	False
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

flags *keyword*

Description	Additional prefix reachability flags.
Context	network-instance name <i>string</i> protocols isis instance name <i>string</i> level level-number <i>number</i> link-state-database lsp lsp-id <i>string</i> tlvs tlv type identityref extended-ipv4-reachability prefixes prefix prefix <i>string</i> subtlvs subtlv type identityref flags flags <i>keyword</i>
Tree	flags
Options	<ul style="list-style-type: none"> external-flag External prefix flag. Set if the prefix has been redistributed from another protocol. This includes the case where multiple virtual routers are supported and the source of the redistributed prefix is another IS-IS instance. readvertisement-flag Readvertisement flag. Set when the prefix has been leaked from one level to another (upwards or downwards). node-flag Node flag. Set when the prefix identifies the advertising router, i.e., the prefix is a host prefix advertising a globally reachable address typically associated with a loopback address. elc-flag Elc flag. Set for local host prefix of the originating node if it supports ELC on all interfaces
Configurable	False
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

type *identityref*

Description	The type of subTLV being described. The type of subTLV is expressed as a canonical name.
Context	network-instance name <i>string</i> protocols isis instance name <i>string</i> level level-number <i>number</i> link-state-database lsp lsp-id <i>string</i> tlvs tlv type identityref extended-ipv4-reachability prefixes prefix prefix <i>string</i> subtlvs subtlv type identityref flags type identityref
Tree	type
Options	<ul style="list-style-type: none"> is-reachability-subtlvs-type Base identity for an ISIS TLV 22, 23, 222, 223, 141 SUB-TLV type. ip-reachability-subtlvs-type Base identity for an ISIS TLV 135, 235, 236, 237 SUB-TLV type.

- router-capability-subtlvs-type
Base identity for an ISIS TLV 242 SUB-TLV type.

Configurable

False

Platforms

7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

ipv4-source-router-id**Description**

This container defines sub-TLV 11.

Context

[network-instance name](#) *string* [protocols isis instance name](#) *string* [level level-number](#) *number* [link-state-database lsp lsp-id](#) *string* [tlvs tlv type identityref extended-ipv4-reachability prefixes prefix prefix](#) *string* [subtlvs subtlv type identityref ipv4-source-router-id](#)

Tree[ipv4-source-router-id](#)**Configurable**

False

Platforms

7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

router-id *string***Description**

IPv4 Source router ID address. In cases where the advertisement is an identifier for the advertising router (e.g., with the N-flag set in the Prefix Attribute Flags sub-TLV), it may be useful for other routers to know the source of the advertisement. When reachability advertisement is leaked from one level to another, Router ID advertised is always the Router ID of the IS-IS instance that originated the advertisement. This would be true even if the prefix had been learned from another protocol.

Context

[network-instance name](#) *string* [protocols isis instance name](#) *string* [level level-number](#) *number* [link-state-database lsp lsp-id](#) *string* [tlvs tlv type identityref extended-ipv4-reachability prefixes prefix prefix](#) *string* [subtlvs subtlv type identityref ipv4-source-router-id router-id](#) *string*

Tree[router-id](#)**Configurable**

False

Platforms

7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

type *identityref***Description**

The type of subTLV being described. The type of subTLV is expressed as a canonical name.

Context	network-instance name <i>string</i> protocols isis instance name <i>string</i> level level-number <i>number</i> link-state-database lsp lsp-id <i>string</i> tlvs tlv type <i>identityref</i> extended-ipv4-reachability prefixes prefix prefix <i>string</i> subtlvs subtlv type <i>identityref</i> ipv4-source-router-id type <i>identityref</i>
Tree	type
Options	<ul style="list-style-type: none"> • is-reachability-subtlvs-type Base identity for an ISIS TLV 22, 23, 222, 223, 141 SUB-TLV type. • ip-reachability-subtlvs-type Base identity for an ISIS TLV 135, 235, 236, 237 SUB-TLV type. • router-capability-subtlvs-type Base identity for an ISIS TLV 242 SUB-TLV type.
Configurable	False
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b
ipv6-source-router-id	
Description	This container defines sub-TLV 12.
Context	network-instance name <i>string</i> protocols isis instance name <i>string</i> level level-number <i>number</i> link-state-database lsp lsp-id <i>string</i> tlvs tlv type <i>identityref</i> extended-ipv4-reachability prefixes prefix prefix <i>string</i> subtlvs subtlv type <i>identityref</i> ipv6-source-router-id
Tree	ipv6-source-router-id
Configurable	False
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b
router-id <i>string</i>	
Description	IPv6 Source router ID address. In cases where the advertisement is an identifier for the advertising router (e.g., with the N-flag set in the Prefix Attribute Flags sub-TLV), it may be useful for other routers to know the source of the advertisement. When reachability advertisement is leaked from one level to another, Router ID advertised is always the Router ID of the ISIS instance that originated the advertisement. This would be true even if the prefix had been learned from another protocol.
Context	network-instance name <i>string</i> protocols isis instance name <i>string</i> level level-number <i>number</i> link-state-database lsp lsp-id <i>string</i> tlvs tlv type <i>identityref</i> extended-ipv4-reachability prefixes prefix prefix <i>string</i> subtlvs subtlv type <i>identityref</i> ipv6-source-router-id router-id <i>string</i>

Tree	router-id
Configurable	False
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b
type identityref	
Description	The type of subTLV being described. The type of subTLV is expressed as a canonical name.
Context	network-instance name string protocols isis instance name string level level-number number link-state-database lsp lsp-id string tlvs tlv type identityref extended-ipv4-reachability prefixes prefix prefix string subtlvs subtlv type identityref ipv6-source-router-id type identityref
Tree	type
Options	<ul style="list-style-type: none"> • is-reachability-subtlvs-type Base identity for an ISIS TLV 22, 23, 222, 223, 141 SUB-TLV type. • ip-reachability-subtlvs-type Base identity for an ISIS TLV 135, 235, 236, 237 SUB-TLV type. • router-capability-subtlvs-type Base identity for an ISIS TLV 242 SUB-TLV type.
Configurable	False
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b
prefix-sids	
Description	This container defines segment routing extensions for prefixes.
Context	network-instance name string protocols isis instance name string level level-number number link-state-database lsp lsp-id string tlvs tlv type identityref extended-ipv4-reachability prefixes prefix prefix string subtlvs subtlv type identityref prefix-sids
Tree	prefix-sids
Configurable	False
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

prefix-sid *value number*

Description	Prefix Segment-ID list. IGP-Prefix Segment is an IGP segment attached to an IGP prefix. An IGP-Prefix Segment is global (unless explicitly advertised otherwise) within the SR/IGP domain.
Context	network-instance name <i>string</i> protocols isis instance name <i>string</i> level level-number <i>number</i> link-state-database lsp lsp-id <i>string</i> tlvs tlv type <i>identityref</i> extended-ipv4-reachability prefixes prefix prefix <i>string</i> subtlvs subtlv type <i>identityref</i> prefix-sids prefix-sid <i>value</i> <i>number</i>
Tree	prefix-sid
Configurable	False
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

value *number*

Description	IGP Prefix-SID value.
Context	network-instance name <i>string</i> protocols isis instance name <i>string</i> level level-number <i>number</i> link-state-database lsp lsp-id <i>string</i> tlvs tlv type <i>identityref</i> extended-ipv4-reachability prefixes prefix prefix <i>string</i> subtlvs subtlv type <i>identityref</i> prefix-sids prefix-sid <i>value</i> <i>number</i>
Configurable	False
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

algorithm *number*

Description	Prefix-SID algorithm to be used for path computation.
Context	network-instance name <i>string</i> protocols isis instance name <i>string</i> level level-number <i>number</i> link-state-database lsp lsp-id <i>string</i> tlvs tlv type <i>identityref</i> extended-ipv4-reachability prefixes prefix prefix <i>string</i> subtlvs subtlv type <i>identityref</i> prefix-sids prefix-sid <i>value</i> <i>number</i> algorithm <i>number</i>
Tree	algorithm
Configurable	False
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

flags *keyword*

Description	Flags associated with Prefix Segment-ID.
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Context	network-instance name <i>string</i> protocols isis instance name <i>string</i> level level-number <i>number</i> link-state-database lsp lsp-id <i>string</i> tlvs tlv type identityref extended-ipv4-reachability prefixes prefix prefix <i>string</i> subtlvs subtlv type identityref prefix-sids prefix-sid value <i>number</i> flags <i>keyword</i>
Tree	flags
Options	<ul style="list-style-type: none"> • readvertisement Readvertisement flag. When set, the prefix to which this Prefix-SID is attached, has been propagated by the router either from another level or from redistribution. • node Node flag. When set, the Prefix-SID refers to the router identified by the prefix. Typically, the N-Flag is set on Prefix-SIDs attached to a router loopback address. • no-php Penultimate-Hop-Popping flag. When set, then the penultimate hop MUST NOT pop the Prefix-SID before delivering the packet to the node that advertised the Prefix-SID. • explicit-null Explicit-Null flag. When set, any upstream neighbor of the Prefix-SID originator MUST replace the Prefix-SID with a Prefix-SID having an Explicit-NULL value (0 for IPv4 and 2 for IPv6) before forwarding the packet. • value Value flag. When set, the Prefix-SID carries a value (instead of an index). By default the flag is UNSET. • local Local flag. When set, the value/index carried by the Prefix-SID has local significance. By default the flag is UNSET.
Configurable	False
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b
tag	
Description	This container defines sub-TLV 1.
Context	network-instance name <i>string</i> protocols isis instance name <i>string</i> level level-number <i>number</i> link-state-database lsp lsp-id <i>string</i> tlvs tlv type identityref extended-ipv4-reachability prefixes prefix prefix <i>string</i> subtlvs subtlv type identityref tag
Tree	tag
Configurable	False

Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b
tag32 number	
Description	List of 32-bit tags associated with the prefix. Example uses of these tags include carrying BGP standard (or extended) communities and controlling redistribution between levels and areas, different routing protocols, or multiple instances of IS-IS running on the same router.
Context	network-instance name string protocols isis instance name string level level-number number link-state-database lsp lsp-id string tlvs tlv type identityref extended-ipv4-reachability prefixes prefix prefix string subtlvs subtlv type identityref tag tag32 number
Tree	tag32
Configurable	False
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b
tag64	
Description	This container defines sub-TLV 2.
Context	network-instance name string protocols isis instance name string level level-number number link-state-database lsp lsp-id string tlvs tlv type identityref extended-ipv4-reachability prefixes prefix prefix string subtlvs subtlv type identityref tag64
Tree	tag64
Configurable	False
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b
tag64 number	
Description	List of 64-bit tags associated with the prefix. Example uses of these tags include carrying BGP standard (or extended) communities and controlling redistribution between levels and areas, different routing protocols, or multiple instances of IS-IS running on the same router.
Context	network-instance name string protocols isis instance name string level level-number number link-state-database lsp lsp-id string tlvs tlv type identityref extended-ipv4-reachability prefixes prefix prefix string subtlvs subtlv type identityref tag64 tag64 number
Tree	tag64

Configurable	False
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

undefined-subtlvs

Description	This container describes undefined ISIS TLVs.
Context	network-instance name string protocols isis instance name string level level-number number link-state-database lsp lsp-id string tlvs tlv type identityref extended-ipv4-reachability prefixes prefix prefix string undefined-subtlvs
Tree	undefined-subtlvs
Configurable	False
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

undefined-subtlv [type number](#)

Description	Sub-TLVs that are not defined in the model or not recognised by system.
Context	network-instance name string protocols isis instance name string level level-number number link-state-database lsp lsp-id string tlvs tlv type identityref extended-ipv4-reachability prefixes prefix prefix string undefined-subtlvs undefined-subtlv type number
Tree	undefined-subtlv
Configurable	False
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

[type number](#)

Description	TLV Type.
Context	network-instance name string protocols isis instance name string level level-number number link-state-database lsp lsp-id string tlvs tlv type identityref extended-ipv4-reachability prefixes prefix prefix string undefined-subtlvs undefined-subtlv type number
Configurable	False
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

length *number*

Description	TLV length.
Context	network-instance name <i>string</i> protocols isis instance name <i>string</i> level level-number <i>number</i> link-state-database lsp lsp-id <i>string</i> tlvs tlv type identityref extended-ipv4-reachability prefixes prefix prefix <i>string</i> undefined-subtlvs undefined-subtlv type <i>number</i> length <i>number</i>
Tree	length
Configurable	False
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

value *binary*

Description	TLV value.
Context	network-instance name <i>string</i> protocols isis instance name <i>string</i> level level-number <i>number</i> link-state-database lsp lsp-id <i>string</i> tlvs tlv type identityref extended-ipv4-reachability prefixes prefix prefix <i>string</i> undefined-subtlvs undefined-subtlv type <i>number</i> value <i>binary</i>
Tree	value
Configurable	False
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

up-down *boolean*

Description	The up/down bit. Set if a prefix is advertised from a higher level to a lower level (e.g., level 2 to level 1), indicating that the prefix has traveled down the hierarchy. Prefixes that have the up/down bit set may only be advertised down the hierarchy, i.e., to lower levels. When a prefix is first injected into IS-IS, the bit is UNSET.
Context	network-instance name <i>string</i> protocols isis instance name <i>string</i> level level-number <i>number</i> link-state-database lsp lsp-id <i>string</i> tlvs tlv type identityref extended-ipv4-reachability prefixes prefix prefix <i>string</i> up-down <i>boolean</i>
Tree	up-down
Configurable	False
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

extended-is-reachability

Description	This container defines list of ISIS extended reachability neighbors.
Context	network-instance name <i>string</i> protocols isis instance name <i>string</i> level level-number <i>number</i> link-state-database lsp lsp-id <i>string</i> tlvs tlv type identityref extended-is-reachability
Tree	extended-is-reachability
Configurable	False
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

neighbors

Description	This container describes IS neighbors.
Context	network-instance name <i>string</i> protocols isis instance name <i>string</i> level level-number <i>number</i> link-state-database lsp lsp-id <i>string</i> tlvs tlv type identityref extended-is-reachability neighbors
Tree	neighbors
Configurable	False
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

neighbor [system-id](#) *string*

Description	This list describes ISIS extended neighbors and reachability attributes.
Context	network-instance name <i>string</i> protocols isis instance name <i>string</i> level level-number <i>number</i> link-state-database lsp lsp-id <i>string</i> tlvs tlv type identityref extended-is-reachability neighbors neighbor system-id <i>string</i>
Tree	neighbor
Configurable	False
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

system-id *string*

Description	System-id of the neighbor.
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Context	network-instance name <i>string</i> protocols isis instance name <i>string</i> level level-number <i>number</i> link-state-database lsp lsp-id <i>string</i> tlvs tlv type identityref extended-is-reachability neighbors neighbor system-id <i>string</i>
String Length	14
Configurable	False
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

instances

Description	This list contains all instances of an adjacency between the originating IS and the remote IS. Multiple instances are used where there are parallel adjacencies between two systems.
Context	network-instance name <i>string</i> protocols isis instance name <i>string</i> level level-number <i>number</i> link-state-database lsp lsp-id <i>string</i> tlvs tlv type identityref extended-is-reachability neighbors neighbor system-id <i>string</i> instances
Tree	instances
Configurable	False
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

instance *id number*

Description	Instance of the TLV to the remote IS neighbor.
Context	network-instance name <i>string</i> protocols isis instance name <i>string</i> level level-number <i>number</i> link-state-database lsp lsp-id <i>string</i> tlvs tlv type identityref extended-is-reachability neighbors neighbor system-id <i>string</i> instances instance id <i>number</i>
Tree	instance
Configurable	False
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

id number

Description	Unique identifier for the instance of the TLV for the IS neighbor. The instance ID is not required to be consistent across readvertisements of the LSP.
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Context	network-instance name <i>string</i> protocols isis instance name <i>string</i> level level-number <i>number</i> link-state-database lsp lsp-id <i>string</i> tlvs tlv type identityref extended-is-reachability neighbors neighbor system-id <i>string</i> instances instance id <i>number</i>
Configurable	False
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b
metric number	
Description	Metric value.
Context	network-instance name <i>string</i> protocols isis instance name <i>string</i> level level-number <i>number</i> link-state-database lsp lsp-id <i>string</i> tlvs tlv type identityref extended-is-reachability neighbors neighbor system-id <i>string</i> instances instance id <i>number</i> metric number
Tree	metric
Range	1 to 16777215
Configurable	False
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b
subtlvs	
Description	This container describes IS Neighbor sub-TLVs.
Context	network-instance name <i>string</i> protocols isis instance name <i>string</i> level level-number <i>number</i> link-state-database lsp lsp-id <i>string</i> tlvs tlv type identityref extended-is-reachability neighbors neighbor system-id <i>string</i> instances instance id <i>number</i> subtlvs
Tree	subtlvs
Configurable	False
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b
subtlv type identityref	
Description	List of subTLV types in the LSDB for the specified TLV.
Context	network-instance name <i>string</i> protocols isis instance name <i>string</i> level level-number <i>number</i> link-state-database lsp lsp-id <i>string</i> tlvs tlv type identityref extended-is-reachability neighbors neighbor system-id <i>string</i> instances instance id <i>number</i> subtlvs subtlv type identityref

Tree	subtlv
Configurable	False
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b
type <i>identityref</i>	
Description	The type of subTLV being described. The type of subTLV is expressed as a canonical name.
Context	network-instance name <i>string</i> protocols isis instance name <i>string</i> level level-number <i>number</i> link-state-database lsp lsp-id <i>string</i> tlvs tlv type <i>identityref</i> extended-is-reachability neighbors neighbor system-id <i>string</i> instances instance id <i>number</i> subtlvs subtlv type <i>identityref</i>
Options	<ul style="list-style-type: none"> • is-reachability-subtlvs-type Base identity for an ISIS TLV 22, 23, 222, 223, 141 SUB-TLV type. • ip-reachability-subtlvs-type Base identity for an ISIS TLV 135, 235, 236, 237 SUB-TLV type. • router-capability-subtlvs-type Base identity for an ISIS TLV 242 SUB-TLV type.
Configurable	False
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b
adjacency-sids	
Description	This container defines segment routing adjacency SIDs.
Context	network-instance name <i>string</i> protocols isis instance name <i>string</i> level level-number <i>number</i> link-state-database lsp lsp-id <i>string</i> tlvs tlv type <i>identityref</i> extended-is-reachability neighbors neighbor system-id <i>string</i> instances instance id <i>number</i> subtlvs subtlv type <i>identityref</i> adjacency-sids
Tree	adjacency-sids
Configurable	False
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

adjacency-sid *value number*

Description	Adjacency Segment-IDs List. An IGP-Adjacency Segment is an IGP segment attached to a unidirectional adjacency or a set of unidirectional adjacencies. By default, an IGP- Adjacency Segment is local to the node which advertises it.
Context	network-instance name <i>string</i> protocols isis instance name <i>string</i> level level-number <i>number</i> link-state-database lsp lsp-id <i>string</i> tlvs tlv type identityref extended-is-reachability neighbors neighbor system-id <i>string</i> instances instance id <i>number</i> subtlvs subtlv type identityref adjacency-sids adjacency-sid value <i>number</i>
Tree	adjacency-sid
Configurable	False
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

value *number*

Description	Adjacency-SID value.
Context	network-instance name <i>string</i> protocols isis instance name <i>string</i> level level-number <i>number</i> link-state-database lsp lsp-id <i>string</i> tlvs tlv type identityref extended-is-reachability neighbors neighbor system-id <i>string</i> instances instance id <i>number</i> subtlvs subtlv type identityref adjacency-sids adjacency-sid value <i>number</i>
Configurable	False
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

flags *keyword*

Description	Flags associated with Adj-Segment-ID.
Context	network-instance name <i>string</i> protocols isis instance name <i>string</i> level level-number <i>number</i> link-state-database lsp lsp-id <i>string</i> tlvs tlv type identityref extended-is-reachability neighbors neighbor system-id <i>string</i> instances instance id <i>number</i> subtlvs subtlv type identityref adjacency-sids adjacency-sid value <i>number</i> flags <i>keyword</i>
Tree	flags
Options	<ul style="list-style-type: none"> address-family <p>Address-family flag. When unset, the Adj-SID refers to an adjacency with outgoing IPv4 encapsulation. If set then the Adj-SID refers to an adjacency with outgoing IPv6 encapsulation.</p>

	<ul style="list-style-type: none"> • backup Backup flag. When set, the Adj-SID refers to an adjacency being protected (e.g.: using IPFRR or MPLS-FRR). • value Value flag. When set, the SID carries a value (instead of an index). By default the flag is SET. • local Local flag. When set, the value/index carried by the SID has local significance. By default the flag is SET. • set Set flag. When set, the S-Flag indicates that the Adj-SID refers to a set of adjacencies.
Configurable	False
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b
weight number	
Description	Value that represents the weight of the Adj-SID for the purpose of load balancing.
Context	network-instance name string protocols isis instance name string level level-number number link-state-database lsp lsp-id string tlvs tlv type identityref extended-is-reachability neighbors neighbor system-id string instances instance id number subtlvs subtlv type identityref adjacency-sids adjacency-sid value number weight number
Tree	weight
Configurable	False
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b
admin-group	
Description	This container defines sub-TLV 3.
Context	network-instance name string protocols isis instance name string level level-number number link-state-database lsp lsp-id string tlvs tlv type identityref extended-is-reachability neighbors neighbor system-id string instances instance id number subtlvs subtlv type identityref admin-group
Tree	admin-group
Configurable	False

Platforms 7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

admin-group *number*

Description The administrative group sub-TLV contains a 4-octet bit mask assigned by the network administrator

Each set bit corresponds to one administrative group assigned to the interface. By convention, the least significant bit is referred to as group 0, and the most significant bit is referred to as group 31.

Context [network-instance name string protocols isis instance name string level level-number number link-state-database lsp lsp-id string tlvs tlv type identityref extended-is-reachability neighbors neighbor system-id string instances instance id number subtlvs subtlv type identityref admin-group admin-group number](#)

Tree [admin-group](#)

Configurable False

Platforms 7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

application-specific-link-attributes

Description Application Specific Link Attributes. Sub-TLV = 16.

Context [network-instance name string protocols isis instance name string level level-number number link-state-database lsp lsp-id string tlvs tlv type identityref extended-is-reachability neighbors neighbor system-id string instances instance id number subtlvs subtlv type identityref application-specific-link-attributes](#)

Tree [application-specific-link-attributes](#)

Configurable False

Platforms 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

legacy *boolean*

Description When the legacy flag is set, all of the applications specified in the bit mask MUST use the legacy advertisements for the corresponding link found in TLVs 22, 23, 25, 141, 222, and 223, in TLV 138, or in TLV 139 as appropriate.

Context [network-instance name string protocols isis instance name string level level-number number link-state-database lsp lsp-id string tlvs tlv type identityref extended-is-reachability neighbors neighbor system-id string instances](#)

	instance id <i>number</i> subtlvs subtlv type identityref application-specific-link-attributes legacy <i>boolean</i>
Tree	legacy
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b
loop-free-alternate <i>boolean</i>	
Description	F bit is set in the Standard Application Identifier Bit Mask
Context	network-instance name <i>string</i> protocols isis instance name <i>string</i> level level-number <i>number</i> link-state-database lsp lsp-id <i>string</i> tlvs tlv type identityref extended-is-reachability neighbors neighbor system-id <i>string</i> instances instance id <i>number</i> subtlvs subtlv type identityref application-specific-link-attributes loop-free-alternate <i>boolean</i>
Tree	loop-free-alternate
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b
rsvp-te <i>boolean</i>	
Description	R bit is set in the Standard Application Identifier Bit Mask
Context	network-instance name <i>string</i> protocols isis instance name <i>string</i> level level-number <i>number</i> link-state-database lsp lsp-id <i>string</i> tlvs tlv type identityref extended-is-reachability neighbors neighbor system-id <i>string</i> instances instance id <i>number</i> subtlvs subtlv type identityref application-specific-link-attributes rsvp-te <i>boolean</i>
Tree	rsvp-te
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b
sr-policy <i>boolean</i>	
Description	S bit is set in the Standard Application Identifier Bit Mask
Context	network-instance name <i>string</i> protocols isis instance name <i>string</i> level level-number <i>number</i> link-state-database lsp lsp-id <i>string</i> tlvs tlv type identityref extended-is-reachability neighbors neighbor system-id <i>string</i> instances instance id <i>number</i> subtlvs subtlv type identityref application-specific-link-attributes sr-policy <i>boolean</i>
Tree	sr-policy
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

sub-sub-tlvs

Description	Enter the sub-sub-tlvs context
Context	network-instance name <i>string</i> protocols isis instance name <i>string</i> level level-number <i>number</i> link-state-database lsp lsp-id <i>string</i> tlvs tlv type <i>identityref</i> extended-is-reachability neighbors neighbor system-id <i>string</i> instances instance id <i>number</i> subtlvs subtlv type <i>identityref</i> application-specific-link-attributes sub-sub-tlvs
Tree	sub-sub-tlvs
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

admin-group *number*

Description	A bit mask representing the administrative groups to which the interface belongs. Sub-Sub-TLV = 3.
Context	network-instance name <i>string</i> protocols isis instance name <i>string</i> level level-number <i>number</i> link-state-database lsp lsp-id <i>string</i> tlvs tlv type <i>identityref</i> extended-is-reachability neighbors neighbor system-id <i>string</i> instances instance id <i>number</i> subtlvs subtlv type <i>identityref</i> application-specific-link-attributes sub-sub-tlvs admin-group <i>number</i>
Tree	admin-group
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

maximum-link-bandwidth *number*

Description	The (LAG aware) bandwidth of the interface to the neighbor. Sub-Sub-TLV = 9.
Context	network-instance name <i>string</i> protocols isis instance name <i>string</i> level level-number <i>number</i> link-state-database lsp lsp-id <i>string</i> tlvs tlv type <i>identityref</i> extended-is-reachability neighbors neighbor system-id <i>string</i> instances instance id <i>number</i> subtlvs subtlv type <i>identityref</i> application-specific-link-attributes sub-sub-tlvs maximum-link-bandwidth <i>number</i>
Tree	maximum-link-bandwidth
Units	bytes-per-second
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

min-max-unidirectional-link-delay

Description	The minimum and maximum delay between two directly connected IS-IS neighbors.
Context	network-instance name <i>string</i> protocols isis instance name <i>string</i> level level-number <i>number</i> link-state-database lsp lsp-id <i>string</i> tlvs tlv type <i>identityref</i> extended-is-reachability neighbors neighbor system-id <i>string</i> instances instance id <i>number</i> subtlvs subtlv type <i>identityref</i> application-specific-link-attributes sub-sub-tlvs min-max-unidirectional-link-delay
Tree	min-max-unidirectional-link-delay
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

anomolous *boolean*

Description	If the A bit is cleared, the values represent steady-state link performance.
Context	network-instance name <i>string</i> protocols isis instance name <i>string</i> level level-number <i>number</i> link-state-database lsp lsp-id <i>string</i> tlvs tlv type <i>identityref</i> extended-is-reachability neighbors neighbor system-id <i>string</i> instances instance id <i>number</i> subtlvs subtlv type <i>identityref</i> application-specific-link-attributes sub-sub-tlvs min-max-unidirectional-link-delay anomolous <i>boolean</i>
Tree	anomolous
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

max-delay *number*

Description	Maximum forward-path delay (from the advertising router to the remote neighbor)
Context	network-instance name <i>string</i> protocols isis instance name <i>string</i> level level-number <i>number</i> link-state-database lsp lsp-id <i>string</i> tlvs tlv type <i>identityref</i> extended-is-reachability neighbors neighbor system-id <i>string</i> instances instance id <i>number</i> subtlvs subtlv type <i>identityref</i> application-specific-link-attributes sub-sub-tlvs min-max-unidirectional-link-delay max-delay <i>number</i>
Tree	max-delay
Units	microseconds
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

min-delay *number*

Description	Minimum forward-path delay (from the advertising router to the remote neighbor)
Context	network-instance name <i>string</i> protocols isis instance name <i>string</i> level level-number <i>number</i> link-state-database lsp lsp-id <i>string</i> tlvs tlv type <i>identityref</i> extended-is-reachability neighbors neighbor system-id <i>string</i> instances instance id <i>number</i> subtlvs subtlv type <i>identityref</i> application-specific-link-attributes sub-sub-tlvs min-max-unidirectional-link-delay min-delay <i>number</i>
Tree	min-delay
Units	microseconds
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

te-default-metric *number*

Description	An administratively assigned metric used as an alternative to the normal SPF metric based (typically) on link bandwidth.
Context	network-instance name <i>string</i> protocols isis instance name <i>string</i> level level-number <i>number</i> link-state-database lsp lsp-id <i>string</i> tlvs tlv type <i>identityref</i> extended-is-reachability neighbors neighbor system-id <i>string</i> instances instance id <i>number</i> subtlvs subtlv type <i>identityref</i> application-specific-link-attributes sub-sub-tlvs te-default-metric <i>number</i>
Tree	te-default-metric
Range	0 to 16777215
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

available-bandwidth

Description	This container defines unidirectional lavailable bandwidth.
Context	network-instance name <i>string</i> protocols isis instance name <i>string</i> level level-number <i>number</i> link-state-database lsp lsp-id <i>string</i> tlvs tlv type <i>identityref</i> extended-is-reachability neighbors neighbor system-id <i>string</i> instances instance id <i>number</i> subtlvs subtlv type <i>identityref</i> available-bandwidth
Tree	available-bandwidth
Configurable	False
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

bandwidth *binary*

Description	The available bandwidth on a link, forwarding adjacency, or bundled link in IEEE floating-point format with units of bytes per second. For a link or forwarding adjacency, available bandwidth is defined to be residual bandwidth minus the measured bandwidth used for the actual forwarding of non-RSVP-TE label switched path packets. For a bundled link, available bandwidth is defined to be the sum of the component link available bandwidths minus the measured bandwidth used for the actual forwarding of non-RSVP-TE label switched path packets. For a bundled link, available bandwidth is defined to be the sum of the component link available bandwidths.
Context	network-instance name <i>string</i> protocols isis instance name <i>string</i> level level-number <i>number</i> link-state-database lsp lsp-id <i>string</i> tlvs tlv type <i>identityref</i> extended-is-reachability neighbors neighbor system-id <i>string</i> instances instance id <i>number</i> subtlvs subtlv type <i>identityref</i> available-bandwidth bandwidth <i>binary</i>
Tree	bandwidth
String Length	4
Units	bytes per second
Configurable	False
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

type *identityref*

Description	The type of subTLV being described. The type of subTLV is expressed as a canonical name.
Context	network-instance name <i>string</i> protocols isis instance name <i>string</i> level level-number <i>number</i> link-state-database lsp lsp-id <i>string</i> tlvs tlv type <i>identityref</i> extended-is-reachability neighbors neighbor system-id <i>string</i> instances instance id <i>number</i> subtlvs subtlv type <i>identityref</i> available-bandwidth type <i>identityref</i>
Tree	type
Options	<ul style="list-style-type: none"> • is-reachability-subtlvs-type Base identity for an ISIS TLV 22, 23, 222, 223, 141 SUB-TLV type. • ip-reachability-subtlvs-type Base identity for an ISIS TLV 135, 235, 236, 237 SUB-TLV type. • router-capability-subtlvs-type Base identity for an ISIS TLV 242 SUB-TLV type.
Configurable	False

Platforms 7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

bandwidth-constraints

Description This container defines bandwidth-constraints. For DS-TE, the existing Maximum Reservable link bandwidth parameter is retained, but its semantics is generalized and interpreted as the aggregate bandwidth constraint across all Class-Types

Context [network-instance name](#) *string* [protocols isis instance name](#) *string* [level level-number](#) *number* [link-state-database lsp lsp-id](#) *string* [tlvs tlv type identityref extended-is-reachability neighbors neighbor system-id](#) *string* [instances instance id](#) *number* [subtlvs subtlv type identityref bandwidth-constraints](#)

Tree [bandwidth-constraints](#)

Configurable False

Platforms 7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

bandwidth-constraint [model-id](#) *number*

Description List of the Bandwidth Constraints sub-TLV instances present in the TLV.

Context [network-instance name](#) *string* [protocols isis instance name](#) *string* [level level-number](#) *number* [link-state-database lsp lsp-id](#) *string* [tlvs tlv type identityref extended-is-reachability neighbors neighbor system-id](#) *string* [instances instance id](#) *number* [subtlvs subtlv type identityref bandwidth-constraints bandwidth-constraint model-id](#) *number*

Tree [bandwidth-constraint](#)

Configurable False

Platforms 7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

[model-id](#) *number*

Description Identifier for the Bandwidth Constraints Model currently in use by the LSR initiating the IGP advertisement.

Context [network-instance name](#) *string* [protocols isis instance name](#) *string* [level level-number](#) *number* [link-state-database lsp lsp-id](#) *string* [tlvs tlv type identityref extended-is-reachability neighbors neighbor system-id](#) *string* [instances instance id](#) *number* [subtlvs subtlv type identityref bandwidth-constraints bandwidth-constraint model-id](#) *number*

Configurable False

Platforms 7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

constraints

Description Constraints contained within the Bandwidth Constraints sub-TLV

Context [network-instance name](#) *string* [protocols isis instance name](#) *string* [level level-number](#) *number* [link-state-database lsp lsp-id](#) *string* [tlvs tlv type identityref extended-is-reachability neighbors neighbor system-id](#) *string* [instances instance id](#) *number* [subtlvs subtlv type identityref bandwidth-constraints bandwidth-constraint model-id](#) *number* [constraints](#)

Tree [constraints](#)

Configurable False

Platforms 7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

constraint [constraint-id](#) *number*

Description List of the constraints within the Bandwidth Constraints sub-TLV. The BC0 level is indicated by the constraint-id leaf being set to 0, with BCN being indicated by constraint-id N.

Context [network-instance name](#) *string* [protocols isis instance name](#) *string* [level level-number](#) *number* [link-state-database lsp lsp-id](#) *string* [tlvs tlv type identityref extended-is-reachability neighbors neighbor system-id](#) *string* [instances instance id](#) *number* [subtlvs subtlv type identityref bandwidth-constraints bandwidth-constraint model-id](#) *number* [constraints constraint constraint-id](#) *number*

Tree [constraint](#)

Configurable False

Platforms 7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

constraint-id *number*

Description Unique reference for the bandwidth constraint level. BC0 is indicated by this leaf being set to zero, with BCN represented by this leaf being set to N.

Context [network-instance name](#) *string* [protocols isis instance name](#) *string* [level level-number](#) *number* [link-state-database lsp lsp-id](#) *string* [tlvs tlv type identityref extended-is-reachability neighbors neighbor system-id](#) *string* [instances instance id](#) *number* [subtlvs subtlv type identityref bandwidth-constraints](#)

	bandwidth-constraint model-id number constraints constraint constraint-id number
Configurable	False
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b
bandwidth binary	
Description	The bandwidth constraint, expressed as a 32-bit IEEE floating point number expressed in bytes per second.
Context	network-instance name string protocols isis instance name string level level-number number link-state-database lsp lsp-id string tlvs tlv type identityref extended-is-reachability neighbors neighbor system-id string instances instance id number subtlvs subtlv type identityref bandwidth-constraints bandwidth-constraint model-id number constraints constraint constraint-id number bandwidth binary
Tree	bandwidth
String Length	4
Units	bytes per second
Configurable	False
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b
extended-admin-group	
Description	This container defines sub-TLV 14.
Context	network-instance name string protocols isis instance name string level level-number number link-state-database lsp lsp-id string tlvs tlv type identityref extended-is-reachability neighbors neighbor system-id string instances instance id number subtlvs subtlv type identityref extended-admin-group
Tree	extended-admin-group
Configurable	False
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b
extended-admin-group number	
Description	The extended-admin-group sub-TLV is used in addition to the Administrative Groups when it is desirable to make more than 32 colors available for advertisement in a network.

Context [network-instance name](#) *string* [protocols isis instance name](#) *string* [level level-number](#) *number* [link-state-database lsp lsp-id](#) *string* [tlvs tlv type](#) *identityref* [extended-is-reachability neighbors neighbor system-id](#) *string* [instances instance id](#) *number* [subtlvs subtlv type](#) *identityref* [extended-admin-group extended-admin-group](#) *number*

Tree [extended-admin-group](#)

Configurable False

Platforms 7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

ipv4-interface-address

Description This container defines sub-TLV 6.

Context [network-instance name](#) *string* [protocols isis instance name](#) *string* [level level-number](#) *number* [link-state-database lsp lsp-id](#) *string* [tlvs tlv type](#) *identityref* [extended-is-reachability neighbors neighbor system-id](#) *string* [instances instance id](#) *number* [subtlvs subtlv type](#) *identityref* [ipv4-interface-address](#)

Tree [ipv4-interface-address](#)

Configurable False

Platforms 7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

address *string*

Description A 4-octet IPv4 address for the interface described by the (main) TLV. This sub-TLV can occur multiple times.

Context [network-instance name](#) *string* [protocols isis instance name](#) *string* [level level-number](#) *number* [link-state-database lsp lsp-id](#) *string* [tlvs tlv type](#) *identityref* [extended-is-reachability neighbors neighbor system-id](#) *string* [instances instance id](#) *number* [subtlvs subtlv type](#) *identityref* [ipv4-interface-address](#) [address](#) *string*

Tree [address](#)

Configurable False

Platforms 7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

ipv4-neighbor-address

Description This container defines sub-TLV 8.

Context	network-instance name <i>string</i> protocols isis instance name <i>string</i> level level-number <i>number</i> link-state-database lsp lsp-id <i>string</i> tlvs tlv type identityref extended-is-reachability neighbors neighbor system-id <i>string</i> instances instance id <i>number</i> subtlvs subtlv type identityref ipv4-neighbor-address
Tree	ipv4-neighbor-address
Configurable	False
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b
address <i>string</i>	
Description	A single IPv4 address for a neighboring router on this link. This sub-TLV can occur multiple times.
Context	network-instance name <i>string</i> protocols isis instance name <i>string</i> level level-number <i>number</i> link-state-database lsp lsp-id <i>string</i> tlvs tlv type identityref extended-is-reachability neighbors neighbor system-id <i>string</i> instances instance id <i>number</i> subtlvs subtlv type identityref ipv4-neighbor-address address <i>string</i>
Tree	address
Configurable	False
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b
ipv6-interface-address	
Description	This container defines sub-TLV 12.
Context	network-instance name <i>string</i> protocols isis instance name <i>string</i> level level-number <i>number</i> link-state-database lsp lsp-id <i>string</i> tlvs tlv type identityref extended-is-reachability neighbors neighbor system-id <i>string</i> instances instance id <i>number</i> subtlvs subtlv type identityref ipv6-interface-address
Tree	ipv6-interface-address
Configurable	False
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b
address <i>string</i>	
Description	Contains a 16-octet IPv6 address for the interface described by the containing Extended IS Reachability TLV. This sub-TLV can occur multiple times.

Context [network-instance name](#) *string* [protocols isis instance name](#) *string* [level level-number](#) *number* [link-state-database lsp lsp-id](#) *string* [tlvs tlv type](#) *identityref* [extended-is-reachability neighbors neighbor system-id](#) *string* [instances instance id](#) *number* [subtlvs subtlv type](#) *identityref* [ipv6-interface-address address](#) *string*

Tree [address](#)

Configurable False

Platforms 7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

ipv6-neighbor-address

Description This container defines sub-TLV 13.

Context [network-instance name](#) *string* [protocols isis instance name](#) *string* [level level-number](#) *number* [link-state-database lsp lsp-id](#) *string* [tlvs tlv type](#) *identityref* [extended-is-reachability neighbors neighbor system-id](#) *string* [instances instance id](#) *number* [subtlvs subtlv type](#) *identityref* [ipv6-neighbor-address address](#) *string*

Tree [ipv6-neighbor-address](#)

Configurable False

Platforms 7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

address *string*

Description Contains a 16-octet IPv6 address for a neighboring router on the link described by the (main) TLV. This sub-TLV can occur multiple times.

Context [network-instance name](#) *string* [protocols isis instance name](#) *string* [level level-number](#) *number* [link-state-database lsp lsp-id](#) *string* [tlvs tlv type](#) *identityref* [extended-is-reachability neighbors neighbor system-id](#) *string* [instances instance id](#) *number* [subtlvs subtlv type](#) *identityref* [ipv6-neighbor-address address](#) *string*

Tree [address](#)

Configurable False

Platforms 7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

lan-adjacency-sids

Description This container defines segment routing LAN adjacency SIDs

Context [network-instance name](#) *string* [protocols isis instance name](#) *string* [level level-number](#) *number* [link-state-database lsp lsp-id](#) *string* [tlvs tlv type](#) *identityref* [extended-is-reachability neighbors neighbor system-id](#) *string* [instances instance id](#) *number* [subtlvs subtlv type](#) *identityref* [lan-adjacency-sids](#)

Tree [lan-adjacency-sids](#)

Configurable False

Platforms 7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

lan-adjacency-sid *value* *number*

Description Adjacency Segment-IDs List. An IGP-Adjacency Segment is an IGP segment attached to a unidirectional adjacency or a set of unidirectional adjacencies. By default, an IGP- Adjacency Segment is local to the node which advertises it.

Context [network-instance name](#) *string* [protocols isis instance name](#) *string* [level level-number](#) *number* [link-state-database lsp lsp-id](#) *string* [tlvs tlv type](#) *identityref* [extended-is-reachability neighbors neighbor system-id](#) *string* [instances instance id](#) *number* [subtlvs subtlv type](#) *identityref* [lan-adjacency-sids lan-adjacency-sid](#) *value* *number*

Tree [lan-adjacency-sid](#)

Configurable False

Platforms 7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

value *number*

Description LAN Adjacency-SID value.

Context [network-instance name](#) *string* [protocols isis instance name](#) *string* [level level-number](#) *number* [link-state-database lsp lsp-id](#) *string* [tlvs tlv type](#) *identityref* [extended-is-reachability neighbors neighbor system-id](#) *string* [instances instance id](#) *number* [subtlvs subtlv type](#) *identityref* [lan-adjacency-sids lan-adjacency-sid](#) *value* *number*

Configurable False

Platforms 7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

flags *keyword*

Description Flags associated with LAN-Adj-Segment-ID.

Context	network-instance name <i>string</i> protocols isis instance name <i>string</i> level level-number <i>number</i> link-state-database lsp lsp-id <i>string</i> tlvs tlv type <i>identityref</i> extended-is-reachability neighbors neighbor system-id <i>string</i> instances instance id <i>number</i> subtlvs subtlv type <i>identityref</i> lan-adjacency-sids lan-adjacency-sid value <i>number</i> flags <i>keyword</i>
Tree	flags
Options	<ul style="list-style-type: none"> • address-family Address-family flag. When unset, the Adj-SID refers to an adjacency with outgoing IPv4 encapsulation. If set then the Adj-SID refers to an adjacency with outgoing IPv6 encapsulation. • backup Backup flag. When set, the Adj-SID refers to an adjacency being protected (e.g.: using IPFRR or MPLS-FRR). • value Value flag. When set, the SID carries a value (instead of an index). By default the flag is SET. • local Local flag. When set, the value/index carried by the SID has local significance. By default the flag is SET. • set Set flag. When set, the S-Flag indicates that the Adj-SID refers to a set of adjacencies.
Configurable	False
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b
neighbor-id <i>string</i>	
Description	System ID of the neighbor associated with the LAN- Adj-Segment-ID value.
Context	network-instance name <i>string</i> protocols isis instance name <i>string</i> level level-number <i>number</i> link-state-database lsp lsp-id <i>string</i> tlvs tlv type <i>identityref</i> extended-is-reachability neighbors neighbor system-id <i>string</i> instances instance id <i>number</i> subtlvs subtlv type <i>identityref</i> lan-adjacency-sids lan-adjacency-sid value <i>number</i> neighbor-id <i>string</i>
Tree	neighbor-id
String Length	14
Configurable	False
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

weight *number*

Description	Value that represents the weight of the Adj-SID for the purpose of load balancing.
Context	network-instance name <i>string</i> protocols isis instance name <i>string</i> level level-number <i>number</i> link-state-database lsp lsp-id <i>string</i> tlvs tlv type <i>identityref</i> extended-is-reachability neighbors neighbor system-id <i>string</i> instances instance id <i>number</i> subtlvs subtlv type <i>identityref</i> lan-adjacency-sids lan-adjacency-sid value <i>number</i> weight <i>number</i>
Tree	weight
Configurable	False
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

link-attributes

Description	This container defines link-attributes.
Context	network-instance name <i>string</i> protocols isis instance name <i>string</i> level level-number <i>number</i> link-state-database lsp lsp-id <i>string</i> tlvs tlv type <i>identityref</i> extended-is-reachability neighbors neighbor system-id <i>string</i> instances instance id <i>number</i> subtlvs subtlv type <i>identityref</i> link-attributes
Tree	link-attributes
Configurable	False
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

local-protection *keyword*

Description	Link local-protection attributes.
Context	network-instance name <i>string</i> protocols isis instance name <i>string</i> level level-number <i>number</i> link-state-database lsp lsp-id <i>string</i> tlvs tlv type <i>identityref</i> extended-is-reachability neighbors neighbor system-id <i>string</i> instances instance id <i>number</i> subtlvs subtlv type <i>identityref</i> link-attributes local-protection <i>keyword</i>
Tree	local-protection
Options	<ul style="list-style-type: none"> local-protection If set, local protection is available for the link. link-excluded If set, the link is excluded from local protection.

Configurable	False
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b
link-delay	
Description	This container defines unidirectional link delay.
Context	network-instance name <i>string</i> protocols isis instance name <i>string</i> level level-number <i>number</i> link-state-database lsp lsp-id <i>string</i> tlvs tlv type identityref extended-is-reachability neighbors neighbor system-id <i>string</i> instances instance id <i>number</i> subtlvs subtlv type identityref link-delay
Tree	link-delay
Configurable	False
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b
a-bit <i>boolean</i>	
Description	The A bit is set when the measured value of this parameter exceeds its configured maximum threshold. The A bit is cleared when the measured value falls below its configured reuse threshold.
Context	network-instance name <i>string</i> protocols isis instance name <i>string</i> level level-number <i>number</i> link-state-database lsp lsp-id <i>string</i> tlvs tlv type identityref extended-is-reachability neighbors neighbor system-id <i>string</i> instances instance id <i>number</i> subtlvs subtlv type identityref link-delay a-bit <i>boolean</i>
Tree	a-bit
Configurable	False
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b
delay <i>number</i>	
Description	Average link delay value (in microseconds) between two directly connected IS-IS neighbors over a configurable interval.
Context	network-instance name <i>string</i> protocols isis instance name <i>string</i> level level-number <i>number</i> link-state-database lsp lsp-id <i>string</i> tlvs tlv type identityref extended-is-reachability neighbors neighbor system-id <i>string</i> instances instance id <i>number</i> subtlvs subtlv type identityref link-delay delay <i>number</i>
Tree	delay
Units	microseconds

Configurable	False
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b
link-delay-variation	
Description	This container defines unidirectional link delay variation.
Context	network-instance name <i>string</i> protocols isis instance name <i>string</i> level level-number <i>number</i> link-state-database lsp lsp-id <i>string</i> tlvs tlv type identityref extended-is-reachability neighbors neighbor system-id <i>string</i> instances instance id <i>number</i> subtlvs subtlv type identityref link-delay-variation
Tree	link-delay-variation
Configurable	False
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b
delay number	
Description	Average link delay between two directly connected IS-IS neighbors over a configurable interval.
Context	network-instance name <i>string</i> protocols isis instance name <i>string</i> level level-number <i>number</i> link-state-database lsp lsp-id <i>string</i> tlvs tlv type identityref extended-is-reachability neighbors neighbor system-id <i>string</i> instances instance id <i>number</i> subtlvs subtlv type identityref link-delay-variation delay number
Tree	delay
Units	microseconds
Configurable	False
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b
link-id	
Description	This container defines sub-TLV 4.
Context	network-instance name <i>string</i> protocols isis instance name <i>string</i> level level-number <i>number</i> link-state-database lsp lsp-id <i>string</i> tlvs tlv type identityref extended-is-reachability neighbors neighbor system-id <i>string</i> instances instance id <i>number</i> subtlvs subtlv type identityref link-id
Tree	link-id

Configurable	False
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b
local number	
Description	The value field of this sub-TLV contains 4 octets of Link Local Identifier followed by 4 octets of Link Remote Identifier.
Context	network-instance name <i>string</i> protocols isis instance name <i>string</i> level level-number <i>number</i> link-state-database lsp lsp-id <i>string</i> tlvs tlv type identityref extended-is-reachability neighbors neighbor system-id <i>string</i> instances instance id <i>number</i> subtlvs subtlv type identityref link-id local <i>number</i>
Tree	local
Configurable	False
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b
remote number	
Description	If the Link Remote Identifier is unknown, it is set to 0.
Context	network-instance name <i>string</i> protocols isis instance name <i>string</i> level level-number <i>number</i> link-state-database lsp lsp-id <i>string</i> tlvs tlv type identityref extended-is-reachability neighbors neighbor system-id <i>string</i> instances instance id <i>number</i> subtlvs subtlv type identityref link-id remote <i>number</i>
Tree	remote
Configurable	False
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b
link-loss	
Description	This container defines unidirectional link loss delay.
Context	network-instance name <i>string</i> protocols isis instance name <i>string</i> level level-number <i>number</i> link-state-database lsp lsp-id <i>string</i> tlvs tlv type identityref extended-is-reachability neighbors neighbor system-id <i>string</i> instances instance id <i>number</i> subtlvs subtlv type identityref link-loss
Tree	link-loss
Configurable	False

Platforms 7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

a-bit *boolean*

Description The A bit is set when the measured value of this parameter exceeds its configured maximum threshold. The A bit is cleared when the measured value falls below its configured reuse threshold.

Context [network-instance name](#) *string* [protocols isis instance name](#) *string* [level level-number](#) *number* [link-state-database lsp lsp-id](#) *string* [tlvs tlv type identityref extended-is-reachability neighbors neighbor system-id](#) *string* [instances instance id](#) *number* [subtlvs subtlv type identityref link-loss a-bit](#) *boolean*

Tree [a-bit](#)

Configurable False

Platforms 7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

link-loss *number*

Description Link packet loss as a percentage of the total traffic sent over a configurable interval. The basic unit is 0.000003%, where $(2^{24} - 2)$ is 50.331642%. This value is the highest packet-loss percentage that can be expressed (the assumption being that precision is more important on high-speed links than the ability to advertise loss rates greater than this, and that high-speed links with over 50% loss are unusable). Therefore, measured values that are larger than the field maximum SHOULD be encoded as the maximum value.

Context [network-instance name](#) *string* [protocols isis instance name](#) *string* [level level-number](#) *number* [link-state-database lsp lsp-id](#) *string* [tlvs tlv type identityref extended-is-reachability neighbors neighbor system-id](#) *string* [instances instance id](#) *number* [subtlvs subtlv type identityref link-loss link-loss](#) *number*

Tree [link-loss](#)

Configurable False

Platforms 7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

link-protection-type

Description ISIS LSDB parameters relating to the type of link protection offered.

Context [network-instance name](#) *string* [protocols isis instance name](#) *string* [level level-number](#) *number* [link-state-database lsp lsp-id](#) *string* [tlvs tlv type identityref](#)

	extended-is-reachability neighbors neighbor system-id <i>string</i> instances instance id <i>number</i> subtlvs subtlv <i>type</i> identityref link-protection-type
Tree	link-protection-type
Configurable	False
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b
type <i>keyword</i>	
Description	Link protection capabilities.
Context	network-instance <i>name</i> <i>string</i> protocols isis <i>instance</i> <i>name</i> <i>string</i> level <i>level-number</i> <i>number</i> link-state-database lsp lsp-id <i>string</i> tlvs tlv <i>type</i> identityref extended-is-reachability neighbors neighbor system-id <i>string</i> instances instance id <i>number</i> subtlvs subtlv <i>type</i> identityref link-protection-type <i>type</i> <i>keyword</i>
Tree	type
Options	<ul style="list-style-type: none"> • extra-traffic If set the link has extra traffic protection. If the link is of type Extra Traffic, it means that the link is protecting another link or links. The LSPs on a link of this type will be lost if any of the links it is protecting fail. • unprotected If set, the link is unprotected. If the link is of type Unprotected, it means that there is no other link protecting this link. The LSPs on a link of this type will be lost if the link fails. • shared If set, the link has shared protection. If the link is of type Shared, it means that there are one or more disjoint links of type Extra Traffic that are protecting this link. These Extra Traffic links are shared between one or more links of type Shared. • one-one If set, the link has dedicated 1:1 protection. If the link is of type Dedicated 1:1, it means that there is one dedicated disjoint link of type Extra Traffic that is protecting this link. • plus-one If set, the link has dedicated 1+1 protection. If the link is of type Dedicated 1+1, it means that a dedicated disjoint link is protecting this link. However, the protecting link is not advertised in the link state database and is therefore not available for the routing of LSPs. • enhanced

If set the link has enhanced protection. If the link is of type Enhanced, it means that a protection scheme that is more reliable than Dedicated 1+1, e.g., 4 fiber BLSR/MS-SPRING, is being used to protect this link.

Configurable False

Platforms 7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

max-link-bandwidth

Description This container defines sub-TLV 9.

Context [network-instance name string protocols isis instance name string level level-number number link-state-database lsp lsp-id string tlvs tlv type identityref extended-is-reachability neighbors neighbor system-id string instances instance id number subtlvs subtlv type identityref max-link-bandwidth](#)

Tree [max-link-bandwidth](#)

Configurable False

Platforms 7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

bandwidth *binary*

Description The maximum bandwidth that can be used on this link in this direction (from the system originating the LSP to its neighbors). It is encoded in 32 bits in IEEE floating point format. The units are bytes (not bits!) per second.

Context [network-instance name string protocols isis instance name string level level-number number link-state-database lsp lsp-id string tlvs tlv type identityref extended-is-reachability neighbors neighbor system-id string instances instance id number subtlvs subtlv type identityref max-link-bandwidth bandwidth binary](#)

Tree [bandwidth](#)

String Length 4

Units bytes per second

Configurable False

Platforms 7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

max-reservable-link-bandwidth

Description This container defines sub-TLV 10.

Context	network-instance name <i>string</i> protocols isis instance name <i>string</i> level level-number <i>number</i> link-state-database lsp lsp-id <i>string</i> tlvs tlv type identityref extended-is-reachability neighbors neighbor system-id <i>string</i> instances instance id <i>number</i> subtlvs subtlv type identityref max-reservable-link-bandwidth
Tree	max-reservable-link-bandwidth
Configurable	False
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b
bandwidth <i>binary</i>	
Description	The maximum amount of bandwidth that can be reserved in this direction on this link. Note that for oversubscription purposes, this can be greater than the bandwidth of the link. It is encoded in 32 bits in IEEE floating point format. The units are bytes (not bits!) per second.
Context	network-instance name <i>string</i> protocols isis instance name <i>string</i> level level-number <i>number</i> link-state-database lsp lsp-id <i>string</i> tlvs tlv type identityref extended-is-reachability neighbors neighbor system-id <i>string</i> instances instance id <i>number</i> subtlvs subtlv type identityref max-reservable-link-bandwidth bandwidth <i>binary</i>
Tree	bandwidth
String Length	4
Units	bytes per second
Configurable	False
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b
min-max-link-delay	
Description	This container defines min/max link delay.
Context	network-instance name <i>string</i> protocols isis instance name <i>string</i> level level-number <i>number</i> link-state-database lsp lsp-id <i>string</i> tlvs tlv type identityref extended-is-reachability neighbors neighbor system-id <i>string</i> instances instance id <i>number</i> subtlvs subtlv type identityref min-max-link-delay
Tree	min-max-link-delay
Configurable	False
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

a-bit *boolean*

Description	The A bit is set when the measured value of this parameter exceeds its configured maximum threshold. The A bit is cleared when the measured value falls below its configured reuse threshold.
Context	network-instance name <i>string</i> protocols isis instance name <i>string</i> level level-number <i>number</i> link-state-database lsp lsp-id <i>string</i> tlvs tlv type <i>identityref</i> extended-is-reachability neighbors neighbor system-id <i>string</i> instances instance id <i>number</i> subtlvs subtlv type <i>identityref</i> min-max-link-delay a-bit <i>boolean</i>
Tree	a-bit
Configurable	False
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

max-delay *number*

Description	Maximum measured link delay value(in microseconds) between two directly connected IS-IS neighbors over a configurable interval.
Context	network-instance name <i>string</i> protocols isis instance name <i>string</i> level level-number <i>number</i> link-state-database lsp lsp-id <i>string</i> tlvs tlv type <i>identityref</i> extended-is-reachability neighbors neighbor system-id <i>string</i> instances instance id <i>number</i> subtlvs subtlv type <i>identityref</i> min-max-link-delay max-delay <i>number</i>
Tree	max-delay
Units	microseconds
Configurable	False
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

min-delay *number*

Description	Minimum measured link delay value(in microseconds) between two directly connected IS-IS neighbors over a configurable interval.
Context	network-instance name <i>string</i> protocols isis instance name <i>string</i> level level-number <i>number</i> link-state-database lsp lsp-id <i>string</i> tlvs tlv type <i>identityref</i> extended-is-reachability neighbors neighbor system-id <i>string</i> instances instance id <i>number</i> subtlvs subtlv type <i>identityref</i> min-max-link-delay min-delay <i>number</i>
Tree	min-delay
Units	microseconds

Configurable	False
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b
residual-bandwidth	
Description	This container defines unidirectional residual bandwidth.
Context	network-instance name <i>string</i> protocols isis instance name <i>string</i> level level-number <i>number</i> link-state-database lsp lsp-id <i>string</i> tlvs tlv type identityref extended-is-reachability neighbors neighbor system-id <i>string</i> instances instance id <i>number</i> subtlvs subtlv type identityref residual-bandwidth
Tree	residual-bandwidth
Configurable	False
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b
bandwidth <i>binary</i>	
Description	Residual bandwidth on a link, forwarding adjacency [RFC4206], or bundled link in IEEE floating-point format with units of bytes per second. For a link or forwarding adjacency, residual bandwidth is defined to be the Maximum Bandwidth [RFC5305] minus the bandwidth currently allocated to RSVP-TE label switched paths. For a bundled link, residual bandwidth is defined to be the sum of the component link residual bandwidths.
Context	network-instance name <i>string</i> protocols isis instance name <i>string</i> level level-number <i>number</i> link-state-database lsp lsp-id <i>string</i> tlvs tlv type identityref extended-is-reachability neighbors neighbor system-id <i>string</i> instances instance id <i>number</i> subtlvs subtlv type identityref residual-bandwidth bandwidth <i>binary</i>
Tree	bandwidth
String Length	4
Units	bytes per second
Configurable	False
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b
te-default-metric	
Description	This container defines sub-TLV 18.

Context	network-instance name <i>string</i> protocols isis instance name <i>string</i> level level-number <i>number</i> link-state-database lsp lsp-id <i>string</i> tlvs tlv type <i>identityref</i> extended-is-reachability neighbors neighbor system-id <i>string</i> instances instance id <i>number</i> subtlvs subtlv type <i>identityref</i> te-default-metric
Tree	te-default-metric
Configurable	False
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b
metric number	
Description	This metric is administratively assigned and can be used to present a differently weighted topology to traffic engineering SPF calculations. To preclude overflow within a traffic engineering SPF implementation, all metrics greater than or equal to MAX_PATH_METRIC SHALL be considered to have a metric of MAX_PATH_METRIC.
Context	network-instance name <i>string</i> protocols isis instance name <i>string</i> level level-number <i>number</i> link-state-database lsp lsp-id <i>string</i> tlvs tlv type <i>identityref</i> extended-is-reachability neighbors neighbor system-id <i>string</i> instances instance id <i>number</i> subtlvs subtlv type <i>identityref</i> te-default-metric metric number
Tree	metric
Configurable	False
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b
unconstrained-lsp	
Description	This container defines sub-TLV 23.
Context	network-instance name <i>string</i> protocols isis instance name <i>string</i> level level-number <i>number</i> link-state-database lsp lsp-id <i>string</i> tlvs tlv type <i>identityref</i> extended-is-reachability neighbors neighbor system-id <i>string</i> instances instance id <i>number</i> subtlvs subtlv type <i>identityref</i> unconstrained-lsp
Tree	unconstrained-lsp
Configurable	False
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

count *number*

Description	Unconstrained TE LSP count(TE Label Switched Paths (LSPs) signalled with zero bandwidth).
Context	network-instance name <i>string</i> protocols isis instance name <i>string</i> level level-number <i>number</i> link-state-database lsp lsp-id <i>string</i> tlvs tlv type <i>identityref</i> extended-is-reachability neighbors neighbor system-id <i>string</i> instances instance id <i>number</i> subtlvs subtlv type <i>identityref</i> unconstrained-lsp count <i>number</i>
Tree	count
Configurable	False
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

type *identityref*

Description	The type of subTLV being described. The type of subTLV is expressed as a canonical name.
Context	network-instance name <i>string</i> protocols isis instance name <i>string</i> level level-number <i>number</i> link-state-database lsp lsp-id <i>string</i> tlvs tlv type <i>identityref</i> extended-is-reachability neighbors neighbor system-id <i>string</i> instances instance id <i>number</i> subtlvs subtlv type <i>identityref</i> unconstrained-lsp type <i>identityref</i>
Tree	type
Options	<ul style="list-style-type: none"> • is-reachability-subtlvs-type Base identity for an ISIS TLV 22, 23, 222, 223, 141 SUB-TLV type. • ip-reachability-subtlvs-type Base identity for an ISIS TLV 135, 235, 236, 237 SUB-TLV type. • router-capability-subtlvs-type Base identity for an ISIS TLV 242 SUB-TLV type.
Configurable	False
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

unreserved-bandwidth

Description	This container defines unreserved-bandwidth. The units are bytes per second.
Context	network-instance name <i>string</i> protocols isis instance name <i>string</i> level level-number <i>number</i> link-state-database lsp lsp-id <i>string</i> tlvs tlv type <i>identityref</i>

	extended-is-reachability neighbors neighbor system-id <i>string</i> instances instance id <i>number</i> subtlvs subtlv <i>type</i> identityref unreserved-bandwidth
Tree	unreserved-bandwidth
Configurable	False
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b
setup-priority <i>priority number</i>	
Description	Enter the setup-priority list instance
Context	network-instance name <i>string</i> protocols isis instance name <i>string</i> level level-number <i>number</i> link-state-database lsp lsp-id <i>string</i> tlvs tlv <i>type</i> identityref extended-is-reachability neighbors neighbor system-id <i>string</i> instances instance id <i>number</i> subtlvs subtlv <i>type</i> identityref unreserved-bandwidth setup-priority priority <i>number</i>
Tree	setup-priority
Configurable	False
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b
priority <i>number</i>	
Description	Setup priority level of 0 through 7 to be used by Unreserved Bandwidth sub-TLV 11.
Context	network-instance name <i>string</i> protocols isis instance name <i>string</i> level level-number <i>number</i> link-state-database lsp lsp-id <i>string</i> tlvs tlv <i>type</i> identityref extended-is-reachability neighbors neighbor system-id <i>string</i> instances instance id <i>number</i> subtlvs subtlv <i>type</i> identityref unreserved-bandwidth setup-priority priority <i>number</i>
Range	0 to 7
Configurable	False
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b
bandwidth <i>binary</i>	
Description	The amount of bandwidth reservable in this direction on this link. Note that for oversubscription purposes, this can be greater than the bandwidth of the link. It contains eight 32-bit IEEE floating point numbers(one for each priority). The units are bytes (not bits!) per second. The values correspond to the bandwidth that can be reserved with a setup priority of 0 through 7,

arranged in increasing order with priority 0 occurring at the start of the sub-TLV, and priority 7 at the end of the sub-TLV.

Context	network-instance name <i>string</i> protocols isis instance name <i>string</i> level level-number <i>number</i> link-state-database lsp lsp-id <i>string</i> tlvs tlv type <i>identityref</i> extended-is-reachability neighbors neighbor system-id <i>string</i> instances instance id <i>number</i> subtlvs subtlv type <i>identityref</i> unreserved-bandwidth setup-priority priority <i>number</i> bandwidth <i>binary</i>
Tree	bandwidth
String Length	4
Units	bytes per second
Configurable	False
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

utilized-bandwidth

Description	This container defines unidirectional utilized bandwidth.
Context	network-instance name <i>string</i> protocols isis instance name <i>string</i> level level-number <i>number</i> link-state-database lsp lsp-id <i>string</i> tlvs tlv type <i>identityref</i> extended-is-reachability neighbors neighbor system-id <i>string</i> instances instance id <i>number</i> subtlvs subtlv type <i>identityref</i> utilized-bandwidth
Tree	utilized-bandwidth
Configurable	False
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

bandwidth *binary*

Description	The bandwidth utilization on a link, forwarding adjacency, or bundled link in IEEE floating-point format with units of bytes per second. For a link or forwarding adjacency, bandwidth utilization represents the actual utilization of the link (i.e., as measured by the advertising node). For a bundled link, bandwidth utilization is defined to be the sum of the component link bandwidth utilizations.
Context	network-instance name <i>string</i> protocols isis instance name <i>string</i> level level-number <i>number</i> link-state-database lsp lsp-id <i>string</i> tlvs tlv type <i>identityref</i> extended-is-reachability neighbors neighbor system-id <i>string</i> instances instance id <i>number</i> subtlvs subtlv type <i>identityref</i> utilized-bandwidth bandwidth <i>binary</i>
Tree	bandwidth
String Length	4

Units	bytes per second
Configurable	False
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b
type identityref	
Description	The type of subTLV being described. The type of subTLV is expressed as a canonical name.
Context	network-instance name string protocols isis instance name string level level-number number link-state-database lsp lsp-id string tlvs tlv type identityref extended-is-reachability neighbors neighbor system-id string instances instance id number subtlvs subtlv type identityref utilized-bandwidth type identityref
Tree	type
Options	<ul style="list-style-type: none"> • is-reachability-subtlvs-type Base identity for an ISIS TLV 22, 23, 222, 223, 141 SUB-TLV type. • ip-reachability-subtlvs-type Base identity for an ISIS TLV 135, 235, 236, 237 SUB-TLV type. • router-capability-subtlvs-type Base identity for an ISIS TLV 242 SUB-TLV type.
Configurable	False
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b
undefined-subtlvs	
Description	This container describes undefined ISIS TLVs.
Context	network-instance name string protocols isis instance name string level level-number number link-state-database lsp lsp-id string tlvs tlv type identityref extended-is-reachability neighbors neighbor system-id string instances instance id number undefined-subtlvs
Tree	undefined-subtlvs
Configurable	False
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

undefined-subtlv *type number*

Description	Sub-TLVs that are not defined in the model or not recognised by system.
Context	network-instance name <i>string</i> protocols isis instance name <i>string</i> level level-number <i>number</i> link-state-database lsp lsp-id <i>string</i> tlvs tlv type identityref extended-is-reachability neighbors neighbor system-id <i>string</i> instances instance id <i>number</i> undefined-subtlvs undefined-subtlv type <i>number</i>
Tree	undefined-subtlv
Configurable	False
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

type *number*

Description	TLV Type.
Context	network-instance name <i>string</i> protocols isis instance name <i>string</i> level level-number <i>number</i> link-state-database lsp lsp-id <i>string</i> tlvs tlv type identityref extended-is-reachability neighbors neighbor system-id <i>string</i> instances instance id <i>number</i> undefined-subtlvs undefined-subtlv type <i>number</i>
Configurable	False
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

length *number*

Description	TLV length.
Context	network-instance name <i>string</i> protocols isis instance name <i>string</i> level level-number <i>number</i> link-state-database lsp lsp-id <i>string</i> tlvs tlv type identityref extended-is-reachability neighbors neighbor system-id <i>string</i> instances instance id <i>number</i> undefined-subtlvs undefined-subtlv type <i>number</i> length <i>number</i>
Tree	length
Configurable	False
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

value *binary*

Description	TLV value.
--------------------	------------

Context	network-instance name <i>string</i> protocols isis instance name <i>string</i> level level-number <i>number</i> link-state-database lsp lsp-id <i>string</i> tlvs tlv type identityref extended-is-reachability neighbors neighbor system-id <i>string</i> instances instance id <i>number</i> undefined-subtlvs undefined-subtlv type <i>number</i> value binary
Tree	value
Configurable	False
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

hostname

Description	This container defines TLV 137.
Context	network-instance name <i>string</i> protocols isis instance name <i>string</i> level level-number <i>number</i> link-state-database lsp lsp-id <i>string</i> tlvs tlv type identityref hostname
Tree	hostname
Configurable	False
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

hostname *string*

Description	Name of the node.
Context	network-instance name <i>string</i> protocols isis instance name <i>string</i> level level-number <i>number</i> link-state-database lsp lsp-id <i>string</i> tlvs tlv type identityref hostname hostname <i>string</i>
Tree	hostname
Configurable	False
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

instance-ids

Description	This container defines ISIS Instance Identifier TLV.
Context	network-instance name <i>string</i> protocols isis instance name <i>string</i> level level-number <i>number</i> link-state-database lsp lsp-id <i>string</i> tlvs tlv type identityref instance-ids

Tree	instance-ids
Configurable	False
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

instance-id [instance-id](#) *number*

Description	A list of instance IDs received within TLV 7 within an IS-IS LSP. In the case that more than one instance of TLV 7 is included in the LSP, the instance IDs specified within the instances are concatenated within this list.
Context	network-instance name <i>string</i> protocols isis instance name <i>string</i> level level-number <i>number</i> link-state-database lsp lsp-id <i>string</i> tlvs tlv type identityref instance-ids instance-id instance-id <i>number</i>
Tree	instance-id
Configurable	False
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

instance-id *number*

Description	An Instance Identifier (IID) to uniquely identify an IS-IS instance. When the IID = 0, the list of supported ITIDs MUST NOT be present. An IID-TLV with IID = 0 MUST NOT appear in an SNP or LSP. When the TLV appears (with a non-zero IID) in an SNP or LSP, exactly one ITID. MUST be present indicating the topology with which the PDU is associated. If no ITIDs or multiple ITIDs are present or the IID is zero, then the PDU MUST be ignored.
Context	network-instance name <i>string</i> protocols isis instance name <i>string</i> level level-number <i>number</i> link-state-database lsp lsp-id <i>string</i> tlvs tlv type identityref instance-ids instance-id instance-id <i>number</i>
Configurable	False
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

topology-id *number*

Description	Instance-Specific Topology Identifiers (ITIDs).
Context	network-instance name <i>string</i> protocols isis instance name <i>string</i> level level-number <i>number</i> link-state-database lsp lsp-id <i>string</i> tlvs tlv type identityref instance-ids instance-id instance-id <i>number</i> topology-id <i>number</i>

Tree	topology-id
Configurable	False
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

ipv4-external-reachability

Description	This container defines list of IPv4 external reachability information.
Context	network-instance name <i>string</i> protocols isis instance name <i>string</i> level level-number <i>number</i> link-state-database lsp lsp-id <i>string</i> tlvs tlv type identityref ipv4-external-reachability
Tree	ipv4-external-reachability
Configurable	False
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

prefixes

Description	This container describes IS neighbors.
Context	network-instance name <i>string</i> protocols isis instance name <i>string</i> level level-number <i>number</i> link-state-database lsp lsp-id <i>string</i> tlvs tlv type identityref ipv4-external-reachability prefixes
Tree	prefixes
Configurable	False
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

prefix [prefix](#) *string*

Description	IPv4 external prefixes and reachability attributes.
Context	network-instance name <i>string</i> protocols isis instance name <i>string</i> level level-number <i>number</i> link-state-database lsp lsp-id <i>string</i> tlvs tlv type identityref ipv4-external-reachability prefixes prefix prefix <i>string</i>
Tree	prefix
Configurable	False

Platforms 7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

prefix string

Description IPv4 prefix contained within reachability TLVs.

Context [network-instance name string](#) [protocols isis instance name string level level-number number link-state-database lsp lsp-id string tlvs tlv type identityref ipv4-external-reachability prefixes prefix prefix string](#)

Configurable False

Platforms 7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

default-metric

Description This container defines ISIS Default Metric.

Context [network-instance name string](#) [protocols isis instance name string level level-number number link-state-database lsp lsp-id string tlvs tlv type identityref ipv4-external-reachability prefixes prefix prefix string default-metric](#)

Tree [default-metric](#)

Configurable False

Platforms 7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

flags keyword

Description ISIS Default-Metric Flags.

Context [network-instance name string](#) [protocols isis instance name string level level-number number link-state-database lsp lsp-id string tlvs tlv type identityref ipv4-external-reachability prefixes prefix prefix string default-metric flags keyword](#)

Tree [flags](#)

Options

- internal
When set to zero, indicates internal metrics.

Configurable False

Platforms 7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

metric number

Description ISIS default metric value

This is a metric understood by every Intermediate system in the domain. Each circuit shall have a positive integral value assigned for this metric. The value may be associated with any objective function of the circuit, but by convention is intended to measure the capacity of the circuit for handling traffic, for example, its throughput in bits-per-second. Higher values indicate a lower capacity.

Context [network-instance name string protocols isis instance name string level level-number number link-state-database lsp lsp-id string tlvs tlv type identityref ipv4-external-reachability prefixes prefix prefix string default-metric metric number](#)

Tree [metric](#)

Range 1 to 63

Configurable False

Platforms 7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

delay-metric

Description This container defines the ISIS delay metric.

Context [network-instance name string protocols isis instance name string level level-number number link-state-database lsp lsp-id string tlvs tlv type identityref ipv4-external-reachability prefixes prefix prefix string delay-metric](#)

Tree [delay-metric](#)

Configurable False

Platforms 7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

flags keyword

Description ISIS Delay Metric Flags.

Context [network-instance name string protocols isis instance name string level level-number number link-state-database lsp lsp-id string tlvs tlv type identityref](#)

	ipv4-external-reachability prefixes prefix prefix string delay-metric flags keyword
Tree	flags
Options	<ul style="list-style-type: none"> • internal When this flag is not set, internal metrics are in use. • unsupported When this flag (referred to as the S-bit) is set, then the metric is unsupported.
Configurable	False
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b
metric number	
Description	<p>ISIS delay metric value</p> <p>This metric measures the transit delay of the associated circuit. It is an optional metric, which if assigned to a circuit shall have a positive integral value. Higher values indicate a longer transit delay.</p>
Context	network-instance name string protocols isis instance name string level level-number number link-state-database lsp lsp-id string tlvs tlv type identityref ipv4-external-reachability prefixes prefix prefix string delay-metric metric number
Tree	metric
Range	1 to 63
Configurable	False
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b
error-metric	
Description	This container defines the ISIS error metric.
Context	network-instance name string protocols isis instance name string level level-number number link-state-database lsp lsp-id string tlvs tlv type identityref ipv4-external-reachability prefixes prefix prefix string error-metric
Tree	error-metric
Configurable	False

Platforms 7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

flags keyword

Description IS-IS error metric flags.

Context [network-instance name string](#) [protocols isis instance name string](#) [level level-number number](#) [link-state-database lsp lsp-id string](#) [tlvs tlv type identityref](#) [ipv4-external-reachability prefixes prefix prefix string](#) [error-metric flags keyword](#)

Tree [flags](#)

Options

- internal
When this flag is not set, internal metrics are in use.
- unsupported
When this flag (referred to as the S-bit) is set, then the metric is unsupported.

Configurable False

Platforms 7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

metric number

Description ISIS error metric value

This metric measures the residual error probability of the associated circuit. It is an optional metric, which if assigned to a circuit shall have a non-zero value. Higher values indicate a larger probability of undetected errors on the circuit.

Context [network-instance name string](#) [protocols isis instance name string](#) [level level-number number](#) [link-state-database lsp lsp-id string](#) [tlvs tlv type identityref](#) [ipv4-external-reachability prefixes prefix prefix string](#) [error-metric metric number](#)

Tree [metric](#)

Range 1 to 63

Configurable False

Platforms 7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

expense-metric

Description	This container defines the ISIS expense metric.
Context	network-instance name <i>string</i> protocols isis instance name <i>string</i> level level-number <i>number</i> link-state-database lsp lsp-id <i>string</i> tlvs tlv type identityref ipv4-external-reachability prefixes prefix prefix <i>string</i> expense-metric
Tree	expense-metric
Configurable	False
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

flags *keyword*

Description	ISIS Expense Metric Flags.
Context	network-instance name <i>string</i> protocols isis instance name <i>string</i> level level-number <i>number</i> link-state-database lsp lsp-id <i>string</i> tlvs tlv type identityref ipv4-external-reachability prefixes prefix prefix <i>string</i> expense-metric flags <i>keyword</i>
Tree	flags
Options	<ul style="list-style-type: none"> • internal When this flag is not set, internal metrics are in use. • unsupported When this flag (referred to as the S-bit) is set, then the metric is unsupported.
Configurable	False
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

metric *number*

Description	<p>ISIS expense metric value</p> <p>This metric measures the monetary cost of utilising the associated circuit. It is an optional metric, which if assigned to a circuit shall have a positive integral value¹). Higher values indicate a larger monetary expense.</p>
Context	network-instance name <i>string</i> protocols isis instance name <i>string</i> level level-number <i>number</i> link-state-database lsp lsp-id <i>string</i> tlvs tlv type identityref ipv4-external-reachability prefixes prefix prefix <i>string</i> expense-metric metric <i>number</i>

Tree	metric
Range	1 to 63
Configurable	False
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

up-down *boolean*

Description	The up/down bit Set if a prefix is advertised from a higher level to a lower level (e.g., level 2 to level 1), indicating that the prefix has traveled down the hierarchy. Prefixes that have the up/down bit set may only be advertised down the hierarchy, i.e., to lower levels. When a prefix is first injected into IS-IS, the bit is UNSET.
Context	network-instance name string protocols isis instance name string level level-number number link-state-database lsp lsp-id string tlvs tlv type identityref ipv4-external-reachability prefixes prefix prefix string up-down boolean
Tree	up-down
Configurable	False
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

ipv4-interface-addresses

Description	This container defines TLV 132.
Context	network-instance name string protocols isis instance name string level level-number number link-state-database lsp lsp-id string tlvs tlv type identityref ipv4-interface-addresses
Tree	ipv4-interface-addresses
Configurable	False
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

address *string*

Description	IPv4 address(es) of the interface corresponding to the SNPA over which this PDU is to be transmitted.
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Context	network-instance name <i>string</i> protocols isis instance name <i>string</i> level level-number <i>number</i> link-state-database lsp lsp-id <i>string</i> tlvs tlv type identityref ipv4-interface-addresses address <i>string</i>
Tree	address
Configurable	False
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

ipv4-internal-reachability

Description	This container defines list of IPv4 internal reachability information.
Context	network-instance name <i>string</i> protocols isis instance name <i>string</i> level level-number <i>number</i> link-state-database lsp lsp-id <i>string</i> tlvs tlv type identityref ipv4-internal-reachability
Tree	ipv4-internal-reachability
Configurable	False
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

prefixes

Description	This container describes IS prefixes.
Context	network-instance name <i>string</i> protocols isis instance name <i>string</i> level level-number <i>number</i> link-state-database lsp lsp-id <i>string</i> tlvs tlv type identityref ipv4-internal-reachability prefixes
Tree	prefixes
Configurable	False
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

prefix [prefix](#) *string*

Description	IPv4 prefixes and internal reachability attributes.
Context	network-instance name <i>string</i> protocols isis instance name <i>string</i> level level-number <i>number</i> link-state-database lsp lsp-id <i>string</i> tlvs tlv type identityref ipv4-internal-reachability prefixes prefix prefix <i>string</i>
Tree	prefix

Configurable	False
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

prefix string

Description	IPv4 prefix contained within reachability TLVs.
Context	network-instance name string protocols isis instance name string level level-number number link-state-database lsp lsp-id string tlvs tlv type identityref ipv4-internal-reachability prefixes prefix prefix string
Configurable	False
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

default-metric

Description	This container defines ISIS Default Metric.
Context	network-instance name string protocols isis instance name string level level-number number link-state-database lsp lsp-id string tlvs tlv type identityref ipv4-internal-reachability prefixes prefix prefix string default-metric
Tree	default-metric
Configurable	False
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

flags keyword

Description	ISIS Default-Metric Flags.
Context	network-instance name string protocols isis instance name string level level-number number link-state-database lsp lsp-id string tlvs tlv type identityref ipv4-internal-reachability prefixes prefix prefix string default-metric flags keyword
Tree	flags
Options	<ul style="list-style-type: none"> internal <p>When set to zero, indicates internal metrics.</p>
Configurable	False

Platforms 7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

metric number

Description ISIS default metric value

This is a metric understood by every Intermediate system in the domain. Each circuit shall have a positive integral value assigned for this metric. The value may be associated with any objective function of the circuit, but by convention is intended to measure the capacity of the circuit for handling traffic, for example, its throughput in bits-per-second. Higher values indicate a lower capacity.

Context [network-instance name string protocols isis instance name string level level-number number link-state-database lsp lsp-id string tlvs tlv type identityref ipv4-internal-reachability prefixes prefix prefix string default-metric metric number](#)

Tree [metric](#)

Range 1 to 63

Configurable False

Platforms 7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

delay-metric

Description This container defines the ISIS delay metric.

Context [network-instance name string protocols isis instance name string level level-number number link-state-database lsp lsp-id string tlvs tlv type identityref ipv4-internal-reachability prefixes prefix prefix string delay-metric](#)

Tree [delay-metric](#)

Configurable False

Platforms 7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

flags keyword

Description ISIS Delay Metric Flags.

Context [network-instance name string protocols isis instance name string level level-number number link-state-database lsp lsp-id string tlvs tlv type identityref](#)

	ipv4-internal-reachability prefixes prefix prefix string delay-metric flags keyword
Tree	flags
Options	<ul style="list-style-type: none"> • internal When this flag is not set, internal metrics are in use. • unsupported When this flag (referred to as the S-bit) is set, then the metric is unsupported.
Configurable	False
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b
metric number	
Description	<p>ISIS delay metric value</p> <p>This metric measures the transit delay of the associated circuit. It is an optional metric, which if assigned to a circuit shall have a positive integral value. Higher values indicate a longer transit delay.</p>
Context	network-instance name string protocols isis instance name string level level-number number link-state-database lsp lsp-id string tlvs tlv type identityref ipv4-internal-reachability prefixes prefix prefix string delay-metric metric number
Tree	metric
Range	1 to 63
Configurable	False
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b
error-metric	
Description	This container defines the ISIS error metric.
Context	network-instance name string protocols isis instance name string level level-number number link-state-database lsp lsp-id string tlvs tlv type identityref ipv4-internal-reachability prefixes prefix prefix string error-metric
Tree	error-metric
Configurable	False

Platforms 7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

flags keyword

Description IS-IS error metric flags.

Context [network-instance name string](#) [protocols isis instance name string](#) [level level-number number](#) [link-state-database lsp lsp-id string](#) [tlvs tlv type identityref](#) [ipv4-internal-reachability prefixes prefix prefix string](#) [error-metric flags keyword](#)

Tree [flags](#)

Options

- internal
When this flag is not set, internal metrics are in use.
- unsupported
When this flag (referred to as the S-bit) is set, then the metric is unsupported.

Configurable False

Platforms 7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

metric number

Description ISIS error metric value

This metric measures the residual error probability of the associated circuit. It is an optional metric, which if assigned to a circuit shall have a non-zero value. Higher values indicate a larger probability of undetected errors on the circuit.

Context [network-instance name string](#) [protocols isis instance name string](#) [level level-number number](#) [link-state-database lsp lsp-id string](#) [tlvs tlv type identityref](#) [ipv4-internal-reachability prefixes prefix prefix string](#) [error-metric metric number](#)

Tree [metric](#)

Range 1 to 63

Configurable False

Platforms 7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

expense-metric

Description	This container defines the ISIS expense metric.
Context	network-instance name <i>string</i> protocols isis instance name <i>string</i> level level-number <i>number</i> link-state-database lsp lsp-id <i>string</i> tlvs tlv type identityref ipv4-internal-reachability prefixes prefix prefix <i>string</i> expense-metric
Tree	expense-metric
Configurable	False
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

flags *keyword*

Description	ISIS Expense Metric Flags.
Context	network-instance name <i>string</i> protocols isis instance name <i>string</i> level level-number <i>number</i> link-state-database lsp lsp-id <i>string</i> tlvs tlv type identityref ipv4-internal-reachability prefixes prefix prefix <i>string</i> expense-metric flags <i>keyword</i>
Tree	flags
Options	<ul style="list-style-type: none"> • internal When this flag is not set, internal metrics are in use. • unsupported When this flag (referred to as the S-bit) is set, then the metric is unsupported.
Configurable	False
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

metric *number*

Description	<p>ISIS expense metric value</p> <p>This metric measures the monetary cost of utilising the associated circuit. It is an optional metric, which if assigned to a circuit shall have a positive integral value¹). Higher values indicate a larger monetary expense.</p>
Context	network-instance name <i>string</i> protocols isis instance name <i>string</i> level level-number <i>number</i> link-state-database lsp lsp-id <i>string</i> tlvs tlv type identityref ipv4-internal-reachability prefixes prefix prefix <i>string</i> expense-metric metric <i>number</i>

Tree	metric
Range	1 to 63
Configurable	False
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

up-down *boolean*

Description	The up/down bit Set if a prefix is advertised from a higher level to a lower level (e.g., level 2 to level 1), indicating that the prefix has traveled down the hierarchy. Prefixes that have the up/down bit set may only be advertised down the hierarchy, i.e., to lower levels. When a prefix is first injected into IS-IS, the bit is UNSET.
Context	network-instance name string protocols isis instance name string level level-number number link-state-database lsp lsp-id string tlvs tlv type identityref ipv4-internal-reachability prefixes prefix prefix string up-down boolean
Tree	up-down
Configurable	False
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

ipv4-srlgs

Description	This container defines ISIS SRLG TLV 138.
Context	network-instance name string protocols isis instance name string level level-number number link-state-database lsp lsp-id string tlvs tlv type identityref ipv4-srlgs
Tree	ipv4-srlgs
Configurable	False
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

ipv4-srlg [instance-number number](#)

Description	Instance of the IPv4 SRLG TLV
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Context	network-instance name <i>string</i> protocols isis instance name <i>string</i> level level-number <i>number</i> link-state-database lsp lsp-id <i>string</i> tlvs tlv type identityref ipv4-srlgs ipv4-srlg instance-number <i>number</i>
Tree	ipv4-srlg
Configurable	False
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

instance-number *number*

Description	An arbitrary unsigned 32-bit integer used to disambiguate the instance of TLV 138. The instance identifier is synthesised by the system and may be renumbered for the same SRLG definition in subsequent advertised LSPs if (and only if) the entire list of SRLGs is replaced.
Context	network-instance name <i>string</i> protocols isis instance name <i>string</i> level level-number <i>number</i> link-state-database lsp lsp-id <i>string</i> tlvs tlv type identityref ipv4-srlgs ipv4-srlg instance-number <i>number</i>
Configurable	False
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

flags *keyword*

Description	SRLG flags.
Context	network-instance name <i>string</i> protocols isis instance name <i>string</i> level level-number <i>number</i> link-state-database lsp lsp-id <i>string</i> tlvs tlv type identityref ipv4-srlgs ipv4-srlg instance-number <i>number</i> flags <i>keyword</i>
Tree	flags
Options	<ul style="list-style-type: none"> numbered <p>When set, the interface is numbered, whereas if unset indicates that the interface is unnumbered.</p>
Configurable	False
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

ipv4-interface-address *string*

Description	IPv4 interface address.
Context	network-instance name <i>string</i> protocols isis instance name <i>string</i> level level-number <i>number</i> link-state-database lsp lsp-id <i>string</i> tlvs tlv type identityref ipv4-srlgs ipv4-srlg instance-number <i>number</i> ipv4-interface-address <i>string</i>
Tree	ipv4-interface-address
Configurable	False
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

ipv4-neighbor-address *string*

Description	IPv4 neighbor address.
Context	network-instance name <i>string</i> protocols isis instance name <i>string</i> level level-number <i>number</i> link-state-database lsp lsp-id <i>string</i> tlvs tlv type identityref ipv4-srlgs ipv4-srlg instance-number <i>number</i> ipv4-neighbor-address <i>string</i>
Tree	ipv4-neighbor-address
Configurable	False
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

psn-number *number*

Description	Pseudonode number if the neighbor is on a LAN interface.
Context	network-instance name <i>string</i> protocols isis instance name <i>string</i> level level-number <i>number</i> link-state-database lsp lsp-id <i>string</i> tlvs tlv type identityref ipv4-srlgs ipv4-srlg instance-number <i>number</i> psn-number <i>number</i>
Tree	psn-number
Configurable	False
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

srlg-value *number*

Description	List of SRLG values.
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Context	network-instance name <i>string</i> protocols isis instance name <i>string</i> level level-number <i>number</i> link-state-database lsp lsp-id <i>string</i> tlvs tlv type identityref ipv4-srlgs ipv4-srlg instance-number <i>number</i> srlg-value <i>number</i>
Tree	srlg-value
Configurable	False
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

system-id *string*

Description	Neighbor system ID.
Context	network-instance name <i>string</i> protocols isis instance name <i>string</i> level level-number <i>number</i> link-state-database lsp lsp-id <i>string</i> tlvs tlv type identityref ipv4-srlgs ipv4-srlg instance-number <i>number</i> system-id <i>string</i>
Tree	system-id
String Length	14
Configurable	False
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

ipv4-te-router-id

Description	This container defines TLV 134.
Context	network-instance name <i>string</i> protocols isis instance name <i>string</i> level level-number <i>number</i> link-state-database lsp lsp-id <i>string</i> tlvs tlv type identityref ipv4-te-router-id
Tree	ipv4-te-router-id
Configurable	False
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

router-id *string*

Description	IPv4 Traffic Engineering router ID of the node. For traffic engineering, it guarantees that we have a single stable address that can always be referenced in a path that will be reachable from multiple hops away, regardless of the state of the node's interfaces.
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Context	network-instance name <i>string</i> protocols isis instance name <i>string</i> level level-number <i>number</i> link-state-database lsp lsp-id <i>string</i> tlvs tlv type <i>identityref</i> ipv4-te-router-id router-id <i>string</i>
Tree	router-id
Configurable	False
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

ipv6-interface-addresses

Description	This container defines TLV 232.
Context	network-instance name <i>string</i> protocols isis instance name <i>string</i> level level-number <i>number</i> link-state-database lsp lsp-id <i>string</i> tlvs tlv type <i>identityref</i> ipv6-interface-addresses
Tree	ipv6-interface-addresses
Configurable	False
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

address *string*

Description	IPv6 interface addresses of the node. MUST contain only the non-link-local IPv6 addresses assigned to the IS.
Context	network-instance name <i>string</i> protocols isis instance name <i>string</i> level level-number <i>number</i> link-state-database lsp lsp-id <i>string</i> tlvs tlv type <i>identityref</i> ipv6-interface-addresses address <i>string</i>
Tree	address
Configurable	False
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

ipv6-reachability

Description	This container defines list of IPv6 reachability information.
Context	network-instance name <i>string</i> protocols isis instance name <i>string</i> level level-number <i>number</i> link-state-database lsp lsp-id <i>string</i> tlvs tlv type <i>identityref</i> ipv6-reachability

Tree	ipv6-reachability
Configurable	False
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

prefixes

Description	This container describes IS prefixes.
Context	network-instance name <i>string</i> protocols isis instance name <i>string</i> level level-number <i>number</i> link-state-database lsp lsp-id <i>string</i> tlvs tlv type identityref ipv6-reachability prefixes
Tree	prefixes
Configurable	False
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

prefix [prefix string](#)

Description	This list defines IPv6 extended prefix attributes.
Context	network-instance name <i>string</i> protocols isis instance name <i>string</i> level level-number <i>number</i> link-state-database lsp lsp-id <i>string</i> tlvs tlv type identityref ipv6-reachability prefixes prefix prefix string
Tree	prefix
Configurable	False
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

prefix [string](#)

Description	IPv6 prefix contained within extended reachability TLVs.
Context	network-instance name <i>string</i> protocols isis instance name <i>string</i> level level-number <i>number</i> link-state-database lsp lsp-id <i>string</i> tlvs tlv type identityref ipv6-reachability prefixes prefix prefix string
Configurable	False
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

metric number

Description	ISIS metric value.
Context	network-instance name <i>string</i> protocols isis instance name <i>string</i> level level-number <i>number</i> link-state-database lsp lsp-id <i>string</i> tlvs tlv type identityref ipv6-reachability prefixes prefix prefix <i>string</i> metric number
Tree	metric
Range	0 to 16777215
Configurable	False
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

s-bit boolean

Description	The sub-tlv present bit. If UNSET, the octets of Sub-TLVs are not present. Otherwise, the bit is set and the octet following the prefix will contain the length of the Sub-TLV portion of the structure.
Context	network-instance name <i>string</i> protocols isis instance name <i>string</i> level level-number <i>number</i> link-state-database lsp lsp-id <i>string</i> tlvs tlv type identityref ipv6-reachability prefixes prefix prefix <i>string</i> s-bit boolean
Tree	s-bit
Configurable	False
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

subtlvs

Description	This container describes IS prefix sub-TLVs.
Context	network-instance name <i>string</i> protocols isis instance name <i>string</i> level level-number <i>number</i> link-state-database lsp lsp-id <i>string</i> tlvs tlv type identityref ipv6-reachability prefixes prefix prefix <i>string</i> subtlvs
Tree	subtlvs
Configurable	False
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

subtlv *type identityref*

Description	List of subTLV types in the LSDB for the specified TLV.
Context	network-instance name <i>string</i> protocols isis instance name <i>string</i> level level-number <i>number</i> link-state-database lsp lsp-id <i>string</i> tlvs tlv type <i>identityref</i> ipv6-reachability prefixes prefix <i>string</i> subtlvs subtlv type <i>identityref</i>
Tree	subtlv
Configurable	False
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

type *identityref*

Description	The type of subTLV being described. The type of subTLV is expressed as a canonical name.
Context	network-instance name <i>string</i> protocols isis instance name <i>string</i> level level-number <i>number</i> link-state-database lsp lsp-id <i>string</i> tlvs tlv type <i>identityref</i> ipv6-reachability prefixes prefix <i>string</i> subtlvs subtlv type <i>identityref</i>
Options	<ul style="list-style-type: none"> • is-reachability-subtlvs-type Base identity for an ISIS TLV 22, 23, 222, 223, 141 SUB-TLV type. • ip-reachability-subtlvs-type Base identity for an ISIS TLV 135, 235, 236, 237 SUB-TLV type. • router-capability-subtlvs-type Base identity for an ISIS TLV 242 SUB-TLV type.
Configurable	False
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

flags

Description	This container defines sub-TLV 4.
Context	network-instance name <i>string</i> protocols isis instance name <i>string</i> level level-number <i>number</i> link-state-database lsp lsp-id <i>string</i> tlvs tlv type <i>identityref</i> ipv6-reachability prefixes prefix <i>string</i> subtlvs subtlv type <i>identityref</i> flags
Tree	flags
Configurable	False

Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b
flags <i>keyword</i>	
Description	Additional prefix reachability flags.
Context	network-instance name <i>string</i> protocols isis instance name <i>string</i> level level-number <i>number</i> link-state-database lsp lsp-id <i>string</i> tlvs tlv type identityref ipv6-reachability prefixes prefix prefix <i>string</i> subtlvs subtlv type identityref flags flags <i>keyword</i>
Tree	flags
Options	<ul style="list-style-type: none"> • external-flag External prefix flag. Set if the prefix has been redistributed from another protocol. This includes the case where multiple virtual routers are supported and the source of the redistributed prefix is another IS-IS instance. • readvertisement-flag Readvertisement flag. Set when the prefix has been leaked from one level to another (upwards or downwards). • node-flag Node flag. Set when the prefix identifies the advertising router, i.e., the prefix is a host prefix advertising a globally reachable address typically associated with a loopback address. • elc-flag Elc flag. Set for local host prefix of the originating node if it supports ELC on all interfaces
Configurable	False
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b
type <i>identityref</i>	
Description	The type of subTLV being described. The type of subTLV is expressed as a canonical name.
Context	network-instance name <i>string</i> protocols isis instance name <i>string</i> level level-number <i>number</i> link-state-database lsp lsp-id <i>string</i> tlvs tlv type identityref ipv6-reachability prefixes prefix prefix <i>string</i> subtlvs subtlv type identityref flags type identityref
Tree	type
Options	<ul style="list-style-type: none"> • is-reachability-subtlvs-type

	<ul style="list-style-type: none"> • Base identity for an ISIS TLV 22, 23, 222, 223, 141 SUB-TLV type. • <code>ip-reachability-subtlvs-type</code> Base identity for an ISIS TLV 135, 235, 236, 237 SUB-TLV type. • <code>router-capability-subtlvs-type</code> Base identity for an ISIS TLV 242 SUB-TLV type.
Configurable	False
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b
ipv4-source-router-id	
Description	This container defines sub-TLV 11.
Context	network-instance name string protocols isis instance name string level level-number number link-state-database lsp lsp-id string tlvs tlv type identityref ipv6-reachability prefixes prefix prefix string subtlvs subtlv type identityref ipv4-source-router-id
Tree	ipv4-source-router-id
Configurable	False
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b
router-id string	
Description	IPv4 Source router ID address. In cases where the advertisement is an identifier for the advertising router (e.g., with the N-flag set in the Prefix Attribute Flags sub-TLV), it may be useful for other routers to know the source of the advertisement. When reachability advertisement is leaked from one level to another, Router ID advertised is always the Router ID of the ISIS instance that originated the advertisement. This would be true even if the prefix had been learned from another protocol.
Context	network-instance name string protocols isis instance name string level level-number number link-state-database lsp lsp-id string tlvs tlv type identityref ipv6-reachability prefixes prefix prefix string subtlvs subtlv type identityref ipv4-source-router-id router-id string
Tree	router-id
Configurable	False
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

type *identityref*

Description	The type of subTLV being described. The type of subTLV is expressed as a canonical name.
Context	network-instance name <i>string</i> protocols isis instance name <i>string</i> level level-number <i>number</i> link-state-database lsp lsp-id <i>string</i> tlvs tlv type <i>identityref</i> ipv6-reachability prefixes prefix prefix <i>string</i> subtlvs subtlv type <i>identityref</i> ipv4-source-router-id type <i>identityref</i>
Tree	type
Options	<ul style="list-style-type: none"> • is-reachability-subtlvs-type Base identity for an ISIS TLV 22, 23, 222, 223, 141 SUB-TLV type. • ip-reachability-subtlvs-type Base identity for an ISIS TLV 135, 235, 236, 237 SUB-TLV type. • router-capability-subtlvs-type Base identity for an ISIS TLV 242 SUB-TLV type.
Configurable	False
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

ipv6-source-router-id

Description	This container defines sub-TLV 12.
Context	network-instance name <i>string</i> protocols isis instance name <i>string</i> level level-number <i>number</i> link-state-database lsp lsp-id <i>string</i> tlvs tlv type <i>identityref</i> ipv6-reachability prefixes prefix prefix <i>string</i> subtlvs subtlv type <i>identityref</i> ipv6-source-router-id
Tree	ipv6-source-router-id
Configurable	False
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

router-id *string*

Description	IPv6 Source router ID address. In cases where the advertisement is an identifier for the advertising router (e.g., with the N-flag set in the Prefix Attribute Flags sub-TLV), it may be useful for other routers to know the source of the advertisement. When reachability advertisement is leaked from one level to another, Router ID advertised is always the Router ID of the ISIS instance that originated the advertisement. This would be true even if the prefix had been learned from another protocol.
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Context	network-instance name <i>string</i> protocols isis instance name <i>string</i> level level-number <i>number</i> link-state-database lsp lsp-id <i>string</i> tlvs tlv type <i>identityref</i> ipv6-reachability prefixes prefix prefix <i>string</i> subtlvs subtlv type <i>identityref</i> ipv6-source-router-id router-id <i>string</i>
Tree	router-id
Configurable	False
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b
type <i>identityref</i>	
Description	The type of subTLV being described. The type of subTLV is expressed as a canonical name.
Context	network-instance name <i>string</i> protocols isis instance name <i>string</i> level level-number <i>number</i> link-state-database lsp lsp-id <i>string</i> tlvs tlv type <i>identityref</i> ipv6-reachability prefixes prefix prefix <i>string</i> subtlvs subtlv type <i>identityref</i> ipv6-source-router-id type <i>identityref</i>
Tree	type
Options	<ul style="list-style-type: none"> • is-reachability-subtlvs-type Base identity for an ISIS TLV 22, 23, 222, 223, 141 SUB-TLV type. • ip-reachability-subtlvs-type Base identity for an ISIS TLV 135, 235, 236, 237 SUB-TLV type. • router-capability-subtlvs-type Base identity for an ISIS TLV 242 SUB-TLV type.
Configurable	False
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b
prefix-sids	
Description	This container defines segment routing extensions for prefixes.
Context	network-instance name <i>string</i> protocols isis instance name <i>string</i> level level-number <i>number</i> link-state-database lsp lsp-id <i>string</i> tlvs tlv type <i>identityref</i> ipv6-reachability prefixes prefix prefix <i>string</i> subtlvs subtlv type <i>identityref</i> prefix-sids
Tree	prefix-sids
Configurable	False

Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b
prefix-sid <i>value number</i>	
Description	Prefix Segment-ID list. IGP-Prefix Segment is an IGP segment attached to an IGP prefix. An IGP-Prefix Segment is global (unless explicitly advertised otherwise) within the SR/IGP domain.
Context	network-instance name <i>string</i> protocols isis instance name <i>string</i> level level-number <i>number</i> link-state-database lsp lsp-id <i>string</i> tlvs tlv type identityref ipv6-reachability prefixes prefix prefix <i>string</i> subtlvs subtlv type identityref prefix-sids prefix-sid <i>value number</i>
Tree	prefix-sid
Configurable	False
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b
value <i>number</i>	
Description	IGP Prefix-SID value.
Context	network-instance name <i>string</i> protocols isis instance name <i>string</i> level level-number <i>number</i> link-state-database lsp lsp-id <i>string</i> tlvs tlv type identityref ipv6-reachability prefixes prefix prefix <i>string</i> subtlvs subtlv type identityref prefix-sids prefix-sid <i>value number</i>
Configurable	False
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b
algorithm <i>number</i>	
Description	Prefix-SID algorithm to be used for path computation.
Context	network-instance name <i>string</i> protocols isis instance name <i>string</i> level level-number <i>number</i> link-state-database lsp lsp-id <i>string</i> tlvs tlv type identityref ipv6-reachability prefixes prefix prefix <i>string</i> subtlvs subtlv type identityref prefix-sids prefix-sid <i>value number</i> algorithm <i>number</i>
Tree	algorithm
Configurable	False
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

flags *keyword*

Description	Flags associated with Prefix Segment-ID.
Context	network-instance name <i>string</i> protocols isis instance name <i>string</i> level level-number <i>number</i> link-state-database lsp lsp-id <i>string</i> tlvs tlv type identityref ipv6-reachability prefixes prefix prefix <i>string</i> subtlvs subtlv type identityref prefix-sids prefix-sid value <i>number</i> flags <i>keyword</i>
Tree	flags
Options	<ul style="list-style-type: none"> • readvertisement Readvertisement flag. When set, the prefix to which this Prefix-SID is attached, has been propagated by the router either from another level or from redistribution. • node Node flag. When set, the Prefix-SID refers to the router identified by the prefix. Typically, the N-Flag is set on Prefix-SIDs attached to a router loopback address. • no-php Penultimate-Hop-Popping flag. When set, then the penultimate hop MUST NOT pop the Prefix-SID before delivering the packet to the node that advertised the Prefix-SID. • explicit-null Explicit-Null flag. When set, any upstream neighbor of the Prefix-SID originator MUST replace the Prefix-SID with a Prefix-SID having an Explicit-NULL value (0 for IPv4 and 2 for IPv6) before forwarding the packet. • value Value flag. When set, the Prefix-SID carries a value (instead of an index). By default the flag is UNSET. • local Local flag. When set, the value/index carried by the Prefix-SID has local significance. By default the flag is UNSET.
Configurable	False
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

tag

Description	This container defines sub-TLV 1.
Context	network-instance name <i>string</i> protocols isis instance name <i>string</i> level level-number <i>number</i> link-state-database lsp lsp-id <i>string</i> tlvs tlv type identityref ipv6-reachability prefixes prefix prefix <i>string</i> subtlvs subtlv type identityref tag

Tree	tag
Configurable	False
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b
tag32 number	
Description	List of 32-bit tags associated with the prefix. Example uses of these tags include carrying BGP standard (or extended) communities and controlling redistribution between levels and areas, different routing protocols, or multiple instances of IS-IS running on the same router.
Context	network-instance name string protocols isis instance name string level level-number number link-state-database lsp lsp-id string tlvs tlv type identityref ipv6-reachability prefixes prefix prefix string subtlvs subtlv type identityref tag32 number
Tree	tag32
Configurable	False
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b
tag64	
Description	This container defines sub-TLV 2.
Context	network-instance name string protocols isis instance name string level level-number number link-state-database lsp lsp-id string tlvs tlv type identityref ipv6-reachability prefixes prefix prefix string subtlvs subtlv type identityref tag64
Tree	tag64
Configurable	False
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b
tag64 number	
Description	List of 64-bit tags associated with the prefix. Example uses of these tags include carrying BGP standard (or extended) communities and controlling redistribution between levels and areas, different routing protocols, or multiple instances of IS-IS running on the same router.
Context	network-instance name string protocols isis instance name string level level-number number link-state-database lsp lsp-id string tlvs tlv type identityref

	ipv6-reachability prefixes prefix prefix <i>string</i> subtlvs subtlv type identityref tag64 tag64 <i>number</i>
Tree	tag64
Configurable	False
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

undefined-subtlvs

Description	This container describes undefined ISIS TLVs.
Context	network-instance name <i>string</i> protocols isis instance name <i>string</i> level level-number <i>number</i> link-state-database lsp lsp-id <i>string</i> tlvs tlv type identityref ipv6-reachability prefixes prefix prefix <i>string</i> undefined-subtlvs
Tree	undefined-subtlvs
Configurable	False
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

undefined-subtlv type number

Description	Sub-TLVs that are not defined in the model or not recognised by system.
Context	network-instance name <i>string</i> protocols isis instance name <i>string</i> level level-number <i>number</i> link-state-database lsp lsp-id <i>string</i> tlvs tlv type identityref ipv6-reachability prefixes prefix prefix <i>string</i> undefined-subtlvs undefined-subtlv type <i>number</i>
Tree	undefined-subtlv
Configurable	False
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

type number

Description	TLV Type.
Context	network-instance name <i>string</i> protocols isis instance name <i>string</i> level level-number <i>number</i> link-state-database lsp lsp-id <i>string</i> tlvs tlv type identityref ipv6-reachability prefixes prefix prefix <i>string</i> undefined-subtlvs undefined-subtlv type <i>number</i>
Configurable	False

Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b
length <i>number</i>	
Description	TLV length.
Context	network-instance name <i>string</i> protocols isis instance name <i>string</i> level level-number <i>number</i> link-state-database lsp lsp-id <i>string</i> tlvs tlv type identityref ipv6-reachability prefixes prefix prefix <i>string</i> undefined-subtlvs undefined-subtlv type <i>number</i> length <i>number</i>
Tree	length
Configurable	False
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b
value <i>binary</i>	
Description	TLV value.
Context	network-instance name <i>string</i> protocols isis instance name <i>string</i> level level-number <i>number</i> link-state-database lsp lsp-id <i>string</i> tlvs tlv type identityref ipv6-reachability prefixes prefix prefix <i>string</i> undefined-subtlvs undefined-subtlv type <i>number</i> value <i>binary</i>
Tree	value
Configurable	False
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b
up-down <i>boolean</i>	
Description	The up/down bit. Set if a prefix is advertised from a higher level to a lower level (e.g., level 2 to level 1), indicating that the prefix has traveled down the hierarchy. Prefixes that have the up/down bit set may only be advertised down the hierarchy, i.e., to lower levels. When a prefix is first injected into IS-IS, the bit is UNSET.
Context	network-instance name <i>string</i> protocols isis instance name <i>string</i> level level-number <i>number</i> link-state-database lsp lsp-id <i>string</i> tlvs tlv type identityref ipv6-reachability prefixes prefix prefix <i>string</i> up-down <i>boolean</i>
Tree	up-down
Configurable	False

Platforms 7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

x-bit *boolean*

Description The external bit. Set when the prefix was distributed into IS-IS from another routing protocol.

Context [network-instance name string protocols isis instance name string level level-number number link-state-database lsp lsp-id string tlvs tlv type identityref ipv6-reachability prefixes prefix prefix string x-bit boolean](#)

Tree [x-bit](#)

Configurable False

Platforms 7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

ipv6-srlgs

Description This container defines ISIS SRLG TLV.

Context [network-instance name string protocols isis instance name string level level-number number link-state-database lsp lsp-id string tlvs tlv type identityref ipv6-srlgs](#)

Tree [ipv6-srlgs](#)

Configurable False

Platforms 7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

ipv6-srlg [instance-number number](#)

Description Instance of the IPv6 SRLG TLV.

Context [network-instance name string protocols isis instance name string level level-number number link-state-database lsp lsp-id string tlvs tlv type identityref ipv6-srlgs ipv6-srlg instance-number number](#)

Tree [ipv6-srlg](#)

Configurable False

Platforms 7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

instance-number *number*

Description	An arbitrary unsigned 32-bit integer used to disambiguate the instance of TLV 138. The instance identifier is synthesised by the system and may be renumbered for the same SRLG definition in subsequent advertised LSPs if (and only if) the entire list of SRLGs is replaced.
Context	network-instance name <i>string</i> protocols isis instance name <i>string</i> level level-number <i>number</i> link-state-database lsp lsp-id <i>string</i> tlvs tlv type identityref ipv6-srlgs ipv6-srlg instance-number <i>number</i>
Configurable	False
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

flags *keyword*

Description	IPv6 SRLG flags.
Context	network-instance name <i>string</i> protocols isis instance name <i>string</i> level level-number <i>number</i> link-state-database lsp lsp-id <i>string</i> tlvs tlv type identityref ipv6-srlgs ipv6-srlg instance-number <i>number</i> flags <i>keyword</i>
Tree	flags
Options	<ul style="list-style-type: none"> na <p>When set, the IPv6 neighbour address is included, whereas if unset, it is omitted</p>
Configurable	False
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

ipv6-interface-address *string*

Description	IPv6 interface address or Link Local Identifier.
Context	network-instance name <i>string</i> protocols isis instance name <i>string</i> level level-number <i>number</i> link-state-database lsp lsp-id <i>string</i> tlvs tlv type identityref ipv6-srlgs ipv6-srlg instance-number <i>number</i> ipv6-interface-address <i>string</i>
Tree	ipv6-interface-address
Configurable	False
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

ipv6-neighbor-address *string*

Description	IPv6 neighbor address or Link Remote Identifier.
Context	network-instance name <i>string</i> protocols isis instance name <i>string</i> level level-number <i>number</i> link-state-database lsp lsp-id <i>string</i> tlvs tlv type identityref ipv6-srlgs ipv6-srlg instance-number <i>number</i> ipv6-neighbor-address <i>string</i>
Tree	ipv6-neighbor-address
Configurable	False
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

psn-number *number*

Description	Pseudonode number if the neighbor is on a LAN interface.
Context	network-instance name <i>string</i> protocols isis instance name <i>string</i> level level-number <i>number</i> link-state-database lsp lsp-id <i>string</i> tlvs tlv type identityref ipv6-srlgs ipv6-srlg instance-number <i>number</i> psn-number <i>number</i>
Tree	psn-number
Configurable	False
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

srlg-value *number*

Description	SRLG values.
Context	network-instance name <i>string</i> protocols isis instance name <i>string</i> level level-number <i>number</i> link-state-database lsp lsp-id <i>string</i> tlvs tlv type identityref ipv6-srlgs ipv6-srlg instance-number <i>number</i> srlg-value <i>number</i>
Tree	srlg-value
Configurable	False
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

system-id *string*

Description	Neighbor system ID.
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Context	network-instance name <i>string</i> protocols isis instance name <i>string</i> level level-number <i>number</i> link-state-database lsp lsp-id <i>string</i> tlvs tlv type <i>identityref</i> ipv6-srlgs ipv6-srlg <i>instance-number</i> <i>number</i> system-id <i>string</i>
Tree	system-id
String Length	14
Configurable	False
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

ipv6-te-router-id

Description	This container defines TLV 140.
Context	network-instance name <i>string</i> protocols isis instance name <i>string</i> level level-number <i>number</i> link-state-database lsp lsp-id <i>string</i> tlvs tlv type <i>identityref</i> ipv6-te-router-id
Tree	ipv6-te-router-id
Configurable	False
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

router-id *string*

Description	IPv6 Traffic Engineering router ID of the node. For traffic engineering, it guarantees that we have a single stable address that can always be referenced in a path that will be reachable from multiple hops away, regardless of the state of the node's interfaces.
Context	network-instance name <i>string</i> protocols isis instance name <i>string</i> level level-number <i>number</i> link-state-database lsp lsp-id <i>string</i> tlvs tlv type <i>identityref</i> ipv6-te-router-id router-id <i>string</i>
Tree	router-id
Configurable	False
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

is-alias-id

Description	This container defines the IS-Alias TLV which allows extension-capable ISs to recognize the Originating System of an Extended LSP set. It identifies the Normal system-id of the Originating System.
Context	network-instance name <i>string</i> protocols isis instance name <i>string</i> level level-number <i>number</i> link-state-database lsp lsp-id <i>string</i> tlvs tlv type identityref is-alias-id
Tree	is-alias-id
Configurable	False
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

alias-id *string*

Description	List of alias ID(s).
Context	network-instance name <i>string</i> protocols isis instance name <i>string</i> level level-number <i>number</i> link-state-database lsp lsp-id <i>string</i> tlvs tlv type identityref is-alias-id alias-id <i>string</i>
Tree	alias-id
String Length	14
Configurable	False
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

is-reachability

Description	This container describes list of ISIS neighbors and attributes.
Context	network-instance name <i>string</i> protocols isis instance name <i>string</i> level level-number <i>number</i> link-state-database lsp lsp-id <i>string</i> tlvs tlv type identityref is-reachability
Tree	is-reachability
Configurable	False
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

neighbors

Description	This container describes IS neighbors.
Context	network-instance name <i>string</i> protocols isis instance name <i>string</i> level level-number <i>number</i> link-state-database lsp lsp-id <i>string</i> tlvs tlv type identityref is-reachability neighbors
Tree	neighbors
Configurable	False
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

neighbor [system-id](#) *string*

Description	IS reachability neighbor attributes.
Context	network-instance name <i>string</i> protocols isis instance name <i>string</i> level level-number <i>number</i> link-state-database lsp lsp-id <i>string</i> tlvs tlv type identityref is-reachability neighbors neighbor system-id <i>string</i>
Tree	neighbor
Configurable	False
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

system-id *string*

Description	System-ID of IS neighbor.
Context	network-instance name <i>string</i> protocols isis instance name <i>string</i> level level-number <i>number</i> link-state-database lsp lsp-id <i>string</i> tlvs tlv type identityref is-reachability neighbors neighbor system-id <i>string</i>
String Length	14
Configurable	False
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

default-metric

Description	This container defines ISIS Default Metric.
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Context	network-instance name <i>string</i> protocols isis instance name <i>string</i> level level-number <i>number</i> link-state-database lsp lsp-id <i>string</i> tlvs tlv type identityref is-reachability neighbors neighbor system-id <i>string</i> default-metric
Tree	default-metric
Configurable	False
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

flags *keyword*

Description	ISIS Default-Metric Flags.
Context	network-instance name <i>string</i> protocols isis instance name <i>string</i> level level-number <i>number</i> link-state-database lsp lsp-id <i>string</i> tlvs tlv type identityref is-reachability neighbors neighbor system-id <i>string</i> default-metric flags <i>keyword</i>
Tree	flags
Options	<ul style="list-style-type: none"> internal When set to zero, indicates internal metrics.
Configurable	False
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

metric *number*

Description	<p>ISIS default metric value</p> <p>This is a metric understood by every Intermediate system in the domain. Each circuit shall have a positive integral value assigned for this metric. The value may be associated with any objective function of the circuit, but by convention is intended to measure the capacity of the circuit for handling traffic, for example, its throughput in bits-per-second. Higher values indicate a lower capacity.</p>
Context	network-instance name <i>string</i> protocols isis instance name <i>string</i> level level-number <i>number</i> link-state-database lsp lsp-id <i>string</i> tlvs tlv type identityref is-reachability neighbors neighbor system-id <i>string</i> default-metric metric number <i>number</i>
Tree	metric
Range	1 to 63
Configurable	False

Platforms 7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

delay-metric

Description This container defines the ISIS delay metric.

Context [network-instance name](#) *string* [protocols isis instance name](#) *string* [level level-number](#) *number* [link-state-database lsp](#) [lsp-id](#) *string* [tlvs tlv type](#) [identityref is-reachability neighbors neighbor system-id](#) *string* [delay-metric](#)

Tree [delay-metric](#)

Configurable False

Platforms 7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

flags *keyword*

Description ISIS Delay Metric Flags.

Context [network-instance name](#) *string* [protocols isis instance name](#) *string* [level level-number](#) *number* [link-state-database lsp](#) [lsp-id](#) *string* [tlvs tlv type](#) [identityref is-reachability neighbors neighbor system-id](#) *string* [delay-metric flags](#) *keyword*

Tree [flags](#)

Options

- **internal**
When this flag is not set, internal metrics are in use.
- **unsupported**
When this flag (referred to as the S-bit) is set, then the metric is unsupported.

Configurable False

Platforms 7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

metric *number*

Description ISIS delay metric value

This metric measures the transit delay of the associated circuit. It is an optional metric, which if assigned to a circuit shall have a positive integral value. Higher values indicate a longer transit delay.

Context	network-instance name <i>string</i> protocols isis instance name <i>string</i> level level-number <i>number</i> link-state-database lsp lsp-id <i>string</i> tlvs tlv type <i>identityref</i> is-reachability neighbors neighbor system-id <i>string</i> delay-metric metric <i>number</i>
Tree	metric
Range	1 to 63
Configurable	False
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

error-metric

Description	This container defines the ISIS error metric.
Context	network-instance name <i>string</i> protocols isis instance name <i>string</i> level level-number <i>number</i> link-state-database lsp lsp-id <i>string</i> tlvs tlv type <i>identityref</i> is-reachability neighbors neighbor system-id <i>string</i> error-metric
Tree	error-metric
Configurable	False
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

flags *keyword*

Description	IS-IS error metric flags.
Context	network-instance name <i>string</i> protocols isis instance name <i>string</i> level level-number <i>number</i> link-state-database lsp lsp-id <i>string</i> tlvs tlv type <i>identityref</i> is-reachability neighbors neighbor system-id <i>string</i> error-metric flags <i>keyword</i>
Tree	flags
Options	<ul style="list-style-type: none"> • internal When this flag is not set, internal metrics are in use. • unsupported When this flag (referred to as the S-bit) is set, then the metric is unsupported.
Configurable	False
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

metric number

Description	ISIS error metric value This metric measures the residual error probability of the associated circuit. It is an optional metric, which if assigned to a circuit shall have a non-zero value. Higher values indicate a larger probability of undetected errors on the circuit.
Context	network-instance name string protocols isis instance name string level level-number number link-state-database lsp lsp-id string tlvs tlv type identityref is-reachability neighbors neighbor system-id string error-metric metric number
Tree	metric
Range	1 to 63
Configurable	False
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

expense-metric

Description	This container defines the ISIS expense metric.
Context	network-instance name string protocols isis instance name string level level-number number link-state-database lsp lsp-id string tlvs tlv type identityref is-reachability neighbors neighbor system-id string expense-metric
Tree	expense-metric
Configurable	False
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

flags keyword

Description	ISIS Expense Metric Flags.
Context	network-instance name string protocols isis instance name string level level-number number link-state-database lsp lsp-id string tlvs tlv type identityref is-reachability neighbors neighbor system-id string expense-metric flags keyword
Tree	flags
Options	<ul style="list-style-type: none"> internal When this flag is not set, internal metrics are in use. unsupported

When this flag (referred to as the S-bit) is set, then the metric is unsupported.

Configurable	False
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

metric number

Description	ISIS expense metric value This metric measures the monetary cost of utilising the associated circuit. It is an optional metric, which if assigned to a circuit shall have a positive integral value ¹). Higher values indicate a larger monetary expense.
Context	network-instance name string protocols isis instance name string level level-number number link-state-database lsp lsp-id string tlvs tlv type identityref is-reachability neighbors neighbor system-id string expense-metric metric number
Tree	metric
Range	1 to 63
Configurable	False
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

isis-neighbor-attribute

Description	This container defines list of ISIS topology neighbors for extended ISIS LSP (multiple system IDs).
Context	network-instance name string protocols isis instance name string level level-number number link-state-database lsp lsp-id string tlvs tlv type identityref isis-neighbor-attribute
Tree	isis-neighbor-attribute
Configurable	False
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

neighbors

Description	This container describes IS neighbors.
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Context	network-instance name <i>string</i> protocols isis instance name <i>string</i> level level-number <i>number</i> link-state-database lsp lsp-id <i>string</i> tlvs tlv type identityref isis-neighbor-attribute neighbors
Tree	neighbors
Configurable	False
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

neighbor [system-id](#) *string*

Description	This list describes ISIS extended neighbors and reachability attributes.
Context	network-instance name <i>string</i> protocols isis instance name <i>string</i> level level-number <i>number</i> link-state-database lsp lsp-id <i>string</i> tlvs tlv type identityref isis-neighbor-attribute neighbors neighbor system-id <i>string</i>
Tree	neighbor
Configurable	False
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

system-id *string*

Description	System-id of the neighbor.
Context	network-instance name <i>string</i> protocols isis instance name <i>string</i> level level-number <i>number</i> link-state-database lsp lsp-id <i>string</i> tlvs tlv type identityref isis-neighbor-attribute neighbors neighbor system-id <i>string</i>
String Length	14
Configurable	False
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

instances

Description	This list contains all instances of an adjacency between the originating IS and the remote IS. Multiple instances are used where there are parallel adjacencies between two systems.
Context	network-instance name <i>string</i> protocols isis instance name <i>string</i> level level-number <i>number</i> link-state-database lsp lsp-id <i>string</i> tlvs tlv type identityref isis-neighbor-attribute neighbors neighbor system-id <i>string</i> instances

Tree	instances
Configurable	False
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

instance id number

Description	Instance of the TLV to the remote IS neighbor.
Context	network-instance name string protocols isis instance name string level level-number number link-state-database lsp lsp-id string tlvs tlv type identityref isis-neighbor-attribute neighbors neighbor system-id string instances instance id number
Tree	instance
Configurable	False
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

id number

Description	Unique identifier for the instance of the TLV for the IS neighbor. The instance ID is not required to be consistent across across readvertisements of the LSP.
Context	network-instance name string protocols isis instance name string level level-number number link-state-database lsp lsp-id string tlvs tlv type identityref isis-neighbor-attribute neighbors neighbor system-id string instances instance id number
Configurable	False
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

metric number

Description	Metric value.
Context	network-instance name string protocols isis instance name string level level-number number link-state-database lsp lsp-id string tlvs tlv type identityref isis-neighbor-attribute neighbors neighbor system-id string instances instance id number metric number
Tree	metric
Range	1 to 16777215

Configurable	False
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b
subtlvs	
Description	This container describes IS Neighbor sub-TLVs.
Context	network-instance name <i>string</i> protocols isis instance name <i>string</i> level level-number <i>number</i> link-state-database lsp lsp-id <i>string</i> tlvs tlv type <i>identityref</i> isis-neighbor-attribute neighbors neighbor system-id <i>string</i> instances instance id <i>number</i> subtlvs
Tree	subtlvs
Configurable	False
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b
subtlv type identityref	
Description	List of subTLV types in the LSDB for the specified TLV.
Context	network-instance name <i>string</i> protocols isis instance name <i>string</i> level level-number <i>number</i> link-state-database lsp lsp-id <i>string</i> tlvs tlv type <i>identityref</i> isis-neighbor-attribute neighbors neighbor system-id <i>string</i> instances instance id <i>number</i> subtlvs subtlv type <i>identityref</i>
Tree	subtlv
Configurable	False
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b
type identityref	
Description	The type of subTLV being described. The type of subTLV is expressed as a canonical name.
Context	network-instance name <i>string</i> protocols isis instance name <i>string</i> level level-number <i>number</i> link-state-database lsp lsp-id <i>string</i> tlvs tlv type <i>identityref</i> isis-neighbor-attribute neighbors neighbor system-id <i>string</i> instances instance id <i>number</i> subtlvs subtlv type <i>identityref</i>
Options	<ul style="list-style-type: none"> • is-reachability-subtlvs-type Base identity for an ISIS TLV 22, 23, 222, 223, 141 SUB-TLV type. • ip-reachability-subtlvs-type

Base identity for an ISIS TLV 135, 235, 236, 237 SUB-TLV type.

- router-capability-subtlvs-type

Base identity for an ISIS TLV 242 SUB-TLV type.

Configurable False

Platforms 7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

adjacency-sids

Description This container defines segment routing adjacency SIDs.

Context [network-instance name](#) *string* [protocols isis instance name](#) *string* [level level-number](#) *number* [link-state-database lsp lsp-id](#) *string* [tlvs tlv type](#) *identityref* [isis-neighbor-attribute neighbors neighbor system-id](#) *string* [instances instance id](#) *number* [subtlvs subtlv type](#) *identityref* [adjacency-sids](#)

Tree [adjacency-sids](#)

Configurable False

Platforms 7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

adjacency-sid *value number*

Description Adjacency Segment-IDs List. An IGP-Adjacency Segment is an IGP segment attached to a unidirectional adjacency or a set of unidirectional adjacencies. By default, an IGP- Adjacency Segment is local to the node which advertises it.

Context [network-instance name](#) *string* [protocols isis instance name](#) *string* [level level-number](#) *number* [link-state-database lsp lsp-id](#) *string* [tlvs tlv type](#) *identityref* [isis-neighbor-attribute neighbors neighbor system-id](#) *string* [instances instance id](#) *number* [subtlvs subtlv type](#) *identityref* [adjacency-sids adjacency-sid value](#) *number*

Tree [adjacency-sid](#)

Configurable False

Platforms 7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

value number

Description Adjacency-SID value.

Context	network-instance name <i>string</i> protocols isis instance name <i>string</i> level level-number <i>number</i> link-state-database lsp lsp-id <i>string</i> tlvs tlv type <i>identityref</i> isis-neighbor-attribute neighbors neighbor system-id <i>string</i> instances instance id <i>number</i> subtlvs subtlv type <i>identityref</i> adjacency-sids adjacency-sid value <i>number</i>
Configurable	False
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b
flags <i>keyword</i>	
Description	Flags associated with Adj-Segment-ID.
Context	network-instance name <i>string</i> protocols isis instance name <i>string</i> level level-number <i>number</i> link-state-database lsp lsp-id <i>string</i> tlvs tlv type <i>identityref</i> isis-neighbor-attribute neighbors neighbor system-id <i>string</i> instances instance id <i>number</i> subtlvs subtlv type <i>identityref</i> adjacency-sids adjacency-sid value <i>number</i> flags <i>keyword</i>
Tree	flags
Options	<ul style="list-style-type: none"> • address-family Address-family flag. When unset, the Adj-SID refers to an adjacency with outgoing IPv4 encapsulation. If set then the Adj-SID refers to an adjacency with outgoing IPv6 encapsulation. • backup Backup flag. When set, the Adj-SID refers to an adjacency being protected (e.g.: using IPFRR or MPLS-FRR). • value Value flag. When set, the SID carries a value (instead of an index). By default the flag is SET. • local Local flag. When set, the value/index carried by the SID has local significance. By default the flag is SET. • set Set flag. When set, the S-Flag indicates that the Adj-SID refers to a set of adjacencies.
Configurable	False
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

weight *number*

Description	Value that represents the weight of the Adj-SID for the purpose of load balancing.
Context	network-instance name <i>string</i> protocols isis instance name <i>string</i> level level-number <i>number</i> link-state-database lsp lsp-id <i>string</i> tlvs tlv type <i>identityref</i> isis-neighbor-attribute neighbors neighbor system-id <i>string</i> instances instance id <i>number</i> subtlvs subtlv type <i>identityref</i> adjacency-sids adjacency-sid value <i>number</i> weight <i>number</i>
Tree	weight
Configurable	False
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

admin-group

Description	This container defines sub-TLV 3.
Context	network-instance name <i>string</i> protocols isis instance name <i>string</i> level level-number <i>number</i> link-state-database lsp lsp-id <i>string</i> tlvs tlv type <i>identityref</i> isis-neighbor-attribute neighbors neighbor system-id <i>string</i> instances instance id <i>number</i> subtlvs subtlv type <i>identityref</i> admin-group
Tree	admin-group
Configurable	False
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

admin-group *number*

Description	The administrative group sub-TLV contains a 4-octet bit mask assigned by the network administrator Each set bit corresponds to one administrative group assigned to the interface. By convention, the least significant bit is referred to as group 0, and the most significant bit is referred to as group 31.
Context	network-instance name <i>string</i> protocols isis instance name <i>string</i> level level-number <i>number</i> link-state-database lsp lsp-id <i>string</i> tlvs tlv type <i>identityref</i> isis-neighbor-attribute neighbors neighbor system-id <i>string</i> instances instance id <i>number</i> subtlvs subtlv type <i>identityref</i> admin-group admin-group <i>number</i>
Tree	admin-group
Configurable	False

Platforms 7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

available-bandwidth

Description This container defines unidirectional lavailable bandwidth.

Context [network-instance name string protocols isis instance name string level level-number number link-state-database lsp lsp-id string tlvs tlv type identityref isis-neighbor-attribute neighbors neighbor system-id string instances instance id number subtlvs subtlv type identityref available-bandwidth](#)

Tree [available-bandwidth](#)

Configurable False

Platforms 7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

bandwidth *binary*

Description The available bandwidth on a link, forwarding adjacency, or bundled link in IEEE floating-point format with units of bytes per second. For a link or forwarding adjacency, available bandwidth is defined to be residual bandwidth minus the measured bandwidth used for the actual forwarding of non-RSVP-TE label switched path packets. For a bundled link, available bandwidth is defined to be the sum of the component link available bandwidths minus the measured bandwidth used for the actual forwarding of non-RSVP-TE label switched path packets. For a bundled link, available bandwidth is defined to be the sum of the component link available bandwidths.

Context [network-instance name string protocols isis instance name string level level-number number link-state-database lsp lsp-id string tlvs tlv type identityref isis-neighbor-attribute neighbors neighbor system-id string instances instance id number subtlvs subtlv type identityref available-bandwidth bandwidth binary](#)

Tree [bandwidth](#)

String Length 4

Units bytes per second

Configurable False

Platforms 7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

type *identityref*

Description	The type of subTLV being described. The type of subTLV is expressed as a canonical name.
Context	network-instance name <i>string</i> protocols isis instance name <i>string</i> level level-number <i>number</i> link-state-database lsp lsp-id <i>string</i> tlvs tlv type <i>identityref</i> isis-neighbor-attribute neighbors neighbor system-id <i>string</i> instances instance id <i>number</i> subtlvs subtlv type <i>identityref</i> available-bandwidth type <i>identityref</i>
Tree	type
Options	<ul style="list-style-type: none"> • is-reachability-subtlvs-type Base identity for an ISIS TLV 22, 23, 222, 223, 141 SUB-TLV type. • ip-reachability-subtlvs-type Base identity for an ISIS TLV 135, 235, 236, 237 SUB-TLV type. • router-capability-subtlvs-type Base identity for an ISIS TLV 242 SUB-TLV type.
Configurable	False
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

bandwidth-constraints

Description	This container defines bandwidth-constraints. For DS-TE, the existing Maximum Reservable link bandwidth parameter is retained, but its semantics is generalized and interpreted as the aggregate bandwidth constraint across all Class-Types
Context	network-instance name <i>string</i> protocols isis instance name <i>string</i> level level-number <i>number</i> link-state-database lsp lsp-id <i>string</i> tlvs tlv type <i>identityref</i> isis-neighbor-attribute neighbors neighbor system-id <i>string</i> instances instance id <i>number</i> subtlvs subtlv type <i>identityref</i> bandwidth-constraints
Tree	bandwidth-constraints
Configurable	False
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

bandwidth-constraint [model-id](#) *number*

Description	List of the Bandwidth Constraints sub-TLV instances present in the TLV.
Context	network-instance name <i>string</i> protocols isis instance name <i>string</i> level level-number <i>number</i> link-state-database lsp lsp-id <i>string</i> tlvs tlv type <i>identityref</i>

	isis-neighbor-attribute neighbors neighbor system-id <i>string</i> instances instance id <i>number</i> subtlvs subtlv type <i>identityref</i> bandwidth-constraints bandwidth-constraint model-id <i>number</i>
Tree	bandwidth-constraint
Configurable	False
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b
model-id <i>number</i>	
Description	Identifier for the Bandwidth Constraints Model currently in use by the LSR initiating the IGP advertisement.
Context	network-instance name <i>string</i> protocols isis instance name <i>string</i> level level-number <i>number</i> link-state-database lsp lsp-id <i>string</i> tlvs tlv type <i>identityref</i> isis-neighbor-attribute neighbors neighbor system-id <i>string</i> instances instance id <i>number</i> subtlvs subtlv type <i>identityref</i> bandwidth-constraints bandwidth-constraint model-id <i>number</i>
Configurable	False
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b
constraints	
Description	Constraints contained within the Bandwidth Constraints sub-TLV
Context	network-instance name <i>string</i> protocols isis instance name <i>string</i> level level-number <i>number</i> link-state-database lsp lsp-id <i>string</i> tlvs tlv type <i>identityref</i> isis-neighbor-attribute neighbors neighbor system-id <i>string</i> instances instance id <i>number</i> subtlvs subtlv type <i>identityref</i> bandwidth-constraints bandwidth-constraint model-id <i>number</i> constraints
Tree	constraints
Configurable	False
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b
constraint constraint-id <i>number</i>	
Description	List of the constraints within the Bandwidth Constraints sub-TLV. The BC0 level is indicated by the constraint-id leaf being set to 0, with BCN being indicated by constraint-id N.
Context	network-instance name <i>string</i> protocols isis instance name <i>string</i> level level-number <i>number</i> link-state-database lsp lsp-id <i>string</i> tlvs tlv type <i>identityref</i>

	isis-neighbor-attribute neighbors neighbor system-id string instances instance id number subtlvs subtlv type identityref bandwidth-constraints bandwidth-constraint model-id number constraints constraint constraint-id number
Tree	constraint
Configurable	False
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b
constraint-id number	
Description	Unique reference for the bandwidth constraint level. BC0 is indicated by this leaf being set to zero, with BCN represented by this leaf being set to N.
Context	network-instance name string protocols isis instance name string level level-number number link-state-database lsp lsp-id string tlvs tlv type identityref isis-neighbor-attribute neighbors neighbor system-id string instances instance id number subtlvs subtlv type identityref bandwidth-constraints bandwidth-constraint model-id number constraints constraint constraint-id number
Configurable	False
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b
bandwidth binary	
Description	The bandwidth constraint, expressed as a 32-bit IEEE floating point number expressed in bytes per second.
Context	network-instance name string protocols isis instance name string level level-number number link-state-database lsp lsp-id string tlvs tlv type identityref isis-neighbor-attribute neighbors neighbor system-id string instances instance id number subtlvs subtlv type identityref bandwidth-constraints bandwidth-constraint model-id number constraints constraint constraint-id number bandwidth binary
Tree	bandwidth
String Length	4
Units	bytes per second
Configurable	False
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

extended-admin-group

Description	This container defines sub-TLV 14.
Context	network-instance name <i>string</i> protocols isis instance name <i>string</i> level level-number <i>number</i> link-state-database lsp lsp-id <i>string</i> tlvs tlv type <i>identityref</i> isis-neighbor-attribute neighbors neighbor system-id <i>string</i> instances instance id <i>number</i> subtlvs subtlv type <i>identityref</i> extended-admin-group
Tree	extended-admin-group
Configurable	False
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

extended-admin-group *number*

Description	The extended-admin-group sub-TLV is used in addition to the Administrative Groups when it is desirable to make more than 32 colors available for advertisement in a network.
Context	network-instance name <i>string</i> protocols isis instance name <i>string</i> level level-number <i>number</i> link-state-database lsp lsp-id <i>string</i> tlvs tlv type <i>identityref</i> isis-neighbor-attribute neighbors neighbor system-id <i>string</i> instances instance id <i>number</i> subtlvs subtlv type <i>identityref</i> extended-admin-group extended-admin-group <i>number</i>
Tree	extended-admin-group
Configurable	False
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

ipv4-interface-address

Description	This container defines sub-TLV 6.
Context	network-instance name <i>string</i> protocols isis instance name <i>string</i> level level-number <i>number</i> link-state-database lsp lsp-id <i>string</i> tlvs tlv type <i>identityref</i> isis-neighbor-attribute neighbors neighbor system-id <i>string</i> instances instance id <i>number</i> subtlvs subtlv type <i>identityref</i> ipv4-interface-address
Tree	ipv4-interface-address
Configurable	False
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

address *string*

Description	A 4-octet IPv4 address for the interface described by the (main) TLV. This sub-TLV can occur multiple times.
Context	network-instance name <i>string</i> protocols isis instance name <i>string</i> level level-number <i>number</i> link-state-database lsp lsp-id <i>string</i> tlvs tlv type <i>identityref</i> isis-neighbor-attribute neighbors neighbor system-id <i>string</i> instances instance id <i>number</i> subtlvs subtlv type <i>identityref</i> ipv4-interface-address address <i>string</i>
Tree	address
Configurable	False
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

ipv4-neighbor-address

Description	This container defines sub-TLV 8.
Context	network-instance name <i>string</i> protocols isis instance name <i>string</i> level level-number <i>number</i> link-state-database lsp lsp-id <i>string</i> tlvs tlv type <i>identityref</i> isis-neighbor-attribute neighbors neighbor system-id <i>string</i> instances instance id <i>number</i> subtlvs subtlv type <i>identityref</i> ipv4-neighbor-address
Tree	ipv4-neighbor-address
Configurable	False
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

address *string*

Description	A single IPv4 address for a neighboring router on this link. This sub-TLV can occur multiple times.
Context	network-instance name <i>string</i> protocols isis instance name <i>string</i> level level-number <i>number</i> link-state-database lsp lsp-id <i>string</i> tlvs tlv type <i>identityref</i> isis-neighbor-attribute neighbors neighbor system-id <i>string</i> instances instance id <i>number</i> subtlvs subtlv type <i>identityref</i> ipv4-neighbor-address address <i>string</i>
Tree	address
Configurable	False
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

ipv6-interface-address

Description	This container defines sub-TLV 12.
Context	network-instance name <i>string</i> protocols isis instance name <i>string</i> level level-number <i>number</i> link-state-database lsp lsp-id <i>string</i> tlvs tlv type <i>identityref</i> isis-neighbor-attribute neighbors neighbor system-id <i>string</i> instances instance id <i>number</i> subtlvs subtlv type <i>identityref</i> ipv6-interface-address
Tree	ipv6-interface-address
Configurable	False
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

address *string*

Description	Contains a 16-octet IPv6 address for the interface described by the containing Extended IS Reachability TLV. This sub-TLV can occur multiple times.
Context	network-instance name <i>string</i> protocols isis instance name <i>string</i> level level-number <i>number</i> link-state-database lsp lsp-id <i>string</i> tlvs tlv type <i>identityref</i> isis-neighbor-attribute neighbors neighbor system-id <i>string</i> instances instance id <i>number</i> subtlvs subtlv type <i>identityref</i> ipv6-interface-address address <i>string</i>
Tree	address
Configurable	False
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

ipv6-neighbor-address

Description	This container defines sub-TLV 13.
Context	network-instance name <i>string</i> protocols isis instance name <i>string</i> level level-number <i>number</i> link-state-database lsp lsp-id <i>string</i> tlvs tlv type <i>identityref</i> isis-neighbor-attribute neighbors neighbor system-id <i>string</i> instances instance id <i>number</i> subtlvs subtlv type <i>identityref</i> ipv6-neighbor-address
Tree	ipv6-neighbor-address
Configurable	False
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

address *string*

Description	Contains a 16-octet IPv6 address for a neighboring router on the link described by the (main) TLV. This sub-TLV can occur multiple times.
Context	network-instance name <i>string</i> protocols isis instance name <i>string</i> level level-number <i>number</i> link-state-database lsp lsp-id <i>string</i> tlvs tlv type <i>identityref</i> isis-neighbor-attribute neighbors neighbor system-id <i>string</i> instances instance id <i>number</i> subtlvs subtlv type <i>identityref</i> ipv6-neighbor-address address <i>string</i>
Tree	address
Configurable	False
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

lan-adjacency-sids

Description	This container defines segment routing LAN adjacency SIDs
Context	network-instance name <i>string</i> protocols isis instance name <i>string</i> level level-number <i>number</i> link-state-database lsp lsp-id <i>string</i> tlvs tlv type <i>identityref</i> isis-neighbor-attribute neighbors neighbor system-id <i>string</i> instances instance id <i>number</i> subtlvs subtlv type <i>identityref</i> lan-adjacency-sids
Tree	lan-adjacency-sids
Configurable	False
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

lan-adjacency-sid *value* *number*

Description	Adjacency Segment-IDs List. An IGP-Adjacency Segment is an IGP segment attached to a unidirectional adjacency or a set of unidirectional adjacencies. By default, an IGP- Adjacency Segment is local to the node which advertises it.
Context	network-instance name <i>string</i> protocols isis instance name <i>string</i> level level-number <i>number</i> link-state-database lsp lsp-id <i>string</i> tlvs tlv type <i>identityref</i> isis-neighbor-attribute neighbors neighbor system-id <i>string</i> instances instance id <i>number</i> subtlvs subtlv type <i>identityref</i> lan-adjacency-sids lan-adjacency-sid value <i>number</i>
Tree	lan-adjacency-sid
Configurable	False

Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b
value <i>number</i>	
Description	LAN Adjacency-SID value.
Context	network-instance name <i>string</i> protocols isis instance name <i>string</i> level level-number <i>number</i> link-state-database lsp lsp-id <i>string</i> tlvs tlv type identityref isis-neighbor-attribute neighbors neighbor system-id <i>string</i> instances instance id <i>number</i> subtlvs subtlv type identityref lan-adjacency-sids lan-adjacency-sid value <i>number</i>
Configurable	False
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b
flags <i>keyword</i>	
Description	Flags associated with LAN-Adj-Segment-ID.
Context	network-instance name <i>string</i> protocols isis instance name <i>string</i> level level-number <i>number</i> link-state-database lsp lsp-id <i>string</i> tlvs tlv type identityref isis-neighbor-attribute neighbors neighbor system-id <i>string</i> instances instance id <i>number</i> subtlvs subtlv type identityref lan-adjacency-sids lan-adjacency-sid value <i>number</i> flags <i>keyword</i>
Tree	flags
Options	<ul style="list-style-type: none"> • address-family Address-family flag. When unset, the Adj-SID refers to an adjacency with outgoing IPv4 encapsulation. If set then the Adj-SID refers to an adjacency with outgoing IPv6 encapsulation. • backup Backup flag. When set, the Adj-SID refers to an adjacency being protected (e.g.: using IPFRR or MPLS-FRR). • value Value flag. When set, the SID carries a value (instead of an index). By default the flag is SET. • local Local flag. When set, the value/index carried by the SID has local significance. By default the flag is SET. • set Set flag. When set, the S-Flag indicates that the Adj-SID refers to a set of adjacencies.

Configurable	False
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b
neighbor-id <i>string</i>	
Description	System ID of the neighbor associated with the LAN- Adj-Segment-ID value.
Context	network-instance name <i>string</i> protocols isis instance name <i>string</i> level level-number <i>number</i> link-state-database lsp lsp-id <i>string</i> tlvs tlv type identityref isis-neighbor-attribute neighbors neighbor system-id <i>string</i> instances instance id <i>number</i> subtlvs subtlv type identityref lan-adjacency-sids lan-adjacency-sid value <i>number</i> neighbor-id <i>string</i>
Tree	neighbor-id
String Length	14
Configurable	False
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b
weight <i>number</i>	
Description	Value that represents the weight of the Adj-SID for the purpose of load balancing.
Context	network-instance name <i>string</i> protocols isis instance name <i>string</i> level level-number <i>number</i> link-state-database lsp lsp-id <i>string</i> tlvs tlv type identityref isis-neighbor-attribute neighbors neighbor system-id <i>string</i> instances instance id <i>number</i> subtlvs subtlv type identityref lan-adjacency-sids lan-adjacency-sid value <i>number</i> weight <i>number</i>
Tree	weight
Configurable	False
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b
link-attributes	
Description	This container defines link-attributes.
Context	network-instance name <i>string</i> protocols isis instance name <i>string</i> level level-number <i>number</i> link-state-database lsp lsp-id <i>string</i> tlvs tlv type identityref isis-neighbor-attribute neighbors neighbor system-id <i>string</i> instances instance id <i>number</i> subtlvs subtlv type identityref link-attributes
Tree	link-attributes

Configurable	False
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

local-protection *keyword*

Description	Link local-protection attributes.
Context	network-instance name <i>string</i> protocols isis instance name <i>string</i> level level-number <i>number</i> link-state-database lsp lsp-id <i>string</i> tlvs tlv type identityref isis-neighbor-attribute neighbors neighbor system-id <i>string</i> instances instance id <i>number</i> subtlvs subtlv type identityref link-attributes local-protection <i>keyword</i>
Tree	local-protection
Options	<ul style="list-style-type: none"> local-protection If set, local protection is available for the link. link-excluded If set, the link is excluded from local protection.

Configurable	False
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

link-delay

Description	This container defines unidirectional link delay.
Context	network-instance name <i>string</i> protocols isis instance name <i>string</i> level level-number <i>number</i> link-state-database lsp lsp-id <i>string</i> tlvs tlv type identityref isis-neighbor-attribute neighbors neighbor system-id <i>string</i> instances instance id <i>number</i> subtlvs subtlv type identityref link-delay
Tree	link-delay
Configurable	False
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

a-bit *boolean*

Description	The A bit is set when the measured value of this parameter exceeds its configured maximum threshold. The A bit is cleared when the measured value falls below its configured reuse threshold.
--------------------	---

Context [network-instance name string protocols isis instance name string level level-number number link-state-database lsp lsp-id string tlvs tlv type identityref isis-neighbor-attribute neighbors neighbor system-id string instances instance id number subtlvs subtlv type identityref link-delay a-bit boolean](#)

Tree [a-bit](#)

Configurable False

Platforms 7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

delay number

Description Average link delay value (in microseconds) between two directly connected IS-IS neighbors over a configurable interval.

Context [network-instance name string protocols isis instance name string level level-number number link-state-database lsp lsp-id string tlvs tlv type identityref isis-neighbor-attribute neighbors neighbor system-id string instances instance id number subtlvs subtlv type identityref link-delay delay number](#)

Tree [delay](#)

Units microseconds

Configurable False

Platforms 7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

link-delay-variation

Description This container defines unidirectional link delay variation.

Context [network-instance name string protocols isis instance name string level level-number number link-state-database lsp lsp-id string tlvs tlv type identityref isis-neighbor-attribute neighbors neighbor system-id string instances instance id number subtlvs subtlv type identityref link-delay-variation](#)

Tree [link-delay-variation](#)

Configurable False

Platforms 7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

delay number

Description Average link delay between two directly connected IS-IS neighbors over a configurable interval.

Context [network-instance name](#) *string* [protocols isis instance name](#) *string* [level level-number](#) *number* [link-state-database lsp lsp-id](#) *string* [tlvs tlv type](#) *identityref* [isis-neighbor-attribute neighbors neighbor system-id](#) *string* [instances instance id](#) *number* [subtlvs subtlv type](#) *identityref* [link-delay-variation delay](#) *number*

Tree [delay](#)

Units microseconds

Configurable False

Platforms 7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

link-id

Description This container defines sub-TLV 4.

Context [network-instance name](#) *string* [protocols isis instance name](#) *string* [level level-number](#) *number* [link-state-database lsp lsp-id](#) *string* [tlvs tlv type](#) *identityref* [isis-neighbor-attribute neighbors neighbor system-id](#) *string* [instances instance id](#) *number* [subtlvs subtlv type](#) *identityref* [link-id](#)

Tree [link-id](#)

Configurable False

Platforms 7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

local *number*

Description The value field of this sub-TLV contains 4 octets of Link Local Identifier followed by 4 octets of Link Remote Identifier.

Context [network-instance name](#) *string* [protocols isis instance name](#) *string* [level level-number](#) *number* [link-state-database lsp lsp-id](#) *string* [tlvs tlv type](#) *identityref* [isis-neighbor-attribute neighbors neighbor system-id](#) *string* [instances instance id](#) *number* [subtlvs subtlv type](#) *identityref* [link-id](#) [local](#) *number*

Tree [local](#)

Configurable False

Platforms 7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

remote *number*

Description If the Link Remote Identifier is unknown, it is set to 0.

Context [network-instance name](#) *string* [protocols isis instance name](#) *string* [level level-number](#) *number* [link-state-database lsp lsp-id](#) *string* [tlvs tlv type](#) *identityref* [isis-neighbor-attribute neighbors neighbor system-id](#) *string* [instances instance id](#) *number* [subtlvs subtlv type](#) *identityref* [link-id remote](#) *number*

Tree [remote](#)

Configurable False

Platforms 7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

link-loss

Description This container defines unidirectional link loss delay.

Context [network-instance name](#) *string* [protocols isis instance name](#) *string* [level level-number](#) *number* [link-state-database lsp lsp-id](#) *string* [tlvs tlv type](#) *identityref* [isis-neighbor-attribute neighbors neighbor system-id](#) *string* [instances instance id](#) *number* [subtlvs subtlv type](#) *identityref* [link-loss](#)

Tree [link-loss](#)

Configurable False

Platforms 7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

a-bit *boolean*

Description The A bit is set when the measured value of this parameter exceeds its configured maximum threshold. The A bit is cleared when the measured value falls below its configured reuse threshold.

Context [network-instance name](#) *string* [protocols isis instance name](#) *string* [level level-number](#) *number* [link-state-database lsp lsp-id](#) *string* [tlvs tlv type](#) *identityref* [isis-neighbor-attribute neighbors neighbor system-id](#) *string* [instances instance id](#) *number* [subtlvs subtlv type](#) *identityref* [link-loss a-bit](#) *boolean*

Tree [a-bit](#)

Configurable False

Platforms 7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

link-loss *number*

Description Link packet loss as a percentage of the total traffic sent over a configurable interval. The basic unit is 0.000003%, where $(2^{24} - 2)$ is 50.331642%. This value is the highest packet-loss percentage that can be expressed (the

assumption being that precision is more important on high-speed links than the ability to advertise loss rates greater than this, and that high-speed links with over 50% loss are unusable). Therefore, measured values that are larger than the field maximum SHOULD be encoded as the maximum value.

Context	network-instance name <i>string</i> protocols isis instance name <i>string</i> level level-number <i>number</i> link-state-database lsp lsp-id <i>string</i> tlvs tlv type identityref isis-neighbor-attribute neighbors neighbor system-id <i>string</i> instances instance id <i>number</i> subtlvs subtlv type identityref link-loss link-loss <i>number</i>
Tree	link-loss
Configurable	False
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

link-protection-type

Description	ISIS LSDB parameters relating to the type of link protection offered.
Context	network-instance name <i>string</i> protocols isis instance name <i>string</i> level level-number <i>number</i> link-state-database lsp lsp-id <i>string</i> tlvs tlv type identityref isis-neighbor-attribute neighbors neighbor system-id <i>string</i> instances instance id <i>number</i> subtlvs subtlv type identityref link-protection-type
Tree	link-protection-type
Configurable	False
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

type *keyword*

Description	Link protection capabilities.
Context	network-instance name <i>string</i> protocols isis instance name <i>string</i> level level-number <i>number</i> link-state-database lsp lsp-id <i>string</i> tlvs tlv type identityref isis-neighbor-attribute neighbors neighbor system-id <i>string</i> instances instance id <i>number</i> subtlvs subtlv type identityref link-protection-type type <i>keyword</i>
Tree	type
Options	<ul style="list-style-type: none"> extra-traffic If set the link has extra traffic protection. If the link is of type Extra Traffic, it means that the link is protecting another link or links. The LSPs on a link of this type will be lost if any of the links it is protecting fail. unprotected

If set, the link is unprotected. If the link is of type Unprotected, it means that there is no other link protecting this link. The LSPs on a link of this type will be lost if the link fails.

- shared

If set, the link has shared protection. If the link is of type Shared, it means that there are one or more disjoint links of type Extra Traffic that are protecting this link. These Extra Traffic links are shared between one or more links of type Shared.

- one-one

If set, the link has dedicated 1:1 protection. If the link is of type Dedicated 1:1, it means that there is one dedicated disjoint link of type Extra Traffic that is protecting this link.

- plus-one

If set, the link has dedicated 1+1 protection. If the link is of type Dedicated 1+1, it means that a dedicated disjoint link is protecting this link. However, the protecting link is not advertised in the link state database and is therefore not available for the routing of LSPs.

- enhanced

If set the link has enhanced protection. If the link is of type Enhanced, it means that a protection scheme that is more reliable than Dedicated 1+1, e.g., 4 fiber BLSR/MS-SPRING, is being used to protect this link.

Configurable

False

Platforms

7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

max-link-bandwidth

Description

This container defines sub-TLV 9.

Context

[network-instance name](#) *string* [protocols isis instance name](#) *string* [level level-number](#) *number* [link-state-database lsp lsp-id](#) *string* [tlvs tlv type](#) *identityref* [isis-neighbor-attribute neighbors neighbor system-id](#) *string* [instances instance id](#) *number* [subtlvs subtlv type](#) *identityref* [max-link-bandwidth](#)

Tree

[max-link-bandwidth](#)

Configurable

False

Platforms

7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

bandwidth *binary*

Description	The maximum bandwidth that can be used on this link in this direction (from the system originating the LSP to its neighbors). It is encoded in 32 bits in IEEE floating point format. The units are bytes (not bits!) per second.
Context	network-instance name <i>string</i> protocols isis instance name <i>string</i> level level-number <i>number</i> link-state-database lsp lsp-id <i>string</i> tlvs tlv type <i>identityref</i> isis-neighbor-attribute neighbors neighbor system-id <i>string</i> instances instance id <i>number</i> subtlvs subtlv type <i>identityref</i> max-link-bandwidth bandwidth <i>binary</i>
Tree	bandwidth
String Length	4
Units	bytes per second
Configurable	False
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

max-reservable-link-bandwidth

Description	This container defines sub-TLV 10.
Context	network-instance name <i>string</i> protocols isis instance name <i>string</i> level level-number <i>number</i> link-state-database lsp lsp-id <i>string</i> tlvs tlv type <i>identityref</i> isis-neighbor-attribute neighbors neighbor system-id <i>string</i> instances instance id <i>number</i> subtlvs subtlv type <i>identityref</i> max-reservable-link-bandwidth
Tree	max-reservable-link-bandwidth
Configurable	False
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

bandwidth *binary*

Description	The maximum amount of bandwidth that can be reserved in this direction on this link. Note that for oversubscription purposes, this can be greater than the bandwidth of the link. It is encoded in 32 bits in IEEE floating point format. The units are bytes (not bits!) per second.
Context	network-instance name <i>string</i> protocols isis instance name <i>string</i> level level-number <i>number</i> link-state-database lsp lsp-id <i>string</i> tlvs tlv type <i>identityref</i> isis-neighbor-attribute neighbors neighbor system-id <i>string</i> instances instance id <i>number</i> subtlvs subtlv type <i>identityref</i> max-reservable-link-bandwidth bandwidth <i>binary</i>

Tree	bandwidth
String Length	4
Units	bytes per second
Configurable	False
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

min-max-link-delay

Description	This container defines min/max link delay.
Context	network-instance name string protocols isis instance name string level level-number number link-state-database lsp lsp-id string tlvs tlv type identityref isis-neighbor-attribute neighbors neighbor system-id string instances instance id number subtlvs subtlv type identityref min-max-link-delay
Tree	min-max-link-delay
Configurable	False
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

a-bit *boolean*

Description	The A bit is set when the measured value of this parameter exceeds its configured maximum threshold. The A bit is cleared when the measured value falls below its configured reuse threshold.
Context	network-instance name string protocols isis instance name string level level-number number link-state-database lsp lsp-id string tlvs tlv type identityref isis-neighbor-attribute neighbors neighbor system-id string instances instance id number subtlvs subtlv type identityref min-max-link-delay a-bit boolean
Tree	a-bit
Configurable	False
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

max-delay *number*

Description	Maximum measured link delay value(in microseconds) between two directly connected IS-IS neighbors over a configurable interval.
--------------------	---

Context	network-instance name <i>string</i> protocols isis instance name <i>string</i> level level-number <i>number</i> link-state-database lsp lsp-id <i>string</i> tlvs tlv type <i>identityref</i> isis-neighbor-attribute neighbors neighbor system-id <i>string</i> instances instance id <i>number</i> subtlvs subtlv type <i>identityref</i> min-max-link-delay max-delay <i>number</i>
Tree	max-delay
Units	microseconds
Configurable	False
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b
min-delay <i>number</i>	
Description	Minimum measured link delay value(in microseconds) between two directly connected IS-IS neighbors over a configurable interval.
Context	network-instance name <i>string</i> protocols isis instance name <i>string</i> level level-number <i>number</i> link-state-database lsp lsp-id <i>string</i> tlvs tlv type <i>identityref</i> isis-neighbor-attribute neighbors neighbor system-id <i>string</i> instances instance id <i>number</i> subtlvs subtlv type <i>identityref</i> min-max-link-delay min-delay <i>number</i>
Tree	min-delay
Units	microseconds
Configurable	False
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b
residual-bandwidth	
Description	This container defines unidirectional residual bandwidth.
Context	network-instance name <i>string</i> protocols isis instance name <i>string</i> level level-number <i>number</i> link-state-database lsp lsp-id <i>string</i> tlvs tlv type <i>identityref</i> isis-neighbor-attribute neighbors neighbor system-id <i>string</i> instances instance id <i>number</i> subtlvs subtlv type <i>identityref</i> residual-bandwidth
Tree	residual-bandwidth
Configurable	False
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

bandwidth *binary*

Description	Residual bandwidth on a link, forwarding adjacency [RFC4206], or bundled link in IEEE floating-point format with units of bytes per second. For a link or forwarding adjacency, residual bandwidth is defined to be the Maximum Bandwidth [RFC5305] minus the bandwidth currently allocated to RSVP-TE label switched paths. For a bundled link, residual bandwidth is defined to be the sum of the component link residual bandwidths.
Context	network-instance name <i>string</i> protocols isis instance name <i>string</i> level level-number <i>number</i> link-state-database lsp lsp-id <i>string</i> tlvs tlv type <i>identityref</i> isis-neighbor-attribute neighbors neighbor system-id <i>string</i> instances instance id <i>number</i> subtlvs subtlv type <i>identityref</i> residual-bandwidth bandwidth <i>binary</i>
Tree	bandwidth
String Length	4
Units	bytes per second
Configurable	False
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

te-default-metric

Description	This container defines sub-TLV 18.
Context	network-instance name <i>string</i> protocols isis instance name <i>string</i> level level-number <i>number</i> link-state-database lsp lsp-id <i>string</i> tlvs tlv type <i>identityref</i> isis-neighbor-attribute neighbors neighbor system-id <i>string</i> instances instance id <i>number</i> subtlvs subtlv type <i>identityref</i> te-default-metric
Tree	te-default-metric
Configurable	False
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

metric *number*

Description	This metric is administratively assigned and can be used to present a differently weighted topology to traffic engineering SPF calculations. To preclude overflow within a traffic engineering SPF implementation, all metrics greater than or equal to MAX_PATH_METRIC SHALL be considered to have a metric of MAX_PATH_METRIC.
Context	network-instance name <i>string</i> protocols isis instance name <i>string</i> level level-number <i>number</i> link-state-database lsp lsp-id <i>string</i> tlvs tlv type <i>identityref</i> isis-neighbor-attribute neighbors neighbor system-id <i>string</i> instances

	instance id number subtlvs subtlv type identityref te-default-metric metric number
Tree	metric
Configurable	False
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b
unconstrained-lsp	
Description	This container defines sub-TLV 23.
Context	network-instance name string protocols isis instance name string level level- number number link-state-database lsp lsp-id string tlvs tlv type identityref isis-neighbor-attribute neighbors neighbor system-id string instances instance id number subtlvs subtlv type identityref unconstrained-lsp
Tree	unconstrained-lsp
Configurable	False
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b
count number	
Description	Unconstrained TE LSP count(TE Label Switched Paths (LSPs) signalled with zero bandwidth).
Context	network-instance name string protocols isis instance name string level level- number number link-state-database lsp lsp-id string tlvs tlv type identityref isis-neighbor-attribute neighbors neighbor system-id string instances instance id number subtlvs subtlv type identityref unconstrained-lsp count number
Tree	count
Configurable	False
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b
type identityref	
Description	The type of subTLV being described. The type of subTLV is expressed as a canonical name.
Context	network-instance name string protocols isis instance name string level level- number number link-state-database lsp lsp-id string tlvs tlv type identityref isis-neighbor-attribute neighbors neighbor system-id string instances

	instance id number subtlvs subtlv type identityref unconstrained-lsp type identityref
Tree	type
Options	<ul style="list-style-type: none"> • is-reachability-subtlvs-type Base identity for an ISIS TLV 22, 23, 222, 223, 141 SUB-TLV type. • ip-reachability-subtlvs-type Base identity for an ISIS TLV 135, 235, 236, 237 SUB-TLV type. • router-capability-subtlvs-type Base identity for an ISIS TLV 242 SUB-TLV type.
Configurable	False
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b
unreserved-bandwidth	
Description	This container defines unreserved-bandwidth. The units are bytes per second.
Context	network-instance name string protocols isis instance name string level level-number number link-state-database lsp lsp-id string tlvs tlv type identityref isis-neighbor-attribute neighbors neighbor system-id string instances instance id number subtlvs subtlv type identityref unreserved-bandwidth
Tree	unreserved-bandwidth
Configurable	False
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b
setup-priority priority number	
Description	Enter the setup-priority list instance
Context	network-instance name string protocols isis instance name string level level-number number link-state-database lsp lsp-id string tlvs tlv type identityref isis-neighbor-attribute neighbors neighbor system-id string instances instance id number subtlvs subtlv type identityref unreserved-bandwidth setup-priority priority number
Tree	setup-priority
Configurable	False
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

priority *number*

Description	Setup priority level of 0 through 7 to be used by Unreserved Bandwidth sub-TLV 11.
Context	network-instance name <i>string</i> protocols isis instance name <i>string</i> level level-number <i>number</i> link-state-database lsp lsp-id <i>string</i> tlvs tlv type identityref isis-neighbor-attribute neighbors neighbor system-id <i>string</i> instances instance id <i>number</i> subtlvs subtlv type identityref unreserved-bandwidth setup-priority <i>priority</i> <i>number</i>
Range	0 to 7
Configurable	False
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

bandwidth *binary*

Description	The amount of bandwidth reservable in this direction on this link. Note that for oversubscription purposes, this can be greater than the bandwidth of the link. It contains eight 32-bit IEEE floating point numbers(one for each priority). The units are bytes (not bits!) per second. The values correspond to the bandwidth that can be reserved with a setup priority of 0 through 7, arranged in increasing order with priority 0 occurring at the start of the sub-TLV, and priority 7 at the end of the sub-TLV.
Context	network-instance name <i>string</i> protocols isis instance name <i>string</i> level level-number <i>number</i> link-state-database lsp lsp-id <i>string</i> tlvs tlv type identityref isis-neighbor-attribute neighbors neighbor system-id <i>string</i> instances instance id <i>number</i> subtlvs subtlv type identityref unreserved-bandwidth setup-priority <i>priority</i> <i>number</i> bandwidth <i>binary</i>
Tree	bandwidth
String Length	4
Units	bytes per second
Configurable	False
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

utilized-bandwidth

Description	This container defines unidirectional utilized bandwidth.
Context	network-instance name <i>string</i> protocols isis instance name <i>string</i> level level-number <i>number</i> link-state-database lsp lsp-id <i>string</i> tlvs tlv type identityref

	isis-neighbor-attribute neighbors neighbor system-id <i>string</i> instances instance id <i>number</i> subtlvs subtlv <i>type</i> identityref utilized-bandwidth
Tree	utilized-bandwidth
Configurable	False
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b
bandwidth <i>binary</i>	
Description	The bandwidth utilization on a link, forwarding adjacency, or bundled link in IEEE floating-point format with units of bytes per second. For a link or forwarding adjacency, bandwidth utilization represents the actual utilization of the link (i.e., as measured by the advertising node). For a bundled link, bandwidth utilization is defined to be the sum of the component link bandwidth utilizations.
Context	network-instance <i>name</i> <i>string</i> protocols isis <i>instance</i> <i>name</i> <i>string</i> level level-number <i>number</i> link-state-database lsp lsp-id <i>string</i> tlvs tlv <i>type</i> identityref isis-neighbor-attribute neighbors neighbor system-id <i>string</i> instances instance id <i>number</i> subtlvs subtlv <i>type</i> identityref utilized-bandwidth bandwidth <i>binary</i>
Tree	bandwidth
String Length	4
Units	bytes per second
Configurable	False
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b
type <i>identityref</i>	
Description	The type of subTLV being described. The type of subTLV is expressed as a canonical name.
Context	network-instance <i>name</i> <i>string</i> protocols isis <i>instance</i> <i>name</i> <i>string</i> level level-number <i>number</i> link-state-database lsp lsp-id <i>string</i> tlvs tlv <i>type</i> identityref isis-neighbor-attribute neighbors neighbor system-id <i>string</i> instances instance id <i>number</i> subtlvs subtlv <i>type</i> identityref utilized-bandwidth <i>type</i> identityref
Tree	type
Options	<ul style="list-style-type: none"> • is-reachability-subtlvs-type Base identity for an ISIS TLV 22, 23, 222, 223, 141 SUB-TLV type. • ip-reachability-subtlvs-type

Base identity for an ISIS TLV 135, 235, 236, 237 SUB-TLV type.

- router-capability-subtlvs-type

Base identity for an ISIS TLV 242 SUB-TLV type.

Configurable False

Platforms 7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

undefined-subtlvs

Description This container describes undefined ISIS TLVs.

Context [network-instance name string protocols isis instance name string level level-number number link-state-database lsp lsp-id string tlvs tlv type identityref isis-neighbor-attribute neighbors neighbor system-id string instances instance id number undefined-subtlvs](#)

Tree [undefined-subtlvs](#)

Configurable False

Platforms 7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

undefined-subtlv type number

Description Sub-TLVs that are not defined in the model or not recognised by system.

Context [network-instance name string protocols isis instance name string level level-number number link-state-database lsp lsp-id string tlvs tlv type identityref isis-neighbor-attribute neighbors neighbor system-id string instances instance id number undefined-subtlvs undefined-subtlv type number](#)

Tree [undefined-subtlv](#)

Configurable False

Platforms 7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

type number

Description TLV Type.

Context [network-instance name string protocols isis instance name string level level-number number link-state-database lsp lsp-id string tlvs tlv type identityref isis-neighbor-attribute neighbors neighbor system-id string instances instance id number undefined-subtlvs undefined-subtlv type number](#)

Configurable	False
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b
length number	
Description	TLV length.
Context	network-instance name string protocols isis instance name string level level-number number link-state-database lsp lsp-id string tlvs tlv type identityref isis-neighbor-attribute neighbors neighbor system-id string instances instance id number undefined-subtlvs undefined-subtlv type number length number
Tree	length
Configurable	False
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b
value binary	
Description	TLV value.
Context	network-instance name string protocols isis instance name string level level-number number link-state-database lsp lsp-id string tlvs tlv type identityref isis-neighbor-attribute neighbors neighbor system-id string instances instance id number undefined-subtlvs undefined-subtlv type number value binary
Tree	value
Configurable	False
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b
Isp-buffer-size	
Description	This container defines TLV 14 - the LSP Buffer Size TLV.
Context	network-instance name string protocols isis instance name string level level-number number link-state-database lsp lsp-id string tlvs tlv type identityref Isp-buffer-size
Tree	Isp-buffer-size
Configurable	False

Platforms 7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

size number

Description The maximum MTU that the advertising system can receive, expressed in bytes.

Context [network-instance name string protocols isis instance name string level level-number number link-state-database lsp lsp-id string tlvs tlv type identityref lsp-buffer-size size number](#)

Tree [size](#)

Units bytes

Configurable False

Platforms 7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

mt-ipv4-reachability

Description This container defines list of IPv4 reachability Information in multi-topology environment.

Context [network-instance name string protocols isis instance name string level level-number number link-state-database lsp lsp-id string tlvs tlv type identityref mt-ipv4-reachability](#)

Tree [mt-ipv4-reachability](#)

Configurable False

Platforms 7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

prefixes

Description This container describes IS prefixes.

Context [network-instance name string protocols isis instance name string level level-number number link-state-database lsp lsp-id string tlvs tlv type identityref mt-ipv4-reachability prefixes](#)

Tree [prefixes](#)

Configurable False

Platforms 7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

prefix mt-id number prefix string

Description IPv4 prefixes that are contained within MT reachability TLV.

Context [network-instance name string protocols isis instance name string level level-number number link-state-database lsp lsp-id string tlvs tlv type identityref mt-ipv4-reachability prefixes prefix mt-id number prefix string](#)

Tree [prefix](#)

Configurable False

Platforms 7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

mt-id number

Description Multi-topology ID

Context [network-instance name string protocols isis instance name string level level-number number link-state-database lsp lsp-id string tlvs tlv type identityref mt-ipv4-reachability prefixes prefix mt-id number prefix string](#)

Range 0 to 4095

Configurable False

Platforms 7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

prefix string

Description IPv4 prefix contained within extended reachability TLVs.

Context [network-instance name string protocols isis instance name string level level-number number link-state-database lsp lsp-id string tlvs tlv type identityref mt-ipv4-reachability prefixes prefix mt-id number prefix string](#)

Configurable False

Platforms 7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

metric number

Description	ISIS metric value.
Context	network-instance name string protocols isis instance name string level level-number number link-state-database lsp lsp-id string tlvs tlv type identityref mt-ipv4-reachability prefixes prefix mt-id number prefix string metric number
Tree	metric
Range	0 to 16777215
Configurable	False
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

s-bit boolean

Description	The Sub-TLV present bit. If UNSET, the octets of Sub-TLVs are not present. Otherwise, the bit is set and the octet following the prefix will contain the length of the Sub-TLV portion of the structure.
Context	network-instance name string protocols isis instance name string level level-number number link-state-database lsp lsp-id string tlvs tlv type identityref mt-ipv4-reachability prefixes prefix mt-id number prefix string s-bit boolean
Tree	s-bit
Configurable	False
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

subtlvs

Description	This container describes IS prefix sub-TLVs.
Context	network-instance name string protocols isis instance name string level level-number number link-state-database lsp lsp-id string tlvs tlv type identityref mt-ipv4-reachability prefixes prefix mt-id number prefix string subtlvs
Tree	subtlvs
Configurable	False
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

subtlv *type identityref*

Description	List of subTLV types in the LSDB for the specified TLV.
Context	network-instance name <i>string</i> protocols isis instance name <i>string</i> level level-number <i>number</i> link-state-database lsp lsp-id <i>string</i> tlvs tlv type <i>identityref</i> mt-ipv4-reachability prefixes prefix mt-id <i>number</i> prefix <i>string</i> subtlvs subtlv type <i>identityref</i>
Tree	subtlv
Configurable	False
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

type *identityref*

Description	The type of subTLV being described. The type of subTLV is expressed as a canonical name.
Context	network-instance name <i>string</i> protocols isis instance name <i>string</i> level level-number <i>number</i> link-state-database lsp lsp-id <i>string</i> tlvs tlv type <i>identityref</i> mt-ipv4-reachability prefixes prefix mt-id <i>number</i> prefix <i>string</i> subtlvs subtlv type <i>identityref</i>
Options	<ul style="list-style-type: none"> • is-reachability-subtlvs-type Base identity for an ISIS TLV 22, 23, 222, 223, 141 SUB-TLV type. • ip-reachability-subtlvs-type Base identity for an ISIS TLV 135, 235, 236, 237 SUB-TLV type. • router-capability-subtlvs-type Base identity for an ISIS TLV 242 SUB-TLV type.
Configurable	False
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

flags

Description	This container defines sub-TLV 4.
Context	network-instance name <i>string</i> protocols isis instance name <i>string</i> level level-number <i>number</i> link-state-database lsp lsp-id <i>string</i> tlvs tlv type <i>identityref</i> mt-ipv4-reachability prefixes prefix mt-id <i>number</i> prefix <i>string</i> subtlvs subtlv type <i>identityref</i> flags
Tree	flags
Configurable	False

Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b
flags <i>keyword</i>	
Description	Additional prefix reachability flags.
Context	network-instance name <i>string</i> protocols isis instance name <i>string</i> level level-number <i>number</i> link-state-database lsp lsp-id <i>string</i> tlvs tlv type identityref mt-ipv4-reachability prefixes prefix mt-id <i>number</i> prefix string subtlvs subtlv type identityref flags <i>flags keyword</i>
Tree	flags
Options	<ul style="list-style-type: none"> • external-flag External prefix flag. Set if the prefix has been redistributed from another protocol. This includes the case where multiple virtual routers are supported and the source of the redistributed prefix is another IS-IS instance. • readvertisement-flag Readvertisement flag. Set when the prefix has been leaked from one level to another (upwards or downwards). • node-flag Node flag. Set when the prefix identifies the advertising router, i.e., the prefix is a host prefix advertising a globally reachable address typically associated with a loopback address. • elc-flag Elc flag. Set for local host prefix of the originating node if it supports ELC on all interfaces
Configurable	False
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b
type <i>identityref</i>	
Description	The type of subTLV being described. The type of subTLV is expressed as a canonical name.
Context	network-instance name <i>string</i> protocols isis instance name <i>string</i> level level-number <i>number</i> link-state-database lsp lsp-id <i>string</i> tlvs tlv type identityref mt-ipv4-reachability prefixes prefix mt-id <i>number</i> prefix string subtlvs subtlv type identityref flags type identityref
Tree	type
Options	<ul style="list-style-type: none"> • is-reachability-subtlvs-type

	<ul style="list-style-type: none"> • Base identity for an ISIS TLV 22, 23, 222, 223, 141 SUB-TLV type. • <code>ip-reachability-subtlvs-type</code> Base identity for an ISIS TLV 135, 235, 236, 237 SUB-TLV type. • <code>router-capability-subtlvs-type</code> Base identity for an ISIS TLV 242 SUB-TLV type.
Configurable	False
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b
ipv4-source-router-id	
Description	This container defines sub-TLV 11.
Context	network-instance name string protocols isis instance name string level level-number number link-state-database lsp lsp-id string tlvs tlv type identityref mt-ipv4-reachability prefixes prefix mt-id number prefix string subtlvs subtlv type identityref ipv4-source-router-id
Tree	ipv4-source-router-id
Configurable	False
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b
router-id string	
Description	IPv4 Source router ID address. In cases where the advertisement is an identifier for the advertising router (e.g., with the N-flag set in the Prefix Attribute Flags sub-TLV), it may be useful for other routers to know the source of the advertisement. When reachability advertisement is leaked from one level to another, Router ID advertised is always the Router ID of the ISIS instance that originated the advertisement. This would be true even if the prefix had been learned from another protocol.
Context	network-instance name string protocols isis instance name string level level-number number link-state-database lsp lsp-id string tlvs tlv type identityref mt-ipv4-reachability prefixes prefix mt-id number prefix string subtlvs subtlv type identityref ipv4-source-router-id router-id string
Tree	router-id
Configurable	False
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

type *identityref*

Description	The type of subTLV being described. The type of subTLV is expressed as a canonical name.
Context	network-instance name <i>string</i> protocols isis instance name <i>string</i> level level-number <i>number</i> link-state-database lsp lsp-id <i>string</i> tlvs tlv type <i>identityref</i> mt-ipv4-reachability prefixes prefix mt-id <i>number</i> prefix string subtlvs subtlv type <i>identityref</i> ipv4-source-router-id type <i>identityref</i>
Tree	type
Options	<ul style="list-style-type: none"> • is-reachability-subtlvs-type Base identity for an ISIS TLV 22, 23, 222, 223, 141 SUB-TLV type. • ip-reachability-subtlvs-type Base identity for an ISIS TLV 135, 235, 236, 237 SUB-TLV type. • router-capability-subtlvs-type Base identity for an ISIS TLV 242 SUB-TLV type.
Configurable	False
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

ipv6-source-router-id

Description	This container defines sub-TLV 12.
Context	network-instance name <i>string</i> protocols isis instance name <i>string</i> level level-number <i>number</i> link-state-database lsp lsp-id <i>string</i> tlvs tlv type <i>identityref</i> mt-ipv4-reachability prefixes prefix mt-id <i>number</i> prefix string subtlvs subtlv type <i>identityref</i> ipv6-source-router-id
Tree	ipv6-source-router-id
Configurable	False
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

router-id *string*

Description	IPv6 Source router ID address. In cases where the advertisement is an identifier for the advertising router (e.g., with the N-flag set in the Prefix Attribute Flags sub-TLV), it may be useful for other routers to know the source of the advertisement. When reachability advertisement is leaked from one level to another, Router ID advertised is always the Router ID of the ISIS instance that originated the advertisement. This would be true even if the prefix had been learned from another protocol.
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Context	network-instance name string protocols isis instance name string level level-number number link-state-database lsp lsp-id string tlvs tlv type identityref mt-ipv4-reachability prefixes prefix mt-id number prefix string subtlvs subtlv type identityref ipv6-source-router-id router-id string
Tree	router-id
Configurable	False
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b
type identityref	
Description	The type of subTLV being described. The type of subTLV is expressed as a canonical name.
Context	network-instance name string protocols isis instance name string level level-number number link-state-database lsp lsp-id string tlvs tlv type identityref mt-ipv4-reachability prefixes prefix mt-id number prefix string subtlvs subtlv type identityref ipv6-source-router-id type identityref
Tree	type
Options	<ul style="list-style-type: none"> • is-reachability-subtlvs-type Base identity for an ISIS TLV 22, 23, 222, 223, 141 SUB-TLV type. • ip-reachability-subtlvs-type Base identity for an ISIS TLV 135, 235, 236, 237 SUB-TLV type. • router-capability-subtlvs-type Base identity for an ISIS TLV 242 SUB-TLV type.
Configurable	False
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b
prefix-sids	
Description	This container defines segment routing extensions for prefixes.
Context	network-instance name string protocols isis instance name string level level-number number link-state-database lsp lsp-id string tlvs tlv type identityref mt-ipv4-reachability prefixes prefix mt-id number prefix string subtlvs subtlv type identityref prefix-sids
Tree	prefix-sids
Configurable	False

Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b
prefix-sid <i>value number</i>	
Description	Prefix Segment-ID list. IGP-Prefix Segment is an IGP segment attached to an IGP prefix. An IGP-Prefix Segment is global (unless explicitly advertised otherwise) within the SR/IGP domain.
Context	network-instance name <i>string</i> protocols isis instance name <i>string</i> level level-number <i>number</i> link-state-database lsp lsp-id <i>string</i> tlvs tlv type identityref mt-ipv4-reachability prefixes prefix mt-id <i>number</i> prefix string subtlvs subtlv type identityref prefix-sids prefix-sid <i>value number</i>
Tree	prefix-sid
Configurable	False
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b
value <i>number</i>	
Description	IGP Prefix-SID value.
Context	network-instance name <i>string</i> protocols isis instance name <i>string</i> level level-number <i>number</i> link-state-database lsp lsp-id <i>string</i> tlvs tlv type identityref mt-ipv4-reachability prefixes prefix mt-id <i>number</i> prefix string subtlvs subtlv type identityref prefix-sids prefix-sid <i>value number</i>
Configurable	False
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b
algorithm <i>number</i>	
Description	Prefix-SID algorithm to be used for path computation.
Context	network-instance name <i>string</i> protocols isis instance name <i>string</i> level level-number <i>number</i> link-state-database lsp lsp-id <i>string</i> tlvs tlv type identityref mt-ipv4-reachability prefixes prefix mt-id <i>number</i> prefix string subtlvs subtlv type identityref prefix-sids prefix-sid <i>value number</i> algorithm <i>number</i>
Tree	algorithm
Configurable	False
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

flags *keyword*

Description	Flags associated with Prefix Segment-ID.
Context	network-instance name <i>string</i> protocols isis instance name <i>string</i> level level-number <i>number</i> link-state-database lsp lsp-id <i>string</i> tlvs tlv type <i>identityref</i> mt-ipv4-reachability prefixes prefix mt-id <i>number</i> prefix <i>string</i> subtlvs subtlv type <i>identityref</i> prefix-sids prefix-sid value <i>number</i> flags <i>keyword</i>
Tree	flags
Options	<ul style="list-style-type: none"> • readvertisement Readvertisement flag. When set, the prefix to which this Prefix-SID is attached, has been propagated by the router either from another level or from redistribution. • node Node flag. When set, the Prefix-SID refers to the router identified by the prefix. Typically, the N-Flag is set on Prefix-SIDs attached to a router loopback address. • no-php Penultimate-Hop-Popping flag. When set, then the penultimate hop MUST NOT pop the Prefix-SID before delivering the packet to the node that advertised the Prefix-SID. • explicit-null Explicit-Null flag. When set, any upstream neighbor of the Prefix-SID originator MUST replace the Prefix-SID with a Prefix-SID having an Explicit-NULL value (0 for IPv4 and 2 for IPv6) before forwarding the packet. • value Value flag. When set, the Prefix-SID carries a value (instead of an index). By default the flag is UNSET. • local Local flag. When set, the value/index carried by the Prefix-SID has local significance. By default the flag is UNSET.
Configurable	False
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

tag

Description	This container defines sub-TLV 1.
Context	network-instance name <i>string</i> protocols isis instance name <i>string</i> level level-number <i>number</i> link-state-database lsp lsp-id <i>string</i> tlvs tlv type <i>identityref</i>

	mt-ipv4-reachability prefixes prefix mt-id number prefix string subtlvs subtlv type identityref tag
Tree	tag
Configurable	False
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b
tag32 number	
Description	List of 32-bit tags associated with the prefix. Example uses of these tags include carrying BGP standard (or extended) communities and controlling redistribution between levels and areas, different routing protocols, or multiple instances of IS-IS running on the same router.
Context	network-instance name string protocols isis instance name string level level-number number link-state-database lsp lsp-id string tlvs tlv type identityref mt-ipv4-reachability prefixes prefix mt-id number prefix string subtlvs subtlv type identityref tag tag32 number
Tree	tag32
Configurable	False
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b
tag64	
Description	This container defines sub-TLV 2.
Context	network-instance name string protocols isis instance name string level level-number number link-state-database lsp lsp-id string tlvs tlv type identityref mt-ipv4-reachability prefixes prefix mt-id number prefix string subtlvs subtlv type identityref tag64
Tree	tag64
Configurable	False
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b
tag64 number	
Description	List of 64-bit tags associated with the prefix. Example uses of these tags include carrying BGP standard (or extended) communities and controlling redistribution between levels and areas, different routing protocols, or multiple instances of IS-IS running on the same router.

Context	network-instance name <i>string</i> protocols isis instance name <i>string</i> level level-number <i>number</i> link-state-database lsp lsp-id <i>string</i> tlvs tlv type identityref mt-ipv4-reachability prefixes prefix mt-id <i>number</i> prefix string subtlvs subtlv type identityref tag64 tag64 <i>number</i>
Tree	tag64
Configurable	False
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

undefined-subtlvs

Description	This container describes undefined ISIS TLVs.
Context	network-instance name <i>string</i> protocols isis instance name <i>string</i> level level-number <i>number</i> link-state-database lsp lsp-id <i>string</i> tlvs tlv type identityref mt-ipv4-reachability prefixes prefix mt-id <i>number</i> prefix string undefined-subtlvs
Tree	undefined-subtlvs
Configurable	False
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

undefined-subtlv *type number*

Description	Sub-TLVs that are not defined in the model or not recognised by system.
Context	network-instance name <i>string</i> protocols isis instance name <i>string</i> level level-number <i>number</i> link-state-database lsp lsp-id <i>string</i> tlvs tlv type identityref mt-ipv4-reachability prefixes prefix mt-id <i>number</i> prefix string undefined-subtlvs undefined-subtlv type <i>number</i>
Tree	undefined-subtlv
Configurable	False
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

type number

Description	TLV Type.
Context	network-instance name <i>string</i> protocols isis instance name <i>string</i> level level-number <i>number</i> link-state-database lsp lsp-id <i>string</i> tlvs tlv type identityref

	mt-ipv4-reachability prefixes prefix mt-id number prefix string undefined-subtlvs undefined-subtlv type number
Configurable	False
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b
length number	
Description	TLV length.
Context	network-instance name string protocols isis instance name string level level-number number link-state-database lsp lsp-id string tlvs tlv type identityref mt-ipv4-reachability prefixes prefix mt-id number prefix string undefined-subtlvs undefined-subtlv type number length number
Tree	length
Configurable	False
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b
value binary	
Description	TLV value.
Context	network-instance name string protocols isis instance name string level level-number number link-state-database lsp lsp-id string tlvs tlv type identityref mt-ipv4-reachability prefixes prefix mt-id number prefix string undefined-subtlvs undefined-subtlv type number value binary
Tree	value
Configurable	False
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b
up-down boolean	
Description	The up/down bit. Set if a prefix is advertised from a higher level to a lower level (e.g., level 2 to level 1), indicating that the prefix has traveled down the hierarchy. Prefixes that have the up/down bit set may only be advertised down the hierarchy, i.e., to lower levels. When a prefix is first injected into IS-IS, the bit is UNSET.
Context	network-instance name string protocols isis instance name string level level-number number link-state-database lsp lsp-id string tlvs tlv type identityref

	mt-ipv4-reachability prefixes prefix mt-id number prefix string up-down boolean
Tree	up-down
Configurable	False
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

mt-ipv6-reachability

Description	This container defines list of IPv6 reachability information in multi - topology environment.
Context	network-instance name string protocols isis instance name string level level-number number link-state-database lsp lsp-id string tlvs tlv type identityref mt-ipv6-reachability
Tree	mt-ipv6-reachability
Configurable	False
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

prefixes

Description	This container describes IS prefixes.
Context	network-instance name string protocols isis instance name string level level-number number link-state-database lsp lsp-id string tlvs tlv type identityref mt-ipv6-reachability prefixes
Tree	prefixes
Configurable	False
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

[prefix](#) [prefix](#) [string](#) [mt-id](#) [number](#)

Description	List of IPv6 prefixes contained within MT reachability TLV.
Context	network-instance name string protocols isis instance name string level level-number number link-state-database lsp lsp-id string tlvs tlv type identityref mt-ipv6-reachability prefixes prefix prefix string mt-id number
Tree	prefix

Configurable	False
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

prefix string

Description	IPv6 prefix contained within extended reachability TLVs.
Context	network-instance name string protocols isis instance name string level level-number number link-state-database lsp lsp-id string tlvs tlv type identityref mt-ipv6-reachability prefixes prefix prefix string mt-id number
Configurable	False
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

mt-id number

Description	Multi-topology ID
Context	network-instance name string protocols isis instance name string level level-number number link-state-database lsp lsp-id string tlvs tlv type identityref mt-ipv6-reachability prefixes prefix prefix string mt-id number
Range	0 to 4095
Configurable	False
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

metric number

Description	ISIS metric value.
Context	network-instance name string protocols isis instance name string level level-number number link-state-database lsp lsp-id string tlvs tlv type identityref mt-ipv6-reachability prefixes prefix prefix string mt-id number metric number
Tree	metric
Range	0 to 16777215
Configurable	False
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

s-bit *boolean*

Description	The sub-tlv present bit. If UNSET, the octets of Sub-TLVs are not present. Otherwise, the bit is set and the octet following the prefix will contain the length of the Sub-TLV portion of the structure.
Context	network-instance name <i>string</i> protocols isis instance name <i>string</i> level level-number <i>number</i> link-state-database lsp lsp-id <i>string</i> tlvs tlv type identityref mt-ipv6-reachability prefixes prefix prefix <i>string</i> mt-id <i>number</i> s-bit <i>boolean</i>
Tree	s-bit
Configurable	False
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

subtlvs

Description	This container describes IS prefix sub-TLVs.
Context	network-instance name <i>string</i> protocols isis instance name <i>string</i> level level-number <i>number</i> link-state-database lsp lsp-id <i>string</i> tlvs tlv type identityref mt-ipv6-reachability prefixes prefix prefix <i>string</i> mt-id <i>number</i> subtlvs
Tree	subtlvs
Configurable	False
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

subtlv *type identityref*

Description	List of subTLV types in the LSDB for the specified TLV.
Context	network-instance name <i>string</i> protocols isis instance name <i>string</i> level level-number <i>number</i> link-state-database lsp lsp-id <i>string</i> tlvs tlv type identityref mt-ipv6-reachability prefixes prefix prefix <i>string</i> mt-id <i>number</i> subtlvs subtlv <i>type identityref</i>
Tree	subtlv
Configurable	False
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

type *identityref*

Description	The type of subTLV being described. The type of subTLV is expressed as a canonical name.
Context	network-instance name <i>string</i> protocols isis instance name <i>string</i> level level-number <i>number</i> link-state-database lsp lsp-id <i>string</i> tlvs tlv type <i>identityref</i> mt-ipv6-reachability prefixes prefix prefix <i>string</i> mt-id <i>number</i> subtlvs subtlv type <i>identityref</i>
Options	<ul style="list-style-type: none"> is-reachability-subtlvs-type Base identity for an ISIS TLV 22, 23, 222, 223, 141 SUB-TLV type. ip-reachability-subtlvs-type Base identity for an ISIS TLV 135, 235, 236, 237 SUB-TLV type. router-capability-subtlvs-type Base identity for an ISIS TLV 242 SUB-TLV type.
Configurable	False
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

flags

Description	This container defines sub-TLV 4.
Context	network-instance name <i>string</i> protocols isis instance name <i>string</i> level level-number <i>number</i> link-state-database lsp lsp-id <i>string</i> tlvs tlv type <i>identityref</i> mt-ipv6-reachability prefixes prefix prefix <i>string</i> mt-id <i>number</i> subtlvs subtlv type <i>identityref</i> flags
Tree	flags
Configurable	False
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

flags *keyword*

Description	Additional prefix reachability flags.
Context	network-instance name <i>string</i> protocols isis instance name <i>string</i> level level-number <i>number</i> link-state-database lsp lsp-id <i>string</i> tlvs tlv type <i>identityref</i> mt-ipv6-reachability prefixes prefix prefix <i>string</i> mt-id <i>number</i> subtlvs subtlv type <i>identityref</i> flags flags <i>keyword</i>
Tree	flags
Options	<ul style="list-style-type: none"> external-flag

	<p>External prefix flag. Set if the prefix has been redistributed from another protocol. This includes the case where multiple virtual routers are supported and the source of the redistributed prefix is another IS-IS instance.</p> <ul style="list-style-type: none"> readvertisement-flag Readvertisement flag. Set when the prefix has been leaked from one level to another (upwards or downwards). node-flag Node flag. Set when the prefix identifies the advertising router, i.e., the prefix is a host prefix advertising a globally reachable address typically associated with a loopback address. elc-flag Elc flag. Set for local host prefix of the originating node if it supports ELC on all interfaces
Configurable	False
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b
type <i>identityref</i>	
Description	The type of subTLV being described. The type of subTLV is expressed as a canonical name.
Context	network-instance name string protocols isis instance name string level level-number number link-state-database lsp lsp-id string tlvs tlv type identityref mt-ipv6-reachability prefixes prefix prefix string mt-id number subtlvs subtlv type identityref flags type identityref
Tree	type
Options	<ul style="list-style-type: none"> is-reachability-subtlvs-type Base identity for an ISIS TLV 22, 23, 222, 223, 141 SUB-TLV type. ip-reachability-subtlvs-type Base identity for an ISIS TLV 135, 235, 236, 237 SUB-TLV type. router-capability-subtlvs-type Base identity for an ISIS TLV 242 SUB-TLV type.
Configurable	False
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

ipv4-source-router-id

Description	This container defines sub-TLV 11.
Context	network-instance name <i>string</i> protocols isis instance name <i>string</i> level level-number <i>number</i> link-state-database lsp lsp-id <i>string</i> tlvs tlv type <i>identityref</i> mt-ipv6-reachability prefixes prefix prefix <i>string</i> mt-id <i>number</i> subtlvs subtlv type <i>identityref</i> ipv4-source-router-id
Tree	ipv4-source-router-id
Configurable	False
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

router-id *string*

Description	IPv4 Source router ID address. In cases where the advertisement is an identifier for the advertising router (e.g., with the N-flag set in the Prefix Attribute Flags sub-TLV), it may be useful for other routers to know the source of the advertisement. When reachability advertisement is leaked from one level to another, Router ID advertised is always the Router ID of the IS-IS instance that originated the advertisement. This would be true even if the prefix had been learned from another protocol.
Context	network-instance name <i>string</i> protocols isis instance name <i>string</i> level level-number <i>number</i> link-state-database lsp lsp-id <i>string</i> tlvs tlv type <i>identityref</i> mt-ipv6-reachability prefixes prefix prefix <i>string</i> mt-id <i>number</i> subtlvs subtlv type <i>identityref</i> ipv4-source-router-id router-id <i>string</i>
Tree	router-id
Configurable	False
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

type *identityref*

Description	The type of subTLV being described. The type of subTLV is expressed as a canonical name.
Context	network-instance name <i>string</i> protocols isis instance name <i>string</i> level level-number <i>number</i> link-state-database lsp lsp-id <i>string</i> tlvs tlv type <i>identityref</i> mt-ipv6-reachability prefixes prefix prefix <i>string</i> mt-id <i>number</i> subtlvs subtlv type <i>identityref</i> ipv4-source-router-id type <i>identityref</i>
Tree	type
Options	<ul style="list-style-type: none"> is-reachability-subtlvs-type Base identity for an ISIS TLV 22, 23, 222, 223, 141 SUB-TLV type.

- **ip-reachability-subtlvs-type**
Base identity for an ISIS TLV 135, 235, 236, 237 SUB-TLV type.
- **router-capability-subtlvs-type**
Base identity for an ISIS TLV 242 SUB-TLV type.

Configurable False

Platforms 7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

ipv6-source-router-id

Description This container defines sub-TLV 12.

Context [network-instance name string protocols isis instance name string level level-number number link-state-database lsp lsp-id string tlvs tlv type identityref mt-ipv6-reachability prefixes prefix prefix string mt-id number subtlvs subtlv type identityref ipv6-source-router-id](#)

Tree [ipv6-source-router-id](#)

Configurable False

Platforms 7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

router-id string

Description IPv6 Source router ID address. In cases where the advertisement is an identifier for the advertising router (e.g., with the N-flag set in the Prefix Attribute Flags sub-TLV), it may be useful for other routers to know the source of the advertisement. When reachability advertisement is leaked from one level to another, Router ID advertised is always the Router ID of the ISIS instance that originated the advertisement. This would be true even if the prefix had been learned from another protocol.

Context [network-instance name string protocols isis instance name string level level-number number link-state-database lsp lsp-id string tlvs tlv type identityref mt-ipv6-reachability prefixes prefix prefix string mt-id number subtlvs subtlv type identityref ipv6-source-router-id router-id string](#)

Tree [router-id](#)

Configurable False

Platforms 7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

type *identityref*

Description	The type of subTLV being described. The type of subTLV is expressed as a canonical name.
Context	network-instance name <i>string</i> protocols isis instance name <i>string</i> level level-number <i>number</i> link-state-database lsp lsp-id <i>string</i> tlvs tlv type <i>identityref</i> mt-ipv6-reachability prefixes prefix prefix <i>string</i> mt-id <i>number</i> subtlvs subtlv type <i>identityref</i> ipv6-source-router-id <i>type</i> <i>identityref</i>
Tree	type
Options	<ul style="list-style-type: none"> • is-reachability-subtlvs-type Base identity for an ISIS TLV 22, 23, 222, 223, 141 SUB-TLV type. • ip-reachability-subtlvs-type Base identity for an ISIS TLV 135, 235, 236, 237 SUB-TLV type. • router-capability-subtlvs-type Base identity for an ISIS TLV 242 SUB-TLV type.
Configurable	False
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

prefix-sids

Description	This container defines segment routing extensions for prefixes.
Context	network-instance name <i>string</i> protocols isis instance name <i>string</i> level level-number <i>number</i> link-state-database lsp lsp-id <i>string</i> tlvs tlv type <i>identityref</i> mt-ipv6-reachability prefixes prefix prefix <i>string</i> mt-id <i>number</i> subtlvs subtlv type <i>identityref</i> prefix-sids
Tree	prefix-sids
Configurable	False
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

prefix-sid *value* *number*

Description	Prefix Segment-ID list. IGP-Prefix Segment is an IGP segment attached to an IGP prefix. An IGP-Prefix Segment is global (unless explicitly advertised otherwise) within the SR/IGP domain.
Context	network-instance name <i>string</i> protocols isis instance name <i>string</i> level level-number <i>number</i> link-state-database lsp lsp-id <i>string</i> tlvs tlv type <i>identityref</i>

	mt-ipv6-reachability prefixes prefix prefix string mt-id number subtlvs subtlv type identityref prefix-sids prefix-sid value number
Tree	prefix-sid
Configurable	False
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b
value number	
Description	IGP Prefix-SID value.
Context	network-instance name string protocols isis instance name string level level-number number link-state-database lsp lsp-id string tlvs tlv type identityref mt-ipv6-reachability prefixes prefix prefix string mt-id number subtlvs subtlv type identityref prefix-sids prefix-sid value number
Configurable	False
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b
algorithm number	
Description	Prefix-SID algorithm to be used for path computation.
Context	network-instance name string protocols isis instance name string level level-number number link-state-database lsp lsp-id string tlvs tlv type identityref mt-ipv6-reachability prefixes prefix prefix string mt-id number subtlvs subtlv type identityref prefix-sids prefix-sid value number algorithm number
Tree	algorithm
Configurable	False
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b
flags keyword	
Description	Flags associated with Prefix Segment-ID.
Context	network-instance name string protocols isis instance name string level level-number number link-state-database lsp lsp-id string tlvs tlv type identityref mt-ipv6-reachability prefixes prefix prefix string mt-id number subtlvs subtlv type identityref prefix-sids prefix-sid value number flags keyword
Tree	flags
Options	<ul style="list-style-type: none"> • readvertisement

Readvertisement flag. When set, the prefix to which this Prefix-SID is attached, has been propagated by the router either from another level or from redistribution.

- node

Node flag. When set, the Prefix-SID refers to the router identified by the prefix. Typically, the N-Flag is set on Prefix-SIDs attached to a router loopback address.

- no-php

Penultimate-Hop-Popping flag. When set, then the penultimate hop MUST NOT pop the Prefix-SID before delivering the packet to the node that advertised the Prefix-SID.

- explicit-null

Explicit-Null flag. When set, any upstream neighbor of the Prefix-SID originator MUST replace the Prefix-SID with a Prefix-SID having an Explicit-NULL value (0 for IPv4 and 2 for IPv6) before forwarding the packet.

- value

Value flag. When set, the Prefix-SID carries a value (instead of an index). By default the flag is UNSET.

- local

Local flag. When set, the value/index carried by the Prefix-SID has local significance. By default the flag is UNSET.

Configurable

False

Platforms

7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

tag

Description

This container defines sub-TLV 1.

Context

[network-instance name](#) *string* [protocols isis instance name](#) *string* [level level-number](#) *number* [link-state-database lsp lsp-id](#) *string* [tlvs tlv type identityref mt-ipv6-reachability prefixes prefix prefix](#) *string* [mt-id](#) *number* [subtlvs subtlv type identityref tag](#)

Tree

[tag](#)

Configurable

False

Platforms

7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

tag32 *number*

Description	List of 32-bit tags associated with the prefix. Example uses of these tags include carrying BGP standard (or extended) communities and controlling redistribution between levels and areas, different routing protocols, or multiple instances of IS-IS running on the same router.
Context	network-instance name <i>string</i> protocols isis instance name <i>string</i> level level-number <i>number</i> link-state-database lsp lsp-id <i>string</i> tlvs tlv type identityref mt-ipv6-reachability prefixes prefix prefix <i>string</i> mt-id <i>number</i> subtlvs subtlv type identityref tag tag32 <i>number</i>
Tree	tag32
Configurable	False
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

tag64

Description	This container defines sub-TLV 2.
Context	network-instance name <i>string</i> protocols isis instance name <i>string</i> level level-number <i>number</i> link-state-database lsp lsp-id <i>string</i> tlvs tlv type identityref mt-ipv6-reachability prefixes prefix prefix <i>string</i> mt-id <i>number</i> subtlvs subtlv type identityref tag64
Tree	tag64
Configurable	False
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

tag64 *number*

Description	List of 64-bit tags associated with the prefix. Example uses of these tags include carrying BGP standard (or extended) communities and controlling redistribution between levels and areas, different routing protocols, or multiple instances of IS-IS running on the same router.
Context	network-instance name <i>string</i> protocols isis instance name <i>string</i> level level-number <i>number</i> link-state-database lsp lsp-id <i>string</i> tlvs tlv type identityref mt-ipv6-reachability prefixes prefix prefix <i>string</i> mt-id <i>number</i> subtlvs subtlv type identityref tag64 tag64 <i>number</i>
Tree	tag64
Configurable	False

Platforms 7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

undefined-subtlvs

Description This container describes undefined ISIS TLVs.

Context [network-instance name](#) *string* [protocols isis instance name](#) *string* [level level-number](#) *number* [link-state-database lsp lsp-id](#) *string* [tlvs tlv type](#) *identityref* [mt-ipv6-reachability prefixes prefix prefix](#) *string* [mt-id](#) *number* [undefined-subtlvs](#)

Tree [undefined-subtlvs](#)

Configurable False

Platforms 7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

undefined-subtlv *type number*

Description Sub-TLVs that are not defined in the model or not recognised by system.

Context [network-instance name](#) *string* [protocols isis instance name](#) *string* [level level-number](#) *number* [link-state-database lsp lsp-id](#) *string* [tlvs tlv type](#) *identityref* [mt-ipv6-reachability prefixes prefix prefix](#) *string* [mt-id](#) *number* [undefined-subtlvs](#) [undefined-subtlv type](#) *number*

Tree [undefined-subtlv](#)

Configurable False

Platforms 7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

type number

Description TLV Type.

Context [network-instance name](#) *string* [protocols isis instance name](#) *string* [level level-number](#) *number* [link-state-database lsp lsp-id](#) *string* [tlvs tlv type](#) *identityref* [mt-ipv6-reachability prefixes prefix prefix](#) *string* [mt-id](#) *number* [undefined-subtlvs](#) [undefined-subtlv type](#) *number*

Configurable False

Platforms 7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

length *number*

Description	TLV length.
Context	network-instance name <i>string</i> protocols isis instance name <i>string</i> level level-number <i>number</i> link-state-database lsp lsp-id <i>string</i> tlvs tlv type identityref mt-ipv6-reachability prefixes prefix prefix <i>string</i> mt-id <i>number</i> undefined-subtlvs undefined-subtlv type <i>number</i> length <i>number</i>
Tree	length
Configurable	False
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

value *binary*

Description	TLV value.
Context	network-instance name <i>string</i> protocols isis instance name <i>string</i> level level-number <i>number</i> link-state-database lsp lsp-id <i>string</i> tlvs tlv type identityref mt-ipv6-reachability prefixes prefix prefix <i>string</i> mt-id <i>number</i> undefined-subtlvs undefined-subtlv type <i>number</i> value <i>binary</i>
Tree	value
Configurable	False
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

up-down *boolean*

Description	The up/down bit. Set if a prefix is advertised from a higher level to a lower level (e.g., level 2 to level 1), indicating that the prefix has traveled down the hierarchy. Prefixes that have the up/down bit set may only be advertised down the hierarchy, i.e., to lower levels. When a prefix is first injected into IS-IS, the bit is UNSET.
Context	network-instance name <i>string</i> protocols isis instance name <i>string</i> level level-number <i>number</i> link-state-database lsp lsp-id <i>string</i> tlvs tlv type identityref mt-ipv6-reachability prefixes prefix prefix <i>string</i> mt-id <i>number</i> up-down <i>boolean</i>
Tree	up-down
Configurable	False
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

x-bit *boolean*

Description	The external bit. Set when the prefix was distributed into IS-IS from another routing protocol.
Context	network-instance name <i>string</i> protocols isis instance name <i>string</i> level level-number <i>number</i> link-state-database lsp lsp-id <i>string</i> tlvs tlv type identityref mt-ipv6-reachability prefixes prefix prefix <i>string</i> mt-id <i>number</i> x-bit <i>boolean</i>
Tree	x-bit
Configurable	False
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

mt-isis-neighbor-attribute

Description	This container defines list of ISIS multi-topology neighbors.
Context	network-instance name <i>string</i> protocols isis instance name <i>string</i> level level-number <i>number</i> link-state-database lsp lsp-id <i>string</i> tlvs tlv type identityref mt-isis-neighbor-attribute
Tree	mt-isis-neighbor-attribute
Configurable	False
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

neighbors

Description	MT-IS neighbor attributes.
Context	network-instance name <i>string</i> protocols isis instance name <i>string</i> level level-number <i>number</i> link-state-database lsp lsp-id <i>string</i> tlvs tlv type identityref mt-isis-neighbor-attribute neighbors
Tree	neighbors
Configurable	False
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

neighbor [mt-id](#) *number* [system-id](#) *string*

Description	This container describes IS neighbors.
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Context	network-instance name <i>string</i> protocols isis instance name <i>string</i> level level-number <i>number</i> link-state-database lsp lsp-id <i>string</i> tlvs tlv type <i>identityref</i> mt-isis-neighbor-attribute neighbors neighbor mt-id <i>number</i> system-id <i>string</i>
Tree	neighbor
Configurable	False
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

mt-id *number*

Description	Identifier of a topology being announced.
Context	network-instance name <i>string</i> protocols isis instance name <i>string</i> level level-number <i>number</i> link-state-database lsp lsp-id <i>string</i> tlvs tlv type <i>identityref</i> mt-isis-neighbor-attribute neighbors neighbor mt-id <i>number</i> system-id <i>string</i>
Range	0 to 4095
Configurable	False
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

system-id *string*

Description	System-id of the IS neighbor.
Context	network-instance name <i>string</i> protocols isis instance name <i>string</i> level level-number <i>number</i> link-state-database lsp lsp-id <i>string</i> tlvs tlv type <i>identityref</i> mt-isis-neighbor-attribute neighbors neighbor mt-id <i>number</i> system-id <i>string</i>
String Length	14
Configurable	False
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

instances

Description	This list contains all instances of an adjacency between the originating and remote IS. Multiple instances are used to indicate where there are arallel adjacencies between systems.
Context	network-instance name <i>string</i> protocols isis instance name <i>string</i> level level-number <i>number</i> link-state-database lsp lsp-id <i>string</i> tlvs tlv type <i>identityref</i>

	mt-isis-neighbor-attribute neighbors neighbor mt-id number system-id string instances
Tree	instances
Configurable	False
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b
instance id number	
Description	Instance of TLV-222 between the originating and remote IS.
Context	network-instance name string protocols isis instance name string level level-number number link-state-database lsp lsp-id string tlvs tlv type identityref mt-isis-neighbor-attribute neighbors neighbor mt-id number system-id string instances instance id number
Tree	instance
Configurable	False
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b
id number	
Description	Unique identifier for the TLV instance for the neighbor. The ID is not required to be consistent across readvertisements of the LSP.
Context	network-instance name string protocols isis instance name string level level-number number link-state-database lsp lsp-id string tlvs tlv type identityref mt-isis-neighbor-attribute neighbors neighbor mt-id number system-id string instances instance id number
Configurable	False
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b
metric number	
Description	ISIS metric value.
Context	network-instance name string protocols isis instance name string level level-number number link-state-database lsp lsp-id string tlvs tlv type identityref mt-isis-neighbor-attribute neighbors neighbor mt-id number system-id string instances instance id number metric number
Tree	metric

Range	0 to 16777215
Configurable	False
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

subtlvs

Description	This container describes IS Neighbor sub-TLVs.
Context	network-instance name <i>string</i> protocols isis instance name <i>string</i> level level-number <i>number</i> link-state-database lsp lsp-id <i>string</i> tlvs tlv type identityref mt-isis-neighbor-attribute neighbors neighbor mt-id <i>number</i> system-id <i>string</i> instances instance id <i>number</i> subtlvs
Tree	subtlvs
Configurable	False
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

subtlv type identityref

Description	List of subTLV types in the LSDB for the specified TLV.
Context	network-instance name <i>string</i> protocols isis instance name <i>string</i> level level-number <i>number</i> link-state-database lsp lsp-id <i>string</i> tlvs tlv type identityref mt-isis-neighbor-attribute neighbors neighbor mt-id <i>number</i> system-id <i>string</i> instances instance id <i>number</i> subtlvs subtlv type identityref
Tree	subtlv
Configurable	False
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

type identityref

Description	The type of subTLV being described. The type of subTLV is expressed as a canonical name.
Context	network-instance name <i>string</i> protocols isis instance name <i>string</i> level level-number <i>number</i> link-state-database lsp lsp-id <i>string</i> tlvs tlv type identityref mt-isis-neighbor-attribute neighbors neighbor mt-id <i>number</i> system-id <i>string</i> instances instance id <i>number</i> subtlvs subtlv type identityref
Options	<ul style="list-style-type: none"> is-reachability-subtlvs-type Base identity for an ISIS TLV 22, 23, 222, 223, 141 SUB-TLV type.

- `ip-reachability-subtlvs-type`
Base identity for an ISIS TLV 135, 235, 236, 237 SUB-TLV type.
- `router-capability-subtlvs-type`
Base identity for an ISIS TLV 242 SUB-TLV type.

Configurable False

Platforms 7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

adjacency-sids

Description This container defines segment routing adjacency SIDs.

Context [network-instance name](#) *string* [protocols isis instance name](#) *string* [level level-number](#) *number* [link-state-database lsp lsp-id](#) *string* [tlvs tlv type identityref mt-isis-neighbor-attribute neighbors neighbor mt-id](#) *number* [system-id](#) *string* [instances instance id](#) *number* [subtlvs subtlv type identityref adjacency-sids](#)

Tree [adjacency-sids](#)

Configurable False

Platforms 7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

adjacency-sid *value number*

Description Adjacency Segment-IDs List. An IGP-Adjacency Segment is an IGP segment attached to a unidirectional adjacency or a set of unidirectional adjacencies. By default, an IGP- Adjacency Segment is local to the node which advertises it.

Context [network-instance name](#) *string* [protocols isis instance name](#) *string* [level level-number](#) *number* [link-state-database lsp lsp-id](#) *string* [tlvs tlv type identityref mt-isis-neighbor-attribute neighbors neighbor mt-id](#) *number* [system-id](#) *string* [instances instance id](#) *number* [subtlvs subtlv type identityref adjacency-sids adjacency-sid value](#) *number*

Tree [adjacency-sid](#)

Configurable False

Platforms 7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

value number

Description Adjacency-SID value.

Context	network-instance name <i>string</i> protocols isis instance name <i>string</i> level level-number <i>number</i> link-state-database lsp lsp-id <i>string</i> tlvs tlv type <i>identityref</i> mt-isis-neighbor-attribute neighbors neighbor mt-id <i>number</i> system-id <i>string</i> instances instance id <i>number</i> subtlvs subtlv type <i>identityref</i> adjacency-sids adjacency-sid value <i>number</i>
Configurable	False
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b
flags <i>keyword</i>	
Description	Flags associated with Adj-Segment-ID.
Context	network-instance name <i>string</i> protocols isis instance name <i>string</i> level level-number <i>number</i> link-state-database lsp lsp-id <i>string</i> tlvs tlv type <i>identityref</i> mt-isis-neighbor-attribute neighbors neighbor mt-id <i>number</i> system-id <i>string</i> instances instance id <i>number</i> subtlvs subtlv type <i>identityref</i> adjacency-sids adjacency-sid value <i>number</i> flags <i>keyword</i>
Tree	flags
Options	<ul style="list-style-type: none"> • address-family Address-family flag. When unset, the Adj-SID refers to an adjacency with outgoing IPv4 encapsulation. If set then the Adj-SID refers to an adjacency with outgoing IPv6 encapsulation. • backup Backup flag. When set, the Adj-SID refers to an adjacency being protected (e.g.: using IPFRR or MPLS-FRR). • value Value flag. When set, the SID carries a value (instead of an index). By default the flag is SET. • local Local flag. When set, the value/index carried by the SID has local significance. By default the flag is SET. • set Set flag. When set, the S-Flag indicates that the Adj-SID refers to a set of adjacencies.
Configurable	False
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

weight *number*

Description	Value that represents the weight of the Adj-SID for the purpose of load balancing.
Context	network-instance name <i>string</i> protocols isis instance name <i>string</i> level level-number <i>number</i> link-state-database lsp lsp-id <i>string</i> tlvs tlv type <i>identityref</i> mt-isis-neighbor-attribute neighbors neighbor mt-id <i>number</i> system-id <i>string</i> instances instance id <i>number</i> subtlvs subtlv type <i>identityref</i> adjacency-sids adjacency-sid value <i>number</i> weight <i>number</i>
Tree	weight
Configurable	False
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

admin-group

Description	This container defines sub-TLV 3.
Context	network-instance name <i>string</i> protocols isis instance name <i>string</i> level level-number <i>number</i> link-state-database lsp lsp-id <i>string</i> tlvs tlv type <i>identityref</i> mt-isis-neighbor-attribute neighbors neighbor mt-id <i>number</i> system-id <i>string</i> instances instance id <i>number</i> subtlvs subtlv type <i>identityref</i> admin-group
Tree	admin-group
Configurable	False
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

admin-group *number*

Description	The administrative group sub-TLV contains a 4-octet bit mask assigned by the network administrator Each set bit corresponds to one administrative group assigned to the interface. By convention, the least significant bit is referred to as group 0, and the most significant bit is referred to as group 31.
Context	network-instance name <i>string</i> protocols isis instance name <i>string</i> level level-number <i>number</i> link-state-database lsp lsp-id <i>string</i> tlvs tlv type <i>identityref</i> mt-isis-neighbor-attribute neighbors neighbor mt-id <i>number</i> system-id <i>string</i> instances instance id <i>number</i> subtlvs subtlv type <i>identityref</i> admin-group admin-group <i>number</i>
Tree	admin-group
Configurable	False

Platforms 7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

application-specific-link-attributes

Description Application Specific Link Attributes. Sub-TLV = 16.

Context [network-instance name](#) *string* [protocols isis instance name](#) *string* [level level-number](#) *number* [link-state-database lsp lsp-id](#) *string* [tlvs tlv type identityref mt-isis-neighbor-attribute neighbors neighbor mt-id](#) *number* [system-id](#) *string* [instances instance id](#) *number* [subtlvs subtlv type identityref application-specific-link-attributes](#)

Tree [application-specific-link-attributes](#)

Configurable False

Platforms 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

legacy *boolean*

Description When the legacy flag is set, all of the applications specified in the bit mask MUST use the legacy advertisements for the corresponding link found in TLVs 22, 23, 25, 141, 222, and 223, in TLV 138, or in TLV 139 as appropriate.

Context [network-instance name](#) *string* [protocols isis instance name](#) *string* [level level-number](#) *number* [link-state-database lsp lsp-id](#) *string* [tlvs tlv type identityref mt-isis-neighbor-attribute neighbors neighbor mt-id](#) *number* [system-id](#) *string* [instances instance id](#) *number* [subtlvs subtlv type identityref application-specific-link-attributes legacy](#) *boolean*

Tree [legacy](#)

Configurable False

Platforms 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

loop-free-alternate *boolean*

Description F bit is set in the Standard Application Identifier Bit Mask

Context [network-instance name](#) *string* [protocols isis instance name](#) *string* [level level-number](#) *number* [link-state-database lsp lsp-id](#) *string* [tlvs tlv type identityref mt-isis-neighbor-attribute neighbors neighbor mt-id](#) *number* [system-id](#) *string* [instances instance id](#) *number* [subtlvs subtlv type identityref application-specific-link-attributes loop-free-alternate](#) *boolean*

Tree [loop-free-alternate](#)

Configurable False

Platforms 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

rsvp-te *boolean*

Description	R bit is set in the Standard Application Identifier Bit Mask
Context	network-instance name <i>string</i> protocols isis instance name <i>string</i> level level-number <i>number</i> link-state-database lsp lsp-id <i>string</i> tlvs tlv type <i>identityref</i> mt-isis-neighbor-attribute neighbors neighbor mt-id <i>number</i> system-id <i>string</i> instances instance id <i>number</i> subtlvs subtlv type <i>identityref</i> application-specific-link-attributes rsvp-te <i>boolean</i>
Tree	rsvp-te
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

sr-policy *boolean*

Description	S bit is set in the Standard Application Identifier Bit Mask
Context	network-instance name <i>string</i> protocols isis instance name <i>string</i> level level-number <i>number</i> link-state-database lsp lsp-id <i>string</i> tlvs tlv type <i>identityref</i> mt-isis-neighbor-attribute neighbors neighbor mt-id <i>number</i> system-id <i>string</i> instances instance id <i>number</i> subtlvs subtlv type <i>identityref</i> application-specific-link-attributes sr-policy <i>boolean</i>
Tree	sr-policy
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

sub-sub-tlvs

Description	Enter the sub-sub-tlvs context
Context	network-instance name <i>string</i> protocols isis instance name <i>string</i> level level-number <i>number</i> link-state-database lsp lsp-id <i>string</i> tlvs tlv type <i>identityref</i> mt-isis-neighbor-attribute neighbors neighbor mt-id <i>number</i> system-id <i>string</i> instances instance id <i>number</i> subtlvs subtlv type <i>identityref</i> application-specific-link-attributes sub-sub-tlvs
Tree	sub-sub-tlvs
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

admin-group *number*

Description	A bit mask representing the administrative groups to which the interface belongs. Sub-Sub-TLV = 3.
Context	network-instance name <i>string</i> protocols isis instance name <i>string</i> level level-number <i>number</i> link-state-database lsp lsp-id <i>string</i> tlvs tlv type <i>identityref</i>

	mt-isis-neighbor-attribute neighbors neighbor mt-id number system-id string instances instance id number subtlvs subtlv type identityref application-specific-link-attributes sub-sub-tlvs admin-group number
Tree	admin-group
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b
maximum-link-bandwidth <i>number</i>	
Description	The (LAG aware) bandwidth of the interface to the neighbor. Sub-Sub-TLV = 9.
Context	network-instance name string protocols isis instance name string level level-number number link-state-database lsp lsp-id string tlvs tlv type identityref mt-isis-neighbor-attribute neighbors neighbor mt-id number system-id string instances instance id number subtlvs subtlv type identityref application-specific-link-attributes sub-sub-tlvs maximum-link-bandwidth number
Tree	maximum-link-bandwidth
Units	bytes-per-second
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b
min-max-unidirectional-link-delay	
Description	The minimum and maximum delay between two directly connected IS-IS neighbors.
Context	network-instance name string protocols isis instance name string level level-number number link-state-database lsp lsp-id string tlvs tlv type identityref mt-isis-neighbor-attribute neighbors neighbor mt-id number system-id string instances instance id number subtlvs subtlv type identityref application-specific-link-attributes sub-sub-tlvs min-max-unidirectional-link-delay
Tree	min-max-unidirectional-link-delay
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b
anomalous <i>boolean</i>	
Description	If the A bit is cleared, the values represent steady-state link performance.
Context	network-instance name string protocols isis instance name string level level-number number link-state-database lsp lsp-id string tlvs tlv type identityref mt-isis-neighbor-attribute neighbors neighbor mt-id number system-id string instances instance id number subtlvs subtlv type identityref application-

	specific-link-attributes sub-sub-tlvs min-max-unidirectional-link-delay anomolous <i>boolean</i>
Tree	anomolous
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b
max-delay <i>number</i>	
Description	Maximum forward-path delay (from the advertising router to the remote neighbor)
Context	network-instance <i>name string</i> protocols isis <i>instance name string</i> level level-number <i>number</i> link-state-database lsp lsp-id <i>string</i> tlvs tlv <i>type identityref</i> mt-isis-neighbor-attribute neighbors neighbor mt-id <i>number</i> system-id <i>string</i> instances instance id <i>number</i> subtlvs subtlv <i>type identityref</i> application-specific-link-attributes sub-sub-tlvs min-max-unidirectional-link-delay max-delay <i>number</i>
Tree	max-delay
Units	microseconds
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b
min-delay <i>number</i>	
Description	Minimum forward-path delay (from the advertising router to the remote neighbor)
Context	network-instance <i>name string</i> protocols isis <i>instance name string</i> level level-number <i>number</i> link-state-database lsp lsp-id <i>string</i> tlvs tlv <i>type identityref</i> mt-isis-neighbor-attribute neighbors neighbor mt-id <i>number</i> system-id <i>string</i> instances instance id <i>number</i> subtlvs subtlv <i>type identityref</i> application-specific-link-attributes sub-sub-tlvs min-max-unidirectional-link-delay min-delay <i>number</i>
Tree	min-delay
Units	microseconds
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b
te-default-metric <i>number</i>	
Description	An administratively assigned metric used as an alternative to the normal SPF metric based (typically) on link bandwidth.
Context	network-instance <i>name string</i> protocols isis <i>instance name string</i> level level-number <i>number</i> link-state-database lsp lsp-id <i>string</i> tlvs tlv <i>type identityref</i>

	mt-isis-neighbor-attribute neighbors neighbor mt-id number system-id string instances instance id number subtlvs subtlv type identityref application-specific-link-attributes sub-sub-tlvs te-default-metric number
Tree	te-default-metric
Range	0 to 16777215
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b
available-bandwidth	
Description	This container defines unidirectional lavailable bandwidth.
Context	network-instance name string protocols isis instance name string level level-number number link-state-database lsp lsp-id string tlvs tlv type identityref mt-isis-neighbor-attribute neighbors neighbor mt-id number system-id string instances instance id number subtlvs subtlv type identityref available-bandwidth
Tree	available-bandwidth
Configurable	False
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b
bandwidth <i>binary</i>	
Description	The available bandwidth on a link, forwarding adjacency, or bundled link in IEEE floating-point format with units of bytes per second. For a link or forwarding adjacency, available bandwidth is defined to be residual bandwidth minus the measured bandwidth used for the actual forwarding of non-RSVP-TE label switched path packets. For a bundled link, available bandwidth is defined to be the sum of the component link available bandwidths minus the measured bandwidth used for the actual forwarding of non-RSVP-TE label switched path packets. For a bundled link, available bandwidth is defined to be the sum of the component link available bandwidths.
Context	network-instance name string protocols isis instance name string level level-number number link-state-database lsp lsp-id string tlvs tlv type identityref mt-isis-neighbor-attribute neighbors neighbor mt-id number system-id string instances instance id number subtlvs subtlv type identityref available-bandwidth bandwidth <i>binary</i>
Tree	bandwidth
String Length	4
Units	bytes per second
Configurable	False

Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b
type <i>identityref</i>	
Description	The type of subTLV being described. The type of subTLV is expressed as a canonical name.
Context	network-instance name <i>string</i> protocols isis instance name <i>string</i> level level-number <i>number</i> link-state-database lsp lsp-id <i>string</i> tlvs tlv type <i>identityref</i> mt-isis-neighbor-attribute neighbors neighbor mt-id <i>number</i> system-id <i>string</i> instances instance id <i>number</i> subtlvs subtlv type <i>identityref</i> available-bandwidth type <i>identityref</i>
Tree	type
Options	<ul style="list-style-type: none"> • is-reachability-subtlvs-type Base identity for an ISIS TLV 22, 23, 222, 223, 141 SUB-TLV type. • ip-reachability-subtlvs-type Base identity for an ISIS TLV 135, 235, 236, 237 SUB-TLV type. • router-capability-subtlvs-type Base identity for an ISIS TLV 242 SUB-TLV type.
Configurable	False
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b
bandwidth-constraints	
Description	This container defines bandwidth-constraints. For DS-TE, the existing Maximum Reservable link bandwidth parameter is retained, but its semantics is generalized and interpreted as the aggregate bandwidth constraint across all Class-Types
Context	network-instance name <i>string</i> protocols isis instance name <i>string</i> level level-number <i>number</i> link-state-database lsp lsp-id <i>string</i> tlvs tlv type <i>identityref</i> mt-isis-neighbor-attribute neighbors neighbor mt-id <i>number</i> system-id <i>string</i> instances instance id <i>number</i> subtlvs subtlv type <i>identityref</i> bandwidth-constraints
Tree	bandwidth-constraints
Configurable	False
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

bandwidth-constraint *model-id number*

Description	List of the Bandwidth Constraints sub-TLV instances present in the TLV.
Context	network-instance name <i>string</i> protocols isis instance name <i>string</i> level level-number <i>number</i> link-state-database lsp lsp-id <i>string</i> tlvs tlv type <i>identityref</i> mt-isis-neighbor-attribute neighbors neighbor mt-id <i>number</i> system-id <i>string</i> instances instance id <i>number</i> subtlvs subtlv type <i>identityref</i> bandwidth-constraints bandwidth-constraint model-id <i>number</i>
Tree	bandwidth-constraint
Configurable	False
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

model-id *number*

Description	Identifier for the Bandwidth Constraints Model currently in use by the LSR initiating the IGP advertisement.
Context	network-instance name <i>string</i> protocols isis instance name <i>string</i> level level-number <i>number</i> link-state-database lsp lsp-id <i>string</i> tlvs tlv type <i>identityref</i> mt-isis-neighbor-attribute neighbors neighbor mt-id <i>number</i> system-id <i>string</i> instances instance id <i>number</i> subtlvs subtlv type <i>identityref</i> bandwidth-constraints bandwidth-constraint model-id <i>number</i>
Configurable	False
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

constraints

Description	Constraints contained within the Bandwidth Constraints sub-TLV
Context	network-instance name <i>string</i> protocols isis instance name <i>string</i> level level-number <i>number</i> link-state-database lsp lsp-id <i>string</i> tlvs tlv type <i>identityref</i> mt-isis-neighbor-attribute neighbors neighbor mt-id <i>number</i> system-id <i>string</i> instances instance id <i>number</i> subtlvs subtlv type <i>identityref</i> bandwidth-constraints bandwidth-constraint model-id <i>number</i> constraints
Tree	constraints
Configurable	False
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

constraint *constraint-id number*

Description	List of the constraints within the Bandwidth Constraints sub-TLV. The BC0 level is indicated by the constraint-id leaf being set to 0, with BCN being indicated by constraint-id N.
Context	network-instance name <i>string</i> protocols isis instance name <i>string</i> level level-number <i>number</i> link-state-database lsp lsp-id <i>string</i> tlvs tlv type <i>identityref</i> mt-isis-neighbor-attribute neighbors neighbor mt-id <i>number</i> system-id <i>string</i> instances instance id <i>number</i> subtlvs subtlv type <i>identityref</i> bandwidth-constraints bandwidth-constraint model-id <i>number</i> constraints constraint constraint-id <i>number</i>
Tree	constraint
Configurable	False
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

constraint-id *number*

Description	Unique reference for the bandwidth constraint level. BC0 is indicated by this leaf being set to zero, with BCN represented by this leaf being set to N.
Context	network-instance name <i>string</i> protocols isis instance name <i>string</i> level level-number <i>number</i> link-state-database lsp lsp-id <i>string</i> tlvs tlv type <i>identityref</i> mt-isis-neighbor-attribute neighbors neighbor mt-id <i>number</i> system-id <i>string</i> instances instance id <i>number</i> subtlvs subtlv type <i>identityref</i> bandwidth-constraints bandwidth-constraint model-id <i>number</i> constraints constraint constraint-id <i>number</i>
Configurable	False
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

bandwidth *binary*

Description	The bandwidth constraint, expressed as a 32-bit IEEE floating point number expressed in bytes per second.
Context	network-instance name <i>string</i> protocols isis instance name <i>string</i> level level-number <i>number</i> link-state-database lsp lsp-id <i>string</i> tlvs tlv type <i>identityref</i> mt-isis-neighbor-attribute neighbors neighbor mt-id <i>number</i> system-id <i>string</i> instances instance id <i>number</i> subtlvs subtlv type <i>identityref</i> bandwidth-constraints bandwidth-constraint model-id <i>number</i> constraints constraint constraint-id <i>number</i> bandwidth <i>binary</i>
Tree	bandwidth
String Length	4

Units	bytes per second
Configurable	False
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

extended-admin-group

Description	This container defines sub-TLV 14.
Context	network-instance name string protocols isis instance name string level level-number number link-state-database lsp lsp-id string tlvs tlv type identityref mt-isis-neighbor-attribute neighbors neighbor mt-id number system-id string instances instance id number subtlvs subtlv type identityref extended-admin-group
Tree	extended-admin-group
Configurable	False
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

extended-admin-group number

Description	The extended-admin-group sub-TLV is used in addition to the Administrative Groups when it is desirable to make more than 32 colors available for advertisement in a network.
Context	network-instance name string protocols isis instance name string level level-number number link-state-database lsp lsp-id string tlvs tlv type identityref mt-isis-neighbor-attribute neighbors neighbor mt-id number system-id string instances instance id number subtlvs subtlv type identityref extended-admin-group extended-admin-group number
Tree	extended-admin-group
Configurable	False
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

ipv4-interface-address

Description	This container defines sub-TLV 6.
Context	network-instance name string protocols isis instance name string level level-number number link-state-database lsp lsp-id string tlvs tlv type identityref mt-isis-neighbor-attribute neighbors neighbor mt-id number system-id string

	instances instance id number subtlvs subtlv type identityref ipv4-interface-address
Tree	ipv4-interface-address
Configurable	False
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b
address string	
Description	A 4-octet IPv4 address for the interface described by the (main) TLV. This sub-TLV can occur multiple times.
Context	network-instance name string protocols isis instance name string level level-number number link-state-database lsp lsp-id string tlvs tlv type identityref mt-isis-neighbor-attribute neighbors neighbor mt-id number system-id string instances instance id number subtlvs subtlv type identityref ipv4-interface-address address string
Tree	address
Configurable	False
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b
ipv4-neighbor-address	
Description	This container defines sub-TLV 8.
Context	network-instance name string protocols isis instance name string level level-number number link-state-database lsp lsp-id string tlvs tlv type identityref mt-isis-neighbor-attribute neighbors neighbor mt-id number system-id string instances instance id number subtlvs subtlv type identityref ipv4-neighbor-address
Tree	ipv4-neighbor-address
Configurable	False
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b
address string	
Description	A single IPv4 address for a neighboring router on this link. This sub-TLV can occur multiple times.
Context	network-instance name string protocols isis instance name string level level-number number link-state-database lsp lsp-id string tlvs tlv type identityref

	mt-isis-neighbor-attribute neighbors neighbor mt-id <i>number</i> system-id <i>string</i> instances instance <i>id</i> <i>number</i> subtlvs subtlv <i>type</i> identityref ipv4-neighbor-address <i>address</i> <i>string</i>
Tree	address
Configurable	False
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b
ipv6-interface-address	
Description	This container defines sub-TLV 12.
Context	network-instance <i>name</i> <i>string</i> protocols isis instance <i>name</i> <i>string</i> level level-number <i>number</i> link-state-database lsp lsp-id <i>string</i> tlvs tlv <i>type</i> identityref mt-isis-neighbor-attribute neighbors neighbor mt-id <i>number</i> system-id <i>string</i> instances instance <i>id</i> <i>number</i> subtlvs subtlv <i>type</i> identityref ipv6-interface-address <i>address</i>
Tree	ipv6-interface-address
Configurable	False
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b
address <i>string</i>	
Description	Contains a 16-octet IPv6 address for the interface described by the containing Extended IS Reachability TLV. This sub-TLV can occur multiple times.
Context	network-instance <i>name</i> <i>string</i> protocols isis instance <i>name</i> <i>string</i> level level-number <i>number</i> link-state-database lsp lsp-id <i>string</i> tlvs tlv <i>type</i> identityref mt-isis-neighbor-attribute neighbors neighbor mt-id <i>number</i> system-id <i>string</i> instances instance <i>id</i> <i>number</i> subtlvs subtlv <i>type</i> identityref ipv6-interface-address <i>address</i> <i>string</i>
Tree	address
Configurable	False
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b
ipv6-neighbor-address	
Description	This container defines sub-TLV 13.

Context	network-instance name string protocols isis instance name string level level-number number link-state-database lsp lsp-id string tlvs tlv type identityref mt-isis-neighbor-attribute neighbors neighbor mt-id number system-id string instances instance id number subtlvs subtlv type identityref ipv6-neighbor-address
Tree	ipv6-neighbor-address
Configurable	False
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b
address string	
Description	Contains a 16-octet IPv6 address for a neighboring router on the link described by the (main) TLV. This sub-TLV can occur multiple times.
Context	network-instance name string protocols isis instance name string level level-number number link-state-database lsp lsp-id string tlvs tlv type identityref mt-isis-neighbor-attribute neighbors neighbor mt-id number system-id string instances instance id number subtlvs subtlv type identityref ipv6-neighbor-address address string
Tree	address
Configurable	False
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b
lan-adjacency-sids	
Description	This container defines segment routing LAN adjacency SIDs
Context	network-instance name string protocols isis instance name string level level-number number link-state-database lsp lsp-id string tlvs tlv type identityref mt-isis-neighbor-attribute neighbors neighbor mt-id number system-id string instances instance id number subtlvs subtlv type identityref lan-adjacency-sids
Tree	lan-adjacency-sids
Configurable	False
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

lan-adjacency-sid *value number*

Description	Adjacency Segment-IDs List. An IGP-Adjacency Segment is an IGP segment attached to a unidirectional adjacency or a set of unidirectional adjacencies. By default, an IGP- Adjacency Segment is local to the node which advertises it.
Context	network-instance name <i>string</i> protocols isis instance name <i>string</i> level level-number <i>number</i> link-state-database lsp lsp-id <i>string</i> tlvs tlv type identityref mt-isis-neighbor-attribute neighbors neighbor mt-id <i>number</i> system-id <i>string</i> instances instance id <i>number</i> subtlvs subtlv type identityref lan-adjacency-sids lan-adjacency-sid <i>value number</i>
Tree	lan-adjacency-sid
Configurable	False
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

value *number*

Description	LAN Adjacency-SID value.
Context	network-instance name <i>string</i> protocols isis instance name <i>string</i> level level-number <i>number</i> link-state-database lsp lsp-id <i>string</i> tlvs tlv type identityref mt-isis-neighbor-attribute neighbors neighbor mt-id <i>number</i> system-id <i>string</i> instances instance id <i>number</i> subtlvs subtlv type identityref lan-adjacency-sids lan-adjacency-sid <i>value number</i>
Configurable	False
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

flags *keyword*

Description	Flags associated with LAN-Adj-Segment-ID.
Context	network-instance name <i>string</i> protocols isis instance name <i>string</i> level level-number <i>number</i> link-state-database lsp lsp-id <i>string</i> tlvs tlv type identityref mt-isis-neighbor-attribute neighbors neighbor mt-id <i>number</i> system-id <i>string</i> instances instance id <i>number</i> subtlvs subtlv type identityref lan-adjacency-sids lan-adjacency-sid <i>value number</i> flags <i>keyword</i>
Tree	flags
Options	<ul style="list-style-type: none"> address-family <p>Address-family flag. When unset, the Adj-SID refers to an adjacency with outgoing IPv4 encapsulation. If set then the Adj-SID refers to an adjacency with outgoing IPv6 encapsulation.</p>

	<ul style="list-style-type: none"> • backup Backup flag. When set, the Adj-SID refers to an adjacency being protected (e.g.: using IPFRR or MPLS-FRR). • value Value flag. When set, the SID carries a value (instead of an index). By default the flag is SET. • local Local flag. When set, the value/index carried by the SID has local significance. By default the flag is SET. • set Set flag. When set, the S-Flag indicates that the Adj-SID refers to a set of adjacencies.
Configurable	False
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b
neighbor-id string	
Description	System ID of the neighbor associated with the LAN- Adj-Segment-ID value.
Context	network-instance name string protocols isis instance name string level level-number number link-state-database lsp lsp-id string tlvs tlv type identityref mt-isis-neighbor-attribute neighbors neighbor mt-id number system-id string instances instance id number subtlvs subtlv type identityref lan-adjacency-sids lan-adjacency-sid value number neighbor-id string
Tree	neighbor-id
String Length	14
Configurable	False
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b
weight number	
Description	Value that represents the weight of the Adj-SID for the purpose of load balancing.
Context	network-instance name string protocols isis instance name string level level-number number link-state-database lsp lsp-id string tlvs tlv type identityref mt-isis-neighbor-attribute neighbors neighbor mt-id number system-id string instances instance id number subtlvs subtlv type identityref lan-adjacency-sids lan-adjacency-sid value number weight number
Tree	weight

Configurable	False
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b
link-attributes	
Description	This container defines link-attributes.
Context	network-instance name string protocols isis instance name string level level-number number link-state-database lsp lsp-id string tlvs tlv type identityref mt-isis-neighbor-attribute neighbors neighbor mt-id number system-id string instances instance id number subtlvs subtlv type identityref link-attributes
Tree	link-attributes
Configurable	False
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b
local-protection <i>keyword</i>	
Description	Link local-protection attributes.
Context	network-instance name string protocols isis instance name string level level-number number link-state-database lsp lsp-id string tlvs tlv type identityref mt-isis-neighbor-attribute neighbors neighbor mt-id number system-id string instances instance id number subtlvs subtlv type identityref link-attributes local-protection keyword
Tree	local-protection
Options	<ul style="list-style-type: none"> • local-protection If set, local protection is available for the link. • link-excluded If set, the link is excluded from local protection.
Configurable	False
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b
link-delay	
Description	This container defines unidirectional link delay.
Context	network-instance name string protocols isis instance name string level level-number number link-state-database lsp lsp-id string tlvs tlv type identityref

	mt-isis-neighbor-attribute neighbors neighbor mt-id number system-id string instances instance id number subtlvs subtlv type identityref link-delay
Tree	link-delay
Configurable	False
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b
a-bit <i>boolean</i>	
Description	The A bit is set when the measured value of this parameter exceeds its configured maximum threshold. The A bit is cleared when the measured value falls below its configured reuse threshold.
Context	network-instance name string protocols isis instance name string level level-number number link-state-database lsp lsp-id string tlvs tlv type identityref mt-isis-neighbor-attribute neighbors neighbor mt-id number system-id string instances instance id number subtlvs subtlv type identityref link-delay a-bit boolean
Tree	a-bit
Configurable	False
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b
delay <i>number</i>	
Description	Average link delay value (in microseconds) between two directly connected IS-IS neighbors over a configurable interval.
Context	network-instance name string protocols isis instance name string level level-number number link-state-database lsp lsp-id string tlvs tlv type identityref mt-isis-neighbor-attribute neighbors neighbor mt-id number system-id string instances instance id number subtlvs subtlv type identityref link-delay delay number
Tree	delay
Units	microseconds
Configurable	False
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b
link-delay-variation	
Description	This container defines unidirectional link delay variation.

Context	network-instance name string protocols isis instance name string level level-number number link-state-database lsp lsp-id string tlvs tlv type identityref mt-isis-neighbor-attribute neighbors neighbor mt-id number system-id string instances instance id number subtlvs subtlv type identityref link-delay-variation
Tree	link-delay-variation
Configurable	False
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b
delay number	
Description	Average link delay between two directly connected IS-IS neighbors over a configurable interval.
Context	network-instance name string protocols isis instance name string level level-number number link-state-database lsp lsp-id string tlvs tlv type identityref mt-isis-neighbor-attribute neighbors neighbor mt-id number system-id string instances instance id number subtlvs subtlv type identityref link-delay-variation delay number
Tree	delay
Units	microseconds
Configurable	False
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b
link-id	
Description	This container defines sub-TLV 4.
Context	network-instance name string protocols isis instance name string level level-number number link-state-database lsp lsp-id string tlvs tlv type identityref mt-isis-neighbor-attribute neighbors neighbor mt-id number system-id string instances instance id number subtlvs subtlv type identityref link-id
Tree	link-id
Configurable	False
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

local number

Description	The value field of this sub-TLV contains 4 octets of Link Local Identifier followed by 4 octets of Link Remote Identifier.
Context	network-instance name string protocols isis instance name string level level-number number link-state-database lsp lsp-id string tlvs tlv type identityref mt-isis-neighbor-attribute neighbors neighbor mt-id number system-id string instances instance id number subtlvs subtlv type identityref link-id local number
Tree	local
Configurable	False
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

remote number

Description	If the Link Remote Identifier is unknown, it is set to 0.
Context	network-instance name string protocols isis instance name string level level-number number link-state-database lsp lsp-id string tlvs tlv type identityref mt-isis-neighbor-attribute neighbors neighbor mt-id number system-id string instances instance id number subtlvs subtlv type identityref link-id remote number
Tree	remote
Configurable	False
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

link-loss

Description	This container defines unidirectional link loss delay.
Context	network-instance name string protocols isis instance name string level level-number number link-state-database lsp lsp-id string tlvs tlv type identityref mt-isis-neighbor-attribute neighbors neighbor mt-id number system-id string instances instance id number subtlvs subtlv type identityref link-loss
Tree	link-loss
Configurable	False
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

a-bit *boolean*

Description	The A bit is set when the measured value of this parameter exceeds its configured maximum threshold. The A bit is cleared when the measured value falls below its configured reuse threshold.
Context	network-instance name <i>string</i> protocols isis instance name <i>string</i> level level-number <i>number</i> link-state-database lsp lsp-id <i>string</i> tlvs tlv type identityref mt-isis-neighbor-attribute neighbors neighbor mt-id <i>number</i> system-id <i>string</i> instances instance id <i>number</i> subtlvs subtlv type identityref link-loss a-bit <i>boolean</i>
Tree	a-bit
Configurable	False
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

link-loss *number*

Description	Link packet loss as a percentage of the total traffic sent over a configurable interval. The basic unit is 0.000003%, where $(2^{24} - 2)$ is 50.331642%. This value is the highest packet-loss percentage that can be expressed (the assumption being that precision is more important on high-speed links than the ability to advertise loss rates greater than this, and that high-speed links with over 50% loss are unusable). Therefore, measured values that are larger than the field maximum SHOULD be encoded as the maximum value.
Context	network-instance name <i>string</i> protocols isis instance name <i>string</i> level level-number <i>number</i> link-state-database lsp lsp-id <i>string</i> tlvs tlv type identityref mt-isis-neighbor-attribute neighbors neighbor mt-id <i>number</i> system-id <i>string</i> instances instance id <i>number</i> subtlvs subtlv type identityref link-loss link-loss <i>number</i>
Tree	link-loss
Configurable	False
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

link-protection-type

Description	ISIS LSDB parameters relating to the type of link protection offered.
Context	network-instance name <i>string</i> protocols isis instance name <i>string</i> level level-number <i>number</i> link-state-database lsp lsp-id <i>string</i> tlvs tlv type identityref mt-isis-neighbor-attribute neighbors neighbor mt-id <i>number</i> system-id <i>string</i> instances instance id <i>number</i> subtlvs subtlv type identityref link-protection-type

Tree	link-protection-type
Configurable	False
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b
type keyword	
Description	Link protection capabilities.
Context	network-instance name string protocols isis instance name string level level-number number link-state-database lsp lsp-id string tlvs tlv type identityref mt-isis-neighbor-attribute neighbors neighbor mt-id number system-id string instances instance id number subtlvs subtlv type identityref link-protection-type type keyword
Tree	type
Options	<ul style="list-style-type: none"> • extra-traffic If set the link has extra traffic protection. If the link is of type Extra Traffic, it means that the link is protecting another link or links. The LSPs on a link of this type will be lost if any of the links it is protecting fail. • unprotected If set, the link is unprotected. If the link is of type Unprotected, it means that there is no other link protecting this link. The LSPs on a link of this type will be lost if the link fails. • shared If set, the link has shared protection. If the link is of type Shared, it means that there are one or more disjoint links of type Extra Traffic that are protecting this link. These Extra Traffic links are shared between one or more links of type Shared. • one-one If set, the link has dedicated 1:1 protection. If the link is of type Dedicated 1:1, it means that there is one dedicated disjoint link of type Extra Traffic that is protecting this link. • plus-one If set, the link has dedicated 1+1 protection. If the link is of type Dedicated 1+1, it means that a dedicated disjoint link is protecting this link. However, the protecting link is not advertised in the link state database and is therefore not available for the routing of LSPs. • enhanced If set the link has enhanced protection. If the link is of type Enhanced, it means that a protection scheme that is more reliable than Dedicated 1+1, e.g., 4 fiber BLSR/MS-SPRING, is being used to protect this link.
Configurable	False

Platforms 7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

max-link-bandwidth

Description This container defines sub-TLV 9.

Context [network-instance name string](#) [protocols isis instance name string](#) [level level-number number](#) [link-state-database lsp lsp-id string](#) [tlvs tlv type identityref](#) [mt-isis-neighbor-attribute neighbors neighbor mt-id number](#) [system-id string](#) [instances instance id number](#) [subtlvs subtlv type identityref](#) [max-link-bandwidth](#)

Tree [max-link-bandwidth](#)

Configurable False

Platforms 7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

bandwidth *binary*

Description The maximum bandwidth that can be used on this link in this direction (from the system originating the LSP to its neighbors). It is encoded in 32 bits in IEEE floating point format. The units are bytes (not bits!) per second.

Context [network-instance name string](#) [protocols isis instance name string](#) [level level-number number](#) [link-state-database lsp lsp-id string](#) [tlvs tlv type identityref](#) [mt-isis-neighbor-attribute neighbors neighbor mt-id number](#) [system-id string](#) [instances instance id number](#) [subtlvs subtlv type identityref](#) [max-link-bandwidth](#) [bandwidth binary](#)

Tree [bandwidth](#)

String Length 4

Units bytes per second

Configurable False

Platforms 7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

max-reservable-link-bandwidth

Description This container defines sub-TLV 10.

Context [network-instance name string](#) [protocols isis instance name string](#) [level level-number number](#) [link-state-database lsp lsp-id string](#) [tlvs tlv type identityref](#) [mt-isis-neighbor-attribute neighbors neighbor mt-id number](#) [system-id string](#)

	instances instance id number subtlvs subtlv type identityref max-reservable-link-bandwidth
Tree	max-reservable-link-bandwidth
Configurable	False
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b
bandwidth <i>binary</i>	
Description	The maximum amount of bandwidth that can be reserved in this direction on this link. Note that for oversubscription purposes, this can be greater than the bandwidth of the link. It is encoded in 32 bits in IEEE floating point format. The units are bytes (not bits!) per second.
Context	network-instance name string protocols isis instance name string level level-number number link-state-database lsp lsp-id string tlvs tlv type identityref mt-isis-neighbor-attribute neighbors neighbor mt-id number system-id string instances instance id number subtlvs subtlv type identityref max-reservable-link-bandwidth bandwidth <i>binary</i>
Tree	bandwidth
String Length	4
Units	bytes per second
Configurable	False
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b
min-max-link-delay	
Description	This container defines min/max link delay.
Context	network-instance name string protocols isis instance name string level level-number number link-state-database lsp lsp-id string tlvs tlv type identityref mt-isis-neighbor-attribute neighbors neighbor mt-id number system-id string instances instance id number subtlvs subtlv type identityref min-max-link-delay
Tree	min-max-link-delay
Configurable	False
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

a-bit *boolean*

Description	The A bit is set when the measured value of this parameter exceeds its configured maximum threshold. The A bit is cleared when the measured value falls below its configured reuse threshold.
Context	network-instance name <i>string</i> protocols isis instance name <i>string</i> level level-number <i>number</i> link-state-database lsp lsp-id <i>string</i> tlvs tlv type identityref mt-isis-neighbor-attribute neighbors neighbor mt-id <i>number</i> system-id <i>string</i> instances instance id <i>number</i> subtlvs subtlv type identityref min-max-link-delay a-bit <i>boolean</i>
Tree	a-bit
Configurable	False
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

max-delay *number*

Description	Maximum measured link delay value(in microseconds) between two directly connected IS-IS neighbors over a configurable interval.
Context	network-instance name <i>string</i> protocols isis instance name <i>string</i> level level-number <i>number</i> link-state-database lsp lsp-id <i>string</i> tlvs tlv type identityref mt-isis-neighbor-attribute neighbors neighbor mt-id <i>number</i> system-id <i>string</i> instances instance id <i>number</i> subtlvs subtlv type identityref min-max-link-delay max-delay <i>number</i>
Tree	max-delay
Units	microseconds
Configurable	False
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

min-delay *number*

Description	Minimum measured link delay value(in microseconds) between two directly connected IS-IS neighbors over a configurable interval.
Context	network-instance name <i>string</i> protocols isis instance name <i>string</i> level level-number <i>number</i> link-state-database lsp lsp-id <i>string</i> tlvs tlv type identityref mt-isis-neighbor-attribute neighbors neighbor mt-id <i>number</i> system-id <i>string</i> instances instance id <i>number</i> subtlvs subtlv type identityref min-max-link-delay min-delay <i>number</i>
Tree	min-delay
Units	microseconds

Configurable	False
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b
residual-bandwidth	
Description	This container defines unidirectional residual bandwidth.
Context	network-instance name <i>string</i> protocols isis instance name <i>string</i> level level-number <i>number</i> link-state-database lsp lsp-id <i>string</i> tlvs tlv type identityref mt-isis-neighbor-attribute neighbors neighbor mt-id <i>number</i> system-id <i>string</i> instances instance id <i>number</i> subtlvs subtlv type identityref residual-bandwidth
Tree	residual-bandwidth
Configurable	False
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b
bandwidth <i>binary</i>	
Description	Residual bandwidth on a link, forwarding adjacency [RFC4206], or bundled link in IEEE floating-point format with units of bytes per second. For a link or forwarding adjacency, residual bandwidth is defined to be the Maximum Bandwidth [RFC5305] minus the bandwidth currently allocated to RSVP-TE label switched paths. For a bundled link, residual bandwidth is defined to be the sum of the component link residual bandwidths.
Context	network-instance name <i>string</i> protocols isis instance name <i>string</i> level level-number <i>number</i> link-state-database lsp lsp-id <i>string</i> tlvs tlv type identityref mt-isis-neighbor-attribute neighbors neighbor mt-id <i>number</i> system-id <i>string</i> instances instance id <i>number</i> subtlvs subtlv type identityref residual-bandwidth bandwidth <i>binary</i>
Tree	bandwidth
String Length	4
Units	bytes per second
Configurable	False
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b
te-default-metric	
Description	This container defines sub-TLV 18.

Context	network-instance name string protocols isis instance name string level level-number number link-state-database lsp lsp-id string tlvs tlv type identityref mt-isis-neighbor-attribute neighbors neighbor mt-id number system-id string instances instance id number subtlvs subtlv type identityref te-default-metric
Tree	te-default-metric
Configurable	False
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b
metric number	
Description	This metric is administratively assigned and can be used to present a differently weighted topology to traffic engineering SPF calculations. To preclude overflow within a traffic engineering SPF implementation, all metrics greater than or equal to MAX_PATH_METRIC SHALL be considered to have a metric of MAX_PATH_METRIC.
Context	network-instance name string protocols isis instance name string level level-number number link-state-database lsp lsp-id string tlvs tlv type identityref mt-isis-neighbor-attribute neighbors neighbor mt-id number system-id string instances instance id number subtlvs subtlv type identityref te-default-metric metric number
Tree	metric
Configurable	False
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b
unconstrained-lsp	
Description	This container defines sub-TLV 23.
Context	network-instance name string protocols isis instance name string level level-number number link-state-database lsp lsp-id string tlvs tlv type identityref mt-isis-neighbor-attribute neighbors neighbor mt-id number system-id string instances instance id number subtlvs subtlv type identityref unconstrained-lsp
Tree	unconstrained-lsp
Configurable	False
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

count *number*

Description	Unconstrained TE LSP count(TE Label Switched Paths (LSPs) signalled with zero bandwidth).
Context	network-instance name <i>string</i> protocols isis instance name <i>string</i> level level-number <i>number</i> link-state-database lsp lsp-id <i>string</i> tlvs tlv type <i>identityref</i> mt-isis-neighbor-attribute neighbors neighbor mt-id <i>number</i> system-id <i>string</i> instances instance id <i>number</i> subtlvs subtlv type <i>identityref</i> unconstrained-lsp count <i>number</i>
Tree	count
Configurable	False
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

type *identityref*

Description	The type of subTLV being described. The type of subTLV is expressed as a canonical name.
Context	network-instance name <i>string</i> protocols isis instance name <i>string</i> level level-number <i>number</i> link-state-database lsp lsp-id <i>string</i> tlvs tlv type <i>identityref</i> mt-isis-neighbor-attribute neighbors neighbor mt-id <i>number</i> system-id <i>string</i> instances instance id <i>number</i> subtlvs subtlv type <i>identityref</i> unconstrained-lsp type <i>identityref</i>
Tree	type
Options	<ul style="list-style-type: none"> • is-reachability-subtlvs-type Base identity for an ISIS TLV 22, 23, 222, 223, 141 SUB-TLV type. • ip-reachability-subtlvs-type Base identity for an ISIS TLV 135, 235, 236, 237 SUB-TLV type. • router-capability-subtlvs-type Base identity for an ISIS TLV 242 SUB-TLV type.
Configurable	False
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

unreserved-bandwidth

Description	This container defines unreserved-bandwidth. The units are bytes per second.
Context	network-instance name <i>string</i> protocols isis instance name <i>string</i> level level-number <i>number</i> link-state-database lsp lsp-id <i>string</i> tlvs tlv type <i>identityref</i>

[mt-isis-neighbor-attribute](#) [neighbors](#) [neighbor](#) [mt-id](#) *number* [system-id](#) *string*
[instances](#) [instance](#) *id* *number* [subtlvs](#) [subtlv](#) *type* [identityref](#) [unreserved-bandwidth](#)

Tree [unreserved-bandwidth](#)

Configurable False

Platforms 7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

setup-priority *priority* *number*

Description Enter the setup-priority list instance

Context [network-instance](#) *name* *string* [protocols](#) [isis](#) [instance](#) *name* *string* [level](#) [level-number](#) *number* [link-state-database](#) [lsp](#) [lsp-id](#) *string* [tlvs](#) [tlv](#) *type* [identityref](#) [mt-isis-neighbor-attribute](#) [neighbors](#) [neighbor](#) [mt-id](#) *number* [system-id](#) *string*
[instances](#) [instance](#) *id* *number* [subtlvs](#) [subtlv](#) *type* [identityref](#) [unreserved-bandwidth](#) [setup-priority](#) *priority* *number*

Tree [setup-priority](#)

Configurable False

Platforms 7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

priority *number*

Description Setup priority level of 0 through 7 to be used by Unreserved Bandwidth sub-TLV 11.

Context [network-instance](#) *name* *string* [protocols](#) [isis](#) [instance](#) *name* *string* [level](#) [level-number](#) *number* [link-state-database](#) [lsp](#) [lsp-id](#) *string* [tlvs](#) [tlv](#) *type* [identityref](#) [mt-isis-neighbor-attribute](#) [neighbors](#) [neighbor](#) [mt-id](#) *number* [system-id](#) *string*
[instances](#) [instance](#) *id* *number* [subtlvs](#) [subtlv](#) *type* [identityref](#) [unreserved-bandwidth](#) [setup-priority](#) *priority* *number*

Range 0 to 7

Configurable False

Platforms 7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

bandwidth *binary*

Description The amount of bandwidth reservable in this direction on this link. Note that for oversubscription purposes, this can be greater than the bandwidth of the link. It contains eight 32-bit IEEE floating point numbers(one for each priority). The units are bytes (not bits!) per second. The values correspond

to the bandwidth that can be reserved with a setup priority of 0 through 7, arranged in increasing order with priority 0 occurring at the start of the sub-TLV, and priority 7 at the end of the sub-TLV.

Context	network-instance name <i>string</i> protocols isis instance name <i>string</i> level level-number <i>number</i> link-state-database lsp lsp-id <i>string</i> tlvs tlv type identityref mt-isis-neighbor-attribute neighbors neighbor mt-id <i>number</i> system-id <i>string</i> instances instance id <i>number</i> subtlvs subtlv type identityref unreserved-bandwidth setup-priority priority <i>number</i> bandwidth <i>binary</i>
Tree	bandwidth
String Length	4
Units	bytes per second
Configurable	False
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

utilized-bandwidth

Description	This container defines unidirectional utilized bandwidth.
Context	network-instance name <i>string</i> protocols isis instance name <i>string</i> level level-number <i>number</i> link-state-database lsp lsp-id <i>string</i> tlvs tlv type identityref mt-isis-neighbor-attribute neighbors neighbor mt-id <i>number</i> system-id <i>string</i> instances instance id <i>number</i> subtlvs subtlv type identityref utilized-bandwidth
Tree	utilized-bandwidth
Configurable	False
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

bandwidth *binary*

Description	The bandwidth utilization on a link, forwarding adjacency, or bundled link in IEEE floating-point format with units of bytes per second. For a link or forwarding adjacency, bandwidth utilization represents the actual utilization of the link (i.e., as measured by the advertising node). For a bundled link, bandwidth utilization is defined to be the sum of the component link bandwidth utilizations.
Context	network-instance name <i>string</i> protocols isis instance name <i>string</i> level level-number <i>number</i> link-state-database lsp lsp-id <i>string</i> tlvs tlv type identityref mt-isis-neighbor-attribute neighbors neighbor mt-id <i>number</i> system-id <i>string</i> instances instance id <i>number</i> subtlvs subtlv type identityref utilized-bandwidth bandwidth <i>binary</i>
Tree	bandwidth

String Length	4
Units	bytes per second
Configurable	False
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b
type identityref	
Description	The type of subTLV being described. The type of subTLV is expressed as a canonical name.
Context	network-instance name string protocols isis instance name string level level-number number link-state-database lsp lsp-id string tlvs tlv type identityref mt-isis-neighbor-attribute neighbors neighbor mt-id number system-id string instances instance id number subtlvs subtlv type identityref utilized-bandwidth type identityref
Tree	type
Options	<ul style="list-style-type: none"> • is-reachability-subtlvs-type Base identity for an ISIS TLV 22, 23, 222, 223, 141 SUB-TLV type. • ip-reachability-subtlvs-type Base identity for an ISIS TLV 135, 235, 236, 237 SUB-TLV type. • router-capability-subtlvs-type Base identity for an ISIS TLV 242 SUB-TLV type.
Configurable	False
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b
undefined-subtlvs	
Description	This container describes undefined ISIS TLVs.
Context	network-instance name string protocols isis instance name string level level-number number link-state-database lsp lsp-id string tlvs tlv type identityref mt-isis-neighbor-attribute neighbors neighbor mt-id number system-id string instances instance id number undefined-subtlvs
Tree	undefined-subtlvs
Configurable	False
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

undefined-subtlv *type number*

Description	Sub-TLVs that are not defined in the model or not recognised by system.
Context	network-instance name <i>string</i> protocols isis instance name <i>string</i> level level-number <i>number</i> link-state-database lsp lsp-id <i>string</i> tlvs tlv type identityref mt-isis-neighbor-attribute neighbors neighbor mt-id <i>number</i> system-id <i>string</i> instances instance id <i>number</i> undefined-subtlvs undefined-subtlv type <i>number</i>
Tree	undefined-subtlv
Configurable	False
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

type *number*

Description	TLV Type.
Context	network-instance name <i>string</i> protocols isis instance name <i>string</i> level level-number <i>number</i> link-state-database lsp lsp-id <i>string</i> tlvs tlv type identityref mt-isis-neighbor-attribute neighbors neighbor mt-id <i>number</i> system-id <i>string</i> instances instance id <i>number</i> undefined-subtlvs undefined-subtlv type <i>number</i>
Configurable	False
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

length *number*

Description	TLV length.
Context	network-instance name <i>string</i> protocols isis instance name <i>string</i> level level-number <i>number</i> link-state-database lsp lsp-id <i>string</i> tlvs tlv type identityref mt-isis-neighbor-attribute neighbors neighbor mt-id <i>number</i> system-id <i>string</i> instances instance id <i>number</i> undefined-subtlvs undefined-subtlv type <i>number</i> length <i>number</i>
Tree	length
Configurable	False
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

value *binary*

Description	TLV value.
Context	network-instance name <i>string</i> protocols isis instance name <i>string</i> level level-number <i>number</i> link-state-database lsp lsp-id <i>string</i> tlvs tlv type identityref mt-isis-neighbor-attribute neighbors neighbor mt-id <i>number</i> system-id <i>string</i> instances instance id <i>number</i> undefined-subtlvs undefined-subtlv type <i>number</i> value <i>binary</i>
Tree	value
Configurable	False
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

mt-Isn

Description	This container defines list of ISIS multi-topology neighbors.
Context	network-instance name <i>string</i> protocols isis instance name <i>string</i> level level-number <i>number</i> link-state-database lsp lsp-id <i>string</i> tlvs tlv type identityref mt-Isn
Tree	mt-Isn
Configurable	False
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

neighbors

Description	MT-IS neighbor attributes.
Context	network-instance name <i>string</i> protocols isis instance name <i>string</i> level level-number <i>number</i> link-state-database lsp lsp-id <i>string</i> tlvs tlv type identityref mt-Isn neighbors
Tree	neighbors
Configurable	False
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

neighbor *mt-id number system-id string*

Description	This container describes IS neighbors.
Context	network-instance name <i>string</i> protocols isis instance name <i>string</i> level level-number <i>number</i> link-state-database lsp lsp-id <i>string</i> tlvs tlv type identityref mt-isn neighbors neighbor mt-id <i>number system-id string</i>
Tree	neighbor
Configurable	False
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

mt-id *number*

Description	Identifier of a topology being announced.
Context	network-instance name <i>string</i> protocols isis instance name <i>string</i> level level-number <i>number</i> link-state-database lsp lsp-id <i>string</i> tlvs tlv type identityref mt-isn neighbors neighbor mt-id <i>number system-id string</i>
Range	0 to 4095
Configurable	False
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

system-id *string*

Description	System-id of the IS neighbor.
Context	network-instance name <i>string</i> protocols isis instance name <i>string</i> level level-number <i>number</i> link-state-database lsp lsp-id <i>string</i> tlvs tlv type identityref mt-isn neighbors neighbor mt-id <i>number system-id string</i>
String Length	14
Configurable	False
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

instances

Description	This list contains all instances of an adjacency between the originating and remote IS. Multiple instances are used to indicate where there are arallel adjacencies between systems.
Context	network-instance name <i>string</i> protocols isis instance name <i>string</i> level level-number <i>number</i> link-state-database lsp lsp-id <i>string</i> tlvs tlv type identityref mt-isn neighbors neighbor mt-id <i>number</i> system-id <i>string</i> instances
Tree	instances
Configurable	False
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

instance *id number*

Description	Instance of TLV-222 between the originating and remote IS.
Context	network-instance name <i>string</i> protocols isis instance name <i>string</i> level level-number <i>number</i> link-state-database lsp lsp-id <i>string</i> tlvs tlv type identityref mt-isn neighbors neighbor mt-id <i>number</i> system-id <i>string</i> instances instance id number
Tree	instance
Configurable	False
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

id number

Description	Unique identifier for the TLV instance for the neighbor. The ID is not required to be consistent across readvertisements of the LSP.
Context	network-instance name <i>string</i> protocols isis instance name <i>string</i> level level-number <i>number</i> link-state-database lsp lsp-id <i>string</i> tlvs tlv type identityref mt-isn neighbors neighbor mt-id <i>number</i> system-id <i>string</i> instances instance id number
Configurable	False
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

metric number

Description	ISIS metric value.
Context	network-instance name string protocols isis instance name string level level-number number link-state-database lsp lsp-id string tlvs tlv type identityref mt-isn neighbors neighbor mt-id number system-id string instances instance id number metric number
Tree	metric
Range	0 to 16777215
Configurable	False
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

subtlvs

Description	This container describes IS Neighbor sub-TLVs.
Context	network-instance name string protocols isis instance name string level level-number number link-state-database lsp lsp-id string tlvs tlv type identityref mt-isn neighbors neighbor mt-id number system-id string instances instance id number subtlvs
Tree	subtlvs
Configurable	False
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

subtlv type identityref

Description	List of subTLV types in the LSDB for the specified TLV.
Context	network-instance name string protocols isis instance name string level level-number number link-state-database lsp lsp-id string tlvs tlv type identityref mt-isn neighbors neighbor mt-id number system-id string instances instance id number subtlvs subtlv type identityref
Tree	subtlv
Configurable	False
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

type *identityref*

Description	The type of subTLV being described. The type of subTLV is expressed as a canonical name.
Context	network-instance name <i>string</i> protocols isis instance name <i>string</i> level level-number <i>number</i> link-state-database lsp lsp-id <i>string</i> tlvs tlv type <i>identityref</i> mt-isn neighbors neighbor mt-id <i>number</i> system-id <i>string</i> instances instance id <i>number</i> subtlvs subtlv type <i>identityref</i>
Options	<ul style="list-style-type: none"> • is-reachability-subtlvs-type Base identity for an ISIS TLV 22, 23, 222, 223, 141 SUB-TLV type. • ip-reachability-subtlvs-type Base identity for an ISIS TLV 135, 235, 236, 237 SUB-TLV type. • router-capability-subtlvs-type Base identity for an ISIS TLV 242 SUB-TLV type.
Configurable	False
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

adjacency-sids

Description	This container defines segment routing adjacency SIDs.
Context	network-instance name <i>string</i> protocols isis instance name <i>string</i> level level-number <i>number</i> link-state-database lsp lsp-id <i>string</i> tlvs tlv type <i>identityref</i> mt-isn neighbors neighbor mt-id <i>number</i> system-id <i>string</i> instances instance id <i>number</i> subtlvs subtlv type <i>identityref</i> adjacency-sids
Tree	adjacency-sids
Configurable	False
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

adjacency-sid *value number*

Description	Adjacency Segment-IDs List. An IGP-Adjacency Segment is an IGP segment attached to a unidirectional adjacency or a set of unidirectional adjacencies. By default, an IGP- Adjacency Segment is local to the node which advertises it.
Context	network-instance name <i>string</i> protocols isis instance name <i>string</i> level level-number <i>number</i> link-state-database lsp lsp-id <i>string</i> tlvs tlv type <i>identityref</i> mt-isn neighbors neighbor mt-id <i>number</i> system-id <i>string</i> instances instance

	<i>id number subtlvs subtlv type identityref adjacency-sids adjacency-sid value number</i>
Tree	adjacency-sid
Configurable	False
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b
value number	
Description	Adjacency-SID value.
Context	network-instance name string protocols isis instance name string level level-number number link-state-database lsp lsp-id string tlvs tlv type identityref mt-isn neighbors neighbor mt-id number system-id string instances instance id number subtlvs subtlv type identityref adjacency-sids adjacency-sid value number
Configurable	False
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b
flags keyword	
Description	Flags associated with Adj-Segment-ID.
Context	network-instance name string protocols isis instance name string level level-number number link-state-database lsp lsp-id string tlvs tlv type identityref mt-isn neighbors neighbor mt-id number system-id string instances instance id number subtlvs subtlv type identityref adjacency-sids adjacency-sid value number flags keyword
Tree	flags
Options	<ul style="list-style-type: none"> • address-family Address-family flag. When unset, the Adj-SID refers to an adjacency with outgoing IPv4 encapsulation. If set then the Adj-SID refers to an adjacency with outgoing IPv6 encapsulation. • backup Backup flag. When set, the Adj-SID refers to an adjacency being protected (e.g.: using IPFRR or MPLS-FRR). • value Value flag. When set, the SID carries a value (instead of an index). By default the flag is SET. • local

Local flag. When set, the value/index carried by the SID has local significance. By default the flag is SET.

- set

Set flag. When set, the S-Flag indicates that the Adj-SID refers to a set of adjacencies.

Configurable	False
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b
weight number	
Description	Value that represents the weight of the Adj-SID for the purpose of load balancing.
Context	network-instance name string protocols isis instance name string level level-number number link-state-database lsp lsp-id string tlvs tlv type identityref mt-isn neighbors neighbor mt-id number system-id string instances instance id number subtlvs subtlv type identityref adjacency-sids adjacency-sid value number weight number
Tree	weight
Configurable	False
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b
admin-group	
Description	This container defines sub-TLV 3.
Context	network-instance name string protocols isis instance name string level level-number number link-state-database lsp lsp-id string tlvs tlv type identityref mt-isn neighbors neighbor mt-id number system-id string instances instance id number subtlvs subtlv type identityref admin-group
Tree	admin-group
Configurable	False
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b
admin-group number	
Description	The administrative group sub-TLV contains a 4-octet bit mask assigned by the network administrator

Each set bit corresponds to one administrative group assigned to the interface. By convention, the least significant bit is referred to as group 0, and the most significant bit is referred to as group 31.

Context	network-instance name <i>string</i> protocols isis instance name <i>string</i> level level-number <i>number</i> link-state-database lsp lsp-id <i>string</i> tlvs tlv type identityref mt-isn neighbors neighbor mt-id <i>number</i> system-id <i>string</i> instances instance id <i>number</i> subtlvs subtlv type identityref admin-group admin-group <i>number</i>
Tree	admin-group
Configurable	False
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

application-specific-link-attributes

Description	Application Specific Link Attributes. Sub-TLV = 16.
Context	network-instance name <i>string</i> protocols isis instance name <i>string</i> level level-number <i>number</i> link-state-database lsp lsp-id <i>string</i> tlvs tlv type identityref mt-isn neighbors neighbor mt-id <i>number</i> system-id <i>string</i> instances instance id <i>number</i> subtlvs subtlv type identityref application-specific-link-attributes
Tree	application-specific-link-attributes
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

legacy *boolean*

Description	When the legacy flag is set, all of the applications specified in the bit mask MUST use the legacy advertisements for the corresponding link found in TLVs 22, 23, 25, 141, 222, and 223, in TLV 138, or in TLV 139 as appropriate.
Context	network-instance name <i>string</i> protocols isis instance name <i>string</i> level level-number <i>number</i> link-state-database lsp lsp-id <i>string</i> tlvs tlv type identityref mt-isn neighbors neighbor mt-id <i>number</i> system-id <i>string</i> instances instance id <i>number</i> subtlvs subtlv type identityref application-specific-link-attributes legacy <i>boolean</i>
Tree	legacy
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

loop-free-alternate *boolean*

Description	F bit is set in the Standard Application Identifier Bit Mask
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Context	network-instance name <i>string</i> protocols isis instance name <i>string</i> level level-number <i>number</i> link-state-database lsp lsp-id <i>string</i> tlvs tlv type <i>identityref</i> mt-isn neighbors neighbor mt-id <i>number</i> system-id <i>string</i> instances instance id <i>number</i> subtlvs subtlv type <i>identityref</i> application-specific-link-attributes loop-free-alternate <i>boolean</i>
Tree	loop-free-alternate
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b
rsvp-te <i>boolean</i>	
Description	R bit is set in the Standard Application Identifier Bit Mask
Context	network-instance name <i>string</i> protocols isis instance name <i>string</i> level level-number <i>number</i> link-state-database lsp lsp-id <i>string</i> tlvs tlv type <i>identityref</i> mt-isn neighbors neighbor mt-id <i>number</i> system-id <i>string</i> instances instance id <i>number</i> subtlvs subtlv type <i>identityref</i> application-specific-link-attributes rsvp-te <i>boolean</i>
Tree	rsvp-te
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b
sr-policy <i>boolean</i>	
Description	S bit is set in the Standard Application Identifier Bit Mask
Context	network-instance name <i>string</i> protocols isis instance name <i>string</i> level level-number <i>number</i> link-state-database lsp lsp-id <i>string</i> tlvs tlv type <i>identityref</i> mt-isn neighbors neighbor mt-id <i>number</i> system-id <i>string</i> instances instance id <i>number</i> subtlvs subtlv type <i>identityref</i> application-specific-link-attributes sr-policy <i>boolean</i>
Tree	sr-policy
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b
sub-sub-tlvs	
Description	Enter the sub-sub-tlvs context
Context	network-instance name <i>string</i> protocols isis instance name <i>string</i> level level-number <i>number</i> link-state-database lsp lsp-id <i>string</i> tlvs tlv type <i>identityref</i> mt-isn neighbors neighbor mt-id <i>number</i> system-id <i>string</i> instances instance id <i>number</i> subtlvs subtlv type <i>identityref</i> application-specific-link-attributes sub-sub-tlvs
Tree	sub-sub-tlvs

Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

admin-group *number*

Description	A bit mask representing the administrative groups to which the interface belongs. Sub-Sub-TLV = 3.
Context	network-instance name <i>string</i> protocols isis instance name <i>string</i> level level-number <i>number</i> link-state-database lsp lsp-id <i>string</i> tlvs tlv type <i>identityref</i> mt-isn neighbors neighbor mt-id <i>number</i> system-id <i>string</i> instances instance id <i>number</i> subtlvs subtlv type <i>identityref</i> application-specific-link-attributes sub-sub-tlvs admin-group <i>number</i>
Tree	admin-group
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

maximum-link-bandwidth *number*

Description	The (LAG aware) bandwidth of the interface to the neighbor. Sub-Sub-TLV = 9.
Context	network-instance name <i>string</i> protocols isis instance name <i>string</i> level level-number <i>number</i> link-state-database lsp lsp-id <i>string</i> tlvs tlv type <i>identityref</i> mt-isn neighbors neighbor mt-id <i>number</i> system-id <i>string</i> instances instance id <i>number</i> subtlvs subtlv type <i>identityref</i> application-specific-link-attributes sub-sub-tlvs maximum-link-bandwidth <i>number</i>
Tree	maximum-link-bandwidth
Units	bytes-per-second
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

min-max-unidirectional-link-delay

Description	The minimum and maximum delay between two directly connected IS-IS neighbors.
Context	network-instance name <i>string</i> protocols isis instance name <i>string</i> level level-number <i>number</i> link-state-database lsp lsp-id <i>string</i> tlvs tlv type <i>identityref</i> mt-isn neighbors neighbor mt-id <i>number</i> system-id <i>string</i> instances instance id <i>number</i> subtlvs subtlv type <i>identityref</i> application-specific-link-attributes sub-sub-tlvs min-max-unidirectional-link-delay
Tree	min-max-unidirectional-link-delay
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

anomolous *boolean*

Description	If the A bit is cleared, the values represent steady-state link performance.
Context	network-instance name <i>string</i> protocols isis instance name <i>string</i> level level-number <i>number</i> link-state-database lsp lsp-id <i>string</i> tlvs tlv type <i>identityref</i> mt-isn neighbors neighbor mt-id <i>number</i> system-id <i>string</i> instances instance id <i>number</i> subtlvs subtlv type <i>identityref</i> application-specific-link-attributes sub-sub-tlvs min-max-unidirectional-link-delay anomolous <i>boolean</i>
Tree	anomolous
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

max-delay *number*

Description	Maximum forward-path delay (from the advertising router to the remote neighbor)
Context	network-instance name <i>string</i> protocols isis instance name <i>string</i> level level-number <i>number</i> link-state-database lsp lsp-id <i>string</i> tlvs tlv type <i>identityref</i> mt-isn neighbors neighbor mt-id <i>number</i> system-id <i>string</i> instances instance id <i>number</i> subtlvs subtlv type <i>identityref</i> application-specific-link-attributes sub-sub-tlvs min-max-unidirectional-link-delay max-delay <i>number</i>
Tree	max-delay
Units	microseconds
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

min-delay *number*

Description	Minimum forward-path delay (from the advertising router to the remote neighbor)
Context	network-instance name <i>string</i> protocols isis instance name <i>string</i> level level-number <i>number</i> link-state-database lsp lsp-id <i>string</i> tlvs tlv type <i>identityref</i> mt-isn neighbors neighbor mt-id <i>number</i> system-id <i>string</i> instances instance id <i>number</i> subtlvs subtlv type <i>identityref</i> application-specific-link-attributes sub-sub-tlvs min-max-unidirectional-link-delay min-delay <i>number</i>
Tree	min-delay
Units	microseconds
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

te-default-metric *number*

Description	An administratively assigned metric used as an alternative to the normal SPF metric based (typically) on link bandwidth.
Context	network-instance name <i>string</i> protocols isis instance name <i>string</i> level level-number <i>number</i> link-state-database lsp lsp-id <i>string</i> tlvs tlv type <i>identityref</i> mt-isn neighbors neighbor mt-id <i>number</i> system-id <i>string</i> instances instance id <i>number</i> subtlvs subtlv type <i>identityref</i> application-specific-link-attributes sub-sub-tlvs te-default-metric <i>number</i>
Tree	te-default-metric
Range	0 to 16777215
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

available-bandwidth

Description	This container defines unidirectional lavailable bandwidth.
Context	network-instance name <i>string</i> protocols isis instance name <i>string</i> level level-number <i>number</i> link-state-database lsp lsp-id <i>string</i> tlvs tlv type <i>identityref</i> mt-isn neighbors neighbor mt-id <i>number</i> system-id <i>string</i> instances instance id <i>number</i> subtlvs subtlv type <i>identityref</i> available-bandwidth
Tree	available-bandwidth
Configurable	False
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

bandwidth *binary*

Description	The available bandwidth on a link, forwarding adjacency, or bundled link in IEEE floating-point format with units of bytes per second. For a link or forwarding adjacency, available bandwidth is defined to be residual bandwidth minus the measured bandwidth used for the actual forwarding of non-RSVP-TE label switched path packets. For a bundled link, available bandwidth is defined to be the sum of the component link available bandwidths minus the measured bandwidth used for the actual forwarding of non-RSVP-TE label switched path packets. For a bundled link, available bandwidth is defined to be the sum of the component link available bandwidths.
Context	network-instance name <i>string</i> protocols isis instance name <i>string</i> level level-number <i>number</i> link-state-database lsp lsp-id <i>string</i> tlvs tlv type <i>identityref</i> mt-isn neighbors neighbor mt-id <i>number</i> system-id <i>string</i> instances instance id <i>number</i> subtlvs subtlv type <i>identityref</i> available-bandwidth bandwidth <i>binary</i>

Tree	bandwidth
String Length	4
Units	bytes per second
Configurable	False
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b
type <i>identityref</i>	
Description	The type of subTLV being described. The type of subTLV is expressed as a canonical name.
Context	network-instance name <i>string</i> protocols isis instance name <i>string</i> level level-number <i>number</i> link-state-database lsp lsp-id <i>string</i> tlvs tlv type <i>identityref</i> mt-isn neighbors neighbor mt-id <i>number</i> system-id <i>string</i> instances instance id <i>number</i> subtlvs subtlv type <i>identityref</i> available-bandwidth type <i>identityref</i>
Tree	type
Options	<ul style="list-style-type: none"> • is-reachability-subtlvs-type Base identity for an ISIS TLV 22, 23, 222, 223, 141 SUB-TLV type. • ip-reachability-subtlvs-type Base identity for an ISIS TLV 135, 235, 236, 237 SUB-TLV type. • router-capability-subtlvs-type Base identity for an ISIS TLV 242 SUB-TLV type.
Configurable	False
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b
bandwidth-constraints	
Description	This container defines bandwidth-constraints. For DS-TE, the existing Maximum Reservable link bandwidth parameter is retained, but its semantics is generalized and interpreted as the aggregate bandwidth constraint across all Class-Types
Context	network-instance name <i>string</i> protocols isis instance name <i>string</i> level level-number <i>number</i> link-state-database lsp lsp-id <i>string</i> tlvs tlv type <i>identityref</i> mt-isn neighbors neighbor mt-id <i>number</i> system-id <i>string</i> instances instance id <i>number</i> subtlvs subtlv type <i>identityref</i> bandwidth-constraints
Tree	bandwidth-constraints
Configurable	False

Platforms 7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

bandwidth-constraint *model-id number*

Description List of the Bandwidth Constraints sub-TLV instances present in the TLV.

Context [network-instance name](#) *string* [protocols isis instance name](#) *string* [level level-number](#) *number* [link-state-database lsp lsp-id](#) *string* [tlvs tlv type identityref mt-isn neighbors neighbor mt-id](#) *number* [system-id](#) *string* [instances instance id](#) *number* [subtlvs subtlv type identityref bandwidth-constraints bandwidth-constraint model-id](#) *number*

Tree [bandwidth-constraint](#)

Configurable False

Platforms 7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

model-id *number*

Description Identifier for the Bandwidth Constraints Model currently in use by the LSR initiating the IGP advertisement.

Context [network-instance name](#) *string* [protocols isis instance name](#) *string* [level level-number](#) *number* [link-state-database lsp lsp-id](#) *string* [tlvs tlv type identityref mt-isn neighbors neighbor mt-id](#) *number* [system-id](#) *string* [instances instance id](#) *number* [subtlvs subtlv type identityref bandwidth-constraints bandwidth-constraint model-id](#) *number*

Configurable False

Platforms 7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

constraints

Description Constraints contained within the Bandwidth Constraints sub-TLV

Context [network-instance name](#) *string* [protocols isis instance name](#) *string* [level level-number](#) *number* [link-state-database lsp lsp-id](#) *string* [tlvs tlv type identityref mt-isn neighbors neighbor mt-id](#) *number* [system-id](#) *string* [instances instance id](#) *number* [subtlvs subtlv type identityref bandwidth-constraints bandwidth-constraint model-id](#) *number* [constraints](#)

Tree [constraints](#)

Configurable False

Platforms 7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

constraint *constraint-id number*

Description List of the constraints within the Bandwidth Constraints sub-TLV. The BC0 level is indicated by the constraint-id leaf being set to 0, with BCN being indicated by constraint-id N.

Context [network-instance name string](#) [protocols isis instance name string level level-number number](#) [link-state-database lsp lsp-id string](#) [tlvs tlv type identityref mt-isn neighbors neighbor mt-id number system-id string](#) [instances instance id number](#) [subtlvs subtlv type identityref bandwidth-constraints bandwidth-constraint model-id number](#) [constraints constraint constraint-id number](#)

Tree [constraint](#)

Configurable False

Platforms 7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

constraint-id *number*

Description Unique reference for the bandwidth constraint level. BC0 is indicated by this leaf being set to zero, with BCN represented by this leaf being set to N.

Context [network-instance name string](#) [protocols isis instance name string level level-number number](#) [link-state-database lsp lsp-id string](#) [tlvs tlv type identityref mt-isn neighbors neighbor mt-id number system-id string](#) [instances instance id number](#) [subtlvs subtlv type identityref bandwidth-constraints bandwidth-constraint model-id number](#) [constraints constraint constraint-id number](#)

Configurable False

Platforms 7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

bandwidth *binary*

Description The bandwidth constraint, expressed as a 32-bit IEEE floating point number expressed in bytes per second.

Context [network-instance name string](#) [protocols isis instance name string level level-number number](#) [link-state-database lsp lsp-id string](#) [tlvs tlv type identityref mt-isn neighbors neighbor mt-id number system-id string](#) [instances instance id number](#) [subtlvs subtlv type identityref bandwidth-constraints bandwidth-constraint model-id number](#) [constraints constraint constraint-id number](#) [bandwidth binary](#)

Tree	bandwidth
String Length	4
Units	bytes per second
Configurable	False
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

extended-admin-group

Description	This container defines sub-TLV 14.
Context	network-instance name string protocols isis instance name string level level-number number link-state-database lsp lsp-id string tlvs tlv type identityref mt-isn neighbors neighbor mt-id number system-id string instances instance id number subtlvs subtlv type identityref extended-admin-group
Tree	extended-admin-group
Configurable	False
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

extended-admin-group number

Description	The extended-admin-group sub-TLV is used in addition to the Administrative Groups when it is desirable to make more than 32 colors available for advertisement in a network.
Context	network-instance name string protocols isis instance name string level level-number number link-state-database lsp lsp-id string tlvs tlv type identityref mt-isn neighbors neighbor mt-id number system-id string instances instance id number subtlvs subtlv type identityref extended-admin-group extended-admin-group number
Tree	extended-admin-group
Configurable	False
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

ipv4-interface-address

Description	This container defines sub-TLV 6.
Context	network-instance name string protocols isis instance name string level level-number number link-state-database lsp lsp-id string tlvs tlv type identityref

	mt-isn neighbors neighbor mt-id number system-id string instances instance id number subtlvs subtlv type identityref ipv4-interface-address
Tree	ipv4-interface-address
Configurable	False
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b
address string	
Description	A 4-octet IPv4 address for the interface described by the (main) TLV. This sub-TLV can occur multiple times.
Context	network-instance name string protocols isis instance name string level level-number number link-state-database lsp lsp-id string tlvs tlv type identityref mt-isn neighbors neighbor mt-id number system-id string instances instance id number subtlvs subtlv type identityref ipv4-interface-address address string
Tree	address
Configurable	False
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b
ipv4-neighbor-address	
Description	This container defines sub-TLV 8.
Context	network-instance name string protocols isis instance name string level level-number number link-state-database lsp lsp-id string tlvs tlv type identityref mt-isn neighbors neighbor mt-id number system-id string instances instance id number subtlvs subtlv type identityref ipv4-neighbor-address
Tree	ipv4-neighbor-address
Configurable	False
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b
address string	
Description	A single IPv4 address for a neighboring router on this link. This sub-TLV can occur multiple times.
Context	network-instance name string protocols isis instance name string level level-number number link-state-database lsp lsp-id string tlvs tlv type identityref mt-isn neighbors neighbor mt-id number system-id string instances instance

	id number subtlvs subtlv type identityref ipv4-neighbor-address address string
Tree	address
Configurable	False
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b
ipv6-interface-address	
Description	This container defines sub-TLV 12.
Context	network-instance name string protocols isis instance name string level level-number number link-state-database lsp lsp-id string tlvs tlv type identityref mt-isn neighbors neighbor mt-id number system-id string instances instance id number subtlvs subtlv type identityref ipv6-interface-address
Tree	ipv6-interface-address
Configurable	False
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b
address string	
Description	Contains a 16-octet IPv6 address for the interface described by the containing Extended IS Reachability TLV. This sub-TLV can occur multiple times.
Context	network-instance name string protocols isis instance name string level level-number number link-state-database lsp lsp-id string tlvs tlv type identityref mt-isn neighbors neighbor mt-id number system-id string instances instance id number subtlvs subtlv type identityref ipv6-interface-address address string
Tree	address
Configurable	False
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b
ipv6-neighbor-address	
Description	This container defines sub-TLV 13.
Context	network-instance name string protocols isis instance name string level level-number number link-state-database lsp lsp-id string tlvs tlv type identityref

	mt-isn neighbors neighbor mt-id number system-id string instances instance id number subtlvs subtlv type identityref ipv6-neighbor-address
Tree	ipv6-neighbor-address
Configurable	False
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b
address string	
Description	Contains a 16-octet IPv6 address for a neighboring router on the link described by the (main) TLV. This sub-TLV can occur multiple times.
Context	network-instance name string protocols isis instance name string level level-number number link-state-database lsp lsp-id string tlvs tlv type identityref mt-isn neighbors neighbor mt-id number system-id string instances instance id number subtlvs subtlv type identityref ipv6-neighbor-address address string
Tree	address
Configurable	False
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b
lan-adjacency-sids	
Description	This container defines segment routing LAN adjacency SIDs
Context	network-instance name string protocols isis instance name string level level-number number link-state-database lsp lsp-id string tlvs tlv type identityref mt-isn neighbors neighbor mt-id number system-id string instances instance id number subtlvs subtlv type identityref lan-adjacency-sids
Tree	lan-adjacency-sids
Configurable	False
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b
lan-adjacency-sid value number	
Description	Adjacency Segment-IDs List. An IGP-Adjacency Segment is an IGP segment attached to a unidirectional adjacency or a set of unidirectional adjacencies. By default, an IGP- Adjacency Segment is local to the node which advertises it.

Context	network-instance name <i>string</i> protocols isis instance name <i>string</i> level level-number <i>number</i> link-state-database lsp lsp-id <i>string</i> tlvs tlv type <i>identityref</i> mt-isn neighbors neighbor mt-id <i>number</i> system-id <i>string</i> instances instance id <i>number</i> subtlvs subtlv type <i>identityref</i> lan-adjacency-sids lan-adjacency-sid value <i>number</i>
Tree	lan-adjacency-sid
Configurable	False
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b
value <i>number</i>	
Description	LAN Adjacency-SID value.
Context	network-instance name <i>string</i> protocols isis instance name <i>string</i> level level-number <i>number</i> link-state-database lsp lsp-id <i>string</i> tlvs tlv type <i>identityref</i> mt-isn neighbors neighbor mt-id <i>number</i> system-id <i>string</i> instances instance id <i>number</i> subtlvs subtlv type <i>identityref</i> lan-adjacency-sids lan-adjacency-sid value <i>number</i>
Configurable	False
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b
flags <i>keyword</i>	
Description	Flags associated with LAN-Adj-Segment-ID.
Context	network-instance name <i>string</i> protocols isis instance name <i>string</i> level level-number <i>number</i> link-state-database lsp lsp-id <i>string</i> tlvs tlv type <i>identityref</i> mt-isn neighbors neighbor mt-id <i>number</i> system-id <i>string</i> instances instance id <i>number</i> subtlvs subtlv type <i>identityref</i> lan-adjacency-sids lan-adjacency-sid value <i>number</i> flags <i>keyword</i>
Tree	flags
Options	<ul style="list-style-type: none"> • address-family Address-family flag. When unset, the Adj-SID refers to an adjacency with outgoing IPv4 encapsulation. If set then the Adj-SID refers to an adjacency with outgoing IPv6 encapsulation. • backup Backup flag. When set, the Adj-SID refers to an adjacency being protected (e.g.: using IPFRR or MPLS-FRR). • value Value flag. When set, the SID carries a value (instead of an index). By default the flag is SET.

	<ul style="list-style-type: none"> • local Local flag. When set, the value/index carried by the SID has local significance. By default the flag is SET. • set Set flag. When set, the S-Flag indicates that the Adj-SID refers to a set of adjacencies.
Configurable	False
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b
neighbor-id <i>string</i>	
Description	System ID of the neighbor associated with the LAN- Adj-Segment-ID value.
Context	network-instance name <i>string</i> protocols isis instance name <i>string</i> level level-number <i>number</i> link-state-database lsp lsp-id <i>string</i> tlvs tlv type identityref mt-isn neighbors neighbor mt-id <i>number</i> system-id <i>string</i> instances instance id <i>number</i> subtlvs subtlv type identityref lan-adjacency-sids lan-adjacency-sid value <i>number</i> neighbor-id <i>string</i>
Tree	neighbor-id
String Length	14
Configurable	False
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b
weight <i>number</i>	
Description	Value that represents the weight of the Adj-SID for the purpose of load balancing.
Context	network-instance name <i>string</i> protocols isis instance name <i>string</i> level level-number <i>number</i> link-state-database lsp lsp-id <i>string</i> tlvs tlv type identityref mt-isn neighbors neighbor mt-id <i>number</i> system-id <i>string</i> instances instance id <i>number</i> subtlvs subtlv type identityref lan-adjacency-sids lan-adjacency-sid value <i>number</i> weight <i>number</i>
Tree	weight
Configurable	False
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

link-attributes

Description	This container defines link-attributes.
Context	network-instance name string protocols isis instance name string level level-number number link-state-database lsp lsp-id string tlvs tlv type identityref mt-isn neighbors neighbor mt-id number system-id string instances instance id number subtlvs subtlv type identityref link-attributes
Tree	link-attributes
Configurable	False
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

local-protection *keyword*

Description	Link local-protection attributes.
Context	network-instance name string protocols isis instance name string level level-number number link-state-database lsp lsp-id string tlvs tlv type identityref mt-isn neighbors neighbor mt-id number system-id string instances instance id number subtlvs subtlv type identityref link-attributes local-protection keyword
Tree	local-protection
Options	<ul style="list-style-type: none"> • local-protection If set, local protection is available for the link. • link-excluded If set, the link is excluded from local protection.
Configurable	False
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

link-delay

Description	This container defines unidirectional link delay.
Context	network-instance name string protocols isis instance name string level level-number number link-state-database lsp lsp-id string tlvs tlv type identityref mt-isn neighbors neighbor mt-id number system-id string instances instance id number subtlvs subtlv type identityref link-delay
Tree	link-delay
Configurable	False

Platforms 7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

a-bit *boolean*

Description The A bit is set when the measured value of this parameter exceeds its configured maximum threshold. The A bit is cleared when the measured value falls below its configured reuse threshold.

Context [network-instance name](#) *string* [protocols isis instance name](#) *string* [level level-number](#) *number* [link-state-database lsp lsp-id](#) *string* [tlvs tlv type identityref mt-isn neighbors neighbor mt-id](#) *number* [system-id](#) *string* [instances instance id](#) *number* [subtlvs subtlv type identityref link-delay a-bit](#) *boolean*

Tree [a-bit](#)

Configurable False

Platforms 7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

delay *number*

Description Average link delay value (in microseconds) between two directly connected IS-IS neighbors over a configurable interval.

Context [network-instance name](#) *string* [protocols isis instance name](#) *string* [level level-number](#) *number* [link-state-database lsp lsp-id](#) *string* [tlvs tlv type identityref mt-isn neighbors neighbor mt-id](#) *number* [system-id](#) *string* [instances instance id](#) *number* [subtlvs subtlv type identityref link-delay delay](#) *number*

Tree [delay](#)

Units microseconds

Configurable False

Platforms 7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

link-delay-variation

Description This container defines unidirectional link delay variation.

Context [network-instance name](#) *string* [protocols isis instance name](#) *string* [level level-number](#) *number* [link-state-database lsp lsp-id](#) *string* [tlvs tlv type identityref mt-isn neighbors neighbor mt-id](#) *number* [system-id](#) *string* [instances instance id](#) *number* [subtlvs subtlv type identityref link-delay-variation](#)

Tree [link-delay-variation](#)

Configurable False

Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b
delay number	
Description	Average link delay between two directly connected IS-IS neighbors over a configurable interval.
Context	network-instance name string protocols isis instance name string level level-number number link-state-database lsp lsp-id string tlvs tlv type identityref mt-isn neighbors neighbor mt-id number system-id string instances instance id number subtlvs subtlv type identityref link-delay-variation delay number
Tree	delay
Units	microseconds
Configurable	False
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b
link-id	
Description	This container defines sub-TLV 4.
Context	network-instance name string protocols isis instance name string level level-number number link-state-database lsp lsp-id string tlvs tlv type identityref mt-isn neighbors neighbor mt-id number system-id string instances instance id number subtlvs subtlv type identityref link-id
Tree	link-id
Configurable	False
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b
local number	
Description	The value field of this sub-TLV contains 4 octets of Link Local Identifier followed by 4 octets of Link Remote Identifier.
Context	network-instance name string protocols isis instance name string level level-number number link-state-database lsp lsp-id string tlvs tlv type identityref mt-isn neighbors neighbor mt-id number system-id string instances instance id number subtlvs subtlv type identityref link-id local number
Tree	local
Configurable	False

Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b
remote number	
Description	If the Link Remote Identifier is unknown, it is set to 0.
Context	network-instance name string protocols isis instance name string level level-number number link-state-database lsp lsp-id string tlvs tlv type identityref mt-isn neighbors neighbor mt-id number system-id string instances instance id number subtlvs subtlv type identityref link-id remote number
Tree	remote
Configurable	False
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b
link-loss	
Description	This container defines unidirectional link loss delay.
Context	network-instance name string protocols isis instance name string level level-number number link-state-database lsp lsp-id string tlvs tlv type identityref mt-isn neighbors neighbor mt-id number system-id string instances instance id number subtlvs subtlv type identityref link-loss
Tree	link-loss
Configurable	False
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b
a-bit boolean	
Description	The A bit is set when the measured value of this parameter exceeds its configured maximum threshold. The A bit is cleared when the measured value falls below its configured reuse threshold.
Context	network-instance name string protocols isis instance name string level level-number number link-state-database lsp lsp-id string tlvs tlv type identityref mt-isn neighbors neighbor mt-id number system-id string instances instance id number subtlvs subtlv type identityref link-loss a-bit boolean
Tree	a-bit
Configurable	False

Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b
link-loss number	
Description	Link packet loss as a percentage of the total traffic sent over a configurable interval. The basic unit is 0.000003%, where (2 ²⁴ - 2) is 50.331642%. This value is the highest packet-loss percentage that can be expressed (the assumption being that precision is more important on high-speed links than the ability to advertise loss rates greater than this, and that high-speed links with over 50% loss are unusable). Therefore, measured values that are larger than the field maximum SHOULD be encoded as the maximum value.
Context	network-instance name string protocols isis instance name string level level-number number link-state-database lsp lsp-id string tlvs tlv type identityref mt-isn neighbors neighbor mt-id number system-id string instances instance id number subtlvs subtlv type identityref link-loss link-loss number
Tree	link-loss
Configurable	False
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b
link-protection-type	
Description	ISIS LSDB parameters relating to the type of link protection offered.
Context	network-instance name string protocols isis instance name string level level-number number link-state-database lsp lsp-id string tlvs tlv type identityref mt-isn neighbors neighbor mt-id number system-id string instances instance id number subtlvs subtlv type identityref link-protection-type
Tree	link-protection-type
Configurable	False
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b
type keyword	
Description	Link protection capabilities.
Context	network-instance name string protocols isis instance name string level level-number number link-state-database lsp lsp-id string tlvs tlv type identityref mt-isn neighbors neighbor mt-id number system-id string instances instance id number subtlvs subtlv type identityref link-protection-type type keyword
Tree	type

Options	<ul style="list-style-type: none"> • extra-traffic If set the link has extra traffic protection. If the link is of type Extra Traffic, it means that the link is protecting another link or links. The LSPs on a link of this type will be lost if any of the links it is protecting fail. • unprotected If set, the link is unprotected. If the link is of type Unprotected, it means that there is no other link protecting this link. The LSPs on a link of this type will be lost if the link fails. • shared If set, the link has shared protection. If the link is of type Shared, it means that there are one or more disjoint links of type Extra Traffic that are protecting this link. These Extra Traffic links are shared between one or more links of type Shared. • one-one If set, the link has dedicated 1:1 protection. If the link is of type Dedicated 1:1, it means that there is one dedicated disjoint link of type Extra Traffic that is protecting this link. • plus-one If set, the link has dedicated 1+1 protection. If the link is of type Dedicated 1+1, it means that a dedicated disjoint link is protecting this link. However, the protecting link is not advertised in the link state database and is therefore not available for the routing of LSPs. • enhanced If set the link has enhanced protection. If the link is of type Enhanced, it means that a protection scheme that is more reliable than Dedicated 1+1, e.g., 4 fiber BLSR/MS-SPRING, is being used to protect this link.
Configurable	False
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b
max-link-bandwidth	
Description	This container defines sub-TLV 9.
Context	network-instance name <i>string</i> protocols isis instance name <i>string</i> level level-number <i>number</i> link-state-database lsp lsp-id <i>string</i> tlvs tlv type <i>identityref</i> mt-isn neighbors neighbor mt-id <i>number</i> system-id <i>string</i> instances instance id <i>number</i> subtlvs subtlv type <i>identityref</i> max-link-bandwidth
Tree	max-link-bandwidth
Configurable	False

Platforms 7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

bandwidth *binary*

Description The maximum bandwidth that can be used on this link in this direction (from the system originating the LSP to its neighbors). It is encoded in 32 bits in IEEE floating point format. The units are bytes (not bits!) per second.

Context [network-instance name string protocols isis instance name string level level-number number link-state-database lsp lsp-id string tlvs tlv type identityref mt-isn neighbors neighbor mt-id number system-id string instances instance id number subtlvs subtlv type identityref max-link-bandwidth bandwidth binary](#)

Tree [bandwidth](#)

String Length 4

Units bytes per second

Configurable False

Platforms 7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

max-reservable-link-bandwidth

Description This container defines sub-TLV 10.

Context [network-instance name string protocols isis instance name string level level-number number link-state-database lsp lsp-id string tlvs tlv type identityref mt-isn neighbors neighbor mt-id number system-id string instances instance id number subtlvs subtlv type identityref max-reservable-link-bandwidth](#)

Tree [max-reservable-link-bandwidth](#)

Configurable False

Platforms 7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

bandwidth *binary*

Description The maximum amount of bandwidth that can be reserved in this direction on this link. Note that for oversubscription purposes, this can be greater than the bandwidth of the link. It is encoded in 32 bits in IEEE floating point format. The units are bytes (not bits!) per second.

Context [network-instance name string protocols isis instance name string level level-number number link-state-database lsp lsp-id string tlvs tlv type identityref](#)

	mt-isn neighbors neighbor mt-id number system-id string instances instance id number subtlvs subtlv type identityref max-reservable-link-bandwidth bandwidth binary
Tree	bandwidth
String Length	4
Units	bytes per second
Configurable	False
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b
min-max-link-delay	
Description	This container defines min/max link delay.
Context	network-instance name string protocols isis instance name string level level-number number link-state-database lsp lsp-id string tlvs tlv type identityref mt-isn neighbors neighbor mt-id number system-id string instances instance id number subtlvs subtlv type identityref min-max-link-delay
Tree	min-max-link-delay
Configurable	False
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b
a-bit <i>boolean</i>	
Description	The A bit is set when the measured value of this parameter exceeds its configured maximum threshold. The A bit is cleared when the measured value falls below its configured reuse threshold.
Context	network-instance name string protocols isis instance name string level level-number number link-state-database lsp lsp-id string tlvs tlv type identityref mt-isn neighbors neighbor mt-id number system-id string instances instance id number subtlvs subtlv type identityref min-max-link-delay a-bit boolean
Tree	a-bit
Configurable	False
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

max-delay *number*

Description	Maximum measured link delay value(in microseconds) between two directly connected IS-IS neighbors over a configurable interval.
Context	network-instance name <i>string</i> protocols isis instance name <i>string</i> level level-number <i>number</i> link-state-database lsp lsp-id <i>string</i> tlvs tlv type identityref mt-isn neighbors neighbor mt-id <i>number</i> system-id <i>string</i> instances instance id <i>number</i> subtlvs subtlv type identityref min-max-link-delay max-delay <i>number</i>
Tree	max-delay
Units	microseconds
Configurable	False
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

min-delay *number*

Description	Minimum measured link delay value(in microseconds) between two directly connected IS-IS neighbors over a configurable interval.
Context	network-instance name <i>string</i> protocols isis instance name <i>string</i> level level-number <i>number</i> link-state-database lsp lsp-id <i>string</i> tlvs tlv type identityref mt-isn neighbors neighbor mt-id <i>number</i> system-id <i>string</i> instances instance id <i>number</i> subtlvs subtlv type identityref min-max-link-delay min-delay <i>number</i>
Tree	min-delay
Units	microseconds
Configurable	False
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

residual-bandwidth

Description	This container defines unidirectional residual bandwidth.
Context	network-instance name <i>string</i> protocols isis instance name <i>string</i> level level-number <i>number</i> link-state-database lsp lsp-id <i>string</i> tlvs tlv type identityref mt-isn neighbors neighbor mt-id <i>number</i> system-id <i>string</i> instances instance id <i>number</i> subtlvs subtlv type identityref residual-bandwidth
Tree	residual-bandwidth
Configurable	False

Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b
bandwidth <i>binary</i>	
Description	Residual bandwidth on a link, forwarding adjacency [RFC4206], or bundled link in IEEE floating-point format with units of bytes per second. For a link or forwarding adjacency, residual bandwidth is defined to be the Maximum Bandwidth [RFC5305] minus the bandwidth currently allocated to RSVP-TE label switched paths. For a bundled link, residual bandwidth is defined to be the sum of the component link residual bandwidths.
Context	network-instance name string protocols isis instance name string level level-number number link-state-database lsp lsp-id string tlvs tlv type identityref mt-isn neighbors neighbor mt-id number system-id string instances instance id number subtlvs subtlv type identityref residual-bandwidth bandwidth <i>binary</i>
Tree	bandwidth
String Length	4
Units	bytes per second
Configurable	False
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b
te-default-metric	
Description	This container defines sub-TLV 18.
Context	network-instance name string protocols isis instance name string level level-number number link-state-database lsp lsp-id string tlvs tlv type identityref mt-isn neighbors neighbor mt-id number system-id string instances instance id number subtlvs subtlv type identityref te-default-metric
Tree	te-default-metric
Configurable	False
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b
metric <i>number</i>	
Description	This metric is administratively assigned and can be used to present a differently weighted topology to traffic engineering SPF calculations. To preclude overflow within a traffic engineering SPF implementation, all metrics greater than or equal to MAX_PATH_METRIC SHALL be considered to have a metric of MAX_PATH_METRIC.

Context	network-instance name string protocols isis instance name string level level-number number link-state-database lsp lsp-id string tlvs tlv type identityref mt-isn neighbors neighbor mt-id number system-id string instances instance id number subtlvs subtlv type identityref te-default-metric metric number
Tree	metric
Configurable	False
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b
unconstrained-lsp	
Description	This container defines sub-TLV 23.
Context	network-instance name string protocols isis instance name string level level-number number link-state-database lsp lsp-id string tlvs tlv type identityref mt-isn neighbors neighbor mt-id number system-id string instances instance id number subtlvs subtlv type identityref unconstrained-lsp
Tree	unconstrained-lsp
Configurable	False
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b
count number	
Description	Unconstrained TE LSP count(TE Label Switched Paths (LSPs) signalled with zero bandwidth).
Context	network-instance name string protocols isis instance name string level level-number number link-state-database lsp lsp-id string tlvs tlv type identityref mt-isn neighbors neighbor mt-id number system-id string instances instance id number subtlvs subtlv type identityref unconstrained-lsp count number
Tree	count
Configurable	False
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b
type identityref	
Description	The type of subTLV being described. The type of subTLV is expressed as a canonical name.
Context	network-instance name string protocols isis instance name string level level-number number link-state-database lsp lsp-id string tlvs tlv type identityref

	mt-isn neighbors neighbor mt-id number system-id string instances instance id number subtlvs subtlv type identityref unconstrained-lsp type identityref
Tree	type
Options	<ul style="list-style-type: none"> • is-reachability-subtlvs-type Base identity for an ISIS TLV 22, 23, 222, 223, 141 SUB-TLV type. • ip-reachability-subtlvs-type Base identity for an ISIS TLV 135, 235, 236, 237 SUB-TLV type. • router-capability-subtlvs-type Base identity for an ISIS TLV 242 SUB-TLV type.
Configurable	False
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b
unreserved-bandwidth	
Description	This container defines unreserved-bandwidth. The units are bytes per second.
Context	network-instance name string protocols isis instance name string level level-number number link-state-database lsp lsp-id string tlvs tlv type identityref mt-isn neighbors neighbor mt-id number system-id string instances instance id number subtlvs subtlv type identityref unreserved-bandwidth
Tree	unreserved-bandwidth
Configurable	False
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b
setup-priority priority number	
Description	Enter the setup-priority list instance
Context	network-instance name string protocols isis instance name string level level-number number link-state-database lsp lsp-id string tlvs tlv type identityref mt-isn neighbors neighbor mt-id number system-id string instances instance id number subtlvs subtlv type identityref unreserved-bandwidth setup-priority priority number
Tree	setup-priority
Configurable	False
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

priority *number*

Description	Setup priority level of 0 through 7 to be used by Unreserved Bandwidth sub-TLV 11.
Context	network-instance name <i>string</i> protocols isis instance name <i>string</i> level level-number <i>number</i> link-state-database lsp lsp-id <i>string</i> tlvs tlv type identityref mt-isn neighbors neighbor mt-id <i>number</i> system-id <i>string</i> instances instance id <i>number</i> subtlvs subtlv type identityref unreserved-bandwidth setup-priority priority <i>number</i>
Range	0 to 7
Configurable	False
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

bandwidth *binary*

Description	The amount of bandwidth reservable in this direction on this link. Note that for oversubscription purposes, this can be greater than the bandwidth of the link. It contains eight 32-bit IEEE floating point numbers(one for each priority). The units are bytes (not bits!) per second. The values correspond to the bandwidth that can be reserved with a setup priority of 0 through 7, arranged in increasing order with priority 0 occurring at the start of the sub-TLV, and priority 7 at the end of the sub-TLV.
Context	network-instance name <i>string</i> protocols isis instance name <i>string</i> level level-number <i>number</i> link-state-database lsp lsp-id <i>string</i> tlvs tlv type identityref mt-isn neighbors neighbor mt-id <i>number</i> system-id <i>string</i> instances instance id <i>number</i> subtlvs subtlv type identityref unreserved-bandwidth setup-priority priority <i>number</i> bandwidth <i>binary</i>
Tree	bandwidth
String Length	4
Units	bytes per second
Configurable	False
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

utilized-bandwidth

Description	This container defines unidirectional utilized bandwidth.
Context	network-instance name <i>string</i> protocols isis instance name <i>string</i> level level-number <i>number</i> link-state-database lsp lsp-id <i>string</i> tlvs tlv type identityref

	mt-isn neighbors neighbor mt-id number system-id string instances instance id number subtlvs subtlv type identityref utilized-bandwidth
Tree	utilized-bandwidth
Configurable	False
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b
bandwidth <i>binary</i>	
Description	The bandwidth utilization on a link, forwarding adjacency, or bundled link in IEEE floating-point format with units of bytes per second. For a link or forwarding adjacency, bandwidth utilization represents the actual utilization of the link (i.e., as measured by the advertising node). For a bundled link, bandwidth utilization is defined to be the sum of the component link bandwidth utilizations.
Context	network-instance name string protocols isis instance name string level level-number number link-state-database lsp lsp-id string tlvs tlv type identityref mt-isn neighbors neighbor mt-id number system-id string instances instance id number subtlvs subtlv type identityref utilized-bandwidth bandwidth <i>binary</i>
Tree	bandwidth
String Length	4
Units	bytes per second
Configurable	False
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b
type <i>identityref</i>	
Description	The type of subTLV being described. The type of subTLV is expressed as a canonical name.
Context	network-instance name string protocols isis instance name string level level-number number link-state-database lsp lsp-id string tlvs tlv type identityref mt-isn neighbors neighbor mt-id number system-id string instances instance id number subtlvs subtlv type identityref utilized-bandwidth type identityref
Tree	type
Options	<ul style="list-style-type: none"> • is-reachability-subtlvs-type Base identity for an ISIS TLV 22, 23, 222, 223, 141 SUB-TLV type. • ip-reachability-subtlvs-type Base identity for an ISIS TLV 135, 235, 236, 237 SUB-TLV type. • router-capability-subtlvs-type

Base identity for an ISIS TLV 242 SUB-TLV type.

Configurable	False
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

undefined-subtlvs

Description	This container describes undefined ISIS TLVs.
Context	network-instance name <i>string</i> protocols isis instance name <i>string</i> level level-number <i>number</i> link-state-database lsp lsp-id <i>string</i> tlvs tlv type identityref mt-isn neighbors neighbor mt-id <i>number</i> system-id <i>string</i> instances instance id <i>number</i> undefined-subtlvs
Tree	undefined-subtlvs
Configurable	False
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

undefined-subtlv *type number*

Description	Sub-TLVs that are not defined in the model or not recognised by system.
Context	network-instance name <i>string</i> protocols isis instance name <i>string</i> level level-number <i>number</i> link-state-database lsp lsp-id <i>string</i> tlvs tlv type identityref mt-isn neighbors neighbor mt-id <i>number</i> system-id <i>string</i> instances instance id <i>number</i> undefined-subtlvs undefined-subtlv <i>type number</i>
Tree	undefined-subtlv
Configurable	False
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

type number

Description	TLV Type.
Context	network-instance name <i>string</i> protocols isis instance name <i>string</i> level level-number <i>number</i> link-state-database lsp lsp-id <i>string</i> tlvs tlv type identityref mt-isn neighbors neighbor mt-id <i>number</i> system-id <i>string</i> instances instance id <i>number</i> undefined-subtlvs undefined-subtlv <i>type number</i>
Configurable	False

Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b
length <i>number</i>	
Description	TLV length.
Context	network-instance name <i>string</i> protocols isis instance name <i>string</i> level level-number <i>number</i> link-state-database lsp lsp-id <i>string</i> tlvs tlv type identityref mt-isn neighbors neighbor mt-id <i>number</i> system-id <i>string</i> instances instance id <i>number</i> undefined-subtlvs undefined-subtlv type <i>number</i> length <i>number</i>
Tree	length
Configurable	False
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b
value <i>binary</i>	
Description	TLV value.
Context	network-instance name <i>string</i> protocols isis instance name <i>string</i> level level-number <i>number</i> link-state-database lsp lsp-id <i>string</i> tlvs tlv type identityref mt-isn neighbors neighbor mt-id <i>number</i> system-id <i>string</i> instances instance id <i>number</i> undefined-subtlvs undefined-subtlv type <i>number</i> value <i>binary</i>
Tree	value
Configurable	False
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b
multi-topology	
Description	This container defines the topology supported.
Context	network-instance name <i>string</i> protocols isis instance name <i>string</i> level level-number <i>number</i> link-state-database lsp lsp-id <i>string</i> tlvs tlv type identityref multi-topology
Tree	multi-topology
Configurable	False
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

topologies

Description	This container describes IS topologies.
Context	network-instance name <i>string</i> protocols isis instance name <i>string</i> level level-number <i>number</i> link-state-database lsp lsp-id <i>string</i> tlvs tlv type identityref multi-topology topologies
Tree	topologies
Configurable	False
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

topology [mt-id](#) *number*

Description	This list describes a topology.
Context	network-instance name <i>string</i> protocols isis instance name <i>string</i> level level-number <i>number</i> link-state-database lsp lsp-id <i>string</i> tlvs tlv type identityref multi-topology topologies topology mt-id <i>number</i>
Tree	topology
Configurable	False
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

mt-id *number*

Description	Multi-topology ID.
Context	network-instance name <i>string</i> protocols isis instance name <i>string</i> level level-number <i>number</i> link-state-database lsp lsp-id <i>string</i> tlvs tlv type identityref multi-topology topologies topology mt-id <i>number</i>
Range	0 to 4095
Configurable	False
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

attributes *keyword*

Description	Attributes of the LSP for the associated topology.
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Context	network-instance name <i>string</i> protocols isis instance name <i>string</i> level level-number <i>number</i> link-state-database lsp lsp-id <i>string</i> tlvs tlv type <i>identityref</i> multi-topology topologies topology mt-id <i>number</i> attributes <i>keyword</i>
Tree	attributes
Options	<ul style="list-style-type: none"> • overload When set, node is overloaded, still part of the topology but cannot be used for transit. • attached When set, node is attached to another area using the referred metric and can be used as default gateway.
Configurable	False
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

nlpid

Description	This container defines TLV 129.
Context	network-instance name <i>string</i> protocols isis instance name <i>string</i> level level-number <i>number</i> link-state-database lsp lsp-id <i>string</i> tlvs tlv type <i>identityref</i> nlpid
Tree	nlpid
Configurable	False
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

nlpid keyword

Description	Protocol supported. IPv4 is defined as (0xcc) and IPv6 -(0x8e)
Context	network-instance name <i>string</i> protocols isis instance name <i>string</i> level level-number <i>number</i> link-state-database lsp lsp-id <i>string</i> tlvs tlv type <i>identityref</i> nlpid nlpid <i>keyword</i>
Tree	nlpid
Options	<ul style="list-style-type: none"> • ipv4 IPv4 Address family. • ipv6 IPv6 Address family.
Configurable	False

Platforms 7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

purge-oi

Description This container defines ISIS purge TLV.

Context [network-instance name string protocols isis instance name string level level-number number link-state-database lsp lsp-id string tlvs tlv type identityref purge-oi](#)

Tree [purge-oi](#)

Configurable False

Platforms 7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

received-system-id *string*

Description System ID of the Intermediate System from which the purge was received.

Context [network-instance name string protocols isis instance name string level level-number number link-state-database lsp lsp-id string tlvs tlv type identityref purge-oi received-system-id string](#)

Tree [received-system-id](#)

String Length 14

Configurable False

Platforms 7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

source-system-id *string*

Description System ID of the Intermediate System that inserted this TLV.

Context [network-instance name string protocols isis instance name string level level-number number link-state-database lsp lsp-id string tlvs tlv type identityref purge-oi source-system-id string](#)

Tree [source-system-id](#)

String Length 14

Configurable False

Platforms 7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

system-id-count *number*

Description Number of system IDs carried in this TLV.

Context [network-instance name](#) *string* [protocols isis instance name](#) *string* [level level-number](#) *number* [link-state-database lsp lsp-id](#) *string* [tlvs tlv type identityref purge-oi system-id-count](#) *number*

Tree [system-id-count](#)

Configurable False

Platforms 7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

router-capabilities

Description This container defines router capabilities.

Context [network-instance name](#) *string* [protocols isis instance name](#) *string* [level level-number](#) *number* [link-state-database lsp lsp-id](#) *string* [tlvs tlv type identityref router-capabilities](#)

Tree [router-capabilities](#)

Configurable False

Platforms 7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

capability [instance-number](#) *number*

Description This list describes IS Router capabilities.

Context [network-instance name](#) *string* [protocols isis instance name](#) *string* [level level-number](#) *number* [link-state-database lsp lsp-id](#) *string* [tlvs tlv type identityref router-capabilities capability instance-number](#) *number*

Tree [capability](#)

Configurable False

Platforms 7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

instance-number *number*

Description	A unique instance number for the instance of the router capabilities TLV. The instance number should be autogenerated by the producer of the data and may be renumbered if the entire LSP contents are replaced in subsequent advertisements.
Context	network-instance name <i>string</i> protocols isis instance name <i>string</i> level level-number <i>number</i> link-state-database lsp lsp-id <i>string</i> tlvs tlv type identityref router-capabilities capability instance-number <i>number</i>
Configurable	False
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

flags *keyword*

Description	Router capability flags.
Context	network-instance name <i>string</i> protocols isis instance name <i>string</i> level level-number <i>number</i> link-state-database lsp lsp-id <i>string</i> tlvs tlv type identityref router-capabilities capability instance-number <i>number</i> flags <i>keyword</i>
Tree	flags
Options	<ul style="list-style-type: none"> flood <p>When the S bit is set(1), the IS - IS Router CAPABILITY TLV MUST be flooded across the entire routing domain. When the S bit is not set(0), the TLV MUST NOT be leaked between levels . This bit MUST NOT be altered during the TLV leaking.</p> down <p>When the IS-IS Router CAPABILITY TLV is leaked from level - 2 to level-1, the Down bit MUST be set. Otherwise, this bit MUST be clear. IS - IS Router capability TLVs with the Down bit set MUST NOT be leaked from level - 1 to level-2. This is to prevent TLV looping.</p>
Configurable	False
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

router-id *string*

Description	IPv4 router-id.
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Context	network-instance name <i>string</i> protocols isis instance name <i>string</i> level level-number <i>number</i> link-state-database lsp lsp-id <i>string</i> tlvs tlv type <i>identityref</i> router-capabilities capability instance-number <i>number</i> router-id <i>string</i>
Tree	router-id
Configurable	False
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

subtlvs

Description	This container describes router capability TLV sub-TLVs
Context	network-instance name <i>string</i> protocols isis instance name <i>string</i> level level-number <i>number</i> link-state-database lsp lsp-id <i>string</i> tlvs tlv type <i>identityref</i> router-capabilities capability instance-number <i>number</i> subtlvs
Tree	subtlvs
Configurable	False
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

subtlv *type identityref*

Description	List of subTLV types in the LSDB for the specified TLV
Context	network-instance name <i>string</i> protocols isis instance name <i>string</i> level level-number <i>number</i> link-state-database lsp lsp-id <i>string</i> tlvs tlv type <i>identityref</i> router-capabilities capability instance-number <i>number</i> subtlvs subtlv type <i>identityref</i>
Tree	subtlv
Configurable	False
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

type *identityref*

Description	The type of subTLV being described. The type of subTLV is expressed as a canonical name.
Context	network-instance name <i>string</i> protocols isis instance name <i>string</i> level level-number <i>number</i> link-state-database lsp lsp-id <i>string</i> tlvs tlv type <i>identityref</i>

	router-capabilities capability instance-number number subtlvs subtlv type identityref
Options	<ul style="list-style-type: none"> • is-reachability-subtlvs-type Base identity for an ISIS TLV 22, 23, 222, 223, 141 SUB-TLV type. • ip-reachability-subtlvs-type Base identity for an ISIS TLV 135, 235, 236, 237 SUB-TLV type. • router-capability-subtlvs-type Base identity for an ISIS TLV 242 SUB-TLV type.
Configurable	False
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b
node-msds	
Description	The Maximum Segment Depth (MSD) values supported by the advertising node. sub-tlv 23.
Context	network-instance name string protocols isis instance name string level level-number number link-state-database lsp lsp-id string tlvs tlv type identityref router-capabilities capability instance-number number subtlvs subtlv type identityref node-msds
Tree	node-msds
Configurable	False
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b
bmi-msd number	
Description	Base MPLS Imposition MSD (BMI-MSD) signals the total number of MPLS labels that can be imposed, including all service/transport/special labels. sub-tlv 1
Context	network-instance name string protocols isis instance name string level level-number number link-state-database lsp lsp-id string tlvs tlv type identityref router-capabilities capability instance-number number subtlvs subtlv type identityref node-msds bmi-msd number
Tree	bmi-msd
Configurable	False
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

erld-msd *number*

Description	Entropy capable Readable Label Depth MSD (ERLD-MSD), is defined to advertise the ERLD [RFC8662] of a given router. sub-tlv 2.
Context	network-instance name <i>string</i> protocols isis instance name <i>string</i> level level-number <i>number</i> link-state-database lsp lsp-id <i>string</i> tlvs tlv type <i>identityref</i> router-capabilities capability instance-number <i>number</i> subtlvs subtlv type <i>identityref</i> node-msds erld-msd <i>number</i>
Tree	erld-msd
Configurable	False
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

sbfd-discriminators

Description	This container defines sbfd discriminators sub-TLV 20.
Context	network-instance name <i>string</i> protocols isis instance name <i>string</i> level level-number <i>number</i> link-state-database lsp lsp-id <i>string</i> tlvs tlv type <i>identityref</i> router-capabilities capability instance-number <i>number</i> subtlvs subtlv type <i>identityref</i> sbfd-discriminators
Tree	sbfd-discriminators
Configurable	False
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

discriminator *number*

Description	Advertised Seamless BFD (S-BFD) Discriminator.
Context	network-instance name <i>string</i> protocols isis instance name <i>string</i> level level-number <i>number</i> link-state-database lsp lsp-id <i>string</i> tlvs tlv type <i>identityref</i> router-capabilities capability instance-number <i>number</i> subtlvs subtlv type <i>identityref</i> sbfd-discriminators discriminator <i>number</i>
Tree	discriminator
Configurable	False
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

segment-routing-algorithms

Description	This container defines SR algorithm sub-TLV 19.
Context	network-instance name <i>string</i> protocols isis instance name <i>string</i> level level-number <i>number</i> link-state-database lsp lsp-id <i>string</i> tlvs tlv type <i>identityref</i> router-capabilities capability instance-number <i>number</i> subtlvs subtlv type <i>identityref</i> segment-routing-algorithms
Tree	segment-routing-algorithms
Configurable	False
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

algorithm *keyword*

Description	The Segment Routing algorithm that is described by the TLV.
Context	network-instance name <i>string</i> protocols isis instance name <i>string</i> level level-number <i>number</i> link-state-database lsp lsp-id <i>string</i> tlvs tlv type <i>identityref</i> router-capabilities capability instance-number <i>number</i> subtlvs subtlv type <i>identityref</i> segment-routing-algorithms algorithm <i>keyword</i>
Tree	algorithm
Options	<ul style="list-style-type: none"> spf <p>Shortest Path First (SPF) algorithm based on link metric. This is the well-known shortest path algorithm as computed by the IS-IS Decision process. Consistent with the deployed practice for link-state protocols, algorithm 0 permits any node to overwrite the SPF path with a different path based on local policy.</p> strict-spf <p>Strict Shortest Path First (SPF) algorithm based on link metric. The algorithm is identical to algorithm 0 but algorithm 1 requires that all nodes along the path will honor the SPF routing decision. Local policy MUST NOT alter the forwarding decision computed by algorithm 1 at the node claiming to support algorithm 1.</p>
Configurable	False
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

segment-routing-capability

Description	This container defines SR Capability sub-TLV 2.
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Context	network-instance name <i>string</i> protocols isis instance name <i>string</i> level level-number <i>number</i> link-state-database lsp lsp-id <i>string</i> tlvs tlv type <i>identityref</i> router-capabilities capability instance-number <i>number</i> subtlvs subtlv type <i>identityref</i> segment-routing-capability
Tree	segment-routing-capability
Configurable	False
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b
flags <i>keyword</i>	
Description	Segment Routing Capability Flags.
Context	network-instance name <i>string</i> protocols isis instance name <i>string</i> level level-number <i>number</i> link-state-database lsp lsp-id <i>string</i> tlvs tlv type <i>identityref</i> router-capabilities capability instance-number <i>number</i> subtlvs subtlv type <i>identityref</i> segment-routing-capability flags <i>keyword</i>
Tree	flags
Options	<ul style="list-style-type: none"> • ipv4-mpls When set, the router is capable of processing SR MPLS encapsulated IPv4 packets on all interfaces. • ipv6-mpls When set, the router is capable of processing SR MPLS encapsulated IPv6 packets on all interfaces. • ipv6-sr When set, the router is capable of processing the IPv6 Segment Routing Header on all interfaces.
Configurable	False
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b
srgb-descriptors	
Description	SRGB Descriptors included within the SR capability sub-TLV
Context	network-instance name <i>string</i> protocols isis instance name <i>string</i> level level-number <i>number</i> link-state-database lsp lsp-id <i>string</i> tlvs tlv type <i>identityref</i> router-capabilities capability instance-number <i>number</i> subtlvs subtlv type <i>identityref</i> segment-routing-capability srgb-descriptors
Tree	srgb-descriptors
Configurable	False

Platforms 7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

srgb-descriptor *range number*

Description Descriptor entry within the SR capability sub-TLV

Context [network-instance name](#) *string* [protocols isis instance name](#) *string* [level level-number](#) *number* [link-state-database lsp lsp-id](#) *string* [tlvs tlv type identityref](#) [router-capabilities capability instance-number](#) *number* [subtlvs subtlv type identityref](#) [segment-routing-capability srgb-descriptors srgb-descriptor range](#) *number*

Tree [srgb-descriptor](#)

Configurable False

Platforms 7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

range *number*

Description Number of SRGB elements. The range value MUST be greater than 0.

Context [network-instance name](#) *string* [protocols isis instance name](#) *string* [level level-number](#) *number* [link-state-database lsp lsp-id](#) *string* [tlvs tlv type identityref](#) [router-capabilities capability instance-number](#) *number* [subtlvs subtlv type identityref](#) [segment-routing-capability srgb-descriptors srgb-descriptor range](#) *number*

Configurable False

Platforms 7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

label *number*

Description The first value of the SRGB when expressed as an MPLS label.

Context [network-instance name](#) *string* [protocols isis instance name](#) *string* [level level-number](#) *number* [link-state-database lsp lsp-id](#) *string* [tlvs tlv type identityref](#) [router-capabilities capability instance-number](#) *number* [subtlvs subtlv type identityref](#) [segment-routing-capability srgb-descriptors srgb-descriptor range](#) *number* [label](#) *number*

Tree [label](#)

Range 16 to 1048575

Configurable False

Platforms 7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

undefined-tlvs

Description Surrounding container for a list of unknown TLVs.

Context [network-instance name string protocols isis instance name string level level-number number link-state-database lsp lsp-id string undefined-tlvs](#)

Tree [undefined-tlvs](#)

Configurable False

Platforms 7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

undefined-tlv type number

Description List of TLVs that are not defined within the model, or are not recognised by the system.

Context [network-instance name string protocols isis instance name string level level-number number link-state-database lsp lsp-id string undefined-tlvs undefined-tlv type number](#)

Tree [undefined-tlv](#)

Configurable False

Platforms 7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

type number

Description TLV Type.

Context [network-instance name string protocols isis instance name string level level-number number link-state-database lsp lsp-id string undefined-tlvs undefined-tlv type number](#)

Configurable False

Platforms 7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

length *number*

Description	TLV length.
Context	network-instance name <i>string</i> protocols isis instance name <i>string</i> level level-number <i>number</i> link-state-database lsp lsp-id <i>string</i> undefined-tlvs undefined-tlv type <i>number</i> length <i>number</i>
Tree	length
Configurable	False
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

value *binary*

Description	TLV value.
Context	network-instance name <i>string</i> protocols isis instance name <i>string</i> level level-number <i>number</i> link-state-database lsp lsp-id <i>string</i> undefined-tlvs undefined-tlv type <i>number</i> value <i>binary</i>
Tree	value
Configurable	False
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

version *number*

Description	PDU version. This is set to 1.
Context	network-instance name <i>string</i> protocols isis instance name <i>string</i> level level-number <i>number</i> link-state-database lsp lsp-id <i>string</i> version <i>number</i>
Tree	version
Configurable	False
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

version2 *number*

Description	PDU version2. This is set to 1
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Context	network-instance name <i>string</i> protocols isis instance name <i>string</i> level level-number <i>number</i> link-state-database lsp lsp-id <i>string</i> version2 <i>number</i>
Tree	version2
Configurable	False
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

loopfree-alternate-exclude *boolean*

Description	Enable/disable LFA at ISIS level.
Context	network-instance name <i>string</i> protocols isis instance name <i>string</i> level level-number <i>number</i> loopfree-alternate-exclude <i>boolean</i>
Tree	loopfree-alternate-exclude
Default	false
Configurable	True
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

metric-style *keyword*

Description	Specifies the metric style to be wide or narrow for the level
Context	network-instance name <i>string</i> protocols isis instance name <i>string</i> level level-number <i>number</i> metric-style <i>keyword</i>
Tree	metric-style
Default	wide
Options	<ul style="list-style-type: none"> • narrow This enum describes narrow metric style • wide This enum describes wide metric style
Configurable	True
Platforms	Supported on all platforms

route-preference

Description	Specify the route preference (admin distance) for IP routes associated with the level
Context	network-instance name <i>string</i> protocols isis instance name <i>string</i> level level-number <i>number</i> route-preference

Tree	route-preference
Configurable	True
Platforms	Supported on all platforms

external number

Description	Specify the route preference of external routes carried in this level. By default the route preference of external L1 routes is 160. By default the route preference of external L2 routes is 165.
Context	network-instance name string protocols isis instance name string level level-number number route-preference external number
Tree	external
Range	1 to 255
Configurable	True
Platforms	Supported on all platforms

internal number

Description	Specify the route preference of internal routes carried in this level. By default the route preference of internal L1 routes is 15. By default the route preference of internal L2 routes is 18.
Context	network-instance name string protocols isis instance name string level level-number number route-preference internal number
Tree	internal
Range	1 to 255
Configurable	True
Platforms	Supported on all platforms

statistics

Description	Per level statistics in an ISIS instance
Context	network-instance name string protocols isis instance name string level level-number number statistics
Tree	statistics
Configurable	False
Platforms	Supported on all platforms

authentication-failures *number*

Description	Number of times an IS-IS control PDU associated with this level had the correct auth type but failed to pass authentication validation
Context	network-instance name <i>string</i> protocols isis instance name <i>string</i> level level-number <i>number</i> statistics authentication-failures <i>number</i>
Tree	authentication-failures
Default	0
Configurable	False
Platforms	Supported on all platforms

authentication-type-failures *number*

Description	Number of times an IS-IS control PDU associated with this level had an auth type field different from that for this system
Context	network-instance name <i>string</i> protocols isis instance name <i>string</i> level level-number <i>number</i> statistics authentication-type-failures <i>number</i>
Tree	authentication-type-failures
Default	0
Configurable	False
Platforms	Supported on all platforms

corrupted-lsps *number*

Description	Number of corrupted in-memory LSPs detected. LSPs received from the wire with a bad checksum are silently dropped and not counted. LSPs received from the wire with parse errors are counted by lsp-errors
Context	network-instance name <i>string</i> protocols isis instance name <i>string</i> level level-number <i>number</i> statistics corrupted-lsps <i>number</i>
Tree	corrupted-lsps
Default	0
Configurable	False
Platforms	Supported on all platforms

database-overloads *number*

Description	Number of times the database has become overloaded
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Context	network-instance name <i>string</i> protocols isis instance name <i>string</i> level level-number <i>number</i> statistics database-overloads <i>number</i>
Tree	database-overloads
Default	0
Configurable	False
Platforms	Supported on all platforms

exceeded-max-sequence-number *number*

Description	Number of times the system has attempted to exceed the maximum sequence number
Context	network-instance name <i>string</i> protocols isis instance name <i>string</i> level level-number <i>number</i> statistics exceeded-max-sequence-number <i>number</i>
Tree	exceeded-max-sequence-number
Default	0
Configurable	False
Platforms	Supported on all platforms

lsp-errors *number*

Description	Number of received LSPs with parse errors
Context	network-instance name <i>string</i> protocols isis instance name <i>string</i> level level-number <i>number</i> statistics lsp-errors <i>number</i>
Tree	lsp-errors
Default	0
Configurable	False
Platforms	Supported on all platforms

manual-address-drop-from-area *number*

Description	number of times a manual address has been dropped from area
Context	network-instance name <i>string</i> protocols isis instance name <i>string</i> level level-number <i>number</i> statistics manual-address-drop-from-area <i>number</i>
Tree	manual-address-drop-from-area
Default	0
Configurable	False
Platforms	Supported on all platforms

max-area-address-mismatches *number*

Description	Number of times an IS-IS control PDU associated with this level was received with a max area address field different from that for this system
Context	network-instance name <i>string</i> protocols isis instance name <i>string</i> level level-number <i>number</i> statistics max-area-address-mismatches <i>number</i>
Tree	max-area-address-mismatches
Default	0
Configurable	False
Platforms	Supported on all platforms

own-lsp-purges *number*

Description	Number of times a zero-aged copy of the system's own LSP is received from some other node
Context	network-instance name <i>string</i> protocols isis instance name <i>string</i> level level-number <i>number</i> statistics own-lsp-purges <i>number</i>
Tree	own-lsp-purges
Default	0
Configurable	False
Platforms	Supported on all platforms

sequence-number-skips *number*

Description	Number of times a sequence number skip has occurred
Context	network-instance name <i>string</i> protocols isis instance name <i>string</i> level level-number <i>number</i> statistics sequence-number-skips <i>number</i>
Tree	sequence-number-skips
Default	0
Configurable	False
Platforms	Supported on all platforms

spf-runs *number*

Description	number of times a full SPF run has been performed on the level LSDB since the IS-IS manager restarted
Context	network-instance name <i>string</i> protocols isis instance name <i>string</i> level level-number <i>number</i> statistics spf-runs <i>number</i>

Tree	spf-runs
Default	0
Configurable	False
Platforms	Supported on all platforms

system-id-length-mismatches *number*

Description	Number of times an IS-IS control PDU associated with this level was received with a system ID field length different from that for this system
Context	network-instance name <i>string</i> protocols isis instance name <i>string</i> level level-number <i>number</i> statistics system-id-length-mismatches <i>number</i>
Tree	system-id-length-mismatches
Default	0
Configurable	False
Platforms	Supported on all platforms

total-lsps *number*

Description	Number of LSPs in the database at the system level
Context	network-instance name <i>string</i> protocols isis instance name <i>string</i> level level-number <i>number</i> statistics total-lsps <i>number</i>
Tree	total-lsps
Default	0
Configurable	False
Platforms	Supported on all platforms

trace-options

Description	Level debug trace options for IS-IS
Context	network-instance name <i>string</i> protocols isis instance name <i>string</i> level level-number <i>number</i> trace-options
Tree	trace-options
Configurable	True
Platforms	Supported on all platforms

trace *keyword*

Description	List of tracing options
Context	network-instance name <i>string</i> protocols isis instance name <i>string</i> level level-number <i>number</i> trace-options trace <i>keyword</i>
Tree	trace
Options	<ul style="list-style-type: none"> • adjacencies • lsdb • routes • spf
Configurable	True
Platforms	Supported on all platforms

level-capability *keyword*

Description	The level-capability of the intermediate system (router)
Context	network-instance name <i>string</i> protocols isis instance name <i>string</i> level-capability <i>keyword</i>
Tree	level-capability
Default	L2
Options	<ul style="list-style-type: none"> • L1 This enum describes ISIS level 1 • L2 This enum describes ISIS level 2 • L1L2 This enum describes ISIS level 1-2
Configurable	True
Platforms	Supported on all platforms

level-database [level-number](#) *number* [lsp-id](#) *string*

Description	Link State database
Context	network-instance name <i>string</i> protocols isis instance name <i>string</i> level-database level-number <i>number</i> lsp-id <i>string</i>
Tree	level-database
Configurable	False

Platforms Supported on 7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e platforms

level-number *number*

Description Specifies the IS-IS protocol level to which these attributes are applied.

Context [network-instance name string protocols isis instance name string level-database level-number number lsp-id string](#)

Range 1 to 2

Configurable False

Platforms Supported on 7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e platforms

Isp-id *string*

Description The value specifies the LSP Id and is given in the format as 6 octets of adjacency system-id followed by 1 octet Lan-ID and 1 octet LSP Number.

Context [network-instance name string protocols isis instance name string level-database level-number number lsp-id string](#)

String Length 20

Configurable False

Platforms Supported on 7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e platforms

attributes

Description Enter the attributes context

Context [network-instance name string protocols isis instance name string level-database level-number number lsp-id string attributes](#)

Tree [attributes](#)

Configurable False

Platforms Supported on 7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e platforms

attached *boolean*

Description	Set to true in the L1 LSP when the IS has a Level 2 adjacency.
Context	network-instance name <i>string</i> protocols isis instance name <i>string</i> level-database level-number <i>number</i> lsp-id <i>string</i> attributes attached <i>boolean</i>
Tree	attached
Configurable	False
Platforms	Supported on 7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e platforms

level1-is-type *boolean*

Description	Set to true when the router participates in L1
Context	network-instance name <i>string</i> protocols isis instance name <i>string</i> level-database level-number <i>number</i> lsp-id <i>string</i> attributes level1-is-type <i>boolean</i>
Tree	level1-is-type
Configurable	False
Platforms	Supported on 7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e platforms

level2-is-type *boolean*

Description	Set to true when the router participates in L2
Context	network-instance name <i>string</i> protocols isis instance name <i>string</i> level-database level-number <i>number</i> lsp-id <i>string</i> attributes level2-is-type <i>boolean</i>
Tree	level2-is-type
Configurable	False
Platforms	Supported on 7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e platforms

overload *boolean*

Description	Set to true when the IS is in overload state and should be avoided for transit.
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Context	network-instance name <i>string</i> protocols isis instance name <i>string</i> level-database level-number <i>number</i> lsp-id <i>string</i> attributes overload <i>boolean</i>
Tree	overload
Configurable	False
Platforms	Supported on 7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e platforms

checksum *string*

Description	The value indicates the checksum of contents of LSP from the SourceID field in the LSP till the end. The checksum is computed using the Fletcher checksum algorithm.
Context	network-instance name <i>string</i> protocols isis instance name <i>string</i> level-database level-number <i>number</i> lsp-id <i>string</i> checksum <i>string</i>
Tree	checksum
Configurable	False
Platforms	Supported on 7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e platforms

defined-tlvs

Description	List of defined TLV-s contained in LSP.
Context	network-instance name <i>string</i> protocols isis instance name <i>string</i> level-database level-number <i>number</i> lsp-id <i>string</i> defined-tlvs
Tree	defined-tlvs
Configurable	False
Platforms	Supported on 7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e platforms

application-specific-srlg [neighbor](#) *string*

Description	List of application-specific SRLGs. TLV = 238.
Context	network-instance name <i>string</i> protocols isis instance name <i>string</i> level-database level-number <i>number</i> lsp-id <i>string</i> defined-tlvs application-specific-srlg neighbor <i>string</i>

Tree	application-specific-srlg
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

neighbor *string*

Description	A neighbor, identified by its System ID and one octet to indicate the pseudonode number
Context	network-instance name <i>string</i> protocols isis instance name <i>string</i> level-database level-number <i>number</i> lsp-id <i>string</i> defined-tlvs application-specific-srlg neighbor <i>string</i>
String Length	17
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

legacy *boolean*

Description	When the legacy flag is set, all of the applications specified in the bit mask MUST use the legacy advertisements for the corresponding link found in TLV 138 or TLV 139.
Context	network-instance name <i>string</i> protocols isis instance name <i>string</i> level-database level-number <i>number</i> lsp-id <i>string</i> defined-tlvs application-specific-srlg neighbor <i>string</i> legacy <i>boolean</i>
Tree	legacy
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

loop-free-alternate *boolean*

Description	F bit is set in the Standard Application Identifier Bit Mask
Context	network-instance name <i>string</i> protocols isis instance name <i>string</i> level-database level-number <i>number</i> lsp-id <i>string</i> defined-tlvs application-specific-srlg neighbor <i>string</i> loop-free-alternate <i>boolean</i>
Tree	loop-free-alternate
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

rsvp-te *boolean*

Description	R bit is set in the Standard Application Identifier Bit Mask
Context	network-instance name <i>string</i> protocols isis instance name <i>string</i> level-database level-number <i>number</i> lsp-id <i>string</i> defined-tlvs application-specific-srlg neighbor <i>string</i> rsvp-te <i>boolean</i>
Tree	rsvp-te
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

sr-policy *boolean*

Description	S bit is set in the Standard Application Identifier Bit Mask
Context	network-instance name <i>string</i> protocols isis instance name <i>string</i> level-database level-number <i>number</i> lsp-id <i>string</i> defined-tlvs application-specific-srlg neighbor <i>string</i> sr-policy <i>boolean</i>
Tree	sr-policy
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

sub-tlvs

Description	Enter the sub-tlvs context
Context	network-instance name <i>string</i> protocols isis instance name <i>string</i> level-database level-number <i>number</i> lsp-id <i>string</i> defined-tlvs application-specific-srlg neighbor <i>string</i> sub-tlvs
Tree	sub-tlvs
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

ipv4-interface-address *string*

Description	The IPv4 address of the interface to the neighbor
Context	network-instance name <i>string</i> protocols isis instance name <i>string</i> level-database level-number <i>number</i> lsp-id <i>string</i> defined-tlvs application-specific-srlg neighbor <i>string</i> sub-tlvs ipv4-interface-address <i>string</i>
Tree	ipv4-interface-address
Configurable	False

Platforms 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

ipv4-neighbor-address *string*

Description The IPv4 address of the neighbor

Context [network-instance name *string*](#) [protocols isis instance name *string*](#) [level-database level-number *number*](#) [lsp-id *string*](#) [defined-tlvs application-specific-srlg neighbor *string*](#) [sub-tlvs ipv4-neighbor-address *string*](#)

Tree [ipv4-neighbor-address](#)

Configurable False

Platforms 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

ipv6-interface-address *string*

Description The IPv6 address of the interface to the neighbor

Context [network-instance name *string*](#) [protocols isis instance name *string*](#) [level-database level-number *number*](#) [lsp-id *string*](#) [defined-tlvs application-specific-srlg neighbor *string*](#) [sub-tlvs ipv6-interface-address *string*](#)

Tree [ipv6-interface-address](#)

Configurable False

Platforms 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

ipv6-neighbor-address *string*

Description The IPv6 address of the neighbor

Context [network-instance name *string*](#) [protocols isis instance name *string*](#) [level-database level-number *number*](#) [lsp-id *string*](#) [defined-tlvs application-specific-srlg neighbor *string*](#) [sub-tlvs ipv6-neighbor-address *string*](#)

Tree [ipv6-neighbor-address](#)

Configurable False

Platforms 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

link-local-identifier *number*

Description A local identifier of the link

Context [network-instance name *string*](#) [protocols isis instance name *string*](#) [level-database level-number *number*](#) [lsp-id *string*](#) [defined-tlvs application-specific-srlg neighbor *string*](#) [sub-tlvs link-local-identifier *number*](#)

Tree	link-local-identifier
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

link-remote-identifier *number*

Description	A remote identifier of the link
Context	network-instance name <i>string</i> protocols isis instance name <i>string</i> level-database level-number <i>number</i> lsp-id <i>string</i> defined-tlvs application-specific-srlg neighbor <i>string</i> sub-tlvs link-remote-identifier <i>number</i>
Tree	link-remote-identifier
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

shared-risk-link-group *number*

Description	List of SRLGs that apply to the adjacency with this neighbor
Context	network-instance name <i>string</i> protocols isis instance name <i>string</i> level-database level-number <i>number</i> lsp-id <i>string</i> defined-tlvs application-specific-srlg neighbor <i>string</i> sub-tlvs shared-risk-link-group <i>number</i>
Tree	shared-risk-link-group
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

area-addresses *string*

Description	Each item represents an area address advertised by the LSP.
Context	network-instance name <i>string</i> protocols isis instance name <i>string</i> level-database level-number <i>number</i> lsp-id <i>string</i> defined-tlvs area-addresses <i>string</i>
Tree	area-addresses
String Length	2 to 38
Configurable	False
Platforms	Supported on 7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e platforms

authentication

Description	Authentication TLV. TLV type = 10
Context	network-instance name <i>string</i> protocols isis instance name <i>string</i> level-database level-number <i>number</i> lsp-id <i>string</i> defined-tlvs authentication
Tree	authentication
Configurable	False
Platforms	Supported on 7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e platforms

auth-data *string*

Description	The authentication data
Context	network-instance name <i>string</i> protocols isis instance name <i>string</i> level-database level-number <i>number</i> lsp-id <i>string</i> defined-tlvs authentication auth-data <i>string</i>
Tree	auth-data
Configurable	False
Platforms	Supported on 7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e platforms

auth-type *keyword*

Description	Enter the auth-type context
Context	network-instance name <i>string</i> protocols isis instance name <i>string</i> level-database level-number <i>number</i> lsp-id <i>string</i> defined-tlvs authentication auth-type <i>keyword</i>
Tree	auth-type
Options	<ul style="list-style-type: none"> • cleartext • crypto • hmac-md5
Configurable	False
Platforms	Supported on 7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3,

7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e platforms

extended-ipv4-reachability *ipv4-prefix string*

Description	TLV specifying extended IPv4 Reachability information in the LSP. TLV type = 135
Context	network-instance name string protocols isis instance name string level-database level-number number lsp-id string defined-tlvs extended-ipv4-reachability ipv4-prefix string
Tree	extended-ipv4-reachability
Configurable	False
Platforms	Supported on 7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e platforms

ipv4-prefix *string*

Description	An IPv4 prefix that is reachable to the router.
Context	network-instance name string protocols isis instance name string level-database level-number number lsp-id string defined-tlvs extended-ipv4-reachability ipv4-prefix string
Configurable	False
Platforms	Supported on 7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e platforms

down *boolean*

Description	Reads true when the IPv4 prefix was leaked down from Level2 to Level1.
Context	network-instance name string protocols isis instance name string level-database level-number number lsp-id string defined-tlvs extended-ipv4-reachability ipv4-prefix string down boolean
Tree	down
Configurable	False
Platforms	Supported on 7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e platforms

metric number

Description	The default metric to reach the IPv4 prefix.
Context	network-instance name <i>string</i> protocols isis instance name <i>string</i> level-database level-number <i>number</i> lsp-id <i>string</i> defined-tlvs extended-ipv4-reachability ipv4-prefix <i>string</i> metric number
Tree	metric
Range	0 to 16777215
Configurable	False
Platforms	Supported on 7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e platforms

sub-tlvs

Description	SubTLVs of TLV 135, TLV 235, TLV 236 and TLV 237
Context	network-instance name <i>string</i> protocols isis instance name <i>string</i> level-database level-number <i>number</i> lsp-id <i>string</i> defined-tlvs extended-ipv4-reachability ipv4-prefix <i>string</i> sub-tlvs
Tree	sub-tlvs
Configurable	False
Platforms	Supported on 7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e platforms

prefix-attribute-flags

Description	This sub-TLV supports the advertisement of additional flags associated with a given prefix advertisement.
Context	network-instance name <i>string</i> protocols isis instance name <i>string</i> level-database level-number <i>number</i> lsp-id <i>string</i> defined-tlvs extended-ipv4-reachability ipv4-prefix <i>string</i> sub-tlvs prefix-attribute-flags
Tree	prefix-attribute-flags
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

external-prefix *boolean*

Description	Set if the prefix has been redistributed from another protocol (or another IS-IS instance).
Context	network-instance name <i>string</i> protocols isis instance name <i>string</i> level-database level-number <i>number</i> lsp-id <i>string</i> defined-tlvs extended-ipv4-reachability ipv4-prefix <i>string</i> sub-tlvs prefix-attribute-flags external-prefix <i>boolean</i>
Tree	external-prefix
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

node-identifier *boolean*

Description	Set when the prefix identifies the advertising router; i.e. it is a host prefix advertising a globally reachable address typically associated with a loopback address.
Context	network-instance name <i>string</i> protocols isis instance name <i>string</i> level-database level-number <i>number</i> lsp-id <i>string</i> defined-tlvs extended-ipv4-reachability ipv4-prefix <i>string</i> sub-tlvs prefix-attribute-flags node-identifier <i>boolean</i>
Tree	node-identifier
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

re-advertised *boolean*

Description	Set when the prefix has been leaked from one level to another (upwards or downwards).
Context	network-instance name <i>string</i> protocols isis instance name <i>string</i> level-database level-number <i>number</i> lsp-id <i>string</i> defined-tlvs extended-ipv4-reachability ipv4-prefix <i>string</i> sub-tlvs prefix-attribute-flags re-advertised <i>boolean</i>
Tree	re-advertised
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

route-tag-32bit *number*

Description	List of 32-bit administrative tag values associated with the IPv4 prefix.
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Context	network-instance name <i>string</i> protocols isis instance name <i>string</i> level-database level-number <i>number</i> lsp-id <i>string</i> defined-tlvs extended-ipv4-reachability ipv4-prefix <i>string</i> sub-tlvs route-tag-32bit <i>number</i>
Tree	route-tag-32bit
Range	1 to 4294967295
Configurable	False
Platforms	Supported on 7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e platforms

route-tag-64bit *number*

Description	List of 64-bit administrative tag values associated with the IPv4 prefix.
Context	network-instance name <i>string</i> protocols isis instance name <i>string</i> level-database level-number <i>number</i> lsp-id <i>string</i> defined-tlvs extended-ipv4-reachability ipv4-prefix <i>string</i> sub-tlvs route-tag-64bit <i>number</i>
Tree	route-tag-64bit
Configurable	False
Platforms	Supported on 7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e platforms

segment-routing-prefix-sid

Description	Carries a segment routing prefix SID
Context	network-instance name <i>string</i> protocols isis instance name <i>string</i> level-database level-number <i>number</i> lsp-id <i>string</i> defined-tlvs extended-ipv4-reachability ipv4-prefix <i>string</i> sub-tlvs segment-routing-prefix-sid
Tree	segment-routing-prefix-sid
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

algorithm *keyword*

Description	Contains the identifier of the algorithm the router uses to compute the reachability of the prefix to which the Prefix-SID is associated
Context	network-instance name <i>string</i> protocols isis instance name <i>string</i> level-database level-number <i>number</i> lsp-id <i>string</i> defined-tlvs extended-ipv4-

	reachability ipv4-prefix <i>string</i> sub-tlvs segment-routing-prefix-sid algorithm <i>keyword</i>
Tree	algorithm
Options	<ul style="list-style-type: none"> • spf • strict-spf
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

explicit-null *boolean*

Description	If set any upstream neighbor of the Prefix-SID originator MUST replace the Prefix-SID with a Prefix-SID that has an Explicit NULL value (0 for IPv4 and 2 for IPv6) before forwarding the packet
Context	network-instance name <i>string</i> protocols isis instance name <i>string</i> level-database level-number <i>number</i> lsp-id <i>string</i> defined-tlvs extended-ipv4-reachability ipv4-prefix <i>string</i> sub-tlvs segment-routing-prefix-sid explicit-null <i>boolean</i>
Tree	explicit-null
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

local *boolean*

Description	If set, then the value/index carried by the Prefix-SID has local significance.
Context	network-instance name <i>string</i> protocols isis instance name <i>string</i> level-database level-number <i>number</i> lsp-id <i>string</i> defined-tlvs extended-ipv4-reachability ipv4-prefix <i>string</i> sub-tlvs segment-routing-prefix-sid local <i>boolean</i>
Tree	local
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

node-sid *boolean*

Description	If set the prefix SID refers to the router identified by the prefix.
Context	network-instance name <i>string</i> protocols isis instance name <i>string</i> level-database level-number <i>number</i> lsp-id <i>string</i> defined-tlvs extended-ipv4-reachability ipv4-prefix <i>string</i> sub-tlvs segment-routing-prefix-sid node-sid <i>boolean</i>

Tree	node-sid
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

penultimate-hop-popping *boolean*

Description	If set the penultimate hop MUST NOT pop the Prefix-SID before delivering the packet to the node that advertised the Prefix-SID.
Context	network-instance name <i>string</i> protocols isis instance name <i>string</i> level-database level-number <i>number</i> lsp-id <i>string</i> defined-tlvs extended-ipv4-reachability ipv4-prefix <i>string</i> sub-tlvs segment-routing-prefix-sid penultimate-hop-popping <i>boolean</i>
Tree	penultimate-hop-popping
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

re-advertised *boolean*

Description	If set the prefix to which this Prefix-SID is attached has been propagated by the router from either another level or from another protocol.
Context	network-instance name <i>string</i> protocols isis instance name <i>string</i> level-database level-number <i>number</i> lsp-id <i>string</i> defined-tlvs extended-ipv4-reachability ipv4-prefix <i>string</i> sub-tlvs segment-routing-prefix-sid re-advertised <i>boolean</i>
Tree	re-advertised
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

sr-index-or-label *number*

Description	An index representing an offset in the SID/label space advertised by the router or else a direct encoding of an MPLS label value.
Context	network-instance name <i>string</i> protocols isis instance name <i>string</i> level-database level-number <i>number</i> lsp-id <i>string</i> defined-tlvs extended-ipv4-reachability ipv4-prefix <i>string</i> sub-tlvs segment-routing-prefix-sid sr-index-or-label <i>number</i>
Tree	sr-index-or-label
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

value *boolean*

Description	If set then the Prefix-SID carries a value
Context	network-instance name <i>string</i> protocols isis instance name <i>string</i> level-database level-number <i>number</i> lsp-id <i>string</i> defined-tlvs extended-ipv4-reachability ipv4-prefix <i>string</i> sub-tlvs segment-routing-prefix-sid value <i>boolean</i>
Tree	value
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

extended-is-reachability [neighbor](#) *string*

Description	Each TLV encodes the identity of an adjacent IS neighbor. TLV type = 22
Context	network-instance name <i>string</i> protocols isis instance name <i>string</i> level-database level-number <i>number</i> lsp-id <i>string</i> defined-tlvs extended-is-reachability neighbor <i>string</i>
Tree	extended-is-reachability
Configurable	False
Platforms	Supported on 7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e platforms

neighbor *string*

Description	An adjacent IS neighbor
Context	network-instance name <i>string</i> protocols isis instance name <i>string</i> level-database level-number <i>number</i> lsp-id <i>string</i> defined-tlvs extended-is-reachability neighbor <i>string</i>
String Length	17
Configurable	False
Platforms	Supported on 7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e platforms

default-metric *number*

Description	The default metric to reach this adjacent neighbor.
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Context	network-instance name <i>string</i> protocols isis instance name <i>string</i> level-database level-number <i>number</i> lsp-id <i>string</i> defined-tlvs extended-is-reachability neighbor <i>string</i> default-metric <i>number</i>
Tree	default-metric
Range	0 to 16777215
Configurable	False
Platforms	Supported on 7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e platforms

sub-tlvs

Description	SubTLVs of TLV 22 and TLV 222
Context	network-instance name <i>string</i> protocols isis instance name <i>string</i> level-database level-number <i>number</i> lsp-id <i>string</i> defined-tlvs extended-is-reachability neighbor <i>string</i> sub-tlvs
Tree	sub-tlvs
Configurable	False
Platforms	Supported on 7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e platforms

admin-group *number*

Description	A bit mask representing the administrative groups to which the interface belongs. Sub-TLV = 3.
Context	network-instance name <i>string</i> protocols isis instance name <i>string</i> level-database level-number <i>number</i> lsp-id <i>string</i> defined-tlvs extended-is-reachability neighbor <i>string</i> sub-tlvs admin-group <i>number</i>
Tree	admin-group
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

application-specific-link-attributes

Description	Application Specific Link Attributes. Sub-TLV = 16.
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Context	network-instance name <i>string</i> protocols isis instance name <i>string</i> level-database level-number <i>number</i> lsp-id <i>string</i> defined-tlvs extended-is-reachability neighbor <i>string</i> sub-tlvs application-specific-link-attributes
Tree	application-specific-link-attributes
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

legacy *boolean*

Description	When the legacy flag is set, all of the applications specified in the bit mask MUST use the legacy advertisements for the corresponding link found in TLVs 22, 23, 25, 141, 222, and 223, in TLV 138, or in TLV 139 as appropriate.
Context	network-instance name <i>string</i> protocols isis instance name <i>string</i> level-database level-number <i>number</i> lsp-id <i>string</i> defined-tlvs extended-is-reachability neighbor <i>string</i> sub-tlvs application-specific-link-attributes legacy <i>boolean</i>
Tree	legacy
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

loop-free-alternate *boolean*

Description	F bit is set in the Standard Application Identifier Bit Mask
Context	network-instance name <i>string</i> protocols isis instance name <i>string</i> level-database level-number <i>number</i> lsp-id <i>string</i> defined-tlvs extended-is-reachability neighbor <i>string</i> sub-tlvs application-specific-link-attributes loop-free-alternate <i>boolean</i>
Tree	loop-free-alternate
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

rsvp-te *boolean*

Description	R bit is set in the Standard Application Identifier Bit Mask
Context	network-instance name <i>string</i> protocols isis instance name <i>string</i> level-database level-number <i>number</i> lsp-id <i>string</i> defined-tlvs extended-is-reachability neighbor <i>string</i> sub-tlvs application-specific-link-attributes rsvp-te <i>boolean</i>
Tree	rsvp-te

Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

sr-policy *boolean*

Description	S bit is set in the Standard Application Identifier Bit Mask
Context	network-instance name <i>string</i> protocols isis instance name <i>string</i> level-database level-number <i>number</i> lsp-id <i>string</i> defined-tlvs extended-is-reachability neighbor <i>string</i> sub-tlvs application-specific-link-attributes sr-policy <i>boolean</i>
Tree	sr-policy
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

sub-sub-tlvs

Description	Enter the sub-sub-tlvs context
Context	network-instance name <i>string</i> protocols isis instance name <i>string</i> level-database level-number <i>number</i> lsp-id <i>string</i> defined-tlvs extended-is-reachability neighbor <i>string</i> sub-tlvs application-specific-link-attributes sub-sub-tlvs
Tree	sub-sub-tlvs
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

admin-group *number*

Description	A bit mask representing the administrative groups to which the interface belongs. Sub-Sub-TLV = 3.
Context	network-instance name <i>string</i> protocols isis instance name <i>string</i> level-database level-number <i>number</i> lsp-id <i>string</i> defined-tlvs extended-is-reachability neighbor <i>string</i> sub-tlvs application-specific-link-attributes sub-sub-tlvs admin-group <i>number</i>
Tree	admin-group
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

maximum-link-bandwidth *number*

Description	The (LAG aware) bandwidth of the interface to the neighbor. Sub-Sub-TLV = 9.
Context	network-instance name <i>string</i> protocols isis instance name <i>string</i> level-database level-number <i>number</i> lsp-id <i>string</i> defined-tlvs extended-is-reachability neighbor <i>string</i> sub-tlvs application-specific-link-attributes sub-sub-tlvs maximum-link-bandwidth <i>number</i>
Tree	maximum-link-bandwidth
Units	bytes-per-second
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

min-max-unidirectional-link-delay

Description	The minimum and maximum delay between two directly connected IS-IS neighbors.
Context	network-instance name <i>string</i> protocols isis instance name <i>string</i> level-database level-number <i>number</i> lsp-id <i>string</i> defined-tlvs extended-is-reachability neighbor <i>string</i> sub-tlvs application-specific-link-attributes sub-sub-tlvs min-max-unidirectional-link-delay
Tree	min-max-unidirectional-link-delay
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

anomolous *boolean*

Description	If the A bit is cleared, the values represent steady-state link performance.
Context	network-instance name <i>string</i> protocols isis instance name <i>string</i> level-database level-number <i>number</i> lsp-id <i>string</i> defined-tlvs extended-is-reachability neighbor <i>string</i> sub-tlvs application-specific-link-attributes sub-sub-tlvs min-max-unidirectional-link-delay anomolous <i>boolean</i>
Tree	anomolous
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

max-delay *number*

Description	Maximum forward-path delay (from the advertising router to the remote neighbor)
Context	network-instance name <i>string</i> protocols isis instance name <i>string</i> level-database level-number <i>number</i> lsp-id <i>string</i> defined-tlvs extended-is-reachability neighbor <i>string</i> sub-tlvs application-specific-link-attributes sub-sub-tlvs min-max-unidirectional-link-delay max-delay <i>number</i>
Tree	max-delay
Units	microseconds
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

min-delay *number*

Description	Minimum forward-path delay (from the advertising router to the remote neighbor)
Context	network-instance name <i>string</i> protocols isis instance name <i>string</i> level-database level-number <i>number</i> lsp-id <i>string</i> defined-tlvs extended-is-reachability neighbor <i>string</i> sub-tlvs application-specific-link-attributes sub-sub-tlvs min-max-unidirectional-link-delay min-delay <i>number</i>
Tree	min-delay
Units	microseconds
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

te-default-metric *number*

Description	An administratively assigned metric used as an alternative to the normal SPF metric based (typically) on link bandwidth.
Context	network-instance name <i>string</i> protocols isis instance name <i>string</i> level-database level-number <i>number</i> lsp-id <i>string</i> defined-tlvs extended-is-reachability neighbor <i>string</i> sub-tlvs application-specific-link-attributes sub-sub-tlvs te-default-metric <i>number</i>
Tree	te-default-metric
Range	0 to 16777215
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

ipv4-interface-address *string*

Description	The IPv4 address of the interface to the neighbor. Sub-TLV = 6.
Context	network-instance name <i>string</i> protocols isis instance name <i>string</i> level-database level-number <i>number</i> lsp-id <i>string</i> defined-tlvs extended-is-reachability neighbor <i>string</i> sub-tlvs ipv4-interface-address <i>string</i>
Tree	ipv4-interface-address
Configurable	False
Platforms	Supported on 7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e platforms

ipv4-neighbor-address *string*

Description	The IPv4 address of the neighbor. Sub-TLV = 8.
Context	network-instance name <i>string</i> protocols isis instance name <i>string</i> level-database level-number <i>number</i> lsp-id <i>string</i> defined-tlvs extended-is-reachability neighbor <i>string</i> sub-tlvs ipv4-neighbor-address <i>string</i>
Tree	ipv4-neighbor-address
Configurable	False
Platforms	Supported on 7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e platforms

ipv6-interface-address *string*

Description	The IPv6 address of the interface to the neighbor. Sub-TLV = 12.
Context	network-instance name <i>string</i> protocols isis instance name <i>string</i> level-database level-number <i>number</i> lsp-id <i>string</i> defined-tlvs extended-is-reachability neighbor <i>string</i> sub-tlvs ipv6-interface-address <i>string</i>
Tree	ipv6-interface-address
Configurable	False
Platforms	Supported on 7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e platforms

ipv6-neighbor-address *string*

Description	The IPv4 address of the neighbor. Sub-TLV = 13.
Context	network-instance name <i>string</i> protocols isis instance name <i>string</i> level-database level-number <i>number</i> lsp-id <i>string</i> defined-tlvs extended-is-reachability neighbor <i>string</i> sub-tlvs ipv6-neighbor-address <i>string</i>
Tree	ipv6-neighbor-address
Configurable	False
Platforms	Supported on 7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e platforms

link-msd

Description	The maximum segment depth of the link to the neighbor. Sub-TLV = 15.
Context	network-instance name <i>string</i> protocols isis instance name <i>string</i> level-database level-number <i>number</i> lsp-id <i>string</i> defined-tlvs extended-is-reachability neighbor <i>string</i> sub-tlvs link-msd
Tree	link-msd
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

msd-info [msd-type](#) (*keyword* | *number*) [msd-value](#) *number*

Description	List of MSD entries
Context	network-instance name <i>string</i> protocols isis instance name <i>string</i> level-database level-number <i>number</i> lsp-id <i>string</i> defined-tlvs extended-is-reachability neighbor <i>string</i> sub-tlvs link-msd msd-info msd-type (<i>keyword</i> <i>number</i>) msd-value <i>number</i>
Tree	msd-info
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

msd-type (*keyword* | *number*)

Description	MSD type
Context	network-instance name <i>string</i> protocols isis instance name <i>string</i> level-database level-number <i>number</i> lsp-id <i>string</i> defined-tlvs extended-is-

	reachability neighbor string sub-tlvs link-msd msd-info msd-type (keyword number) msd-value number
Range	2 to 254
Options	<ul style="list-style-type: none"> base-mpls-imposition-msd
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

msd-value number

Description	A number in the range of 0-255 representing the maximum SID depth; for all MSD-Types, 0 represents the lack of ability to support a SID stack of any depth
Context	network-instance name string protocols isis instance name string level-database level-number number lsp-id string defined-tlvs extended-is-reachability neighbor string sub-tlvs link-msd msd-info msd-type (keyword number) msd-value number
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

maximum-link-bandwidth number

Description	The (LAG aware) bandwidth of the interface to the neighbor. Sub-TLV = 9.
Context	network-instance name string protocols isis instance name string level-database level-number number lsp-id string defined-tlvs extended-is-reachability neighbor string sub-tlvs maximum-link-bandwidth number
Tree	maximum-link-bandwidth
Units	bytes-per-second
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

min-max-unidirectional-link-delay

Description	The minimum and maximum delay between two directly connected IS-IS neighbors. Sub-TLV = 34.
Context	network-instance name string protocols isis instance name string level-database level-number number lsp-id string defined-tlvs extended-is-reachability neighbor string sub-tlvs min-max-unidirectional-link-delay
Tree	min-max-unidirectional-link-delay
Configurable	False

Platforms 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

anomolous *boolean*

Description If the A bit is cleared, the values represent steady-state link performance.

Context [network-instance name](#) *string* [protocols isis instance name](#) *string* [level-database level-number](#) *number* [lsp-id](#) *string* [defined-tlvs extended-is-reachability neighbor](#) *string* [sub-tlvs min-max-unidirectional-link-delay anomolous](#) *boolean*

Tree [anomolous](#)

Configurable False

Platforms 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

max-delay *number*

Description Maximum forward-path delay (from the advertising router to the remote neighbor)

Context [network-instance name](#) *string* [protocols isis instance name](#) *string* [level-database level-number](#) *number* [lsp-id](#) *string* [defined-tlvs extended-is-reachability neighbor](#) *string* [sub-tlvs min-max-unidirectional-link-delay max-delay](#) *number*

Tree [max-delay](#)

Units microseconds

Configurable False

Platforms 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

min-delay *number*

Description Minimum forward-path delay (from the advertising router to the remote neighbor)

Context [network-instance name](#) *string* [protocols isis instance name](#) *string* [level-database level-number](#) *number* [lsp-id](#) *string* [defined-tlvs extended-is-reachability neighbor](#) *string* [sub-tlvs min-max-unidirectional-link-delay min-delay](#) *number*

Tree [min-delay](#)

Units microseconds

Configurable False

Platforms 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

segment-routing-adjacency-sid *sr-index-or-label number*

Description	List of Adj-SID sub-TLVs associated with the neighbor. Sub-TLV = 31.
Context	network-instance name <i>string</i> protocols isis instance name <i>string</i> level-database level-number <i>number</i> lsp-id <i>string</i> defined-tlvs extended-is-reachability neighbor <i>string</i> sub-tlvs segment-routing-adjacency-sid sr-index-or-label <i>number</i>
Tree	segment-routing-adjacency-sid
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

sr-index-or-label *number*

Description	An index representing an offset in the SID/label space advertised by the router or else a direct encoding of an MPLS label value.
Context	network-instance name <i>string</i> protocols isis instance name <i>string</i> level-database level-number <i>number</i> lsp-id <i>string</i> defined-tlvs extended-is-reachability neighbor <i>string</i> sub-tlvs segment-routing-adjacency-sid sr-index-or-label <i>number</i>
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

adj-set *boolean*

Description	When set, the S-Flag indicates that the Adj-SID refers to a set of adjacencies.
Context	network-instance name <i>string</i> protocols isis instance name <i>string</i> level-database level-number <i>number</i> lsp-id <i>string</i> defined-tlvs extended-is-reachability neighbor <i>string</i> sub-tlvs segment-routing-adjacency-sid sr-index-or-label <i>number</i> adj-set <i>boolean</i>
Tree	adj-set
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

backup *boolean*

Description	If set, the Adj-SID is eligible for protection
Context	network-instance name <i>string</i> protocols isis instance name <i>string</i> level-database level-number <i>number</i> lsp-id <i>string</i> defined-tlvs extended-is-

	reachability neighbor <i>string</i> sub-tlvs segment-routing-adjacency-sid sr-index-or-label <i>number</i> backup <i>boolean</i>
Tree	backup
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

ipv6-family *boolean*

Description	If set, then the Adj-SID is used for forwarding IPv6 traffic to the neighbor; else the Adj-SID is used for forwarding IPv4 traffic.
Context	network-instance name <i>string</i> protocols isis instance name <i>string</i> level-database level-number <i>number</i> lsp-id <i>string</i> defined-tlvs extended-is-reachability neighbor <i>string</i> sub-tlvs segment-routing-adjacency-sid sr-index-or-label <i>number</i> ipv6-family <i>boolean</i>
Tree	ipv6-family
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

local *boolean*

Description	If set, then the value/index carried by the Adj-SID has local significance.
Context	network-instance name <i>string</i> protocols isis instance name <i>string</i> level-database level-number <i>number</i> lsp-id <i>string</i> defined-tlvs extended-is-reachability neighbor <i>string</i> sub-tlvs segment-routing-adjacency-sid sr-index-or-label <i>number</i> local <i>boolean</i>
Tree	local
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

persistent *boolean*

Description	When set, the P-Flag indicates that the Adj-SID is persistently allocated, i.e., the Adj-SID value remains consistent across router restart and/or interface flap
Context	network-instance name <i>string</i> protocols isis instance name <i>string</i> level-database level-number <i>number</i> lsp-id <i>string</i> defined-tlvs extended-is-reachability neighbor <i>string</i> sub-tlvs segment-routing-adjacency-sid sr-index-or-label <i>number</i> persistent <i>boolean</i>
Tree	persistent
Configurable	False

Platforms 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

value *boolean*

Description If set then the Adj-SID carries a value

Context [network-instance name](#) *string* [protocols isis instance name](#) *string* [level-database level-number](#) *number* [lsp-id](#) *string* [defined-tlvs extended-is-reachability neighbor](#) *string* [sub-tlvs segment-routing-adjacency-sid sr-index-or-label](#) *number* **value** *boolean*

Tree [value](#)

Configurable False

Platforms 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

weight *number*

Description The value represents the weight of the Adj-SID for the purpose of load balancing

Context [network-instance name](#) *string* [protocols isis instance name](#) *string* [level-database level-number](#) *number* [lsp-id](#) *string* [defined-tlvs extended-is-reachability neighbor](#) *string* [sub-tlvs segment-routing-adjacency-sid sr-index-or-label](#) *number* **weight** *number*

Tree [weight](#)

Configurable False

Platforms 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

segment-routing-lan-adjacency-sid [sr-index-or-label](#) *number*

Description List of LAN Adj-SID sub-TLVs. Each describes the set of Adj-SIDs the router assigned to each of its LAN neighbors. Sub-TLV = 32.

Context [network-instance name](#) *string* [protocols isis instance name](#) *string* [level-database level-number](#) *number* [lsp-id](#) *string* [defined-tlvs extended-is-reachability neighbor](#) *string* [sub-tlvs segment-routing-lan-adjacency-sid sr-index-or-label](#) *number*

Tree [segment-routing-lan-adjacency-sid](#)

Configurable False

Platforms 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

sr-index-or-label *number*

Description	An index representing an offset in the SID/label space advertised by the router or else a direct encoding of an MPLS label value.
Context	network-instance name <i>string</i> protocols isis instance name <i>string</i> level-database level-number <i>number</i> lsp-id <i>string</i> defined-tlvs extended-is-reachability neighbor <i>string</i> sub-tlvs segment-routing-lan-adjacency-sid sr-index-or-label <i>number</i>
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

adj-set *boolean*

Description	When set, the S-Flag indicates that the Adj-SID refers to a set of adjacencies.
Context	network-instance name <i>string</i> protocols isis instance name <i>string</i> level-database level-number <i>number</i> lsp-id <i>string</i> defined-tlvs extended-is-reachability neighbor <i>string</i> sub-tlvs segment-routing-lan-adjacency-sid sr-index-or-label <i>number</i> adj-set <i>boolean</i>
Tree	adj-set
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

backup *boolean*

Description	If set, the Adj-SID is eligible for protection
Context	network-instance name <i>string</i> protocols isis instance name <i>string</i> level-database level-number <i>number</i> lsp-id <i>string</i> defined-tlvs extended-is-reachability neighbor <i>string</i> sub-tlvs segment-routing-lan-adjacency-sid sr-index-or-label <i>number</i> backup <i>boolean</i>
Tree	backup
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

ipv6-family *boolean*

Description	If set, then the Adj-SID is used for forwarding IPv6 traffic to the neighbor; else the Adj-SID is used for forwarding IPv4 traffic.
Context	network-instance name <i>string</i> protocols isis instance name <i>string</i> level-database level-number <i>number</i> lsp-id <i>string</i> defined-tlvs extended-is-

	reachability neighbor <i>string</i> sub-tlvs segment-routing-lan-adjacency-sid sr-index-or-label <i>number</i> ipv6-family <i>boolean</i>
Tree	ipv6-family
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

local *boolean*

Description	If set, then the value/index carried by the Adj-SID has local significance.
Context	network-instance name <i>string</i> protocols isis instance name <i>string</i> level-database level-number <i>number</i> lsp-id <i>string</i> defined-tlvs extended-is-reachability neighbor <i>string</i> sub-tlvs segment-routing-lan-adjacency-sid sr-index-or-label <i>number</i> local <i>boolean</i>
Tree	local
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

neighbor-system-id *string*

Description	IS-IS system-ID of the LAN neighbor
Context	network-instance name <i>string</i> protocols isis instance name <i>string</i> level-database level-number <i>number</i> lsp-id <i>string</i> defined-tlvs extended-is-reachability neighbor <i>string</i> sub-tlvs segment-routing-lan-adjacency-sid sr-index-or-label <i>number</i> neighbor-system-id <i>string</i>
Tree	neighbor-system-id
String Length	14
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

persistent *boolean*

Description	When set, the P-Flag indicates that the Adj-SID is persistently allocated, i.e., the Adj-SID value remains consistent across router restart and/or interface flap
Context	network-instance name <i>string</i> protocols isis instance name <i>string</i> level-database level-number <i>number</i> lsp-id <i>string</i> defined-tlvs extended-is-reachability neighbor <i>string</i> sub-tlvs segment-routing-lan-adjacency-sid sr-index-or-label <i>number</i> persistent <i>boolean</i>
Tree	persistent

Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

value *boolean*

Description	If set then the Adj-SID carries a value
Context	network-instance name <i>string</i> protocols isis instance name <i>string</i> level-database level-number <i>number</i> lsp-id <i>string</i> defined-tlvs extended-is-reachability neighbor <i>string</i> sub-tlvs segment-routing-lan-adjacency-sid sr-index-or-label <i>number</i> value <i>boolean</i>
Tree	value
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

weight *number*

Description	The value represents the weight of the Adj-SID for the purpose of load balancing
Context	network-instance name <i>string</i> protocols isis instance name <i>string</i> level-database level-number <i>number</i> lsp-id <i>string</i> defined-tlvs extended-is-reachability neighbor <i>string</i> sub-tlvs segment-routing-lan-adjacency-sid sr-index-or-label <i>number</i> weight <i>number</i>
Tree	weight
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

te-default-metric *number*

Description	An administratively assigned metric used as an alternative to the normal SPF metric based (typically) on link bandwidth. Sub-TLV = 18.
Context	network-instance name <i>string</i> protocols isis instance name <i>string</i> level-database level-number <i>number</i> lsp-id <i>string</i> defined-tlvs extended-is-reachability neighbor <i>string</i> sub-tlvs te-default-metric <i>number</i>
Tree	te-default-metric
Range	0 to 16777215
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

hostname *string*

Description	Host name that advertised this LSP.
Context	network-instance name <i>string</i> protocols isis instance name <i>string</i> level-database level-number <i>number</i> lsp-id <i>string</i> defined-tlvs hostname <i>string</i>
Tree	hostname
Configurable	False
Platforms	Supported on 7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e platforms

ipv4-external-reachability [ipv4-prefix](#) *string*

Description	TLV specifying external IPv4 Reachability information in the LSP. External reachability is typically routing information learned from another protocol. TLV type = 130
Context	network-instance name <i>string</i> protocols isis instance name <i>string</i> level-database level-number <i>number</i> lsp-id <i>string</i> defined-tlvs ipv4-external-reachability ipv4-prefix <i>string</i>
Tree	ipv4-external-reachability
Configurable	False
Platforms	Supported on 7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e platforms

ipv4-prefix *string*

Description	An IPv4 prefix that is reachable to the router.
Context	network-instance name <i>string</i> protocols isis instance name <i>string</i> level-database level-number <i>number</i> lsp-id <i>string</i> defined-tlvs ipv4-external-reachability ipv4-prefix <i>string</i>
Configurable	False
Platforms	Supported on 7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e platforms

default-metric *number*

Description	The default metric to reach the IPv4 prefix.
Context	network-instance name <i>string</i> protocols isis instance name <i>string</i> level-database level-number <i>number</i> lsp-id <i>string</i> defined-tlvs ipv4-external-reachability ipv4-prefix <i>string</i> default-metric <i>number</i>
Tree	default-metric
Range	0 to 63
Configurable	False
Platforms	Supported on 7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e platforms

default-metric-type *keyword*

Description	The default metric type: internal or external.
Context	network-instance name <i>string</i> protocols isis instance name <i>string</i> level-database level-number <i>number</i> lsp-id <i>string</i> defined-tlvs ipv4-external-reachability ipv4-prefix <i>string</i> default-metric-type <i>keyword</i>
Tree	default-metric-type
Options	<ul style="list-style-type: none"> • internal This enum describes internal route type • external This enum describes external route type
Configurable	False
Platforms	Supported on 7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e platforms

down *boolean*

Description	Reads true when the IPv4 prefix was leaked down from Level2 to Level1.
Context	network-instance name <i>string</i> protocols isis instance name <i>string</i> level-database level-number <i>number</i> lsp-id <i>string</i> defined-tlvs ipv4-external-reachability ipv4-prefix <i>string</i> down <i>boolean</i>
Tree	down
Configurable	False

Platforms Supported on 7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e platforms

ipv4-interface-addresses (*ipv4-address* | *ipv6-address*)

Description Each item represents an IPv4 address configured on an interface in this IS-IS instance.

Context [network-instance name](#) *string* [protocols isis instance name](#) *string* [level-database level-number](#) *number* [lsp-id](#) *string* [defined-tlvs ipv4-interface-addresses](#) (*ipv4-address* | *ipv6-address*)

Tree [ipv4-interface-addresses](#)

Configurable False

Platforms Supported on 7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e platforms

ipv4-internal-reachability [ipv4-prefix](#) *string*

Description TLV specifying internal IPv4 Reachability information in the LSP. TLV type = 128

Context [network-instance name](#) *string* [protocols isis instance name](#) *string* [level-database level-number](#) *number* [lsp-id](#) *string* [defined-tlvs ipv4-internal-reachability ipv4-prefix](#) *string*

Tree [ipv4-internal-reachability](#)

Configurable False

Platforms Supported on 7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e platforms

ipv4-prefix *string*

Description An IPv4 prefix that is reachable to the router.

Context [network-instance name](#) *string* [protocols isis instance name](#) *string* [level-database level-number](#) *number* [lsp-id](#) *string* [defined-tlvs ipv4-internal-reachability ipv4-prefix](#) *string*

Configurable False

Platforms Supported on 7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e platforms

default-metric *number*

Description The default metric to reach the IPv4 prefix.

Context [network-instance name](#) *string* [protocols isis instance name](#) *string* [level-database level-number](#) *number* [lsp-id](#) *string* [defined-tlvs ipv4-internal-reachability ipv4-prefix](#) *string* [default-metric](#) *number*

Tree [default-metric](#)

Range 0 to 63

Configurable False

Platforms Supported on 7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e platforms

default-metric-type *keyword*

Description The default metric type: internal or external.

Context [network-instance name](#) *string* [protocols isis instance name](#) *string* [level-database level-number](#) *number* [lsp-id](#) *string* [defined-tlvs ipv4-internal-reachability ipv4-prefix](#) *string* [default-metric-type](#) *keyword*

Tree [default-metric-type](#)

Options

- internal
This enum describes internal route type
- external
This enum describes external route type

Configurable False

Platforms Supported on 7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e platforms

down *boolean*

Description Reads true when the IPv4 prefix was leaked down from Level2 to Level1.

Context	network-instance name <i>string</i> protocols isis instance name <i>string</i> level-database level-number <i>number</i> lsp-id <i>string</i> defined-tlvs ipv4-internal-reachability ipv4-prefix <i>string</i> down <i>boolean</i>
Tree	down
Configurable	False
Platforms	Supported on 7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e platforms

ipv4-srlg neighbor *string*

Description	List of SRLGs advertised by the router. TLV = 138.
Context	network-instance name <i>string</i> protocols isis instance name <i>string</i> level-database level-number <i>number</i> lsp-id <i>string</i> defined-tlvs ipv4-srlg neighbor <i>string</i>
Tree	ipv4-srlg
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

neighbor *string*

Description	A neighbor, identified by its System ID and one octet to indicate the pseudonode number
Context	network-instance name <i>string</i> protocols isis instance name <i>string</i> level-database level-number <i>number</i> lsp-id <i>string</i> defined-tlvs ipv4-srlg neighbor <i>string</i>
String Length	17
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

ipv4-interface-address *string*

Description	The IPv4 address of the interface to the neighbor
Context	network-instance name <i>string</i> protocols isis instance name <i>string</i> level-database level-number <i>number</i> lsp-id <i>string</i> defined-tlvs ipv4-srlg neighbor <i>string</i> ipv4-interface-address <i>string</i>
Tree	ipv4-interface-address
Configurable	False

Platforms 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

ipv4-neighbor-address *string*

Description The IPv4 address of the neighbor

Context [network-instance name string protocols isis instance name string level-database level-number number lsp-id string defined-tlvs ipv4-srlg neighbor string ipv4-neighbor-address string](#)

Tree [ipv4-neighbor-address](#)

Configurable False

Platforms 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

numbered *boolean*

Description When set, the interface to the neighbor is numbered. When unset it is unnumbered.

Context [network-instance name string protocols isis instance name string level-database level-number number lsp-id string defined-tlvs ipv4-srlg neighbor string numbered boolean](#)

Tree [numbered](#)

Configurable False

Platforms 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

shared-risk-link-group *number*

Description List of SRLGs that apply to the adjacency with this neighbor

Context [network-instance name string protocols isis instance name string level-database level-number number lsp-id string defined-tlvs ipv4-srlg neighbor string shared-risk-link-group number](#)

Tree [shared-risk-link-group](#)

Configurable False

Platforms 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

ipv6-interface-addresses (*ipv4-address* | *ipv6-address*)

Description Each item represents an IPv6 address configured on an interface in this IS-IS instance.

Context	network-instance name <i>string</i> protocols isis instance name <i>string</i> level-database level-number <i>number</i> lsp-id <i>string</i> defined-tlvs ipv6-interface-addresses (<i>ipv4-address</i> <i>ipv6-address</i>)
Tree	ipv6-interface-addresses
Configurable	False
Platforms	Supported on 7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e platforms

ipv6-reachability [ipv6-prefix](#) *string*

Description	TLV specifying IPv6 Reachability information in the LSP. TLV type = 236
Context	network-instance name <i>string</i> protocols isis instance name <i>string</i> level-database level-number <i>number</i> lsp-id <i>string</i> defined-tlvs ipv6-reachability ipv6-prefix <i>string</i>
Tree	ipv6-reachability
Configurable	False
Platforms	Supported on 7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e platforms

ipv6-prefix *string*

Description	An IPv6 prefix that is reachable to the router.
Context	network-instance name <i>string</i> protocols isis instance name <i>string</i> level-database level-number <i>number</i> lsp-id <i>string</i> defined-tlvs ipv6-reachability ipv6-prefix <i>string</i>
Configurable	False
Platforms	Supported on 7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e platforms

down *boolean*

Description	Reads true when the IPv6 prefix was leaked down from Level2 to Level1.
Context	network-instance name <i>string</i> protocols isis instance name <i>string</i> level-database level-number <i>number</i> lsp-id <i>string</i> defined-tlvs ipv6-reachability ipv6-prefix <i>string</i> down <i>boolean</i>

Tree	down
Configurable	False
Platforms	Supported on 7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e platforms

external *boolean*

Description	Reads true when the IPv6 prefix reachability is external (learned from another protocol).
Context	network-instance name string protocols isis instance name string level-database level-number number lsp-id string defined-tlvs ipv6-reachability ipv6-prefix string external boolean
Tree	external
Configurable	False
Platforms	Supported on 7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e platforms

metric *number*

Description	The metric to reach this IPv6 prefix.
Context	network-instance name string protocols isis instance name string level-database level-number number lsp-id string defined-tlvs ipv6-reachability ipv6-prefix string metric number
Tree	metric
Range	0 to 16777215
Configurable	False
Platforms	Supported on 7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e platforms

sub-tlvs

Description	SubTLVs of TLV 135, TLV 235, TLV 236 and TLV 237
Context	network-instance name string protocols isis instance name string level-database level-number number lsp-id string defined-tlvs ipv6-reachability ipv6-prefix string sub-tlvs

Tree	sub-tlvs
Configurable	False
Platforms	Supported on 7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e platforms

prefix-attribute-flags

Description	This sub-TLV supports the advertisement of additional flags associated with a given prefix advertisement.
Context	network-instance name <i>string</i> protocols isis instance name <i>string</i> level-database level-number <i>number</i> lsp-id <i>string</i> defined-tlvs ipv6-reachability ipv6-prefix <i>string</i> sub-tlvs prefix-attribute-flags
Tree	prefix-attribute-flags
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

external-prefix *boolean*

Description	Set if the prefix has been redistributed from another protocol (or another IS-IS instance).
Context	network-instance name <i>string</i> protocols isis instance name <i>string</i> level-database level-number <i>number</i> lsp-id <i>string</i> defined-tlvs ipv6-reachability ipv6-prefix <i>string</i> sub-tlvs prefix-attribute-flags external-prefix <i>boolean</i>
Tree	external-prefix
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

node-identifier *boolean*

Description	Set when the prefix identifies the advertising router; i.e. it is a host prefix advertising a globally reachable address typically associated with a loopback address.
Context	network-instance name <i>string</i> protocols isis instance name <i>string</i> level-database level-number <i>number</i> lsp-id <i>string</i> defined-tlvs ipv6-reachability ipv6-prefix <i>string</i> sub-tlvs prefix-attribute-flags node-identifier <i>boolean</i>
Tree	node-identifier
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

re-advertised *boolean*

Description	Set when the prefix has been leaked from one level to another (upwards or downwards).
Context	network-instance name <i>string</i> protocols isis instance name <i>string</i> level-database level-number <i>number</i> lsp-id <i>string</i> defined-tlvs ipv6-reachability ipv6-prefix <i>string</i> sub-tlvs prefix-attribute-flags re-advertised <i>boolean</i>
Tree	re-advertised
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

route-tag-32bit *number*

Description	List of 32-bit administrative tag values associated with the IPv4 prefix.
Context	network-instance name <i>string</i> protocols isis instance name <i>string</i> level-database level-number <i>number</i> lsp-id <i>string</i> defined-tlvs ipv6-reachability ipv6-prefix <i>string</i> sub-tlvs route-tag-32bit <i>number</i>
Tree	route-tag-32bit
Range	1 to 4294967295
Configurable	False
Platforms	Supported on 7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e platforms

route-tag-64bit *number*

Description	List of 64-bit administrative tag values associated with the IPv4 prefix.
Context	network-instance name <i>string</i> protocols isis instance name <i>string</i> level-database level-number <i>number</i> lsp-id <i>string</i> defined-tlvs ipv6-reachability ipv6-prefix <i>string</i> sub-tlvs route-tag-64bit <i>number</i>
Tree	route-tag-64bit
Configurable	False
Platforms	Supported on 7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e platforms

segment-routing-prefix-sid

Description	Carries a segment routing prefix SID
Context	network-instance name <i>string</i> protocols isis instance name <i>string</i> level-database level-number <i>number</i> lsp-id <i>string</i> defined-tlvs ipv6-reachability ipv6-prefix <i>string</i> sub-tlvs segment-routing-prefix-sid
Tree	segment-routing-prefix-sid
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

algorithm *keyword*

Description	Contains the identifier of the algorithm the router uses to compute the reachability of the prefix to which the Prefix-SID is associated
Context	network-instance name <i>string</i> protocols isis instance name <i>string</i> level-database level-number <i>number</i> lsp-id <i>string</i> defined-tlvs ipv6-reachability ipv6-prefix <i>string</i> sub-tlvs segment-routing-prefix-sid algorithm <i>keyword</i>
Tree	algorithm
Options	<ul style="list-style-type: none"> • <code>spf</code> • <code>strict-spf</code>
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

explicit-null *boolean*

Description	If set any upstream neighbor of the Prefix-SID originator MUST replace the Prefix-SID with a Prefix-SID that has an Explicit NULL value (0 for IPv4 and 2 for IPv6) before forwarding the packet
Context	network-instance name <i>string</i> protocols isis instance name <i>string</i> level-database level-number <i>number</i> lsp-id <i>string</i> defined-tlvs ipv6-reachability ipv6-prefix <i>string</i> sub-tlvs segment-routing-prefix-sid explicit-null <i>boolean</i>
Tree	explicit-null
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

local *boolean*

Description	If set, then the value/index carried by the Prefix-SID has local significance.
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Context	network-instance name <i>string</i> protocols isis instance name <i>string</i> level-database level-number <i>number</i> lsp-id <i>string</i> defined-tlvs ipv6-reachability ipv6-prefix <i>string</i> sub-tlvs segment-routing-prefix-sid local <i>boolean</i>
Tree	local
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

node-sid *boolean*

Description	If set the prefix SID refers to the router identified by the prefix.
Context	network-instance name <i>string</i> protocols isis instance name <i>string</i> level-database level-number <i>number</i> lsp-id <i>string</i> defined-tlvs ipv6-reachability ipv6-prefix <i>string</i> sub-tlvs segment-routing-prefix-sid node-sid <i>boolean</i>
Tree	node-sid
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

penultimate-hop-popping *boolean*

Description	If set the penultimate hop MUST NOT pop the Prefix-SID before delivering the packet to the node that advertised the Prefix-SID.
Context	network-instance name <i>string</i> protocols isis instance name <i>string</i> level-database level-number <i>number</i> lsp-id <i>string</i> defined-tlvs ipv6-reachability ipv6-prefix <i>string</i> sub-tlvs segment-routing-prefix-sid penultimate-hop-popping <i>boolean</i>
Tree	penultimate-hop-popping
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

re-advertised *boolean*

Description	If set the prefix to which this Prefix-SID is attached has been propagated by the router from either another level or from another protocol.
Context	network-instance name <i>string</i> protocols isis instance name <i>string</i> level-database level-number <i>number</i> lsp-id <i>string</i> defined-tlvs ipv6-reachability ipv6-prefix <i>string</i> sub-tlvs segment-routing-prefix-sid re-advertised <i>boolean</i>
Tree	re-advertised
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

sr-index-or-label *number*

Description	An index representing an offset in the SID/label space advertised by the router or else a direct encoding of an MPLS label value.
Context	network-instance name <i>string</i> protocols isis instance name <i>string</i> level-database level-number <i>number</i> lsp-id <i>string</i> defined-tlvs ipv6-reachability ipv6-prefix <i>string</i> sub-tlvs segment-routing-prefix-sid sr-index-or-label <i>number</i>
Tree	sr-index-or-label
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

value *boolean*

Description	If set then the Prefix-SID carries a value
Context	network-instance name <i>string</i> protocols isis instance name <i>string</i> level-database level-number <i>number</i> lsp-id <i>string</i> defined-tlvs ipv6-reachability ipv6-prefix <i>string</i> sub-tlvs segment-routing-prefix-sid value <i>boolean</i>
Tree	value
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

ipv6-srlg [neighbor](#) *string*

Description	List of IPv6 SRLGs advertised by the router. TLV = 139.
Context	network-instance name <i>string</i> protocols isis instance name <i>string</i> level-database level-number <i>number</i> lsp-id <i>string</i> defined-tlvs ipv6-srlg neighbor <i>string</i>
Tree	ipv6-srlg
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

neighbor *string*

Description	A neighbor, identified by its System ID and one octet to indicate the pseudonode number
Context	network-instance name <i>string</i> protocols isis instance name <i>string</i> level-database level-number <i>number</i> lsp-id <i>string</i> defined-tlvs ipv6-srlg neighbor <i>string</i>

String Length	17
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

ipv6-interface-address *string*

Description	The IPv6 address of the interface to the neighbor
Context	network-instance name <i>string</i> protocols isis instance name <i>string</i> level-database level-number <i>number</i> lsp-id <i>string</i> defined-tlvs ipv6-srlg neighbor <i>string</i> ipv6-interface-address <i>string</i>
Tree	ipv6-interface-address
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

ipv6-neighbor-address *string*

Description	The IPv6 address of the neighbor
Context	network-instance name <i>string</i> protocols isis instance name <i>string</i> level-database level-number <i>number</i> lsp-id <i>string</i> defined-tlvs ipv6-srlg neighbor <i>string</i> ipv6-neighbor-address <i>string</i>
Tree	ipv6-neighbor-address
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

neighbor-address-included *boolean*

Description	When set, the IPv6 neighbor address is included.
Context	network-instance name <i>string</i> protocols isis instance name <i>string</i> level-database level-number <i>number</i> lsp-id <i>string</i> defined-tlvs ipv6-srlg neighbor <i>string</i> neighbor-address-included <i>boolean</i>
Tree	neighbor-address-included
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

shared-risk-link-group *number*

Description	List of SRLGs that apply to the adjacency with this neighbor
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Context	network-instance name <i>string</i> protocols isis instance name <i>string</i> level-database level-number <i>number</i> lsp-id <i>string</i> defined-tlvs ipv6-srlg neighbor <i>string</i> shared-risk-link-group <i>number</i>
Tree	shared-risk-link-group
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

ipv6-te-router-id *string*

Description	A single stable address that can always be referenced in a path that will be reachable from multiple hops away. TLV = 140.
Context	network-instance name <i>string</i> protocols isis instance name <i>string</i> level-database level-number <i>number</i> lsp-id <i>string</i> defined-tlvs ipv6-te-router-id <i>string</i>
Tree	ipv6-te-router-id
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

is-reachability [neighbor](#) *string*

Description	Each TLV encodes the identity of an adjacent IS neighbor. TLV type = 2
Context	network-instance name <i>string</i> protocols isis instance name <i>string</i> level-database level-number <i>number</i> lsp-id <i>string</i> defined-tlvs is-reachability neighbor <i>string</i>
Tree	is-reachability
Configurable	False
Platforms	Supported on 7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e platforms

neighbor *string*

Description	An adjacent IS neighbor
Context	network-instance name <i>string</i> protocols isis instance name <i>string</i> level-database level-number <i>number</i> lsp-id <i>string</i> defined-tlvs is-reachability neighbor <i>string</i>
String Length	17
Configurable	False

Platforms Supported on 7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e platforms

default-metric *number*

Description The default metric to reach this adjacent neighbor.

Context [network-instance name string protocols isis instance name string level-database level-number number lsp-id string defined-tlvs is-reachability neighbor string default-metric number](#)

Tree [default-metric](#)

Range 0 to 63

Configurable False

Platforms Supported on 7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e platforms

default-metric-type *keyword*

Description The default metric type: internal or external.

Context [network-instance name string protocols isis instance name string level-database level-number number lsp-id string defined-tlvs is-reachability neighbor string default-metric-type keyword](#)

Tree [default-metric-type](#)

Options

- internal
- external

Configurable False

Platforms Supported on 7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e platforms

mt-ipv4-reachability [ipv4-prefix string](#)

Description TLV specifying multi-topology IPv4 reachability information in the LSP. TLV type = 235

Context	network-instance name <i>string</i> protocols isis instance name <i>string</i> level-database level-number <i>number</i> lsp-id <i>string</i> defined-tlvs mt-ipv4-reachability ipv4-prefix <i>string</i>
Tree	mt-ipv4-reachability
Configurable	False
Platforms	Supported on 7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e platforms

ipv4-prefix *string*

Description	An IPv4 prefix that is reachable to the router.
Context	network-instance name <i>string</i> protocols isis instance name <i>string</i> level-database level-number <i>number</i> lsp-id <i>string</i> defined-tlvs mt-ipv4-reachability ipv4-prefix <i>string</i>
Configurable	False
Platforms	Supported on 7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e platforms

down *boolean*

Description	Reads true when the IPv4 prefix was leaked down from Level2 to Level1.
Context	network-instance name <i>string</i> protocols isis instance name <i>string</i> level-database level-number <i>number</i> lsp-id <i>string</i> defined-tlvs mt-ipv4-reachability ipv4-prefix <i>string</i> down <i>boolean</i>
Tree	down
Configurable	False
Platforms	Supported on 7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e platforms

metric *number*

Description	The default metric to reach the IPv4 prefix.
Context	network-instance name <i>string</i> protocols isis instance name <i>string</i> level-database level-number <i>number</i> lsp-id <i>string</i> defined-tlvs mt-ipv4-reachability ipv4-prefix <i>string</i> metric <i>number</i>

Tree	metric
Range	0 to 16777215
Configurable	False
Platforms	Supported on 7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e platforms

mt-id number

Description	A multi-topology ID.
Context	network-instance name string protocols isis instance name string level-database level-number number lsp-id string defined-tlvs mt-ipv4-reachability ipv4-prefix string mt-id number
Tree	mt-id
Range	0 to 4095
Configurable	False
Platforms	Supported on 7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e platforms

sub-tlvs

Description	SubTLVs of TLV 135, TLV 235, TLV 236 and TLV 237
Context	network-instance name string protocols isis instance name string level-database level-number number lsp-id string defined-tlvs mt-ipv4-reachability ipv4-prefix string sub-tlvs
Tree	sub-tlvs
Configurable	False
Platforms	Supported on 7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e platforms

prefix-attribute-flags

Description	This sub-TLV supports the advertisement of additional flags associated with a given prefix advertisement.
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Context	network-instance name <i>string</i> protocols isis instance name <i>string</i> level-database level-number <i>number</i> lsp-id <i>string</i> defined-tlvs mt-ipv4-reachability ipv4-prefix <i>string</i> sub-tlvs prefix-attribute-flags
Tree	prefix-attribute-flags
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

external-prefix *boolean*

Description	Set if the prefix has been redistributed from another protocol (or another IS-IS instance).
Context	network-instance name <i>string</i> protocols isis instance name <i>string</i> level-database level-number <i>number</i> lsp-id <i>string</i> defined-tlvs mt-ipv4-reachability ipv4-prefix <i>string</i> sub-tlvs prefix-attribute-flags external-prefix <i>boolean</i>
Tree	external-prefix
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

node-identifier *boolean*

Description	Set when the prefix identifies the advertising router; i.e. it is a host prefix advertising a globally reachable address typically associated with a loopback address.
Context	network-instance name <i>string</i> protocols isis instance name <i>string</i> level-database level-number <i>number</i> lsp-id <i>string</i> defined-tlvs mt-ipv4-reachability ipv4-prefix <i>string</i> sub-tlvs prefix-attribute-flags node-identifier <i>boolean</i>
Tree	node-identifier
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

re-advertised *boolean*

Description	Set when the prefix has been leaked from one level to another (upwards or downwards).
Context	network-instance name <i>string</i> protocols isis instance name <i>string</i> level-database level-number <i>number</i> lsp-id <i>string</i> defined-tlvs mt-ipv4-reachability ipv4-prefix <i>string</i> sub-tlvs prefix-attribute-flags re-advertised <i>boolean</i>
Tree	re-advertised
Configurable	False

Platforms 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

route-tag-32bit *number*

Description List of 32-bit administrative tag values associated with the IPv4 prefix.

Context [network-instance name string protocols isis instance name string level-database level-number number lsp-id string defined-tlvs mt-ipv4-reachability ipv4-prefix string sub-tlvs route-tag-32bit number](#)

Tree [route-tag-32bit](#)

Range 1 to 4294967295

Configurable False

Platforms Supported on 7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e platforms

route-tag-64bit *number*

Description List of 64-bit administrative tag values associated with the IPv4 prefix.

Context [network-instance name string protocols isis instance name string level-database level-number number lsp-id string defined-tlvs mt-ipv4-reachability ipv4-prefix string sub-tlvs route-tag-64bit number](#)

Tree [route-tag-64bit](#)

Configurable False

Platforms Supported on 7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e platforms

segment-routing-prefix-sid

Description Carries a segment routing prefix SID

Context [network-instance name string protocols isis instance name string level-database level-number number lsp-id string defined-tlvs mt-ipv4-reachability ipv4-prefix string sub-tlvs segment-routing-prefix-sid](#)

Tree [segment-routing-prefix-sid](#)

Configurable False

Platforms 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

algorithm *keyword*

Description	Contains the identifier of the algorithm the router uses to compute the reachability of the prefix to which the Prefix-SID is associated
Context	network-instance name <i>string</i> protocols isis instance name <i>string</i> level-database level-number <i>number</i> lsp-id <i>string</i> defined-tlvs mt-ipv4-reachability ipv4-prefix <i>string</i> sub-tlvs segment-routing-prefix-sid algorithm <i>keyword</i>
Tree	algorithm
Options	<ul style="list-style-type: none"> • <code>spf</code> • <code>strict-spf</code>
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

explicit-null *boolean*

Description	If set any upstream neighbor of the Prefix-SID originator MUST replace the Prefix-SID with a Prefix-SID that has an Explicit NULL value (0 for IPv4 and 2 for IPv6) before forwarding the packet
Context	network-instance name <i>string</i> protocols isis instance name <i>string</i> level-database level-number <i>number</i> lsp-id <i>string</i> defined-tlvs mt-ipv4-reachability ipv4-prefix <i>string</i> sub-tlvs segment-routing-prefix-sid explicit-null <i>boolean</i>
Tree	explicit-null
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

local *boolean*

Description	If set, then the value/index carried by the Prefix-SID has local significance.
Context	network-instance name <i>string</i> protocols isis instance name <i>string</i> level-database level-number <i>number</i> lsp-id <i>string</i> defined-tlvs mt-ipv4-reachability ipv4-prefix <i>string</i> sub-tlvs segment-routing-prefix-sid local <i>boolean</i>
Tree	local
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

node-sid *boolean*

Description	If set the prefix SID refers to the router identified by the prefix.
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Context	network-instance name <i>string</i> protocols isis instance name <i>string</i> level-database level-number <i>number</i> lsp-id <i>string</i> defined-tlvs mt-ipv4-reachability ipv4-prefix <i>string</i> sub-tlvs segment-routing-prefix-sid node-sid <i>boolean</i>
Tree	node-sid
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

penultimate-hop-popping *boolean*

Description	If set the penultimate hop MUST NOT pop the Prefix-SID before delivering the packet to the node that advertised the Prefix-SID.
Context	network-instance name <i>string</i> protocols isis instance name <i>string</i> level-database level-number <i>number</i> lsp-id <i>string</i> defined-tlvs mt-ipv4-reachability ipv4-prefix <i>string</i> sub-tlvs segment-routing-prefix-sid penultimate-hop-popping <i>boolean</i>
Tree	penultimate-hop-popping
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

re-advertised *boolean*

Description	If set the prefix to which this Prefix-SID is attached has been propagated by the router from either another level or from another protocol.
Context	network-instance name <i>string</i> protocols isis instance name <i>string</i> level-database level-number <i>number</i> lsp-id <i>string</i> defined-tlvs mt-ipv4-reachability ipv4-prefix <i>string</i> sub-tlvs segment-routing-prefix-sid re-advertised <i>boolean</i>
Tree	re-advertised
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

sr-index-or-label *number*

Description	An index representing an offset in the SID/label space advertised by the router or else a direct encoding of an MPLS label value.
Context	network-instance name <i>string</i> protocols isis instance name <i>string</i> level-database level-number <i>number</i> lsp-id <i>string</i> defined-tlvs mt-ipv4-reachability ipv4-prefix <i>string</i> sub-tlvs segment-routing-prefix-sid sr-index-or-label <i>number</i>
Tree	sr-index-or-label
Configurable	False

Platforms 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

value *boolean*

Description If set then the Prefix-SID carries a value

Context [network-instance name string](#) [protocols isis instance name string](#) [level-database level-number number](#) [lsp-id string](#) [defined-tlvs mt-ipv4-reachability ipv4-prefix string](#) [sub-tlvs segment-routing-prefix-sid value boolean](#)

Tree [value](#)

Configurable False

Platforms 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

mt-ipv6-reachability [ipv6-prefix string](#)

Description TLV specifying IPv6 Reachability information in the LSP. TLV type = 237

Context [network-instance name string](#) [protocols isis instance name string](#) [level-database level-number number](#) [lsp-id string](#) [defined-tlvs mt-ipv6-reachability ipv6-prefix string](#)

Tree [mt-ipv6-reachability](#)

Configurable False

Platforms Supported on 7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e platforms

ipv6-prefix *string*

Description An IPv6 prefix that is reachable to the router.

Context [network-instance name string](#) [protocols isis instance name string](#) [level-database level-number number](#) [lsp-id string](#) [defined-tlvs mt-ipv6-reachability ipv6-prefix string](#)

Configurable False

Platforms Supported on 7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e platforms

down *boolean*

Description Reads true when the IPv6 prefix was leaked down from Level2 to Level1.

Context	network-instance name <i>string</i> protocols isis instance name <i>string</i> level-database level-number <i>number</i> lsp-id <i>string</i> defined-tlvs mt-ipv6-reachability ipv6-prefix <i>string</i> down <i>boolean</i>
Tree	down
Configurable	False
Platforms	Supported on 7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e platforms

external *boolean*

Description	Reads true when the IPv6 prefix reachability is external (learned from another protocol).
Context	network-instance name <i>string</i> protocols isis instance name <i>string</i> level-database level-number <i>number</i> lsp-id <i>string</i> defined-tlvs mt-ipv6-reachability ipv6-prefix <i>string</i> external <i>boolean</i>
Tree	external
Configurable	False
Platforms	Supported on 7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e platforms

metric *number*

Description	The metric to reach this IPv6 prefix.
Context	network-instance name <i>string</i> protocols isis instance name <i>string</i> level-database level-number <i>number</i> lsp-id <i>string</i> defined-tlvs mt-ipv6-reachability ipv6-prefix <i>string</i> metric <i>number</i>
Tree	metric
Range	0 to 16777215
Configurable	False
Platforms	Supported on 7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e platforms

mt-id *number*

Description	A multi-topology ID.
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Context	network-instance name <i>string</i> protocols isis instance name <i>string</i> level-database level-number <i>number</i> lsp-id <i>string</i> defined-tlvs mt-ipv6-reachability ipv6-prefix <i>string</i> mt-id <i>number</i>
Tree	mt-id
Range	0 to 4095
Configurable	False
Platforms	Supported on 7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e platforms

sub-tlvs

Description	SubTLVs of TLV 135, TLV 235, TLV 236 and TLV 237
Context	network-instance name <i>string</i> protocols isis instance name <i>string</i> level-database level-number <i>number</i> lsp-id <i>string</i> defined-tlvs mt-ipv6-reachability ipv6-prefix <i>string</i> sub-tlvs
Tree	sub-tlvs
Configurable	False
Platforms	Supported on 7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e platforms

prefix-attribute-flags

Description	This sub-TLV supports the advertisement of additional flags associated with a given prefix advertisement.
Context	network-instance name <i>string</i> protocols isis instance name <i>string</i> level-database level-number <i>number</i> lsp-id <i>string</i> defined-tlvs mt-ipv6-reachability ipv6-prefix <i>string</i> sub-tlvs prefix-attribute-flags
Tree	prefix-attribute-flags
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

external-prefix *boolean*

Description	Set if the prefix has been redistributed from another protocol (or another IS-IS instance).
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Context	network-instance name <i>string</i> protocols isis instance name <i>string</i> level-database level-number <i>number</i> lsp-id <i>string</i> defined-tlvs mt-ipv6-reachability ipv6-prefix <i>string</i> sub-tlvs prefix-attribute-flags external-prefix <i>boolean</i>
Tree	external-prefix
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

node-identifier *boolean*

Description	Set when the prefix identifies the advertising router; i.e. it is a host prefix advertising a globally reachable address typically associated with a loopback address.
Context	network-instance name <i>string</i> protocols isis instance name <i>string</i> level-database level-number <i>number</i> lsp-id <i>string</i> defined-tlvs mt-ipv6-reachability ipv6-prefix <i>string</i> sub-tlvs prefix-attribute-flags node-identifier <i>boolean</i>
Tree	node-identifier
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

re-advertised *boolean*

Description	Set when the prefix has been leaked from one level to another (upwards or downwards).
Context	network-instance name <i>string</i> protocols isis instance name <i>string</i> level-database level-number <i>number</i> lsp-id <i>string</i> defined-tlvs mt-ipv6-reachability ipv6-prefix <i>string</i> sub-tlvs prefix-attribute-flags re-advertised <i>boolean</i>
Tree	re-advertised
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

route-tag-32bit *number*

Description	List of 32-bit administrative tag values associated with the IPv4 prefix.
Context	network-instance name <i>string</i> protocols isis instance name <i>string</i> level-database level-number <i>number</i> lsp-id <i>string</i> defined-tlvs mt-ipv6-reachability ipv6-prefix <i>string</i> sub-tlvs route-tag-32bit <i>number</i>
Tree	route-tag-32bit
Range	1 to 4294967295
Configurable	False

Platforms Supported on 7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e platforms

route-tag-64bit *number*

Description List of 64-bit administrative tag values associated with the IPv4 prefix.

Context [network-instance name](#) *string* [protocols isis instance name](#) *string* [level-database level-number](#) *number* [lsp-id](#) *string* [defined-tlvs mt-ipv6-reachability ipv6-prefix](#) *string* [sub-tlvs route-tag-64bit](#) *number*

Tree [route-tag-64bit](#)

Configurable False

Platforms Supported on 7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e platforms

segment-routing-prefix-sid

Description Carries a segment routing prefix SID

Context [network-instance name](#) *string* [protocols isis instance name](#) *string* [level-database level-number](#) *number* [lsp-id](#) *string* [defined-tlvs mt-ipv6-reachability ipv6-prefix](#) *string* [sub-tlvs segment-routing-prefix-sid](#)

Tree [segment-routing-prefix-sid](#)

Configurable False

Platforms 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

algorithm *keyword*

Description Contains the identifier of the algorithm the router uses to compute the reachability of the prefix to which the Prefix-SID is associated

Context [network-instance name](#) *string* [protocols isis instance name](#) *string* [level-database level-number](#) *number* [lsp-id](#) *string* [defined-tlvs mt-ipv6-reachability ipv6-prefix](#) *string* [sub-tlvs segment-routing-prefix-sid algorithm](#) *keyword*

Tree [algorithm](#)

Options

- spf
- strict-spf

Configurable False

Platforms 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

explicit-null *boolean*

Description If set any upstream neighbor of the Prefix-SID originator MUST replace the Prefix-SID with a Prefix-SID that has an Explicit NULL value (0 for IPv4 and 2 for IPv6) before forwarding the packet

Context [network-instance name](#) *string* [protocols isis instance name](#) *string* [level-database level-number](#) *number* [lsp-id](#) *string* [defined-tlvs mt-ipv6-reachability ipv6-prefix](#) *string* [sub-tlvs segment-routing-prefix-sid explicit-null](#) *boolean*

Tree [explicit-null](#)

Configurable False

Platforms 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

local *boolean*

Description If set, then the value/index carried by the Prefix-SID has local significance.

Context [network-instance name](#) *string* [protocols isis instance name](#) *string* [level-database level-number](#) *number* [lsp-id](#) *string* [defined-tlvs mt-ipv6-reachability ipv6-prefix](#) *string* [sub-tlvs segment-routing-prefix-sid local](#) *boolean*

Tree [local](#)

Configurable False

Platforms 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

node-sid *boolean*

Description If set the prefix SID refers to the router identified by the prefix.

Context [network-instance name](#) *string* [protocols isis instance name](#) *string* [level-database level-number](#) *number* [lsp-id](#) *string* [defined-tlvs mt-ipv6-reachability ipv6-prefix](#) *string* [sub-tlvs segment-routing-prefix-sid node-sid](#) *boolean*

Tree [node-sid](#)

Configurable False

Platforms 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

penultimate-hop-popping *boolean*

Description If set the penultimate hop MUST NOT pop the Prefix-SID before delivering the packet to the node that advertised the Prefix-SID.

Context	network-instance name <i>string</i> protocols isis instance name <i>string</i> level-database level-number <i>number</i> lsp-id <i>string</i> defined-tlvs mt-ipv6-reachability ipv6-prefix <i>string</i> sub-tlvs segment-routing-prefix-sid penultimate-hop-popping <i>boolean</i>
Tree	penultimate-hop-popping
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

re-advertised *boolean*

Description	If set the prefix to which this Prefix-SID is attached has been propagated by the router from either another level or from another protocol.
Context	network-instance name <i>string</i> protocols isis instance name <i>string</i> level-database level-number <i>number</i> lsp-id <i>string</i> defined-tlvs mt-ipv6-reachability ipv6-prefix <i>string</i> sub-tlvs segment-routing-prefix-sid re-advertised <i>boolean</i>
Tree	re-advertised
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

sr-index-or-label *number*

Description	An index representing an offset in the SID/label space advertised by the router or else a direct encoding of an MPLS label value.
Context	network-instance name <i>string</i> protocols isis instance name <i>string</i> level-database level-number <i>number</i> lsp-id <i>string</i> defined-tlvs mt-ipv6-reachability ipv6-prefix <i>string</i> sub-tlvs segment-routing-prefix-sid sr-index-or-label <i>number</i>
Tree	sr-index-or-label
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

value *boolean*

Description	If set then the Prefix-SID carries a value
Context	network-instance name <i>string</i> protocols isis instance name <i>string</i> level-database level-number <i>number</i> lsp-id <i>string</i> defined-tlvs mt-ipv6-reachability ipv6-prefix <i>string</i> sub-tlvs segment-routing-prefix-sid value <i>boolean</i>
Tree	value
Configurable	False

Platforms 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

mt-is-reachability neighbor string

Description Each TLV encodes the identity of an adjacent IS neighbor in a specific topology. TLV type = 222

Context [network-instance name string protocols isis instance name string level-database level-number number lsp-id string defined-tlvs mt-is-reachability neighbor string](#)

Tree [mt-is-reachability](#)

Configurable False

Platforms Supported on 7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e platforms

neighbor string

Description An adjacent IS neighbor

Context [network-instance name string protocols isis instance name string level-database level-number number lsp-id string defined-tlvs mt-is-reachability neighbor string](#)

String Length 17

Configurable False

Platforms Supported on 7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e platforms

default-metric number

Description The default metric to reach this adjacent neighbor.

Context [network-instance name string protocols isis instance name string level-database level-number number lsp-id string defined-tlvs mt-is-reachability neighbor string default-metric number](#)

Tree [default-metric](#)

Range 0 to 16777215

Configurable False

Platforms Supported on 7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3,

7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e platforms

mt-id number

Description	A multi-topology ID.
Context	network-instance name <i>string</i> protocols isis instance name <i>string</i> level-database level-number <i>number</i> lsp-id <i>string</i> defined-tlvs mt-is-reachability neighbor <i>string</i> mt-id <i>number</i>
Tree	mt-id
Range	0 to 4095
Configurable	False
Platforms	Supported on 7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e platforms

sub-tlvs

Description	SubTLVs of TLV 22 and TLV 222
Context	network-instance name <i>string</i> protocols isis instance name <i>string</i> level-database level-number <i>number</i> lsp-id <i>string</i> defined-tlvs mt-is-reachability neighbor <i>string</i> sub-tlvs
Tree	sub-tlvs
Configurable	False
Platforms	Supported on 7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e platforms

admin-group number

Description	A bit mask representing the administrative groups to which the interface belongs. Sub-TLV = 3.
Context	network-instance name <i>string</i> protocols isis instance name <i>string</i> level-database level-number <i>number</i> lsp-id <i>string</i> defined-tlvs mt-is-reachability neighbor <i>string</i> sub-tlvs admin-group <i>number</i>
Tree	admin-group
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

application-specific-link-attributes

Description	Application Specific Link Attributes. Sub-TLV = 16.
Context	network-instance name <i>string</i> protocols isis instance name <i>string</i> level-database level-number <i>number</i> lsp-id <i>string</i> defined-tlvs mt-is-reachability neighbor <i>string</i> sub-tlvs application-specific-link-attributes
Tree	application-specific-link-attributes
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

legacy *boolean*

Description	When the legacy flag is set, all of the applications specified in the bit mask MUST use the legacy advertisements for the corresponding link found in TLVs 22, 23, 25, 141, 222, and 223, in TLV 138, or in TLV 139 as appropriate.
Context	network-instance name <i>string</i> protocols isis instance name <i>string</i> level-database level-number <i>number</i> lsp-id <i>string</i> defined-tlvs mt-is-reachability neighbor <i>string</i> sub-tlvs application-specific-link-attributes legacy <i>boolean</i>
Tree	legacy
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

loop-free-alternate *boolean*

Description	F bit is set in the Standard Application Identifier Bit Mask
Context	network-instance name <i>string</i> protocols isis instance name <i>string</i> level-database level-number <i>number</i> lsp-id <i>string</i> defined-tlvs mt-is-reachability neighbor <i>string</i> sub-tlvs application-specific-link-attributes loop-free-alternate <i>boolean</i>
Tree	loop-free-alternate
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

rsvp-te *boolean*

Description	R bit is set in the Standard Application Identifier Bit Mask
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Context	network-instance name <i>string</i> protocols isis instance name <i>string</i> level-database level-number <i>number</i> lsp-id <i>string</i> defined-tlvs mt-is-reachability neighbor <i>string</i> sub-tlvs application-specific-link-attributes rsvp-te <i>boolean</i>
Tree	rsvp-te
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

sr-policy *boolean*

Description	S bit is set in the Standard Application Identifier Bit Mask
Context	network-instance name <i>string</i> protocols isis instance name <i>string</i> level-database level-number <i>number</i> lsp-id <i>string</i> defined-tlvs mt-is-reachability neighbor <i>string</i> sub-tlvs application-specific-link-attributes sr-policy <i>boolean</i>
Tree	sr-policy
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

sub-sub-tlvs

Description	Enter the sub-sub-tlvs context
Context	network-instance name <i>string</i> protocols isis instance name <i>string</i> level-database level-number <i>number</i> lsp-id <i>string</i> defined-tlvs mt-is-reachability neighbor <i>string</i> sub-tlvs application-specific-link-attributes sub-sub-tlvs
Tree	sub-sub-tlvs
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

admin-group *number*

Description	A bit mask representing the administrative groups to which the interface belongs. Sub-Sub-TLV = 3.
Context	network-instance name <i>string</i> protocols isis instance name <i>string</i> level-database level-number <i>number</i> lsp-id <i>string</i> defined-tlvs mt-is-reachability neighbor <i>string</i> sub-tlvs application-specific-link-attributes sub-sub-tlvs admin-group <i>number</i>
Tree	admin-group
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

maximum-link-bandwidth *number*

Description	The (LAG aware) bandwidth of the interface to the neighbor. Sub-Sub-TLV = 9.
Context	network-instance name <i>string</i> protocols isis instance name <i>string</i> level-database level-number <i>number</i> lsp-id <i>string</i> defined-tlvs mt-is-reachability neighbor <i>string</i> sub-tlvs application-specific-link-attributes sub-sub-tlvs maximum-link-bandwidth <i>number</i>
Tree	maximum-link-bandwidth
Units	bytes-per-second
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

min-max-unidirectional-link-delay

Description	The minimum and maximum delay between two directly connected IS-IS neighbors.
Context	network-instance name <i>string</i> protocols isis instance name <i>string</i> level-database level-number <i>number</i> lsp-id <i>string</i> defined-tlvs mt-is-reachability neighbor <i>string</i> sub-tlvs application-specific-link-attributes sub-sub-tlvs min-max-unidirectional-link-delay
Tree	min-max-unidirectional-link-delay
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

anomolous *boolean*

Description	If the A bit is cleared, the values represent steady-state link performance.
Context	network-instance name <i>string</i> protocols isis instance name <i>string</i> level-database level-number <i>number</i> lsp-id <i>string</i> defined-tlvs mt-is-reachability neighbor <i>string</i> sub-tlvs application-specific-link-attributes sub-sub-tlvs min-max-unidirectional-link-delay anomolous <i>boolean</i>
Tree	anomolous
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

max-delay *number*

Description	Maximum forward-path delay (from the advertising router to the remote neighbor)
Context	network-instance name <i>string</i> protocols isis instance name <i>string</i> level-database level-number <i>number</i> lsp-id <i>string</i> defined-tlvs mt-is-reachability neighbor <i>string</i> sub-tlvs application-specific-link-attributes sub-sub-tlvs min-max-unidirectional-link-delay max-delay <i>number</i>
Tree	max-delay
Units	microseconds
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

min-delay *number*

Description	Minimum forward-path delay (from the advertising router to the remote neighbor)
Context	network-instance name <i>string</i> protocols isis instance name <i>string</i> level-database level-number <i>number</i> lsp-id <i>string</i> defined-tlvs mt-is-reachability neighbor <i>string</i> sub-tlvs application-specific-link-attributes sub-sub-tlvs min-max-unidirectional-link-delay min-delay <i>number</i>
Tree	min-delay
Units	microseconds
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

te-default-metric *number*

Description	An administratively assigned metric used as an alternative to the normal SPF metric based (typically) on link bandwidth.
Context	network-instance name <i>string</i> protocols isis instance name <i>string</i> level-database level-number <i>number</i> lsp-id <i>string</i> defined-tlvs mt-is-reachability neighbor <i>string</i> sub-tlvs application-specific-link-attributes sub-sub-tlvs te-default-metric <i>number</i>
Tree	te-default-metric
Range	0 to 16777215
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

ipv4-interface-address *string*

Description	The IPv4 address of the interface to the neighbor. Sub-TLV = 6.
Context	network-instance name <i>string</i> protocols isis instance name <i>string</i> level-database level-number <i>number</i> lsp-id <i>string</i> defined-tlvs mt-is-reachability neighbor <i>string</i> sub-tlvs ipv4-interface-address <i>string</i>
Tree	ipv4-interface-address
Configurable	False
Platforms	Supported on 7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e platforms

ipv4-neighbor-address *string*

Description	The IPv4 address of the neighbor. Sub-TLV = 8.
Context	network-instance name <i>string</i> protocols isis instance name <i>string</i> level-database level-number <i>number</i> lsp-id <i>string</i> defined-tlvs mt-is-reachability neighbor <i>string</i> sub-tlvs ipv4-neighbor-address <i>string</i>
Tree	ipv4-neighbor-address
Configurable	False
Platforms	Supported on 7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e platforms

ipv6-interface-address *string*

Description	The IPv6 address of the interface to the neighbor. Sub-TLV = 12.
Context	network-instance name <i>string</i> protocols isis instance name <i>string</i> level-database level-number <i>number</i> lsp-id <i>string</i> defined-tlvs mt-is-reachability neighbor <i>string</i> sub-tlvs ipv6-interface-address <i>string</i>
Tree	ipv6-interface-address
Configurable	False
Platforms	Supported on 7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e platforms

ipv6-neighbor-address *string*

Description	The IPv4 address of the neighbor. Sub-TLV = 13.
Context	network-instance name <i>string</i> protocols isis instance name <i>string</i> level-database level-number <i>number</i> lsp-id <i>string</i> defined-tlvs mt-is-reachability neighbor <i>string</i> sub-tlvs ipv6-neighbor-address <i>string</i>
Tree	ipv6-neighbor-address
Configurable	False
Platforms	Supported on 7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e platforms

link-msd

Description	The maximum segment depth of the link to the neighbor. Sub-TLV = 15.
Context	network-instance name <i>string</i> protocols isis instance name <i>string</i> level-database level-number <i>number</i> lsp-id <i>string</i> defined-tlvs mt-is-reachability neighbor <i>string</i> sub-tlvs link-msd
Tree	link-msd
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

msd-info [msd-type](#) (*keyword* | *number*) [msd-value](#) *number*

Description	List of MSD entries
Context	network-instance name <i>string</i> protocols isis instance name <i>string</i> level-database level-number <i>number</i> lsp-id <i>string</i> defined-tlvs mt-is-reachability neighbor <i>string</i> sub-tlvs link-msd msd-info msd-type (<i>keyword</i> <i>number</i>) msd-value <i>number</i>
Tree	msd-info
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

msd-type (*keyword* | *number*)

Description	MSD type
Context	network-instance name <i>string</i> protocols isis instance name <i>string</i> level-database level-number <i>number</i> lsp-id <i>string</i> defined-tlvs mt-is-reachability

	neighbor <i>string</i> sub-tlvs link-msd msd-info msd-type (<i>keyword number</i>) msd-value <i>number</i>
Range	2 to 254
Options	<ul style="list-style-type: none"> base-mpls-imposition-msd
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

msd-value *number*

Description	A number in the range of 0-255 representing the maximum SID depth; for all MSD-Types, 0 represents the lack of ability to support a SID stack of any depth
Context	network-instance name <i>string</i> protocols isis instance name <i>string</i> level-database level-number <i>number</i> lsp-id <i>string</i> defined-tlvs mt-is-reachability neighbor <i>string</i> sub-tlvs link-msd msd-info msd-type (<i>keyword number</i>) msd-value <i>number</i>
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

maximum-link-bandwidth *number*

Description	The (LAG aware) bandwidth of the interface to the neighbor. Sub-TLV = 9.
Context	network-instance name <i>string</i> protocols isis instance name <i>string</i> level-database level-number <i>number</i> lsp-id <i>string</i> defined-tlvs mt-is-reachability neighbor <i>string</i> sub-tlvs maximum-link-bandwidth <i>number</i>
Tree	maximum-link-bandwidth
Units	bytes-per-second
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

min-max-unidirectional-link-delay

Description	The minimum and maximum delay between two directly connected IS-IS neighbors. Sub-TLV = 34.
Context	network-instance name <i>string</i> protocols isis instance name <i>string</i> level-database level-number <i>number</i> lsp-id <i>string</i> defined-tlvs mt-is-reachability neighbor <i>string</i> sub-tlvs min-max-unidirectional-link-delay
Tree	min-max-unidirectional-link-delay
Configurable	False

Platforms 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

anomolous *boolean*

Description If the A bit is cleared, the values represent steady-state link performance.

Context [network-instance name](#) *string* [protocols isis instance name](#) *string* [level-database level-number](#) *number* [lsp-id](#) *string* [defined-tlvs mt-is-reachability neighbor](#) *string* [sub-tlvs min-max-unidirectional-link-delay anomolous](#) *boolean*

Tree [anomolous](#)

Configurable False

Platforms 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

max-delay *number*

Description Maximum forward-path delay (from the advertising router to the remote neighbor)

Context [network-instance name](#) *string* [protocols isis instance name](#) *string* [level-database level-number](#) *number* [lsp-id](#) *string* [defined-tlvs mt-is-reachability neighbor](#) *string* [sub-tlvs min-max-unidirectional-link-delay max-delay](#) *number*

Tree [max-delay](#)

Units microseconds

Configurable False

Platforms 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

min-delay *number*

Description Minimum forward-path delay (from the advertising router to the remote neighbor)

Context [network-instance name](#) *string* [protocols isis instance name](#) *string* [level-database level-number](#) *number* [lsp-id](#) *string* [defined-tlvs mt-is-reachability neighbor](#) *string* [sub-tlvs min-max-unidirectional-link-delay min-delay](#) *number*

Tree [min-delay](#)

Units microseconds

Configurable False

Platforms 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

segment-routing-adjacency-sid *sr-index-or-label number*

Description	List of Adj-SID sub-TLVs associated with the neighbor. Sub-TLV = 31.
Context	network-instance name <i>string</i> protocols isis instance name <i>string</i> level-database level-number <i>number</i> lsp-id <i>string</i> defined-tlvs mt-is-reachability neighbor <i>string</i> sub-tlvs segment-routing-adjacency-sid sr-index-or-label <i>number</i>
Tree	segment-routing-adjacency-sid
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

sr-index-or-label *number*

Description	An index representing an offset in the SID/label space advertised by the router or else a direct encoding of an MPLS label value.
Context	network-instance name <i>string</i> protocols isis instance name <i>string</i> level-database level-number <i>number</i> lsp-id <i>string</i> defined-tlvs mt-is-reachability neighbor <i>string</i> sub-tlvs segment-routing-adjacency-sid sr-index-or-label <i>number</i>
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

adj-set *boolean*

Description	When set, the S-Flag indicates that the Adj-SID refers to a set of adjacencies.
Context	network-instance name <i>string</i> protocols isis instance name <i>string</i> level-database level-number <i>number</i> lsp-id <i>string</i> defined-tlvs mt-is-reachability neighbor <i>string</i> sub-tlvs segment-routing-adjacency-sid sr-index-or-label <i>number</i> adj-set <i>boolean</i>
Tree	adj-set
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

backup *boolean*

Description	If set, the Adj-SID is eligible for protection
Context	network-instance name <i>string</i> protocols isis instance name <i>string</i> level-database level-number <i>number</i> lsp-id <i>string</i> defined-tlvs mt-is-reachability

	neighbor <i>string</i> sub-tlvs segment-routing-adjacency-sid sr-index-or-label number backup <i>boolean</i>
Tree	backup
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

ipv6-family *boolean*

Description	If set, then the Adj-SID is used for forwarding IPv6 traffic to the neighbor; else the Adj-SID is used for forwarding IPv4 traffic.
Context	network-instance name <i>string</i> protocols isis instance name <i>string</i> level-database level-number <i>number</i> lsp-id <i>string</i> defined-tlvs mt-is-reachability neighbor <i>string</i> sub-tlvs segment-routing-adjacency-sid sr-index-or-label number ipv6-family <i>boolean</i>
Tree	ipv6-family
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

local *boolean*

Description	If set, then the value/index carried by the Adj-SID has local significance.
Context	network-instance name <i>string</i> protocols isis instance name <i>string</i> level-database level-number <i>number</i> lsp-id <i>string</i> defined-tlvs mt-is-reachability neighbor <i>string</i> sub-tlvs segment-routing-adjacency-sid sr-index-or-label number local <i>boolean</i>
Tree	local
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

persistent *boolean*

Description	When set, the P-Flag indicates that the Adj-SID is persistently allocated, i.e., the Adj-SID value remains consistent across router restart and/or interface flap
Context	network-instance name <i>string</i> protocols isis instance name <i>string</i> level-database level-number <i>number</i> lsp-id <i>string</i> defined-tlvs mt-is-reachability neighbor <i>string</i> sub-tlvs segment-routing-adjacency-sid sr-index-or-label number persistent <i>boolean</i>
Tree	persistent
Configurable	False

Platforms 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

value *boolean*

Description If set then the Adj-SID carries a value

Context [network-instance name](#) *string* [protocols isis instance name](#) *string* [level-database level-number](#) *number* [lsp-id](#) *string* [defined-tlvs mt-is-reachability neighbor](#) *string* [sub-tlvs segment-routing-adjacency-sid sr-index-or-label](#) *number* [value](#) *boolean*

Tree [value](#)

Configurable False

Platforms 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

weight *number*

Description The value represents the weight of the Adj-SID for the purpose of load balancing

Context [network-instance name](#) *string* [protocols isis instance name](#) *string* [level-database level-number](#) *number* [lsp-id](#) *string* [defined-tlvs mt-is-reachability neighbor](#) *string* [sub-tlvs segment-routing-adjacency-sid sr-index-or-label](#) *number* [weight](#) *number*

Tree [weight](#)

Configurable False

Platforms 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

segment-routing-lan-adjacency-sid [sr-index-or-label](#) *number*

Description List of LAN Adj-SID sub-TLVs. Each describes the set of Adj-SIDs the router assigned to each of its LAN neighbors. Sub-TLV = 32.

Context [network-instance name](#) *string* [protocols isis instance name](#) *string* [level-database level-number](#) *number* [lsp-id](#) *string* [defined-tlvs mt-is-reachability neighbor](#) *string* [sub-tlvs segment-routing-lan-adjacency-sid sr-index-or-label](#) *number*

Tree [segment-routing-lan-adjacency-sid](#)

Configurable False

Platforms 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

sr-index-or-label *number*

Description	An index representing an offset in the SID/label space advertised by the router or else a direct encoding of an MPLS label value.
Context	network-instance name <i>string</i> protocols isis instance name <i>string</i> level-database level-number <i>number</i> lsp-id <i>string</i> defined-tlvs mt-is-reachability neighbor <i>string</i> sub-tlvs segment-routing-lan-adjacency-sid sr-index-or-label <i>number</i>
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

adj-set *boolean*

Description	When set, the S-Flag indicates that the Adj-SID refers to a set of adjacencies.
Context	network-instance name <i>string</i> protocols isis instance name <i>string</i> level-database level-number <i>number</i> lsp-id <i>string</i> defined-tlvs mt-is-reachability neighbor <i>string</i> sub-tlvs segment-routing-lan-adjacency-sid sr-index-or-label <i>number</i> adj-set <i>boolean</i>
Tree	adj-set
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

backup *boolean*

Description	If set, the Adj-SID is eligible for protection
Context	network-instance name <i>string</i> protocols isis instance name <i>string</i> level-database level-number <i>number</i> lsp-id <i>string</i> defined-tlvs mt-is-reachability neighbor <i>string</i> sub-tlvs segment-routing-lan-adjacency-sid sr-index-or-label <i>number</i> backup <i>boolean</i>
Tree	backup
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

ipv6-family *boolean*

Description	If set, then the Adj-SID is used for forwarding IPv6 traffic to the neighbor; else the Adj-SID is used for forwarding IPv4 traffic.
Context	network-instance name <i>string</i> protocols isis instance name <i>string</i> level-database level-number <i>number</i> lsp-id <i>string</i> defined-tlvs mt-is-reachability

	neighbor <i>string</i> sub-tlvs segment-routing-lan-adjacency-sid sr-index-or-label number ipv6-family <i>boolean</i>
Tree	ipv6-family
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

local *boolean*

Description	If set, then the value/index carried by the Adj-SID has local significance.
Context	network-instance name <i>string</i> protocols isis instance name <i>string</i> level-database level-number <i>number</i> lsp-id <i>string</i> defined-tlvs mt-is-reachability neighbor <i>string</i> sub-tlvs segment-routing-lan-adjacency-sid sr-index-or-label number local <i>boolean</i>
Tree	local
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

neighbor-system-id *string*

Description	IS-IS system-ID of the LAN neighbor
Context	network-instance name <i>string</i> protocols isis instance name <i>string</i> level-database level-number <i>number</i> lsp-id <i>string</i> defined-tlvs mt-is-reachability neighbor <i>string</i> sub-tlvs segment-routing-lan-adjacency-sid sr-index-or-label number neighbor-system-id <i>string</i>
Tree	neighbor-system-id
String Length	14
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

persistent *boolean*

Description	When set, the P-Flag indicates that the Adj-SID is persistently allocated, i.e., the Adj-SID value remains consistent across router restart and/or interface flap
Context	network-instance name <i>string</i> protocols isis instance name <i>string</i> level-database level-number <i>number</i> lsp-id <i>string</i> defined-tlvs mt-is-reachability neighbor <i>string</i> sub-tlvs segment-routing-lan-adjacency-sid sr-index-or-label number persistent <i>boolean</i>
Tree	persistent

Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

value *boolean*

Description	If set then the Adj-SID carries a value
Context	network-instance name <i>string</i> protocols isis instance name <i>string</i> level-database level-number <i>number</i> lsp-id <i>string</i> defined-tlvs mt-is-reachability neighbor <i>string</i> sub-tlvs segment-routing-lan-adjacency-sid sr-index-or-label <i>number</i> value <i>boolean</i>
Tree	value
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

weight *number*

Description	The value represents the weight of the Adj-SID for the purpose of load balancing
Context	network-instance name <i>string</i> protocols isis instance name <i>string</i> level-database level-number <i>number</i> lsp-id <i>string</i> defined-tlvs mt-is-reachability neighbor <i>string</i> sub-tlvs segment-routing-lan-adjacency-sid sr-index-or-label <i>number</i> weight <i>number</i>
Tree	weight
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

te-default-metric *number*

Description	An administratively assigned metric used as an alternative to the normal SPF metric based (typically) on link bandwidth. Sub-TLV = 18.
Context	network-instance name <i>string</i> protocols isis instance name <i>string</i> level-database level-number <i>number</i> lsp-id <i>string</i> defined-tlvs mt-is-reachability neighbor <i>string</i> sub-tlvs te-default-metric <i>number</i>
Tree	te-default-metric
Range	0 to 16777215
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

multi-topology

Description	The Multi-Topology TLV, type 229.
Context	network-instance name <i>string</i> protocols isis instance name <i>string</i> level-database level-number <i>number</i> lsp-id <i>string</i> defined-tlvs multi-topology
Tree	multi-topology
Configurable	False
Platforms	Supported on 7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e platforms

topology [mt-id](#) *number*

Description	The list of multi-topology IDs that the router is participating in
Context	network-instance name <i>string</i> protocols isis instance name <i>string</i> level-database level-number <i>number</i> lsp-id <i>string</i> defined-tlvs multi-topology topology mt-id <i>number</i>
Tree	topology
Configurable	False
Platforms	Supported on 7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e platforms

mt-id *number*

Description	A multi-topology ID.
Context	network-instance name <i>string</i> protocols isis instance name <i>string</i> level-database level-number <i>number</i> lsp-id <i>string</i> defined-tlvs multi-topology topology mt-id <i>number</i>
Range	0 to 4095
Configurable	False
Platforms	Supported on 7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e platforms

attached *boolean*

Description	Reads true when the topology is attached to Level 2
Context	network-instance name <i>string</i> protocols isis instance name <i>string</i> level-database level-number <i>number</i> lsp-id <i>string</i> defined-tlvs multi-topology topology mt-id <i>number</i> attached <i>boolean</i>
Tree	attached
Configurable	False
Platforms	Supported on 7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e platforms

overload *boolean*

Description	Reads true when the topology is in overload state.
Context	network-instance name <i>string</i> protocols isis instance name <i>string</i> level-database level-number <i>number</i> lsp-id <i>string</i> defined-tlvs multi-topology topology mt-id <i>number</i> overload <i>boolean</i>
Tree	overload
Configurable	False
Platforms	Supported on 7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e platforms

nlpid *keyword*

Description	Each item represents a network layer protocol supported by the IS-IS Instance.
Context	network-instance name <i>string</i> protocols isis instance name <i>string</i> level-database level-number <i>number</i> lsp-id <i>string</i> defined-tlvs nlpid <i>keyword</i>
Tree	nlpid
Options	<ul style="list-style-type: none"> IPv4 NLPID 0xCC corresponding to IPv4 IPv6 NLPID 0x8E corresponding to IPv6 CLNS NLPID 0x81 corresponding to CLNS

Configurable	False
Platforms	Supported on 7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e platforms

purge-oi *string*

Description	This indicates System ID that originated a purge.
Context	network-instance name <i>string</i> protocols isis instance name <i>string</i> level-database level-number <i>number</i> lsp-id <i>string</i> defined-tlvs purge-oi <i>string</i>
Tree	purge-oi
String Length	14
Configurable	False
Platforms	Supported on 7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e platforms

router-capability

Description	Allows a router to announce its capabilities within an IS-IS level or the entire routing domain. TLV = 242.
Context	network-instance name <i>string</i> protocols isis instance name <i>string</i> level-database level-number <i>number</i> lsp-id <i>string</i> defined-tlvs router-capability
Tree	router-capability
Configurable	False
Platforms	Supported on 7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e platforms

leaked-down *boolean*

Description	When true, the TLV was leaked down from Level 2 to Level 1 and must not be leaked back up to L2
Context	network-instance name <i>string</i> protocols isis instance name <i>string</i> level-database level-number <i>number</i> lsp-id <i>string</i> defined-tlvs router-capability leaked-down <i>boolean</i>
Tree	leaked-down

Configurable	False
Platforms	Supported on 7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e platforms

router-id *string*

Description	Router ID indicating the source of the TLV
Context	network-instance name <i>string</i> protocols isis instance name <i>string</i> level-database level-number <i>number</i> lsp-id <i>string</i> defined-tlvs router-capability router-id <i>string</i>
Tree	router-id
Configurable	False
Platforms	Supported on 7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e platforms

scope-is-domain-wide *boolean*

Description	When true, the TLV MUST be flooded across the entire routing domain. When false, the TLV MUST NOT be leaked between levels.
Context	network-instance name <i>string</i> protocols isis instance name <i>string</i> level-database level-number <i>number</i> lsp-id <i>string</i> defined-tlvs router-capability scope-is-domain-wide <i>boolean</i>
Tree	scope-is-domain-wide
Configurable	False
Platforms	Supported on 7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e platforms

sub-tlvs

Description	Sub-TLVs of TLV 242
Context	network-instance name <i>string</i> protocols isis instance name <i>string</i> level-database level-number <i>number</i> lsp-id <i>string</i> defined-tlvs router-capability sub-tlvs
Tree	sub-tlvs
Configurable	False

Platforms Supported on 7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e platforms

node-msd

Description Used to carry the provisioned SID depth of the router originating the capability TLV. Node MSD is the smallest MSD supported by the node on the set of interfaces configured for use by the advertising IGP instance

Context [network-instance name](#) *string* [protocols isis instance name](#) *string* [level-database level-number](#) *number* [lsp-id](#) *string* [defined-tlvs router-capability sub-tlvs node-msd](#)

Tree [node-msd](#)

Configurable False

Platforms 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

msd-info [msd-type](#) (*keyword* | *number*) [msd-value](#) *number*

Description List of MSD entries

Context [network-instance name](#) *string* [protocols isis instance name](#) *string* [level-database level-number](#) *number* [lsp-id](#) *string* [defined-tlvs router-capability sub-tlvs node-msd msd-info msd-type](#) (*keyword* | *number*) [msd-value](#) *number*

Tree [msd-info](#)

Configurable False

Platforms 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

msd-type (*keyword* | *number*)

Description MSD type

Context [network-instance name](#) *string* [protocols isis instance name](#) *string* [level-database level-number](#) *number* [lsp-id](#) *string* [defined-tlvs router-capability sub-tlvs node-msd msd-info msd-type](#) (*keyword* | *number*) [msd-value](#) *number*

Range 2 to 254

Options

- base-mpls-imposition-msd

Configurable False

Platforms 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

msd-value *number*

Description	A number in the range of 0-255 representing the maximum SID depth; for all MSD-Types, 0 represents the lack of ability to support a SID stack of any depth
Context	network-instance name <i>string</i> protocols isis instance name <i>string</i> level-database level-number <i>number</i> lsp-id <i>string</i> defined-tlvs router-capability sub-tlvs node-msd msd-info msd-type (<i>keyword</i> <i>number</i>) msd-value <i>number</i>
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

sr-algorithm

Description	Advertises the IGP algorithms that the router is using
Context	network-instance name <i>string</i> protocols isis instance name <i>string</i> level-database level-number <i>number</i> lsp-id <i>string</i> defined-tlvs router-capability sub-tlvs sr-algorithm
Tree	sr-algorithm
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

algorithm *number*

Description	List of algorithm types supported by the router. Algorithm 0 should always be in the list
Context	network-instance name <i>string</i> protocols isis instance name <i>string</i> level-database level-number <i>number</i> lsp-id <i>string</i> defined-tlvs router-capability sub-tlvs sr-algorithm algorithm <i>number</i>
Tree	algorithm
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

sr-capabilities

Description	Used to advertise its SR data plane capability and the range of MPLS label values each router uses for Segment Routing in the case where global SIDs are allocated.
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Context	network-instance name <i>string</i> protocols isis instance name <i>string</i> level-database level-number <i>number</i> lsp-id <i>string</i> defined-tlvs router-capability sub-tlvs sr-capabilities
Tree	sr-capabilities
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

ipv4-support *boolean*

Description	When true, the router is capable of processing SR-MPLS-encapsulated IPv4 packets on all interfaces
Context	network-instance name <i>string</i> protocols isis instance name <i>string</i> level-database level-number <i>number</i> lsp-id <i>string</i> defined-tlvs router-capability sub-tlvs sr-capabilities ipv4-support <i>boolean</i>
Tree	ipv4-support
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

ipv6-support *boolean*

Description	When true, the router is capable of processing SR-MPLS-encapsulated IPv6 packets on all interfaces
Context	network-instance name <i>string</i> protocols isis instance name <i>string</i> level-database level-number <i>number</i> lsp-id <i>string</i> defined-tlvs router-capability sub-tlvs sr-capabilities ipv6-support <i>boolean</i>
Tree	ipv6-support
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

srgb-descriptor sr-index-or-label *number range number*

Description	List of Segment Routing Global Block descriptors
Context	network-instance name <i>string</i> protocols isis instance name <i>string</i> level-database level-number <i>number</i> lsp-id <i>string</i> defined-tlvs router-capability sub-tlvs sr-capabilities srgb-descriptor sr-index-or-label <i>number range number</i>
Tree	srgb-descriptor
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

sr-index-or-label *number*

Description	An index representing the first value of the SRGB. The meaning (index or label) is determined from the length of the sub-tlv.
Context	network-instance name <i>string</i> protocols isis instance name <i>string</i> level-database level-number <i>number</i> lsp-id <i>string</i> defined-tlvs router-capability sub-tlvs sr-capabilities srgb-descriptor sr-index-or-label <i>number range number</i>
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

range *number*

Description	The number of SRGB elements
Context	network-instance name <i>string</i> protocols isis instance name <i>string</i> level-database level-number <i>number</i> lsp-id <i>string</i> defined-tlvs router-capability sub-tlvs sr-capabilities srgb-descriptor sr-index-or-label <i>number range number</i>
Range	1 to 16777215
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

sr-local-block

Description	Used to advertise the range of labels the node has reserved for local SIDs.
Context	network-instance name <i>string</i> protocols isis instance name <i>string</i> level-database level-number <i>number</i> lsp-id <i>string</i> defined-tlvs router-capability sub-tlvs sr-local-block
Tree	sr-local-block
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

srlb-descriptor [sr-index-or-label](#) *number range number*

Description	List of Segment Routing Local Block descriptors
Context	network-instance name <i>string</i> protocols isis instance name <i>string</i> level-database level-number <i>number</i> lsp-id <i>string</i> defined-tlvs router-capability sub-tlvs sr-local-block srlb-descriptor sr-index-or-label <i>number range number</i>
Tree	srlb-descriptor

Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

sr-index-or-label *number*

Description	An index representing the first value of the SRLB. The meaning (index or label) is determined from the length of the sub-tlv.
Context	network-instance name <i>string</i> protocols isis instance name <i>string</i> level-database level-number <i>number</i> lsp-id <i>string</i> defined-tlvs router-capability sub-tlvs sr-local-block srlb-descriptor sr-index-or-label <i>number range number</i>
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

range *number*

Description	The number of SRLB elements
Context	network-instance name <i>string</i> protocols isis instance name <i>string</i> level-database level-number <i>number</i> lsp-id <i>string</i> defined-tlvs router-capability sub-tlvs sr-local-block srlb-descriptor sr-index-or-label <i>number range number</i>
Range	1 to 16777215
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

te-router-id *string*

Description	A single stable address that can always be referenced in a path that will be reachable from multiple hops away. TLV = 134.
Context	network-instance name <i>string</i> protocols isis instance name <i>string</i> level-database level-number <i>number</i> lsp-id <i>string</i> defined-tlvs te-router-id <i>string</i>
Tree	te-router-id
Configurable	False
Platforms	Supported on 7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e platforms

maximum-area-addresses *number*

Description	The value indicates the maximum number of areas supported by the originator of the LSP. A value of 0 indicates a default of 3 areas.
Context	network-instance name <i>string</i> protocols isis instance name <i>string</i> level-database level-number <i>number</i> lsp-id <i>string</i> maximum-area-addresses <i>number</i>
Tree	maximum-area-addresses
Configurable	False
Platforms	Supported on 7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e platforms

pdu-length *number*

Description	The value indicates the PDU length for instance LSPs, CSNPs OR PSNPs at both IS-IS protocol levels i.e. L1 and L2 as maintained in the database.
Context	network-instance name <i>string</i> protocols isis instance name <i>string</i> level-database level-number <i>number</i> lsp-id <i>string</i> pdu-length <i>number</i>
Tree	pdu-length
Configurable	False
Platforms	Supported on 7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e platforms

pdu-type *number*

Description	The value indicates the PDU type for instance LSPs, CSNPs OR PSNPs at both IS-IS protocol levels i.e. L1 and L2 as maintained in of the object packet-type.
Context	network-instance name <i>string</i> protocols isis instance name <i>string</i> level-database level-number <i>number</i> lsp-id <i>string</i> pdu-type <i>number</i>
Tree	pdu-type
Configurable	False
Platforms	Supported on 7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e platforms

pkt-version number

Description	The value indicates the version of the ISIS protocol that has generated the Packet.
Context	network-instance name string protocols isis instance name string level-database level-number number lsp-id string pkt-version number
Tree	pkt-version
Configurable	False
Platforms	Supported on 7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e platforms

remaining-lifetime number

Description	The value indicates the remaining lifetime of this LSP and is a decrementing counter that decrements in seconds starting from the value as received in the LSP if not self-originated OR from lsp-life-time for self originated LSPs. When the remaining lifetime becomes zero, the contents of the LSP should not be considered for SPF calculation.
Context	network-instance name string protocols isis instance name string level-database level-number number lsp-id string remaining-lifetime number
Tree	remaining-lifetime
Range	0 to 65535
Units	seconds
Configurable	False
Platforms	Supported on 7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e platforms

sequence-number string

Description	The value indicates the sequence number of an LSP and is a four byte quantity that represents the version of an LSP. The higher the sequence number, the more up to date the information. The sequence number is always incremented by the system that originated the LSP and ensures that there is only one version of that LSP in the entire network.
Context	network-instance name string protocols isis instance name string level-database level-number number lsp-id string sequence-number string
Tree	sequence-number

Configurable	False
Platforms	Supported on 7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e platforms

system-id-len *number*

Description	The value indicates the length of the system-id as used by the originator.
Context	network-instance name <i>string</i> protocols isis instance name <i>string</i> level-database level-number <i>number</i> lsp-id <i>string</i> system-id-len <i>number</i>
Tree	system-id-len
Configurable	False
Platforms	Supported on 7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e platforms

undefined-tlvs *string*

Description	Undefined TLV-s as contents of the LSP.
Context	network-instance name <i>string</i> protocols isis instance name <i>string</i> level-database level-number <i>number</i> lsp-id <i>string</i> undefined-tlvs <i>string</i>
Tree	undefined-tlvs
String Length	27 to 9190
Configurable	False
Platforms	Supported on 7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e platforms

version *number*

Description	The value indicates the version of the ISIS protocol that has generated the LSP
Context	network-instance name <i>string</i> protocols isis instance name <i>string</i> level-database level-number <i>number</i> lsp-id <i>string</i> version <i>number</i>
Tree	version
Configurable	False

Platforms Supported on 7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e platforms

loopfree-alternate

Description Loopfree-alternate related context for the instance.

Context [network-instance name string protocols isis instance name string loopfree-alternate](#)

Tree [loopfree-alternate](#)

Configurable True

Platforms 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

admin-state *keyword*

Description When set, loopfree-alternate protection is enabled for the ISIS instance. Enables ability to seek for LFA, doesn't guarantee LFA protection.

Context [network-instance name string protocols isis instance name string loopfree-alternate admin-state keyword](#)

Tree [admin-state](#)

Default disable

Options

- enable
- disable

Configurable True

Platforms 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

exclude

Description Set the exclude context for LFA SPF computation

Context [network-instance name string protocols isis instance name string loopfree-alternate exclude](#)

Tree [exclude](#)

Configurable True

Platforms 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

prefix-policy *reference*

Description	Policy to exclude prefixes from LFA SPF calculation
Context	network-instance name <i>string</i> protocols isis instance name <i>string</i> loopfree-alternate exclude prefix-policy <i>reference</i>
Tree	prefix-policy
Reference	routing-policy policy name <i>string</i>
Configurable	True
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b
Max. Elements	5

multi-homed-prefix

Description	Multi-homed-prefix context
Context	network-instance name <i>string</i> protocols isis instance name <i>string</i> loopfree-alternate multi-homed-prefix
Tree	multi-homed-prefix
Configurable	True
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

admin-state *keyword*

Description	When set, multi-homed prefix context is enabled for the ISIS instance
Context	network-instance name <i>string</i> protocols isis instance name <i>string</i> loopfree-alternate multi-homed-prefix admin-state <i>keyword</i>
Tree	admin-state
Default	disable
Options	<ul style="list-style-type: none"> • enable • disable
Configurable	True
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

preference *keyword*

Description	Backup preference of a multi-homed prefix
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Context	network-instance name <i>string</i> protocols isis instance name <i>string</i> loopfree-alternate multi-homed-prefix preference <i>keyword</i>
Tree	preference
Default	none
Options	<ul style="list-style-type: none"> • none • all
Configurable	True
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

remote-lfa

Description	Remote LFA context
Context	network-instance name <i>string</i> protocols isis instance name <i>string</i> loopfree-alternate remote-lfa
Tree	remote-lfa
Configurable	True
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

admin-state *keyword*

Description	When set, remote lfa protection is enabled for the ISIS instance. Enables ability to seek for an eligible remote-LFA node (P,Q intersection), doesn't guarantee existence of remote-LFA protection.
Context	network-instance name <i>string</i> protocols isis instance name <i>string</i> loopfree-alternate remote-lfa admin-state <i>keyword</i>
Tree	admin-state
Default	disable
Options	<ul style="list-style-type: none"> • enable • disable
Configurable	True
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

max-pq-cost *number*

Description	Maximum cost of destination node during reverse SPF calculation
Context	network-instance name <i>string</i> protocols isis instance name <i>string</i> loopfree-alternate remote-lfa max-pq-cost <i>number</i>

Tree	max-pq-cost
Default	4261412864
Configurable	True
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

node-protect

Description	Node protect context
Context	network-instance name <i>string</i> protocols isis instance name <i>string</i> loopfree-alternate remote-lfa node-protect
Tree	node-protect
Configurable	True
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

admin-state *keyword*

Description	When set, the IS-IS instance enables node protection using remote lfa. Remote LFA seeks for a viable P,Q intersection that can protect against node failures.
Context	network-instance name <i>string</i> protocols isis instance name <i>string</i> loopfree-alternate remote-lfa node-protect admin-state <i>keyword</i>
Tree	admin-state
Default	disable
Options	<ul style="list-style-type: none"> • enable • disable
Configurable	True
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

max-pq-nodes *number*

Description	Maximum number of PQ nodes found in the LFA SPF. Value 0 disables node protect
Context	network-instance name <i>string</i> protocols isis instance name <i>string</i> loopfree-alternate remote-lfa node-protect max-pq-nodes <i>number</i>
Tree	max-pq-nodes
Range	0 to 32
Default	16

Configurable	True
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

ti-lfa

Description	ti-lfa context
Context	network-instance name <i>string</i> protocols isis instance name <i>string</i> loopfree-alternate ti-lfa
Tree	ti-lfa
Configurable	True
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

admin-state *keyword*

Description	When set, ti-lfa protection is enabled for the ISIS instance. ti-LFA seeks for a viable P,Q intersection based on constraints including max ti-lfa labels.
Context	network-instance name <i>string</i> protocols isis instance name <i>string</i> loopfree-alternate ti-lfa admin-state <i>keyword</i>
Tree	admin-state
Default	disable
Options	<ul style="list-style-type: none"> • enable • disable
Configurable	True
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

max-sr-policy-lfa-labels *number*

Description	Maximum number of labels the TI-LFA backup path can use
Context	network-instance name <i>string</i> protocols isis instance name <i>string</i> loopfree-alternate ti-lfa max-sr-policy-lfa-labels <i>number</i>
Tree	max-sr-policy-lfa-labels
Range	0 to 3
Default	2
Configurable	True
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

node-protect

Description	Node-protect context
Context	network-instance name <i>string</i> protocols isis instance name <i>string</i> loopfree-alternate ti-lfa node-protect
Tree	node-protect
Configurable	True
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

admin-state *keyword*

Description	When set to enabled, the IS-IS instance enables ti-lfa node protection.
Context	network-instance name <i>string</i> protocols isis instance name <i>string</i> loopfree-alternate ti-lfa node-protect admin-state <i>keyword</i>
Tree	admin-state
Default	disable
Options	<ul style="list-style-type: none"> • enable • disable
Configurable	True
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

max-ecmp-paths *number*

Description	The maximum number of ECMP next-hops to program into the FIB for every IP prefix
Context	network-instance name <i>string</i> protocols isis instance name <i>string</i> max-ecmp-paths <i>number</i>
Tree	max-ecmp-paths
Range	1 to 64
Default	1
Configurable	True
Platforms	Supported on all platforms

net *string*

Description	ISIS network entity title (NET)
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Context	network-instance name string protocols isis instance name string net string
Tree	net
Configurable	True
Platforms	Supported on all platforms
Max. Elements	1

oper-area-id *string*

Description	The list of area IDs associated with this IS router
Context	network-instance name string protocols isis instance name string oper-area-id string
Tree	oper-area-id
String Length	2 to 38
Configurable	False
Platforms	Supported on all platforms

oper-state *keyword*

Description	The value of the this object indicates the operational state of the destination.
Context	network-instance name string protocols isis instance name string oper-state keyword
Tree	oper-state
Options	<ul style="list-style-type: none"> • up Component or process is operational • down Component or process is not operational • empty Component slot is empty • downloading Component is downloading image into memory • booting Component is booting downloaded image • starting Component image operational, application processes starting • failed Component or process has failed

- synchronizing
Component is currently being synchronized
- upgrading
Component is currently being upgraded
- low-power
Component is offline due to insufficient system power
- degraded
Component or process is in a degraded state
- warm-reboot
Component or process is currently warm rebooting
This state is set during a warm reboot immediately following initiation of the reboot, continuing after startup until the system has completed audit. In this state the system will not accept configuration changes.
- waiting
Component or process is currently waiting
This state can be set by event handler when the reinvoke-with-delay action is used, and indicates that the event handler is waiting for the provided delay before reinvoking the instance.

Configurable

False

Platforms

Supported on all platforms

oper-system-id *string***Description**

The ID for this instance of the Integrated IS-IS protocol.

Context[network-instance name](#) *string* [protocols isis instance name](#) *string* [oper-system-id](#) *string***Tree**[oper-system-id](#)**String Length**

14

Configurable

False

Platforms

Supported on all platforms

overload**Description**

Specifies isis routing instance behavior regarding overload

Context[network-instance name](#) *string* [protocols isis instance name](#) *string* [overload](#)**Tree**[overload](#)**Configurable**

True

Platforms Supported on all platforms

advertise-external *boolean*

Description When set to true, external (non-ISIS) routes continue to be advertised when the router is in overload.

Context [network-instance name](#) *string* [protocols isis instance name](#) *string* [overload advertise-external](#) *boolean*

Tree [advertise-external](#)

Default false

Configurable True

Platforms Supported on all platforms

advertise-interlevel *boolean*

Description When set to true, L1->L2 and L2->L1 inter-level routes continue to be advertised when the router is in overload.

Context [network-instance name](#) *string* [protocols isis instance name](#) *string* [overload advertise-interlevel](#) *boolean*

Tree [advertise-interlevel](#)

Default false

Configurable True

Platforms Supported on all platforms

immediate

Description Options for advertising an overloaded state immediately

Context [network-instance name](#) *string* [protocols isis instance name](#) *string* [overload immediate](#)

Tree [immediate](#)

Configurable True

Platforms Supported on all platforms

max-metric *boolean*

Description When set to true transit links are advertised with a wide metric of 0xfffffe and a narrow metric of 0x3f

Context	network-instance name <i>string</i> protocols isis instance name <i>string</i> overload immediate max-metric <i>boolean</i>
Tree	max-metric
Default	false
Configurable	True
Platforms	Supported on all platforms

set-bit *boolean*

Description	When set to true, the Overload bit is set
Context	network-instance name <i>string</i> protocols isis instance name <i>string</i> overload immediate set-bit <i>boolean</i>
Tree	set-bit
Default	false
Configurable	True
Platforms	Supported on all platforms

instance-is-in-overload *boolean*

Description	When set to true the IS-IS instance is currently in overload state.
Context	network-instance name <i>string</i> protocols isis instance name <i>string</i> overload instance-is-in-overload <i>boolean</i>
Tree	instance-is-in-overload
Configurable	False
Platforms	Supported on all platforms

on-boot

Description	Options for advertising an overloaded state whenever the IS-IS process restarts
Context	network-instance name <i>string</i> protocols isis instance name <i>string</i> overload on-boot
Tree	on-boot
Configurable	True
Platforms	Supported on all platforms

max-metric *boolean*

Description	When set to true transit links are advertised with a wide metric of 0xfffffe and a narrow metric of 0x3f
Context	network-instance name <i>string</i> protocols isis instance name <i>string</i> overload on-boot max-metric <i>boolean</i>
Tree	max-metric
Configurable	True
Platforms	Supported on all platforms

set-bit *boolean*

Description	When set to true, the Overload bit is set
Context	network-instance name <i>string</i> protocols isis instance name <i>string</i> overload on-boot set-bit <i>boolean</i>
Tree	set-bit
Configurable	True
Platforms	Supported on all platforms

timeout *number*

Description	Specifies the time that the router should remain in overload state after the IS-IS process restarts
Context	network-instance name <i>string</i> protocols isis instance name <i>string</i> overload on-boot timeout <i>number</i>
Tree	timeout
Range	60 to 1800
Units	seconds
Configurable	True
Platforms	Supported on all platforms

poi-tlv *boolean*

Description	When set to true, a TLV is added to purge to record the system ID of the IS generating the purge.
Context	network-instance name <i>string</i> protocols isis instance name <i>string</i> poi-tlv <i>boolean</i>
Tree	poi-tlv

Default	false
Configurable	True
Platforms	Supported on all platforms

restarting-neighbor-list

Description	The list of neighbors that have restarted recently and that are currently being helped.
Context	network-instance name string protocols isis instance name string restarting-neighbor-list
Tree	restarting-neighbor-list
Configurable	False
Platforms	Supported on all platforms

neighbor [system-id string](#)

Description	The list of neighbors that have restarted recently and that are currently being helped.
Context	network-instance name string protocols isis instance name string restarting-neighbor-list neighbor system-id string
Tree	neighbor
Configurable	False
Platforms	Supported on all platforms

system-id [string](#)

Description	The neighbor router's system ID.
Context	network-instance name string protocols isis instance name string restarting-neighbor-list neighbor system-id string
String Length	14
Configurable	False
Platforms	Supported on all platforms

hostname [string](#)

Description	The hostname of the neighbor, as learned by TLV 137.
Context	network-instance name string protocols isis instance name string restarting-neighbor-list neighbor system-id string hostname string

Tree	hostname
Configurable	False
Platforms	Supported on all platforms

segment-routing

Description	Enter the segment-routing context
Context	network-instance name <i>string</i> protocols isis instance name <i>string</i> segment-routing
Tree	segment-routing
Configurable	True
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

mpls

Description	Context used to configure SR-MPLS options
Context	network-instance name <i>string</i> protocols isis instance name <i>string</i> segment-routing mpls
Tree	mpls
Configurable	True
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

adjacency-sid-hold-time (*keyword* | *number*)

Description	Timer to maintain the operational state of the adjacency SID following a failure of the adjacency.
Context	network-instance name <i>string</i> protocols isis instance name <i>string</i> segment-routing mpls adjacency-sid-hold-time (<i>keyword</i> <i>number</i>)
Tree	adjacency-sid-hold-time
Range	1 to 300
Default	15
Units	seconds
Options	<ul style="list-style-type: none"> • none
Configurable	True
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

dynamic-adjacency-sids

Description	Enter the dynamic-adjacency-sids context
Context	network-instance name <i>string</i> protocols isis instance name <i>string</i> segment-routing mpls dynamic-adjacency-sids
Tree	dynamic-adjacency-sids
Configurable	True
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

all-interfaces *boolean*

Description	When true, IS-IS is instructed to assign a dynamic adjacency SID to all IS-IS interfaces in all levels, except for the interfaces configured with an adjacency SID assignment of 'none' or 'static'.
Context	network-instance name <i>string</i> protocols isis instance name <i>string</i> segment-routing mpls dynamic-adjacency-sids all-interfaces <i>boolean</i>
Tree	all-interfaces
Default	false
Configurable	True
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

maximum-sid-depth

Description	Container to configure advertise multiple types of Maximum SID Depths (MSDs). maximum-sid-depth advertisements allow entities (e.g., centralized controllers) to determine whether a particular Segment ID (SID) stack can be supported in a given network
Context	network-instance name <i>string</i> protocols isis instance name <i>string</i> segment-routing mpls maximum-sid-depth
Tree	maximum-sid-depth
Configurable	True
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

override-bmi *number*

Description	Value to override the announced node MSD-BMI value
Context	network-instance name <i>string</i> protocols isis instance name <i>string</i> segment-routing mpls maximum-sid-depth override-bmi <i>number</i>
Tree	override-bmi
Range	0 to 15
Configurable	True
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

sid-database

Description	Database of all prefix SIDs associated with the IS-IS instance.
Context	network-instance name <i>string</i> protocols isis instance name <i>string</i> segment-routing mpls sid-database
Tree	sid-database
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

prefix-sid [prefix](#) (*ipv4-prefix* | *ipv6-prefix*) [sid-label-value](#) *number* [multi-topology-id](#) *number* [algorithm](#) *number*

Description	List of prefix SIDs
Context	network-instance name <i>string</i> protocols isis instance name <i>string</i> segment-routing mpls sid-database prefix-sid prefix (<i>ipv4-prefix</i> <i>ipv6-prefix</i>) sid-label-value <i>number</i> multi-topology-id <i>number</i> algorithm <i>number</i>
Tree	prefix-sid
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

prefix (*ipv4-prefix* | *ipv6-prefix*)

Description	The IPv4 or IPv6 prefix associated with the SID.
Context	network-instance name <i>string</i> protocols isis instance name <i>string</i> segment-routing mpls sid-database prefix-sid prefix (<i>ipv4-prefix</i> <i>ipv6-prefix</i>) sid-label-value <i>number</i> multi-topology-id <i>number</i> algorithm <i>number</i>
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

sid-label-value *number*

Description	The MPLS label value associated with the SID.
Context	network-instance name <i>string</i> protocols isis instance name <i>string</i> segment-routing mpls sid-database prefix-sid prefix (<i>ipv4-prefix</i> <i>ipv6-prefix</i>) sid-label-value <i>number</i> multi-topology-id <i>number</i> algorithm <i>number</i>
Range	16 to 1048575
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

multi-topology-id *number*

Description	The multi-topology ID that provided the prefix SID
Context	network-instance name <i>string</i> protocols isis instance name <i>string</i> segment-routing mpls sid-database prefix-sid prefix (<i>ipv4-prefix</i> <i>ipv6-prefix</i>) sid-label-value <i>number</i> multi-topology-id <i>number</i> algorithm <i>number</i>
Range	0 to 4095
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

algorithm *number*

Description	Contains the identifier of the algorithm the router uses to compute the reachability of the prefix to which the Prefix-SID is associated
Context	network-instance name <i>string</i> protocols isis instance name <i>string</i> segment-routing mpls sid-database prefix-sid prefix (<i>ipv4-prefix</i> <i>ipv6-prefix</i>) sid-label-value <i>number</i> multi-topology-id <i>number</i> algorithm <i>number</i>
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

active *boolean*

Description	When false, the prefix SID is inactive. It could be inactive for any of these reasons:
Context	network-instance name <i>string</i> protocols isis instance name <i>string</i> segment-routing mpls sid-database prefix-sid prefix (<i>ipv4-prefix</i> <i>ipv6-prefix</i>) sid-label-value <i>number</i> multi-topology-id <i>number</i> algorithm <i>number</i> active <i>boolean</i>
Tree	active

Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

prefix-conflict *boolean*

Description	Reads true when the prefix SID entry is involved in a prefix conflict within the scope of this IS-IS instance. This occurs when there are multiple entries for the same (prefix, multi-topology-id, algorithm). All the conflicting entries become inactive except for the one with the smallest sid-index.
Context	network-instance name <i>string</i> protocols isis instance name <i>string</i> segment-routing mpls sid-database prefix-sid prefix (<i>ipv4-prefix</i> <i>ipv6-prefix</i>) sid-label-value <i>number</i> multi-topology-id <i>number</i> algorithm <i>number</i> prefix-conflict <i>boolean</i>
Tree	prefix-conflict
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

sid-conflict *boolean*

Description	Reads true when the prefix SID entry is involved in a SID conflict within the scope of this IS-IS instance. This occurs when the same SID has been assigned to different prefixes after first eliminating entries that have lost the prefix-conflict comparison. All entries involved in a SID conflict that do not have the absolute lowest 'preference' value become inactive. In the SRL implementation SID entries associated with interfaces of this IS-IS instance are considered to have a lower numerical preference than remote prefix-sid entries. If there are still SID conflicts then all the remaining conflicting entries become inactive except for the one with the smallest sid-index.
Context	network-instance name <i>string</i> protocols isis instance name <i>string</i> segment-routing mpls sid-database prefix-sid prefix (<i>ipv4-prefix</i> <i>ipv6-prefix</i>) sid-label-value <i>number</i> multi-topology-id <i>number</i> algorithm <i>number</i> sid-conflict <i>boolean</i>
Tree	sid-conflict
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

sid-out-of-range *boolean*

Description	Reads true when a received prefix SID from another router has a SID index or label value that is not within the locally defined SRGB range of the network instance; the prefix SID entry will be inactive.
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Context	network-instance name <i>string</i> protocols isis instance name <i>string</i> segment-routing mpls sid-database prefix-sid prefix (<i>ipv4-prefix ipv6-prefix</i>) sid-label-value <i>number</i> multi-topology-id <i>number</i> algorithm <i>number</i> sid-out-of-range <i>boolean</i>
Tree	sid-out-of-range
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

source-router [system-id](#) *string* [level-number](#) *number*

Description	The ISIS routers that provided the prefix SID. (Multiple in the case of redistribution.)
Context	network-instance name <i>string</i> protocols isis instance name <i>string</i> segment-routing mpls sid-database prefix-sid prefix (<i>ipv4-prefix ipv6-prefix</i>) sid-label-value <i>number</i> multi-topology-id <i>number</i> algorithm <i>number</i> source-router system-id <i>string</i> level-number <i>number</i>
Tree	source-router
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

system-id *string*

Description	The system-id of an ISIS router that originated or redistributed the prefix SID
Context	network-instance name <i>string</i> protocols isis instance name <i>string</i> segment-routing mpls sid-database prefix-sid prefix (<i>ipv4-prefix ipv6-prefix</i>) sid-label-value <i>number</i> multi-topology-id <i>number</i> algorithm <i>number</i> source-router system-id <i>string</i> level-number <i>number</i>
String Length	14
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

level-number *number*

Description	The level of the LSP that advertises the prefix SID
Context	network-instance name <i>string</i> protocols isis instance name <i>string</i> segment-routing mpls sid-database prefix-sid prefix (<i>ipv4-prefix ipv6-prefix</i>) sid-label-value <i>number</i> multi-topology-id <i>number</i> algorithm <i>number</i> source-router system-id <i>string</i> level-number <i>number</i>
Range	1 to 2
Configurable	False

Platforms 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

flags

Description Flags that characterize the prefix SID

Context [network-instance name](#) *string* [protocols isis instance name](#) *string* [segment-routing mpls sid-database prefix-sid prefix](#) (*ipv4-prefix | ipv6-prefix*) [sid-label-value](#) *number* [multi-topology-id](#) *number* [algorithm](#) *number* [source-router system-id](#) *string* [level-number](#) *number* [flags](#)

Tree [flags](#)

Configurable False

Platforms 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

explicit-null *boolean*

Description If set any upstream neighbor of the Prefix-SID originator MUST replace the Prefix-SID with a Prefix-SID that has an Explicit NULL value (0 for IPv4 and 2 for IPv6) before forwarding the packet

Context [network-instance name](#) *string* [protocols isis instance name](#) *string* [segment-routing mpls sid-database prefix-sid prefix](#) (*ipv4-prefix | ipv6-prefix*) [sid-label-value](#) *number* [multi-topology-id](#) *number* [algorithm](#) *number* [source-router system-id](#) *string* [level-number](#) *number* [flags explicit-null](#) *boolean*

Tree [explicit-null](#)

Configurable False

Platforms 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

local *boolean*

Description If set, then the value/index carried by the Prefix-SID has local significance.

Context [network-instance name](#) *string* [protocols isis instance name](#) *string* [segment-routing mpls sid-database prefix-sid prefix](#) (*ipv4-prefix | ipv6-prefix*) [sid-label-value](#) *number* [multi-topology-id](#) *number* [algorithm](#) *number* [source-router system-id](#) *string* [level-number](#) *number* [flags local](#) *boolean*

Tree [local](#)

Configurable False

Platforms 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

node-sid *boolean*

Description	If set the prefix SID refers to the router identified by the prefix.
Context	network-instance name <i>string</i> protocols isis instance name <i>string</i> segment-routing mpls sid-database prefix-sid prefix (<i>ipv4-prefix</i> <i>ipv6-prefix</i>) sid-label-value <i>number</i> multi-topology-id <i>number</i> algorithm <i>number</i> source-router system-id <i>string</i> level-number <i>number</i> flags node-sid <i>boolean</i>
Tree	node-sid
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

penultimate-hop-popping *boolean*

Description	If set the penultimate hop MUST NOT pop the Prefix-SID before delivering the packet to the node that advertised the Prefix-SID.
Context	network-instance name <i>string</i> protocols isis instance name <i>string</i> segment-routing mpls sid-database prefix-sid prefix (<i>ipv4-prefix</i> <i>ipv6-prefix</i>) sid-label-value <i>number</i> multi-topology-id <i>number</i> algorithm <i>number</i> source-router system-id <i>string</i> level-number <i>number</i> flags penultimate-hop-popping <i>boolean</i>
Tree	penultimate-hop-popping
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

re-advertised *boolean*

Description	If set the prefix to which this Prefix-SID is attached was propagated from another level or from another protocol.
Context	network-instance name <i>string</i> protocols isis instance name <i>string</i> segment-routing mpls sid-database prefix-sid prefix (<i>ipv4-prefix</i> <i>ipv6-prefix</i>) sid-label-value <i>number</i> multi-topology-id <i>number</i> algorithm <i>number</i> source-router system-id <i>string</i> level-number <i>number</i> flags re-advertised <i>boolean</i>
Tree	re-advertised
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

local-system *boolean*

Description	True when the system ID belongs to the local system.
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Context	network-instance name <i>string</i> protocols isis instance name <i>string</i> segment-routing mpls sid-database prefix-sid prefix (<i>ipv4-prefix</i> <i>ipv6-prefix</i>) sid-label-value <i>number</i> multi-topology-id <i>number</i> algorithm <i>number</i> source-router system-id <i>string</i> level-number <i>number</i> local-system <i>boolean</i>
Tree	local-system
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

static-label-block *reference*

Description	Reference to a static label block to use an SRLB. Configuration of this label block is mandatory in order to assign static adjacency SID labels. This label block is advertised as an SRLB in the router capabilities TLV.
Context	network-instance name <i>string</i> protocols isis instance name <i>string</i> segment-routing mpls static-label-block <i>reference</i>
Tree	static-label-block
Reference	system mpls label-ranges static name <i>string</i>
Configurable	True
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

static-label-block-status *keyword*

Description	Status of the label block. The label block may show as unavailable if there is pending cleanup.
Context	network-instance name <i>string</i> protocols isis instance name <i>string</i> segment-routing mpls static-label-block-status <i>keyword</i>
Tree	static-label-block-status
Options	<ul style="list-style-type: none"> available unavailable
Configurable	False
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

statistics

Description	Instance level statistics
Context	network-instance name <i>string</i> protocols isis instance name <i>string</i> statistics
Tree	statistics
Configurable	False
Platforms	Supported on all platforms

last-partial-spf *string*

Description	The elapsed time since the last time a partial SPF run was run on either the L1 or L2 LSDB
Context	network-instance name <i>string</i> protocols isis instance name <i>string</i> statistics last-partial-spf <i>string</i>
Tree	last-partial-spf
String Length	20 to 32
Configurable	False
Platforms	Supported on all platforms

last-spf *string*

Description	The elapsed time since the last time a full SPF run was run on either the L1 or L2 LSDB
Context	network-instance name <i>string</i> protocols isis instance name <i>string</i> statistics last-spf <i>string</i>
Tree	last-spf
String Length	20 to 32
Configurable	False
Platforms	Supported on all platforms

partial-spf-runs *number*

Description	The number of times a partial SPF run has been performed on either the L1 or L2 LSDB since the IS-IS manager restarted
Context	network-instance name <i>string</i> protocols isis instance name <i>string</i> statistics partial-spf-runs <i>number</i>
Tree	partial-spf-runs

Default	0
Configurable	False
Platforms	Supported on all platforms

pdu *pdu-name keyword*

Description	List of PDUs processed by the IS-IS instance since the IS-IS manager restarted
Context	network-instance name <i>string</i> protocols isis instance name <i>string</i> statistics pdu pdu-name <i>keyword</i>
Tree	pdu
Configurable	False
Platforms	Supported on all platforms

pdu-name *keyword*

Description	The PDU type that was processed
Context	network-instance name <i>string</i> protocols isis instance name <i>string</i> statistics pdu pdu-name <i>keyword</i>
Options	<ul style="list-style-type: none"> • LSP Link State PDU • IIH IS-to-IS Hello PDU • CSNP Complete Sequence Number PDU • PSNP Partial Sequence Number PDU • Unknown Unknown PDU type
Configurable	False
Platforms	Supported on all platforms

dropped *number*

Description	The number of PDUs that were received and dropped
Context	network-instance name <i>string</i> protocols isis instance name <i>string</i> statistics pdu pdu-name <i>keyword</i> dropped <i>number</i>

Tree	dropped
Default	0
Configurable	False
Platforms	Supported on all platforms

processed *number*

Description	The number of PDUs that were received and processed
Context	network-instance name <i>string</i> protocols isis instance name <i>string</i> statistics pdu pdu-name <i>keyword</i> processed <i>number</i>
Tree	processed
Default	0
Configurable	False
Platforms	Supported on all platforms

received *number*

Description	The number of PDUs that were received
Context	network-instance name <i>string</i> protocols isis instance name <i>string</i> statistics pdu pdu-name <i>keyword</i> received <i>number</i>
Tree	received
Default	0
Configurable	False
Platforms	Supported on all platforms

sent *number*

Description	The number of PDUs that were transmitted
Context	network-instance name <i>string</i> protocols isis instance name <i>string</i> statistics pdu pdu-name <i>keyword</i> sent <i>number</i>
Tree	sent
Default	0
Configurable	False
Platforms	Supported on all platforms

spf-runs *number*

Description	The number of times a full SPF run has been performed on either the L1 or L2 LSDB since the IS-IS manager restarted
Context	network-instance name <i>string</i> protocols isis instance name <i>string</i> statistics spf-runs <i>number</i>
Tree	spf-runs
Default	0
Configurable	False
Platforms	Supported on all platforms

te-database-install

Description	When present, topology and TE information related to this protocol instance is installed into the TE database
Context	network-instance name <i>string</i> protocols isis instance name <i>string</i> te-database-install
Tree	te-database-install
Configurable	True
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

bgp-ls

Description	When present, topology and TE information related to this protocol instance is installed into the TE database in a format that supports export as BGP-LS routes
Context	network-instance name <i>string</i> protocols isis instance name <i>string</i> te-database-install bgp-ls
Tree	bgp-ls
Configurable	True
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

bgp-ls-identifier *number*

Description	BGP-LS identifier value that is sent in the BGP-LS NLRI
Context	network-instance name <i>string</i> protocols isis instance name <i>string</i> te-database-install bgp-ls bgp-ls-identifier <i>number</i>
Tree	bgp-ls-identifier

Configurable	True
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

igp-identifier *number*

Description	Unique identifier of the IGP instance that is sent in the BGP-LS NLRI
Context	network-instance name <i>string</i> protocols isis instance name <i>string</i> te-database-install bgp-ls igp-identifier <i>number</i>
Tree	igp-identifier
Range	0 to 18446744073709551615
Configurable	True
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

timers

Description	Container for IS-IS timers applicable at the instance level
Context	network-instance name <i>string</i> protocols isis instance name <i>string</i> timers
Tree	timers
Configurable	True
Platforms	Supported on all platforms

lsp-generation

Description	Container with options for specifying LSP generation timer values
Context	network-instance name <i>string</i> protocols isis instance name <i>string</i> timers lsp-generation
Tree	lsp-generation
Configurable	True
Platforms	Supported on all platforms

initial-wait *number*

Description	Time interval between the detection of topology change and when the new LSP is generated. The timer granularity is 100 ms. Timer values are rounded down to the nearest granularity, for example a configured value of 550 ms is internally rounded down to 500 ms
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Context	network-instance name <i>string</i> protocols isis instance name <i>string</i> timers lsp-generation initial-wait <i>number</i>
Tree	initial-wait
Range	10 to 100000
Default	10
Units	milliseconds
Configurable	True
Platforms	Supported on all platforms

max-wait *number*

Description	Specifies the maximum interval between two consecutive generations of an LSP. The timer granularity is 100 ms. Timer values are rounded down to the nearest granularity, for example a configured value of 550 ms is internally rounded down to 500 ms
Context	network-instance name <i>string</i> protocols isis instance name <i>string</i> timers lsp-generation max-wait <i>number</i>
Tree	max-wait
Range	10 to 120000
Default	5000
Units	milliseconds
Configurable	True
Platforms	Supported on all platforms

second-wait *number*

Description	Time interval between the the first and second LSP generation. The timer granularity is 100 ms. Timer values are rounded down to the nearest granularity, for example a configured value of 550 ms is internally rounded down to 500 ms
Context	network-instance name <i>string</i> protocols isis instance name <i>string</i> timers lsp-generation second-wait <i>number</i>
Tree	second-wait
Range	10 to 100000
Default	1000
Units	milliseconds

Configurable	True
Platforms	Supported on all platforms

Isp-lifetime *number*

Description	Time interval in seconds that the LSPs originated by this IS (router) remain valid in the LSDB before they must be refreshed or else they are purged.
Context	network-instance name <i>string</i> protocols isis instance name <i>string</i> timers lsp-lifetime <i>number</i>
Tree	lsp-lifetime
Range	350 to 65535
Default	1200
Units	seconds
Configurable	True
Platforms	Supported on all platforms

Isp-refresh

Description	Configure LSP refresh timers.
Context	network-instance name <i>string</i> protocols isis instance name <i>string</i> timers lsp-refresh
Tree	lsp-refresh
Configurable	True
Platforms	Supported on all platforms

half-lifetime *boolean*

Description	When set to true, the LSP refresh interval is half the lsp-lifetime
Context	network-instance name <i>string</i> protocols isis instance name <i>string</i> timers lsp-refresh half-lifetime <i>boolean</i>
Tree	half-lifetime
Default	true
Configurable	True
Platforms	Supported on all platforms

interval *number*

Description	Time interval in seconds since the last advertisement of its LSP when the router attempts to refresh the LSP. Must not exceed 90% of the lsp-lifetime. This value is ignored when half-lifetime is set to true.
Context	network-instance name <i>string</i> protocols isis instance name <i>string</i> timers lsp-refresh interval <i>number</i>
Tree	interval
Range	150 to 65535
Default	600
Units	seconds
Configurable	True
Platforms	Supported on all platforms

spf

Description	Container with options for specifying SPF timer values
Context	network-instance name <i>string</i> protocols isis instance name <i>string</i> timers spf
Tree	spf
Configurable	True
Platforms	Supported on all platforms

initial-wait *number*

Description	Time interval between the detection of topology change and when the SPF algorithm runs. The timer granularity is 100 ms. Timer values are rounded down to the nearest granularity, for example a configured value of 550 ms is internally rounded down to 500 ms
Context	network-instance name <i>string</i> protocols isis instance name <i>string</i> timers spf initial-wait <i>number</i>
Tree	initial-wait
Range	10 to 100000
Default	1000
Units	milliseconds
Configurable	True
Platforms	Supported on all platforms

max-wait *number*

Description	Specifies the maximum interval between two consecutive SPF calculations in milliseconds. The timer granularity is 100 ms. Timer values are rounded down to the nearest granularity, for example a configured value of 550 ms is internally rounded down to 500 ms
Context	network-instance name <i>string</i> protocols isis instance name <i>string</i> timers spf max-wait <i>number</i>
Tree	max-wait
Range	10 to 120000
Default	10000
Units	milliseconds
Configurable	True
Platforms	Supported on all platforms

second-wait *number*

Description	Time interval between the the first and second SPF run. The timer granularity is 100 ms. Timer values are rounded down to the nearest granularity, for example a configured value of 550 ms is internally rounded down to 500 ms
Context	network-instance name <i>string</i> protocols isis instance name <i>string</i> timers spf second-wait <i>number</i>
Tree	second-wait
Range	10 to 100000
Default	1000
Units	milliseconds
Configurable	True
Platforms	Supported on all platforms

trace-options

Description	Instance level debug trace options for IS-IS
Context	network-instance name <i>string</i> protocols isis instance name <i>string</i> trace-options
Tree	trace-options

Configurable	True
Platforms	Supported on all platforms

trace keyword

Description	List of tracing options
Context	network-instance name <i>string</i> protocols isis instance name <i>string</i> trace-options trace <i>keyword</i>
Tree	trace
Options	<ul style="list-style-type: none"> • adjacencies • graceful-restart • interfaces • packets-all • packets-p2p-hello • packets-l1-hello • packets-l2-hello • packets-l1-psnp • packets-l2-psnp • packets-l1-csnp • packets-l2-csnp • packets-l1-lsp • packets-l2-lsp • routes • summary-addresses

Configurable	True
Platforms	Supported on all platforms

traffic-engineering

Description	container for traffic engineering information
Context	network-instance name <i>string</i> protocols isis instance name <i>string</i> traffic-engineering
Tree	traffic-engineering
Configurable	True
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

advertisement *boolean*

Description	A setting of false means that no TE-related TLVs and subTLVs should be added to LSAs or LSPs originated by this IGP instance. A setting of true means that TE-related TLVs and subTLVs should be added to LSAs or LSPs originated by this IGP instance.
Context	network-instance name <i>string</i> protocols isis instance name <i>string</i> traffic-engineering advertisement <i>boolean</i>
Tree	advertisement
Default	false
Configurable	True
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

ipv4-te-router-id *string*

Description	<p>A routable IPv4 address to identify the router uniquely in a TE domain. TLV = 134.</p> <p>The ipv4-te-router-id contains the 4-octet router ID of the router originating the LSP. The ipv4-te-router-id guarantees a single stable address that can always be referenced in a path that will be reachable from multiple hops away, regardless of the state of the node's interfaces.</p> <p>The configured ipv4-te-router-id address must be active and reachable within the routing instance and must be associated to either a system or loopback interface. The state value represents the operational advertised of ipv4-te-router-id</p>
Context	network-instance name <i>string</i> protocols isis instance name <i>string</i> traffic-engineering ipv4-te-router-id <i>string</i>
Tree	ipv4-te-router-id
Configurable	True
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

ipv6-te-router-id *string*

Description	<p>A routable IPv6 address to identify the router uniquely in a TE domain. TLV = 140.</p> <p>The ipv6-te-router-id contains the 4-octet router ID of the router originating the LSP. The ipv6-te-router-id guarantees a single stable address that can always be referenced in a path that will be reachable from multiple hops away, regardless of the state of the node's interfaces.</p> <p>The configured ipv6-te-router-id address must be active and reachable within the routing instance and must be associated to either a system or loopback</p>
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interface. The state value represents the operational advertised of ipv6-te-router-id

Context	network-instance name <i>string</i> protocols isis instance name <i>string</i> traffic-engineering ipv6-te-router-id <i>string</i>
Tree	ipv6-te-router-id
Configurable	True
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

legacy-link-attribute-advertisement *boolean*

Description	The advertisement mode for TE link attributes. A setting of true means that TE properties should be advertised in legacy mode as defined in RFC 8919 and RFC 8920.
Context	network-instance name <i>string</i> protocols isis instance name <i>string</i> traffic-engineering legacy-link-attribute-advertisement <i>boolean</i>
Tree	legacy-link-attribute-advertisement
Default	true
Configurable	True
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

transport

Description	Enter the transport context
Context	network-instance name <i>string</i> protocols isis instance name <i>string</i> transport
Tree	transport
Configurable	True
Platforms	Supported on all platforms

lsp-mtu-size *number*

Description	Sets the maximum size of LSPs generated by this router
Context	network-instance name <i>string</i> protocols isis instance name <i>string</i> transport lsp-mtu-size <i>number</i>
Tree	lsp-mtu-size
Range	490 to 9490
Default	1492
Units	bytes

Configurable	True
Platforms	Supported on all platforms

weighted-ecmp

Description	Enter the weighted-ecmp context
Context	network-instance name <i>string</i> protocols isis instance name <i>string</i> weighted-ecmp
Tree	weighted-ecmp
Configurable	True
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

admin-state *keyword*

Description	<p>Setting enable triggers weighted ECMP programming for all eligible multipath IS-IS routes associated with the instance</p> <p>An IS-IS route is eligible for weighted ECMP if all the next-hop interfaces in the multipath set have a load-balancing-weight other than 'none'.</p> <p>When weighted ECMP is disabled in an IS-IS instance all IS-IS multipath routes are programmed as normal ECMP, even if some or all of the next-hop interfaces in any particular multipath set have a load-balancing-weight other than 'none'.</p>
Context	network-instance name <i>string</i> protocols isis instance name <i>string</i> weighted-ecmp admin-state <i>keyword</i>
Tree	admin-state
Default	disable
Options	<ul style="list-style-type: none"> • enable • disable
Configurable	True
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

max-ecmp-hash-buckets-per-next-hop-group *number*

Description	<p>Specifies the maximum number of ECMP hash buckets per next-hop-group. Weighted ECMP weights are normalized based on this number of hash buckets.</p>
Context	network-instance name <i>string</i> protocols isis instance name <i>string</i> weighted-ecmp max-ecmp-hash-buckets-per-next-hop-group <i>number</i>

Tree	max-ecmp-hash-buckets-per-next-hop-group
Range	1 to 128
Configurable	True
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

non-stop-forwarding

Description	Enter the non-stop-forwarding context
Context	network-instance name <i>string</i> protocols isis non-stop-forwarding
Tree	non-stop-forwarding
Configurable	True
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

admin-state *keyword*

Description	Used to administratively enable or disable the IS-IS non-stop forwarding functionality.
Context	network-instance name <i>string</i> protocols isis non-stop-forwarding admin-state keyword
Tree	admin-state
Default	disable
Options	<ul style="list-style-type: none"> • enable • disable
Configurable	True
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

ldp

Description	Container for LDP configuration and state
Context	network-instance name <i>string</i> protocols ldp
Tree	ldp
Configurable	True
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

admin-state *keyword*

Description	Administratively enable or disable LDP
Context	network-instance name <i>string</i> protocols ldp admin-state <i>keyword</i>
Tree	admin-state
Default	disable
Options	<ul style="list-style-type: none"> • enable • disable
Configurable	True
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

discovery

Description	Neighbor discovery configuration and operational state
Context	network-instance name <i>string</i> protocols ldp discovery
Tree	discovery
Configurable	True
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

interfaces

Description	The complete set of interfaces used for LDP Basic Discovery
Context	network-instance name <i>string</i> protocols ldp discovery interfaces
Tree	interfaces
Configurable	True
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

hello-holdtime *number*

Description	The time interval for which a LDP Hello adjacency is maintained in the absence of Hello messages from the LDP neighbor
Context	network-instance name <i>string</i> protocols ldp discovery interfaces hello-holdtime <i>number</i>
Tree	hello-holdtime
Range	15 to 3600
Units	seconds

Configurable	True
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

hello-interval *number*

Description	The interval between consecutive LDP Hello messages used in LDP discovery
Context	network-instance name <i>string</i> protocols ldp discovery interfaces hello-interval number
Tree	hello-interval
Range	5 to 1200
Units	seconds
Configurable	True
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

interface *name string*

Description	List of LDP interfaces used for LDP Basic Discovery
Context	network-instance name <i>string</i> protocols ldp discovery interfaces interface name string
Tree	interface
Configurable	True
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

name *string*

Description	Reference to a specific subinterface that is bound to the network instance
Context	network-instance name <i>string</i> protocols ldp discovery interfaces interface name string
String Length	5 to 25
Configurable	True
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

hello-holdtime *number*

Description	The time interval for which a LDP Hello adjacency is maintained in the absence of Hello messages from the LDP neighbor
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Context	network-instance name <i>string</i> protocols ldp discovery interfaces interface name <i>string</i> hello-holdtime <i>number</i>
Tree	hello-holdtime
Range	15 to 3600
Units	seconds
Configurable	True
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

hello-interval *number*

Description	The interval between consecutive LDP Hello messages used in LDP discovery
Context	network-instance name <i>string</i> protocols ldp discovery interfaces interface name <i>string</i> hello-interval <i>number</i>
Tree	hello-interval
Range	5 to 1200
Units	seconds
Configurable	True
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

ipv4

Description	Enter the ipv4 context
Context	network-instance name <i>string</i> protocols ldp discovery interfaces interface name <i>string</i> ipv4
Tree	ipv4
Configurable	True
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

admin-state *keyword*

Description	Administratively enable or disable LDP discovery for IPv4 on a particular interface
Context	network-instance name <i>string</i> protocols ldp discovery interfaces interface name <i>string</i> ipv4 admin-state <i>keyword</i>
Tree	admin-state
Default	disable

Options	<ul style="list-style-type: none"> • enable • disable
Configurable	True
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

enable-bfd *boolean*

Description	Enable BFD
Context	network-instance name <i>string</i> protocols ldp discovery interfaces interface name <i>string</i> ipv4 enable-bfd <i>boolean</i>
Tree	enable-bfd
Default	false
Configurable	True
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

hello-adjacencies

Description	Container with a list of hello adjacencies
Context	network-instance name <i>string</i> protocols ldp discovery interfaces interface name <i>string</i> ipv4 hello-adjacencies
Tree	hello-adjacencies
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

adjacency [lsr-id](#) *reference* [label-space-id](#) *reference*

Description	List of hello adjacencies
Context	network-instance name <i>string</i> protocols ldp discovery interfaces interface name <i>string</i> ipv4 hello-adjacencies adjacency lsr-id <i>reference</i> label-space-id <i>reference</i>
Tree	adjacency
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

lsr-id *reference*

Description	The LSR ID of the peer, as a portion of the peer LDP ID
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Context	network-instance name <i>string</i> protocols ldp discovery interfaces interface name <i>string</i> ipv4 hello-adjacencies adjacency lsr-id <i>reference</i> label-space-id <i>reference</i>
Reference	network-instance name <i>string</i> protocols ldp peers peer lsr-id (<i>ipv4-address</i> <i>ipv6-address</i>) label-space-id <i>number</i>
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

label-space-id *reference*

Description	The Label Space ID of the peer, as a portion of the peer LDP ID
Context	network-instance name <i>string</i> protocols ldp discovery interfaces interface name <i>string</i> ipv4 hello-adjacencies adjacency lsr-id <i>reference</i> label-space-id <i>reference</i>
Reference	network-instance name <i>string</i> protocols ldp peers peer lsr-id (<i>ipv4-address</i> <i>ipv6-address</i>) label-space-id <i>number</i>
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

hello-holdtime

Description	Container for hello holdtime state information
Context	network-instance name <i>string</i> protocols ldp discovery interfaces interface name <i>string</i> ipv4 hello-adjacencies adjacency lsr-id <i>reference</i> label-space-id <i>reference</i> hello-holdtime
Tree	hello-holdtime
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

negotiated *number*

Description	The holdtime negotiated between this LSR and the adjacent LSR
Context	network-instance name <i>string</i> protocols ldp discovery interfaces interface name <i>string</i> ipv4 hello-adjacencies adjacency lsr-id <i>reference</i> label-space-id <i>reference</i> hello-holdtime negotiated <i>number</i>
Tree	negotiated
Units	seconds
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

neighbor-proposed *number*

Description	The holdtime value learned from the adjacent LSR
Context	network-instance name <i>string</i> protocols ldp discovery interfaces interface name <i>string</i> ipv4 hello-adjacencies adjacency lsr-id <i>reference</i> label-space-id <i>reference</i> hello-holdtime neighbor-proposed <i>number</i>
Tree	neighbor-proposed
Units	seconds
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

remaining *number*

Description	The time remaining until the holdtime timer expires
Context	network-instance name <i>string</i> protocols ldp discovery interfaces interface name <i>string</i> ipv4 hello-adjacencies adjacency lsr-id <i>reference</i> label-space-id <i>reference</i> hello-holdtime remaining <i>number</i>
Tree	remaining
Units	seconds
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

hello-received *number*

Description	The number of Hello messages received
Context	network-instance name <i>string</i> protocols ldp discovery interfaces interface name <i>string</i> ipv4 hello-adjacencies adjacency lsr-id <i>reference</i> label-space-id <i>reference</i> hello-received <i>number</i>
Tree	hello-received
Default	0
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

hello-sent *number*

Description	The number of Hello messages sent
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Context	network-instance name <i>string</i> protocols ldp discovery interfaces interface name <i>string</i> ipv4 hello-adjacencies adjacency lsr-id <i>reference</i> label-space-id <i>reference</i> hello-sent <i>number</i>
Tree	hello-sent
Default	0
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

local-address *string*

Description	Local address of the hello adjacency
Context	network-instance name <i>string</i> protocols ldp discovery interfaces interface name <i>string</i> ipv4 hello-adjacencies adjacency lsr-id <i>reference</i> label-space-id <i>reference</i> local-address <i>string</i>
Tree	local-address
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

remote-address *string*

Description	Remote address of the hello adjacency
Context	network-instance name <i>string</i> protocols ldp discovery interfaces interface name <i>string</i> ipv4 hello-adjacencies adjacency lsr-id <i>reference</i> label-space-id <i>reference</i> remote-address <i>string</i>
Tree	remote-address
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

intf-oper-down-reason *keyword*

Description	Reason for the LDP interface being down
Context	network-instance name <i>string</i> protocols ldp discovery interfaces interface name <i>string</i> ipv4 intf-oper-down-reason <i>keyword</i>
Tree	intf-oper-down-reason
Options	<ul style="list-style-type: none"> • ldp-interface-admin-down • ldp-instance-oper-down • network-instance-subinterface-down • out-of-resources

- unknown

Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

last-oper-state-change *string*

Description	The last time when the IPv4 oper-state changed
Context	network-instance name <i>string</i> protocols ldp discovery interfaces interface name <i>string</i> ipv4 last-oper-state-change <i>string</i>
Tree	last-oper-state-change
String Length	20 to 32
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

oper-state *keyword*

Description	Operational state of IPv4 on the LDP interface
Context	network-instance name <i>string</i> protocols ldp discovery interfaces interface name <i>string</i> ipv4 oper-state <i>keyword</i>
Tree	oper-state
Options	<ul style="list-style-type: none"> • up • down
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

override-lsr-id

Description	Options to override the LSR ID
Context	network-instance name <i>string</i> protocols ldp discovery interfaces interface name <i>string</i> ipv4 override-lsr-id
Tree	override-lsr-id
Configurable	True
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

local-subinterface *keyword*

Description	Use local subinterface IP address as LSR ID for interface LDP session
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Context	network-instance name <i>string</i> protocols ldp discovery interfaces interface name <i>string</i> ipv4 override-lsr-id local-subinterface keyword
Tree	local-subinterface
Options	<ul style="list-style-type: none"> • ipv4 Use the IPv4 address of the subinterface as the LSR ID
Configurable	True
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

statistics

Description	Statistics objects
Context	network-instance name <i>string</i> protocols ldp discovery interfaces interface name <i>string</i> ipv4 statistics
Tree	statistics
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

hello-message-errors

Description	Counters for received Hello message errors
Context	network-instance name <i>string</i> protocols ldp discovery interfaces interface name <i>string</i> ipv4 statistics hello-message-errors
Tree	hello-message-errors
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

bad-message-length *number*

Description	The number of Hello messages received with a bad message length
Context	network-instance name <i>string</i> protocols ldp discovery interfaces interface name <i>string</i> ipv4 statistics hello-message-errors bad-message-length <i>number</i>
Tree	bad-message-length
Default	0
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

bad-pdu-length *number*

Description	The number of Hello messages received with a bad PDU length
Context	network-instance name <i>string</i> protocols ldp discovery interfaces interface name <i>string</i> ipv4 statistics hello-message-errors bad-pdu-length <i>number</i>
Tree	bad-pdu-length
Default	0
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

bad-protocol-version *number*

Description	The number of Hello messages received with a bad protocol version
Context	network-instance name <i>string</i> protocols ldp discovery interfaces interface name <i>string</i> ipv4 statistics hello-message-errors bad-protocol-version <i>number</i>
Tree	bad-protocol-version
Default	0
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

malformed-tlv-value *number*

Description	The number of Hello messages received with a malformed TLV value
Context	network-instance name <i>string</i> protocols ldp discovery interfaces interface name <i>string</i> ipv4 statistics hello-message-errors malformed-tlv-value <i>number</i>
Tree	malformed-tlv-value
Default	0
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

hello-received *number*

Description	The number of Hello messages received
Context	network-instance name <i>string</i> protocols ldp discovery interfaces interface name <i>string</i> ipv4 statistics hello-received <i>number</i>
Tree	hello-received

Default	0
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

hello-sent *number*

Description	The number of Hello messages sent
Context	network-instance name <i>string</i> protocols ldp discovery interfaces interface name <i>string</i> ipv4 statistics hello-sent <i>number</i>
Tree	hello-sent
Default	0
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

trace-options

Description	Configure event/packet tracing for one specific LDP interface
Context	network-instance name <i>string</i> protocols ldp discovery interfaces interface name <i>string</i> ipv4 trace-options
Tree	trace-options
Configurable	True
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

trace *keyword*

Description	Specifies the trace information to be captured
Context	network-instance name <i>string</i> protocols ldp discovery interfaces interface name <i>string</i> ipv4 trace-options trace <i>keyword</i>
Tree	trace
Options	<ul style="list-style-type: none"> • all Trace all events and packets • events-discovery Trace session related events • messages-hello Trace Hello packets • messages-hello-detail

Trace LDP Hello packets with detailed output

Configurable	True
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

ipv6

Description	Enter the ipv6 context
Context	network-instance name <i>string</i> protocols ldp discovery interfaces interface name <i>string</i> ipv6
Tree	ipv6
Configurable	True
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

admin-state *keyword*

Description	Administratively enable or disable LDP discovery for IPv6 on a particular interface
Context	network-instance name <i>string</i> protocols ldp discovery interfaces interface name <i>string</i> ipv6 admin-state <i>keyword</i>
Tree	admin-state
Default	disable
Options	<ul style="list-style-type: none"> • enable • disable
Configurable	True
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

enable-bfd *boolean*

Description	Enable BFD
Context	network-instance name <i>string</i> protocols ldp discovery interfaces interface name <i>string</i> ipv6 enable-bfd <i>boolean</i>
Tree	enable-bfd
Default	false
Configurable	True
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

hello-adjacencies

Description	Container with a list of hello adjacencies
Context	network-instance name <i>string</i> protocols ldp discovery interfaces interface name <i>string</i> ipv6 hello-adjacencies
Tree	hello-adjacencies
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

adjacency [lsr-id reference](#) [label-space-id reference](#)

Description	List of hello adjacencies
Context	network-instance name <i>string</i> protocols ldp discovery interfaces interface name <i>string</i> ipv6 hello-adjacencies adjacency lsr-id reference label-space-id reference
Tree	adjacency
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

lsr-id [reference](#)

Description	The LSR ID of the peer, as a portion of the peer LDP ID
Context	network-instance name <i>string</i> protocols ldp discovery interfaces interface name <i>string</i> ipv6 hello-adjacencies adjacency lsr-id reference label-space-id reference
Reference	network-instance name <i>string</i> protocols ldp peers peer lsr-id (<i>ipv4-address</i> <i>ipv6-address</i>) label-space-id <i>number</i>
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

label-space-id [reference](#)

Description	The Label Space ID of the peer, as a portion of the peer LDP ID
Context	network-instance name <i>string</i> protocols ldp discovery interfaces interface name <i>string</i> ipv6 hello-adjacencies adjacency lsr-id reference label-space-id reference
Reference	network-instance name <i>string</i> protocols ldp peers peer lsr-id (<i>ipv4-address</i> <i>ipv6-address</i>) label-space-id <i>number</i>

Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

hello-holdtime

Description	Container for hello holdtime state information
Context	network-instance name <i>string</i> protocols ldp discovery interfaces interface name <i>string</i> ipv6 hello-adjacencies adjacency lsr-id <i>reference</i> label-space-id <i>reference</i> hello-holdtime
Tree	hello-holdtime
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

negotiated *number*

Description	The holdtime negotiated between this LSR and the adjacent LSR
Context	network-instance name <i>string</i> protocols ldp discovery interfaces interface name <i>string</i> ipv6 hello-adjacencies adjacency lsr-id <i>reference</i> label-space-id <i>reference</i> hello-holdtime negotiated <i>number</i>
Tree	negotiated
Units	seconds
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

neighbor-proposed *number*

Description	The holdtime value learned from the adjacent LSR
Context	network-instance name <i>string</i> protocols ldp discovery interfaces interface name <i>string</i> ipv6 hello-adjacencies adjacency lsr-id <i>reference</i> label-space-id <i>reference</i> hello-holdtime neighbor-proposed <i>number</i>
Tree	neighbor-proposed
Units	seconds
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

remaining *number*

Description	The time remaining until the holdtime timer expires
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Context	network-instance name <i>string</i> protocols ldp discovery interfaces interface name <i>string</i> ipv6 hello-adjacencies adjacency lsr-id <i>reference</i> label-space-id <i>reference</i> hello-holdtime remaining <i>number</i>
Tree	remaining
Units	seconds
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

hello-received *number*

Description	The number of Hello messages received
Context	network-instance name <i>string</i> protocols ldp discovery interfaces interface name <i>string</i> ipv6 hello-adjacencies adjacency lsr-id <i>reference</i> label-space-id <i>reference</i> hello-received <i>number</i>
Tree	hello-received
Default	0
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

hello-sent *number*

Description	The number of Hello messages sent
Context	network-instance name <i>string</i> protocols ldp discovery interfaces interface name <i>string</i> ipv6 hello-adjacencies adjacency lsr-id <i>reference</i> label-space-id <i>reference</i> hello-sent <i>number</i>
Tree	hello-sent
Default	0
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

local-address *string*

Description	Local address of the hello adjacency
Context	network-instance name <i>string</i> protocols ldp discovery interfaces interface name <i>string</i> ipv6 hello-adjacencies adjacency lsr-id <i>reference</i> label-space-id <i>reference</i> local-address <i>string</i>
Tree	local-address
Configurable	False

Platforms 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

remote-address *string*

Description Remote address of the hello adjacency

Context [network-instance name *string*](#) [protocols ldp discovery interfaces interface name *string*](#) [ipv6 hello-adjacencies adjacency lsr-id *reference*](#) [label-space-id *reference*](#) [remote-address *string*](#)

Tree [remote-address](#)

Configurable False

Platforms 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

intf-oper-down-reason *keyword*

Description Reason for the LDP interface being down

Context [network-instance name *string*](#) [protocols ldp discovery interfaces interface name *string*](#) [ipv6 intf-oper-down-reason *keyword*](#)

Tree [intf-oper-down-reason](#)

Options

- ldp-interface-admin-down
- ldp-instance-oper-down
- network-instance-subinterface-down
- out-of-resources
- unknown

Configurable False

Platforms 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

last-oper-state-change *string*

Description The last time when the IPv6 oper-state changed

Context [network-instance name *string*](#) [protocols ldp discovery interfaces interface name *string*](#) [ipv6 last-oper-state-change *string*](#)

Tree [last-oper-state-change](#)

String Length 20 to 32

Configurable False

Platforms 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

oper-state *keyword*

Description	Operational state of IPv6 on the LDP interface
Context	network-instance name <i>string</i> protocols ldp discovery interfaces interface name <i>string</i> ipv6 oper-state <i>keyword</i>
Tree	oper-state
Options	<ul style="list-style-type: none"> • up • down
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

override-lsr-id

Description	Options to override the LSR ID
Context	network-instance name <i>string</i> protocols ldp discovery interfaces interface name <i>string</i> ipv6 override-lsr-id
Tree	override-lsr-id
Configurable	True
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

local-subinterface *keyword*

Description	Use local subinterface IP address as LSR ID for interface LDP session
Context	network-instance name <i>string</i> protocols ldp discovery interfaces interface name <i>string</i> ipv6 override-lsr-id local-subinterface <i>keyword</i>
Tree	local-subinterface
Options	<ul style="list-style-type: none"> • ipv4 Use the IPv4 address of the subinterface as the LSR ID • ipv6 Use the IPv6 address of the subinterface as the LSR ID
Configurable	True
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

statistics

Description	Statistics objects
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Context	network-instance name <i>string</i> protocols ldp discovery interfaces interface name <i>string</i> ipv6 statistics
Tree	statistics
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

hello-message-errors

Description	Counters for received Hello message errors
Context	network-instance name <i>string</i> protocols ldp discovery interfaces interface name <i>string</i> ipv6 statistics hello-message-errors
Tree	hello-message-errors
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

bad-message-length *number*

Description	The number of Hello messages received with a bad message length
Context	network-instance name <i>string</i> protocols ldp discovery interfaces interface name <i>string</i> ipv6 statistics hello-message-errors bad-message-length <i>number</i>
Tree	bad-message-length
Default	0
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

bad-pdu-length *number*

Description	The number of Hello messages received with a bad PDU length
Context	network-instance name <i>string</i> protocols ldp discovery interfaces interface name <i>string</i> ipv6 statistics hello-message-errors bad-pdu-length <i>number</i>
Tree	bad-pdu-length
Default	0
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

bad-protocol-version *number*

Description	The number of Hello messages received with a bad protocol version
Context	network-instance name <i>string</i> protocols ldp discovery interfaces interface name <i>string</i> ipv6 statistics hello-message-errors bad-protocol-version <i>number</i>
Tree	bad-protocol-version
Default	0
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

malformed-tlv-value *number*

Description	The number of Hello messages received with a malformed TLV value
Context	network-instance name <i>string</i> protocols ldp discovery interfaces interface name <i>string</i> ipv6 statistics hello-message-errors malformed-tlv-value <i>number</i>
Tree	malformed-tlv-value
Default	0
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

hello-received *number*

Description	The number of Hello messages received
Context	network-instance name <i>string</i> protocols ldp discovery interfaces interface name <i>string</i> ipv6 statistics hello-received <i>number</i>
Tree	hello-received
Default	0
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

hello-sent *number*

Description	The number of Hello messages sent
Context	network-instance name <i>string</i> protocols ldp discovery interfaces interface name <i>string</i> ipv6 statistics hello-sent <i>number</i>
Tree	hello-sent

Default	0
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

trace-options

Description	Configure event/packet tracing for one specific LDP interface
Context	network-instance name <i>string</i> protocols ldp discovery interfaces interface name <i>string</i> ipv6 trace-options
Tree	trace-options
Configurable	True
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

trace keyword

Description	Specifies the trace information to be captured
Context	network-instance name <i>string</i> protocols ldp discovery interfaces interface name <i>string</i> ipv6 trace-options trace <i>keyword</i>
Tree	trace
Options	<ul style="list-style-type: none"> • all Trace all events and packets • events-discovery Trace session related events • messages-hello Trace Hello packets • messages-hello-detail Trace LDP Hello packets with detailed output
Configurable	True
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

trace-options

Description	Configure event/packet tracing for all LDP interfaces
Context	network-instance name <i>string</i> protocols ldp discovery interfaces trace-options
Tree	trace-options

Configurable	True
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

trace keyword

Description	Specifies the trace information to be captured
Context	network-instance name <i>string</i> protocols ldp discovery interfaces trace-options trace <i>keyword</i>
Tree	trace
Options	<ul style="list-style-type: none"> • all Trace all events and packets • events-discovery Trace session related events • messages-hello Trace Hello packets • messages-hello-detail Trace LDP Hello packets with detailed output
Configurable	True
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

dynamic-label-block reference

Description	Reference to a dynamic label block
Context	network-instance name <i>string</i> protocols ldp dynamic-label-block <i>reference</i>
Tree	dynamic-label-block
Reference	system mpls label-ranges dynamic name <i>string</i>
Configurable	True
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

dynamic-label-block-status keyword

Description	<p>Status of the label block</p> <p>The label block may show as unavailable if there is pending cleanup</p>
Context	network-instance name <i>string</i> protocols ldp dynamic-label-block-status <i>keyword</i>
Tree	dynamic-label-block-status

Options	<ul style="list-style-type: none"> • available • unavailable
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

export-prefix-policy *reference*

Description	Apply an export prefix policy to filter advertised label bindings
Context	network-instance name <i>string</i> protocols ldp export-prefix-policy <i>reference</i>
Tree	export-prefix-policy
Reference	routing-policy policy name <i>string</i>
Configurable	True
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

fec-resolution

Description	Container with options for controlling IP prefix FEC resolution
Context	network-instance name <i>string</i> protocols ldp fec-resolution
Tree	fec-resolution
Configurable	True
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

longest-prefix *boolean*

Description	<p>When this is set to true IPv4/IPv6 prefix FECs can be resolved by less-specific IPv4/IPv6 routes in the route table, as long as the prefix bits of the route match the prefix bits of the FEC; the IP route with the longest prefix match is the route that is used to resolve the FEC.</p> <p>When this is set to false, IPv4/IPv6 prefix FECs can only be resolved by routes that are an exact match of the FEC in terms of prefix length</p>
Context	network-instance name <i>string</i> protocols ldp fec-resolution longest-prefix <i>boolean</i>
Tree	longest-prefix
Default	false
Configurable	True
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

graceful-restart

Description	Attributes for graceful restart
Context	network-instance name <i>string</i> protocols ldp graceful-restart
Tree	graceful-restart
Configurable	True
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

helper-enable *boolean*

Description	Enable or disable graceful restart as a helper
Context	network-instance name <i>string</i> protocols ldp graceful-restart helper-enable <i>boolean</i>
Tree	helper-enable
Default	false
Configurable	True
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

max-reconnect-time *number*

Description	Specifies the maximum time interval, in seconds, that this router is willing to wait for the remote LDP peer to reconnect after an LDP communication failure
Context	network-instance name <i>string</i> protocols ldp graceful-restart max-reconnect-time <i>number</i>
Tree	max-reconnect-time
Range	10 to 1800
Default	120
Units	seconds
Configurable	True
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

max-recovery-time *number*

Description	Specifies the maximum time interval, in seconds, that this router is willing to preserve its MPLS forwarding state after receiving the Initialization message from the restarted LDP peer
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Context	network-instance name <i>string</i> protocols ldp graceful-restart max-recovery-time <i>number</i>
Tree	max-recovery-time
Range	30 to 3600
Default	120
Units	seconds
Configurable	True
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

import-prefix-policy *reference*

Description	Apply an import prefix policy to filter received label bindings
Context	network-instance name <i>string</i> protocols ldp import-prefix-policy <i>reference</i>
Tree	import-prefix-policy
Reference	routing-policy policy name <i>string</i>
Configurable	True
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

ipv4

Description	Container for configuration and state related to the IPv4 address family
Context	network-instance name <i>string</i> protocols ldp ipv4
Tree	ipv4
Configurable	True
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

bindings

Description	LDP address and label binding information
Context	network-instance name <i>string</i> protocols ldp ipv4 bindings
Tree	bindings
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

advertised-address

Description	Enter the advertised-address context
Context	network-instance name <i>string</i> protocols ldp ipv4 bindings advertised-address
Tree	advertised-address
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

peer [lsr-id reference](#) [label-space-id reference](#)

Description	List of LDP peers towards which IPv4 address bindings have been sent
Context	network-instance name <i>string</i> protocols ldp ipv4 bindings advertised-address peer lsr-id reference label-space-id reference
Tree	peer
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

[lsr-id reference](#)

Description	The LSR ID of the peer, as a portion of the peer LDP ID
Context	network-instance name <i>string</i> protocols ldp ipv4 bindings advertised-address peer lsr-id reference label-space-id reference
Reference	network-instance name <i>string</i> protocols ldp peers peer lsr-id (ipv4-address ipv6-address) label-space-id number
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

[label-space-id reference](#)

Description	The Label Space ID of the peer, as a portion of the peer LDP ID
Context	network-instance name <i>string</i> protocols ldp ipv4 bindings advertised-address peer lsr-id reference label-space-id reference
Reference	network-instance name <i>string</i> protocols ldp peers peer lsr-id (ipv4-address ipv6-address) label-space-id number
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

ip-address *string*

Description	The list of IPv4 address bindings sent to the peer
Context	network-instance name <i>string</i> protocols ldp ipv4 bindings advertised-address peer lsr-id <i>reference</i> label-space-id <i>reference</i> ip-address <i>string</i>
Tree	ip-address
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

advertised-prefix-fec

Description	Enter the advertised-prefix-fec context
Context	network-instance name <i>string</i> protocols ldp ipv4 bindings advertised-prefix-fec
Tree	advertised-prefix-fec
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

prefix-fec [fec](#) *string* [lsr-id](#) *reference* [label-space-id](#) *reference*

Description	List of IPv4 FEC-label bindings advertised to LDP peers
Context	network-instance name <i>string</i> protocols ldp ipv4 bindings advertised-prefix-fec prefix-fec fec <i>string</i> lsr-id <i>reference</i> label-space-id <i>reference</i>
Tree	prefix-fec
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

fec *string*

Description	The prefix FEC value in the FEC-label binding, advertised in a Label Mapping message sent to a peer
Context	network-instance name <i>string</i> protocols ldp ipv4 bindings advertised-prefix-fec prefix-fec fec <i>string</i> lsr-id <i>reference</i> label-space-id <i>reference</i>
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

lsr-id reference

Description	The LSR ID of the peer, as a portion of the peer LDP ID
Context	network-instance name <i>string</i> protocols ldp ipv4 bindings advertised-prefix-fec prefix-fec fec <i>string</i> lsr-id reference label-space-id reference
Reference	network-instance name <i>string</i> protocols ldp peers peer lsr-id (ipv4-address ipv6-address) label-space-id number
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

label-space-id reference

Description	The Label Space ID of the peer, as a portion of the peer LDP ID
Context	network-instance name <i>string</i> protocols ldp ipv4 bindings advertised-prefix-fec prefix-fec fec <i>string</i> lsr-id reference label-space-id reference
Reference	network-instance name <i>string</i> protocols ldp peers peer lsr-id (ipv4-address ipv6-address) label-space-id number
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

egress-lsr-fec boolean

Description	When set true, the router is the egress LSR for the FEC (the FEC is locally originated)
Context	network-instance name <i>string</i> protocols ldp ipv4 bindings advertised-prefix-fec prefix-fec fec <i>string</i> lsr-id reference label-space-id reference egress-lsr-fec boolean
Tree	egress-lsr-fec
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

label (number | keyword)

Description	Advertised label value
Context	network-instance name <i>string</i> protocols ldp ipv4 bindings advertised-prefix-fec prefix-fec fec <i>string</i> lsr-id reference label-space-id reference label (number keyword)
Tree	label

Range	16 to 1048575
Options	<ul style="list-style-type: none"> • IPV4_EXPLICIT_NULL • IPV6_EXPLICIT_NULL • IMPLICIT_NULL
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

label-status *keyword*

Description	Label status
Context	network-instance name <i>string</i> protocols ldp ipv4 bindings advertised-prefix-fec prefix-fec fec <i>string</i> lsr-id <i>reference</i> label-space-id <i>reference</i> label-status <i>keyword</i>
Tree	label-status
Options	<ul style="list-style-type: none"> • released • withdrawn • wdraw-pending
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

label-type *keyword*

Description	The label type of the advertised label
Context	network-instance name <i>string</i> protocols ldp ipv4 bindings advertised-prefix-fec prefix-fec fec <i>string</i> lsr-id <i>reference</i> label-space-id <i>reference</i> label-type <i>keyword</i>
Tree	label-type
Options	<ul style="list-style-type: none"> • pop An advertised label that is programmed with a POP operation • swap An advertised label that is programmed with a SWAP operation
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

received-address

Description	Enter the received-address context
Context	network-instance name <i>string</i> protocols ldp ipv4 bindings received-address
Tree	received-address
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

peer [lsr-id reference](#) [label-space-id reference](#)

Description	List of LDP peers from which IPv4 address bindings have been received
Context	network-instance name <i>string</i> protocols ldp ipv4 bindings received-address peer lsr-id reference label-space-id reference
Tree	peer
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

[lsr-id reference](#)

Description	The LSR ID of the peer, as a portion of the peer LDP ID
Context	network-instance name <i>string</i> protocols ldp ipv4 bindings received-address peer lsr-id reference label-space-id reference
Reference	network-instance name <i>string</i> protocols ldp peers peer lsr-id (ipv4-address ipv6-address) label-space-id number
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

[label-space-id reference](#)

Description	The Label Space ID of the peer, as a portion of the peer LDP ID
Context	network-instance name <i>string</i> protocols ldp ipv4 bindings received-address peer lsr-id reference label-space-id reference
Reference	network-instance name <i>string</i> protocols ldp peers peer lsr-id (ipv4-address ipv6-address) label-space-id number
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

ip-address *string*

Description	The list of IPv4 address bindings received from the peer
Context	network-instance name <i>string</i> protocols ldp ipv4 bindings received-address peer lsr-id <i>reference</i> label-space-id <i>reference</i> ip-address <i>string</i>
Tree	ip-address
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

received-prefix-fec

Description	Enter the received-prefix-fec context
Context	network-instance name <i>string</i> protocols ldp ipv4 bindings received-prefix-fec prefix-fec fec <i>string</i> lsr-id <i>reference</i> label-space-id <i>reference</i>
Tree	received-prefix-fec
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

prefix-fec [fec](#) *string* [lsr-id](#) *reference* [label-space-id](#) *reference*

Description	List of IPv4 FEC-label bindings received from LDP peers
Context	network-instance name <i>string</i> protocols ldp ipv4 bindings received-prefix-fec prefix-fec fec <i>string</i> lsr-id <i>reference</i> label-space-id <i>reference</i>
Tree	prefix-fec
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

fec *string*

Description	The prefix FEC value in the FEC-label binding, learned in a Label Mapping message received from a peer
Context	network-instance name <i>string</i> protocols ldp ipv4 bindings received-prefix-fec prefix-fec fec <i>string</i> lsr-id <i>reference</i> label-space-id <i>reference</i>
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

lsr-id reference

Description	The LSR ID of the peer, as a portion of the peer LDP ID
Context	network-instance name <i>string</i> protocols ldp ipv4 bindings received-prefix-fec prefix-fec fec <i>string</i> lsr-id reference label-space-id reference
Reference	network-instance name <i>string</i> protocols ldp peers peer lsr-id (<i>ipv4-address</i> <i>ipv6-address</i>) label-space-id <i>number</i>
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

label-space-id reference

Description	The Label Space ID of the peer, as a portion of the peer LDP ID
Context	network-instance name <i>string</i> protocols ldp ipv4 bindings received-prefix-fec prefix-fec fec <i>string</i> lsr-id reference label-space-id reference
Reference	network-instance name <i>string</i> protocols ldp peers peer lsr-id (<i>ipv4-address</i> <i>ipv6-address</i>) label-space-id <i>number</i>
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

entropy-label-transmit boolean

Description	Entropy label (EL/ELI) is pushed when transmitting to this peer
Context	network-instance name <i>string</i> protocols ldp ipv4 bindings received-prefix-fec prefix-fec fec <i>string</i> lsr-id reference label-space-id reference entropy-label-transmit <i>boolean</i>
Tree	entropy-label-transmit
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

ingress-lsr-fec boolean

Description	When set true, the router is an ingress LSR for the FEC
Context	network-instance name <i>string</i> protocols ldp ipv4 bindings received-prefix-fec prefix-fec fec <i>string</i> lsr-id reference label-space-id reference ingress-lsr-fec <i>boolean</i>
Tree	ingress-lsr-fec
Configurable	False

Platforms 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

label (*number* | *keyword*)

Description Received label value

Context [network-instance name](#) *string* [protocols ldp ipv4 bindings received-prefix-fec prefix-fec fec](#) *string* [lsr-id reference](#) [label-space-id reference](#) [label \(number | keyword\)](#)

Tree [label](#)

Range 16 to 1048575

Options

- IPV4_EXPLICIT_NULL
- IPV6_EXPLICIT_NULL
- IMPLICIT_NULL

Configurable False

Platforms 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

next-hop [index number](#)

Description List of ECMP next-hops towards the LDP peer

Context [network-instance name](#) *string* [protocols ldp ipv4 bindings received-prefix-fec prefix-fec fec](#) *string* [lsr-id reference](#) [label-space-id reference](#) [next-hop index number](#)

Tree [next-hop](#)

Configurable False

Platforms 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

index number

Description Label ID index entry

Context [network-instance name](#) *string* [protocols ldp ipv4 bindings received-prefix-fec prefix-fec fec](#) *string* [lsr-id reference](#) [label-space-id reference](#) [next-hop index number](#)

Configurable False

Platforms 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

interface *string*

Description The outgoing interface towards the LDP peer

Context	network-instance name <i>string</i> protocols ldp ipv4 bindings received-prefix-fec prefix-fec fec <i>string</i> lsr-id <i>reference</i> label-space-id <i>reference</i> next-hop index number interface <i>string</i>
Tree	interface
String Length	5 to 25
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

next-hop (*ipv4-address* | *ipv6-address*)

Description	The IP next-hop towards the LDP peer
Context	network-instance name <i>string</i> protocols ldp ipv4 bindings received-prefix-fec prefix-fec fec <i>string</i> lsr-id <i>reference</i> label-space-id <i>reference</i> next-hop index number next-hop (<i>ipv4-address</i> <i>ipv6-address</i>)
Tree	next-hop
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

next-hop-type *keyword*

Description	Type of next-hop
Context	network-instance name <i>string</i> protocols ldp ipv4 bindings received-prefix-fec prefix-fec fec <i>string</i> lsr-id <i>reference</i> label-space-id <i>reference</i> next-hop index number next-hop-type <i>keyword</i>
Tree	next-hop-type
Options	<ul style="list-style-type: none"> • primary • alternate • rifa
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

outer-label (*number* | *keyword*)

Description	Outer label value for RLFA
Context	network-instance name <i>string</i> protocols ldp ipv4 bindings received-prefix-fec prefix-fec fec <i>string</i> lsr-id <i>reference</i> label-space-id <i>reference</i> next-hop index number outer-label (<i>number</i> <i>keyword</i>)
Tree	outer-label

Range	16 to 1048575
Options	<ul style="list-style-type: none"> • IPV4_EXPLICIT_NULL • IPV6_EXPLICIT_NULL • IMPLICIT_NULL
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

not-used-reason *keyword*

Description	The reason why the label mapping is not being used in the dataplane
Context	network-instance name <i>string</i> protocols ldp ipv4 bindings received-prefix-fec prefix-fec fec <i>string</i> lsr-id <i>reference</i> label-space-id <i>reference</i> not-used-reason <i>keyword</i>
Tree	not-used-reason
Options	<ul style="list-style-type: none"> • rejected-on-rx The received FEC was rejected either because non-host FEC or rejected by import policy • exceeds-multipath-limit The LDP multipath ECMP limit has been reached • exceeds-fec-limit The FEC limit has been reached • fec-unresolved The IP prefix FEC is unused because there is no resolving route matching the IP prefix
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

used-in-forwarding *boolean*

Description	Reads true if the label is used in forwarding and has been programmed for a push operation
Context	network-instance name <i>string</i> protocols ldp ipv4 bindings received-prefix-fec prefix-fec fec <i>string</i> lsr-id <i>reference</i> label-space-id <i>reference</i> used-in-forwarding <i>boolean</i>
Tree	used-in-forwarding
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

service-fec128 virtual-circuit-type keyword virtual-circuit-identifier number peer-lsr-id (ipv4-address | ipv6-address)

Description	Service FEC128 binding
Context	network-instance name string protocols ldp ipv4 bindings service-fec128 virtual-circuit-type keyword virtual-circuit-identifier number peer-lsr-id (ipv4-address ipv6-address)
Tree	service-fec128
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

virtual-circuit-type keyword

Description	The virtual circuit (VC) type of the pseudowire
Context	network-instance name string protocols ldp ipv4 bindings service-fec128 virtual-circuit-type keyword virtual-circuit-identifier number peer-lsr-id (ipv4-address ipv6-address)
Options	<ul style="list-style-type: none"> • ethernet • vlan
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

virtual-circuit-identifier number

Description	The virtual circuit identifier of the pseudowire
Context	network-instance name string protocols ldp ipv4 bindings service-fec128 virtual-circuit-type keyword virtual-circuit-identifier number peer-lsr-id (ipv4-address ipv6-address)
Range	1 to 4294967295
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

peer-lsr-id (ipv4-address | ipv6-address)

Description	Peer IP address, LSR-id
Context	network-instance name string protocols ldp ipv4 bindings service-fec128 virtual-circuit-type keyword virtual-circuit-identifier number peer-lsr-id (ipv4-address ipv6-address)

Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

advertised

Description	Configuration and state related to advertised service FECs
Context	network-instance name <i>string</i> protocols ldp ipv4 bindings service-fec128 virtual-circuit-type <i>keyword</i> virtual-circuit-identifier <i>number</i> peer-lsr-id (ipv4-address ipv6-address) advertised
Tree	advertised
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

control-word *boolean*

Description	Whether control word capability is advertised
Context	network-instance name <i>string</i> protocols ldp ipv4 bindings service-fec128 virtual-circuit-type <i>keyword</i> virtual-circuit-identifier <i>number</i> peer-lsr-id (ipv4-address ipv6-address) advertised control-word <i>boolean</i>
Tree	control-word
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

l2-mtu *number*

Description	Layer-2 MTU advertised to the remote peer in bytes
Context	network-instance name <i>string</i> protocols ldp ipv4 bindings service-fec128 virtual-circuit-type <i>keyword</i> virtual-circuit-identifier <i>number</i> peer-lsr-id (ipv4-address ipv6-address) advertised l2-mtu <i>number</i>
Tree	l2-mtu
Units	bytes
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

label (*number* | *keyword*)

Description	The received label from the remote peer
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Context	network-instance name <i>string</i> protocols ldp ipv4 bindings service-fec128 virtual-circuit-type <i>keyword</i> virtual-circuit-identifier <i>number</i> peer-lsr-id (<i>ipv4-address</i> <i>ipv6-address</i>) advertised label (<i>number</i> <i>keyword</i>)
Tree	label
Range	16 to 1048575
Options	<ul style="list-style-type: none"> • IPV4_EXPLICIT_NULL • IPV6_EXPLICIT_NULL • IMPLICIT_NULL
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

label-status *keyword*

Description	The status of the advertised label
Context	network-instance name <i>string</i> protocols ldp ipv4 bindings service-fec128 virtual-circuit-type <i>keyword</i> virtual-circuit-identifier <i>number</i> peer-lsr-id (<i>ipv4-address</i> <i>ipv6-address</i>) advertised label-status <i>keyword</i>
Tree	label-status
Options	<ul style="list-style-type: none"> • in-use-pop • released • withdrawn • withdraw-pending
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

pw-status *boolean*

Description	Whether or not the router advertising the associated label supports pseudowire status signaling
Context	network-instance name <i>string</i> protocols ldp ipv4 bindings service-fec128 virtual-circuit-type <i>keyword</i> virtual-circuit-identifier <i>number</i> peer-lsr-id (<i>ipv4-address</i> <i>ipv6-address</i>) advertised pw-status <i>boolean</i>
Tree	pw-status
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

signaling-status *keyword*

Description	Indicates the signaling status
Context	network-instance name <i>string</i> protocols ldp ipv4 bindings service-fec128 virtual-circuit-type <i>keyword</i> virtual-circuit-identifier <i>number</i> peer-lsr-id (ipv4-address ipv6-address) advertised signaling-status <i>keyword</i>
Tree	signaling-status
Options	<ul style="list-style-type: none"> • none • pseudowire-not-forwarding • local-attachment-circuit-ingress-fault • local-attachment-circuit-egress-fault • provider-service-network-ingress-fault • provider-service-network-egress-fault • pseudowire-forwarding-standby
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

withdraw-reason *keyword*

Description	Indicates the reason of withdrawl of the ingress label
Context	network-instance name <i>string</i> protocols ldp ipv4 bindings service-fec128 virtual-circuit-type <i>keyword</i> virtual-circuit-identifier <i>number</i> peer-lsr-id (ipv4-address ipv6-address) advertised withdraw-reason <i>keyword</i>
Tree	withdraw-reason
Options	<ul style="list-style-type: none"> • none • local-fault
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

binding-oper-down-reason *keyword*

Description	The reason why the binding is operationally down
Context	network-instance name <i>string</i> protocols ldp ipv4 bindings service-fec128 virtual-circuit-type <i>keyword</i> virtual-circuit-identifier <i>number</i> peer-lsr-id (ipv4-address ipv6-address) binding-oper-down-reason <i>keyword</i>
Tree	binding-oper-down-reason
Options	<ul style="list-style-type: none"> • vc-type-mismatch

- control-word-mismatch
- transport-tunnel-oper-down
- ldp-resource-exhausted
- no-egress-label

Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

binding-oper-state *keyword*

Description	Operational state of the binding
Context	network-instance name <i>string</i> protocols ldp ipv4 bindings service-fec128 virtual-circuit-type <i>keyword</i> virtual-circuit-identifier number peer-lsr-id (ipv4-address ipv6-address) binding-oper-state <i>keyword</i>
Tree	binding-oper-state
Options	<ul style="list-style-type: none"> • up • down
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

received

Description	Configuration and state related to received service FECs
Context	network-instance name <i>string</i> protocols ldp ipv4 bindings service-fec128 virtual-circuit-type <i>keyword</i> virtual-circuit-identifier number peer-lsr-id (ipv4-address ipv6-address) received
Tree	received
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

control-word *boolean*

Description	Whether control word capability is received
Context	network-instance name <i>string</i> protocols ldp ipv4 bindings service-fec128 virtual-circuit-type <i>keyword</i> virtual-circuit-identifier number peer-lsr-id (ipv4-address ipv6-address) received control-word <i>boolean</i>
Tree	control-word
Configurable	False

Platforms 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

I2-mtu *number*

Description Layer-2 MTU received from the remote peer in bytes

Context [network-instance name](#) *string* [protocols](#) [ldp](#) [ipv4](#) [bindings](#) [service-fec128](#) [virtual-circuit-type](#) *keyword* [virtual-circuit-identifier](#) *number* [peer-lsr-id](#) ([ipv4-address](#) | [ipv6-address](#)) [received](#) **I2-mtu** *number*

Tree [I2-mtu](#)

Units bytes

Configurable False

Platforms 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

label (*number* | *keyword*)

Description The received label from the remote peer

Context [network-instance name](#) *string* [protocols](#) [ldp](#) [ipv4](#) [bindings](#) [service-fec128](#) [virtual-circuit-type](#) *keyword* [virtual-circuit-identifier](#) *number* [peer-lsr-id](#) ([ipv4-address](#) | [ipv6-address](#)) [received](#) **label** (*number* | *keyword*)

Tree [label](#)

Range 16 to 1048575

Options

- IPV4_EXPLICIT_NULL
- IPV6_EXPLICIT_NULL
- IMPLICIT_NULL

Configurable False

Platforms 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

label-status *keyword*

Description The status of the received label

Context [network-instance name](#) *string* [protocols](#) [ldp](#) [ipv4](#) [bindings](#) [service-fec128](#) [virtual-circuit-type](#) *keyword* [virtual-circuit-identifier](#) *number* [peer-lsr-id](#) ([ipv4-address](#) | [ipv6-address](#)) [received](#) **label-status** *keyword*

Tree [label-status](#)

Options

- in-use-push
- released
- withdrawn

- withdraw-pending

Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

pw-status *boolean*

Description	Whether or not the router advertising the associated label supports pseudowire status signaling
Context	network-instance name <i>string</i> protocols ldp ipv4 bindings service-fec128 virtual-circuit-type <i>keyword</i> virtual-circuit-identifier <i>number</i> peer-lsr-id (<i>ipv4-address</i> <i>ipv6-address</i>) received pw-status <i>boolean</i>
Tree	pw-status
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

signaling-status *keyword*

Description	Indicates the signaling status
Context	network-instance name <i>string</i> protocols ldp ipv4 bindings service-fec128 virtual-circuit-type <i>keyword</i> virtual-circuit-identifier <i>number</i> peer-lsr-id (<i>ipv4-address</i> <i>ipv6-address</i>) received signaling-status <i>keyword</i>
Tree	signaling-status
Options	<ul style="list-style-type: none"> • none • pseudowire-not-forwarding • local-attachment-circuit-ingress-fault • local-attachment-circuit-egress-fault • provider-service-network-ingress-fault • provider-service-network-egress-fault • pseudowire-forwarding-standby
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

last-oper-state-change *string*

Description	The last time that the IPv4 oper-state changed
Context	network-instance name <i>string</i> protocols ldp ipv4 last-oper-state-change <i>string</i>

Tree	last-oper-state-change
String Length	20 to 32
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

lsr-id string

Description	Returns the value that is being used as the LDP LSR ID
Context	network-instance name string protocols ldp ipv4 lsr-id string
Tree	lsr-id
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

oper-down-reason keyword

Description	The reason for the LDP for IPv4 being operationally down
Context	network-instance name string protocols ldp ipv4 oper-down-reason keyword
Tree	oper-down-reason
Options	<ul style="list-style-type: none"> • ldp-admin-disabled • mpls-admin-disabled • no-system-ipv4-address System IPv4 address is used as the LSR ID. If this dependency is missing LDP is down • net-instance-mgr-down • label-block-unavailable • no-resource Memory allocation failure • unknown Other failure reason
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

oper-state keyword

Description	The operational state of LDP for IPv4
Context	network-instance name string protocols ldp ipv4 oper-state keyword

Tree	oper-state
Options	<ul style="list-style-type: none"> • up Component or process is operational • down Component or process is not operational • empty Component slot is empty • downloading Component is downloading image into memory • booting Component is booting downloaded image • starting Component image operational, application processes starting • failed Component or process has failed • synchronizing Component is currently being synchronized • upgrading Component is currently being upgraded • low-power Component is offline due to insufficient system power • degraded Component or process is in a degraded state • warm-reboot Component or process is currently warm rebooting This state is set during a warm reboot immediately following initiation of the reboot, continuing after startup until the system has completed audit. In this state the system will not accept configuration changes. • waiting Component or process is currently waiting This state can be set by event handler when the reinvoke-with-delay action is used, and indicates that the event handler is waiting for the provided delay before reinvoking the instance.
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

oper-up-to-down-transitions *number*

Description	The number of times the oper state for IPv4 has transitioned from up to down
Context	network-instance name <i>string</i> protocols ldp ipv4 oper-up-to-down-transitions <i>number</i>
Tree	oper-up-to-down-transitions
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

ipv6

Description	Container for configuration and state related to the IPv6 address family
Context	network-instance name <i>string</i> protocols ldp ipv6
Tree	ipv6
Configurable	True
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

bindings

Description	LDP address and label binding information
Context	network-instance name <i>string</i> protocols ldp ipv6 bindings
Tree	bindings
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

advertised-address

Description	Enter the advertised-address context
Context	network-instance name <i>string</i> protocols ldp ipv6 bindings advertised-address
Tree	advertised-address
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

peer *lsr-id reference label-space-id reference*

Description	List of LDP peers towards which IPv6 address bindings have been sent
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Context	network-instance name <i>string</i> protocols ldp ipv6 bindings advertised-address peer lsr-id <i>reference</i> label-space-id <i>reference</i>
Tree	peer
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

lsr-id *reference*

Description	The LSR ID of the peer, as a portion of the peer LDP ID
Context	network-instance name <i>string</i> protocols ldp ipv6 bindings advertised-address peer lsr-id <i>reference</i> label-space-id <i>reference</i>
Reference	network-instance name <i>string</i> protocols ldp peers peer lsr-id (ipv4-address ipv6-address) label-space-id <i>number</i>
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

label-space-id *reference*

Description	The Label Space ID of the peer, as a portion of the peer LDP ID
Context	network-instance name <i>string</i> protocols ldp ipv6 bindings advertised-address peer lsr-id <i>reference</i> label-space-id <i>reference</i>
Reference	network-instance name <i>string</i> protocols ldp peers peer lsr-id (ipv4-address ipv6-address) label-space-id <i>number</i>
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

ip-address *string*

Description	The list of IPv6 address bindings sent to the peer
Context	network-instance name <i>string</i> protocols ldp ipv6 bindings advertised-address peer lsr-id <i>reference</i> label-space-id <i>reference</i> ip-address <i>string</i>
Tree	ip-address
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

advertised-prefix-fec

Description	Enter the advertised-prefix-fec context
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Context	network-instance name <i>string</i> protocols ldp ipv6 bindings advertised-prefix-fec
Tree	advertised-prefix-fec
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

prefix-fec [fec](#) *string* [lsr-id](#) *reference* [label-space-id](#) *reference*

Description	List of IPv6 FEC-label bindings advertised to LDP peers
Context	network-instance name <i>string</i> protocols ldp ipv6 bindings advertised-prefix-fec prefix-fec fec <i>string</i> lsr-id <i>reference</i> label-space-id <i>reference</i>
Tree	prefix-fec
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

fec *string*

Description	The prefix FEC value in the FEC-label binding, advertised in a Label Mapping message sent to a peer
Context	network-instance name <i>string</i> protocols ldp ipv6 bindings advertised-prefix-fec prefix-fec fec <i>string</i> lsr-id <i>reference</i> label-space-id <i>reference</i>
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

lsr-id *reference*

Description	The LSR ID of the peer, as a portion of the peer LDP ID
Context	network-instance name <i>string</i> protocols ldp ipv6 bindings advertised-prefix-fec prefix-fec fec <i>string</i> lsr-id <i>reference</i> label-space-id <i>reference</i>
Reference	network-instance name <i>string</i> protocols ldp peers peer lsr-id (ipv4-address ipv6-address) label-space-id <i>number</i>
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

label-space-id *reference*

Description	The Label Space ID of the peer, as a portion of the peer LDP ID
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Context	network-instance name <i>string</i> protocols ldp ipv6 bindings advertised-prefix-fec prefix-fec fec <i>string</i> lsr-id <i>reference</i> label-space-id <i>reference</i>
Reference	network-instance name <i>string</i> protocols ldp peers peer lsr-id (<i>ipv4-address</i> <i>ipv6-address</i>) label-space-id <i>number</i>
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

egress-lsr-fec *boolean*

Description	When set true, the router is the egress LSR for the FEC (the FEC is locally originated)
Context	network-instance name <i>string</i> protocols ldp ipv6 bindings advertised-prefix-fec prefix-fec fec <i>string</i> lsr-id <i>reference</i> label-space-id <i>reference</i> egress-lsr-fec <i>boolean</i>
Tree	egress-lsr-fec
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

label (*number* | *keyword*)

Description	Advertised label value
Context	network-instance name <i>string</i> protocols ldp ipv6 bindings advertised-prefix-fec prefix-fec fec <i>string</i> lsr-id <i>reference</i> label-space-id <i>reference</i> label (<i>number</i> <i>keyword</i>)
Tree	label
Range	16 to 1048575
Options	<ul style="list-style-type: none"> • IPV4_EXPLICIT_NULL • IPV6_EXPLICIT_NULL • IMPLICIT_NULL
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

label-status *keyword*

Description	Label status
Context	network-instance name <i>string</i> protocols ldp ipv6 bindings advertised-prefix-fec prefix-fec fec <i>string</i> lsr-id <i>reference</i> label-space-id <i>reference</i> label-status <i>keyword</i>

Tree	label-status
Options	<ul style="list-style-type: none"> released withdrawn wdraw-pending
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

label-type *keyword*

Description	The label type of the advertised label
Context	network-instance name <i>string</i> protocols ldp ipv6 bindings advertised-prefix-fec prefix-fec fec <i>string</i> lsr-id <i>reference</i> label-space-id <i>reference</i> label-type <i>keyword</i>
Tree	label-type
Options	<ul style="list-style-type: none"> pop An advertised label that is programmed with a POP operation swap An advertised label that is programmed with a SWAP operation
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

received-address

Description	Enter the received-address context
Context	network-instance name <i>string</i> protocols ldp ipv6 bindings received-address
Tree	received-address
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

peer [lsr-id](#) *reference* [label-space-id](#) *reference*

Description	List of LDP peers from which IPv6 address bindings have been received
Context	network-instance name <i>string</i> protocols ldp ipv6 bindings received-address peer lsr-id <i>reference</i> label-space-id <i>reference</i>
Tree	peer
Configurable	False

Platforms 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

lsr-id reference

Description The LSR ID of the peer, as a portion of the peer LDP ID

Context [network-instance name](#) [string](#) [protocols](#) [ldp](#) [ipv6](#) [bindings](#) [received-address](#) [peer](#) [lsr-id reference](#) [label-space-id reference](#)

Reference [network-instance name](#) [string](#) [protocols](#) [ldp](#) [peers](#) [peer](#) [lsr-id \(ipv4-address | ipv6-address\)](#) [label-space-id](#) [number](#)

Configurable False

Platforms 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

label-space-id reference

Description The Label Space ID of the peer, as a portion of the peer LDP ID

Context [network-instance name](#) [string](#) [protocols](#) [ldp](#) [ipv6](#) [bindings](#) [received-address](#) [peer](#) [lsr-id reference](#) [label-space-id reference](#)

Reference [network-instance name](#) [string](#) [protocols](#) [ldp](#) [peers](#) [peer](#) [lsr-id \(ipv4-address | ipv6-address\)](#) [label-space-id](#) [number](#)

Configurable False

Platforms 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

ip-address string

Description The list of IPv6 address bindings received from the peer

Context [network-instance name](#) [string](#) [protocols](#) [ldp](#) [ipv6](#) [bindings](#) [received-address](#) [peer](#) [lsr-id reference](#) [label-space-id reference](#) [ip-address](#) [string](#)

Tree [ip-address](#)

Configurable False

Platforms 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

received-prefix-fec

Description Enter the received-prefix-fec context

Context [network-instance name](#) [string](#) [protocols](#) [ldp](#) [ipv6](#) [bindings](#) [received-prefix-fec](#)

Tree [received-prefix-fec](#)

Configurable False

Platforms 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

prefix-fec *fec string lsr-id reference label-space-id reference*

Description List of IPv6 FEC-label bindings received from LDP peers

Context [network-instance name string protocols ldp ipv6 bindings received-prefix-fec prefix-fec fec string lsr-id reference label-space-id reference](#)

Tree [prefix-fec](#)

Configurable False

Platforms 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

fec *string*

Description The prefix FEC value in the FEC-label binding, learned in a Label Mapping message received from a peer

Context [network-instance name string protocols ldp ipv6 bindings received-prefix-fec prefix-fec fec string lsr-id reference label-space-id reference](#)

Configurable False

Platforms 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

lsr-id *reference*

Description The LSR ID of the peer, as a portion of the peer LDP ID

Context [network-instance name string protocols ldp ipv6 bindings received-prefix-fec prefix-fec fec string lsr-id reference label-space-id reference](#)

Reference [network-instance name string protocols ldp peers peer lsr-id \(ipv4-address | ipv6-address\) label-space-id number](#)

Configurable False

Platforms 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

label-space-id *reference*

Description The Label Space ID of the peer, as a portion of the peer LDP ID

Context [network-instance name string protocols ldp ipv6 bindings received-prefix-fec prefix-fec fec string lsr-id reference label-space-id reference](#)

Reference [network-instance name string protocols ldp peers peer lsr-id \(ipv4-address | ipv6-address\) label-space-id number](#)

Configurable False

Platforms 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

entropy-label-transmit *boolean*

Description Entropy label (EL/ELI) is pushed when transmitting to this peer

Context [network-instance name](#) *string* [protocols](#) [ldp](#) [ipv6](#) [bindings](#) [received-prefix-fec](#) [prefix-fec](#) [fec](#) *string* [lsr-id](#) *reference* [label-space-id](#) *reference* [entropy-label-transmit](#) *boolean*

Tree [entropy-label-transmit](#)

Configurable False

Platforms 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

ingress-lsr-fec *boolean*

Description When set true, the router is an ingress LSR for the FEC

Context [network-instance name](#) *string* [protocols](#) [ldp](#) [ipv6](#) [bindings](#) [received-prefix-fec](#) [prefix-fec](#) [fec](#) *string* [lsr-id](#) *reference* [label-space-id](#) *reference* [ingress-lsr-fec](#) *boolean*

Tree [ingress-lsr-fec](#)

Configurable False

Platforms 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

label (*number* | *keyword*)

Description Received label value

Context [network-instance name](#) *string* [protocols](#) [ldp](#) [ipv6](#) [bindings](#) [received-prefix-fec](#) [prefix-fec](#) [fec](#) *string* [lsr-id](#) *reference* [label-space-id](#) *reference* [label](#) (*number* | *keyword*)

Tree [label](#)

Range 16 to 1048575

Options

- IPV4_EXPLICIT_NULL
- IPV6_EXPLICIT_NULL
- IMPLICIT_NULL

Configurable False

Platforms 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

next-hop *index number*

Description	List of ECMP next-hops towards the LDP peer
Context	network-instance name <i>string</i> protocols ldp ipv6 bindings received-prefix-fec prefix-fec fec <i>string</i> lsr-id <i>reference</i> label-space-id <i>reference</i> next-hop index number
Tree	next-hop
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

index *number*

Description	Label ID index entry
Context	network-instance name <i>string</i> protocols ldp ipv6 bindings received-prefix-fec prefix-fec fec <i>string</i> lsr-id <i>reference</i> label-space-id <i>reference</i> next-hop index number
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

interface *string*

Description	The outgoing interface towards the LDP peer
Context	network-instance name <i>string</i> protocols ldp ipv6 bindings received-prefix-fec prefix-fec fec <i>string</i> lsr-id <i>reference</i> label-space-id <i>reference</i> next-hop index number interface <i>string</i>
Tree	interface
String Length	5 to 25
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

next-hop (*ipv4-address* | *ipv6-address*)

Description	The IP next-hop towards the LDP peer
Context	network-instance name <i>string</i> protocols ldp ipv6 bindings received-prefix-fec prefix-fec fec <i>string</i> lsr-id <i>reference</i> label-space-id <i>reference</i> next-hop index number next-hop (<i>ipv4-address</i> <i>ipv6-address</i>)
Tree	next-hop
Configurable	False

Platforms 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

next-hop-type *keyword*

Description Type of next-hop

Context [network-instance name](#) *string* [protocols ldp ipv6 bindings received-prefix-fec prefix-fec fec](#) *string* [lsr-id](#) *reference* [label-space-id](#) *reference* [next-hop index number](#) **next-hop-type** *keyword*

Tree [next-hop-type](#)

Options

- primary
- alternate
- rfa

Configurable False

Platforms 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

outer-label (*number* | *keyword*)

Description Outer label value for RLFA

Context [network-instance name](#) *string* [protocols ldp ipv6 bindings received-prefix-fec prefix-fec fec](#) *string* [lsr-id](#) *reference* [label-space-id](#) *reference* [next-hop index number](#) **outer-label** (*number* | *keyword*)

Tree [outer-label](#)

Range 16 to 1048575

Options

- IPV4_EXPLICIT_NULL
- IPV6_EXPLICIT_NULL
- IMPLICIT_NULL

Configurable False

Platforms 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

not-used-reason *keyword*

Description The reason why the label mapping is not being used in the dataplane

Context [network-instance name](#) *string* [protocols ldp ipv6 bindings received-prefix-fec prefix-fec fec](#) *string* [lsr-id](#) *reference* [label-space-id](#) *reference* **not-used-reason** *keyword*

Tree [not-used-reason](#)

Options

- rejected-on-rx

- The received FEC was rejected either because non-host FEC or rejected by import policy
- exceeds-multipath-limit
The LDP multipath ECMP limit has been reached
- exceeds-fec-limit
The FEC limit has been reached
- fec-unresolved
The IP prefix FEC is unused because there is no resolving route matching the IP prefix

Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

used-in-forwarding *boolean*

Description	Reads true if the label is used in forwarding and has been programmed for a push operation
Context	network-instance name <i>string</i> protocols ldp ipv6 bindings received-prefix-fec prefix-fec fec <i>string</i> lsr-id <i>reference</i> label-space-id <i>reference</i> used-in-forwarding <i>boolean</i>
Tree	used-in-forwarding
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

service-fec128 [virtual-circuit-type](#) *keyword* [virtual-circuit-identifier](#) *number* [peer-lsr-id](#) (*ipv4-address* | *ipv6-address*)

Description	Service FEC128 binding
Context	network-instance name <i>string</i> protocols ldp ipv6 bindings service-fec128 virtual-circuit-type <i>keyword</i> virtual-circuit-identifier <i>number</i> peer-lsr-id (<i>ipv4-address</i> <i>ipv6-address</i>)
Tree	service-fec128
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

virtual-circuit-type *keyword*

Description	The virtual circuit (VC) type of the pseudowire
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Context	network-instance name <i>string</i> protocols ldp ipv6 bindings service-fec128 virtual-circuit-type <i>keyword</i> virtual-circuit-identifier <i>number</i> peer-lsr-id (ipv4-address ipv6-address)
Options	<ul style="list-style-type: none"> • ethernet • vlan
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

virtual-circuit-identifier *number*

Description	The virtual circuit identifier of the pseudowire
Context	network-instance name <i>string</i> protocols ldp ipv6 bindings service-fec128 virtual-circuit-type <i>keyword</i> virtual-circuit-identifier <i>number</i> peer-lsr-id (ipv4-address ipv6-address)
Range	1 to 4294967295
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

peer-lsr-id ([ipv4-address](#) | [ipv6-address](#))

Description	Peer IP address, LSR-id
Context	network-instance name <i>string</i> protocols ldp ipv6 bindings service-fec128 virtual-circuit-type <i>keyword</i> virtual-circuit-identifier <i>number</i> peer-lsr-id (ipv4-address ipv6-address)
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

advertised

Description	Configuration and state related to advertised service FECs
Context	network-instance name <i>string</i> protocols ldp ipv6 bindings service-fec128 virtual-circuit-type <i>keyword</i> virtual-circuit-identifier <i>number</i> peer-lsr-id (ipv4-address ipv6-address) advertised
Tree	advertised
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

control-word *boolean*

Description	Whether control word capability is advertised
Context	network-instance name <i>string</i> protocols ldp ipv6 bindings service-fec128 virtual-circuit-type <i>keyword</i> virtual-circuit-identifier <i>number</i> peer-lsr-id (<i>ipv4-address</i> <i>ipv6-address</i>) advertised control-word <i>boolean</i>
Tree	control-word
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

I2-mtu *number*

Description	Layer-2 MTU advertised to the remote peer in bytes
Context	network-instance name <i>string</i> protocols ldp ipv6 bindings service-fec128 virtual-circuit-type <i>keyword</i> virtual-circuit-identifier <i>number</i> peer-lsr-id (<i>ipv4-address</i> <i>ipv6-address</i>) advertised I2-mtu <i>number</i>
Tree	I2-mtu
Units	bytes
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

label (*number* | *keyword*)

Description	The received label from the remote peer
Context	network-instance name <i>string</i> protocols ldp ipv6 bindings service-fec128 virtual-circuit-type <i>keyword</i> virtual-circuit-identifier <i>number</i> peer-lsr-id (<i>ipv4-address</i> <i>ipv6-address</i>) advertised label (<i>number</i> <i>keyword</i>)
Tree	label
Range	16 to 1048575
Options	<ul style="list-style-type: none"> • IPV4_EXPLICIT_NULL • IPV6_EXPLICIT_NULL • IMPLICIT_NULL
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

label-status *keyword*

Description	The status of the advertised label
Context	network-instance name <i>string</i> protocols ldp ipv6 bindings service-fec128 virtual-circuit-type <i>keyword</i> virtual-circuit-identifier <i>number</i> peer-lsr-id (ipv4-address ipv6-address) advertised label-status <i>keyword</i>
Tree	label-status
Options	<ul style="list-style-type: none"> • in-use-pop • released • withdrawn • withdraw-pending
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

pw-status *boolean*

Description	Whether or not the router advertising the associated label supports pseudowire status signaling
Context	network-instance name <i>string</i> protocols ldp ipv6 bindings service-fec128 virtual-circuit-type <i>keyword</i> virtual-circuit-identifier <i>number</i> peer-lsr-id (ipv4-address ipv6-address) advertised pw-status <i>boolean</i>
Tree	pw-status
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

signaling-status *keyword*

Description	Indicates the signaling status
Context	network-instance name <i>string</i> protocols ldp ipv6 bindings service-fec128 virtual-circuit-type <i>keyword</i> virtual-circuit-identifier <i>number</i> peer-lsr-id (ipv4-address ipv6-address) advertised signaling-status <i>keyword</i>
Tree	signaling-status
Options	<ul style="list-style-type: none"> • none • pseudowire-not-forwarding • local-attachment-circuit-ingress-fault • local-attachment-circuit-egress-fault • provider-service-network-ingress-fault • provider-service-network-egress-fault

	<ul style="list-style-type: none"> pseudowire-forwarding-standby
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

withdraw-reason *keyword*

Description	Indicates the reason of withdrawl of the ingress label
Context	network-instance name <i>string</i> protocols ldp ipv6 bindings service-fec128 virtual-circuit-type <i>keyword</i> virtual-circuit-identifier <i>number</i> peer-lsr-id (ipv4-address ipv6-address) advertised withdraw-reason <i>keyword</i>
Tree	withdraw-reason
Options	<ul style="list-style-type: none"> none local-fault
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

binding-oper-down-reason *keyword*

Description	The reason why the binding is operationally down
Context	network-instance name <i>string</i> protocols ldp ipv6 bindings service-fec128 virtual-circuit-type <i>keyword</i> virtual-circuit-identifier <i>number</i> peer-lsr-id (ipv4-address ipv6-address) binding-oper-down-reason <i>keyword</i>
Tree	binding-oper-down-reason
Options	<ul style="list-style-type: none"> vc-type-mismatch control-word-mismatch transport-tunnel-oper-down ldp-resource-exhausted no-egress-label
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

binding-oper-state *keyword*

Description	Operational state of the binding
Context	network-instance name <i>string</i> protocols ldp ipv6 bindings service-fec128 virtual-circuit-type <i>keyword</i> virtual-circuit-identifier <i>number</i> peer-lsr-id (ipv4-address ipv6-address) binding-oper-state <i>keyword</i>

Tree	binding-oper-state
Options	<ul style="list-style-type: none"> • up • down
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

received

Description	Configuration and state related to received service FECs
Context	network-instance name <i>string</i> protocols ldp ipv6 bindings service-fec128 virtual-circuit-type <i>keyword</i> virtual-circuit-identifier <i>number</i> peer-lsr-id (ipv4-address ipv6-address) received
Tree	received
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

control-word *boolean*

Description	Whether control word capability is received
Context	network-instance name <i>string</i> protocols ldp ipv6 bindings service-fec128 virtual-circuit-type <i>keyword</i> virtual-circuit-identifier <i>number</i> peer-lsr-id (ipv4-address ipv6-address) received control-word <i>boolean</i>
Tree	control-word
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

l2-mtu *number*

Description	Layer-2 MTU received from the remote peer in bytes
Context	network-instance name <i>string</i> protocols ldp ipv6 bindings service-fec128 virtual-circuit-type <i>keyword</i> virtual-circuit-identifier <i>number</i> peer-lsr-id (ipv4-address ipv6-address) received l2-mtu <i>number</i>
Tree	l2-mtu
Units	bytes
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

label (*number* | *keyword*)

Description	The received label from the remote peer
Context	network-instance name <i>string</i> protocols ldp ipv6 bindings service-fec128 virtual-circuit-type <i>keyword</i> virtual-circuit-identifier <i>number</i> peer-lsr-id (ipv4-address ipv6-address) received label (<i>number</i> <i>keyword</i>)
Tree	label
Range	16 to 1048575
Options	<ul style="list-style-type: none"> • IPV4_EXPLICIT_NULL • IPV6_EXPLICIT_NULL • IMPLICIT_NULL
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

label-status *keyword*

Description	The status of the received label
Context	network-instance name <i>string</i> protocols ldp ipv6 bindings service-fec128 virtual-circuit-type <i>keyword</i> virtual-circuit-identifier <i>number</i> peer-lsr-id (ipv4-address ipv6-address) received label-status <i>keyword</i>
Tree	label-status
Options	<ul style="list-style-type: none"> • in-use-push • released • withdrawn • withdraw-pending
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

pw-status *boolean*

Description	Whether or not the router advertising the associated label supports pseudowire status signaling
Context	network-instance name <i>string</i> protocols ldp ipv6 bindings service-fec128 virtual-circuit-type <i>keyword</i> virtual-circuit-identifier <i>number</i> peer-lsr-id (ipv4-address ipv6-address) received pw-status <i>boolean</i>
Tree	pw-status
Configurable	False

Platforms 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

signaling-status *keyword*

Description Indicates the signaling status

Context [network-instance name](#) *string* [protocols ldp ipv6 bindings service-fec128 virtual-circuit-type](#) *keyword* [virtual-circuit-identifier](#) *number* [peer-lsr-id \(ipv4-address | ipv6-address\)](#) [received signaling-status](#) *keyword*

Tree [signaling-status](#)

Options

- none
- pseudowire-not-forwarding
- local-attachment-circuit-ingress-fault
- local-attachment-circuit-egress-fault
- provider-service-network-ingress-fault
- provider-service-network-egress-fault
- pseudowire-forwarding-standby

Configurable False

Platforms 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

last-oper-state-change *string*

Description The last time that the IPv6 oper-state changed

Context [network-instance name](#) *string* [protocols ldp ipv6 last-oper-state-change](#) *string*

Tree [last-oper-state-change](#)

String Length 20 to 32

Configurable False

Platforms 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

lsr-id *string*

Description Returns the value that is being used as the LDP LSR ID

Context [network-instance name](#) *string* [protocols ldp ipv6 lsr-id](#) *string*

Tree [lsr-id](#)

Configurable False

Platforms 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

oper-down-reason *keyword*

Description	The reason for the LDP for IPv6 being operationally down
Context	network-instance name <i>string</i> protocols ldp ipv6 oper-down-reason <i>keyword</i>
Tree	oper-down-reason
Options	<ul style="list-style-type: none"> • ldp-admin-disabled • mpls-admin-disabled • no-system-ipv6-address System IPv6 address is used as the LSR ID. If this dependency is missing LDP is down • net-instance-mgr-down • label-block-unavailable • no-resource Memory allocation failure • unknown Other failure reason
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

oper-state *keyword*

Description	The operational state of LDP for IPv6
Context	network-instance name <i>string</i> protocols ldp ipv6 oper-state <i>keyword</i>
Tree	oper-state
Options	<ul style="list-style-type: none"> • up Component or process is operational • down Component or process is not operational • empty Component slot is empty • downloading Component is downloading image into memory • booting Component is booting downloaded image • starting Component image operational, application processes starting

- failed
Component or process has failed
- synchronizing
Component is currently being synchronized
- upgrading
Component is currently being upgraded
- low-power
Component is offline due to insufficient system power
- degraded
Component or process is in a degraded state
- warm-reboot
Component or process is currently warm rebooting
This state is set during a warm reboot immediately following initiation of the reboot, continuing after startup until the system has completed audit. In this state the system will not accept configuration changes.
- waiting
Component or process is currently waiting
This state can be set by event handler when the reinvoke-with-delay action is used, and indicates that the event handler is waiting for the provided delay before reinvoking the instance.

Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

oper-up-to-down-transitions *number*

Description	The number of times the oper state for IPv6 has transitioned from up to down
Context	network-instance name <i>string</i> protocols ldp ipv6 oper-up-to-down-transitions number
Tree	oper-up-to-down-transitions
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

loopfree-alternate

Description	Enter the loopfree-alternate context
Context	network-instance name <i>string</i> protocols ldp loopfree-alternate
Tree	loopfree-alternate

Configurable	True
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

admin-state *keyword*

Description	Administratively enable or disable Loop Free Alternates
Context	network-instance name <i>string</i> protocols ldp loopfree-alternate admin-state keyword
Tree	admin-state
Default	disable
Options	<ul style="list-style-type: none"> • enable • disable
Configurable	True
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

multipath

Description	Container with options to configure load-balancing over equal-cost paths
Context	network-instance name <i>string</i> protocols ldp multipath
Tree	multipath
Configurable	True
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

max-paths *number*

Description	Specifies the maximum number of next-hops used for load-balancing toward towards a given FEC
Context	network-instance name <i>string</i> protocols ldp multipath max-paths <i>number</i>
Tree	max-paths
Range	1 to 64
Default	1
Configurable	True
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

peers

Description	Configuration and state related to peers
Context	network-instance name <i>string</i> protocols ldp peers
Tree	peers
Configurable	True
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

peer [lsr-id \(ipv4-address | ipv6-address\)](#) [label-space-id](#) *number*

Description	List of peers
Context	network-instance name <i>string</i> protocols ldp peers peer lsr-id (ipv4-address ipv6-address) label-space-id <i>number</i>
Tree	peer
Configurable	True
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

lsr-id (ipv4-address | ipv6-address)

Description	The LSR ID of the peer, to identify the globally unique LSR. This leaf is used together with the leaf 'label-space-id' to form the LDP ID
Context	network-instance name <i>string</i> protocols ldp peers peer lsr-id (ipv4-address ipv6-address) label-space-id <i>number</i>
Configurable	True
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

label-space-id *number*

Description	The Label Space ID of the peer, to identify a specific label space within the LSR. This is the last two octets of the LDP ID. This leaf is used together with the leaf 'lsr-id' to form the LDP ID
Context	network-instance name <i>string</i> protocols ldp peers peer lsr-id (ipv4-address ipv6-address) label-space-id <i>number</i>
Configurable	True
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

adjacency-type *keyword*

Description	The value indicates the adjacency type
Context	network-instance name <i>string</i> protocols ldp peers peer lsr-id (<i>ipv4-address</i> <i>ipv6-address</i>) label-space-id <i>number</i> adjacency-type <i>keyword</i>
Tree	adjacency-type
Options	<ul style="list-style-type: none"> • link • targeted • both
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

end-of-lib

Description	Container with state information pertaining to sent and received End of LIB markers
Context	network-instance name <i>string</i> protocols ldp peers peer lsr-id (<i>ipv4-address</i> <i>ipv6-address</i>) label-space-id <i>number</i> end-of-lib
Tree	end-of-lib
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

ipv4-prefix-fecs

Description	Enter the ipv4-prefix-fecs context
Context	network-instance name <i>string</i> protocols ldp peers peer lsr-id (<i>ipv4-address</i> <i>ipv6-address</i>) label-space-id <i>number</i> end-of-lib ipv4-prefix-fecs
Tree	ipv4-prefix-fecs
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

received *boolean*

Description	When this is true, an End-of-LIB marker was received from the LDP peer
Context	network-instance name <i>string</i> protocols ldp peers peer lsr-id (<i>ipv4-address</i> <i>ipv6-address</i>) label-space-id <i>number</i> end-of-lib ipv4-prefix-fecs received <i>boolean</i>

Tree	received
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

sent *boolean*

Description	When this is true, an End-of-LIB marker was sent to the LDP peer
Context	network-instance name <i>string</i> protocols ldp peers peer lsr-id (ipv4-address ipv6-address) label-space-id <i>number</i> end-of-lib ipv6-prefix-fecs sent <i>boolean</i>
Tree	sent
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

ipv6-prefix-fecs

Description	Enter the ipv6-prefix-fecs context
Context	network-instance name <i>string</i> protocols ldp peers peer lsr-id (ipv4-address ipv6-address) label-space-id <i>number</i> end-of-lib ipv6-prefix-fecs
Tree	ipv6-prefix-fecs
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

received *boolean*

Description	When this is true, an End-of-LIB marker was received from the LDP peer
Context	network-instance name <i>string</i> protocols ldp peers peer lsr-id (ipv4-address ipv6-address) label-space-id <i>number</i> end-of-lib ipv6-prefix-fecs received <i>boolean</i>
Tree	received
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

sent *boolean*

Description	When this is true, an End-of-LIB marker was sent to the LDP peer
Context	network-instance name <i>string</i> protocols ldp peers peer lsr-id (ipv4-address ipv6-address) label-space-id <i>number</i> end-of-lib ipv6-prefix-fecs sent <i>boolean</i>

Tree	sent
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

export-prefix-policy *reference*

Description	Apply an export prefix policy to filter advertised label bindings
Context	network-instance name <i>string</i> protocols ldp peers peer lsr-id (ipv4-address ipv6-address) label-space-id <i>number</i> export-prefix-policy <i>reference</i>
Tree	export-prefix-policy
Reference	routing-policy policy name <i>string</i>
Configurable	True
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

fec-limit *number*

Description	The maximum number of FECs of all types combined that will be accepted from the peer The value 0 implies no limit
Context	network-instance name <i>string</i> protocols ldp peers peer lsr-id (ipv4-address ipv6-address) label-space-id <i>number</i> fec-limit <i>number</i>
Tree	fec-limit
Default	0
Configurable	True
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

fec-limit-exceeded *boolean*

Description	Reads true when the peer has sent more FECs than the configured limit
Context	network-instance name <i>string</i> protocols ldp peers peer lsr-id (ipv4-address ipv6-address) label-space-id <i>number</i> fec-limit-exceeded <i>boolean</i>
Tree	fec-limit-exceeded
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

graceful-restart

Description	Graceful restart operational state
Context	network-instance name <i>string</i> protocols ldp peers peer lsr-id (ipv4-address ipv6-address) label-space-id <i>number</i> graceful-restart
Tree	graceful-restart
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

peer-reconnect-time *number*

Description	The requested reconnect time
Context	network-instance name <i>string</i> protocols ldp peers peer lsr-id (ipv4-address ipv6-address) label-space-id <i>number</i> graceful-restart peer-reconnect-time <i>number</i>
Tree	peer-reconnect-time
Range	10 to 1800
Units	seconds
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

peer-recovery-time *number*

Description	The requested recovery time
Context	network-instance name <i>string</i> protocols ldp peers peer lsr-id (ipv4-address ipv6-address) label-space-id <i>number</i> graceful-restart peer-recovery-time <i>number</i>
Tree	peer-recovery-time
Range	30 to 3600
Default	120
Units	seconds
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

peer-restarting *boolean*

Description	If true, the peer is currently in the process of restarting
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Context	network-instance name <i>string</i> protocols ldp peers peer lsr-id (ipv4-address ipv6-address) label-space-id <i>number</i> graceful-restart peer-restarting <i>boolean</i>
Tree	peer-restarting
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

import-prefix-policy *reference*

Description	Apply an import prefix policy to filter received label bindings
Context	network-instance name <i>string</i> protocols ldp peers peer lsr-id (ipv4-address ipv6-address) label-space-id <i>number</i> import-prefix-policy <i>reference</i>
Tree	import-prefix-policy
Reference	routing-policy policy name <i>string</i>
Configurable	True
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

label-advertisement-mode

Description	Label advertisement mode state
Context	network-instance name <i>string</i> protocols ldp peers peer lsr-id (ipv4-address ipv6-address) label-space-id <i>number</i> label-advertisement-mode
Tree	label-advertisement-mode
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

negotiated *keyword*

Description	Negotiated Label Advertisement Mode
Context	network-instance name <i>string</i> protocols ldp peers peer lsr-id (ipv4-address ipv6-address) label-space-id <i>number</i> label-advertisement-mode negotiated <i>keyword</i>
Tree	negotiated
Options	<ul style="list-style-type: none"> • downstream-unsolicited Downstream Unsolicited • downstream-on-demand Downstream on Demand
Configurable	False

Platforms 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

last-oper-state-change *string*

Description Last time the peer state changed

Context [network-instance name](#) *string* [protocols ldp peers peer lsr-id](#) (*ipv4-address* | *ipv6-address*) [label-space-id](#) *number* **last-oper-state-change** *string*

Tree [last-oper-state-change](#)

String Length 20 to 32

Configurable False

Platforms 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

overload

Description Overload state of the session

Context [network-instance name](#) *string* [protocols ldp peers peer lsr-id](#) (*ipv4-address* | *ipv6-address*) [label-space-id](#) *number* **overload**

Tree [overload](#)

Configurable False

Platforms 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

local-router-is-overloaded *boolean*

Description This router transmitted an overload TLV requesting that the peer stop advertising new FECs

Context [network-instance name](#) *string* [protocols ldp peers peer lsr-id](#) (*ipv4-address* | *ipv6-address*) [label-space-id](#) *number* **overload local-router-is-overloaded** *boolean*

Tree [local-router-is-overloaded](#)

Configurable False

Platforms 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

peer-is-overloaded *boolean*

Description The peer has sent an overload TLV to this router requesting that we stop advertising new FECs

Context [network-instance name](#) *string* [protocols ldp peers peer lsr-id](#) (*ipv4-address* | *ipv6-address*) [label-space-id](#) *number* **overload peer-is-overloaded** *boolean*

Tree	peer-is-overloaded
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

received-capabilities

Description	Capabilities signalled by the peer
Context	network-instance name <i>string</i> protocols ldp peers peer lsr-id (ipv4-address ipv6-address) label-space-id <i>number</i> received-capabilities
Tree	received-capabilities
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

dual-stack-capability *boolean*

Description	Dual stack capability. TLV 0x0701
Context	network-instance name <i>string</i> protocols ldp peers peer lsr-id (ipv4-address ipv6-address) label-space-id <i>number</i> received-capabilities dual-stack-capability <i>boolean</i>
Tree	dual-stack-capability
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

dynamic-capability *boolean*

Description	Dynamic capability advertisement capability. Indicates support for Capability messages. TLV 0x0506
Context	network-instance name <i>string</i> protocols ldp peers peer lsr-id (ipv4-address ipv6-address) label-space-id <i>number</i> received-capabilities dynamic-capability <i>boolean</i>
Tree	dynamic-capability
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

entropy-label-capability *boolean*

Description	Entropy label capability. TLV 0x0206
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Context	network-instance name <i>string</i> protocols ldp peers peer lsr-id (ipv4-address ipv6-address) label-space-id <i>number</i> received-capabilities entropy-label-capability <i>boolean</i>
Tree	entropy-label-capability
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

graceful-restart-capability *boolean*

Description	Fault tolerance protection TLV 0x0503
Context	network-instance name <i>string</i> protocols ldp peers peer lsr-id (ipv4-address ipv6-address) label-space-id <i>number</i> received-capabilities graceful-restart-capability <i>boolean</i>
Tree	graceful-restart-capability
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

make-before-break-capability *boolean*

Description	Make before break capability. TLV 0x050A
Context	network-instance name <i>string</i> protocols ldp peers peer lsr-id (ipv4-address ipv6-address) label-space-id <i>number</i> received-capabilities make-before-break-capability <i>boolean</i>
Tree	make-before-break-capability
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

multipoint-to-multipoint-capability *boolean*

Description	Multipoint to multipoint FEC capability. TLV 0x0509
Context	network-instance name <i>string</i> protocols ldp peers peer lsr-id (ipv4-address ipv6-address) label-space-id <i>number</i> received-capabilities multipoint-to-multipoint-capability <i>boolean</i>
Tree	multipoint-to-multipoint-capability
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

nokia-vendor-overload-capability *boolean*

Description	Overload capability
Context	network-instance name <i>string</i> protocols ldp peers peer lsr-id (<i>ipv4-address</i> <i>ipv6-address</i>) label-space-id <i>number</i> received-capabilities nokia-vendor-overload-capability <i>boolean</i>
Tree	nokia-vendor-overload-capability
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

point-to-multipoint-capability *boolean*

Description	Point to multipoint FEC capability. TLV 0x0508
Context	network-instance name <i>string</i> protocols ldp peers peer lsr-id (<i>ipv4-address</i> <i>ipv6-address</i>) label-space-id <i>number</i> received-capabilities point-to-multipoint-capability <i>boolean</i>
Tree	point-to-multipoint-capability
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

state-advertisement-control

Description	State advertisement control capability. TLV 0x050D
Context	network-instance name <i>string</i> protocols ldp peers peer lsr-id (<i>ipv4-address</i> <i>ipv6-address</i>) label-space-id <i>number</i> received-capabilities state-advertisement-control
Tree	state-advertisement-control
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

ipv4-prefix-disable *boolean*

Description	Indicates desire to not receive IPv4 prefix FECs
Context	network-instance name <i>string</i> protocols ldp peers peer lsr-id (<i>ipv4-address</i> <i>ipv6-address</i>) label-space-id <i>number</i> received-capabilities state-advertisement-control ipv4-prefix-disable <i>boolean</i>
Tree	ipv4-prefix-disable
Configurable	False

Platforms 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

ipv6-prefix-disable *boolean*

Description Indicates desire to not receive IPv6 prefix FECs

Context [network-instance name](#) *string* [protocols](#) [ldp](#) [peers](#) [peer](#) [lsr-id](#) ([ipv4-address](#) | [ipv6-address](#)) [label-space-id](#) *number* [received-capabilities](#) [state-advertisement-control](#) [ipv6-prefix-disable](#) *boolean*

Tree [ipv6-prefix-disable](#)

Configurable False

Platforms 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

p2p-pseudowire-fec-128-disable *boolean*

Description Indicates desire to not receive P2P PW FEC 128 FECs

Context [network-instance name](#) *string* [protocols](#) [ldp](#) [peers](#) [peer](#) [lsr-id](#) ([ipv4-address](#) | [ipv6-address](#)) [label-space-id](#) *number* [received-capabilities](#) [state-advertisement-control](#) [p2p-pseudowire-fec-128-disable](#) *boolean*

Tree [p2p-pseudowire-fec-128-disable](#)

Configurable False

Platforms 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

p2p-pseudowire-fec-129-disable *boolean*

Description Indicates desire to not receive P2P PW FEC 129 FECs

Context [network-instance name](#) *string* [protocols](#) [ldp](#) [peers](#) [peer](#) [lsr-id](#) ([ipv4-address](#) | [ipv6-address](#)) [label-space-id](#) *number* [received-capabilities](#) [state-advertisement-control](#) [p2p-pseudowire-fec-129-disable](#) *boolean*

Tree [p2p-pseudowire-fec-129-disable](#)

Configurable False

Platforms 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

unrecognized-notification-capability *boolean*

Description Unrecognized notification capability. TLV 0x0603

Context [network-instance name](#) *string* [protocols](#) [ldp](#) [peers](#) [peer](#) [lsr-id](#) ([ipv4-address](#) | [ipv6-address](#)) [label-space-id](#) *number* [received-capabilities](#) [unrecognized-notification-capability](#) *boolean*

Tree	unrecognized-notification-capability
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

session-holdtime

Description	Session holdtime state
Context	network-instance name <i>string</i> protocols ldp peers peer lsr-id (<i>ipv4-address</i> <i>ipv6-address</i>) label-space-id <i>number</i> session-holdtime
Tree	session-holdtime
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

negotiated *number*

Description	Negotiated holdtime
Context	network-instance name <i>string</i> protocols ldp peers peer lsr-id (<i>ipv4-address</i> <i>ipv6-address</i>) label-space-id <i>number</i> session-holdtime negotiated <i>number</i>
Tree	negotiated
Units	seconds
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

peer-proposed *number*

Description	Peer holdtime
Context	network-instance name <i>string</i> protocols ldp peers peer lsr-id (<i>ipv4-address</i> <i>ipv6-address</i>) label-space-id <i>number</i> session-holdtime peer-proposed <i>number</i>
Tree	peer-proposed
Units	seconds
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

remaining *number*

Description	Remaining holdtime
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Context	network-instance name <i>string</i> protocols ldp peers peer lsr-id (<i>ipv4-address</i> <i>ipv6-address</i>) label-space-id <i>number</i> session-holdtime remaining <i>number</i>
Tree	remaining
Units	seconds
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

session-state *keyword*

Description	Representing the operational status of the LDP session
Context	network-instance name <i>string</i> protocols ldp peers peer lsr-id (<i>ipv4-address</i> <i>ipv6-address</i>) label-space-id <i>number</i> session-state <i>keyword</i>
Tree	session-state
Options	<ul style="list-style-type: none"> • non-existent NON EXISTENT state. Transport disconnected • initialized INITIALIZED state • openrec OPENREC state • opensent OPENSENT state • operational OPERATIONAL state
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

statistics

Description	Statistics objects
Context	network-instance name <i>string</i> protocols ldp peers peer lsr-id (<i>ipv4-address</i> <i>ipv6-address</i>) label-space-id <i>number</i> statistics
Tree	statistics
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

address-statistics

Description	Enter the address-statistics context
Context	network-instance name <i>string</i> protocols ldp peers peer lsr-id (ipv4-address ipv6-address) label-space-id <i>number</i> statistics address-statistics
Tree	address-statistics
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

ipv4

Description	Enter the ipv4 context
Context	network-instance name <i>string</i> protocols ldp peers peer lsr-id (ipv4-address ipv6-address) label-space-id <i>number</i> statistics address-statistics ipv4
Tree	ipv4
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

advertised-addresses *number*

Description	The number of IPv4 addresses advertised to a peer
Context	network-instance name <i>string</i> protocols ldp peers peer lsr-id (ipv4-address ipv6-address) label-space-id <i>number</i> statistics address-statistics ipv4 advertised-addresses <i>number</i>
Tree	advertised-addresses
Default	0
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

received-addresses *number*

Description	The number of IPv4 addresses received from a peer
Context	network-instance name <i>string</i> protocols ldp peers peer lsr-id (ipv4-address ipv6-address) label-space-id <i>number</i> statistics address-statistics ipv4 received-addresses <i>number</i>
Tree	received-addresses
Default	0

Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

ipv6

Description	Enter the ipv6 context
Context	network-instance name <i>string</i> protocols ldp peers peer lsr-id (ipv4-address ipv6-address) label-space-id <i>number</i> statistics address-statistics ipv6
Tree	ipv6
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

advertised-addresses *number*

Description	The number of IPv6 addresses advertised to a peer
Context	network-instance name <i>string</i> protocols ldp peers peer lsr-id (ipv4-address ipv6-address) label-space-id <i>number</i> statistics address-statistics ipv6 advertised-addresses <i>number</i>
Tree	advertised-addresses
Default	0
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

received-addresses *number*

Description	The number of IPv6 addresses received from a peer
Context	network-instance name <i>string</i> protocols ldp peers peer lsr-id (ipv4-address ipv6-address) label-space-id <i>number</i> statistics address-statistics ipv6 received-addresses <i>number</i>
Tree	received-addresses
Default	0
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

fec-statistics

Description	Enter the fec-statistics context
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Context	network-instance name <i>string</i> protocols ldp peers peer lsr-id (ipv4-address ipv6-address) label-space-id <i>number</i> statistics fec-statistics
Tree	fec-statistics
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

ipv4-prefix

Description	Enter the ipv4-prefix context
Context	network-instance name <i>string</i> protocols ldp peers peer lsr-id (ipv4-address ipv6-address) label-space-id <i>number</i> statistics fec-statistics ipv4-prefix
Tree	ipv4-prefix
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

advertised-fecs *number*

Description	The number of advertised IPv4 prefix FECs to a single peer or all peers. In the overall summary the same FEC prefix advertised to multiple peers counts as 1
Context	network-instance name <i>string</i> protocols ldp peers peer lsr-id (ipv4-address ipv6-address) label-space-id <i>number</i> statistics fec-statistics ipv4-prefix advertised-fecs <i>number</i>
Tree	advertised-fecs
Default	0
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

received-fecs *number*

Description	The number of received IPv4 prefix FECs from a single peer or all peers. In the overall summary the same FEC prefix from different peers counts as 1
Context	network-instance name <i>string</i> protocols ldp peers peer lsr-id (ipv4-address ipv6-address) label-space-id <i>number</i> statistics fec-statistics ipv4-prefix received-fecs <i>number</i>
Tree	received-fecs
Default	0
Configurable	False

Platforms 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

ipv6-prefix

Description Enter the ipv6-prefix context

Context [network-instance name](#) *string* [protocols](#) [ldp](#) [peers](#) [peer](#) [lsr-id](#) ([ipv4-address](#) | [ipv6-address](#)) [label-space-id](#) *number* [statistics](#) [fec-statistics](#) [ipv6-prefix](#)

Tree [ipv6-prefix](#)

Configurable False

Platforms 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

advertised-fecs *number*

Description The number of advertised IPv6 prefix FECs to a single peer or all peers. In the overall summary the same FEC prefix advertised to multiple peers counts as 1

Context [network-instance name](#) *string* [protocols](#) [ldp](#) [peers](#) [peer](#) [lsr-id](#) ([ipv4-address](#) | [ipv6-address](#)) [label-space-id](#) *number* [statistics](#) [fec-statistics](#) [ipv6-prefix](#) [advertised-fecs](#) *number*

Tree [advertised-fecs](#)

Default 0

Configurable False

Platforms 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

received-fecs *number*

Description The number of received IPv6 prefix FECs from a single peer or all peers. In the overall summary the same FEC prefix from different peers counts as 1

Context [network-instance name](#) *string* [protocols](#) [ldp](#) [peers](#) [peer](#) [lsr-id](#) ([ipv4-address](#) | [ipv6-address](#)) [label-space-id](#) *number* [statistics](#) [fec-statistics](#) [ipv6-prefix](#) [received-fecs](#) *number*

Tree [received-fecs](#)

Default 0

Configurable False

Platforms 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

received-messages

Description	Inbound statistics
Context	network-instance name <i>string</i> protocols ldp peers peer lsr-id (ipv4-address ipv6-address) label-space-id <i>number</i> statistics received-messages
Tree	received-messages
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

address *number*

Description	The number of address messages sent or received
Context	network-instance name <i>string</i> protocols ldp peers peer lsr-id (ipv4-address ipv6-address) label-space-id <i>number</i> statistics received-messages address <i>number</i>
Tree	address
Default	0
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

address-withdraw *number*

Description	The number of address-withdraw messages sent or received
Context	network-instance name <i>string</i> protocols ldp peers peer lsr-id (ipv4-address ipv6-address) label-space-id <i>number</i> statistics received-messages address-withdraw <i>number</i>
Tree	address-withdraw
Default	0
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

capability *number*

Description	The number of messages sent or received
Context	network-instance name <i>string</i> protocols ldp peers peer lsr-id (ipv4-address ipv6-address) label-space-id <i>number</i> statistics received-messages capability <i>number</i>
Tree	capability

Default	0
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

initialization *number*

Description	The number of initialization messages sent or received
Context	network-instance name string protocols ldp peers peer lsr-id (ipv4-address ipv6-address) label-space-id number statistics received-messages initialization number
Tree	initialization
Default	0
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

keepalive *number*

Description	The number of keepalive messages sent or received
Context	network-instance name string protocols ldp peers peer lsr-id (ipv4-address ipv6-address) label-space-id number statistics received-messages keepalive number
Tree	keepalive
Default	0
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

label-abort-request *number*

Description	The number of label-abort-request messages sent or received
Context	network-instance name string protocols ldp peers peer lsr-id (ipv4-address ipv6-address) label-space-id number statistics received-messages label-abort-request number
Tree	label-abort-request
Default	0
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

label-mapping *number*

Description	The number of label-mapping messages sent or received
Context	network-instance name <i>string</i> protocols ldp peers peer lsr-id (<i>ipv4-address</i> <i>ipv6-address</i>) label-space-id <i>number</i> statistics received-messages label-mapping <i>number</i>
Tree	label-mapping
Default	0
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

label-release *number*

Description	The number of label-release messages sent or received
Context	network-instance name <i>string</i> protocols ldp peers peer lsr-id (<i>ipv4-address</i> <i>ipv6-address</i>) label-space-id <i>number</i> statistics received-messages label-release <i>number</i>
Tree	label-release
Default	0
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

label-request *number*

Description	The number of label-request messages sent or received
Context	network-instance name <i>string</i> protocols ldp peers peer lsr-id (<i>ipv4-address</i> <i>ipv6-address</i>) label-space-id <i>number</i> statistics received-messages label-request <i>number</i>
Tree	label-request
Default	0
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

label-withdraw *number*

Description	The number of label-withdraw messages sent or received
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Context	network-instance name <i>string</i> protocols ldp peers peer lsr-id (ipv4-address ipv6-address) label-space-id <i>number</i> statistics received-messages label-withdraw <i>number</i>
Tree	label-withdraw
Default	0
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

notification *number*

Description	The number of messages sent or received
Context	network-instance name <i>string</i> protocols ldp peers peer lsr-id (ipv4-address ipv6-address) label-space-id <i>number</i> statistics received-messages notification <i>number</i>
Tree	notification
Default	0
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

total-messages *number*

Description	The number of messages sent or received
Context	network-instance name <i>string</i> protocols ldp peers peer lsr-id (ipv4-address ipv6-address) label-space-id <i>number</i> statistics received-messages total-messages <i>number</i>
Tree	total-messages
Default	0
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

sent-messages

Description	Outbound statistics
Context	network-instance name <i>string</i> protocols ldp peers peer lsr-id (ipv4-address ipv6-address) label-space-id <i>number</i> statistics sent-messages
Tree	sent-messages
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

address number

Description	The number of address messages sent or received
Context	network-instance name <i>string</i> protocols ldp peers peer lsr-id (ipv4-address ipv6-address) label-space-id <i>number</i> statistics sent-messages address number
Tree	address
Default	0
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

address-withdraw number

Description	The number of address-withdraw messages sent or received
Context	network-instance name <i>string</i> protocols ldp peers peer lsr-id (ipv4-address ipv6-address) label-space-id <i>number</i> statistics sent-messages address-withdraw number
Tree	address-withdraw
Default	0
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

capability number

Description	The number of messages sent or received
Context	network-instance name <i>string</i> protocols ldp peers peer lsr-id (ipv4-address ipv6-address) label-space-id <i>number</i> statistics sent-messages capability number
Tree	capability
Default	0
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

initialization number

Description	The number of initialization messages sent or received
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Context	network-instance name <i>string</i> protocols ldp peers peer lsr-id (<i>ipv4-address ipv6-address</i>) label-space-id <i>number</i> statistics sent-messages initialization number
Tree	initialization
Default	0
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

keepalive *number*

Description	The number of keepalive messages sent or received
Context	network-instance name <i>string</i> protocols ldp peers peer lsr-id (<i>ipv4-address ipv6-address</i>) label-space-id <i>number</i> statistics sent-messages keepalive number
Tree	keepalive
Default	0
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

label-abort-request *number*

Description	The number of label-abort-request messages sent or received
Context	network-instance name <i>string</i> protocols ldp peers peer lsr-id (<i>ipv4-address ipv6-address</i>) label-space-id <i>number</i> statistics sent-messages label-abort-request number
Tree	label-abort-request
Default	0
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

label-mapping *number*

Description	The number of label-mapping messages sent or received
Context	network-instance name <i>string</i> protocols ldp peers peer lsr-id (<i>ipv4-address ipv6-address</i>) label-space-id <i>number</i> statistics sent-messages label-mapping number
Tree	label-mapping
Default	0

Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

label-release *number*

Description	The number of label-release messages sent or received
Context	network-instance name <i>string</i> protocols ldp peers peer lsr-id (<i>ipv4-address</i> <i>ipv6-address</i>) label-space-id <i>number</i> statistics sent-messages label-release <i>number</i>
Tree	label-release
Default	0
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

label-request *number*

Description	The number of label-request messages sent or received
Context	network-instance name <i>string</i> protocols ldp peers peer lsr-id (<i>ipv4-address</i> <i>ipv6-address</i>) label-space-id <i>number</i> statistics sent-messages label-request <i>number</i>
Tree	label-request
Default	0
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

label-withdraw *number*

Description	The number of label-withdraw messages sent or received
Context	network-instance name <i>string</i> protocols ldp peers peer lsr-id (<i>ipv4-address</i> <i>ipv6-address</i>) label-space-id <i>number</i> statistics sent-messages label-withdraw <i>number</i>
Tree	label-withdraw
Default	0
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

notification number

Description	The number of messages sent or received
Context	network-instance name string protocols ldp peers peer lsr-id (ipv4-address ipv6-address) label-space-id number statistics sent-messages notification number
Tree	notification
Default	0
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

total-messages number

Description	The number of messages sent or received
Context	network-instance name string protocols ldp peers peer lsr-id (ipv4-address ipv6-address) label-space-id number statistics sent-messages total-messages number
Tree	total-messages
Default	0
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

tcp-transport

Description	Enter the tcp-transport context
Context	network-instance name string protocols ldp peers peer lsr-id (ipv4-address ipv6-address) label-space-id number tcp-transport
Tree	tcp-transport
Configurable	True
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

local-address (ipv4-address | ipv6-address)

Description	Local address
Context	network-instance name string protocols ldp peers peer lsr-id (ipv4-address ipv6-address) label-space-id number tcp-transport local-address (ipv4-address ipv6-address)
Tree	local-address

Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

local-port *number*

Description	Local port number
Context	network-instance name <i>string</i> protocols ldp peers peer lsr-id (ipv4-address ipv6-address) label-space-id <i>number</i> tcp-transport local-port <i>number</i>
Tree	local-port
Range	0 to 65535
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

remote-address (*ipv4-address* | *ipv6-address*)

Description	Remote address
Context	network-instance name <i>string</i> protocols ldp peers peer lsr-id (ipv4-address ipv6-address) label-space-id <i>number</i> tcp-transport remote-address (ipv4-address ipv6-address)
Tree	remote-address
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

remote-port *number*

Description	Remote port number
Context	network-instance name <i>string</i> protocols ldp peers peer lsr-id (ipv4-address ipv6-address) label-space-id <i>number</i> tcp-transport remote-port <i>number</i>
Tree	remote-port
Range	0 to 65535
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

trace-options

Description	Configure event/packet tracing for one specific session
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Context	network-instance name <i>string</i> protocols ldp peers peer lsp-id (ipv4-address ipv6-address) label-space-id <i>number</i> trace-options
Tree	trace-options
Configurable	True
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

trace *keyword*

Description	Specifies the trace information to be captured
Context	network-instance name <i>string</i> protocols ldp peers peer lsp-id (ipv4-address ipv6-address) label-space-id <i>number</i> trace-options trace <i>keyword</i>
Tree	trace
Options	<ul style="list-style-type: none"> • all Trace all events and packets • events-all Trace all events • events-session Trace session related events • events-binding Trace binding related events • messages-all Trace all LDP messages • messages-all-detail Trace all LDP messages with detailed output • messages-initialization Trace LDP Initialization packets • messages-initialization-detail Trace LDP Initialization packets with detailed output • messages-keepalive Trace LDP Keepalive packets • messages-label Trace LDP Label Mapping, Label Request, Label Abort Request, Label Withdraw and Label Release packets • messages-label-detail Trace LDP Label Mapping, Label Request, Label Abort Request, Label Withdraw and Label Release packets with detailed output • messages-hello

- Trace Hello packets
 - messages-hello-detail
- Trace LDP Hello packets with detailed output

Configurable	True
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

session-keepalive-holdtime *number*

Description	The time interval after which an inactive LDP session terminates and the corresponding TCP session closes. Inactivity is defined as not receiving LDP packets from the peer
Context	network-instance name <i>string</i> protocols ldp peers session-keepalive-holdtime <i>number</i>
Tree	session-keepalive-holdtime
Range	45 to 3600
Default	180
Units	seconds
Configurable	True
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

session-keepalive-interval *number*

Description	The interval between successive transmissions of keepalive packets. Keepalive packets are only sent in the absence of other LDP packets transmitted over the LDP session
Context	network-instance name <i>string</i> protocols ldp peers session-keepalive-interval <i>number</i>
Tree	session-keepalive-interval
Range	15 to 1200
Default	60
Units	seconds
Configurable	True
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

trace-options

Description	Configure event/packet tracing for all sessions (configured and dynamic)
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Context	network-instance name <i>string</i> protocols ldp peers trace-options
Tree	trace-options
Configurable	True
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

trace keyword

Description	Specifies the trace information to be captured
Context	network-instance name <i>string</i> protocols ldp peers trace-options trace keyword
Tree	trace
Options	<ul style="list-style-type: none"> • all Trace all events and packets • events-all Trace all events • events-session Trace session related events • events-binding Trace binding related events • messages-all Trace all LDP messages • messages-all-detail Trace all LDP messages with detailed output • messages-initialization Trace LDP Initialization packets • messages-initialization-detail Trace LDP Initialization packets with detailed output • messages-keepalive Trace LDP Keepalive packets • messages-label Trace LDP Label Mapping, Label Request, Label Abort Request, Label Withdraw and Label Release packets • messages-label-detail Trace LDP Label Mapping, Label Request, Label Abort Request, Label Withdraw and Label Release packets with detailed output • messages-hello Trace Hello packets

- `messages-hello-detail`
Trace LDP Hello packets with detailed output

Configurable	True
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

static-fec `fec-prefix` (*ipv4-prefix* | *ipv6-prefix*)

Description	Configure static FEC
Context	<code>network-instance name string protocols ldp static-fec fec-prefix</code> (<i>ipv4-prefix</i> <i>ipv6-prefix</i>)
Tree	<code>static-fec</code>
Configurable	True
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

fec-prefix (*ipv4-prefix* | *ipv6-prefix*)

Description	Static FEC IP prefix
Context	<code>network-instance name string protocols ldp static-fec fec-prefix</code> (<i>ipv4-prefix</i> <i>ipv6-prefix</i>)
Configurable	True
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

swap *boolean*

Description	Swap label. If false, label is popped
Context	<code>network-instance name string protocols ldp static-fec fec-prefix</code> (<i>ipv4-prefix</i> <i>ipv6-prefix</i>) <code>swap boolean</code>
Tree	<code>swap</code>
Configurable	True
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

statistics

Description	LDP instance level statistics
Context	<code>network-instance name string protocols ldp statistics</code>
Tree	<code>statistics</code>
Configurable	False

Platforms 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

fec-statistics

Description Enter the fec-statistics context

Context [network-instance name](#) *string* [protocols ldp statistics fec-statistics](#)

Tree [fec-statistics](#)

Configurable False

Platforms 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

ipv4-prefix

Description Enter the ipv4-prefix context

Context [network-instance name](#) *string* [protocols ldp statistics fec-statistics ipv4-prefix](#)

Tree [ipv4-prefix](#)

Configurable False

Platforms 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

advertised-fecs *number*

Description The number of advertised IPv4 prefix FECs to a single peer or all peers. In the overall summary the same FEC prefix advertised to multiple peers counts as 1

Context [network-instance name](#) *string* [protocols ldp statistics fec-statistics ipv4-prefix advertised-fecs](#) *number*

Tree [advertised-fecs](#)

Default 0

Configurable False

Platforms 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

received-fecs *number*

Description The number of received IPv4 prefix FECs from a single peer or all peers. In the overall summary the same FEC prefix from different peers counts as 1

Context [network-instance name](#) *string* [protocols ldp statistics fec-statistics ipv4-prefix received-fecs](#) *number*

Tree [received-fecs](#)

Default	0
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

ipv6-prefix

Description	Enter the ipv6-prefix context
Context	network-instance name <i>string</i> protocols ldp statistics fec-statistics ipv6-prefix
Tree	ipv6-prefix
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

advertised-fecs *number*

Description	The number of advertised IPv6 prefix FECs to a single peer or all peers. In the overall summary the same FEC prefix advertised to multiple peers counts as 1
Context	network-instance name <i>string</i> protocols ldp statistics fec-statistics ipv6-prefix advertised-fecs <i>number</i>
Tree	advertised-fecs
Default	0
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

received-fecs *number*

Description	The number of received IPv6 prefix FECs from a single peer or all peers. In the overall summary the same FEC prefix from different peers counts as 1
Context	network-instance name <i>string</i> protocols ldp statistics fec-statistics ipv6-prefix received-fecs <i>number</i>
Tree	received-fecs
Default	0
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

ipv4

Description	Enter the ipv4 context
Context	network-instance name <i>string</i> protocols ldp statistics ipv4
Tree	ipv4
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

total-discovery-interfaces *number*

Description	The total number of IP subinterfaces on which basic LDP discovery is active
Context	network-instance name <i>string</i> protocols ldp statistics ipv4 total-discovery-interfaces <i>number</i>
Tree	total-discovery-interfaces
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

total-interface-hello-adjacencies *number*

Description	The total number of interface hello adjacencies that are up
Context	network-instance name <i>string</i> protocols ldp statistics ipv4 total-interface-hello-adjacencies <i>number</i>
Tree	total-interface-hello-adjacencies
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

total-peers *number*

Description	The total number of LDP TCP sessions that are established
Context	network-instance name <i>string</i> protocols ldp statistics ipv4 total-peers <i>number</i>
Tree	total-peers
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

ipv6

Description	Enter the ipv6 context
Context	network-instance name <i>string</i> protocols ldp statistics ipv6
Tree	ipv6
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

total-discovery-interfaces *number*

Description	The total number of IP subinterfaces on which basic LDP discovery is active
Context	network-instance name <i>string</i> protocols ldp statistics ipv6 total-discovery-interfaces <i>number</i>
Tree	total-discovery-interfaces
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

total-interface-hello-adjacencies *number*

Description	The total number of interface hello adjacencies that are up
Context	network-instance name <i>string</i> protocols ldp statistics ipv6 total-interface-hello-adjacencies <i>number</i>
Tree	total-interface-hello-adjacencies
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

total-peers *number*

Description	The total number of LDP TCP sessions that are established
Context	network-instance name <i>string</i> protocols ldp statistics ipv6 total-peers <i>number</i>
Tree	total-peers
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

protocol-errors

Description	Enter the protocol-errors context
Context	network-instance name <i>string</i> protocols ldp statistics protocol-errors
Tree	protocol-errors
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

bad-ldp-identifier *number*

Description	The number of notification messages sent to advise of a bad LDP identifier
Context	network-instance name <i>string</i> protocols ldp statistics protocol-errors bad-ldp-identifier <i>number</i>
Tree	bad-ldp-identifier
Default	0
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

bad-message-length *number*

Description	The number of notification messages sent to advise of a bad message length
Context	network-instance name <i>string</i> protocols ldp statistics protocol-errors bad-message-length <i>number</i>
Tree	bad-message-length
Default	0
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

bad-pdu-length *number*

Description	The number of notification messages sent to advise of a bad PDU length
Context	network-instance name <i>string</i> protocols ldp statistics protocol-errors bad-pdu-length <i>number</i>
Tree	bad-pdu-length
Default	0
Configurable	False

Platforms 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

bad-protocol-version *number*

Description The number of notification messages sent to advise of a bad protocol version

Context [network-instance name](#) *string* [protocols](#) [ldp](#) [statistics](#) [protocol-errors](#) [bad-protocol-version](#) *number*

Tree [bad-protocol-version](#)

Default 0

Configurable False

Platforms 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

bad-tlv-length *number*

Description The number of notification messages sent to advise of a bad TLV length

Context [network-instance name](#) *string* [protocols](#) [ldp](#) [statistics](#) [protocol-errors](#) [bad-tlv-length](#) *number*

Tree [bad-tlv-length](#)

Default 0

Configurable False

Platforms 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

malformed-tlv-value *number*

Description The number of notification messages sent to advise of a malformed TLV value

Context [network-instance name](#) *string* [protocols](#) [ldp](#) [statistics](#) [protocol-errors](#) [malformed-tlv-value](#) *number*

Tree [malformed-tlv-value](#)

Default 0

Configurable False

Platforms 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

missing-message-parameters *number*

Description The number of notification messages sent to advise of missing mandatory parameters

Context	network-instance name <i>string</i> protocols ldp statistics protocol-errors missing-message-parameters <i>number</i>
Tree	missing-message-parameters
Default	0
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

session-rejected-bad-keepalive-time *number*

Description	The number of notification messages sent to advise that a TCP connection was closed because the requested keepalive time is not acceptable
Context	network-instance name <i>string</i> protocols ldp statistics protocol-errors session-rejected-bad-keepalive-time <i>number</i>
Tree	session-rejected-bad-keepalive-time
Default	0
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

session-rejected-no-hello *number*

Description	The number of notification messages sent to advise that a TCP connection was closed because there was no matching Hello adjacency
Context	network-instance name <i>string</i> protocols ldp statistics protocol-errors session-rejected-no-hello <i>number</i>
Tree	session-rejected-no-hello
Default	0
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

session-rejected-parameters-adv-mode *number*

Description	The number of notification messages sent to advise that a TCP connection was closed because the requested label advertisement mode is not acceptable
Context	network-instance name <i>string</i> protocols ldp statistics protocol-errors session-rejected-parameters-adv-mode <i>number</i>
Tree	session-rejected-parameters-adv-mode
Default	0

Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

session-rejected-parameters-label-range *number*

Description	The number of notification messages sent to advise that a TCP connection was closed because the requested label range is not acceptable
Context	network-instance name <i>string</i> protocols ldp statistics protocol-errors session-rejected-parameters-label-range <i>number</i>
Tree	session-rejected-parameters-label-range
Default	0
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

session-rejected-parameters-max-pdu-length *number*

Description	The number of notification messages sent to advise that a TCP connection was closed because the requested Maximum PDU Length is not acceptable
Context	network-instance name <i>string</i> protocols ldp statistics protocol-errors session-rejected-parameters-max-pdu-length <i>number</i>
Tree	session-rejected-parameters-max-pdu-length
Default	0
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

unknown-message-type *number*

Description	The number of notification messages sent to advise of an unknown message type
Context	network-instance name <i>string</i> protocols ldp statistics protocol-errors unknown-message-type <i>number</i>
Tree	unknown-message-type
Default	0
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

unknown-tlv *number*

Description	The number of notification messages sent to advise of an unknown TLV
Context	network-instance name <i>string</i> protocols ldp statistics protocol-errors unknown-tlv <i>number</i>
Tree	unknown-tlv
Default	0
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

unsupported-address-family *number*

Description	The number of notification messages sent to advise that a TCP connection was closed because the FEC type is not IPv4 or IPv6
Context	network-instance name <i>string</i> protocols ldp statistics protocol-errors unsupported-address-family <i>number</i>
Tree	unsupported-address-family
Default	0
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

sessions-terminated-holdtime-expiry *number*

Description	The total number of LDP sessions that were terminated due to keepalive holdtime expiry
Context	network-instance name <i>string</i> protocols ldp statistics sessions-terminated-holdtime-expiry <i>number</i>
Tree	sessions-terminated-holdtime-expiry
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

linux

Description	Enables routing interaction with the Linux kernel
Context	network-instance name <i>string</i> protocols linux
Tree	linux
Configurable	True

Platforms Supported on all platforms

export-neighbors *boolean*

Description Export neighbors to linux routing table

Context [network-instance name](#) *string* [protocols linux export-neighbors](#) *boolean*

Tree [export-neighbors](#)

Default true

Configurable True

Platforms Supported on all platforms

export-routes *boolean*

Description Export routes to linux routing table

Context [network-instance name](#) *string* [protocols linux export-routes](#) *boolean*

Tree [export-routes](#)

Default false

Configurable True

Platforms Supported on all platforms

import-routes *boolean*

Description Import routes from linux routing table

Context [network-instance name](#) *string* [protocols linux import-routes](#) *boolean*

Tree [import-routes](#)

Default false

Configurable True

Platforms Supported on all platforms

mld-snooping

Description Enable the mld-snooping context

Context [network-instance name](#) *string* [protocols mld-snooping](#)

Tree [mld-snooping](#)

Configurable True

Platforms 7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5

admin-state *keyword*

Description Administratively enable or disable the MLD instance

Context [network-instance name](#) *string* [protocols mld-snooping admin-state](#) *keyword*

Tree [admin-state](#)

Default disable

Options

- enable
- disable

Configurable True

Platforms 7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5

interface [interface-name](#) *string*

Description List of MLD interfaces

Context [network-instance name](#) *string* [protocols mld-snooping interface interface-name](#) *string*

Tree [interface](#)

Configurable True

Platforms 7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5

interface-name *string*

Description Reference to a specific subinterface of the form <interface-name>.<subinterface-index>

Context [network-instance name](#) *string* [protocols mld-snooping interface interface-name](#) *string*

String Length 5 to 25

Configurable True

Platforms 7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5

fast-leave *boolean*

Description	Allow MLD fast leave processing When enabled, the multicast state is removed immediately upon receiving an MLD leave message.
Context	network-instance name <i>string</i> protocols mld-snooping interface interface-name <i>string</i> fast-leave <i>boolean</i>
Tree	fast-leave
Default	false
Configurable	True
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5

import-policy *reference*

Description	Apply an import policy. The length of the policy name should not exceed 32 characters.
Context	network-instance name <i>string</i> protocols mld-snooping interface interface-name <i>string</i> import-policy <i>reference</i>
Tree	import-policy
Reference	routing-policy policy name <i>string</i>
Configurable	True
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

is-mrouter-port *boolean*

Description	Interface Is a multicast router port
Context	network-instance name <i>string</i> protocols mld-snooping interface interface-name <i>string</i> is-mrouter-port <i>boolean</i>
Tree	is-mrouter-port
Configurable	False
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5

maximum-number-group-sources *number*

Description	Maximum number of MLD group/source combinations for this interface
Context	network-instance name <i>string</i> protocols mld-snooping interface interface-name <i>string</i> maximum-number-group-sources <i>number</i>
Tree	maximum-number-group-sources
Range	1 to 4096
Configurable	True
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5

maximum-number-groups *number*

Description	Maximum number of MLD Groups for this interface
Context	network-instance name <i>string</i> protocols mld-snooping interface interface-name <i>string</i> maximum-number-groups <i>number</i>
Tree	maximum-number-groups
Range	1 to 4096
Configurable	True
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5

maximum-number-sources *number*

Description	Maximum number of MLD sources per group for this interface
Context	network-instance name <i>string</i> protocols mld-snooping interface interface-name <i>string</i> maximum-number-sources <i>number</i>
Tree	maximum-number-sources
Range	1 to 512
Configurable	True
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5

membership-group-count *number*

Description	The number of multicast groups which have been learned
Context	network-instance name <i>string</i> protocols mld-snooping interface interface-name <i>string</i> membership-group-count <i>number</i>

Tree	membership-group-count
Configurable	False
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5

membership-groups

Description	List of MLD Membership information
Context	network-instance name <i>string</i> protocols mld-snooping interface interface-name <i>string</i> membership-groups
Tree	membership-groups
Configurable	False
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5

group [group](#) *string*

Description	Multicast group membership
Context	network-instance name <i>string</i> protocols mld-snooping interface interface-name <i>string</i> membership-groups group group <i>string</i>
Tree	group
Configurable	False
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5

group *string*

Description	Multicast address
Context	network-instance name <i>string</i> protocols mld-snooping interface interface-name <i>string</i> membership-groups group group <i>string</i>
Configurable	False
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5

expiry-time *number*

Description	The time left before multicast group timeout
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Context	network-instance name <i>string</i> protocols mld-snooping interface interface-name <i>string</i> membership-groups group group <i>string</i> expiry-time <i>number</i>
Tree	expiry-time
Units	seconds
Configurable	False
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5

filter-mode *keyword*

Description	Enter the filter-mode context
Context	network-instance name <i>string</i> protocols mld-snooping interface interface-name <i>string</i> membership-groups group group <i>string</i> filter-mode <i>keyword</i>
Tree	filter-mode
Options	<ul style="list-style-type: none"> include In include mode, reception of packets sent to the specified multicast address is requested only from those IP source addresses listed in the source-list parameter exclude In exclude mode, reception of packets sent to the given multicast address is requested from all IP source addresses except those listed in the source-list parameter.
Configurable	False
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5

group-type *keyword*

Description	Enter the group-type context
Context	network-instance name <i>string</i> protocols mld-snooping interface interface-name <i>string</i> membership-groups group group <i>string</i> group-type <i>keyword</i>
Tree	group-type
Options	<ul style="list-style-type: none"> static This group entry was statically configured. dynamic This group entry was learned by the protocol. bgp-smet This group entry was learned from a bgp SMET route.

- `bgp-sync`
This group entry was learned from a bgp JOIN SYNC route.

Configurable	False
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5

mld-compatibility-mode *keyword*

Description	Compatibility with older version routers
Context	network-instance name <i>string</i> protocols mld-snooping interface interface-name <i>string</i> membership-groups group group <i>string</i> mld-compatibility-mode <i>keyword</i>
Tree	mld-compatibility-mode
Options	<ul style="list-style-type: none"> • 1 • 2
Configurable	False
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5

source [source](#) *string*

Description	Source addresses of multicast
Context	network-instance name <i>string</i> protocols mld-snooping interface interface-name <i>string</i> membership-groups group group <i>string</i> source source <i>string</i>
Tree	source
Configurable	False
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5

source *string*

Description	Source address of multicast
Context	network-instance name <i>string</i> protocols mld-snooping interface interface-name <i>string</i> membership-groups group group <i>string</i> source source <i>string</i>
Configurable	False
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5

expiry-time *number*

Description	The time left before multicast group timeout
Context	network-instance name <i>string</i> protocols mld-snooping interface interface-name <i>string</i> membership-groups group group <i>string</i> source source <i>string</i> expiry-time <i>number</i>
Tree	expiry-time
Units	seconds
Configurable	False
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5

forwarding-state *keyword*

Description	Traffic forwarding state on this port
Context	network-instance name <i>string</i> protocols mld-snooping interface interface-name <i>string</i> membership-groups group group <i>string</i> source source <i>string</i> forwarding-state <i>keyword</i>
Tree	forwarding-state
Options	<ul style="list-style-type: none"> • forward • block
Configurable	False
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5

source-type *keyword*

Description	Enter the source-type context
Context	network-instance name <i>string</i> protocols mld-snooping interface interface-name <i>string</i> membership-groups group group <i>string</i> source source <i>string</i> source-type <i>keyword</i>
Tree	source-type
Options	<ul style="list-style-type: none"> • static This group entry was statically configured. • dynamic This group entry was learned by the protocol. • bgp-smet This group entry was learned from a bgp SMET route.

- `bgp-sync`
This group entry was learned from a bgp JOIN SYNC route.

Configurable	False
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5

up-time string

Description	The time elapsed since this entry was created
Context	network-instance name string protocols mld-snooping interface interface-name string membership-groups group group string source source string up-time string
Tree	up-time
String Length	20 to 32
Configurable	False
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5

up-time string

Description	The time elapsed since this entry was created
Context	network-instance name string protocols mld-snooping interface interface-name string membership-groups group group string up-time string
Tree	up-time
String Length	20 to 32
Configurable	False
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5

v1-host-timer number

Description	The time remaining until the local router will assume that there are no longer any version 1 members
Context	network-instance name string protocols mld-snooping interface interface-name string membership-groups group group string v1-host-timer number
Tree	v1-host-timer
Units	seconds
Configurable	False

Platforms 7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5

mrouter-port *boolean*

Description Operate port as a multicast router port

Context [network-instance name](#) *string* [protocols mld-snooping interface interface-name](#) *string* **mrouter-port** *boolean*

Tree [mrouter-port](#)

Default false

Configurable True

Platforms 7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5

query-interval *number*

Description Interval at which the router sends the MLD membership queries

Context [network-instance name](#) *string* [protocols mld-snooping interface interface-name](#) *string* **query-interval** *number*

Tree [query-interval](#)

Range 2 to 1024

Default 125

Configurable True

Platforms 7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5

query-last-member-interval *number*

Description Interval at which Group-Specific-Query packets are transmitted

When used along with EVPN multi-homing, the result of this value multiplied by the interface robust-count must be a value equal to or less than 25.5 seconds. This is due to the fact that the maximum response time field in the EVPN Multicast Leave Synch route has a limit of 255 units of 1/10 second, and this field encodes the result of $[(\text{query-last-member-interval} * 10) * \text{robust-count}]$.

If the result of that operation is greater than 255, the maximum response time in the EVPN Multicast Leave Synch route is still 255.

Context [network-instance name](#) *string* [protocols mld-snooping interface interface-name](#) *string* **query-last-member-interval** *number*

Tree	query-last-member-interval
Range	1 to 5
Default	1
Configurable	True
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5

query-response-interval *number*

Description	Time to wait to receive a response to the MLD membership query from the host
Context	network-instance name <i>string</i> protocols mld-snooping interface interface-name <i>string</i> query-response-interval <i>number</i>
Tree	query-response-interval
Range	1 to 1023
Default	10
Configurable	True
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5

robust-count *number*

Description	<p>Tune MLD robustness to allow for expected packet loss</p> <p>The robust-count variable allows tuning for the expected packet loss on a subnet. If a subnet anticipates losses, the robust-count variable can be increased.</p> <p>When used along with EVPN multi-homing, the result of this value multiplied by the interface query-last-member-interval must be a value equal to or less than 25.5 seconds. This is due to the fact that the maximum response time field in the EVPN Multicast Leave Synch route has a limit of 255 units of 1/10 second, and this field encodes the result of [(query-last-member-interval* 10) * robust-count].</p> <p>If the result of that operation is greater than 255, the maximum response time in the EVPN Multicast Leave Synch route is still 255.</p>
Context	network-instance name <i>string</i> protocols mld-snooping interface interface-name <i>string</i> robust-count <i>number</i>
Tree	robust-count
Range	2 to 10
Default	2

Configurable	True
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5

router-alert-check *boolean*

Description	Enable or disable router alert checking for MLD messages received on this interface
Context	network-instance name <i>string</i> protocols mld-snooping interface interface-name <i>string</i> router-alert-check <i>boolean</i>
Tree	router-alert-check
Default	true
Configurable	True
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5

send-queries *boolean*

Description	Generate MLD general queries
Context	network-instance name <i>string</i> protocols mld-snooping interface interface-name <i>string</i> send-queries <i>boolean</i>
Tree	send-queries
Default	false
Configurable	True
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5

static-membership-groups

Description	Container to configure static <S,G>s for this interface
Context	network-instance name <i>string</i> protocols mld-snooping interface interface-name <i>string</i> static-membership-groups
Tree	static-membership-groups
Configurable	True
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5

group *group string*

Description	Enter the group list instance
Context	network-instance name string protocols mld-snooping interface interface-name string static-membership-groups group group string
Tree	group
Configurable	True
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5

group *string*

Description	group address.
Context	network-instance name string protocols mld-snooping interface interface-name string static-membership-groups group group string
Configurable	True
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5

source *source string*

Description	Multicast source address list
Context	network-instance name string protocols mld-snooping interface interface-name string static-membership-groups group group string source source string
Tree	source
Configurable	True
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5

source *string*

Description	Multicast source address.
Context	network-instance name string protocols mld-snooping interface interface-name string static-membership-groups group group string source source string
Configurable	True
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5

starg

Description	any source address (*,G)
Context	network-instance name <i>string</i> protocols mld-snooping interface interface-name <i>string</i> static-membership-groups group group <i>string</i> starg
Tree	starg
Configurable	True
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5

statistics

Description	MLD sub-interface statistics
Context	network-instance name <i>string</i> protocols mld-snooping interface interface-name <i>string</i> statistics
Tree	statistics
Configurable	False
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5

error

Description	Error message statistics
Context	network-instance name <i>string</i> protocols mld-snooping interface interface-name <i>string</i> statistics error
Tree	error
Configurable	False
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5

bad-encoding *number*

Description	Badly encoded packets
Context	network-instance name <i>string</i> protocols mld-snooping interface interface-name <i>string</i> statistics error bad-encoding <i>number</i>
Tree	bad-encoding
Default	0
Configurable	False

Platforms 7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5

bad-length *number*

Description Bad length

Context [network-instance name](#) *string* [protocols mld-snooping interface interface-name](#) *string* [statistics error bad-length](#) *number*

Tree [bad-length](#)

Default 0

Configurable False

Platforms 7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5

bad-mld-checksum *number*

Description Number of times a packet is discarded because of a bad MLD header checksum

Context [network-instance name](#) *string* [protocols mld-snooping interface interface-name](#) *string* [statistics error bad-mld-checksum](#) *number*

Tree [bad-mld-checksum](#)

Default 0

Configurable False

Platforms 7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5

discarded-bgp-join-sync *number*

Description Bgp join sync routes

Context [network-instance name](#) *string* [protocols mld-snooping interface interface-name](#) *string* [statistics error discarded-bgp-join-sync](#) *number*

Tree [discarded-bgp-join-sync](#)

Default 0

Configurable False

Platforms 7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5

discarded-bgp-leave-sync *number*

Description	Bgp leave sync routes
Context	network-instance name <i>string</i> protocols mld-snooping interface interface-name <i>string</i> statistics error discarded-bgp-leave-sync <i>number</i>
Tree	discarded-bgp-leave-sync
Default	0
Configurable	False
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5

import-policy-drops *number*

Description	Number of times the host IP address or group or source IP addresses specified in the import policy are matched
Context	network-instance name <i>string</i> protocols mld-snooping interface interface-name <i>string</i> statistics error import-policy-drops <i>number</i>
Tree	import-policy-drops
Default	0
Configurable	False
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

local-scope *number*

Description	Link-local scope multicast group address
Context	network-instance name <i>string</i> protocols mld-snooping interface interface-name <i>string</i> statistics error local-scope <i>number</i>
Tree	local-scope
Default	0
Configurable	False
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5

missing-router-alert *number*

Description	Router alert flag is not set
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Context	network-instance name <i>string</i> protocols mld-snooping interface interface-name <i>string</i> statistics error missing-router-alert <i>number</i>
Tree	missing-router-alert
Default	0
Configurable	False
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5

out-of-memory-discarded-packets *number*

Description	Number of times a join is discarded because the router ran out of memory
Context	network-instance name <i>string</i> protocols mld-snooping interface interface-name <i>string</i> statistics error out-of-memory-discarded-packets <i>number</i>
Tree	out-of-memory-discarded-packets
Default	0
Configurable	False
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5

reached-maximum-number-group-sources *number*

Description	Number of times a join is discarded because the maximum number of group-source combinations is reached
Context	network-instance name <i>string</i> protocols mld-snooping interface interface-name <i>string</i> statistics error reached-maximum-number-group-sources <i>number</i>
Tree	reached-maximum-number-group-sources
Default	0
Configurable	False
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5

reached-maximum-number-groups *number*

Description	Number of times a join is discarded because the maximum number of groups is reached
Context	network-instance name <i>string</i> protocols mld-snooping interface interface-name <i>string</i> statistics error reached-maximum-number-groups <i>number</i>
Tree	reached-maximum-number-groups

Default	0
Configurable	False
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5

reached-maximum-number-sources *number*

Description	Number of times a join is discarded because the maximum number of sources per group is reached
Context	network-instance name <i>string</i> protocols mld-snooping interface interface-name <i>string</i> statistics error reached-maximum-number-sources <i>number</i>
Tree	reached-maximum-number-sources
Default	0
Configurable	False
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5

send-query-configured-discarded-packets *number*

Description	Number of times a query is discarded because send-queries is configured in the sub-interface
Context	network-instance name <i>string</i> protocols mld-snooping interface interface-name <i>string</i> statistics error send-query-configured-discarded-packets <i>number</i>
Tree	send-query-configured-discarded-packets
Default	0
Configurable	False
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5

unknown-type *number*

Description	Unknown type
Context	network-instance name <i>string</i> protocols mld-snooping interface interface-name <i>string</i> statistics error unknown-type <i>number</i>
Tree	unknown-type
Default	0
Configurable	False

Platforms 7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5

wrong-version *number*

Description Wrong version

Context [network-instance name](#) *string* [protocols mld-snooping interface interface-name](#) *string* [statistics error wrong-version](#) *number*

Tree [wrong-version](#)

Default 0

Configurable False

Platforms 7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5

zero-source-ip-address *number*

Description Number of times a packet is discarded because it has a zero source IP address

Context [network-instance name](#) *string* [protocols mld-snooping interface interface-name](#) *string* [statistics error zero-source-ip-address](#) *number*

Tree [zero-source-ip-address](#)

Default 0

Configurable False

Platforms 7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5

forwarded

Description Forward message statistics

Context [network-instance name](#) *string* [protocols mld-snooping interface interface-name](#) *string* [statistics forwarded](#)

Tree [forwarded](#)

Configurable False

Platforms 7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5

error-packets *number*

Description	Forwarding Errors
Context	network-instance name <i>string</i> protocols mld-snooping interface interface-name <i>string</i> statistics forwarded error-packets <i>number</i>
Tree	error-packets
Default	0
Configurable	False
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5

general-queries *number*

Description	General Queries
Context	network-instance name <i>string</i> protocols mld-snooping interface interface-name <i>string</i> statistics forwarded general-queries <i>number</i>
Tree	general-queries
Default	0
Configurable	False
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5

group-queries *number*

Description	Group Specific Queries
Context	network-instance name <i>string</i> protocols mld-snooping interface interface-name <i>string</i> statistics forwarded group-queries <i>number</i>
Tree	group-queries
Default	0
Configurable	False
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5

group-source-queries *number*

Description	Group and Source Specific Queries
Context	network-instance name <i>string</i> protocols mld-snooping interface interface-name <i>string</i> statistics forwarded group-source-queries <i>number</i>

Tree	group-source-queries
Default	0
Configurable	False
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5

leave-messages *number*

Description	Leave messages
Context	network-instance name <i>string</i> protocols mld-snooping interface interface-name <i>string</i> statistics forwarded leave-messages <i>number</i>
Tree	leave-messages
Default	0
Configurable	False
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5

unknown-type *number*

Description	Unknown MLD types
Context	network-instance name <i>string</i> protocols mld-snooping interface interface-name <i>string</i> statistics forwarded unknown-type <i>number</i>
Tree	unknown-type
Default	0
Configurable	False
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5

v1-reports *number*

Description	V1 Reports
Context	network-instance name <i>string</i> protocols mld-snooping interface interface-name <i>string</i> statistics forwarded v1-reports <i>number</i>
Tree	v1-reports
Default	0
Configurable	False
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5

v2-reports *number*

Description	V2 Reports
Context	network-instance name <i>string</i> protocols mld-snooping interface interface-name <i>string</i> statistics forwarded v2-reports <i>number</i>
Tree	v2-reports
Default	0
Configurable	False
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5

multicast-states

Description	Multicast state count for this network instance
Context	network-instance name <i>string</i> protocols mld-snooping interface interface-name <i>string</i> statistics multicast-states
Tree	multicast-states
Configurable	False
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5

source-group-entries *number*

Description	The number of (S,G)s
Context	network-instance name <i>string</i> protocols mld-snooping interface interface-name <i>string</i> statistics multicast-states source-group-entries <i>number</i>
Tree	source-group-entries
Default	0
Configurable	False
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5

star-group-entries *number*

Description	The number of (*,G)s
Context	network-instance name <i>string</i> protocols mld-snooping interface interface-name <i>string</i> statistics multicast-states star-group-entries <i>number</i>
Tree	star-group-entries

Default	0
Configurable	False
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5

received

Description	Received message statistics
Context	network-instance name <i>string</i> protocols mld-snooping interface interface-name <i>string</i> statistics received
Tree	received
Configurable	False
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5

bgp-join-sync *number*

Description	Bgp join sync routes
Context	network-instance name <i>string</i> protocols mld-snooping interface interface-name <i>string</i> statistics received bgp-join-sync <i>number</i>
Tree	bgp-join-sync
Default	0
Configurable	False
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5

bgp-leave-sync *number*

Description	Bgp leave sync routes
Context	network-instance name <i>string</i> protocols mld-snooping interface interface-name <i>string</i> statistics received bgp-leave-sync <i>number</i>
Tree	bgp-leave-sync
Default	0
Configurable	False
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5

discarded-packets *number*

Description	Total number of discarded MLD packets
Context	network-instance name <i>string</i> protocols mld-snooping interface interface-name <i>string</i> statistics received discarded-packets <i>number</i>
Tree	discarded-packets
Default	0
Configurable	False
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5

general-queries *number*

Description	General Queries
Context	network-instance name <i>string</i> protocols mld-snooping interface interface-name <i>string</i> statistics received general-queries <i>number</i>
Tree	general-queries
Default	0
Configurable	False
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5

group-queries *number*

Description	Group Specific Queries
Context	network-instance name <i>string</i> protocols mld-snooping interface interface-name <i>string</i> statistics received group-queries <i>number</i>
Tree	group-queries
Default	0
Configurable	False
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5

group-source-queries *number*

Description	Group and Source Specific Queries
Context	network-instance name <i>string</i> protocols mld-snooping interface interface-name <i>string</i> statistics received group-source-queries <i>number</i>

Tree	group-source-queries
Default	0
Configurable	False
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5

leave-messages *number*

Description	Leave messages
Context	network-instance name <i>string</i> protocols mld-snooping interface interface-name <i>string</i> statistics received leave-messages <i>number</i>
Tree	leave-messages
Default	0
Configurable	False
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5

v1-reports *number*

Description	V1 Reports
Context	network-instance name <i>string</i> protocols mld-snooping interface interface-name <i>string</i> statistics received v1-reports <i>number</i>
Tree	v1-reports
Default	0
Configurable	False
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5

v2-reports *number*

Description	V2 Reports
Context	network-instance name <i>string</i> protocols mld-snooping interface interface-name <i>string</i> statistics received v2-reports <i>number</i>
Tree	v2-reports
Default	0
Configurable	False
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5

transmitted

Description	Transmit message statistics
Context	network-instance name <i>string</i> protocols mld-snooping interface interface-name <i>string</i> statistics transmitted
Tree	transmitted
Configurable	False
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5

bgp-join-sync *number*

Description	Bgp join sync routes
Context	network-instance name <i>string</i> protocols mld-snooping interface interface-name <i>string</i> statistics transmitted bgp-join-sync <i>number</i>
Tree	bgp-join-sync
Default	0
Configurable	False
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5

bgp-leave-sync *number*

Description	Bgp leave sync routes
Context	network-instance name <i>string</i> protocols mld-snooping interface interface-name <i>string</i> statistics transmitted bgp-leave-sync <i>number</i>
Tree	bgp-leave-sync
Default	0
Configurable	False
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5

error-packets *number*

Description	Transmission error MLD packets
Context	network-instance name <i>string</i> protocols mld-snooping interface interface-name <i>string</i> statistics transmitted error-packets <i>number</i>
Tree	error-packets

Default	0
Configurable	False
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5

general-queries *number*

Description	General Queries
Context	network-instance name <i>string</i> protocols mld-snooping interface interface-name <i>string</i> statistics transmitted general-queries <i>number</i>
Tree	general-queries
Default	0
Configurable	False
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5

group-queries *number*

Description	Group Specific Queries
Context	network-instance name <i>string</i> protocols mld-snooping interface interface-name <i>string</i> statistics transmitted group-queries <i>number</i>
Tree	group-queries
Default	0
Configurable	False
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5

group-source-queries *number*

Description	Group and Source Specific Queries
Context	network-instance name <i>string</i> protocols mld-snooping interface interface-name <i>string</i> statistics transmitted group-source-queries <i>number</i>
Tree	group-source-queries
Default	0
Configurable	False
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5

leave-messages *number*

Description	Leave messages
Context	network-instance name <i>string</i> protocols mld-snooping interface interface-name <i>string</i> statistics transmitted leave-messages <i>number</i>
Tree	leave-messages
Default	0
Configurable	False
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5

v1-reports *number*

Description	V1 Reports
Context	network-instance name <i>string</i> protocols mld-snooping interface interface-name <i>string</i> statistics transmitted v1-reports <i>number</i>
Tree	v1-reports
Default	0
Configurable	False
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5

v2-reports *number*

Description	V2 Reports
Context	network-instance name <i>string</i> protocols mld-snooping interface interface-name <i>string</i> statistics transmitted v2-reports <i>number</i>
Tree	v2-reports
Default	0
Configurable	False
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5

version *number*

Description	MLD Version
Context	network-instance name <i>string</i> protocols mld-snooping interface interface-name <i>string</i> version <i>number</i>

Tree	version
Range	1 to 2
Default	2
Configurable	True
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5

multicast-routers [address string](#)

Description	Enter the multicast-router list instance
Context	network-instance name string protocols mld-snooping multicast-routers address string
Tree	multicast-routers
Configurable	False
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5

address string

Description	The source IP address used by queries sent out by this multicast router
Context	network-instance name string protocols mld-snooping multicast-routers address string
Configurable	False
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5

expiry-time number

Description	The time remaining before this multicast router is aged out
Context	network-instance name string protocols mld-snooping multicast-routers address string expiry-time number
Tree	expiry-time
Units	seconds
Configurable	False
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5

interface *string*

Description	Interface behind which this multicast router is located
Context	network-instance name <i>string</i> protocols mld-snooping multicast-routers address <i>string</i> interface <i>string</i>
Tree	interface
String Length	5 to 25
Configurable	False
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5

mld-v2-states

Description	Enter the mld-v2-states context
Context	network-instance name <i>string</i> protocols mld-snooping multicast-routers address <i>string</i> mld-v2-states
Tree	mld-v2-states
Configurable	False
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5

general-query-interval *number*

Description	The General Query Interval used by this multicast router
Context	network-instance name <i>string</i> protocols mld-snooping multicast-routers address <i>string</i> mld-v2-states general-query-interval <i>number</i>
Tree	general-query-interval
Units	seconds
Configurable	False
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5

general-response-interval *number*

Description	The General Query Response interval used by this multicast router
Context	network-instance name <i>string</i> protocols mld-snooping multicast-routers address <i>string</i> mld-v2-states general-response-interval <i>number</i>
Tree	general-response-interval

Units	seconds
Configurable	False
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5

robust-count *number*

Description	The Robust Count value used by this multicast router
Context	network-instance name <i>string</i> protocols mld-snooping multicast-routers address <i>string</i> mld-v2-states robust-count <i>number</i>
Tree	robust-count
Configurable	False
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5

up-time *string*

Description	The time since this multicast router has been known in this service
Context	network-instance name <i>string</i> protocols mld-snooping multicast-routers address <i>string</i> up-time <i>string</i>
Tree	up-time
String Length	20 to 32
Configurable	False
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5

version *number*

Description	The version of the protocol that is sent by this multicast router
Context	network-instance name <i>string</i> protocols mld-snooping multicast-routers address <i>string</i> version <i>number</i>
Tree	version
Range	1 to 2
Configurable	False
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5

oper-state keyword

Description	Used to report operational state of the MLD instance
Context	network-instance name <i>string</i> protocols mld-snooping oper-state <i>keyword</i>
Tree	oper-state
Options	<ul style="list-style-type: none">• up Component or process is operational• down Component or process is not operational• empty Component slot is empty• downloading Component is downloading image into memory• booting Component is booting downloaded image• starting Component image operational, application processes starting• failed Component or process has failed• synchronizing Component is currently being synchronized• upgrading Component is currently being upgraded• low-power Component is offline due to insufficient system power• degraded Component or process is in a degraded state• warm-reboot Component or process is currently warm rebooting This state is set during a warm reboot immediately following initiation of the reboot, continuing after startup until the system has completed audit. In this state the system will not accept configuration changes.• waiting Component or process is currently waiting This state can be set by event handler when the <code>reinvoke-with-delay</code> action is used, and indicates that the event handler is waiting for the provided delay before reinvoking the instance.

Configurable	False
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5

proxy-evpn-membership-group-count *number*

Description	The number of multicast groups in proxy-evpn-membership-groups
Context	network-instance name <i>string</i> protocols mld-snooping proxy-evpn-membership-group-count <i>number</i>
Tree	proxy-evpn-membership-group-count
Configurable	False
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5

proxy-evpn-membership-groups

Description	EVPN Proxy Database created for the network-instance The content of this table is used by the router to proxy the reports towards the remote PEs via BGP EVPN SMET (Selective Multicast Ethernet Tag) routes.
Context	network-instance name <i>string</i> protocols mld-snooping proxy-evpn-membership-groups
Tree	proxy-evpn-membership-groups
Configurable	False
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5

group [group](#) *string*

Description	Multicast group membership
Context	network-instance name <i>string</i> protocols mld-snooping proxy-evpn-membership-groups group group <i>string</i>
Tree	group
Configurable	False
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5

group *string*

Description	Multicast address
Context	network-instance name <i>string</i> protocols mld-snooping proxy-evpn-membership-groups group <i>group</i> <i>string</i>
Configurable	False
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5

filter-mode *keyword*

Description	Enter the filter-mode context
Context	network-instance name <i>string</i> protocols mld-snooping proxy-evpn-membership-groups group <i>group</i> <i>string</i> filter-mode <i>keyword</i>
Tree	filter-mode
Options	<ul style="list-style-type: none"> include In include mode, reception of packets sent to the specified multicast address is requested only from those IP source addresses listed in the source-list parameter exclude In exclude mode, reception of packets sent to the given multicast address is requested from all IP source addresses except those listed in the source-list parameter.
Configurable	False
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5

source [source](#) *string*

Description	Source addresses of multicast
Context	network-instance name <i>string</i> protocols mld-snooping proxy-evpn-membership-groups group <i>group</i> <i>string</i> source <i>source</i> <i>string</i>
Tree	source
Configurable	False
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5

source *string*

Description	Source address of multicast
Context	network-instance name <i>string</i> protocols mld-snooping proxy-evpn-membership-groups group group <i>string</i> source source <i>string</i>
Configurable	False
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5

up-time *string*

Description	The time elapsed since this entry was created
Context	network-instance name <i>string</i> protocols mld-snooping proxy-evpn-membership-groups group group <i>string</i> source source <i>string</i> up-time <i>string</i>
Tree	up-time
String Length	20 to 32
Configurable	False
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5

up-time *string*

Description	The time elapsed since this entry was created
Context	network-instance name <i>string</i> protocols mld-snooping proxy-evpn-membership-groups group group <i>string</i> up-time <i>string</i>
Tree	up-time
String Length	20 to 32
Configurable	False
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5

v1-support *boolean*

Description	MLD Version 1 is supported
Context	network-instance name <i>string</i> protocols mld-snooping proxy-evpn-membership-groups group group <i>string</i> v1-support <i>boolean</i>
Tree	v1-support
Configurable	False

Platforms 7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5

v2-support *boolean*

Description MLD Version 2 is supported

Context [network-instance name](#) *string* [protocols mld-snooping proxy-evpn-membership-groups group group](#) *string* **v2-support** *boolean*

Tree [v2-support](#)

Configurable False

Platforms 7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5

proxy-membership-group-count *number*

Description The number of multicast groups which have been learned

Context [network-instance name](#) *string* [protocols mld-snooping proxy-membership-group-count](#) *number*

Tree [proxy-membership-group-count](#)

Configurable False

Platforms 7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5

proxy-membership-groups

Description Proxy Database created for the network-instance
The content of this table is used by the router to proxy the reports towards the Querier, when the Querier is attached to a sub-interface.

Context [network-instance name](#) *string* [protocols mld-snooping proxy-membership-groups](#)

Tree [proxy-membership-groups](#)

Configurable False

Platforms 7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5

group [group](#) *string*

Description Multicast group membership

Context	network-instance name <i>string</i> protocols mld-snooping proxy-membership-groups group group <i>string</i>
Tree	group
Configurable	False
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5

group *string*

Description	Multicast address.
Context	network-instance name <i>string</i> protocols mld-snooping proxy-membership-groups group group <i>string</i>
Configurable	False
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5

filter-mode *keyword*

Description	Enter the filter-mode context
Context	network-instance name <i>string</i> protocols mld-snooping proxy-membership-groups group group <i>string</i> filter-mode <i>keyword</i>
Tree	filter-mode
Options	<ul style="list-style-type: none"> include In include mode, reception of packets sent to the specified multicast address is requested only from those IP source addresses listed in the source-list parameter exclude In exclude mode, reception of packets sent to the given multicast address is requested from all IP source addresses except those listed in the source-list parameter.
Configurable	False
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5

source [source](#) *string*

Description	Source addresses of multicast
Context	network-instance name <i>string</i> protocols mld-snooping proxy-membership-groups group group <i>string</i> source source <i>string</i>

Tree	source
Configurable	False
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5

source *string*

Description	Source address of multicast
Context	network-instance name <i>string</i> protocols mld-snooping proxy-membership-groups group group <i>string</i> source source <i>string</i>
Configurable	False
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5

up-time *string*

Description	The time elapsed since this entry was created
Context	network-instance name <i>string</i> protocols mld-snooping proxy-membership-groups group group <i>string</i> source source <i>string</i> up-time <i>string</i>
Tree	up-time
String Length	20 to 32
Configurable	False
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5

up-time *string*

Description	The time elapsed since this entry was created
Context	network-instance name <i>string</i> protocols mld-snooping proxy-membership-groups group group <i>string</i> up-time <i>string</i>
Tree	up-time
String Length	20 to 32
Configurable	False
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5

querier

Description	Enter the querier context
Context	network-instance name <i>string</i> protocols mld-snooping querier
Tree	querier
Configurable	False
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5

address *string*

Description	The source IP address used by queries sent out by this multicast router
Context	network-instance name <i>string</i> protocols mld-snooping querier address <i>string</i>
Tree	address
Configurable	False
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5

expiry-time *number*

Description	The time remaining before this multicast router is aged out
Context	network-instance name <i>string</i> protocols mld-snooping querier expiry-time <i>number</i>
Tree	expiry-time
Units	seconds
Configurable	False
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5

interface *string*

Description	Interface behind which this multicast router is located
Context	network-instance name <i>string</i> protocols mld-snooping querier interface <i>string</i>
Tree	interface
String Length	5 to 25
Configurable	False

Platforms 7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5

mld-v2-states

Description Enter the mld-v2-states context

Context [network-instance name](#) *string* [protocols](#) [mld-snooping](#) [querier](#) [mld-v2-states](#)

Tree [mld-v2-states](#)

Configurable False

Platforms 7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5

general-query-interval *number*

Description The General Query Interval used by this multicast router

Context [network-instance name](#) *string* [protocols](#) [mld-snooping](#) [querier](#) [mld-v2-states](#) [general-query-interval](#) *number*

Tree [general-query-interval](#)

Units seconds

Configurable False

Platforms 7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5

general-response-interval *number*

Description The General Query Response interval used by this multicast router

Context [network-instance name](#) *string* [protocols](#) [mld-snooping](#) [querier](#) [mld-v2-states](#) [general-response-interval](#) *number*

Tree [general-response-interval](#)

Units seconds

Configurable False

Platforms 7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5

robust-count *number*

Description The Robust Count value used by this multicast router

Context	network-instance name <i>string</i> protocols mld-snooping querier mld-v2-states robust-count <i>number</i>
Tree	robust-count
Configurable	False
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5

up-time *string*

Description	The time since this multicast router has been known in this service
Context	network-instance name <i>string</i> protocols mld-snooping querier up-time <i>string</i>
Tree	up-time
String Length	20 to 32
Configurable	False
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5

version *number*

Description	The version of the protocol that is sent by this multicast router
Context	network-instance name <i>string</i> protocols mld-snooping querier version <i>number</i>
Tree	version
Range	1 to 2
Configurable	False
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5

query-interval *number*

Description	Interval at which the router sends the MLD membership queries
Context	network-instance name <i>string</i> protocols mld-snooping query-interval <i>number</i>
Tree	query-interval
Range	1 to 65535
Default	125
Configurable	True

Platforms 7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5

query-source-address *string*

Description Source IP address used when generating MLD queries

Context [network-instance name](#) *string* [protocols mld-snooping query-source-address](#) *string*

Tree [query-source-address](#)

Configurable True

Platforms 7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5

report-source-address *string*

Description Source IP address used when generating MLD reports

Context [network-instance name](#) *string* [protocols mld-snooping report-source-address](#) *string*

Tree [report-source-address](#)

Configurable True

Platforms 7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5

robust-count *number*

Description Configures the MLD robustness to allow for the expected MLD packet loss
The robust-count variable allows tuning for the expected packet loss on a subnet. If a subnet anticipates losses, the robust-count variable can be increased.

Context [network-instance name](#) *string* [protocols mld-snooping robust-count](#) *number*

Tree [robust-count](#)

Range 1 to 255

Default 2

Configurable True

Platforms 7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5

trace-options

Description	Enter the trace-options context
Context	network-instance name <i>string</i> protocols mld-snooping trace-options
Tree	trace-options
Configurable	True
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5

trace

Description	Tracing parameter flags
Context	network-instance name <i>string</i> protocols mld-snooping trace-options trace
Tree	trace
Configurable	True
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5

packet

Description	Trace MLD Packet types
Context	network-instance name <i>string</i> protocols mld-snooping trace-options trace packet
Tree	packet
Configurable	True
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5

interface [interface-name](#) *string*

Description	List of interfaces to trace
Context	network-instance name <i>string</i> protocols mld-snooping trace-options trace packet interface interface-name <i>string</i>
Tree	interface
Configurable	True
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5

Max. Elements 8

interface-name *string*

Description Reference to a specific subinterface of the form <interface-name>.<subinterface-index>

Context [network-instance name](#) *string* [protocols mld-snooping trace-options trace packet interface interface-name](#) *string*

String Length 5 to 25

Configurable True

Platforms 7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5

modifier *keyword*

Description Enter the modifier context

Context [network-instance name](#) *string* [protocols mld-snooping trace-options trace packet modifier](#) *keyword*

Tree [modifier](#)

Options

- **dropped**
Enable tracing for the packets which are dropped
- **ingress-and-dropped**
Enable tracing for the packets which are sent or received
- **egress-ingress-and-dropped**
Enable tracing for the packets which are sent, received or dropped

Configurable True

Platforms 7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5

source-mac [source-mac](#) *string*

Description List of source mac addresses to trace

Context [network-instance name](#) *string* [protocols mld-snooping trace-options trace packet source-mac source-mac](#) *string*

Tree [source-mac](#)

Configurable True

Platforms 7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5

Max. Elements 8

source-mac *string*

Description Enter the source-mac context

Context [network-instance name](#) *string* [protocols mld-snooping trace-options trace packet source-mac source-mac](#) *string*

Configurable True

Platforms 7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5

transmitted-bgp-smet-routes *number*

Description Transmitted BGP SMET routes

Context [network-instance name](#) *string* [protocols mld-snooping transmitted-bgp-smet-routes](#) *number*

Tree [transmitted-bgp-smet-routes](#)

Configurable False

Platforms 7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5

vxlan-destination [vtep](#) ([ipv4-address](#) | [ipv6-address](#)) [vni](#) *number*

Description Enter the vxlan-destination list instance

Context [network-instance name](#) *string* [protocols mld-snooping vxlan-destination vtep](#) ([ipv4-address](#) | [ipv6-address](#)) [vni](#) *number*

Tree [vxlan-destination](#)

Configurable False

Platforms 7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5

vtep ([ipv4-address](#) | [ipv6-address](#))

Description The IP address that identifies the remote VXLAN Termination Endpoint (VTEP).

Context [network-instance name](#) *string* [protocols mld-snooping vxlan-destination vtep](#) ([ipv4-address](#) | [ipv6-address](#)) [vni](#) *number*

Configurable False

Platforms 7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5

vni number

Description VXLAN Network Identifier of the destination.

Context [network-instance name string protocols mld-snooping vxlan-destination vtep \(ipv4-address | ipv6-address\) vni number](#)

Range 1 to 16777215

Configurable False

Platforms 7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5

index number

Description the next-hop-group-id (system allocated) for resolving the VXLAN termination endpoint

Context [network-instance name string protocols mld-snooping vxlan-destination vtep \(ipv4-address | ipv6-address\) vni number index number](#)

Tree [index](#)

Configurable False

Platforms 7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5

is-evpn-proxy boolean

Description vxlan-interface supports evpn-proxy

Context [network-instance name string protocols mld-snooping vxlan-destination vtep \(ipv4-address | ipv6-address\) vni number is-evpn-proxy boolean](#)

Tree [is-evpn-proxy](#)

Configurable False

Platforms 7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5

is-mrouter-port boolean

Description vxlan-interface is a multicast router port

Context [network-instance name string protocols mld-snooping vxlan-destination vtep \(ipv4-address | ipv6-address\) vni number is-mrouter-port boolean](#)

Tree	is-mrouter-port
Configurable	False
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5

is-sbd *boolean*

Description	Enter the is-sbd context
Context	network-instance name <i>string</i> protocols mld-snooping vxlan-destination vtep (ipv4-address ipv6-address) vni number is-sbd <i>boolean</i>
Tree	is-sbd
Configurable	False
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5

membership-group-count *number*

Description	The number of multicast groups which have been learned
Context	network-instance name <i>string</i> protocols mld-snooping vxlan-destination vtep (ipv4-address ipv6-address) vni number membership-group-count <i>number</i>
Tree	membership-group-count
Configurable	False
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5

membership-groups

Description	List of MLD Membership information
Context	network-instance name <i>string</i> protocols mld-snooping vxlan-destination vtep (ipv4-address ipv6-address) vni number membership-groups
Tree	membership-groups
Configurable	False
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5

group [group](#) *string*

Description	Multicast group membership
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Context	network-instance name string protocols mld-snooping vxlan-destination vtep (ipv4-address ipv6-address) vni number membership-groups group group string
Tree	group
Configurable	False
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5

group string

Description	Multicast address
Context	network-instance name string protocols mld-snooping vxlan-destination vtep (ipv4-address ipv6-address) vni number membership-groups group group string
Configurable	False
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5

expiry-time number

Description	The time left before multicast group timeout
Context	network-instance name string protocols mld-snooping vxlan-destination vtep (ipv4-address ipv6-address) vni number membership-groups group group string expiry-time number
Tree	expiry-time
Units	seconds
Configurable	False
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5

filter-mode keyword

Description	Enter the filter-mode context
Context	network-instance name string protocols mld-snooping vxlan-destination vtep (ipv4-address ipv6-address) vni number membership-groups group group string filter-mode keyword
Tree	filter-mode
Options	<ul style="list-style-type: none"> include

In include mode, reception of packets sent to the specified multicast address is requested only from those IP source addresses listed in the source-list parameter

- exclude

In exclude mode, reception of packets sent to the given multicast address is requested from all IP source addresses except those listed in the source-list parameter.

Configurable	False
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5

group-type *keyword*

Description	Enter the group-type context
Context	network-instance name <i>string</i> protocols mld-snooping vxlan-destination vtep (ipv4-address ipv6-address) vni <i>number</i> membership-groups group group <i>string</i> group-type <i>keyword</i>
Tree	group-type
Options	<ul style="list-style-type: none"> • static This group entry was statically configured. • dynamic This group entry was learned by the protocol. • bgp-smet This group entry was learned from a bgp SMET route. • bgp-sync This group entry was learned from a bgp JOIN SYNC route.
Configurable	False
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5

mld-compatibility-mode *keyword*

Description	Compatibility with older version routers
Context	network-instance name <i>string</i> protocols mld-snooping vxlan-destination vtep (ipv4-address ipv6-address) vni <i>number</i> membership-groups group group <i>string</i> mld-compatibility-mode <i>keyword</i>
Tree	mld-compatibility-mode
Options	<ul style="list-style-type: none"> • 1

- 2

Configurable	False
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5

source *source string*

Description	Source addresses of multicast
Context	network-instance name string protocols mld-snooping vxlan-destination vtep (ipv4-address ipv6-address) vni number membership-groups group group string source source string
Tree	source
Configurable	False
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5

source *string*

Description	Source address of multicast
Context	network-instance name string protocols mld-snooping vxlan-destination vtep (ipv4-address ipv6-address) vni number membership-groups group group string source source string
Configurable	False
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5

expiry-time *number*

Description	The time left before multicast group timeout
Context	network-instance name string protocols mld-snooping vxlan-destination vtep (ipv4-address ipv6-address) vni number membership-groups group group string source source string expiry-time number
Tree	expiry-time
Units	seconds
Configurable	False
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5

forwarding-state *keyword*

Description	Traffic forwarding state on this port
Context	network-instance name <i>string</i> protocols mld-snooping vxlan-destination vtep (ipv4-address ipv6-address) vni number membership-groups group group string source source string forwarding-state <i>keyword</i>
Tree	forwarding-state
Options	<ul style="list-style-type: none"> • forward • block
Configurable	False
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5

source-type *keyword*

Description	Enter the source-type context
Context	network-instance name <i>string</i> protocols mld-snooping vxlan-destination vtep (ipv4-address ipv6-address) vni number membership-groups group group string source source string source-type <i>keyword</i>
Tree	source-type
Options	<ul style="list-style-type: none"> • static This group entry was statically configured. • dynamic This group entry was learned by the protocol. • bgp-smet This group entry was learned from a bgp SMET route. • bgp-sync This group entry was learned from a bgp JOIN SYNC route.
Configurable	False
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5

up-time *string*

Description	The time elapsed since this entry was created
Context	network-instance name <i>string</i> protocols mld-snooping vxlan-destination vtep (ipv4-address ipv6-address) vni number membership-groups group group string source source string up-time <i>string</i>

Tree	up-time
String Length	20 to 32
Configurable	False
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5

up-time string

Description	The time elapsed since this entry was created
Context	network-instance name string protocols mld-snooping vxlan-destination vtep (ipv4-address ipv6-address) vni number membership-groups group group string up-time string
Tree	up-time
String Length	20 to 32
Configurable	False
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5

v1-host-timer number

Description	The time remaining until the local router will assume that there are no longer any version 1 members
Context	network-instance name string protocols mld-snooping vxlan-destination vtep (ipv4-address ipv6-address) vni number membership-groups group group string v1-host-timer number
Tree	v1-host-timer
Units	seconds
Configurable	False
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5

statistics

Description	vxlan-interface statistics
Context	network-instance name string protocols mld-snooping vxlan-destination vtep (ipv4-address ipv6-address) vni number statistics
Tree	statistics
Configurable	False

Platforms 7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5

discarded-smet *number*

Description Total number of discarded smet routes

Context [network-instance name string protocols mld-snooping vxlan-destination vtep \(ipv4-address | ipv6-address\) vni number statistics discarded-smet number](#)

Tree [discarded-smet](#)

Default 0

Configurable False

Platforms 7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5

received-smet *number*

Description Total number of received smet routes

Context [network-instance name string protocols mld-snooping vxlan-destination vtep \(ipv4-address | ipv6-address\) vni number statistics received-smet number](#)

Tree [received-smet](#)

Default 0

Configurable False

Platforms 7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5

ospf

Description Top-level configuration and operational state for Open Shortest Path First (OSPF)

Context [network-instance name string protocols ospf](#)

Tree [ospf](#)

Configurable True

Platforms Supported on all platforms

instance [name string](#)

Description List of OSPF protocol instances associated with this network-instance.

Context [network-instance name string protocols ospf instance name string](#)

Tree	instance
Configurable	True
Platforms	Supported on all platforms
Max. Elements	3

name *string*

Description	The name of the OSPF instance
Context	network-instance name <i>string</i> protocols ospf instance name <i>string</i>
String Length	1 to 255
Configurable	True
Platforms	Supported on all platforms

address-family *identityref*

Description	The address family that this instance supports. Only valid for OSPFv3.
Context	network-instance name <i>string</i> protocols ospf instance name <i>string</i> address-family <i>identityref</i>
Tree	address-family
Options	<ul style="list-style-type: none"> • <code>ipv6-unicast</code> IPv6 unicast address family • <code>ipv4-unicast</code> IPv4 unicast address family
Configurable	True
Platforms	Supported on all platforms

admin-state *keyword*

Description	Used to administratively enable or disable the OSPF instance
Context	network-instance name <i>string</i> protocols ospf instance name <i>string</i> admin-state <i>keyword</i>
Tree	admin-state
Default	disable
Options	<ul style="list-style-type: none"> • <code>enable</code> • <code>disable</code>
Configurable	True

Platforms Supported on all platforms

advertise-router-capability *keyword*

Description Scope to advertise router-capability.

Context [network-instance name](#) *string* [protocols ospf instance name](#) *string* [advertise-router-capability](#) *keyword*

Tree [advertise-router-capability](#)

Options

- false
- link
- area
- as

Configurable True

Platforms Supported on all platforms

area [area-id](#)

Description The OSPF areas within which the local system exists

Context [network-instance name](#) *string* [protocols ospf instance name](#) *string* [area area-id](#)

Tree [area](#)

Configurable True

Platforms Supported on all platforms

area-id

Description the area identifier as a dotted-quad.

Context [network-instance name](#) *string* [protocols ospf instance name](#) *string* [area area-id](#)

Configurable True

Platforms Supported on all platforms

active-interfaces *number*

Description The number of active interfaces in this area.

Context [network-instance name](#) *string* [protocols ospf instance name](#) *string* [area area-id](#) [active-interfaces](#) *number*

Tree	active-interfaces
Configurable	False
Platforms	Supported on all platforms

advertise-router-capability *boolean*

Description	Allow router advertisement capabilities
Context	network-instance name <i>string</i> protocols ospf instance name <i>string</i> area area-id advertise-router-capability <i>boolean</i>
Tree	advertise-router-capability
Default	true
Configurable	True
Platforms	Supported on all platforms

area-bdr-rtr-count

Description	The total number of area border routers reachable within this area.
Context	network-instance name <i>string</i> protocols ospf instance name <i>string</i> area area-id area-bdr-rtr-count
Tree	area-bdr-rtr-count
Configurable	False
Platforms	Supported on all platforms

area-range [ip-prefix-mask](#) (*ipv4-prefix* | *ipv6-prefix*)

Description	Enter the area-range context
Context	network-instance name <i>string</i> protocols ospf instance name <i>string</i> area area-id area-range ip-prefix-mask (<i>ipv4-prefix</i> <i>ipv6-prefix</i>)
Tree	area-range
Configurable	True
Platforms	Supported on all platforms

ip-prefix-mask (*ipv4-prefix* | *ipv6-prefix*)

Description	ip-prefix with host bits set to 0
Context	network-instance name <i>string</i> protocols ospf instance name <i>string</i> area area-id area-range ip-prefix-mask (<i>ipv4-prefix</i> <i>ipv6-prefix</i>)

Configurable	True
Platforms	Supported on all platforms

advertise *boolean*

Description	Advertise summarized range of addresses to other areas
Context	network-instance name <i>string</i> protocols ospf instance name <i>string</i> area area-id area-range ip-prefix-mask (<i>ipv4-prefix</i> <i>ipv6-prefix</i>) advertise <i>boolean</i>
Tree	advertise
Default	true
Configurable	True
Platforms	Supported on all platforms

as-bdr-rtr-count

Description	The total number of autonomous system border routers reachable within this area.
Context	network-instance name <i>string</i> protocols ospf instance name <i>string</i> area area-id as-bdr-rtr-count
Tree	as-bdr-rtr-count
Configurable	False
Platforms	Supported on all platforms

blackhole-aggregate *boolean*

Description	Enables the creation of a blackhole for generated aggregates
Context	network-instance name <i>string</i> protocols ospf instance name <i>string</i> area area-id blackhole-aggregate <i>boolean</i>
Tree	blackhole-aggregate
Default	true
Configurable	True
Platforms	Supported on all platforms

export-policy *reference*

Description	Apply an export policy when summarizing from this area to other areas.. Summary LSAs for prefixes matching the policy will still be in the linkstate database but are not flooded.
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Context	network-instance name <i>string</i> protocols ospf instance name <i>string</i> area area-id export-policy <i>reference</i>
Tree	export-policy
Reference	routing-policy policy name <i>string</i>
Configurable	True
Platforms	Supported on all platforms

full-spf-runs

Description	The total number of times that complete SPF has been run on the router since OSPF was last enabled.
Context	network-instance name <i>string</i> protocols ospf instance name <i>string</i> area area-id full-spf-runs
Tree	full-spf-runs
Configurable	False
Platforms	Supported on all platforms

interface [interface-name](#) *string*

Description	List of OSPF interfaces
Context	network-instance name <i>string</i> protocols ospf instance name <i>string</i> area area-id interface interface-name <i>string</i>
Tree	interface
Configurable	True
Platforms	Supported on all platforms

interface-name *string*

Description	Router logical interface name.
Context	network-instance name <i>string</i> protocols ospf instance name <i>string</i> area area-id interface interface-name <i>string</i>
String Length	5 to 25
Configurable	True
Platforms	Supported on all platforms

admin-state *keyword*

Description	Administrative state of the OSPF
Context	network-instance name <i>string</i> protocols ospf instance name <i>string</i> area area-id interface interface-name <i>string</i> admin-state <i>keyword</i>
Tree	admin-state
Default	enable
Options	<ul style="list-style-type: none"> • enable • disable
Configurable	True
Platforms	Supported on all platforms

advertise-router-capability *boolean*

Description	Allow router advertisement capabilities
Context	network-instance name <i>string</i> protocols ospf instance name <i>string</i> area area-id interface interface-name <i>string</i> advertise-router-capability <i>boolean</i>
Tree	advertise-router-capability
Default	true
Configurable	True
Platforms	Supported on all platforms

advertise-subnet *boolean*

Description	Advertise point-to-point interfaces as subnet routes
Context	network-instance name <i>string</i> protocols ospf instance name <i>string</i> area area-id interface interface-name <i>string</i> advertise-subnet <i>boolean</i>
Tree	advertise-subnet
Default	true
Configurable	True
Platforms	Supported on all platforms

authentication

Description	Container with authentication options that apply to all peers in this peer-group
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Context	network-instance name <i>string</i> protocols ospf instance name <i>string</i> area area-id interface interface-name <i>string</i> authentication
Tree	authentication
Configurable	True
Platforms	Supported on all platforms

keychain *reference*

Description	Reference to a keychain. The keychain type must be ospf
Context	network-instance name <i>string</i> protocols ospf instance name <i>string</i> area area-id interface interface-name <i>string</i> authentication keychain reference
Tree	keychain
Reference	system authentication keychain name <i>string</i>
Configurable	True
Platforms	Supported on all platforms

bad-packets

Description	Bad packets counters
Context	network-instance name <i>string</i> protocols ospf instance name <i>string</i> area area-id interface interface-name <i>string</i> bad-packets
Tree	bad-packets
Configurable	False
Platforms	Supported on all platforms

auth-failures

Description	The total number of OSPF packets received with an invalid authorization key since admin-state was last set to 'enabled'.
Context	network-instance name <i>string</i> protocols ospf instance name <i>string</i> area area-id interface interface-name <i>string</i> bad-packets auth-failures
Tree	auth-failures
Configurable	False
Platforms	Supported on all platforms

bad-area

Description	The total number of OSPF packets received with an area mismatch since admin-state was last set to 'enabled'.
Context	network-instance name <i>string</i> protocols ospf instance name <i>string</i> area area-id interface interface-name <i>string</i> bad-packets bad-area
Tree	bad-area
Configurable	False
Platforms	Supported on all platforms

bad-auth-type

Description	The total number of OSPF packets received with an invalid authorization type since admin-state was last set to 'enabled'.
Context	network-instance name <i>string</i> protocols ospf instance name <i>string</i> area area-id interface interface-name <i>string</i> bad-packets bad-auth-type
Tree	bad-auth-type
Configurable	False
Platforms	Supported on all platforms

bad-checksum

Description	The count of LS-as received with bad checksums.
Context	network-instance name <i>string</i> protocols ospf instance name <i>string</i> area area-id interface interface-name <i>string</i> bad-packets bad-checksum
Tree	bad-checksum
Configurable	False
Platforms	Supported on all platforms

bad-dead-interval

Description	The total number of OSPF packets received where the dead interval given in the packet was not equal to that configured on this interface since admin-state was last set to 'enabled'.
Context	network-instance name <i>string</i> protocols ospf instance name <i>string</i> area area-id interface interface-name <i>string</i> bad-packets bad-dead-interval
Tree	bad-dead-interval
Configurable	False

Platforms Supported on all platforms

bad-dest-address

Description The total number of OSPF packets received with the incorrect IP destination address since admin-state was last set to 'enabled'.

Context [network-instance name](#) *string* [protocols ospf instance name](#) *string* [area area-id](#) [interface interface-name](#) *string* [bad-packets](#) [bad-dest-address](#)

Tree [bad-dest-address](#)

Configurable False

Platforms Supported on all platforms

bad-hello-interval

Description the value of bad-hello-intervals indicates the total number of OSPF packets received where the hello interval given in packet was not equal to that configured on this interface since admin-state was last set to 'enabled'.

Context [network-instance name](#) *string* [protocols ospf instance name](#) *string* [area area-id](#) [interface interface-name](#) *string* [bad-packets](#) [bad-hello-interval](#)

Tree [bad-hello-interval](#)

Configurable False

Platforms Supported on all platforms

bad-length

Description The total number of OSPF packets received with a total length not equal to the length given in the packet itself since admin-state was last set to 'enabled'.

Context [network-instance name](#) *string* [protocols ospf instance name](#) *string* [area area-id](#) [interface interface-name](#) *string* [bad-packets](#) [bad-length](#)

Tree [bad-length](#)

Configurable False

Platforms Supported on all platforms

bad-neighbors

Description The total number of OSPF packets received where the neighbor information does not match the information this router has for the neighbor since admin-state was last set to 'enabled'.

Context	network-instance name <i>string</i> protocols ospf instance name <i>string</i> area area-id interface interface-name <i>string</i> bad-packets bad-neighbors
Tree	bad-neighbors
Configurable	False
Platforms	Supported on all platforms

bad-network

Description	The total number of OSPF packets received with invalid network or mask since admin-state was last set to 'enabled'.
Context	network-instance name <i>string</i> protocols ospf instance name <i>string</i> area area-id interface interface-name <i>string</i> bad-packets bad-network
Tree	bad-network
Configurable	False
Platforms	Supported on all platforms

bad-options

Description	The total number of OSPF packets received with an option that does not match those configured for this interface or area since admin-state was last set to 'enabled'.
Context	network-instance name <i>string</i> protocols ospf instance name <i>string</i> area area-id interface interface-name <i>string</i> bad-packets bad-options
Tree	bad-options
Configurable	False
Platforms	Supported on all platforms

bad-packet-type

Description	The total number of OSPF packets received with an invalid OSPF packet type since admin-state was last set to 'enabled'.
Context	network-instance name <i>string</i> protocols ospf instance name <i>string</i> area area-id interface interface-name <i>string</i> bad-packets bad-packet-type
Tree	bad-packet-type
Configurable	False
Platforms	Supported on all platforms

bad-version

Description	The total number of OSPF packets received with bad OSPF version numbers since admin-state was last set to 'enabled'.
Context	network-instance name <i>string</i> protocols ospf instance name <i>string</i> area area-id interface interface-name <i>string</i> bad-packets bad-version
Tree	bad-version
Configurable	False
Platforms	Supported on all platforms

bad-virtual-link

Description	The total number of OSPF packets received that are destined to a virtual link that does not exist since admin-state was last set to 'enabled'.
Context	network-instance name <i>string</i> protocols ospf instance name <i>string</i> area area-id interface interface-name <i>string</i> bad-packets bad-virtual-link
Tree	bad-virtual-link
Configurable	False
Platforms	Supported on all platforms

bdr-id

Description	the value of BDR-id indicates the router ID of the backup designated router.
Context	network-instance name <i>string</i> protocols ospf instance name <i>string</i> area area-id interface interface-name <i>string</i> bdr-id
Tree	bdr-id
Configurable	False
Platforms	Supported on all platforms

dead-interval *number*

Description	Time OSPF waits without receiving Hello packets before declaring a neighbor down
Context	network-instance name <i>string</i> protocols ospf instance name <i>string</i> area area-id interface interface-name <i>string</i> dead-interval <i>number</i>
Tree	dead-interval
Range	2 to 65535
Default	40

Units	seconds
Configurable	True
Platforms	Supported on all platforms

dr-id

Description	the value of DR-id indicates the router ID of the designated router.
Context	network-instance name <i>string</i> protocols ospf instance name <i>string</i> area area-id interface interface-name <i>string</i> <i>dr-id</i>
Tree	dr-id
Configurable	False
Platforms	Supported on all platforms

events

Description	the value of events indicates the number of times this OSPF interface has changed its state, or an error has occurred.
Context	network-instance name <i>string</i> protocols ospf instance name <i>string</i> area area-id interface interface-name <i>string</i> <i>events</i>
Tree	events
Configurable	False
Platforms	Supported on all platforms

failure-detection

Description	Options related to methods of detecting BGP session failure
Context	network-instance name <i>string</i> protocols ospf instance name <i>string</i> area area-id interface interface-name <i>string</i> <i>failure-detection</i>
Tree	failure-detection
Configurable	True
Platforms	Supported on all platforms

enable-bfd *boolean*

Description	Enables the use of BFD for liveliness detection
Context	network-instance name <i>string</i> protocols ospf instance name <i>string</i> area area-id interface interface-name <i>string</i> failure-detection enable-bfd <i>boolean</i>

Tree	enable-bfd
Default	false
Configurable	True
Platforms	Supported on all platforms

hello-interval *number*

Description	Time between OSPF Hellos of this interface
Context	network-instance name <i>string</i> protocols ospf instance name <i>string</i> area area-id interface interface-name <i>string</i> hello-interval <i>number</i>
Tree	hello-interval
Range	1 to 65535
Default	10
Units	seconds
Configurable	True
Platforms	Supported on all platforms

interface-type *keyword*

Description	Interface type to broadcast or point-to-point
Context	network-instance name <i>string</i> protocols ospf instance name <i>string</i> area area-id interface interface-name <i>string</i> interface-type <i>keyword</i>
Tree	interface-type
Options	<ul style="list-style-type: none"> • broadcast • point-to-point
Configurable	True
Platforms	Supported on all platforms

last-enabled-time *string*

Description	the value of last-enabled-time indicates the sys-up-time value when ospf-if-admin-stat was last set to enabled (1) to run the ospf on this interface.
Context	network-instance name <i>string</i> protocols ospf instance name <i>string</i> area area-id interface interface-name <i>string</i> last-enabled-time <i>string</i>
Tree	last-enabled-time
String Length	20 to 32

Configurable	False
Platforms	Supported on all platforms

last-event-time *string*

Description	the value of last-event-time indicates the value of sys-up-time when an event was last associated with this OSPF interface.
Context	network-instance name <i>string</i> protocols ospf instance name <i>string</i> area area-id interface interface-name <i>string</i> last-event-time <i>string</i>
Tree	last-event-time
String Length	20 to 32
Configurable	False
Platforms	Supported on all platforms

ldp-synchronization

Description	Container with configuration options and state that pertains to the operation of LDP-IGP synchronization on this interface
Context	network-instance name <i>string</i> protocols ospf instance name <i>string</i> area area-id interface interface-name <i>string</i> ldp-synchronization
Tree	ldp-synchronization
Configurable	True
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

disable

Description	Disable LDP-IGP synchronization procedures on this interface, even if synchronization is enabled globally
Context	network-instance name <i>string</i> protocols ospf instance name <i>string</i> area area-id interface interface-name <i>string</i> ldp-synchronization disable
Tree	disable
Configurable	True
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

duration *number*

Description	The length of time that the IGP interface has been in sync or out of sync
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Context	network-instance name <i>string</i> protocols ospf instance name <i>string</i> area area-id interface interface-name <i>string</i> ldp-synchronization duration <i>number</i>
Tree	duration
Units	seconds
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

end-of-lib *boolean*

Description	<p>When set to true, the IGP restores the normal metric for the IGP adjacency when learning from LDP that all label-FEC mappings have been received from the LDP peer, even if there is remaining time on the hold-down-timer.</p> <p>When set to false, the IGP always waits for the full duration of the hold-down-timer to restore the normal metric for the IGP adjacency.</p> <p>This overrides the global/instance level setting</p>
Context	network-instance name <i>string</i> protocols ospf instance name <i>string</i> area area-id interface interface-name <i>string</i> ldp-synchronization end-of-lib <i>boolean</i>
Tree	end-of-lib
Configurable	True
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

hold-down-timer *number*

Description	<p>The maximum amount of time that the IGP advertises a maximum metric for an interface, measured from the time that the LDP adjacency is re-established after going down.</p> <p>This overrides the global/instance level setting</p>
Context	network-instance name <i>string</i> protocols ospf instance name <i>string</i> area area-id interface interface-name <i>string</i> ldp-synchronization hold-down-timer <i>number</i>
Tree	hold-down-timer
Range	1 to 1800
Units	seconds
Configurable	True
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

sync-state *keyword*

Description	The current state of the interface with respect to LDP-IGP sync
Context	network-instance name <i>string</i> protocols ospf instance name <i>string</i> area area-id <i>string</i> interface interface-name <i>string</i> ldp-synchronization sync-state <i>keyword</i>
Tree	sync-state
Options	<ul style="list-style-type: none"> • wait-for-LDP-adjacency The IGP is waiting for the LDP adjacency to come up. The interface is being advertised with max-metric • hold-down-timer-active The LDP adjacency has come up and the IGP has started the hold-down-timer, waiting for either end-of-lib or hold-down-timer expiry. The interface is being advertised with max-metric • end-of-lib-received The IGP received end-of-lib and has switched to normal operation. The interface is being advertised with a normal metric • hold-down-timer-expired The IGP did not receive end-of-lib (or was configured to ignore it) but hold-down-timer has expired and normal metric is restored • manual-exit A tools command was performed to exit ldp-sync. Normal operation is resumed, max-metric is removed • disabled ldp-sync is not applicable on this interface
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

link-lsa-cksum-sum *string*

Description	the value of link-lsa-cksum-sum indicates the 32-bit unsigned sum of the link-scope link-state advertisements' LS checksums contained in this link's link-state database. the sum can be used to determine if there has been a change in a router's link-state database, and to compare the link state database of two routers.
Context	network-instance name <i>string</i> protocols ospf instance name <i>string</i> area area-id <i>string</i> interface interface-name <i>string</i> link-lsa-cksum-sum <i>string</i>
Tree	link-lsa-cksum-sum
Configurable	False
Platforms	Supported on all platforms

link-lsa-count

Description	the value of link-lsa-count indicates the total number of link-scope link-state advertisements in this link's link-state database.
Context	network-instance name <i>string</i> protocols ospf instance name <i>string</i> area area-id interface interface-name <i>string</i> link-lsa-count
Tree	link-lsa-count
Configurable	False
Platforms	Supported on all platforms

local-ip-address (*ipv4-address* | *ipv6-address*)

Description	the value of local-ip-address indicates the IP address of this OSPF interface.
Context	network-instance name <i>string</i> protocols ospf instance name <i>string</i> area area-id interface interface-name <i>string</i> local-ip-address (<i>ipv4-address</i> <i>ipv6-address</i>)
Tree	local-ip-address
Configurable	False
Platforms	Supported on all platforms

lsa-filter-out *keyword*

Description	LSA flooding reduction
Context	network-instance name <i>string</i> protocols ospf instance name <i>string</i> area area-id interface interface-name <i>string</i> lsa-filter-out <i>keyword</i>
Tree	lsa-filter-out
Default	none
Options	<ul style="list-style-type: none"> • none • all • except-own-rtrlsa • except-own-rtrlsa-and-defaults
Configurable	True
Platforms	Supported on all platforms

lsa-totals

Description	The number of LSAs of each type in this interface's database
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Context	network-instance name <i>string</i> protocols ospf instance name <i>string</i> area area-id interface interface-name <i>string</i> lsa-totals
Tree	lsa-totals
Configurable	False
Platforms	Supported on all platforms

e-link-lsa

Description	The number of extended link LSAs in this interface's database.
Context	network-instance name <i>string</i> protocols ospf instance name <i>string</i> area area-id interface interface-name <i>string</i> lsa-totals e-link-lsa
Tree	e-link-lsa
Configurable	False
Platforms	Supported on all platforms

link-lsa

Description	The number of link LSAs in this interface's database.
Context	network-instance name <i>string</i> protocols ospf instance name <i>string</i> area area-id interface interface-name <i>string</i> lsa-totals link-lsa
Tree	link-lsa
Configurable	False
Platforms	Supported on all platforms

link-opaque-lsa

Description	The number of link opaque LSAs in this interface's database.
Context	network-instance name <i>string</i> protocols ospf instance name <i>string</i> area area-id interface interface-name <i>string</i> lsa-totals link-opaque-lsa
Tree	link-opaque-lsa
Configurable	False
Platforms	Supported on all platforms

router-info-lsa

Description	The number of link scoped router information LSAs in this interface's AS database.
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Context	network-instance name <i>string</i> protocols ospf instance name <i>string</i> area area-id interface interface-name <i>string</i> lsa-totals router-info-lsa
Tree	router-info-lsa
Configurable	False
Platforms	Supported on all platforms

metric *number*

Description	Explicit route cost metric that is applied to the interface. Setting the value to 0 or removing the metric will cause the metric to be derived from the link bandwidth and the reference-bandwidth
Context	network-instance name <i>string</i> protocols ospf instance name <i>string</i> area area-id interface interface-name <i>string</i> metric <i>number</i>
Tree	metric
Configurable	True
Platforms	Supported on all platforms

mtu *number*

Description	MTU for the OSPF to use on the interface. For OSPFv3 this must be minimum 1280. If the MTU defined here exceeds the actual IP-MTU of the interface, then the IP-MTU of the interface is used.
Context	network-instance name <i>string</i> protocols ospf instance name <i>string</i> area area-id interface interface-name <i>string</i> mtu <i>number</i>
Tree	mtu
Range	512 to 9486
Configurable	True
Platforms	Supported on all platforms

neighbor [router-id](#)

Description	List of neighbors associated with this OSPF interface
Context	network-instance name <i>string</i> protocols ospf instance name <i>string</i> area area-id interface interface-name <i>string</i> neighbor router-id
Tree	neighbor
Configurable	False

Platforms Supported on all platforms

router-id

Description The router-id advertised by the neighbor

Context [network-instance name](#) *string* [protocols ospf instance name](#) *string* [area area-id interface interface-name](#) *string* [neighbor router-id](#)

Configurable False

Platforms Supported on all platforms

address (*ipv4-address-with-zone* | *ipv6-address-with-zone*)

Description the value of address indicates the IP address of the neighbor associated with the local link.

Context [network-instance name](#) *string* [protocols ospf instance name](#) *string* [area area-id interface interface-name](#) *string* [neighbor router-id address](#) (*ipv4-address-with-zone* | *ipv6-address-with-zone*)

Tree [address](#)

Configurable False

Platforms Supported on all platforms

adjacency-state *identityref*

Description Current OSPF Neighbor state

Context [network-instance name](#) *string* [protocols ospf instance name](#) *string* [area area-id interface interface-name](#) *string* [neighbor router-id adjacency-state identityref](#)

Tree [adjacency-state](#)

Options

- down

The initial state of a neighbor, indicating that no recent information has been received from the neighbor.

- attempt

Utilised for neighbors that are attached to NBMA networks, it indicates that no information has been recently received from the neighbor but that Hello packets should be directly sent to that neighbor.

- init

Indicates that a Hello packet has been received from the neighbor but bi-directional communication has not yet been established. That is to say that the local Router ID does not appear in the list of neighbors in the remote system's Hello packet.

- two-way
Communication between the local and remote system is bi-directional such that the local system's Router ID is listed in the received remote system's Hello packet.
- exstart
An adjacency with the remote system is being formed. The local system is currently transmitting empty database description packets in order to establish the primary/standby relationship for the adjacency.
- exchange
The local and remote systems are currently exchanging database description packets in order to determine which elements of their local LSDBs are out of date.
- loading
The local system is sending Link State Request packets to the remote system in order to receive the more recently LSAs that were discovered during the Exchange phase of the procedure establishing the adjacency.
- full
The neighboring routers are fully adjacent such that both LSDBs are synchronized. The adjacency will appear in Router and Network LSAs

Configurable	False
Platforms	Supported on all platforms

backup-designated-router

Description	Advertised backup designated router
Context	network-instance name <i>string</i> protocols ospf instance name <i>string</i> area area-id interface interface-name <i>string</i> neighbor router-id backup-designated-router
Tree	backup-designated-router
Configurable	False
Platforms	Supported on all platforms

dead-time *number*

Description	The remaining number of seconds remaining in the neighbor's dead time interval
Context	network-instance name <i>string</i> protocols ospf instance name <i>string</i> area area-id interface interface-name <i>string</i> neighbor router-id dead-time <i>number</i>
Tree	dead-time
Configurable	False

Platforms Supported on all platforms

designated-router

Description Advertised designated router

Context [network-instance name](#) *string* [protocols ospf instance name](#) *string* [area area-id interface interface-name](#) *string* [neighbor router-id designated-router](#)

Tree [designated-router](#)

Configurable False

Platforms Supported on all platforms

last-established-time *string*

Description Time then OSPF neighbor was last established

Context [network-instance name](#) *string* [protocols ospf instance name](#) *string* [area area-id interface interface-name](#) *string* [neighbor router-id last-established-time](#) *string*

Tree [last-established-time](#)

String Length 20 to 32

Configurable False

Platforms Supported on all platforms

last-event-time *string*

Description the value of last-event-time indicates the value of sys-up-time when the last event occurred that affected the adjacency to the neighbour.

Context [network-instance name](#) *string* [protocols ospf instance name](#) *string* [area area-id interface interface-name](#) *string* [neighbor router-id last-event-time](#) *string*

Tree [last-event-time](#)

String Length 20 to 32

Configurable False

Platforms Supported on all platforms

last-restart-time *string*

Description the value of last-restart-time indicates the last time the neighbor attempted restart.

Context	network-instance name <i>string</i> protocols ospf instance name <i>string</i> area area-id interface interface-name <i>string</i> neighbor router-id last-restart-time <i>string</i>
Tree	last-restart-time
String Length	20 to 32
Configurable	False
Platforms	Supported on all platforms

optional-capabilities

Description	Advertised Optional Capabilities
Context	network-instance name <i>string</i> protocols ospf instance name <i>string</i> area area-id interface interface-name <i>string</i> neighbor router-id optional-capabilities
Tree	optional-capabilities
Configurable	False
Platforms	Supported on all platforms

priority *number*

Description	Router priority advertised by neighbor
Context	network-instance name <i>string</i> protocols ospf instance name <i>string</i> area area-id interface interface-name <i>string</i> neighbor router-id priority <i>number</i>
Tree	priority
Configurable	False
Platforms	Supported on all platforms

restart-helper-age *number*

Description	the value of restart-helper-age indicates the remaining time in the current OSPF graceful restart interval, if the router is acting as a restart helper for the neighbor.
Context	network-instance name <i>string</i> protocols ospf instance name <i>string</i> area area-id interface interface-name <i>string</i> neighbor router-id restart-helper-age <i>number</i>
Tree	restart-helper-age
Range	0 to 1800
Units	seconds
Configurable	False
Platforms	Supported on all platforms

restart-helper-exit-rc *keyword*

Description	the value of restart-helper-exit-rc indicates the outcome of the last attempt at acting as a graceful restart helper for the neighbor. none no restart has yet been attempted. in-progress A restart attempt is currently underway. completed the last restart completed successfully. timed-out the last restart timed out. topology-changed the last restart was aborted due to a topology change.
Context	network-instance name <i>string</i> protocols ospf instance name <i>string</i> area area-id interface interface-name <i>string</i> neighbor router-id restart-helper-exit-rc <i>keyword</i>
Tree	restart-helper-exit-rc
Options	<ul style="list-style-type: none"> • none • in-progress • completed • timed-out • topology-changed • bfd-down
Configurable	False
Platforms	Supported on all platforms

restart-helper-status *keyword*

Description	the value of restart-helper-status indicates whether the router is acting as a graceful restart helper for the neighbor.
Context	network-instance name <i>string</i> protocols ospf instance name <i>string</i> area area-id interface interface-name <i>string</i> neighbor router-id restart-helper-status <i>keyword</i>
Tree	restart-helper-status
Options	<ul style="list-style-type: none"> • not-helping • helping
Configurable	False
Platforms	Supported on all platforms

restart-reason (*number* | *keyword*)

Description	the value of restart-reason indicates the OSPF neighbor's graceful restart reason.
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Context	network-instance name <i>string</i> protocols ospf instance name <i>string</i> area area-id interface interface-name <i>string</i> neighbor router-id restart-reason (<i>number</i> <i>keyword</i>)
Tree	restart-reason
Range	4 to 4294967295
Options	<ul style="list-style-type: none"> • unknown • sw-restart • sw-reload • switch-red
Configurable	False
Platforms	Supported on all platforms

retransmission-queue-length *number*

Description	Enter the retransmission-queue-length context
Context	network-instance name <i>string</i> protocols ospf instance name <i>string</i> area area-id interface interface-name <i>string</i> neighbor router-id retransmission-queue-length <i>number</i>
Tree	retransmission-queue-length
Configurable	False
Platforms	Supported on all platforms

state-changes *number*

Description	total numer of OSPF state changes
Context	network-instance name <i>string</i> protocols ospf instance name <i>string</i> area area-id interface interface-name <i>string</i> neighbor router-id state-changes <i>number</i>
Tree	state-changes
Configurable	False
Platforms	Supported on all platforms

statistics

Description	Enter the statistics context
Context	network-instance name <i>string</i> protocols ospf instance name <i>string</i> area area-id interface interface-name <i>string</i> neighbor router-id statistics
Tree	statistics

Configurable	False
Platforms	Supported on all platforms

bad-mtu

Description	the value of bad-MT-us indicates the total number of times when the MTU in a received database description packet was larger than the MTU of the receiving interface since admin-state was last set to 'enabled'.
Context	network-instance name <i>string</i> protocols ospf instance name <i>string</i> area area-id interface interface-name <i>string</i> neighbor router-id statistics bad-mtu
Tree	bad-mtu
Configurable	False
Platforms	Supported on all platforms

bad-nbr-states

Description	the value of bad-nbr-states indicates the total number of OSPF packets received when the neighbor state was not expecting to receive this packet type since admin-state was last set to 'enabled'.
Context	network-instance name <i>string</i> protocols ospf instance name <i>string</i> area area-id interface interface-name <i>string</i> neighbor router-id statistics bad-nbr-states
Tree	bad-nbr-states
Configurable	False
Platforms	Supported on all platforms

bad-packets

Description	the value of bad-packets indicates the total number of times when an LS update was received with an illegal LS type or an option mismatch since admin-state was last set to 'enabled'.
Context	network-instance name <i>string</i> protocols ospf instance name <i>string</i> area area-id interface interface-name <i>string</i> neighbor router-id statistics bad-packets
Tree	bad-packets
Configurable	False
Platforms	Supported on all platforms

bad-seq-nums

Description	the value of bad-seq-nums indicates the total number of times when a database description packet was received with a sequence number mismatch since admin-state was last set to 'enabled'.
Context	network-instance name <i>string</i> protocols ospf instance name <i>string</i> area area-id interface interface-name <i>string</i> neighbor router-id statistics bad-seq-nums
Tree	bad-seq-nums
Configurable	False
Platforms	Supported on all platforms

duplicates

Description	the value of duplicates indicates the total number of times when a duplicate database description packet was received during the exchange state since admin-state was last set to 'enabled'.
Context	network-instance name <i>string</i> protocols ospf instance name <i>string</i> area area-id interface interface-name <i>string</i> neighbor router-id statistics duplicates
Tree	duplicates
Configurable	False
Platforms	Supported on all platforms

events

Description	the value of events indicates the number of times this neighbor relationship has changed state, or an error has occurred.
Context	network-instance name <i>string</i> protocols ospf instance name <i>string</i> area area-id interface interface-name <i>string</i> neighbor router-id statistics events
Tree	events
Configurable	False
Platforms	Supported on all platforms

lsa-install-failed

Description	the value of lsa-install-failed indicates the total number of times an LSA could not be installed into the LSDB due to a resource allocation issue since admin-state was last set to 'enabled'.
Context	network-instance name <i>string</i> protocols ospf instance name <i>string</i> area area-id interface interface-name <i>string</i> neighbor router-id statistics lsa-install-failed

Tree	lsa-install-failed
Configurable	False
Platforms	Supported on all platforms

lsa-not-in-lsdb

Description	the value of lsa-not-in-lsdb indicates the total number of times when an LS request was received for an LSA not installed in the LSDB of this router since admin-state was last set to 'enabled'.
Context	network-instance name <i>string</i> protocols ospf instance name <i>string</i> area area-id interface interface-name <i>string</i> neighbor router-id statistics lsa-not-in-lsdb
Tree	lsa-not-in-lsdb
Configurable	False
Platforms	Supported on all platforms

num-restarts

Description	the value of num-restarts indicates the number of times the neighbor has attempted restart.
Context	network-instance name <i>string</i> protocols ospf instance name <i>string</i> area area-id interface interface-name <i>string</i> neighbor router-id statistics num-restarts
Tree	num-restarts
Configurable	False
Platforms	Supported on all platforms

option-mismatches

Description	the value of option-mismatches indicates the total number of times when a LS update was received with an option mismatch since admin-state was last set to 'enabled'.
Context	network-instance name <i>string</i> protocols ospf instance name <i>string</i> area area-id interface interface-name <i>string</i> neighbor router-id statistics option-mismatches
Tree	option-mismatches
Configurable	False
Platforms	Supported on all platforms

up-time *number*

Description	the value of up-time indicates the uninterrupted time, in hundredths of seconds, the adjacency to this neighbour has been up.
Context	network-instance name <i>string</i> protocols ospf instance name <i>string</i> area area-id interface interface-name <i>string</i> neighbor router-id up-time <i>number</i>
Tree	up-time
Range	0 to 2147483647
Units	centiseconds
Configurable	False
Platforms	Supported on all platforms

neighbor-count

Description	The total number of OSPF neighbors adjacent on this interface, in a state of INIT or greater, since admin-state was last set to 'enabled'.
Context	network-instance name <i>string</i> protocols ospf instance name <i>string</i> area area-id interface interface-name <i>string</i> neighbor-count
Tree	neighbor-count
Configurable	False
Platforms	Supported on all platforms

oper-state *keyword*

Description	the OSPF interface state.
Context	network-instance name <i>string</i> protocols ospf instance name <i>string</i> area area-id interface interface-name <i>string</i> oper-state <i>keyword</i>
Tree	oper-state
Options	<ul style="list-style-type: none"> • down • loopback • waiting • point-to-point • designated-router • backup-designated-router • other-designated-router
Configurable	False
Platforms	Supported on all platforms

packets

Description	Packet counters
Context	network-instance name <i>string</i> protocols ospf instance name <i>string</i> area area-id interface interface-name <i>string</i> packets
Tree	packets
Configurable	False
Platforms	Supported on all platforms

discarded

Description	The total number of OSPF packets discarded since admin-state was last set to 'enabled'.
Context	network-instance name <i>string</i> protocols ospf instance name <i>string</i> area area-id interface interface-name <i>string</i> packets discarded
Tree	discarded
Configurable	False
Platforms	Supported on all platforms

retransmits

Description	The total number of OSPF retransmits since admin-state was last set to 'enabled'.
Context	network-instance name <i>string</i> protocols ospf instance name <i>string</i> area area-id interface interface-name <i>string</i> packets retransmits
Tree	retransmits
Configurable	False
Platforms	Supported on all platforms

rx-db-description

Description	The total number of OSPF database description packets received since admin-state was last set to 'enabled'.
Context	network-instance name <i>string</i> protocols ospf instance name <i>string</i> area area-id interface interface-name <i>string</i> packets rx-db-description
Tree	rx-db-description
Configurable	False
Platforms	Supported on all platforms

rx-hello

Description	The total number of OSPF hello packets received since admin-state was last set to 'enabled'.
Context	network-instance name <i>string</i> protocols ospf instance name <i>string</i> area area-id interface interface-name <i>string</i> packets rx-hello
Tree	rx-hello
Configurable	False
Platforms	Supported on all platforms

rx-ls-ack

Description	The total number of link state acknowledgements received since admin-state was last set to 'enabled'.
Context	network-instance name <i>string</i> protocols ospf instance name <i>string</i> area area-id interface interface-name <i>string</i> packets rx-ls-ack
Tree	rx-ls-ack
Configurable	False
Platforms	Supported on all platforms

rx-ls-request

Description	The total number of link state requests (LS-rs) received since admin-state was last set to 'enabled'.
Context	network-instance name <i>string</i> protocols ospf instance name <i>string</i> area area-id interface interface-name <i>string</i> packets rx-ls-request
Tree	rx-ls-request
Configurable	False
Platforms	Supported on all platforms

rx-ls-update

Description	The total number of link state updates (LS-us) received since admin-state was last set to 'enabled'.
Context	network-instance name <i>string</i> protocols ospf instance name <i>string</i> area area-id interface interface-name <i>string</i> packets rx-ls-update
Tree	rx-ls-update
Configurable	False

Platforms Supported on all platforms

rx-total

Description The total number of OSPF packets received since admin-state was last set to 'enabled'.

Context [network-instance name](#) *string* [protocols ospf instance name](#) *string* [area area-id interface interface-name](#) *string* [packets rx-total](#)

Tree [rx-total](#)

Configurable False

Platforms Supported on all platforms

tx-db-description

Description The total number of OSPF database description packets transmitted since admin-state was last set to 'enabled'.

Context [network-instance name](#) *string* [protocols ospf instance name](#) *string* [area area-id interface interface-name](#) *string* [packets tx-db-description](#)

Tree [tx-db-description](#)

Configurable False

Platforms Supported on all platforms

tx-hello

Description The total number of OSPF hello packets transmitted since admin-state was last set to 'enabled'.

Context [network-instance name](#) *string* [protocols ospf instance name](#) *string* [area area-id interface interface-name](#) *string* [packets tx-hello](#)

Tree [tx-hello](#)

Configurable False

Platforms Supported on all platforms

tx-ls-ack

Description The total number of OSPF link state acknowledgements transmitted since admin-state was last set to 'enabled'.

Context [network-instance name](#) *string* [protocols ospf instance name](#) *string* [area area-id interface interface-name](#) *string* [packets tx-ls-ack](#)

Tree	tx-ls-ack
Configurable	False
Platforms	Supported on all platforms

tx-ls-request

Description	The total number of OSPF link state requests (LS-rs) transmitted since admin-state was last set to 'enabled'.
Context	network-instance name <i>string</i> protocols ospf instance name <i>string</i> area area-id interface interface-name <i>string</i> packets tx-ls-request
Tree	tx-ls-request
Configurable	False
Platforms	Supported on all platforms

tx-ls-update

Description	The total number of OSPF link state updates (LS-us) transmitted since admin-state was last set to 'enabled'.
Context	network-instance name <i>string</i> protocols ospf instance name <i>string</i> area area-id interface interface-name <i>string</i> packets tx-ls-update
Tree	tx-ls-update
Configurable	False
Platforms	Supported on all platforms

tx-total

Description	The total number of OSPF packets transmitted since admin-state was last set to 'enabled'.
Context	network-instance name <i>string</i> protocols ospf instance name <i>string</i> area area-id interface interface-name <i>string</i> packets tx-total
Tree	tx-total
Configurable	False
Platforms	Supported on all platforms

passive *boolean*

Description	Allow interface to be advertised as an OSPF interface without running the OSPF protocol
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Context	network-instance name <i>string</i> protocols ospf instance name <i>string</i> area area-id interface interface-name <i>string</i> passive <i>boolean</i>
Tree	passive
Configurable	True
Platforms	Supported on all platforms

priority *number*

Description	Priority of the interface to apply in the designated router election on the subnet
Context	network-instance name <i>string</i> protocols ospf instance name <i>string</i> area area-id interface interface-name <i>string</i> priority <i>number</i>
Tree	priority
Range	0 to 255
Default	1
Configurable	True
Platforms	Supported on all platforms

retransmit-interval *number*

Description	Time before OSPF retransmits an unacknowledged LSA to a neighbor
Context	network-instance name <i>string</i> protocols ospf instance name <i>string</i> area area-id interface interface-name <i>string</i> retransmit-interval <i>number</i>
Tree	retransmit-interval
Range	1 to 1800
Default	5
Units	seconds
Configurable	True
Platforms	Supported on all platforms

trace-options

Description	Enter the trace-options context
Context	network-instance name <i>string</i> protocols ospf instance name <i>string</i> area area-id interface interface-name <i>string</i> trace-options
Tree	trace-options
Configurable	True

Platforms Supported on all platforms

trace

Description Tracing parameter flags

Context [network-instance name](#) *string* [protocols ospf instance name](#) *string* [area area-id interface interface-name](#) *string* [trace-options trace](#)

Tree [trace](#)

Configurable True

Platforms Supported on all platforms

adjacencies

Description Enable tracing all adjacency events.

Context [network-instance name](#) *string* [protocols ospf instance name](#) *string* [area area-id interface interface-name](#) *string* [trace-options trace adjacencies](#)

Tree [adjacencies](#)

Configurable True

Platforms Supported on all platforms

interfaces

Description Enable tracing all interface events.

Context [network-instance name](#) *string* [protocols ospf instance name](#) *string* [area area-id interface interface-name](#) *string* [trace-options trace interfaces](#)

Tree [interfaces](#)

Configurable True

Platforms Supported on all platforms

packet

Description Trace OSPF Packet types Only one type can be enabled at a time

Context [network-instance name](#) *string* [protocols ospf instance name](#) *string* [area area-id interface interface-name](#) *string* [trace-options trace packet](#)

Tree [packet](#)

Configurable True

Platforms Supported on all platforms

detail

Description	To enable detailed tracing. Includes both received and sent packets.
Context	network-instance name <i>string</i> protocols ospf instance name <i>string</i> area area-id interface interface-name <i>string</i> trace-options trace packet detail
Tree	detail
Configurable	True
Platforms	Supported on all platforms

modifier *keyword*

Description	Enter the modifier context
Context	network-instance name <i>string</i> protocols ospf instance name <i>string</i> area area-id interface interface-name <i>string</i> trace-options trace packet modifier <i>keyword</i>
Tree	modifier
Options	<ul style="list-style-type: none"> • ingress To enable tracing for the packets which are received. • egress To enable tracing for the sent packets. • in-and-egress To enable tracing for both sent and received packets • drop To enable tracing for the sent packets.
Configurable	True
Platforms	Supported on all platforms

type *keyword*

Description	Enter the type context
Context	network-instance name <i>string</i> protocols ospf instance name <i>string</i> area area-id interface interface-name <i>string</i> trace-options trace packet type <i>keyword</i>
Tree	type
Options	<ul style="list-style-type: none"> • all Enable tracing of all OSPF packets • hello Enable tracing of OSPF Hello packets

- `dbdescr`
Enable tracing of OSPF database Descriptor packets
- `ls-request`
Enable tracing of OSPF link-state request packets
- `ls-update`
Enable tracing of OSPF link-state update packets
- `ls-ack`
Enable tracing of OSPF link-state Ack packets

Configurable	True
Platforms	Supported on all platforms

transit-delay *number*

Description	Time required to transmit an LSA on the interface, virtual link, or sham link
Context	network-instance name <i>string</i> protocols ospf instance name <i>string</i> area area-id interface interface-name <i>string</i> transit-delay <i>number</i>
Tree	transit-delay
Range	1 to 1800
Default	1
Units	seconds
Configurable	True
Platforms	Supported on all platforms

last-spf-run-time *string*

Description	The sys-up-time when intra-area SPF was last run on this area.
Context	network-instance name <i>string</i> protocols ospf instance name <i>string</i> area area-id last-spf-run-time <i>string</i>
Tree	last-spf-run-time
String Length	20 to 32
Configurable	False
Platforms	Supported on all platforms

lsa-filter-totals

Description	The number of LSAs not sent due to area policy.
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Context	network-instance name <i>string</i> protocols ospf instance name <i>string</i> area area-id lsa-filter-totals
Tree	lsa-filter-totals
Configurable	False
Platforms	Supported on all platforms

export-filtered

Description	The number of LSAs not sent due to area export policy.
Context	network-instance name <i>string</i> protocols ospf instance name <i>string</i> area area-id lsa-filter-totals export-filtered
Tree	export-filtered
Configurable	False
Platforms	Supported on all platforms

import-filtered

Description	The number of LSAs not sent due to area import policy.
Context	network-instance name <i>string</i> protocols ospf instance name <i>string</i> area area-id lsa-filter-totals import-filtered
Tree	import-filtered
Configurable	False
Platforms	Supported on all platforms

lsa-totals

Description	The number of LSAs of each type in this area's database
Context	network-instance name <i>string</i> protocols ospf instance name <i>string</i> area area-id lsa-totals
Tree	lsa-totals
Configurable	False
Platforms	Supported on all platforms

area-opaque-lsa

Description	The number of NSSA LSAs in this area's link-state database.
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Context	network-instance name <i>string</i> protocols ospf instance name <i>string</i> area area-id lsa-totals area-opaque-lsa
Tree	area-opaque-lsa
Configurable	False
Platforms	Supported on all platforms

asbr-summary-lsa

Description	The number of ASBR summary LSAs in this area's link-state database.
Context	network-instance name <i>string</i> protocols ospf instance name <i>string</i> area area-id lsa-totals asbr-summary-lsa
Tree	asbr-summary-lsa
Configurable	False
Platforms	Supported on all platforms

e-inter-area-prefix-lsa

Description	The number of OSPFv3 E-inter-area-prefix LSAs in this area's link-state database.
Context	network-instance name <i>string</i> protocols ospf instance name <i>string</i> area area-id lsa-totals e-inter-area-prefix-lsa
Tree	e-inter-area-prefix-lsa
Configurable	False
Platforms	Supported on all platforms

e-inter-area-router-lsa

Description	The number of OSPFv3 E-inter-area-router LSAs in this area's link-state database.
Context	network-instance name <i>string</i> protocols ospf instance name <i>string</i> area area-id lsa-totals e-inter-area-router-lsa
Tree	e-inter-area-router-lsa
Configurable	False
Platforms	Supported on all platforms

e-intra-area-prefix-lsa

Description	The number of OSPFv3 E-intra-area-prefix LSAs in this area's link-state database.
Context	network-instance name <i>string</i> protocols ospf instance name <i>string</i> area area-id lsa-totals e-intra-area-prefix-lsa
Tree	e-intra-area-prefix-lsa
Configurable	False
Platforms	Supported on all platforms

e-network-lsa

Description	The number of OSPFv3 E-network LSAs in this area's link-state database.
Context	network-instance name <i>string</i> protocols ospf instance name <i>string</i> area area-id lsa-totals e-network-lsa
Tree	e-network-lsa
Configurable	False
Platforms	Supported on all platforms

e-nssa-lsa

Description	The number of OSPFv3 E-NSSA LSAs in this area's link-state database.
Context	network-instance name <i>string</i> protocols ospf instance name <i>string</i> area area-id lsa-totals e-nssa-lsa
Tree	e-nssa-lsa
Configurable	False
Platforms	Supported on all platforms

e-router-lsa

Description	The number of OSPFv3 E-router LSAs in this area's link-state database.
Context	network-instance name <i>string</i> protocols ospf instance name <i>string</i> area area-id lsa-totals e-router-lsa
Tree	e-router-lsa
Configurable	False
Platforms	Supported on all platforms

inter-area-prefix-lsa

Description	The number of OSPFv3 inter-area-prefix LSAs in this area's link-state database.
Context	network-instance name <i>string</i> protocols ospf instance name <i>string</i> area area-id lsa-totals inter-area-prefix-lsa
Tree	inter-area-prefix-lsa
Configurable	False
Platforms	Supported on all platforms

inter-area-router-lsa

Description	The number of OSPFv3 inter-area-router LSAs in this area's link-state database.
Context	network-instance name <i>string</i> protocols ospf instance name <i>string</i> area area-id lsa-totals inter-area-router-lsa
Tree	inter-area-router-lsa
Configurable	False
Platforms	Supported on all platforms

intra-area-prefix-lsa

Description	The number of OSPFv3 intra-area-prefix LSAs in this area's link-state database.
Context	network-instance name <i>string</i> protocols ospf instance name <i>string</i> area area-id lsa-totals intra-area-prefix-lsa
Tree	intra-area-prefix-lsa
Configurable	False
Platforms	Supported on all platforms

network-lsa

Description	The number of network LSAs in this area's link-state database.
Context	network-instance name <i>string</i> protocols ospf instance name <i>string</i> area area-id lsa-totals network-lsa
Tree	network-lsa
Configurable	False
Platforms	Supported on all platforms

network-summary-lsa

Description	The number of network summary LSAs in this area's link-state database.
Context	network-instance name <i>string</i> protocols ospf instance name <i>string</i> area area-id lsa-totals network-summary-lsa
Tree	network-summary-lsa
Configurable	False
Platforms	Supported on all platforms

nssa-lsa

Description	The number of NSSA LSAs in this area's link-state database.
Context	network-instance name <i>string</i> protocols ospf instance name <i>string</i> area area-id lsa-totals nssa-lsa
Tree	nssa-lsa
Configurable	False
Platforms	Supported on all platforms

router-info-lsa

Description	The number of OSPFv3 router-info LSAs in this area's link-state database.
Context	network-instance name <i>string</i> protocols ospf instance name <i>string</i> area area-id lsa-totals router-info-lsa
Tree	router-info-lsa
Configurable	False
Platforms	Supported on all platforms

router-lsa

Description	The number of router LSAs in this area's link-state database.
Context	network-instance name <i>string</i> protocols ospf instance name <i>string</i> area area-id lsa-totals router-lsa
Tree	router-lsa
Configurable	False
Platforms	Supported on all platforms

total

Description	The number of area scope LSAs within this area.
Context	network-instance name <i>string</i> protocols ospf instance name <i>string</i> area area-id lsa-totals total
Tree	total
Configurable	False
Platforms	Supported on all platforms

total-lsa-cksum-sum *string*

Description	The 32-bit unsigned sum of the area scope LSA checksums contained in this area's link-state database. The sum can be used to determine if there has been a change in a router's link-state database, and to compare the link-state database of two routers.
Context	network-instance name <i>string</i> protocols ospf instance name <i>string</i> area area-id lsa-totals total-lsa-cksum-sum <i>string</i>
Tree	total-lsa-cksum-sum
Configurable	False
Platforms	Supported on all platforms

unknown-lsa

Description	The number of unknown LSA advertisements in this area's link-state database.
Context	network-instance name <i>string</i> protocols ospf instance name <i>string</i> area area-id lsa-totals unknown-lsa
Tree	unknown-lsa
Configurable	False
Platforms	Supported on all platforms

nssa

Description	This command creates the context to configure the associated OSPF or OSPF3 area as Not So Stubby Area (NSSA). NSSAs are similar to stub areas in that no external routes are imported into the area from other OSPF areas. The major difference between a stub area and an NSSA is an NSSA has the capability to flood external routes that
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it learns throughout its area and via an ABR to the entire OSPF or OSPF3 domain.

Context	network-instance name <i>string</i> protocols ospf instance name <i>string</i> area area-id nssa
Tree	nssa
Configurable	True
Platforms	Supported on all platforms

area-range [ip-prefix-mask](#) (*ipv4-prefix | ipv6-prefix*)

Description	Enter the area-range context
Context	network-instance name <i>string</i> protocols ospf instance name <i>string</i> area area-id nssa area-range ip-prefix-mask (<i>ipv4-prefix ipv6-prefix</i>)
Tree	area-range
Configurable	True
Platforms	Supported on all platforms

ip-prefix-mask (*ipv4-prefix | ipv6-prefix*)

Description	ip-prefix with host bits set to 0
Context	network-instance name <i>string</i> protocols ospf instance name <i>string</i> area area-id nssa area-range ip-prefix-mask (<i>ipv4-prefix ipv6-prefix</i>)
Configurable	True
Platforms	Supported on all platforms

advertise *boolean*

Description	Advertise summarized range of addresses to other areas
Context	network-instance name <i>string</i> protocols ospf instance name <i>string</i> area area-id nssa area-range ip-prefix-mask (<i>ipv4-prefix ipv6-prefix</i>) advertise <i>boolean</i>
Tree	advertise
Default	true
Configurable	True
Platforms	Supported on all platforms

originate-default-route

Description	Enter the originate-default-route context
Context	network-instance name <i>string</i> protocols ospf instance name <i>string</i> area area-id nssa originate-default-route
Tree	originate-default-route
Configurable	True
Platforms	Supported on all platforms

adjacency-check *boolean*

Description	Default route to remove if there is no adjacency
Context	network-instance name <i>string</i> protocols ospf instance name <i>string</i> area area-id nssa originate-default-route adjacency-check <i>boolean</i>
Tree	adjacency-check
Default	true
Configurable	True
Platforms	Supported on all platforms

type-nssa *boolean*

Description	Generate a default route using NSSA-LSA type
Context	network-instance name <i>string</i> protocols ospf instance name <i>string</i> area area-id nssa originate-default-route type-nssa <i>boolean</i>
Tree	type-nssa
Default	false
Configurable	True
Platforms	Supported on all platforms

redistribute-external *boolean*

Description	Enables the redistribution of external routes into the Not So Stubby Area (NSSA) or an NSSA area border router (ABR) that is exporting the routes into non-NSSA areas
Context	network-instance name <i>string</i> protocols ospf instance name <i>string</i> area area-id nssa redistribute-external <i>boolean</i>
Tree	redistribute-external

Default	true
Configurable	True
Platforms	Supported on all platforms

summaries *boolean*

Description	Enables sending summary (type 3) advertisements into a stub area or Not So Stubby Area (NSSA) on an Area Border Router (ABR)
Context	network-instance name <i>string</i> protocols ospf instance name <i>string</i> area area-id nssa summaries <i>boolean</i>
Tree	summaries
Default	true
Configurable	True
Platforms	Supported on all platforms

stub

Description	Enable the stub context
Context	network-instance name <i>string</i> protocols ospf instance name <i>string</i> area area-id stub
Tree	stub
Configurable	True
Platforms	Supported on all platforms

default-metric *number*

Description	Defines the default OSPF metric for associated stub area
Context	network-instance name <i>string</i> protocols ospf instance name <i>string</i> area area-id stub default-metric <i>number</i>
Tree	default-metric
Range	1 to 65535
Default	1
Configurable	True
Platforms	Supported on all platforms

summaries *boolean*

Description	Enables sending summary (type 3) advertisements into a stub area or Not So Stubby Area (NSSA) on an Area Border Router (ABR)
Context	network-instance name <i>string</i> protocols ospf instance name <i>string</i> area area-id stub summaries <i>boolean</i>
Tree	summaries
Default	true
Configurable	True
Platforms	Supported on all platforms

area-border-router *boolean*

Description	This indicates whether this router is an area border router.
Context	network-instance name <i>string</i> protocols ospf instance name <i>string</i> area-border-router <i>boolean</i>
Tree	area-border-router
Configurable	False
Platforms	Supported on all platforms

as-border-router *boolean*

Description	This indicates whether this router is an AS border router.
Context	network-instance name <i>string</i> protocols ospf instance name <i>string</i> as-border-router <i>boolean</i>
Tree	as-border-router
Configurable	False
Platforms	Supported on all platforms

asbr

Description	Configure the router as an ASBR (Autonomous System Boundary Router)
Context	network-instance name <i>string</i> protocols ospf instance name <i>string</i> asbr
Tree	asbr
Configurable	True
Platforms	Supported on all platforms

trace-path (*number | keyword*)

Description	Domain identity
Context	network-instance name <i>string</i> protocols ospf instance name <i>string</i> asbr trace-path (<i>number keyword</i>)
Tree	trace-path
Range	0 to 31
Default	none
Options	<ul style="list-style-type: none"> • none
Configurable	True
Platforms	Supported on all platforms

backbone-router *boolean*

Description	This indicates whether or not this router is configured as an OSPF back bone router.
Context	network-instance name <i>string</i> protocols ospf instance name <i>string</i> backbone-router <i>boolean</i>
Tree	backbone-router
Configurable	False
Platforms	Supported on all platforms

export-limit

Description	Enter the export-limit context
Context	network-instance name <i>string</i> protocols ospf instance name <i>string</i> export-limit
Tree	export-limit
Configurable	True
Platforms	Supported on all platforms

log-percent *number*

Description	Export limit at which warning a log message and SNMP notification are sent
Context	network-instance name <i>string</i> protocols ospf instance name <i>string</i> export-limit log-percent <i>number</i>
Tree	log-percent

Range	1 to 100
Configurable	True
Platforms	Supported on all platforms

number *number*

Description	Maximum number of routes or prefixes to be exported into IGP instance from route table
Context	network-instance name <i>string</i> protocols ospf instance name <i>string</i> export-limit number <i>number</i>
Tree	number
Range	1 to 4294967295
Configurable	True
Platforms	Supported on all platforms

export-policy *reference*

Description	Apply an export policy to redistribute routes into OSPF
Context	network-instance name <i>string</i> protocols ospf instance name <i>string</i> export-policy reference
Tree	export-policy
Reference	routing-policy policy name <i>string</i>
Configurable	True
Platforms	Supported on all platforms

extern-lsa-cksum-sum *string*

Description	the value of extern-lsa-cksum-sum indicates the 32-bit unsigned sum of the LS checksums of the external link-state advertisements contained in the link-state database. This sum can be used to determine if there has been a change in a router's link state database, and to compare the link-state database of two routers.
Context	network-instance name <i>string</i> protocols ospf instance name <i>string</i> extern-lsa-cksum-sum <i>string</i>
Tree	extern-lsa-cksum-sum
Configurable	False
Platforms	Supported on all platforms

extern-lsa-count

Description	the value of extern-lsa-count indicates the number of external LS-as (LS type 0x4005) in the link-state database
Context	network-instance name <i>string</i> protocols ospf instance name <i>string</i> extern-lsa-count
Tree	extern-lsa-count
Configurable	False
Platforms	Supported on all platforms

external-db-overflow

Description	Enable the external-db-overflow context
Context	network-instance name <i>string</i> protocols ospf instance name <i>string</i> external-db-overflow
Tree	external-db-overflow
Configurable	True
Platforms	Supported on all platforms

interval *number*

Description	Enter the interval context
Context	network-instance name <i>string</i> protocols ospf instance name <i>string</i> external-db-overflow interval <i>number</i>
Tree	interval
Range	0 to 2147483647
Default	0
Units	seconds
Configurable	True
Platforms	Supported on all platforms

limit *number*

Description	Enter the limit context
Context	network-instance name <i>string</i> protocols ospf instance name <i>string</i> external-db-overflow limit <i>number</i>
Tree	limit

Range	0 to 2147483647
Default	0
Configurable	True
Platforms	Supported on all platforms

external-preference *number*

Description	Configure the route preference associated with OSPF external routes
Context	network-instance name <i>string</i> protocols ospf instance name <i>string</i> external-preference <i>number</i>
Tree	external-preference
Default	150
Configurable	True
Platforms	Supported on all platforms

graceful-restart

Description	Container for options related to OSPF graceful restart
Context	network-instance name <i>string</i> protocols ospf instance name <i>string</i> graceful-restart
Tree	graceful-restart
Configurable	True
Platforms	Supported on all platforms

helper-mode *boolean*

Description	Enable or disable the OSPF graceful restart helper function. When this leaf is set, the local system supports retaining forwarding information during a neighbor router's restart.
Context	network-instance name <i>string</i> protocols ospf instance name <i>string</i> graceful-restart helper-mode <i>boolean</i>
Tree	helper-mode
Default	false
Configurable	True
Platforms	Supported on all platforms

strict-lsa-checking *boolean*

Description	Enter the strict-lsa-checking context
Context	network-instance name <i>string</i> protocols ospf instance name <i>string</i> graceful-restart strict-lsa-checking <i>boolean</i>
Tree	strict-lsa-checking
Default	false
Configurable	True
Platforms	Supported on all platforms

instance-id *number*

Description	The OSPF multi instance identity as defined in RFC6549 or RFC5838. Supported values are: For OSPFv2 it is between 0 and 31, default is 0. For OSPFv3 address-family ipv6-unicast it is between 0 and 31, default is 0. For OSPFv3 address-family ipv4-unicast it is between 64 and 95, default is 64.
Context	network-instance name <i>string</i> protocols ospf instance name <i>string</i> instance-id <i>number</i>
Tree	instance-id
Range	0 to 255
Configurable	True
Platforms	Supported on all platforms

last-disabled-reason *string*

Description	Reason why the disabled state was entered the last time.
Context	network-instance name <i>string</i> protocols ospf instance name <i>string</i> last-disabled-reason <i>string</i>
Tree	last-disabled-reason
String Length	0 to 20
Configurable	False
Platforms	Supported on all platforms

last-enabled-time *string*

Description	the value of last-enabled-time indicates the value of sys-up-time when admin-state was last set to 'enabled'. when admin-state is set to 'disabled',
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the OSPF counters are stopped when admin-state is reset to 'enabled', the counters are reset to zero.

Context	network-instance name <i>string</i> protocols ospf instance name <i>string</i> last-enabled-time <i>string</i>
Tree	last-enabled-time
String Length	20 to 32
Configurable	False
Platforms	Supported on all platforms

last-overflow-entered-time *string*

Description	The value of last-ovrflw-entered-time indicates the value of sys-up-time the last time we entered overflow state. this overflow state occurs when the number of non-default AS-external-LS-as entries exceed the link-state database capability.
Context	network-instance name <i>string</i> protocols ospf instance name <i>string</i> last-overflow-entered-time <i>string</i>
Tree	last-overflow-entered-time
String Length	20 to 32
Configurable	False
Platforms	Supported on all platforms

last-overflow-exit-time *string*

Description	the value of last-overflow-exit-time indicates the value of sys-up-time the last time we exited overflow state. this overflow state occurs when the number of non-default AS-external-LS-as entries exceed the link-state database capability.
Context	network-instance name <i>string</i> protocols ospf instance name <i>string</i> last-overflow-exit-time <i>string</i>
Tree	last-overflow-exit-time
String Length	20 to 32
Configurable	False
Platforms	Supported on all platforms

last-overload-enter-code *keyword*

Description	the value of last-overload-enter-code indicates the condition which caused OSPF to get into overload.
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Context	network-instance name <i>string</i> protocols ospf instance name <i>string</i> last-overload-enter-code <i>keyword</i>
Tree	last-overload-enter-code
Options	<ul style="list-style-type: none"> • none • spf-failed • boot-overload • manual-overload • sfm-overload • fib-add-fail • rtm-add-fail • rtr-adv-lsa-limit
Configurable	False
Platforms	Supported on all platforms

last-overload-entered-time *string*

Description	the value of last-overload-entrd-time indicates the time at which the system last went into overload state.
Context	network-instance name <i>string</i> protocols ospf instance name <i>string</i> last-overload-entered-time <i>string</i>
Tree	last-overload-entered-time
String Length	20 to 32
Configurable	False
Platforms	Supported on all platforms

last-overload-exit-code *keyword*

Description	the value of last-overload-exit-code indicates the reason why OSPF came out of overload state the last time, since reset.
Context	network-instance name <i>string</i> protocols ospf instance name <i>string</i> last-overload-exit-code <i>keyword</i>
Tree	last-overload-exit-code
Options	<ul style="list-style-type: none"> • none • bgp-sig-recv • timer-expired • manual-exit • sfm-overload-done

Configurable	False
Platforms	Supported on all platforms

last-overload-exit-time *string*

Description	the value of last-overload-exit-time indicates the time at which the system last came out of overload state.
Context	network-instance name <i>string</i> protocols ospf instance name <i>string</i> last-overload-exit-time <i>string</i>
Tree	last-overload-exit-time
String Length	20 to 32
Configurable	False
Platforms	Supported on all platforms

ldp-synchronization

Description	Enable LDP-IGP synchronization procedures on all P2P interfaces and all LAN interfaces with a single adjacency, except on interfaces where the functionality is explicitly disabled
Context	network-instance name <i>string</i> protocols ospf instance name <i>string</i> ldp-synchronization
Tree	ldp-synchronization
Configurable	True
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

end-of-lib *boolean*

Description	When set to true, the IGP restores the normal metric for the IGP adjacency when learning from LDP that all label-FEC mappings have been received from the LDP peer, even if there is remaining time on the hold-down-timer. When set to false, the IGP always waits for the full duration of the hold-down-timer to restore the normal metric for the IGP adjacency
Context	network-instance name <i>string</i> protocols ospf instance name <i>string</i> ldp-synchronization end-of-lib <i>boolean</i>
Tree	end-of-lib
Default	false
Configurable	True
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

hold-down-timer *number*

Description	The maximum amount of time that the IGP advertises a maximum metric for an interface, measured from the time that the LDP adjacency is re-established after going down
Context	network-instance name <i>string</i> protocols ospf instance name <i>string</i> ldp-synchronization hold-down-timer <i>number</i>
Tree	hold-down-timer
Range	1 to 1800
Default	60
Units	seconds
Configurable	True
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

lsa-totals

Description	The number of LSAs of each type in this instance's AS database
Context	network-instance name <i>string</i> protocols ospf instance name <i>string</i> lsa-totals
Tree	lsa-totals
Configurable	False
Platforms	Supported on all platforms

as-external-lsa

Description	The number of AS External LSAs in this instance's AS database.
Context	network-instance name <i>string</i> protocols ospf instance name <i>string</i> lsa-totals as-external-lsa
Tree	as-external-lsa
Configurable	False
Platforms	Supported on all platforms

as-opaque-lsa

Description	The number of AS opaque LSAs in this instance's AS database.
Context	network-instance name <i>string</i> protocols ospf instance name <i>string</i> lsa-totals as-opaque-lsa
Tree	as-opaque-lsa

Configurable	False
Platforms	Supported on all platforms

e-as-external-lsa

Description	The number of extended AS External LSAs in this instance's AS database.
Context	network-instance name string protocols ospf instance name string lsa-totals e-as-external-lsa
Tree	e-as-external-lsa
Configurable	False
Platforms	Supported on all platforms

router-info-lsa

Description	The number of AS scoped router information LSAs in this instance's AS database.
Context	network-instance name string protocols ospf instance name string lsa-totals router-info-lsa
Tree	router-info-lsa
Configurable	False
Platforms	Supported on all platforms

max-ecmp-paths *number*

Description	The maximum number of ECMP next-hops to program into the FIB for every IP prefix
Context	network-instance name string protocols ospf instance name string max-ecmp-paths number
Tree	max-ecmp-paths
Range	1 to 64
Default	1
Configurable	True
Platforms	Supported on all platforms

new-lsas-originated

Description	The number of new link-state advertisements that have been originated. This number is incremented each time the router originates a new LSA.
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Context	network-instance name <i>string</i> protocols ospf instance name <i>string</i> new-lsas-originated
Tree	new-lsas-originated
Configurable	False
Platforms	Supported on all platforms

new-lsas-received

Description	The number of link-state advertisements received determined to be new instantiations. This number does not include newer instantiations of self-originated link-state advertisements.
Context	network-instance name <i>string</i> protocols ospf instance name <i>string</i> new-lsas-received
Tree	new-lsas-received
Configurable	False
Platforms	Supported on all platforms

opaque-lsa-support *boolean*

Description	the value of opaque-lsa-support indicates the router's support for opaque LSA types. this object is valid only when version is 'version2'.
Context	network-instance name <i>string</i> protocols ospf instance name <i>string</i> opaque-lsa-support <i>boolean</i>
Tree	opaque-lsa-support
Configurable	False
Platforms	Supported on all platforms

oper-state *keyword*

Description	Used to report operational state of the OSPF instance
Context	network-instance name <i>string</i> protocols ospf instance name <i>string</i> oper-state <i>keyword</i>
Tree	oper-state
Options	<ul style="list-style-type: none"> • enable • disable
Configurable	False
Platforms	Supported on all platforms

overflow *boolean*

Description	The value of in-overflow-state indicates the current overflow state (true/false). This overflow state occurs when the number of non-default AS-external-LS-as entries exceed the link-state database capability.
Context	network-instance name <i>string</i> protocols ospf instance name <i>string</i> overflow <i>boolean</i>
Tree	overflow
Configurable	False
Platforms	Supported on all platforms

overload

Description	Enter the overload context
Context	network-instance name <i>string</i> protocols ospf instance name <i>string</i> overload
Tree	overload
Configurable	True
Platforms	Supported on all platforms

active *boolean*

Description	Enter the active context
Context	network-instance name <i>string</i> protocols ospf instance name <i>string</i> overload active <i>boolean</i>
Tree	active
Default	false
Configurable	True
Platforms	Supported on all platforms

overload-include-ext-1 *boolean*

Description	Enter the overload-include-ext-1 context
Context	network-instance name <i>string</i> protocols ospf instance name <i>string</i> overload overload-include-ext-1 <i>boolean</i>
Tree	overload-include-ext-1
Default	false
Configurable	True

Platforms Supported on all platforms

overload-include-ext-2 *boolean*

Description Enter the overload-include-ext-2 context

Context [network-instance name](#) *string* [protocols ospf instance name](#) *string* [overload overload-include-ext-2](#) *boolean*

Tree [overload-include-ext-2](#)

Default false

Configurable True

Platforms Supported on all platforms

overload-include-stub *boolean*

Description Enter the overload-include-stub context

Context [network-instance name](#) *string* [protocols ospf instance name](#) *string* [overload overload-include-stub](#) *boolean*

Tree [overload-include-stub](#)

Default false

Configurable True

Platforms Supported on all platforms

overload-on-boot

Description Enable the overload-on-boot context

Context [network-instance name](#) *string* [protocols ospf instance name](#) *string* [overload overload-on-boot](#)

Tree [overload-on-boot](#)

Configurable True

Platforms Supported on all platforms

timeout *number*

Description Enter the timeout context

Context [network-instance name](#) *string* [protocols ospf instance name](#) *string* [overload overload-on-boot timeout](#) *number*

Tree [timeout](#)

Range	60 to 1800
Default	60
Units	seconds
Configurable	True
Platforms	Supported on all platforms

rtr-adv-lsa-limit

Description	Enter the rtr-adv-lsa-limit context
Context	network-instance name <i>string</i> protocols ospf instance name <i>string</i> overload rtr-adv-lsa-limit
Tree	rtr-adv-lsa-limit
Configurable	True
Platforms	Supported on all platforms

log-only *boolean*

Description	Enter the log-only context
Context	network-instance name <i>string</i> protocols ospf instance name <i>string</i> overload rtr-adv-lsa-limit log-only <i>boolean</i>
Tree	log-only
Configurable	True
Platforms	Supported on all platforms

max-lsa-count *number*

Description	Enter the max-lsa-count context
Context	network-instance name <i>string</i> protocols ospf instance name <i>string</i> overload rtr-adv-lsa-limit max-lsa-count <i>number</i>
Tree	max-lsa-count
Range	1 to 4294967295
Configurable	True
Platforms	Supported on all platforms

overload-timeout *number*

Description	Enter the overload-timeout context
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Context	network-instance name <i>string</i> protocols ospf instance name <i>string</i> overload rtr-adv-lsa-limit overload-timeout <i>number</i>
Tree	overload-timeout
Range	1 to 1800
Configurable	True
Platforms	Supported on all platforms

warning-threshold *number*

Description	Enter the warning-threshold context
Context	network-instance name <i>string</i> protocols ospf instance name <i>string</i> overload rtr-adv-lsa-limit warning-threshold <i>number</i>
Tree	warning-threshold
Range	0 to 100
Default	0
Configurable	True
Platforms	Supported on all platforms

overload-rem-interval *number*

Description	the value of <code>overload-rem-interval</code> indicates the time for which the system will be in overload state if OSPF is in overload state. the value of 0 implies that the system is indefinitely in overload state.
Context	network-instance name <i>string</i> protocols ospf instance name <i>string</i> overload-rem-interval <i>number</i>
Tree	overload-rem-interval
Range	0 to 65535
Units	seconds
Configurable	False
Platforms	Supported on all platforms

overload-state *keyword*

Description	the value of <code>overload-oper-state</code> indicates whether or not the OSPF application is presently in overload state or not.
Context	network-instance name <i>string</i> protocols ospf instance name <i>string</i> overload-state <i>keyword</i>
Tree	overload-state

Options	<ul style="list-style-type: none"> • overload • no-overload
Configurable	False
Platforms	Supported on all platforms

ovld-lsa-limit-rem-interval *number*

Description	the value of ovld-lsa-limit-rem-interval indicates the remaining time in seconds for which the system will be in overload state due to advertising router LSA limit exceeded. the value of 0 implies that the system is either not in overload or indefinitely in overload state.
Context	network-instance name <i>string</i> protocols ospf instance name <i>string</i> ovld-lsa-limit-rem-interval <i>number</i>
Tree	ovld-lsa-limit-rem-interval
Range	0 to 65535
Units	seconds
Configurable	False
Platforms	Supported on all platforms

preference *number*

Description	Sets the route preference for OSPF sourced routes
Context	network-instance name <i>string</i> protocols ospf instance name <i>string</i> preference <i>number</i>
Tree	preference
Range	1 to 255
Default	10
Configurable	True
Platforms	Supported on all platforms

reference-bandwidth *number*

Description	<p>Configures the reference bandwidth that provides the basis for interface metrics based on link Bandwidth</p> <p>If the reference bandwidth is defined, then the cost is calculated using the following formula: $\text{cost} = \text{reference-bandwidth} / \text{bandwidth}$</p> <p>When a large reference-bandwidth value is configured, a metric calculation may result in a value higher than the supported protocol cost value. If this</p>
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occurs, OSPF automatically reverts to the maximum configurable cost metric.

Context	network-instance name <i>string</i> protocols ospf instance name <i>string</i> reference-bandwidth <i>number</i>
Tree	reference-bandwidth
Range	1 to 8000000000
Default	400000000
Units	kbps
Configurable	True
Platforms	Supported on all platforms

router-id

Description	Enter the router-id context
Context	network-instance name <i>string</i> protocols ospf instance name <i>string</i> router-id
Tree	router-id
Configurable	True
Platforms	Supported on all platforms

routes-submitted

Description	the value of routes-submitted indicates the number of routes submitted to the route table manager (RTM) by this instance of OSPF.
Context	network-instance name <i>string</i> protocols ospf instance name <i>string</i> routes-submitted
Tree	routes-submitted
Configurable	False
Platforms	Supported on all platforms

spf

Description	SPF related information
Context	network-instance name <i>string</i> protocols ospf instance name <i>string</i> spf
Tree	spf
Configurable	False
Platforms	Supported on all platforms

avg-spf-run-interval *number*

Description	the value of avg-spf-run-interval indicates the average time, in hundredths of seconds, of all the total SPF calculations performed by this OSPF router.
Context	network-instance name <i>string</i> protocols ospf instance name <i>string</i> spf avg-spf-run-interval <i>number</i>
Tree	avg-spf-run-interval
Range	0 to 2147483647
Units	centiseconds
Configurable	False
Platforms	Supported on all platforms

ext-spf-runs

Description	The total number of times that only the external portion of the SPF has been run since OSPF was last enabled.
Context	network-instance name <i>string</i> protocols ospf instance name <i>string</i> spf ext-spf-runs
Tree	ext-spf-runs
Configurable	False
Platforms	Supported on all platforms

full-spf-runs

Description	The total number of times that complete SPF has been run on the router since OSPF was last enabled.
Context	network-instance name <i>string</i> protocols ospf instance name <i>string</i> spf full-spf-runs
Tree	full-spf-runs
Configurable	False
Platforms	Supported on all platforms

incremental-ext-spf-runs

Description	The total number of incremental SPF runs triggered by new or updated external LS-as.
Context	network-instance name <i>string</i> protocols ospf instance name <i>string</i> spf incremental-ext-spf-runs

Tree	incremental-ext-spf-runs
Configurable	False
Platforms	Supported on all platforms

incremental-inter-spf-runs

Description	The total number of incremental SPF runs triggered by new or updated inter-area prefix or inter-area router LS-as.
Context	network-instance name <i>string</i> protocols ospf instance name <i>string</i> spf incremental-inter-spf-runs
Tree	incremental-inter-spf-runs
Configurable	False
Platforms	Supported on all platforms

last-ext-spf

Description	Information about the last external SPF run
Context	network-instance name <i>string</i> protocols ospf instance name <i>string</i> spf last-ext-spf
Tree	last-ext-spf
Configurable	False
Platforms	Supported on all platforms

interval *number*

Description	the value of ext-spf-run-interval indicates the time, in hundredths of seconds, used to perform the most recent total external (not incremental) SPF calculation.
Context	network-instance name <i>string</i> protocols ospf instance name <i>string</i> spf last-ext-spf interval <i>number</i>
Tree	interval
Range	0 to 2147483647
Units	centiseconds
Configurable	False
Platforms	Supported on all platforms

run-time *string*

Description	the value of last-ext-spf-run-time indicates the value of sys-up-time when the external OSPF dijkstra (SPF) was last run.
Context	network-instance name <i>string</i> protocols ospf instance name <i>string</i> spf last-ext-spf run-time <i>string</i>
Tree	run-time
String Length	20 to 32
Configurable	False
Platforms	Supported on all platforms

last-full-spf

Description	Information about the last full SPF run
Context	network-instance name <i>string</i> protocols ospf instance name <i>string</i> spf last-full-spf
Tree	last-full-spf
Configurable	False
Platforms	Supported on all platforms

extern-spf-time *number*

Description	Time it took, in hundredths of seconds, to complete the external LSA calculations.
Context	network-instance name <i>string</i> protocols ospf instance name <i>string</i> spf last-full-spf extern-spf-time <i>number</i>
Tree	extern-spf-time
Range	0 to 2147483647
Units	centiseconds
Configurable	False
Platforms	Supported on all platforms

inter-spf-time *number*

Description	Time it took, in hundredths of seconds, to complete the inter-area SPF calculations.
Context	network-instance name <i>string</i> protocols ospf instance name <i>string</i> spf last-full-spf inter-spf-time <i>number</i>

Tree	inter-spf-time
Range	0 to 2147483647
Units	centiseconds
Configurable	False
Platforms	Supported on all platforms

intra-spf-time *number*

Description	Time it took, in hundredths of seconds, to complete the intra-area SPF calculations.
Context	network-instance name <i>string</i> protocols ospf instance name <i>string</i> spf last-full-spf intra-spf-time <i>number</i>
Tree	intra-spf-time
Range	0 to 2147483647
Units	centiseconds
Configurable	False
Platforms	Supported on all platforms

rtm-update-time *number*

Description	Time it took, in hundredths of seconds, to complete the RTM updates.
Context	network-instance name <i>string</i> protocols ospf instance name <i>string</i> spf last-full-spf rtm-update-time <i>number</i>
Tree	rtm-update-time
Range	0 to 2147483647
Units	centiseconds
Configurable	False
Platforms	Supported on all platforms

run-time *string*

Description	the value of last-full-spf-run-time indicates the time at which the system last performed a full dijkstra (SPF) run.
Context	network-instance name <i>string</i> protocols ospf instance name <i>string</i> spf last-full-spf run-time <i>string</i>
Tree	run-time
String Length	20 to 32

Configurable	False
Platforms	Supported on all platforms

total-time *number*

Description	Time it took, in hundredths of seconds, to complete the last SPF run completely.
Context	network-instance name <i>string</i> protocols ospf instance name <i>string</i> spf last-full-spf total-time <i>number</i>
Tree	total-time
Range	0 to 2147483647
Units	centiseconds
Configurable	False
Platforms	Supported on all platforms

max-spf-run-interval *number*

Description	the value of max-spf-run-interval indicates the maximum time, in hundredths of seconds, used to perform a total SPF calculation.
Context	network-instance name <i>string</i> protocols ospf instance name <i>string</i> spf max-spf-run-interval <i>number</i>
Tree	max-spf-run-interval
Range	0 to 2147483647
Units	centiseconds
Configurable	False
Platforms	Supported on all platforms

min-spf-run-interval *number*

Description	the value of min-spf-run-interval indicates the minimum time, in hundredths of seconds, used to perform a total SPF calculation.
Context	network-instance name <i>string</i> protocols ospf instance name <i>string</i> spf min-spf-run-interval <i>number</i>
Tree	min-spf-run-interval
Range	0 to 2147483647
Units	centiseconds
Configurable	False

Platforms Supported on all platforms

spf-attempts-failed

Description The number of times an attempt to run SPF has failed because SPF runs have been stopped as a result of insufficient memory resources.

Context [network-instance name string protocols ospf instance name string spf spf-attempts-failed](#)

Tree [spf-attempts-failed](#)

Configurable False

Platforms Supported on all platforms

timers

Description Enter the timers context

Context [network-instance name string protocols ospf instance name string timers](#)

Tree [timers](#)

Configurable True

Platforms Supported on all platforms

incremental-spf-wait *number*

Description Delay time before an incremental SPF calculation is started

Context [network-instance name string protocols ospf instance name string timers incremental-spf-wait number](#)

Tree [incremental-spf-wait](#)

Range 0 to 1000

Default 1000

Configurable True

Platforms Supported on all platforms

lsa-accumulate *number*

Description Delay time for accumulating multiple LSAs before advertising them to neighbors

Context [network-instance name string protocols ospf instance name string timers lsa-accumulate number](#)

Tree	lsa-accumulate
Range	0 to 1000
Default	1000
Configurable	True
Platforms	Supported on all platforms

Isa-arrival *number*

Description	Minimum delay between receipt of the same LSAs arriving from neighbors
Context	network-instance name <i>string</i> protocols ospf instance name <i>string</i> timers lsa-arrival number
Tree	lsa-arrival
Range	0 to 600000
Default	1000
Configurable	True
Platforms	Supported on all platforms

Isa-generate

Description	Enter the lsa-generate context
Context	network-instance name <i>string</i> protocols ospf instance name <i>string</i> timers lsa-generate
Tree	lsa-generate
Configurable	True
Platforms	Supported on all platforms

Isa-initial-wait *number*

Description	First waiting period between link state advertisements LSA originates
Context	network-instance name <i>string</i> protocols ospf instance name <i>string</i> timers lsa-generate lsa-initial-wait number
Tree	lsa-initial-wait
Range	10 to 600000
Default	5000
Units	milliseconds
Configurable	True

Platforms Supported on all platforms

lsa-second-wait *number*

Description Hold time between the first and second LSA generation

Context [network-instance name](#) *string* [protocols ospf instance name](#) *string* [timers lsa-generate lsa-second-wait](#) *number*

Tree [lsa-second-wait](#)

Range 10 to 600000

Default 5000

Units milliseconds

Configurable True

Platforms Supported on all platforms

max-lsa-wait *number*

Description Maximum time between two consecutive occurrences of an LSA being generated

Context [network-instance name](#) *string* [protocols ospf instance name](#) *string* [timers lsa-generate max-lsa-wait](#) *number*

Tree [max-lsa-wait](#)

Range 10 to 600000

Default 5000

Units milliseconds

Configurable True

Platforms Supported on all platforms

redistribute-delay *number*

Description Hold down timer for external routes that are redistributed in OSPF

Context [network-instance name](#) *string* [protocols ospf instance name](#) *string* [timers redistribute-delay](#) *number*

Tree [redistribute-delay](#)

Range 0 to 1000

Default 1000

Configurable True

Platforms Supported on all platforms

spf-wait

Description	Enter the spf-wait context
Context	network-instance name <i>string</i> protocols ospf instance name <i>string</i> timers spf-wait
Tree	spf-wait
Configurable	True
Platforms	Supported on all platforms

spf-initial-wait *number*

Description	Initial SPF calculation delay after a topology change
Context	network-instance name <i>string</i> protocols ospf instance name <i>string</i> timers spf-wait spf-initial-wait <i>number</i>
Tree	spf-initial-wait
Range	10 to 100000
Default	1000
Units	milliseconds
Configurable	True
Platforms	Supported on all platforms

spf-max-wait *number*

Description	Maximum interval between two consecutive SPF calculations
Context	network-instance name <i>string</i> protocols ospf instance name <i>string</i> timers spf-wait spf-max-wait <i>number</i>
Tree	spf-max-wait
Range	10 to 120000
Default	10000
Units	milliseconds
Configurable	True
Platforms	Supported on all platforms

spf-second-wait *number*

Description	Hold time between the first and second SPF calculation
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Context	network-instance name <i>string</i> protocols ospf instance name <i>string</i> timers spf-wait spf-second-wait <i>number</i>
Tree	spf-second-wait
Range	10 to 100000
Default	1000
Units	milliseconds
Configurable	True
Platforms	Supported on all platforms

total-exported-routes

Description	the value of total-exported-routes indicates the total number of routes exported into OSPF from the route table manager when an export policy is configured. value of total-exported-routes would be 0 when no export policy is configured.
Context	network-instance name <i>string</i> protocols ospf instance name <i>string</i> total-exported-routes
Tree	total-exported-routes
Configurable	False
Platforms	Supported on all platforms

trace-options

Description	Enter the trace-options context
Context	network-instance name <i>string</i> protocols ospf instance name <i>string</i> trace-options
Tree	trace-options
Configurable	True
Platforms	Supported on all platforms

trace

Description	Tracing parameter flags
Context	network-instance name <i>string</i> protocols ospf instance name <i>string</i> trace-options trace
Tree	trace
Configurable	True
Platforms	Supported on all platforms

adjacencies

Description	Enable tracing all adjacency events.
Context	network-instance name <i>string</i> protocols ospf instance name <i>string</i> trace-options trace adjacencies
Tree	adjacencies
Configurable	True
Platforms	Supported on all platforms

graceful-restart

Description	Enable tracing all graceful-restart events.
Context	network-instance name <i>string</i> protocols ospf instance name <i>string</i> trace-options trace graceful-restart
Tree	graceful-restart
Configurable	True
Platforms	Supported on all platforms

interfaces

Description	Enable tracing all interface events.
Context	network-instance name <i>string</i> protocols ospf instance name <i>string</i> trace-options trace interfaces
Tree	interfaces
Configurable	True
Platforms	Supported on all platforms

lsdb

Description	Trace OSPF LSDB events Only one type can be enabled at a time
Context	network-instance name <i>string</i> protocols ospf instance name <i>string</i> trace-options trace lsdb
Tree	lsdb
Configurable	True
Platforms	Supported on all platforms

link-state-id *string*

Description	Enter the link-state-id context
Context	network-instance name <i>string</i> protocols ospf instance name <i>string</i> trace-options trace lsdb link-state-id <i>string</i>
Tree	link-state-id
Configurable	True
Platforms	Supported on all platforms

router-id *string*

Description	Enter the router-id context
Context	network-instance name <i>string</i> protocols ospf instance name <i>string</i> trace-options trace lsdb router-id <i>string</i>
Tree	router-id
Configurable	True
Platforms	Supported on all platforms

type *keyword*

Description	Enter the type context
Context	network-instance name <i>string</i> protocols ospf instance name <i>string</i> trace-options trace lsdb type <i>keyword</i>
Tree	type
Options	<ul style="list-style-type: none"> • all Enable tracing of all LSDB events • router Enable tracing of LSDB router LSA events • network Enable tracing of OSPF LSDB network LSA events • summary Enable tracing of OSPF LSDB summary LSA events • nssa Enable tracing of OSPF LSDB NSSA LSA events • external Enable tracing of OSPF LSDB events for External LSA • opaque

Enable tracing of OSPF LSDB events involving opaque LSA

- inter-area-prefix

Enable tracing of OSPF LSDB events for inter-area prefixes

- inter-area-router

Enable tracing of OSPF LSDB events for inter-area routers

- intra-area-prefix

Enable tracing of OSPF LSDB events for intra-area prefixes

Configurable

True

Platforms

Supported on all platforms

misc

Description

Enable tracing all Config events.

Context

[network-instance name](#) *string* [protocols ospf instance name](#) *string* [trace-options trace misc](#)

Tree

[misc](#)

Configurable

True

Platforms

Supported on all platforms

packet

Description

Trace OSPF Packet types Only one type can be enabled at a time

Context

[network-instance name](#) *string* [protocols ospf instance name](#) *string* [trace-options trace packet](#)

Tree

[packet](#)

Configurable

True

Platforms

Supported on all platforms

detail

Description

To enable detailed tracing. Includes both received and sent packets.

Context

[network-instance name](#) *string* [protocols ospf instance name](#) *string* [trace-options trace packet detail](#)

Tree

[detail](#)

Configurable

True

Platforms

Supported on all platforms

modifier *keyword*

Description	Enter the modifier context
Context	network-instance name <i>string</i> protocols ospf instance name <i>string</i> trace-options trace packet modifier <i>keyword</i>
Tree	modifier
Options	<ul style="list-style-type: none"> • ingress To enable tracing for the packets which are received. • egress To enable tracing for the sent packets. • in-and-egress To enable tracing for both sent and received packets • drop To enable tracing for the sent packets.
Configurable	True
Platforms	Supported on all platforms

type *keyword*

Description	Enter the type context
Context	network-instance name <i>string</i> protocols ospf instance name <i>string</i> trace-options trace packet type <i>keyword</i>
Tree	type
Options	<ul style="list-style-type: none"> • all Enable tracing of all OSPF packets • hello Enable tracing of OSPF Hello packets • dbdescr Enable tracing of OSPF database Descriptor packets • ls-request Enable tracing of OSPF link-state request packets • ls-update Enable tracing of OSPF link-state update packets • ls-ack Enable tracing of OSPF link-state Ack packets
Configurable	True

Platforms Supported on all platforms

routes

Description Enable the routes context

Context [network-instance name string protocols ospf instance name string trace-options trace routes](#)

Tree [routes](#)

Configurable True

Platforms Supported on all platforms

dest-address (*ipv4-address* | *ipv6-address*)

Description Enter the dest-address context

Context [network-instance name string protocols ospf instance name string trace-options trace routes dest-address \(*ipv4-address* | *ipv6-address*\)](#)

Tree [dest-address](#)

Configurable True

Platforms Supported on all platforms

spf

Description Enable the spf context

Context [network-instance name string protocols ospf instance name string trace-options trace spf](#)

Tree [spf](#)

Configurable True

Platforms Supported on all platforms

dest-address (*ipv4-address* | *ipv6-address*)

Description Enter the dest-address context

Context [network-instance name string protocols ospf instance name string trace-options trace spf dest-address \(*ipv4-address* | *ipv6-address*\)](#)

Tree [dest-address](#)

Configurable True

Platforms Supported on all platforms

version *identityref*

Description	The version that this ospf instance supports.
Context	network-instance name <i>string</i> protocols ospf instance name <i>string</i> version identityref
Tree	version
Options	<ul style="list-style-type: none"> ospf-v2 Version 2 of the OSPF protocol ospf-v3 Version 3 of the OSPF protocol
Configurable	True
Platforms	Supported on all platforms

pcep

Description	Top-level configuration and operational state for Path Computation Element Protocol (PCEP)
Context	network-instance name <i>string</i> protocols pcep
Tree	pcep
Configurable	True
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

pcc

Description	Configure Path Computation Client (PCC) parameters
Context	network-instance name <i>string</i> protocols pcep pcc
Tree	pcc
Configurable	True
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

admin-state *keyword*

Description	Administrative state
Context	network-instance name <i>string</i> protocols pcep pcc admin-state <i>keyword</i>
Tree	admin-state
Default	disable

Options	<ul style="list-style-type: none"> • enable • disable
Configurable	True
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

allow-negotiation *boolean*

Description	Indicates whether the PCEP entity will permit negotiation of session parameters.
Context	network-instance name <i>string</i> protocols pcep pcc allow-negotiation <i>boolean</i>
Tree	allow-negotiation
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

capabilities *keyword*

Description	The list of capabilities supported by this PCEP
Context	network-instance name <i>string</i> protocols pcep pcc capabilities <i>keyword</i>
Tree	capabilities
Options	<ul style="list-style-type: none"> • stateful-delegate • stateful-pce • stateful-optimize • segment-routing-path • rsvp-path • optical-gmpls • pce-initiated-lsp • stateless • p2mp • p2mp-delegate • p2mp-initiate • association • multipath
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b
Max. Elements	8

connect-timer *number*

Description	The time that the PCEP entity will wait to establish a TCP connection with a peer If a TCP connection is not established within this time, then PCEP aborts the session setup attempt.
Context	network-instance name <i>string</i> protocols pcep pcc connect-timer <i>number</i>
Tree	connect-timer
Range	1 to 65535
Units	seconds
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

dead-timer *number*

Description	Configure dead timer
Context	network-instance name <i>string</i> protocols pcep pcc dead-timer <i>number</i>
Tree	dead-timer
Range	1 to 255
Default	120
Units	seconds
Configurable	True
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

keep-wait-timer *number*

Description	The time that the PCEP entity will wait to receive a Keepalive or PCErr message from a peer during session initialization after receiving an Open message If no Keepalive or PCErr message is received within this time, then PCEP terminates the TCP connection.
Context	network-instance name <i>string</i> protocols pcep pcc keep-wait-timer <i>number</i>
Tree	keep-wait-timer
Range	1 to 65535
Units	seconds
Configurable	False

Platforms 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

keepalive *number*

Description Configure keepalive

Context [network-instance name](#) *string* [protocols pcep pcc keepalive](#) *number*

Tree [keepalive](#)

Range 1 to 255

Default 30

Units seconds

Configurable True

Platforms 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

Isp-update [pce-id](#) *number*

Description List of Labeled Switch Path (LSP) update information sent by a PCE to a PCC to update attributes of a LSP

Context [network-instance name](#) *string* [protocols pcep pcc lsp-update pce-id](#) *number*

Tree [lsp-update](#)

Configurable False

Platforms 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

pce-id *number*

Description The unique identifier for PCE

Context [network-instance name](#) *string* [protocols pcep pcc lsp-update pce-id](#) *number*

Range 1 to 4294967295

Configurable False

Platforms 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

delegated *boolean*

Description Indicates whether the PCC is delegating the LSP to the PCE

Context [network-instance name](#) *string* [protocols pcep pcc lsp-update pce-id](#) *number*
[delegated](#) *boolean*

Tree [delegated](#)

Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

delegated-peer-address (*ipv4-address-unicast | ipv6-address-unicast-without-local*)

Description	The peer address to which the PCC has delegated the LSP
Context	network-instance name <i>string</i> protocols pcep pcc lsp-update pce-id <i>number</i> delegated-peer-address (<i>ipv4-address-unicast ipv6-address-unicast-without-local</i>)
Tree	delegated-peer-address
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

destination-address (*ipv4-address-unicast | ipv6-address-unicast-without-local*)

Description	The destination address of the LSP
Context	network-instance name <i>string</i> protocols pcep pcc lsp-update pce-id <i>number</i> destination-address (<i>ipv4-address-unicast ipv6-address-unicast-without-local</i>)
Tree	destination-address
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

extended-tunnel-id (*ipv4-address-unicast | ipv6-address-unicast*)

Description	The extended tunnel identifier
Context	network-instance name <i>string</i> protocols pcep pcc lsp-update pce-id <i>number</i> extended-tunnel-id (<i>ipv4-address-unicast ipv6-address-unicast</i>)
Tree	extended-tunnel-id
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

lsp-id *number*

Description	The unique identifier for the LSP
Context	network-instance name <i>string</i> protocols pcep pcc lsp-update pce-id <i>number</i> lsp-id <i>number</i>
Tree	lsp-id

Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

lsp-type keyword

Description	The type of LSP
Context	network-instance name <i>string</i> protocols pcep pcc lsp-update pce-id <i>number</i> lsp-type <i>keyword</i>
Tree	lsp-type
Options	<ul style="list-style-type: none"> • rsvp-p2p Resource Reservation Protocol-Traffic Engineering (RSVP-TE) Point to Point • rsvp-p2mp RSVP-TE Point to Multipoint • segment-routing Segment Routing • pce-initiated-segment-routing Segment Routing

Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

name string

Description	The LSP path name that is unique in the PCC and remains constant throughout a path's life time
Context	network-instance name <i>string</i> protocols pcep pcc lsp-update pce-id <i>number</i> name <i>string</i>
Tree	name
String Length	1 to 255
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

oper-state keyword

Description	The operational status of the LSP
Context	network-instance name <i>string</i> protocols pcep pcc lsp-update pce-id <i>number</i> oper-state <i>keyword</i>

Tree	oper-state
Options	<ul style="list-style-type: none"> • down LSP is not active • up LSP has been signaled • active LSP is up and carrying traffic • going-down LSP is being torn down, resources are being released • going-up LSP is being signaled
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

path-detail [path-type](#) *keyword*

Description	Path details.
Context	network-instance name <i>string</i> protocols pcep pcc lsp-update pce-id <i>number</i> path-detail path-type <i>keyword</i>
Tree	path-detail
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

path-type *keyword*

Description	LSP paths types
Context	network-instance name <i>string</i> protocols pcep pcc lsp-update pce-id <i>number</i> path-detail path-type <i>keyword</i>
Options	<ul style="list-style-type: none"> • current Current path • in-progress A path under process • pending Pending path which is yet to be processed
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

error keyword

Description	The reason for LSP update failure
Context	network-instance name <i>string</i> protocols pcep pcc lsp-update pce-id <i>number</i> path-detail path-type <i>keyword error keyword</i>
Tree	error
Options	<ul style="list-style-type: none"> • not-applicable Not Applicable • unknown-reason Unknown reason • limit-reached-for-pce-lsps Limit reached for PCE-controlled LSPs • too-many-pending-lsp-updates Too many pending LSP update requests • unacceptable-parameters Unacceptable parameters • internal-error Internal error • lsp-admin-down LSP administratively brought down • lsp-preempted LSP preempted • rsvp-signaling-error RSVP signaling error
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

exclude-any number

Description	Set of attribute filters associated with a tunnel, any of which renders a link unacceptable It is the LSPA object used in PCReq message.
Context	network-instance name <i>string</i> protocols pcep pcc lsp-update pce-id <i>number</i> path-detail path-type <i>keyword exclude-any number</i>
Tree	exclude-any
Configurable	False

Platforms 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

explicit-route-objects *route-object-index number*

Description Path EROs details.

Context [network-instance name](#) *string* [protocols pcep pcc lsp-update pce-id](#) *number* [path-detail path-type](#) *keyword* [explicit-route-objects route-object-index number](#)

Tree [explicit-route-objects](#)

Configurable False

Platforms 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

route-object-index *number*

Description The unique identifier for RRO/ERO entries

Context [network-instance name](#) *string* [protocols pcep pcc lsp-update pce-id](#) *number* [path-detail path-type](#) *keyword* [explicit-route-objects route-object-index number](#)

Configurable False

Platforms 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

as-number *number*

Description AS-Number for a given segment in ERO or RRO

Context [network-instance name](#) *string* [protocols pcep pcc lsp-update pce-id](#) *number* [path-detail path-type](#) *keyword* [explicit-route-objects route-object-index number](#) [as-number](#) *number*

Tree [as-number](#)

Configurable False

Platforms 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

local-interface-id *number*

Description Local interface-id for a given unnumbered/link-local segment in ERO or RRO

Context [network-instance name](#) *string* [protocols pcep pcc lsp-update pce-id](#) *number* [path-detail path-type](#) *keyword* [explicit-route-objects route-object-index number](#) [local-interface-id](#) *number*

Tree [local-interface-id](#)

Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

local-interface-name *string*

Description	Local interface name for a given unnumbered/link-local segment in ERO or RRO
Context	network-instance name <i>string</i> protocols pcep pcc lsp-update pce-id <i>number</i> path-detail path-type <i>keyword</i> explicit-route-objects route-object-index <i>number</i> local-interface-name <i>string</i>
Tree	local-interface-name
String Length	5 to 25
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

local-prefix (*ipv4-address-unicast* | *ipv6-address-unicast-without-local*)

Description	Local IP address for a given segment in ERO or RRO
Context	network-instance name <i>string</i> protocols pcep pcc lsp-update pce-id <i>number</i> path-detail path-type <i>keyword</i> explicit-route-objects route-object-index <i>number</i> local-prefix (<i>ipv4-address-unicast</i> <i>ipv6-address-unicast-without-local</i>)
Tree	local-prefix
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

prefix (*ipv4-address-unicast* | *ipv6-address-unicast-without-local*)

Description	IP address for a given segment in ERO or RRO
Context	network-instance name <i>string</i> protocols pcep pcc lsp-update pce-id <i>number</i> path-detail path-type <i>keyword</i> explicit-route-objects route-object-index <i>number</i> prefix (<i>ipv4-address-unicast</i> <i>ipv6-address-unicast-without-local</i>)
Tree	prefix
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

remote-interface-id *number*

Description	Remote interface-id for a given unnumbered/link-local segment in ERO or RRO
Context	network-instance name <i>string</i> protocols pcep pcc lsp-update pce-id <i>number</i> path-detail path-type <i>keyword</i> explicit-route-objects route-object-index <i>number</i> remote-interface-id <i>number</i>
Tree	remote-interface-id
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

remote-prefix (*ipv4-address-unicast* | *ipv6-address-unicast-without-local*)

Description	Remote IP address for a given segment in ERO or RRO
Context	network-instance name <i>string</i> protocols pcep pcc lsp-update pce-id <i>number</i> path-detail path-type <i>keyword</i> explicit-route-objects route-object-index <i>number</i> remote-prefix (<i>ipv4-address-unicast</i> <i>ipv6-address-unicast-without-local</i>)
Tree	remote-prefix
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

router-id (*ipv4-address-unicast* | *ipv6-address-unicast-without-local*)

Description	Router-id for a given unnumbered segment in ERO or RRO
Context	network-instance name <i>string</i> protocols pcep pcc lsp-update pce-id <i>number</i> path-detail path-type <i>keyword</i> explicit-route-objects route-object-index <i>number</i> router-id (<i>ipv4-address-unicast</i> <i>ipv6-address-unicast-without-local</i>)
Tree	router-id
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

sid-label *number*

Description	Unique Segment Identifier label value
Context	network-instance name <i>string</i> protocols pcep pcc lsp-update pce-id <i>number</i> path-detail path-type <i>keyword</i> explicit-route-objects route-object-index <i>number</i> sid-label <i>number</i>
Tree	sid-label

Range	16 to 1048575
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

sid-type keyword

Description	Refers to strict or loose hop
Context	network-instance name string protocols pcep pcc lsp-update pce-id number path-detail path-type keyword explicit-route-objects route-object-index number sid-type keyword
Tree	sid-type
Options	<ul style="list-style-type: none"> strict loose
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

holding-priority number

Description	<p>The priority of the TE LSP with respect to holding resources</p> <p>The value of 0 represents highest priority. The holding priority indicates whether this session can be preempted by another session. It is the LSPA object used in PCReq message.</p>
Context	network-instance name string protocols pcep pcc lsp-update pce-id number path-detail path-type keyword holding-priority number
Tree	holding-priority
Range	0 to 7
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

hop-count number

Description	<p>The number of hops that are traversed via the TE tunnel</p> <p>It is the METRIC object in PCReq message.</p>
Context	network-instance name string protocols pcep pcc lsp-update pce-id number path-detail path-type keyword hop-count number
Tree	hop-count
Configurable	False

Platforms 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

igp-metric number

Description The Interior Gateway Protocol (IGP) metric that must be optimized by the path computation algorithm for providing the cost of computed path
It is the METRIC object used in PCReq message.

Context [network-instance name](#) *string* [protocols pcep pcc lsp-update pce-id](#) *number*
[path-detail path-type](#) *keyword* [igp-metric](#) *number*

Tree [igp-metric](#)

Configurable False

Platforms 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

include-all number

Description Set of attribute filters associated with a tunnel, all of which must be present for a link to be acceptable
It is the LSPA object used in PCReq message.

Context [network-instance name](#) *string* [protocols pcep pcc lsp-update pce-id](#) *number*
[path-detail path-type](#) *keyword* [include-all](#) *number*

Tree [include-all](#)

Configurable False

Platforms 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

include-any number

Description Set of attribute filters associated with a tunnel, any of which renders a link acceptable
It is the LSPA object used in PCReq message.

Context [network-instance name](#) *string* [protocols pcep pcc lsp-update pce-id](#) *number*
[path-detail path-type](#) *keyword* [include-any](#) *number*

Tree [include-any](#)

Configurable False

Platforms 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

lsp-bandwidth *number*

Description	The bandwidth that is being requested by the LSP.
Context	network-instance name <i>string</i> protocols pcep pcc lsp-update pce-id <i>number</i> path-detail path-type <i>keyword</i> lsp-bandwidth <i>number</i>
Tree	lsp-bandwidth
Units	Mbps
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

record-route-objects [route-object-index](#) *number*

Description	Path RROs details.
Context	network-instance name <i>string</i> protocols pcep pcc lsp-update pce-id <i>number</i> path-detail path-type <i>keyword</i> record-route-objects route-object-index <i>number</i>
Tree	record-route-objects
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

route-object-index *number*

Description	The unique identifier for RRO/ERO entries
Context	network-instance name <i>string</i> protocols pcep pcc lsp-update pce-id <i>number</i> path-detail path-type <i>keyword</i> record-route-objects route-object-index <i>number</i>
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

as-number *number*

Description	AS-Number for a given segment in ERO or RRO
Context	network-instance name <i>string</i> protocols pcep pcc lsp-update pce-id <i>number</i> path-detail path-type <i>keyword</i> record-route-objects route-object-index <i>number</i> as-number <i>number</i>
Tree	as-number
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

local-interface-id *number*

Description	Local interface-id for a given unnumbered/link-local segment in ERO or RRO
Context	network-instance name <i>string</i> protocols pcep pcc lsp-update pce-id <i>number</i> path-detail path-type <i>keyword</i> record-route-objects route-object-index <i>number</i> local-interface-id <i>number</i>
Tree	local-interface-id
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

local-interface-name *string*

Description	Local interface name for a given unnumbered/link-local segment in ERO or RRO
Context	network-instance name <i>string</i> protocols pcep pcc lsp-update pce-id <i>number</i> path-detail path-type <i>keyword</i> record-route-objects route-object-index <i>number</i> local-interface-name <i>string</i>
Tree	local-interface-name
String Length	5 to 25
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

local-prefix (*ipv4-address-unicast* | *ipv6-address-unicast-without-local*)

Description	Local IP address for a given segment in ERO or RRO
Context	network-instance name <i>string</i> protocols pcep pcc lsp-update pce-id <i>number</i> path-detail path-type <i>keyword</i> record-route-objects route-object-index <i>number</i> local-prefix (<i>ipv4-address-unicast</i> <i>ipv6-address-unicast-without-local</i>)
Tree	local-prefix
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

prefix (*ipv4-address-unicast* | *ipv6-address-unicast-without-local*)

Description	IP address for a given segment in ERO or RRO
Context	network-instance name <i>string</i> protocols pcep pcc lsp-update pce-id <i>number</i> path-detail path-type <i>keyword</i> record-route-objects route-object-index <i>number</i> prefix (<i>ipv4-address-unicast</i> <i>ipv6-address-unicast-without-local</i>)

Tree	prefix
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

remote-interface-id *number*

Description	Remote interface-id for a given unnumbered/link-local segment in ERO or RRO
Context	network-instance name <i>string</i> protocols pcep pcc lsp-update pce-id <i>number</i> path-detail path-type <i>keyword</i> record-route-objects route-object-index <i>number</i> remote-interface-id <i>number</i>
Tree	remote-interface-id
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

remote-prefix (*ipv4-address-unicast* | *ipv6-address-unicast-without-local*)

Description	Remote IP address for a given segment in ERO or RRO
Context	network-instance name <i>string</i> protocols pcep pcc lsp-update pce-id <i>number</i> path-detail path-type <i>keyword</i> record-route-objects route-object-index <i>number</i> remote-prefix (<i>ipv4-address-unicast</i> <i>ipv6-address-unicast-without-local</i>)
Tree	remote-prefix
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

router-id (*ipv4-address-unicast* | *ipv6-address-unicast-without-local*)

Description	Router-id for a given unnumbered segment in ERO or RRO
Context	network-instance name <i>string</i> protocols pcep pcc lsp-update pce-id <i>number</i> path-detail path-type <i>keyword</i> record-route-objects route-object-index <i>number</i> router-id (<i>ipv4-address-unicast</i> <i>ipv6-address-unicast-without-local</i>)
Tree	router-id
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

sid-label *number*

Description	Unique Segment Identifier label value
Context	network-instance name <i>string</i> protocols pcep pcc lsp-update pce-id <i>number</i> path-detail path-type <i>keyword</i> record-route-objects route-object-index <i>number</i> sid-label <i>number</i>
Tree	sid-label
Range	16 to 1048575
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

sid-type *keyword*

Description	Refers to strict or loose hop
Context	network-instance name <i>string</i> protocols pcep pcc lsp-update pce-id <i>number</i> path-detail path-type <i>keyword</i> record-route-objects route-object-index <i>number</i> sid-type <i>keyword</i>
Tree	sid-type
Options	<ul style="list-style-type: none"> • strict • loose
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

setup-priority *number*

Description	The priority of the TE LSP with respect to holding resources The value of 0 represents highest priority. The holding priority indicates whether this session can be in PCReq message.
Context	network-instance name <i>string</i> protocols pcep pcc lsp-update pce-id <i>number</i> path-detail path-type <i>keyword</i> setup-priority <i>number</i>
Tree	setup-priority
Range	0 to 7
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

srp-id *number*

Description	Stateful PCE Request Parameters(SRP) identifier for update sent by PCE
Context	network-instance name <i>string</i> protocols pcep pcc lsp-update pce-id <i>number</i> path-detail path-type <i>keyword</i> srp-id <i>number</i>
Tree	srp-id
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

te-metric *number*

Description	The Traffic Engineering (TE) metric that must be optimized by the path computation algorithm for providing the cost of computed path It is the METRIC object used in PCReq messages.
Context	network-instance name <i>string</i> protocols pcep pcc lsp-update pce-id <i>number</i> path-detail path-type <i>keyword</i> te-metric <i>number</i>
Tree	te-metric
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

source-address (*ipv4-address-unicast | ipv6-address-unicast-without-local*)

Description	The sender address of the LSP
Context	network-instance name <i>string</i> protocols pcep pcc lsp-update pce-id <i>number</i> source-address (<i>ipv4-address-unicast ipv6-address-unicast-without-local</i>)
Tree	source-address
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

state *keyword*

Description	The state of the LSP
Context	network-instance name <i>string</i> protocols pcep pcc lsp-update pce-id <i>number</i> state <i>keyword</i>
Tree	state
Options	<ul style="list-style-type: none"> • not-applicable • mbb-in-progress

- MBB procedure is in progress
- mbb-fail
 - MBB procedure failed
- mbb-success
 - MBB procedure succeeded
- update-delegation
 - Delegation update is being processed
- lsp-down
 - LSP down update is being processed

Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

tunnel-id *number*

Description	The unique tunnel identifier that remains constant over the life time of a tunnel
Context	network-instance name <i>string</i> protocols pcep pcc lsp-update pce-id <i>number</i> tunnel-id <i>number</i>
Tree	tunnel-id
Range	1 to 65535
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

max-sessions *number*

Description	The maximum number of sessions involving this PCEP entity that can exist at any time.
Context	network-instance name <i>string</i> protocols pcep pcc max-sessions <i>number</i>
Tree	max-sessions
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

max-unknown-requests *number*

Description	The maximum number of unrecognized requests and replies that any session on this PCEP entity is willing to accept per minute before terminating the session.
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Context	network-instance name <i>string</i> protocols pcep pcc max-unknown-requests number
Tree	max-unknown-requests
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

open-wait-timer *number*

Description	The time that the PCEP entity will wait to receive an Open message from a peer after the TCP connection has come up If no Open message is received within this time, then PCEP terminates the TCP connection.
Context	network-instance name <i>string</i> protocols pcep pcc open-wait-timer number
Tree	open-wait-timer
Range	1 to 65535
Units	seconds
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

oper-state *keyword*

Description	Indicates the operational status of this PCEP
Context	network-instance name <i>string</i> protocols pcep pcc oper-state keyword
Tree	oper-state
Options	<ul style="list-style-type: none"> • up The PCEP entity is active • down The PCEP entity is inactive • going-up The PCEP entity is activating • going-down The PCEP entity is deactivating • failed The PCEP entity has failed and will recover when possible • failed-permanently The PCEP entity has failed and will not recover without operator intervention

Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

path-request [request-id](#) *number*

Description	List of Path Computation Request (PCReq) messages sent by the PCC to request a path computation.
Context	network-instance name <i>string</i> protocols pcep pcc path-request request-id <i>number</i>
Tree	path-request
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

request-id *number*

Description	The unique path computation request identifier represented in PCReq message
Context	network-instance name <i>string</i> protocols pcep pcc path-request request-id <i>number</i>
Range	1 to 4294967295
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

bidirectional *boolean*

Description	Indicates whether the PCReq message relates to a bi-directional TE LSP that has the same traffic engineering requirements in each direction It is the RP object used in PCReq message. TE requirements include fate sharing, protection and restoration, LSRs, TE links, and resource requirements (e.g., latency and jitter)
Context	network-instance name <i>string</i> protocols pcep pcc path-request request-id <i>number</i> bidirectional <i>boolean</i>
Tree	bidirectional
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

destination-address (*ipv4-address-unicast | ipv6-address-unicast-without-local*)

Description	The destination address of the path for which the path computation is requested It is the END-POINTS object used in PCReq message.
Context	network-instance name <i>string</i> protocols pcep pcc path-request request-id <i>number</i> destination-address (<i>ipv4-address-unicast ipv6-address-unicast-without-local</i>)
Tree	destination-address
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

exclude-any *number*

Description	Set of attribute filters associated with a tunnel, any of which renders a link unacceptable It is the LSPA object used in PCReq message.
Context	network-instance name <i>string</i> protocols pcep pcc path-request request-id <i>number</i> exclude-any <i>number</i>
Tree	exclude-any
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

extended-profiles *number*

Description	List of extended identifiers associated with the path profile identifier.
Context	network-instance name <i>string</i> protocols pcep pcc path-request request-id <i>number</i> extended-profiles <i>number</i>
Tree	extended-profiles
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b
Max. Elements	5

extended-tunnel-id (*ipv4-address-unicast | ipv6-address-unicast*)

Description	The extended tunnel identifier
Context	network-instance name <i>string</i> protocols pcep pcc path-request request-id <i>number</i> extended-tunnel-id (<i>ipv4-address-unicast ipv6-address-unicast</i>)

Tree	extended-tunnel-id
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

holding-priority *number*

Description	The priority of the TE LSP with respect to holding resources The value of 0 represents highest priority. The holding priority indicates whether this session can be preempted by another session. It is the LSPA object used in PCReq message.
Context	network-instance name <i>string</i> protocols pcep pcc path-request request-id number holding-priority number
Tree	holding-priority
Range	0 to 7
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

hop-count *number*

Description	The number of hops that are traversed via the TE tunnel It is the METRIC object in PCReq message.
Context	network-instance name <i>string</i> protocols pcep pcc path-request request-id number hop-count number
Tree	hop-count
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

igp-metric *number*

Description	The Interior Gateway Protocol (IGP) metric that must be optimized by the path computation algorithm for providing the cost of computed path It is the METRIC object used in PCReq message.
Context	network-instance name <i>string</i> protocols pcep pcc path-request request-id number igp-metric number
Tree	igp-metric
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

include-all *number*

Description	Set of attribute filters associated with a tunnel, all of which must be present for a link to be acceptable It is the LSPA object used in PCReq message.
Context	network-instance name <i>string</i> protocols pcep pcc path-request request-id number include-all <i>number</i>
Tree	include-all
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

include-any *number*

Description	Set of attribute filters associated with a tunnel, any of which renders a link acceptable It is the LSPA object used in PCReq message.
Context	network-instance name <i>string</i> protocols pcep pcc path-request request-id number include-any <i>number</i>
Tree	include-any
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

local-protection-desired *boolean*

Description	Indicates whether local protection is desired or not It is the LSPA (LSP Attribute) object used in PCReq message. When the value of this object is set to 'true', it indicates that the computed path must include links protected with Fast Reroute as defined in the maximum number of hops to be traversed that must not be exceeded to consider computed path as acceptable.
Context	network-instance name <i>string</i> protocols pcep pcc path-request request-id number local-protection-desired <i>boolean</i>
Tree	local-protection-desired
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

loose-path-acceptable *boolean*

Description	Indicates whether a loose path is acceptable (true) or not (false) It is the RP object used in PCReq message. When the value of this object is set to 'true', it indicates that a loose path is acceptable. When the value of this object is set to 'false', it indicates that a path exclusively made of strict hops is required.
Context	network-instance name <i>string</i> protocols pcep pcc path-request request-id number loose-path-acceptable <i>boolean</i>
Tree	loose-path-acceptable
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

lsp-bandwidth *number*

Description	The bandwidth that is being requested by the LSP.
Context	network-instance name <i>string</i> protocols pcep pcc path-request request-id number lsp-bandwidth <i>number</i>
Tree	lsp-bandwidth
Units	Mbps
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

lsp-id *number*

Description	The unique identifier for the LSP
Context	network-instance name <i>string</i> protocols pcep pcc path-request request-id number lsp-id <i>number</i>
Tree	lsp-id
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

lsp-name *string*

Description	The LSP path name that is unique in the PCC and remains constant throughout a path's life time.
Context	network-instance name <i>string</i> protocols pcep pcc path-request request-id number lsp-name <i>string</i>

Tree	lsp-name
String Length	1 to 255
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

lsp-type *keyword*

Description	The type of LSP
Context	network-instance name <i>string</i> protocols pcep pcc path-request request-id <i>number</i> lsp-type <i>keyword</i>
Tree	lsp-type
Options	<ul style="list-style-type: none"> • rsvp-p2p Resource Reservation Protocol-Traffic Engineering (RSVP-TE) Point to Point • rsvp-p2mp RSVP-TE Point to Multipoint • segment-routing Segment Routing • pce-initiated-segment-routing Segment Routing
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

max-lsr-labels *number*

Description	The maximum segment routing label stack size for this LSP.
Context	network-instance name <i>string</i> protocols pcep pcc path-request request-id <i>number</i> max-lsr-labels <i>number</i>
Tree	max-lsr-labels
Range	1 to 10
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

message-state *keyword*

Description	The state of the PCReq message
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Context	network-instance name <i>string</i> protocols pcep pcc path-request request-id number message-state <i>keyword</i>
Tree	message-state
Options	<ul style="list-style-type: none"> unknown The state of PCReq message is unknown request-parameter Request Parameter (RP) object is included in the PCReq message sent-for-compute PCReq message has been sent for path computation error-received Path Computation Error (PCErr) message is received by the PCC notify-received Path Computation Notification (PCNtf) message is received by the PCC cancel PCReq message has been cancelled compute-received Path computation is received by the PCC
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

metric-bound *keyword*

Description	Indicates whether the metric-value specifies a bound (a maximum)for the path metric that must not be exceeded for the PCC to consider the computed path as acceptable It is the METRIC object used in PCReq message.
Context	network-instance name <i>string</i> protocols pcep pcc path-request request-id number metric-bound <i>keyword</i>
Tree	metric-bound
Options	<ul style="list-style-type: none"> igp-metric te-metric hop-count
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b
Max. Elements	3

metric-compute *keyword*

Description	Indicates whether PCE must provide the computed path metric value in Path Computation Response (PCRep) message for the corresponding metric It is the METRIC object used in PCReq message.
Context	network-instance name <i>string</i> protocols pcep pcc path-request request-id number metric-compute <i>keyword</i>
Tree	metric-compute
Options	<ul style="list-style-type: none"> • igp-metric • te-metric • hop-count
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b
Max. Elements	3

msg-priority *number*

Description	The priority of the PCReq message It is RP object used in PCReq message.
Context	network-instance name <i>string</i> protocols pcep pcc path-request request-id number msg-priority <i>number</i>
Tree	msg-priority
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

profiles *number*

Description	List of path profile identifiers
Context	network-instance name <i>string</i> protocols pcep pcc path-request request-id number profiles <i>number</i>
Tree	profiles
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b
Max. Elements	5

reoptimization *boolean*

Description	Indicates whether the PCReq message relates to the reoptimization of an existing TE LSP It is the RP object used in PCReq message.
Context	network-instance name <i>string</i> protocols pcep pcc path-request request-id number reoptimization <i>boolean</i>
Tree	reoptimization
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

setup-priority *number*

Description	The priority of the TE LSP with respect to holding resources The value of 0 represents highest priority. The holding priority indicates whether this session can be in PCReq message.
Context	network-instance name <i>string</i> protocols pcep pcc path-request request-id number setup-priority <i>number</i>
Tree	setup-priority
Range	0 to 7
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

source-address (*ipv4-address-unicast | ipv6-address-unicast-without-local*)

Description	The source address of the path for which path computation is requested It is the END-POINTS object used in PCReq message.
Context	network-instance name <i>string</i> protocols pcep pcc path-request request-id number source-address (<i>ipv4-address-unicast ipv6-address-unicast-without-local</i>)
Tree	source-address
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

sync-vector-id *number*

Description	The Synchronization Vector (svec) identifier for Synchronized Dependent Path Computations
Context	network-instance name <i>string</i> protocols pcep pcc path-request request-id number sync-vector-id <i>number</i>
Tree	sync-vector-id
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

te-metric *number*

Description	The Traffic Engineering (TE) metric that must be optimized by the path computation algorithm for providing the cost of computed path It is the METRIC object used in PCReq messages.
Context	network-instance name <i>string</i> protocols pcep pcc path-request request-id number te-metric <i>number</i>
Tree	te-metric
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

tunnel-id *number*

Description	The unique tunnel identifier that remains constant over the life time of a tunnel.
Context	network-instance name <i>string</i> protocols pcep pcc path-request request-id number tunnel-id <i>number</i>
Tree	tunnel-id
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

peer ip-address (*ipv4-address-unicast | ipv6-address-unicast-without-local*)

Description	Configure peer parameters for PCC
Context	network-instance name <i>string</i> protocols pcep pcc peer ip-address (<i>ipv4-address-unicast ipv6-address-unicast-without-local</i>)
Tree	peer
Configurable	True

Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b
Max. Elements	2

ip-address (*ipv4-address-unicast | ipv6-address-unicast-without-local*)

Description	The address of the PCE peer
Context	network-instance name <i>string</i> protocols pcep pcc peer ip-address (<i>ipv4-address-unicast ipv6-address-unicast-without-local</i>)
Configurable	True
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

admin-state *keyword*

Description	Administrative state of PCC peer
Context	network-instance name <i>string</i> protocols pcep pcc peer ip-address (<i>ipv4-address-unicast ipv6-address-unicast-without-local</i>) admin-state <i>keyword</i>
Tree	admin-state
Default	disable
Options	<ul style="list-style-type: none"> • enable • disable
Configurable	True
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

capabilities *keyword*

Description	The capabilities supported by this peer
Context	network-instance name <i>string</i> protocols pcep pcc peer ip-address (<i>ipv4-address-unicast ipv6-address-unicast-without-local</i>) capabilities <i>keyword</i>
Tree	capabilities
Options	<ul style="list-style-type: none"> • stateful-delegate • stateful-pce • stateful-optimize • segment-routing-path • rsvp-path • optical-gmpls • pce-initiated-lsp • stateless

- p2mp
- p2mp-delegate
- p2mp-initiate
- association
- multipath

Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b
Max. Elements	8

is-overloaded *boolean*

Description	The value indicates whether this peer is overloaded with the processing of existing requests and is unable to handle new requests leading to unacceptable response times
Context	network-instance name <i>string</i> protocols pcep pcc peer ip-address (ipv4-address-unicast ipv6-address-unicast-without-local) is-overloaded <i>boolean</i>
Tree	is-overloaded
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

local-address ([ipv4-address-unicast](#) | [ipv6-address-unicast-without-local](#))

Description	Configure local IP to be used for PCE peering
Context	network-instance name <i>string</i> protocols pcep pcc peer ip-address (ipv4-address-unicast ipv6-address-unicast-without-local) local-address (ipv4-address-unicast ipv6-address-unicast-without-local)
Tree	local-address
Configurable	True
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

network-instance *reference*

Description	Reference to a configured network-instance used for reachability to PCE. This network-instance must already exist in the system.
Context	network-instance name <i>string</i> protocols pcep pcc peer ip-address (ipv4-address-unicast ipv6-address-unicast-without-local) network-instance reference
Tree	network-instance

Reference	network-instance name <i>string</i>
Configurable	True
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

oper-dead-timer *number*

Description	The operational value of dead timer interval in use by this peer This is the time after which a peer should declare a session down if it does not receive any PCEP messages
Context	network-instance name <i>string</i> protocols pcep pcc peer ip-address (ipv4-address-unicast ipv6-address-unicast-without-local) oper-dead-timer <i>number</i>
Tree	oper-dead-timer
Units	seconds
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

oper-keepalive *number*

Description	The operational value of keepalive interval in use by this entity's peer This is the maximum time between two consecutive messages sent to a peer
Context	network-instance name <i>string</i> protocols pcep pcc peer ip-address (ipv4-address-unicast ipv6-address-unicast-without-local) oper-keepalive <i>number</i>
Tree	oper-keepalive
Units	seconds
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

oper-local-address (*ipv4-address-unicast | ipv6-address-unicast-without-local*)

Description	The value indicates the internet address being used by this PCEP Peer.
Context	network-instance name <i>string</i> protocols pcep pcc peer ip-address (ipv4-address-unicast ipv6-address-unicast-without-local) oper-local-address (ipv4-address-unicast ipv6-address-unicast-without-local)
Tree	oper-local-address
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

oper-state keyword

Description	Details the operational state of the Pcep Pcc Peer
Context	network-instance name <i>string</i> protocols pcep pcc peer ip-address (<i>ipv4-address-unicast</i> <i>ipv6-address-unicast-without-local</i>) oper-state keyword
Tree	oper-state
Options	<ul style="list-style-type: none"> • up Component or process is operational • down Component or process is not operational • empty Component slot is empty • downloading Component is downloading image into memory • booting Component is booting downloaded image • starting Component image operational, application processes starting • failed Component or process has failed • synchronizing Component is currently being synchronized • upgrading Component is currently being upgraded • low-power Component is offline due to insufficient system power • degraded Component or process is in a degraded state • warm-reboot Component or process is currently warm rebooting This state is set during a warm reboot immediately following initiation of the reboot, continuing after startup until the system has completed audit. In this state the system will not accept configuration changes. • waiting Component or process is currently waiting

This state can be set by event handler when the `reinvoke-with-delay` action is used, and indicates that the event handler is waiting for the provided delay before reinvoking the instance.

Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

preference *number*

Description	The preference value of this peer If a higher preference PCE is unavailable or not connected, the PCE with the next preference is used.
Context	network-instance name <i>string</i> protocols pcep pcc peer ip-address (<i>ipv4-address-unicast</i> <i>ipv6-address-unicast-without-local</i>) preference number
Tree	preference
Range	0 to 100
Default	0
Configurable	True
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

session-established-time *string*

Description	Indicates when the session with this peer entered into the established state
Context	network-instance name <i>string</i> protocols pcep pcc peer ip-address (<i>ipv4-address-unicast</i> <i>ipv6-address-unicast-without-local</i>) session-established-time string
Tree	session-established-time
String Length	20 to 32
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

speaker-id *string*

Description	A unique speaker identifier for the peer that does change during lifetime of the speaker
Context	network-instance name <i>string</i> protocols pcep pcc peer ip-address (<i>ipv4-address-unicast</i> <i>ipv6-address-unicast-without-local</i>) speaker-id string
Tree	speaker-id
String Length	1 to 255

Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

statistics

Description	Holds statistics of messages send to peer
Context	network-instance name <i>string</i> protocols pcep pcc peer ip-address (<i>ipv4-address-unicast</i> <i>ipv6-address-unicast-without-local</i>) statistics
Tree	statistics
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

num-keepalive-rcvd *number*

Description	The number of Keepalive messages received from this peer
Context	network-instance name <i>string</i> protocols pcep pcc peer ip-address (<i>ipv4-address-unicast</i> <i>ipv6-address-unicast-without-local</i>) statistics num-keepalive-rcvd <i>number</i>
Tree	num-keepalive-rcvd
Default	0
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

num-keepalive-sent *number*

Description	The number of Keepalive messages sent to this peer
Context	network-instance name <i>string</i> protocols pcep pcc peer ip-address (<i>ipv4-address-unicast</i> <i>ipv6-address-unicast-without-local</i>) statistics num-keepalive-sent <i>number</i>
Tree	num-keepalive-sent
Default	0
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

num-pcerr-rcvd *number*

Description	The number of PCErr messages received from this peer
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Context	network-instance name <i>string</i> protocols pcep pcc peer ip-address (<i>ipv4-address-unicast ipv6-address-unicast-without-local</i>) statistics num-pcrr-rcvd <i>number</i>
Tree	num-pcrr-rcvd
Default	0
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

num-pcrr-sent *number*

Description	The number of PCErr messages sent to this peer
Context	network-instance name <i>string</i> protocols pcep pcc peer ip-address (<i>ipv4-address-unicast ipv6-address-unicast-without-local</i>) statistics num-pcrr-sent <i>number</i>
Tree	num-pcrr-sent
Default	0
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

num-pcinit-rcvd *number*

Description	The number of PC initiated messages received from this peer.
Context	network-instance name <i>string</i> protocols pcep pcc peer ip-address (<i>ipv4-address-unicast ipv6-address-unicast-without-local</i>) statistics num-pcinit-rcvd <i>number</i>
Tree	num-pcinit-rcvd
Default	0
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

num-pcinit-sent *number*

Description	The number of PC initiated messages sent to this peer.
Context	network-instance name <i>string</i> protocols pcep pcc peer ip-address (<i>ipv4-address-unicast ipv6-address-unicast-without-local</i>) statistics num-pcinit-sent <i>number</i>
Tree	num-pcinit-sent
Default	0

Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

num-pcntf-rcvd *number*

Description	The number of PCNtf messages received from this peer
Context	network-instance name <i>string</i> protocols pcep pcc peer ip-address (ipv4-address-unicast ipv6-address-unicast-without-local) statistics num-pcntf-rcvd <i>number</i>
Tree	num-pcntf-rcvd
Default	0
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

num-pcntf-sent *number*

Description	The number of PCNtf messages sent to this peer
Context	network-instance name <i>string</i> protocols pcep pcc peer ip-address (ipv4-address-unicast ipv6-address-unicast-without-local) statistics num-pcntf-sent <i>number</i>
Tree	num-pcntf-sent
Default	0
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

num-pcrep-rcvd *number*

Description	The number of PCRep messages received from this peer
Context	network-instance name <i>string</i> protocols pcep pcc peer ip-address (ipv4-address-unicast ipv6-address-unicast-without-local) statistics num-pcrep-rcvd <i>number</i>
Tree	num-pcrep-rcvd
Default	0
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

num-pcrep-sent *number*

Description	The number of PCRep messages sent to this peer
Context	network-instance name <i>string</i> protocols pcep pcc peer ip-address (ipv4-address-unicast ipv6-address-unicast-without-local) statistics num-pcrep-sent <i>number</i>
Tree	num-pcrep-sent
Default	0
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

num-pcreq-rcvd *number*

Description	The number of PCReq messages received from this peer
Context	network-instance name <i>string</i> protocols pcep pcc peer ip-address (ipv4-address-unicast ipv6-address-unicast-without-local) statistics num-pcreq-rcvd <i>number</i>
Tree	num-pcreq-rcvd
Default	0
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

num-pcreq-sent *number*

Description	The number of PCReq messages sent to this peer
Context	network-instance name <i>string</i> protocols pcep pcc peer ip-address (ipv4-address-unicast ipv6-address-unicast-without-local) statistics num-pcreq-sent <i>number</i>
Tree	num-pcreq-sent
Default	0
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

num-pcrpt-rcvd *number*

Description	The number of PCRpt messages received from this peer
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Context	network-instance name <i>string</i> protocols pcep pcc peer ip-address (<i>ipv4-address-unicast ipv6-address-unicast-without-local</i>) statistics num-pcrpt-rcvd <i>number</i>
Tree	num-pcrpt-rcvd
Default	0
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

num-pcrpt-sent *number*

Description	The number of PCRpt messages sent to this peer.
Context	network-instance name <i>string</i> protocols pcep pcc peer ip-address (<i>ipv4-address-unicast ipv6-address-unicast-without-local</i>) statistics num-pcrpt-sent <i>number</i>
Tree	num-pcrpt-sent
Default	0
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

num-pcupd-rcvd *number*

Description	The number of PCUpd messages received from this peer
Context	network-instance name <i>string</i> protocols pcep pcc peer ip-address (<i>ipv4-address-unicast ipv6-address-unicast-without-local</i>) statistics num-pcupd-rcvd <i>number</i>
Tree	num-pcupd-rcvd
Default	0
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

num-pcupd-sent *number*

Description	The number of PCUpd messages sent to this peer.
Context	network-instance name <i>string</i> protocols pcep pcc peer ip-address (<i>ipv4-address-unicast ipv6-address-unicast-without-local</i>) statistics num-pcupd-sent <i>number</i>
Tree	num-pcupd-sent
Default	0

Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

num-req-rcvd *number*

Description	The number of requests received from this peer A request corresponds 1:1 with an RP object in a PCReq message
Context	network-instance name <i>string</i> protocols pcep pcc peer ip-address (ipv4-address-unicast ipv6-address-unicast-without-local) statistics num-req-rcvd number
Tree	num-req-rcvd
Default	0
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

num-req-sent *number*

Description	The number of requests sent to this peer A request corresponds 1:1 with an RP object in a PCReq message
Context	network-instance name <i>string</i> protocols pcep pcc peer ip-address (ipv4-address-unicast ipv6-address-unicast-without-local) statistics num-req-sent number
Tree	num-req-sent
Default	0
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

num-rpt-rcvd *number*

Description	The number of report messages received from this peer This might be greater than num-pcrpt-rcvd because multiple requests can be batched into a single PCRpt message.
Context	network-instance name <i>string</i> protocols pcep pcc peer ip-address (ipv4-address-unicast ipv6-address-unicast-without-local) statistics num-rpt-rcvd number
Tree	num-rpt-rcvd
Default	0

Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

num-rpt-sent *number*

Description	The number of report messages sent to this peer This might be greater than num-pcrpt-sent because multiple requests can be batched into a single PCRpt messages.
Context	network-instance name string protocols pcep pcc peer ip-address (ipv4-address-unicast ipv6-address-unicast-without-local) statistics num-rpt-sent number
Tree	num-rpt-sent
Default	0
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

num-session-setup-fail *number*

Description	The number of PCEP sessions with the peer that have been attempted but failed before being fully established This counter is incremented each time a session retry to this peer fails
Context	network-instance name string protocols pcep pcc peer ip-address (ipv4-address-unicast ipv6-address-unicast-without-local) statistics num-session-setup-fail number
Tree	num-session-setup-fail
Default	0
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

num-session-setup-ok *number*

Description	The number of PCEP sessions successfully established with the peer, including any current session This counter is incremented each time a session with this peer is successfully established
Context	network-instance name string protocols pcep pcc peer ip-address (ipv4-address-unicast ipv6-address-unicast-without-local) statistics num-session-setup-ok number

Tree	num-session-setup-ok
Default	0
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

sync-state *keyword*

Description	The synchronization state of this peer.
Context	network-instance name <i>string</i> protocols pcep pcc peer ip-address (<i>ipv4-address-unicast</i> <i>ipv6-address-unicast-without-local</i>) sync-state <i>keyword</i>
Tree	sync-state
Options	<ul style="list-style-type: none"> not-initialized Indicates the State Synchronization has not yet started or not initialized due to no connection with the peer. in-progress Indicates the State Synchronization is in progress done Indicates the State Synchronozation has been completed
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

redelegation-timer *number*

Description	Configure redelegation-timer
Context	network-instance name <i>string</i> protocols pcep pcc redelegation-timer <i>number</i>
Tree	redelegation-timer
Range	1 to 3600
Default	90
Units	seconds
Configurable	True
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

report-path-constraints *boolean*

Description	Specify whether to enable/disable path constraints in PCC report
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Context	network-instance name <i>string</i> protocols pcep pcc report-path-constraints <i>boolean</i>
Tree	report-path-constraints
Default	true
Configurable	True
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

request-timer *number*

Description	The maximum time that the PCEP entity will wait for a response to a PCReq message.
Context	network-instance name <i>string</i> protocols pcep pcc request-timer <i>number</i>
Tree	request-timer
Range	1 to 65535
Units	seconds
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

state-timer

Description	Holds state timer information
Context	network-instance name <i>string</i> protocols pcep pcc state-timer
Tree	state-timer
Configurable	True
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

timer *number*

Description	Configure state-timer
Context	network-instance name <i>string</i> protocols pcep pcc state-timer timer <i>number</i>
Tree	timer
Range	1 to 3600
Default	180
Units	seconds
Configurable	True
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

timer-action *keyword*

Description	State timer action remove/none
Context	network-instance name <i>string</i> protocols pcep pcc state-timer timer-action <i>keyword</i>
Tree	timer-action
Default	remove
Options	<ul style="list-style-type: none"> • none • remove
Configurable	True
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

sync-timer *number*

Description	The value is used in the case of a synchronized path computation request using the SVEC object.
Context	network-instance name <i>string</i> protocols pcep pcc sync-timer <i>number</i>
Tree	sync-timer
Range	1 to 65535
Units	seconds
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

unknown-message-rate *number*

Description	Configure unknown message rate
Context	network-instance name <i>string</i> protocols pcep pcc unknown-message-rate <i>number</i>
Tree	unknown-message-rate
Range	1 to 255
Default	10
Configurable	True
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

ptp

Description	Per network instance PTP configuration and state
Context	network-instance name <i>string</i> protocols ptp
Tree	ptp
Configurable	True
Platforms	7220 IXR-D5, 7250 IXR-X3b

oper-state *keyword*

Description	Operational state of PTP within the network instance This is dependent on the administrative state of the ptp instance, the administrative state of the this network-instance under ptp, and the operational state of the network-instance itself.
Context	network-instance name <i>string</i> protocols ptp oper-state <i>keyword</i>
Tree	oper-state
Options	<ul style="list-style-type: none"> • up Component or process is operational • down Component or process is not operational • empty Component slot is empty • downloading Component is downloading image into memory • booting Component is booting downloaded image • starting Component image operational, application processes starting • failed Component or process has failed • synchronizing Component is currently being synchronized • upgrading Component is currently being upgraded • low-power Component is offline due to insufficient system power

- degraded
Component or process is in a degraded state
- warm-reboot
Component or process is currently warm rebooting
This state is set during a warm reboot immediately following initiation of the reboot, continuing after startup until the system has completed audit. In this state the system will not accept configuration changes.
- waiting
Component or process is currently waiting
This state can be set by event handler when the reinvoke-with-delay action is used, and indicates that the event handler is waiting for the provided delay before reinvoking the instance.

Configurable	False
Platforms	7220 IXR-D5, 7250 IXR-X3b

peer-limit *number*

Description	Number of discovered peers allowed for network-instance If not defined then the number is not restricted within this network-instance.
Context	network-instance name <i>string</i> protocols ptp peer-limit <i>number</i>
Tree	peer-limit
Range	0 to 512
Configurable	True
Platforms	7220 IXR-D5, 7250 IXR-X3b

source-address-ipv4 *string*

Description	IPv4 source address to be used for PTP messages sent in this network-instance Only unicast IP supported.
Context	network-instance name <i>string</i> protocols ptp source-address-ipv4 <i>string</i>
Tree	source-address-ipv4
Configurable	True
Platforms	7220 IXR-D5, 7250 IXR-X3b

source-address-ipv6 *string*

Description	IPv6 source address to be used for PTP messages sent in this network-instance Only unicast IP supported.
Context	network-instance name <i>string</i> protocols ptp source-address-ipv6 <i>string</i>
Tree	source-address-ipv6
Configurable	True
Platforms	Supported on 7220 IXR-D5, 7250 IXR-X3b

route-table

Description	Enter the route-table context
Context	network-instance name <i>string</i> route-table
Tree	route-table
Configurable	False
Platforms	Supported on all platforms

ipv4-unicast

Description	The container for the IPv4 unicast routing table of the network instance.
Context	network-instance name <i>string</i> route-table ipv4-unicast
Tree	ipv4-unicast
Configurable	False
Platforms	Supported on all platforms

route [ipv4-prefix](#) *string* [route-type](#) *identityref* [route-owner](#) *string* [id](#) *number* [origin-network-instance](#) *reference*

Description	Enter the route list instance
Context	network-instance name <i>string</i> route-table ipv4-unicast route ipv4-prefix <i>string</i> route-type <i>identityref</i> route-owner <i>string</i> id <i>number</i> origin-network-instance <i>reference</i>
Tree	route
Configurable	False
Platforms	Supported on all platforms

ipv4-prefix *string*

Description	The IPv4 prefix associated with the route.
Context	network-instance name <i>string</i> route-table ipv4-unicast route ipv4-prefix <i>string</i> route-type identityref route-owner <i>string</i> id <i>number</i> origin-network-instance reference
Configurable	False
Platforms	Supported on all platforms

route-type *identityref*

Description	The type of the IP route
Context	network-instance name <i>string</i> route-table ipv4-unicast route ipv4-prefix <i>string</i> route-type identityref route-owner <i>string</i> id <i>number</i> origin-network-instance reference
Options	<ul style="list-style-type: none"> • aggregate Locally configured aggregate route • arp-nd IP route added by ARP ND. • bgp Border Gateway Protocol version 4 • bgp-label Border Gateway Protocol labeled routes • bgp-evpn BGP Ethernet VPN (EVPN) • bgp-ipvpn BGP IP VPN • dhcp IP (default) route added by DHCP. • gribi A gRIBI route • host A host route • isis IS-IS • local A directly connected route

- linux
IP route added by the linux kernel.
- ndk1
Route added by an agent application using the NDK
- ndk2
Route added by an agent application using the NDK
- ospfv2
OSPFv2
- ospfv3
OSPFv3
- static
Locally configured static route

Configurable	False
Platforms	Supported on all platforms

route-owner *string*

Description	The application name of the owner of the IP route
Context	network-instance name <i>string</i> route-table ipv4-unicast route ipv4-prefix <i>string</i> route-type identityref route-owner <i>string</i> id number origin-network-instance reference
Configurable	False
Platforms	Supported on all platforms

id *number*

Description	An owner-assigned index value that is unique for each of the routes for a given prefix.
Context	network-instance name <i>string</i> route-table ipv4-unicast route ipv4-prefix <i>string</i> route-type identityref route-owner <i>string</i> id number origin-network-instance reference
Configurable	False
Platforms	Supported on all platforms

origin-network-instance *reference*

Description	Origin network instance of the route (where it was originally learned or configured)
--------------------	--

If the route was leaked from another network instance, the value of this leaf reflects the network-instance from which it was learned. If it was not leaked the value is the same as the parent network-instance.

Context	network-instance name <i>string</i> route-table ipv4-unicast route ipv4-prefix <i>string</i> route-type <i>identityref</i> route-owner <i>string</i> id <i>number</i> origin-network-instance <i>reference</i>
Reference	network-instance name <i>string</i>
Configurable	False
Platforms	Supported on all platforms

active *boolean*

Description	If set to true then the route is installed as the active route for the IP prefix in the FIB. A route can be inactive because there is a more preferred route for the same prefix or else its next-hops are unresolved.
Context	network-instance name <i>string</i> route-table ipv4-unicast route ipv4-prefix <i>string</i> route-type <i>identityref</i> route-owner <i>string</i> id <i>number</i> origin-network-instance <i>reference</i> active <i>boolean</i>
Tree	active
Configurable	False
Platforms	Supported on all platforms

fib-programming

Description	Container for state related to the FIB programming of the object
Context	network-instance name <i>string</i> route-table ipv4-unicast route ipv4-prefix <i>string</i> route-type <i>identityref</i> route-owner <i>string</i> id <i>number</i> origin-network-instance <i>reference</i> fib-programming
Tree	fib-programming
Configurable	False
Platforms	Supported on all platforms

last-failed-complexes *string*

Description	List of forwarding complexes that reported a failure for the last operation. They appear in the format (slot-number,complex-number).
Context	network-instance name <i>string</i> route-table ipv4-unicast route ipv4-prefix <i>string</i> route-type <i>identityref</i> route-owner <i>string</i> id <i>number</i> origin-network-instance <i>reference</i> fib-programming last-failed-complexes <i>string</i>
Tree	last-failed-complexes

Configurable	False
Platforms	Supported on all platforms

last-failed-operation-type *keyword*

Description	The last operation type that failed.
Context	network-instance name <i>string</i> route-table ipv4-unicast route ipv4-prefix <i>string</i> route-type identityref route-owner <i>string id number</i> origin-network-instance reference fib-programming last-failed-operation-type <i>keyword</i>
Tree	last-failed-operation-type
Options	<ul style="list-style-type: none"> • add The current or last operation was an attempt to create a new entry. • delete The current or last operation was an attempt to delete an existing entry. • modify The current or last operation was an attempt to modify an existing entry. • none There was no prior operation for this entry or there is no current operation that is in process
Configurable	False
Platforms	Supported on all platforms

last-successful-operation-timestamp *string*

Description	<p>The date and time of the last operation to complete successfully, if the entry was not suppressed.</p> <p>A delete operation is immediately timestamped by FIB manager on the assumption that it will ultimately be successful on all complexes. For other operations the timestamp is generated when the last complex that was expected to respond has responded with a success acknowledgement.</p>
Context	network-instance name <i>string</i> route-table ipv4-unicast route ipv4-prefix <i>string</i> route-type identityref route-owner <i>string id number</i> origin-network-instance reference fib-programming last-successful-operation-timestamp <i>string</i>
Tree	last-successful-operation-timestamp
String Length	20 to 32
Configurable	False
Platforms	Supported on all platforms

last-successful-operation-type *keyword*

Description	The last operation type that completed successfully, if the entry was not suppressed.
Context	network-instance name <i>string</i> route-table ipv4-unicast route ipv4-prefix <i>string</i> route-type identityref route-owner <i>string</i> id number origin-network-instance reference fib-programming last-successful-operation-type <i>keyword</i>
Tree	last-successful-operation-type
Options	<ul style="list-style-type: none"> • add The current or last operation was an attempt to create a new entry. • delete The current or last operation was an attempt to delete an existing entry. • modify The current or last operation was an attempt to modify an existing entry. • none There was no prior operation for this entry or there is no current operation that is in process
Configurable	False
Platforms	Supported on all platforms

pending-operation-type *keyword*

Description	The current operation type that is in progress because not all complexes have responded.
Context	network-instance name <i>string</i> route-table ipv4-unicast route ipv4-prefix <i>string</i> route-type identityref route-owner <i>string</i> id number origin-network-instance reference fib-programming pending-operation-type <i>keyword</i>
Tree	pending-operation-type
Options	<ul style="list-style-type: none"> • add The current or last operation was an attempt to create a new entry. • delete The current or last operation was an attempt to delete an existing entry. • modify The current or last operation was an attempt to modify an existing entry. • none There was no prior operation for this entry or there is no current operation that is in process
Configurable	False

Platforms Supported on all platforms

suppressed *boolean*

Description When true, FIB programming for this entry has been suppressed and it is only installed in the control plane route table

Context [network-instance name string](#) [route-table ipv4-unicast route ipv4-prefix string](#) [route-type identityref](#) [route-owner string id number](#) [origin-network-instance reference](#) [fib-programming suppressed boolean](#)

Tree [suppressed](#)

Configurable False

Platforms Supported on all platforms

gribi-metadata *binary*

Description Metadata persistently stored with the entry.

Context [network-instance name string](#) [route-table ipv4-unicast route ipv4-prefix string](#) [route-type identityref](#) [route-owner string id number](#) [origin-network-instance reference](#) [gribi-metadata binary](#)

Tree [gribi-metadata](#)

String Length 0 to 8

Configurable False

Platforms Supported on all platforms

internal-tags *string*

Description Internal route tag written in the route/tunnel tables or BGP rib
The internal-tag value is shown with the format 'type-string = hex-value-string'. For example:

Context [network-instance name string](#) [route-table ipv4-unicast route ipv4-prefix string](#) [route-type identityref](#) [route-owner string id number](#) [origin-network-instance reference](#) [internal-tags string](#)

Tree [internal-tags](#)

Configurable False

Platforms 7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

Max. Elements 2

last-app-update *string*

Description	The date and time of the last update of this route by the owning application or protocol.
Context	network-instance name <i>string</i> route-table ipv4-unicast route ipv4-prefix <i>string</i> route-type identityref route-owner <i>string</i> id <i>number</i> origin-network-instance reference last-app-update <i>string</i>
Tree	last-app-update
String Length	20 to 32
Configurable	False
Platforms	Supported on all platforms

leakable *boolean*

Description	Reads true when the route was matched and accepted by the route-leaking inter-instance export-policy
Context	network-instance name <i>string</i> route-table ipv4-unicast route ipv4-prefix <i>string</i> route-type identityref route-owner <i>string</i> id <i>number</i> origin-network-instance reference leakable <i>boolean</i>
Tree	leakable
Configurable	False
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

metric *number*

Description	The metric of the IP route. In general, when comparing two routes with the same owner and preference, the route with the lower metric is the one that is activated and used for forwarding.
Context	network-instance name <i>string</i> route-table ipv4-unicast route ipv4-prefix <i>string</i> route-type identityref route-owner <i>string</i> id <i>number</i> origin-network-instance reference metric <i>number</i>
Tree	metric
Configurable	False
Platforms	Supported on all platforms

next-hop-group *reference*

Description	The next-hop-group indirection object used by this route.
Context	network-instance name <i>string</i> route-table ipv4-unicast route ipv4-prefix <i>string</i> route-type identityref route-owner <i>string id number</i> origin-network-instance reference next-hop-group reference
Tree	next-hop-group
Reference	network-instance name <i>string</i> route-table next-hop-group index <i>number</i>
Configurable	False
Platforms	Supported on all platforms

next-hop-group-network-instance *reference*

Description	The network instance where the next-hop-group can be found. If unspecified, the next hop group is in the local network instance.
Context	network-instance name <i>string</i> route-table ipv4-unicast route ipv4-prefix <i>string</i> route-type identityref route-owner <i>string id number</i> origin-network-instance reference next-hop-group-network-instance reference
Tree	next-hop-group-network-instance
Reference	network-instance name <i>string</i>
Configurable	False
Platforms	Supported on all platforms

preference *number*

Description	The IP route table preference. This is sometimes called the administrative distance of the route. In general, when comparing any two routes, the route with the lower preference is the one that is activated and used for forwarding.
Context	network-instance name <i>string</i> route-table ipv4-unicast route ipv4-prefix <i>string</i> route-type identityref route-owner <i>string id number</i> origin-network-instance reference preference <i>number</i>
Tree	preference
Configurable	False
Platforms	Supported on all platforms

resilient-hash *boolean*

Description	Set to true if the route is covered by a resilient-hash-prefix entry
--------------------	--

Context	network-instance name <i>string</i> route-table ipv4-unicast route ipv4-prefix <i>string</i> route-type <i>identityref</i> route-owner <i>string</i> id <i>number</i> origin-network-instance <i>reference</i> resilient-hash <i>boolean</i>
Tree	resilient-hash
Configurable	False
Platforms	Supported on all platforms

target-network-instances *reference*

Description	List of network-instances that have imported this route as a result of matching and accepting it in their inter-instance import-policy
Context	network-instance name <i>string</i> route-table ipv4-unicast route ipv4-prefix <i>string</i> route-type <i>identityref</i> route-owner <i>string</i> id <i>number</i> origin-network-instance <i>reference</i> target-network-instances <i>reference</i>
Tree	target-network-instances
Reference	network-instance name <i>string</i>
Configurable	False
Platforms	Supported on all platforms

route-summary

Description	Route summary information
Context	network-instance name <i>string</i> route-table ipv4-unicast route-summary
Tree	route-summary
Configurable	False
Platforms	Supported on all platforms

route-type [ip-route-type-name](#) *identityref*

Description	Enter the route-type list instance
Context	network-instance name <i>string</i> route-table ipv4-unicast route-summary route-type ip-route-type-name <i>identityref</i>
Tree	route-type
Configurable	False
Platforms	Supported on all platforms

ip-route-type-name *identityref*

Description	IP route type
Context	network-instance name <i>string</i> route-table ipv4-unicast route-summary route-type ip-route-type-name <i>identityref</i>
Options	<ul style="list-style-type: none">• aggregate Locally configured aggregate route• arp-nd IP route added by ARP ND.• bgp Border Gateway Protocol version 4• bgp-label Border Gateway Protocol labeled routes• bgp-evpn BGP Ethernet VPN (EVPN)• bgp-ipvpn BGP IP VPN• dhcp IP (default) route added by DHCP.• gribi A gRIBI route• host A host route• isis IS-IS• local A directly connected route• linux IP route added by the linux kernel.• ndk1 Route added by an agent application using the NDK• ndk2 Route added by an agent application using the NDK• ospfv2 OSPFv2• ospfv3

- OSPFv3
- static
- Locally configured static route

Configurable	False
Platforms	Supported on all platforms

active-routes *number*

Description	Total number of prefixes associated with this route type that were submitted to fib-mgr and that fib-mgr successfully installed as active routes
Context	network-instance name <i>string</i> route-table ipv4-unicast route-summary route-type ip-route-type-name <i>identityref</i> active-routes <i>number</i>
Tree	active-routes
Configurable	False
Platforms	Supported on all platforms

statistics

Description	Enter the statistics context
Context	network-instance name <i>string</i> route-table ipv4-unicast statistics
Tree	statistics
Configurable	False
Platforms	Supported on all platforms

active-routes *number*

Description	The total number of prefixes, belonging to this address family, with an active route in the FIB.
Context	network-instance name <i>string</i> route-table ipv4-unicast statistics active-routes <i>number</i>
Tree	active-routes
Configurable	False
Platforms	Supported on all platforms

active-routes-with-ecmp *number*

Description	The total number of prefixes, belonging to this address family, that have an active route in the FIB with multiple ECMP next-hops.
Context	network-instance name <i>string</i> route-table ipv4-unicast statistics active-routes-with-ecmp <i>number</i>
Tree	active-routes-with-ecmp
Configurable	False
Platforms	Supported on all platforms

fib-failed-routes *number*

Description	The total number of prefixes, belonging to this address family, that were not installed successfully because datapath resources were unavailable.
Context	network-instance name <i>string</i> route-table ipv4-unicast statistics fib-failed-routes <i>number</i>
Tree	fib-failed-routes
Configurable	False
Platforms	Supported on all platforms

resilient-hash-routes *number*

Description	The total number of prefixes, belonging to this address family, with an active route in the FIB that have resilient hash support.
Context	network-instance name <i>string</i> route-table ipv4-unicast statistics resilient-hash-routes <i>number</i>
Tree	resilient-hash-routes
Configurable	False
Platforms	Supported on all platforms

total-routes *number*

Description	The total number of routes, active and inactive, belonging to this address family, that are present in the routing table.
Context	network-instance name <i>string</i> route-table ipv4-unicast statistics total-routes <i>number</i>
Tree	total-routes
Default	0

Configurable	False
Platforms	Supported on all platforms

ipv6-unicast

Description	The container for the IPv6 unicast routing table of the network instance.
Context	network-instance name <i>string</i> route-table ipv6-unicast
Tree	ipv6-unicast
Configurable	False
Platforms	Supported on all platforms

route [ipv6-prefix](#) *string* [route-type](#) *identityref* [route-owner](#) *string* [id](#) *number* [origin-network-instance](#) *reference*

Description	Enter the route list instance
Context	network-instance name <i>string</i> route-table ipv6-unicast route ipv6-prefix <i>string</i> route-type <i>identityref</i> route-owner <i>string</i> id <i>number</i> origin-network-instance <i>reference</i>
Tree	route
Configurable	False
Platforms	Supported on all platforms

ipv6-prefix *string*

Description	The IPv6 prefix associated with the route.
Context	network-instance name <i>string</i> route-table ipv6-unicast route ipv6-prefix <i>string</i> route-type <i>identityref</i> route-owner <i>string</i> id <i>number</i> origin-network-instance <i>reference</i>
Configurable	False
Platforms	Supported on all platforms

route-type *identityref*

Description	The type of the IP route
Context	network-instance name <i>string</i> route-table ipv6-unicast route ipv6-prefix <i>string</i> route-type <i>identityref</i> route-owner <i>string</i> id <i>number</i> origin-network-instance <i>reference</i>
Options	<ul style="list-style-type: none"> • aggregate

Locally configured aggregate route

- arp-nd
IP route added by ARP ND.
- bgp
Border Gateway Protocol version 4
- bgp-label
Border Gateway Protocol labeled routes
- bgp-evpn
BGP Ethernet VPN (EVPN)
- bgp-ipvpn
BGP IP VPN
- dhcp
IP (default) route added by DHCP.
- gribi
A gRIBI route
- host
A host route
- isis
IS-IS
- local
A directly connected route
- linux
IP route added by the linux kernel.
- ndk1
Route added by an agent application using the NDK
- ndk2
Route added by an agent application using the NDK
- ospfv2
OSPFv2
- ospfv3
OSPFv3
- static
Locally configured static route

Configurable

False

Platforms

Supported on all platforms

route-owner *string*

Description	The application name of the owner of the IP route
Context	network-instance name <i>string</i> route-table ipv6-unicast route ipv6-prefix <i>string</i> route-type identityref route-owner <i>string</i> id <i>number</i> origin-network-instance <i>reference</i>
Configurable	False
Platforms	Supported on all platforms

id *number*

Description	An owner-assigned index value that is unique for each of the routes for a given prefix.
Context	network-instance name <i>string</i> route-table ipv6-unicast route ipv6-prefix <i>string</i> route-type identityref route-owner <i>string</i> id <i>number</i> origin-network-instance <i>reference</i>
Configurable	False
Platforms	Supported on all platforms

origin-network-instance *reference*

Description	Origin network instance of the route (where it was originally learned or configured) If the route was leaked from another network instance, the value of this leaf reflects the network-instance from which it was learned. If it was not leaked the value is the same as the parent network-instance.
Context	network-instance name <i>string</i> route-table ipv6-unicast route ipv6-prefix <i>string</i> route-type identityref route-owner <i>string</i> id <i>number</i> origin-network-instance <i>reference</i>
Reference	network-instance name <i>string</i>
Configurable	False
Platforms	Supported on all platforms

active *boolean*

Description	If set to true then the route is installed as the active route for the IP prefix in the FIB. A route can be inactive because there is a more preferred route for the same prefix or else its next-hops are unresolved.
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Context	network-instance name <i>string</i> route-table ipv6-unicast route ipv6-prefix <i>string</i> route-type identityref route-owner <i>string</i> id <i>number</i> origin-network-instance <i>reference</i> active <i>boolean</i>
Tree	active
Configurable	False
Platforms	Supported on all platforms

fib-programming

Description	Container for state related to the FIB programming of the object
Context	network-instance name <i>string</i> route-table ipv6-unicast route ipv6-prefix <i>string</i> route-type identityref route-owner <i>string</i> id <i>number</i> origin-network-instance <i>reference</i> fib-programming
Tree	fib-programming
Configurable	False
Platforms	Supported on all platforms

last-failed-complexes *string*

Description	List of forwarding complexes that reported a failure for the last operation. They appear in the format (slot-number,complex-number).
Context	network-instance name <i>string</i> route-table ipv6-unicast route ipv6-prefix <i>string</i> route-type identityref route-owner <i>string</i> id <i>number</i> origin-network-instance <i>reference</i> fib-programming last-failed-complexes <i>string</i>
Tree	last-failed-complexes
Configurable	False
Platforms	Supported on all platforms

last-failed-operation-type *keyword*

Description	The last operation type that failed.
Context	network-instance name <i>string</i> route-table ipv6-unicast route ipv6-prefix <i>string</i> route-type identityref route-owner <i>string</i> id <i>number</i> origin-network-instance <i>reference</i> fib-programming last-failed-operation-type <i>keyword</i>
Tree	last-failed-operation-type
Options	<ul style="list-style-type: none"> • add The current or last operation was an attempt to create a new entry. • delete

- The current or last operation was an attempt to delete an existing entry.
- modify
 - The current or last operation was an attempt to modify an existing entry.
- none
 - There was no prior operation for this entry or there is no current operation that is in process

Configurable	False
Platforms	Supported on all platforms

last-successful-operation-timestamp *string*

Description	<p>The date and time of the last operation to complete successfully, if the entry was not suppressed.</p> <p>A delete operation is immediately timestamped by FIB manager on the assumption that it will ultimately be successful on all complexes. For other operations the timestamp is generated when the last complex that was expected to respond has responded with a success acknowledgement.</p>
Context	network-instance name <i>string</i> route-table ipv6-unicast route ipv6-prefix <i>string</i> route-type identityref route-owner <i>string</i> id number origin-network-instance reference fib-programming last-successful-operation-timestamp <i>string</i>
Tree	last-successful-operation-timestamp
String Length	20 to 32
Configurable	False
Platforms	Supported on all platforms

last-successful-operation-type *keyword*

Description	The last operation type that completed successfully, if the entry was not suppressed.
Context	network-instance name <i>string</i> route-table ipv6-unicast route ipv6-prefix <i>string</i> route-type identityref route-owner <i>string</i> id number origin-network-instance reference fib-programming last-successful-operation-type <i>keyword</i>
Tree	last-successful-operation-type
Options	<ul style="list-style-type: none"> • add <ul style="list-style-type: none"> • The current or last operation was an attempt to create a new entry. • delete <ul style="list-style-type: none"> • The current or last operation was an attempt to delete an existing entry. • modify

- The current or last operation was an attempt to modify an existing entry.
- none
 - There was no prior operation for this entry or there is no current operation that is in process

Configurable	False
Platforms	Supported on all platforms

pending-operation-type *keyword*

Description	The current operation type that is in progress because not all complexes have responded.
Context	network-instance name <i>string</i> route-table ipv6-unicast route ipv6-prefix <i>string</i> route-type identityref route-owner <i>string</i> id <i>number</i> origin-network-instance reference fib-programming pending-operation-type <i>keyword</i>
Tree	pending-operation-type
Options	<ul style="list-style-type: none"> • add <ul style="list-style-type: none"> The current or last operation was an attempt to create a new entry. • delete <ul style="list-style-type: none"> The current or last operation was an attempt to delete an existing entry. • modify <ul style="list-style-type: none"> The current or last operation was an attempt to modify an existing entry. • none <ul style="list-style-type: none"> There was no prior operation for this entry or there is no current operation that is in process
Configurable	False
Platforms	Supported on all platforms

suppressed *boolean*

Description	When true, FIB programming for this entry has been suppressed and it is only installed in the control plane route table
Context	network-instance name <i>string</i> route-table ipv6-unicast route ipv6-prefix <i>string</i> route-type identityref route-owner <i>string</i> id <i>number</i> origin-network-instance reference fib-programming suppressed <i>boolean</i>
Tree	suppressed
Configurable	False
Platforms	Supported on all platforms

gribi-metadata *binary*

Description	Metadata persistently stored with the entry.
Context	network-instance name <i>string</i> route-table ipv6-unicast route ipv6-prefix <i>string</i> route-type identityref route-owner <i>string id number</i> origin-network-instance reference gribi-metadata <i>binary</i>
Tree	gribi-metadata
String Length	0 to 8
Configurable	False
Platforms	Supported on all platforms

internal-tags *string*

Description	Internal route tag written in the route/tunnel tables or BGP rib The internal-tag value is shown with the format 'type-string = hex-value-string'. For example:
Context	network-instance name <i>string</i> route-table ipv6-unicast route ipv6-prefix <i>string</i> route-type identityref route-owner <i>string id number</i> origin-network-instance reference internal-tags <i>string</i>
Tree	internal-tags
Configurable	False
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b
Max. Elements	2

last-app-update *string*

Description	The date and time of the last update of this route by the owning application or protocol.
Context	network-instance name <i>string</i> route-table ipv6-unicast route ipv6-prefix <i>string</i> route-type identityref route-owner <i>string id number</i> origin-network-instance reference last-app-update <i>string</i>
Tree	last-app-update
String Length	20 to 32
Configurable	False
Platforms	Supported on all platforms

leakable *boolean*

Description	Reads true when the route was matched and accepted by the route-leaking inter-instance export-policy
Context	network-instance name <i>string</i> route-table ipv6-unicast route ipv6-prefix <i>string</i> route-type identityref route-owner <i>string</i> id <i>number</i> origin-network-instance reference leakable <i>boolean</i>
Tree	leakable
Configurable	False
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

metric *number*

Description	The metric of the IP route. In general, when comparing two routes with the same owner and preference, the route with the lower metric is the one that is activated and used for forwarding.
Context	network-instance name <i>string</i> route-table ipv6-unicast route ipv6-prefix <i>string</i> route-type identityref route-owner <i>string</i> id <i>number</i> origin-network-instance reference metric <i>number</i>
Tree	metric
Configurable	False
Platforms	Supported on all platforms

next-hop-group *reference*

Description	The next-hop-group indirection object used by this route.
Context	network-instance name <i>string</i> route-table ipv6-unicast route ipv6-prefix <i>string</i> route-type identityref route-owner <i>string</i> id <i>number</i> origin-network-instance reference next-hop-group reference
Tree	next-hop-group
Reference	network-instance name <i>string</i> route-table next-hop-group index <i>number</i>
Configurable	False
Platforms	Supported on all platforms

next-hop-group-network-instance *reference*

Description	The network instance where the next-hop-group can be found. If unspecified, the next hop group is in the local network instance.
Context	network-instance name <i>string</i> route-table ipv6-unicast route ipv6-prefix <i>string</i> route-type identityref route-owner <i>string id number</i> origin-network-instance reference next-hop-group-network-instance <i>reference</i>
Tree	next-hop-group-network-instance
Reference	network-instance name <i>string</i>
Configurable	False
Platforms	Supported on all platforms

preference *number*

Description	The IP route table preference. This is sometimes called the administrative distance of the route. In general, when comparing any two routes, the route with the lower preference is the one that is activated and used for forwarding.
Context	network-instance name <i>string</i> route-table ipv6-unicast route ipv6-prefix <i>string</i> route-type identityref route-owner <i>string id number</i> origin-network-instance reference preference <i>number</i>
Tree	preference
Configurable	False
Platforms	Supported on all platforms

resilient-hash *boolean*

Description	Set to true if the route is covered by a resilient-hash-prefix entry
Context	network-instance name <i>string</i> route-table ipv6-unicast route ipv6-prefix <i>string</i> route-type identityref route-owner <i>string id number</i> origin-network-instance reference resilient-hash <i>boolean</i>
Tree	resilient-hash
Configurable	False
Platforms	Supported on all platforms

target-network-instances *reference*

Description	List of network-instances that have imported this route as a result of matching and accepting it in their inter-instance import-policy
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Context	network-instance name <i>string</i> route-table ipv6-unicast route ipv6-prefix <i>string</i> route-type identityref route-owner <i>string</i> id <i>number</i> origin-network-instance <i>reference</i> target-network-instances <i>reference</i>
Tree	target-network-instances
Reference	network-instance name <i>string</i>
Configurable	False
Platforms	Supported on all platforms

route-summary

Description	Route summary information
Context	network-instance name <i>string</i> route-table ipv6-unicast route-summary
Tree	route-summary
Configurable	False
Platforms	Supported on all platforms

route-type [ip-route-type-name](#) *identityref*

Description	Enter the route-type list instance
Context	network-instance name <i>string</i> route-table ipv6-unicast route-summary route-type ip-route-type-name <i>identityref</i>
Tree	route-type
Configurable	False
Platforms	Supported on all platforms

[ip-route-type-name](#) *identityref*

Description	IP route type
Context	network-instance name <i>string</i> route-table ipv6-unicast route-summary route-type ip-route-type-name <i>identityref</i>
Options	<ul style="list-style-type: none"> • aggregate Locally configured aggregate route • arp-nd IP route added by ARP ND. • bgp Border Gateway Protocol version 4 • bgp-label

Border Gateway Protocol labeled routes

- bgp-evpn
BGP Ethernet VPN (EVPN)
- bgp-ipvpn
BGP IP VPN
- dhcp
IP (default) route added by DHCP.
- gribi
A gRIBI route
- host
A host route
- isis
IS-IS
- local
A directly connected route
- linux
IP route added by the linux kernel.
- ndk1
Route added by an agent application using the NDK
- ndk2
Route added by an agent application using the NDK
- ospfv2
OSPFv2
- ospfv3
OSPFv3
- static
Locally configured static route

Configurable	False
Platforms	Supported on all platforms

active-routes *number*

Description	Total number of prefixes associated with this route type that were submitted to fib-mgr and that fib-mgr successfully installed as active routes
Context	network-instance name <i>string</i> route-table ipv6-unicast route-summary route-type ip-route-type-name <i>identityref</i> active-routes <i>number</i>

Tree	active-routes
Configurable	False
Platforms	Supported on all platforms

statistics

Description	Enter the statistics context
Context	network-instance name <i>string</i> route-table ipv6-unicast statistics
Tree	statistics
Configurable	False
Platforms	Supported on all platforms

active-routes *number*

Description	The total number of prefixes, belonging to this address family, with an active route in the FIB.
Context	network-instance name <i>string</i> route-table ipv6-unicast statistics active-routes <i>number</i>
Tree	active-routes
Configurable	False
Platforms	Supported on all platforms

active-routes-with-ecmp *number*

Description	The total number of prefixes, belonging to this address family, that have an active route in the FIB with multiple ECMP next-hops.
Context	network-instance name <i>string</i> route-table ipv6-unicast statistics active-routes-with-ecmp <i>number</i>
Tree	active-routes-with-ecmp
Configurable	False
Platforms	Supported on all platforms

fib-failed-routes *number*

Description	The total number of prefixes, belonging to this address family, that were not installed successfully because datapath resources were unavailable.
Context	network-instance name <i>string</i> route-table ipv6-unicast statistics fib-failed-routes <i>number</i>

Tree	fib-failed-routes
Configurable	False
Platforms	Supported on all platforms

resilient-hash-routes *number*

Description	The total number of prefixes, belonging to this address family, with an active route in the FIB that have resilient hash support.
Context	network-instance name <i>string</i> route-table ipv6-unicast statistics resilient-hash-routes <i>number</i>
Tree	resilient-hash-routes
Configurable	False
Platforms	Supported on all platforms

total-routes *number*

Description	The total number of routes, active and inactive, belonging to this address family, that are present in the routing table.
Context	network-instance name <i>string</i> route-table ipv6-unicast statistics total-routes <i>number</i>
Tree	total-routes
Default	0
Configurable	False
Platforms	Supported on all platforms

mpls

Description	The container for the MPLS routing table of the network instance.
Context	network-instance name <i>string</i> route-table mpls
Tree	mpls
Configurable	False
Platforms	Supported on all platforms

label-entry [label-value](#) *number*

Description	Enter the label-entry list instance
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Context	network-instance name <i>string</i> route-table mpls label-entry label-value number
Tree	label-entry
Configurable	False
Platforms	Supported on all platforms

label-value *number*

Description	The MPLS label value
Context	network-instance name <i>string</i> route-table mpls label-entry label-value number
Range	16 to 1048575
Configurable	False
Platforms	Supported on all platforms

entry-type *identityref*

Description	The entry type of the MPLS FIB entry.
Context	network-instance name <i>string</i> route-table mpls label-entry label-value number entry-type <i>identityref</i>
Tree	entry-type
Options	<ul style="list-style-type: none"> • esi ESI mpls label entry, used by BGP-EVPN • pseudowire Pseudowire mpls label entry • ldp Label distribution protocol • network-instance Network Instance mpls label entry, used by EVPN or IP-VPN • sr-mpls Segment routing using MPLS dataplane, programmed by segment routing manager. • static-mpls Locally configured static MPLS route.
Configurable	False
Platforms	Supported on all platforms

last-app-update *string*

Description	The date and time of the last update of this MPLS label entry by the owning application or protocol.
Context	network-instance name <i>string</i> route-table mpls label-entry label-value number last-app-update <i>string</i>
Tree	last-app-update
String Length	20 to 32
Configurable	False
Platforms	Supported on all platforms

next-bgp-instance *reference*

Description	Enter the next-bgp-instance context
Context	network-instance name <i>string</i> route-table mpls label-entry label-value number next-bgp-instance <i>reference</i>
Tree	next-bgp-instance
Reference	network-instance name <i>string</i> protocols bgp-vpn bgp-instance id <i>number</i>
Configurable	False
Platforms	Supported on all platforms

next-ethernet-segment *reference*

Description	If this ILM entry is for a pop label, and this label is below an EVPN label at the bottom of the stack, the label will identify an Ethernet Segment and forwarding in the network-instance may exclude the bridged subinterfaces associated with the Ethernet Segment
Context	network-instance name <i>string</i> route-table mpls label-entry label-value number next-ethernet-segment <i>reference</i>
Tree	next-ethernet-segment
Reference	system network-instance protocols evpn ethernet-segments bgp-instance id <i>reference</i> ethernet-segment name <i>string</i>
Configurable	False
Platforms	7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

next-hop-group *reference*

Description	The next-hop-group indirection object used by this route. Applicable only if the operation is SWAP.
Context	network-instance name <i>string</i> route-table mpls label-entry label-value <i>number</i> next-hop-group reference
Tree	next-hop-group
Reference	network-instance name <i>string</i> route-table next-hop-group index <i>number</i>
Configurable	False
Platforms	Supported on all platforms

next-network-instance *reference*

Description	If this ILM entry is for a pop label, and this label is at the bottom of the stack, the next forwarding lookup will be done in the referenced network-instance
Context	network-instance name <i>string</i> route-table mpls label-entry label-value <i>number</i> next-network-instance reference
Tree	next-network-instance
Reference	network-instance name <i>string</i>
Configurable	False
Platforms	Supported on all platforms

operation *keyword*

Description	The forwarding operation associated with the MPLS label entry.
Context	network-instance name <i>string</i> route-table mpls label-entry label-value <i>number</i> operation keyword
Tree	operation
Options	<ul style="list-style-type: none"> • pop • swap
Configurable	False
Platforms	Supported on all platforms

statistics

Description	Enter the statistics context
Context	network-instance name <i>string</i> route-table mpls statistics

Tree	statistics
Configurable	False
Platforms	Supported on all platforms

active-entries *number*

Description	The total number of MPLS entries that are active in the FIB.
Context	network-instance name <i>string</i> route-table mpls statistics active-entries <i>number</i>
Tree	active-entries
Default	0
Configurable	False
Platforms	Supported on all platforms

next-hop [index](#) *number*

Description	Enter the next-hop list instance
Context	network-instance name <i>string</i> route-table next-hop index <i>number</i>
Tree	next-hop
Configurable	False
Platforms	Supported on all platforms

index *number*

Description	A system-wide unique identifier of a next-hop object (system allocated).
Context	network-instance name <i>string</i> route-table next-hop index <i>number</i>
Configurable	False
Platforms	Supported on all platforms

counters

Description	Next-hop forwarding counters
Context	network-instance name <i>string</i> route-table next-hop index <i>number</i> counters
Tree	counters
Configurable	False
Platforms	Supported on all platforms

octets-forwarded *number*

Description	The number of octets in packets forwarded to this next-hop
Context	network-instance name <i>string</i> route-table next-hop index <i>number</i> counters octets-forwarded <i>number</i>
Tree	octets-forwarded
Default	0
Configurable	False
Platforms	Supported on all platforms

packets-forwarded *number*

Description	The number of packets forwarded to this next-hop
Context	network-instance name <i>string</i> route-table next-hop index <i>number</i> counters packets-forwarded <i>number</i>
Tree	packets-forwarded
Default	0
Configurable	False
Platforms	Supported on all platforms

resource-allocation-failed *boolean*

Description	An available decap-next-hop-statistics resource was not available for this next-hop in all forwarding complexes
Context	network-instance name <i>string</i> route-table next-hop index <i>number</i> counters resource-allocation-failed <i>boolean</i>
Tree	resource-allocation-failed
Configurable	False
Platforms	Supported on all platforms

decapsulate-header *keyword*

Description	Packets matching this next-hop are decapsulated by removing the specified header.
Context	network-instance name <i>string</i> route-table next-hop index <i>number</i> decapsulate-header <i>keyword</i>
Tree	decapsulate-header

Options	<ul style="list-style-type: none"> • gre The encapsulation header is a Generic Routing Encapsulation header. • ipv4 The encapsulation header is an IPv4 packet header • ipv6 The encapsulation header is an IPv6 packet header • mpls The encapsulation header is one or more MPLS labels indicated by the pushed and popped label stack lists.
Configurable	False
Platforms	Supported on all platforms

encapsulate-header *keyword*

Description	Packets matching this next-hop are encapsulated by adding the specified header.
Context	network-instance name <i>string</i> route-table next-hop index <i>number</i> encapsulate-header <i>keyword</i>
Tree	encapsulate-header
Options	<ul style="list-style-type: none"> • gre The encapsulation header is a Generic Routing Encapsulation header. • ipv4 The encapsulation header is an IPv4 packet header • ipv6 The encapsulation header is an IPv6 packet header • mpls The encapsulation header is one or more MPLS labels indicated by the pushed and popped label stack lists.
Configurable	False
Platforms	Supported on all platforms

ip-address (*ipv4-address* | *ipv6-address*)

Description	<p>The next-hop IP address. Only populated when the next-hop type is indirect or tunnel or static-mpls.</p> <p>For a VXLAN tunnel this is the destination VTEP address.</p>
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Context	network-instance name <i>string</i> route-table next-hop index number ip-address (ipv4-address ipv6-address)
Tree	ip-address
Configurable	False
Platforms	Supported on all platforms

ip-in-ip

Description	Specifies details of the IP-in-IP header added to the packet. This is valid only when encapsulate-header is ipv4 or ipv6
Context	network-instance name <i>string</i> route-table next-hop index number ip-in-ip
Tree	ip-in-ip
Configurable	False
Platforms	Supported on all platforms

dst-ip ([ipv4-address](#) | [ipv6-address](#))

Description	Destination IP address to use for the encapsulated packet.
Context	network-instance name <i>string</i> route-table next-hop index number ip-in-ip dst-ip (ipv4-address ipv6-address)
Tree	dst-ip
Configurable	False
Platforms	Supported on all platforms

src-ip ([ipv4-address](#) | [ipv6-address](#))

Description	Source IP address to use for the encapsulated packet.
Context	network-instance name <i>string</i> route-table next-hop index number ip-in-ip src-ip (ipv4-address ipv6-address)
Tree	src-ip
Configurable	False
Platforms	Supported on all platforms

mac-address *string*

Description	The MAC address of the next-hop that has been provided directly.
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No value is populated if the next-hop IP is resolved by an ARP or IPv6 ND entry.

Context	network-instance name <i>string</i> route-table next-hop index <i>number</i> mac-address <i>string</i>
Tree	mac-address
Configurable	False
Platforms	Supported on all platforms

mpls

Description	Enter the mpls context
Context	network-instance name <i>string</i> route-table next-hop index <i>number</i> mpls
Tree	mpls
Configurable	False
Platforms	Supported on all platforms

entropy-label-transmit *boolean*

Description	Entropy label (EL/ELI) is pushed when transmitting to this next-hop
Context	network-instance name <i>string</i> route-table next-hop index <i>number</i> mpls entropy-label-transmit <i>boolean</i>
Tree	entropy-label-transmit
Configurable	False
Platforms	Supported on all platforms

pushed-mpls-label-stack (*number* | *keyword*)

Description	The list of MPLS labels to push onto the packet when forwarding to this particular next-hop.
Context	network-instance name <i>string</i> route-table next-hop index <i>number</i> mpls pushed-mpls-label-stack (<i>number</i> <i>keyword</i>)
Tree	pushed-mpls-label-stack
Range	16 to 1048575
Options	<ul style="list-style-type: none"> • IPV4_EXPLICIT_NULL • IPV6_EXPLICIT_NULL • IMPLICIT_NULL
Configurable	False

Platforms	Supported on all platforms
Max. Elements	1

network-instance *reference*

Description	Indicates that the next-hop is another network instance. If this is specified but an IP address or interface is not provided, the meaning is that a new IP lookup should occur in the other network instance.
Context	network-instance name <i>string</i> route-table next-hop index <i>number</i> network-instance reference
Tree	network-instance
Reference	network-instance name <i>string</i>
Configurable	False
Platforms	Supported on all platforms

programmed-index *number*

Description	The index assigned to the next-hop by the gRIBI client
Context	network-instance name <i>string</i> route-table next-hop index <i>number</i> programmed-index <i>number</i>
Tree	programmed-index
Configurable	False
Platforms	Supported on all platforms

resolving-route

Description	Enter the resolving-route context
Context	network-instance name <i>string</i> route-table next-hop index <i>number</i> resolving-route
Tree	resolving-route
Configurable	False
Platforms	Supported on all platforms

ip-prefix (*ipv4-prefix* | *ipv6-prefix*)

Description	The prefix of the resolving route.
Context	network-instance name <i>string</i> route-table next-hop index <i>number</i> resolving-route ip-prefix (<i>ipv4-prefix</i> <i>ipv6-prefix</i>)

Tree	ip-prefix
Configurable	False
Platforms	Supported on all platforms

route-owner *string*

Description	The application name of the owner of the resolving route.
Context	network-instance name <i>string</i> route-table next-hop index number resolving-route route-owner <i>string</i>
Tree	route-owner
Configurable	False
Platforms	Supported on all platforms

route-type *identityref*

Description	The type of the resolving route.
Context	network-instance name <i>string</i> route-table next-hop index number resolving-route route-type <i>identityref</i>
Tree	route-type
Options	<ul style="list-style-type: none"> • aggregate Locally configured aggregate route • arp-nd IP route added by ARP ND. • bgp Border Gateway Protocol version 4 • bgp-label Border Gateway Protocol labeled routes • bgp-evpn BGP Ethernet VPN (EVPN) • bgp-ipvpn BGP IP VPN • dhcp IP (default) route added by DHCP. • gribi A gRIBI route • host A host route

- isis
IS-IS
- local
A directly connected route
- linux
IP route added by the linux kernel.
- ndk1
Route added by an agent application using the NDK
- ndk2
Route added by an agent application using the NDK
- ospfv2
OSPFv2
- ospfv3
OSPFv3
- static
Locally configured static route

Configurable

False

Platforms

Supported on all platforms

resolving-tunnel**Description**

Enter the resolving-tunnel context

Context[network-instance name](#) [string](#) [route-table](#) [next-hop](#) [index](#) [number](#) [resolving-tunnel](#)**Tree**[resolving-tunnel](#)**Configurable**

False

Platforms

Supported on all platforms

ip-prefix (*ipv4-prefix* | *ipv6-prefix*)**Description**

The prefix of the resolving tunnel.

Context[network-instance name](#) [string](#) [route-table](#) [next-hop](#) [index](#) [number](#) [resolving-tunnel](#) [ip-prefix \(*ipv4-prefix* | *ipv6-prefix*\)](#)**Tree**[ip-prefix](#)**Configurable**

False

Platforms

Supported on all platforms

tunnel-owner *string*

Description	The application name of the owner of the resolving tunnel.
Context	network-instance name <i>string</i> route-table next-hop index <i>number</i> resolving-tunnel tunnel-owner <i>string</i>
Tree	tunnel-owner
Configurable	False
Platforms	Supported on all platforms

tunnel-type *identityref*

Description	The type of the tunnel.
Context	network-instance name <i>string</i> route-table next-hop index <i>number</i> resolving-tunnel tunnel-type <i>identityref</i>
Tree	tunnel-type
Options	<ul style="list-style-type: none"> • ip-in-ip Tunnels with IP-in-IP encapsulation • gre Tunnels with GRE encapsulation • sr-isis Segment routing using MPLS dataplane, programmed by IS-IS • sr-ospfv2 Segment routing using MPLS dataplane, programmed by OSPFv2 • sr-ospfv3 Segment routing using MPLS dataplane, programmed by OSPFv3 • te-policy-sr-mpls-colored Tunnel setup with sr-mpls-colored type TE-Policy. Labeled Traffic Engineering Policy with color • te-policy-sr-mpls-uncolored Tunnel setup with sr-mpls-uncolored type TE-Policy. Labeled Traffic Engineering Policy with primary and secondary segment-lists. • vxlan Tunnels based on VXLAN encapsulation
Configurable	False
Platforms	Supported on all platforms

subinterface *reference*

Description	The next-hop interface. Only populated when the next-hop type is direct.
Context	network-instance name <i>string</i> route-table <i>string</i> next-hop index <i>number</i> subinterface <i>reference</i>
Tree	subinterface
Reference	interface name <i>string</i> subinterface <i>index</i> <i>number</i> name <i>string</i>
Configurable	False
Platforms	Supported on all platforms

type *identityref*

Description	The next-hop type used by the datapath.
Context	network-instance name <i>string</i> route-table <i>string</i> next-hop index <i>number</i> type <i>identityref</i>
Tree	type
Options	<ul style="list-style-type: none"> • extract Next-hop will cause matching packets to be delivered to the CPM. • direct Next-hop was resolved by a local route - i.e. it is an address on a connected subnet. • discard Next-hop will cause matching packets to be dropped without ICMP generation. • reject Next-hop will cause matching packets to be dropped with ICMP generation. • indirect Next-hop was resolved by a non-local route - i.e. it is not an address on a connected subnet. • mpls An MPLS label will be pushed when forwarding to this next-hop. • tunnel Next-hop is a tunnel. • broadcast Next-hop will cause matching subnet-bradcast packets to be delivered to the control plane. • redirect

Next-hop will redirect to another network-instance.

- interface-with-mac

Next-hop is associated with an outbound interface plus MAC address

Configurable	False
Platforms	Supported on all platforms

vxlan

Description	Enter the vxlan context
Context	network-instance name <i>string</i> route-table next-hop index number vxlan
Tree	vxlan
Configurable	False
Platforms	Supported on all platforms

destination-mac *string*

Description	VXLAN inner ethernet destination mac-address.
Context	network-instance name <i>string</i> route-table next-hop index number vxlan destination-mac <i>string</i>
Tree	destination-mac
Configurable	False
Platforms	Supported on all platforms

source-mac *string*

Description	VXLAN inner ethernet source mac-address.
Context	network-instance name <i>string</i> route-table next-hop index number vxlan source-mac <i>string</i>
Tree	source-mac
Configurable	False
Platforms	Supported on all platforms

vni *number*

Description	VXLAN Network Identifier of the destination.
Context	network-instance name <i>string</i> route-table next-hop index number vxlan vni number

Tree	vni
Range	1 to 16777215
Configurable	False
Platforms	Supported on all platforms

next-hop-group [index](#) *number*

Description	Enter the next-hop-group list instance
Context	network-instance name <i>string</i> route-table next-hop-group index <i>number</i>
Tree	next-hop-group
Configurable	False
Platforms	Supported on all platforms

index *number*

Description	A system-wide unique identifier of a next-hop-group indirection object (system allocated).
Context	network-instance name <i>string</i> route-table next-hop-group index <i>number</i>
Configurable	False
Platforms	Supported on all platforms

backup-next-hop [id](#) *number*

Description	List of backup next-hops associated with the NHG
Context	network-instance name <i>string</i> route-table next-hop-group index <i>number</i> backup-next-hop id <i>number</i>
Tree	backup-next-hop
Configurable	False
Platforms	Supported on all platforms

id *number*

Description	A unique identifier of a next-hop member (system allocated).
Context	network-instance name <i>string</i> route-table next-hop-group index <i>number</i> backup-next-hop id <i>number</i>
Range	0 to 1023
Configurable	False

Platforms Supported on all platforms

next-hop *reference*

Description Enter the next-hop context

Context [network-instance name](#) *string* [route-table](#) [next-hop-group](#) [index](#) *number* [backup-next-hop id](#) *number* [next-hop](#) *reference*

Tree [next-hop](#)

Reference [network-instance name](#) *string* [route-table](#) [next-hop](#) [index](#) *number*

Configurable False

Platforms Supported on all platforms

resolved *keyword*

Description Set to true when the next-hop was resolved. This reads not-applicable for resolve=false next-hops.

Context [network-instance name](#) *string* [route-table](#) [next-hop-group](#) [index](#) *number* [backup-next-hop id](#) *number* [resolved](#) *keyword*

Tree [resolved](#)

Options

- true
- false
- not-applicable

Configurable False

Platforms Supported on all platforms

backup-next-hop-group *reference*

Description The backup next-hop-group for the current group. When all entries within the next-hop group become unusable, the backup next-hop group is used if specified.

Context [network-instance name](#) *string* [route-table](#) [next-hop-group](#) [index](#) *number* [backup-next-hop-group](#) *reference*

Tree [backup-next-hop-group](#)

Reference [network-instance name](#) *string* [route-table](#) [next-hop-group](#) [index](#) *number*

Configurable False

Platforms Supported on all platforms

fib-programming

Description	Container for state related to the FIB programming of the object
Context	network-instance name <i>string</i> route-table next-hop-group index <i>number</i> fib-programming
Tree	fib-programming
Configurable	False
Platforms	Supported on all platforms

last-failed-complexes *string*

Description	List of forwarding complexes that reported a failure for the last operation. They appear in the format (slot-number,complex-number).
Context	network-instance name <i>string</i> route-table next-hop-group index <i>number</i> fib-programming last-failed-complexes <i>string</i>
Tree	last-failed-complexes
Configurable	False
Platforms	Supported on all platforms

last-failed-operation-type *keyword*

Description	The last operation type that failed.
Context	network-instance name <i>string</i> route-table next-hop-group index <i>number</i> fib-programming last-failed-operation-type <i>keyword</i>
Tree	last-failed-operation-type
Options	<ul style="list-style-type: none"> • add The current or last operation was an attempt to create a new entry. • delete The current or last operation was an attempt to delete an existing entry. • modify The current or last operation was an attempt to modify an existing entry. • none There was no prior operation for this entry or there is no current operation that is in process
Configurable	False
Platforms	Supported on all platforms

last-successful-operation-timestamp *string*

Description	The date and time of the last operation to complete successfully, if the entry was not suppressed. A delete operation is immediately timestamped by FIB manager on the assumption that it will ultimately be successful on all complexes. For other operations the timestamp is generated when the last complex that was expected to respond has responded with a success acknowledgement.
Context	network-instance name <i>string</i> route-table next-hop-group index number fib-programming last-successful-operation-timestamp <i>string</i>
Tree	last-successful-operation-timestamp
String Length	20 to 32
Configurable	False
Platforms	Supported on all platforms

last-successful-operation-type *keyword*

Description	The last operation type that completed successfully, if the entry was not suppressed.
Context	network-instance name <i>string</i> route-table next-hop-group index number fib-programming last-successful-operation-type <i>keyword</i>
Tree	last-successful-operation-type
Options	<ul style="list-style-type: none"> • add The current or last operation was an attempt to create a new entry. • delete The current or last operation was an attempt to delete an existing entry. • modify The current or last operation was an attempt to modify an existing entry. • none There was no prior operation for this entry or there is no current operation that is in process
Configurable	False
Platforms	Supported on all platforms

pending-operation-type *keyword*

Description	The current operation type that is in progress because not all complexes have responded.
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Context	network-instance name <i>string</i> route-table next-hop-group index <i>number</i> fib-programming pending-operation-type <i>keyword</i>
Tree	pending-operation-type
Options	<ul style="list-style-type: none"> • add The current or last operation was an attempt to create a new entry. • delete The current or last operation was an attempt to delete an existing entry. • modify The current or last operation was an attempt to modify an existing entry. • none There was no prior operation for this entry or there is no current operation that is in process
Configurable	False
Platforms	Supported on all platforms

suppressed *boolean*

Description	When true, FIB programming for this entry has been suppressed and it is only installed in the control plane route table
Context	network-instance name <i>string</i> route-table next-hop-group index <i>number</i> fib-programming suppressed <i>boolean</i>
Tree	suppressed
Configurable	False
Platforms	Supported on all platforms

group-name-alias *string*

Description	The alias name associated with this next-hop-group.
Context	network-instance name <i>string</i> route-table next-hop-group index <i>number</i> group-name-alias <i>string</i>
Tree	group-name-alias
Configurable	False
Platforms	Supported on all platforms

next-hop [id](#) *number*

Description	List of primary next-hops associated with the NHG
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Context	network-instance name <i>string</i> route-table next-hop-group index <i>number</i> next-hop id <i>number</i>
Tree	next-hop
Configurable	False
Platforms	Supported on all platforms

id *number*

Description	A unique identifier of a next-hop member (system allocated).
Context	network-instance name <i>string</i> route-table next-hop-group index <i>number</i> next-hop id <i>number</i>
Range	0 to 1023
Configurable	False
Platforms	Supported on all platforms

next-hop *reference*

Description	Enter the next-hop context
Context	network-instance name <i>string</i> route-table next-hop-group index <i>number</i> next-hop id <i>number</i> next-hop <i>reference</i>
Tree	next-hop
Reference	network-instance name <i>string</i> route-table next-hop index <i>number</i>
Configurable	False
Platforms	Supported on all platforms

resolved *keyword*

Description	Set to true when the next-hop was resolved. This reads not-applicable for resolve=false next-hops.
Context	network-instance name <i>string</i> route-table next-hop-group index <i>number</i> next-hop id <i>number</i> resolved <i>keyword</i>
Tree	resolved
Options	<ul style="list-style-type: none"> • true • false • not-applicable
Configurable	False
Platforms	Supported on all platforms

weight *number*

Description	The configured/programmed weight assigned to the next-hop within the group This may be different from the actual weight used by the datapath, which changes depending on the next-hops that are up/down in the group. Traffic is balanced across the next-hops within the group in proportion of the actual weight.
Context	network-instance name <i>string</i> route-table next-hop-group index <i>number</i> next-hop id <i>number</i> weight <i>number</i>
Tree	weight
Configurable	False
Platforms	Supported on all platforms

programmed-index *number*

Description	The index assigned to the next-hop-group by the gRIBI client
Context	network-instance name <i>string</i> route-table next-hop-group index <i>number</i> programmed-index <i>number</i>
Tree	programmed-index
Configurable	False
Platforms	Supported on all platforms

router-id *string*

Description	A identifier for the local network instance - typically used within associated routing protocols or signalling routing information in another network instance
Context	network-instance name <i>string</i> router-id <i>string</i>
Tree	router-id
Configurable	True
Platforms	Supported on all platforms

segment-routing

Description	Container with segment routing configuration options
Context	network-instance name <i>string</i> segment-routing
Tree	segment-routing

Configurable	True
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

mpls

Description	Adding this container activates datapath support for SR-MPLS
Context	network-instance name <i>string</i> segment-routing mpls
Tree	mpls
Configurable	True
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

global-block

Description	Container with SRGB configuration that is applicable to all IGP protocol instances
Context	network-instance name <i>string</i> segment-routing mpls global-block
Tree	global-block
Configurable	True
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

label-range *reference*

Description	Reference to a static label range
Context	network-instance name <i>string</i> segment-routing mpls global-block label-range reference
Tree	label-range
Reference	system mpls label-ranges static name <i>string</i>
Configurable	True
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

label-range-status *keyword*

Description	Status of the label block. The label block may show as unavailable if there is pending cleanup.
Context	network-instance name <i>string</i> segment-routing mpls global-block label-range-status keyword
Tree	label-range-status

Options	<ul style="list-style-type: none"> • available • unavailable
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

local-prefix-sid [prefix-sid-index](#) *number*

Description	List of configured protocol-independent prefix SIDs associated with the network-instance
Context	network-instance name <i>string</i> segment-routing mpls local-prefix-sid prefix-sid-index <i>number</i>
Tree	local-prefix-sid
Configurable	True
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b
Max. Elements	4

prefix-sid-index *number*

Description	An index to enumerate the different prefix sids
Context	network-instance name <i>string</i> segment-routing mpls local-prefix-sid prefix-sid-index <i>number</i>
Range	1 to 4
Configurable	True
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

interface *string*

Description	<p>Reference to the subinterface that owns the prefix(es) to be advertised.</p> <p>If ipv4-label-index is assigned a value then the primary IPv4 address of the referenced subinterface is advertised as a prefix SID.</p> <p>If ipv6-label-index is assigned a value then the primary IPv6 address of the referenced subinterface is advertised as a prefix SID.</p>
Context	network-instance name <i>string</i> segment-routing mpls local-prefix-sid prefix-sid-index <i>number</i> interface <i>string</i>

Tree	interface
String Length	5 to 25
Configurable	True
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

ipv4-label-index *number*

Description	Label index to add to SRGB base.
Context	network-instance name <i>string</i> segment-routing mpls local-prefix-sid prefix-sid-index <i>number</i> ipv4-label-index <i>number</i>
Tree	ipv4-label-index
Range	0 to 1048575
Configurable	True
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

ipv6-label-index *number*

Description	Label index to add to SRGB base.
Context	network-instance name <i>string</i> segment-routing mpls local-prefix-sid prefix-sid-index <i>number</i> ipv6-label-index <i>number</i>
Tree	ipv6-label-index
Range	0 to 1048575
Configurable	True
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

node-sid *boolean*

Description	If set, the prefix SID(s) identity the router as a whole.
Context	network-instance name <i>string</i> segment-routing mpls local-prefix-sid prefix-sid-index <i>number</i> node-sid <i>boolean</i>
Tree	node-sid
Default	true

Configurable	True
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

sid-database

Description	Database of all known prefix SIDs, local and remote.
Context	network-instance name <i>string</i> segment-routing mpls sid-database
Tree	sid-database
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

prefix-sid [prefix](#) (*ipv4-prefix* | *ipv6-prefix*) [sid-label-value](#) *number* [protocol](#) *keyword* [protocol-instance](#) *number* [protocol-multi-topology](#) *number* [algorithm](#) *number*

Description	List of prefix SIDs
Context	network-instance name <i>string</i> segment-routing mpls sid-database prefix-sid prefix (<i>ipv4-prefix</i> <i>ipv6-prefix</i>) sid-label-value <i>number</i> protocol <i>keyword</i> protocol-instance <i>number</i> protocol-multi-topology <i>number</i> algorithm <i>number</i>
Tree	prefix-sid
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

prefix (*ipv4-prefix* | *ipv6-prefix*)

Description	The IPv4 or IPv6 prefix associated with the SID.
Context	network-instance name <i>string</i> segment-routing mpls sid-database prefix-sid prefix (<i>ipv4-prefix</i> <i>ipv6-prefix</i>) sid-label-value <i>number</i> protocol <i>keyword</i> protocol-instance <i>number</i> protocol-multi-topology <i>number</i> algorithm <i>number</i>
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

sid-label-value *number*

Description	The MPLS label value associated with the SID.
Context	network-instance name <i>string</i> segment-routing mpls sid-database prefix-sid prefix (<i>ipv4-prefix</i> <i>ipv6-prefix</i>) sid-label-value <i>number</i> protocol <i>keyword</i> protocol-instance <i>number</i> protocol-multi-topology <i>number</i> algorithm <i>number</i>

Range	16 to 1048575
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

protocol *keyword*

Description	The protocol that provided the prefix SID
Context	network-instance name <i>string</i> segment-routing mpls sid-database prefix-sid prefix (<i>ipv4-prefix</i> <i>ipv6-prefix</i>) sid-label-value <i>number</i> protocol keyword protocol-instance <i>number</i> protocol-multi-topology <i>number</i> algorithm <i>number</i>
Options	<ul style="list-style-type: none"> isis direct
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

protocol-instance *number*

Description	The instance ID that provided the prefix SID
Context	network-instance name <i>string</i> segment-routing mpls sid-database prefix-sid prefix (<i>ipv4-prefix</i> <i>ipv6-prefix</i>) sid-label-value <i>number</i> protocol keyword protocol-instance <i>number</i> protocol-multi-topology <i>number</i> algorithm <i>number</i>
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

protocol-multi-topology *number*

Description	The multi-topology ID that provided the prefix SID
Context	network-instance name <i>string</i> segment-routing mpls sid-database prefix-sid prefix (<i>ipv4-prefix</i> <i>ipv6-prefix</i>) sid-label-value <i>number</i> protocol keyword protocol-instance <i>number</i> protocol-multi-topology <i>number</i> algorithm <i>number</i>
Range	0 to 4095
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

algorithm *number*

Description	Contains the identifier of the algorithm the router uses to compute the reachability of the prefix to which the Prefix-SID is associated
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Context	network-instance name <i>string</i> segment-routing mpls sid-database prefix-sid prefix (<i>ipv4-prefix ipv6-prefix</i>) sid-label-value <i>number</i> protocol keyword protocol-instance <i>number</i> protocol-multi-topology <i>number</i> algorithm <i>number</i>
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

active *boolean*

Description	When false, the prefix SID is inactive. It could be inactive because it is involved in a prefix or SID conflict that occurred between different protocol-instance. It could also be inactive because datapath programming failed.
Context	network-instance name <i>string</i> segment-routing mpls sid-database prefix-sid prefix (<i>ipv4-prefix ipv6-prefix</i>) sid-label-value <i>number</i> protocol keyword protocol-instance <i>number</i> protocol-multi-topology <i>number</i> algorithm <i>number</i> active <i>boolean</i>
Tree	active
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

prefix-conflict *boolean*

Description	Reads true when the prefix SID entry is involved in a prefix conflict that has occurred between protocols. This occurs when there are multiple entries in the SID database for the same prefix. All the conflicting entries become inactive except for the one with the smallest sid-index.
Context	network-instance name <i>string</i> segment-routing mpls sid-database prefix-sid prefix (<i>ipv4-prefix ipv6-prefix</i>) sid-label-value <i>number</i> protocol keyword protocol-instance <i>number</i> protocol-multi-topology <i>number</i> algorithm <i>number</i> prefix-conflict <i>boolean</i>
Tree	prefix-conflict
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

sid-conflict *boolean*

Description	Reads true when the prefix SID entry is involved in a SID conflict that has occurred between protocols (after first removing inter-protocol prefix conflict entries). All entries involved in a SID conflict that do not have the absolute lowest 'preference' value become inactive. In the SRL implementation local-prefix-sid entries are considered to have a lower numerical preference than
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remote prefix-sid entries. If there are still SID conflicts then all the remaining conflicting entries become inactive except for the one with the smallest sid-index.

Context	network-instance name <i>string</i> segment-routing mpls sid-database prefix-sid prefix (<i>ipv4-prefix ipv6-prefix</i>) sid-label-value <i>number</i> protocol <i>keyword</i> protocol-instance <i>number</i> protocol-multi-topology <i>number</i> algorithm <i>number</i> sid-conflict <i>boolean</i>
Tree	sid-conflict
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

static-routes

Description	Enable the static-routes context
Context	network-instance name <i>string</i> static-routes
Tree	static-routes
Configurable	True
Platforms	Supported on all platforms

admin-state *keyword*

Description	Enter the admin-state context
Context	network-instance name <i>string</i> static-routes admin-state <i>keyword</i>
Tree	admin-state
Default	enable
Options	<ul style="list-style-type: none"> • enable • disable
Configurable	True
Platforms	Supported on all platforms

route [prefix](#) (*ipv4-prefix | ipv6-prefix*)

Description	Enter the route list instance
Context	network-instance name <i>string</i> static-routes route prefix (<i>ipv4-prefix ipv6-prefix</i>)
Tree	route
Configurable	True

Platforms	Supported on all platforms
Max. Elements	16384

prefix (*ipv4-prefix* | *ipv6-prefix*)

Description	Enter the prefix context
Context	network-instance name <i>string</i> static-routes route prefix (<i>ipv4-prefix</i> <i>ipv6-prefix</i>)
Configurable	True
Platforms	Supported on all platforms

admin-state *keyword*

Description	Administratively enable or disable the static route.
Context	network-instance name <i>string</i> static-routes route prefix (<i>ipv4-prefix</i> <i>ipv6-prefix</i>) admin-state <i>keyword</i>
Tree	admin-state
Default	enable
Options	<ul style="list-style-type: none"> • enable • disable
Configurable	True
Platforms	Supported on all platforms

installed *boolean*

Description	If set to true, this indicates that the static route was installed into the datapath. If this is false then there are 3 possible reasons: (a) the admin-state is disable (b) there is another IP route for the same prefix that has a superior preference (c) the next-hop-group has no resolvable next-hops
Context	network-instance name <i>string</i> static-routes route prefix (<i>ipv4-prefix</i> <i>ipv6-prefix</i>) installed <i>boolean</i>
Tree	installed
Configurable	False
Platforms	Supported on all platforms

metric number

Description	IGP metric of the static route.
Context	network-instance name <i>string</i> static-routes route prefix (<i>ipv4-prefix</i> <i>ipv6-prefix</i>) metric number
Tree	metric
Default	1
Configurable	True
Platforms	Supported on all platforms

next-hop-group reference

Description	Enter the next-hop-group context
Context	network-instance name <i>string</i> static-routes route prefix (<i>ipv4-prefix</i> <i>ipv6-prefix</i>) next-hop-group reference
Tree	next-hop-group
Reference	network-instance name <i>string</i> next-hop-groups group name <i>string</i>
Configurable	True
Platforms	Supported on all platforms

preference number

Description	Route preference with lower values indicating a higher degree of preference.
Context	network-instance name <i>string</i> static-routes route prefix (<i>ipv4-prefix</i> <i>ipv6-prefix</i>) preference number
Tree	preference
Range	0 to 255
Default	5
Configurable	True
Platforms	Supported on all platforms

tag-set reference

Description	Tag set to associate with the static route
Context	network-instance name <i>string</i> static-routes route prefix (<i>ipv4-prefix</i> <i>ipv6-prefix</i>) tag-set reference
Tree	tag-set

Reference	routing-policy tag-set name <i>string</i>
Configurable	True
Platforms	Supported on all platforms

system-ipv4-address

Description	Container for displaying information about the system IPv4 address of the default network-instance
Context	network-instance name <i>string</i> system-ipv4-address
Tree	system-ipv4-address
Configurable	False
Platforms	Supported on all platforms

oper-down-reason *keyword*

Description	The reason why the default network instance does not have a system IPv4 address
Context	network-instance name <i>string</i> system-ipv4-address oper-down-reason <i>keyword</i>
Tree	oper-down-reason
Options	<ul style="list-style-type: none"> • system-interface-not-bound • system-interface-has-no-ipv4-address
Configurable	False
Platforms	Supported on all platforms

oper-state *keyword*

Description	The operational state of the system IPv4 address binding
Context	network-instance name <i>string</i> system-ipv4-address oper-state <i>keyword</i>
Tree	oper-state
Options	<ul style="list-style-type: none"> • up Component or process is operational • down Component or process is not operational • empty Component slot is empty

- downloading
Component is downloading image into memory
- booting
Component is booting downloaded image
- starting
Component image operational, application processes starting
- failed
Component or process has failed
- synchronizing
Component is currently being synchronized
- upgrading
Component is currently being upgraded
- low-power
Component is offline due to insufficient system power
- degraded
Component or process is in a degraded state
- warm-reboot
Component or process is currently warm rebooting
This state is set during a warm reboot immediately following initiation of the reboot, continuing after startup until the system has completed audit. In this state the system will not accept configuration changes.
- waiting
Component or process is currently waiting
This state can be set by event handler when the `reinvoke-with-delay` action is used, and indicates that the event handler is waiting for the provided delay before reinvoking the instance.

Configurable	False
Platforms	Supported on all platforms

system-ipv6-address

Description	Container for displaying information about the system IPv6 address of the default network-instance
Context	network-instance name <i>string</i> system-ipv6-address
Tree	system-ipv6-address
Configurable	False
Platforms	Supported on all platforms

oper-down-reason *keyword*

Description	The reason why the default network instance does not have a system IPv6 address
Context	network-instance name <i>string</i> system-ipv6-address oper-down-reason <i>keyword</i>
Tree	oper-down-reason
Options	<ul style="list-style-type: none">• system-interface-not-bound• system-interface-has-no-ipv6-address
Configurable	False
Platforms	Supported on all platforms

oper-state *keyword*

Description	The operational state of the system IPv6 address binding
Context	network-instance name <i>string</i> system-ipv6-address oper-state <i>keyword</i>
Tree	oper-state
Options	<ul style="list-style-type: none">• up Component or process is operational• down Component or process is not operational• empty Component slot is empty• downloading Component is downloading image into memory• booting Component is booting downloaded image• starting Component image operational, application processes starting• failed Component or process has failed• synchronizing Component is currently being synchronized• upgrading Component is currently being upgraded• low-power

- Component is offline due to insufficient system power
- degraded
 - Component or process is in a degraded state
- warm-reboot
 - Component or process is currently warm rebooting
 - This state is set during a warm reboot immediately following initiation of the reboot, continuing after startup until the system has completed audit. In this state the system will not accept configuration changes.
- waiting
 - Component or process is currently waiting
 - This state can be set by event handler when the reinvoke-with-delay action is used, and indicates that the event handler is waiting for the provided delay before reinvoking the instance.

Configurable	False
Platforms	Supported on all platforms

tcp

Description	State for TCP connections that have been established or could be established using the route tables of this network instance.
Context	network-instance name <i>string</i> tcp
Tree	tcp
Configurable	False
Platforms	Supported on all platforms

connection [local-address](#) (*ipv4-address* | *ipv6-address*) [local-port](#) *number* [remote-address](#) (*ipv4-address* | *ipv6-address*) [remote-port](#) *number*

Description	List of TCP connections that are established or that are in the process of being established – i.e. excluding those in the LISTEN state. An entry in this list is transient in that it ceases to exist when (or soon after) the connection makes the transition to the CLOSED state.
Context	network-instance name <i>string</i> tcp connection local-address (<i>ipv4-address</i> <i>ipv6-address</i>) local-port <i>number</i> remote-address (<i>ipv4-address</i> <i>ipv6-address</i>) remote-port <i>number</i>
Tree	connection
Configurable	False
Platforms	Supported on all platforms

local-address (*ipv4-address* | *ipv6-address*)

Description	The local IP address for this TCP connection.
Context	network-instance name <i>string</i> tcp connection local-address (<i>ipv4-address</i> <i>ipv6-address</i>) local-port <i>number</i> remote-address (<i>ipv4-address</i> <i>ipv6-address</i>) remote-port <i>number</i>
Configurable	False
Platforms	Supported on all platforms

local-port *number*

Description	The local port number for this TCP connection.
Context	network-instance name <i>string</i> tcp connection local-address (<i>ipv4-address</i> <i>ipv6-address</i>) local-port <i>number</i> remote-address (<i>ipv4-address</i> <i>ipv6-address</i>) remote-port <i>number</i>
Range	0 to 65535
Configurable	False
Platforms	Supported on all platforms

remote-address (*ipv4-address* | *ipv6-address*)

Description	The remote IP address for this TCP connection.
Context	network-instance name <i>string</i> tcp connection local-address (<i>ipv4-address</i> <i>ipv6-address</i>) local-port <i>number</i> remote-address (<i>ipv4-address</i> <i>ipv6-address</i>) remote-port <i>number</i>
Configurable	False
Platforms	Supported on all platforms

remote-port *number*

Description	The remote port number for this TCP connection.
Context	network-instance name <i>string</i> tcp connection local-address (<i>ipv4-address</i> <i>ipv6-address</i>) local-port <i>number</i> remote-address (<i>ipv4-address</i> <i>ipv6-address</i>) remote-port <i>number</i>
Range	0 to 65535
Configurable	False
Platforms	Supported on all platforms

process-id *number*

Description	The process ID of the application that owns the socket.
Context	network-instance name <i>string</i> tcp connection local-address (<i>ipv4-address</i> <i>ipv6-address</i>) local-port <i>number</i> remote-address (<i>ipv4-address</i> <i>ipv6-address</i>) remote-port <i>number</i> process-id <i>number</i>
Tree	process-id
Configurable	False
Platforms	Supported on all platforms

session-state *keyword*

Description	The state of this TCP connection.
Context	network-instance name <i>string</i> tcp connection local-address (<i>ipv4-address</i> <i>ipv6-address</i>) local-port <i>number</i> remote-address (<i>ipv4-address</i> <i>ipv6-address</i>) remote-port <i>number</i> session-state <i>keyword</i>
Tree	session-state
Options	<ul style="list-style-type: none"> • closed • syn-sent • syn-received • established • fin-wait1 • fin-wait2 • close-wait • last-ack • closing • time-wait • delete-tcb
Configurable	False
Platforms	Supported on all platforms

listening-application [local-address](#) (*ipv4-address* | *ipv6-address*) [local-port](#) *number*

Description	List of applications that are listening on a particular TCP port bound to the network-instance.
Context	network-instance name <i>string</i> tcp listening-application local-address (<i>ipv4-address</i> <i>ipv6-address</i>) local-port <i>number</i>

Tree	listening-application
Configurable	False
Platforms	Supported on all platforms

local-address (*ipv4-address* | *ipv6-address*)

Description	The local IP address accepted by the application. An all-zeroes value for the <i>ipv4-address</i> means that any IPv4 address is accepted. An all-zeroes value for the <i>ipv6-address</i> means that any IPv6 address is accepted.
Context	network-instance name <i>string</i> tcp listening-application local-address (<i>ipv4-address</i> <i>ipv6-address</i>) local-port <i>number</i>
Configurable	False
Platforms	Supported on all platforms

local-port *number*

Description	The local port number accepted by the application.
Context	network-instance name <i>string</i> tcp listening-application local-address (<i>ipv4-address</i> <i>ipv6-address</i>) local-port <i>number</i>
Range	0 to 65535
Configurable	False
Platforms	Supported on all platforms

process-id *number*

Description	The process ID of the application that owns the socket.
Context	network-instance name <i>string</i> tcp listening-application local-address (<i>ipv4-address</i> <i>ipv6-address</i>) local-port <i>number</i> process-id <i>number</i>
Tree	process-id
Configurable	False
Platforms	Supported on all platforms

statistics

Description	Enter the statistics context
Context	network-instance name <i>string</i> tcp statistics
Tree	statistics

Configurable	False
Platforms	Supported on all platforms

active-opens *number*

Description	The total number of times that TCP connections have made a direct transition to the SYN-SENT state from the CLOSED state.
Context	network-instance name <i>string</i> tcp statistics active-opens <i>number</i>
Tree	active-opens
Default	0
Configurable	False
Platforms	Supported on all platforms

attempt-fails *number*

Description	The total number of times that TCP connections have made a direct transition to the CLOSED state from either the SYN-SENT state or the SYN-RCVD state, plus the number of times that TCP connections have made a direct transition to the LISTEN state from the SYN-RCVD state.
Context	network-instance name <i>string</i> tcp statistics attempt-fails <i>number</i>
Tree	attempt-fails
Default	0
Configurable	False
Platforms	Supported on all platforms

established-resets *number*

Description	The total number of times that TCP connections have made a direct transition to the CLOSED state from either the ESTABLISHED state or the CLOSE-WAIT state.
Context	network-instance name <i>string</i> tcp statistics established-resets <i>number</i>
Tree	established-resets
Default	0
Configurable	False
Platforms	Supported on all platforms

in-checksum-errors *number*

Description	The total number of segments that are received as bad TCP checksum errors.
Context	network-instance name <i>string</i> tcp statistics in-checksum-errors <i>number</i>
Tree	in-checksum-errors
Default	0
Configurable	False
Platforms	Supported on all platforms

in-error-segments *number*

Description	The total number of segments received in error (e.g., bad TCP checksums).
Context	network-instance name <i>string</i> tcp statistics in-error-segments <i>number</i>
Tree	in-error-segments
Default	0
Configurable	False
Platforms	Supported on all platforms

in-segments *number*

Description	The total number of segments received, including those received in error. This count includes segments received on currently established connections.
Context	network-instance name <i>string</i> tcp statistics in-segments <i>number</i>
Tree	in-segments
Default	0
Configurable	False
Platforms	Supported on all platforms

out-rst-segments *number*

Description	The total number of TCP segments sent containing the RST flag.
Context	network-instance name <i>string</i> tcp statistics out-rst-segments <i>number</i>
Tree	out-rst-segments
Default	0
Configurable	False

Platforms Supported on all platforms

out-segments *number*

Description The total number of segments sent, including those on current connections but excluding those containing only retransmitted octets.

Context [network-instance name](#) *string* [tcp statistics out-segments](#) *number*

Tree [out-segments](#)

Default 0

Configurable False

Platforms Supported on all platforms

passive-opens *number*

Description The total number of times TCP connections have made a direct transition to the SYN-RCVD state from the LISTEN state.

Context [network-instance name](#) *string* [tcp statistics passive-opens](#) *number*

Tree [passive-opens](#)

Default 0

Configurable False

Platforms Supported on all platforms

retransmitted-segments *number*

Description The total number of segments retransmitted; that is, the number of TCP segments transmitted containing one or more previously transmitted octets.

Context [network-instance name](#) *string* [tcp statistics retransmitted-segments](#) *number*

Tree [retransmitted-segments](#)

Default 0

Configurable False

Platforms Supported on all platforms

traffic-engineering

Description Container with traffic engineering options for the network-instance

Context [network-instance name](#) *string* [traffic-engineering](#)

Tree [traffic-engineering](#)

Configurable	True
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

admin-groups

Description	Container for configuring admin groups
Context	network-instance name <i>string</i> traffic-engineering admin-groups
Tree	admin-groups
Configurable	True
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

group name *string*

Description	List of admin groups defined for this network instance.
Context	network-instance name <i>string</i> traffic-engineering admin-groups group name <i>string</i>
Tree	group
Configurable	True
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

name *string*

Description	The name of the admin group
Context	network-instance name <i>string</i> traffic-engineering admin-groups group name <i>string</i>
String Length	1 to 255
Configurable	True
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

bit-position *number*

Description	The bit-position value for the admin-group. The value for the admin group is an integer that represents one of the bit positions in the admin-group bitmask.
Context	network-instance name <i>string</i> traffic-engineering admin-groups group name <i>string</i> bit-position <i>number</i>
Tree	bit-position

Range	0 to 31
Configurable	True
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

autonomous-system *number*

Description	The autonomous system number of the network-instance, for protocols and pseudo-protocols that do not have their own configuration of AS number.
Context	network-instance name <i>string</i> traffic-engineering autonomous-system number
Tree	autonomous-system
Range	1 to 4294967295
Configurable	True
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

interface [interface-name](#) *string*

Description	List of routed subinterfaces that have associated TE information
Context	network-instance name <i>string</i> traffic-engineering interface interface-name string
Tree	interface
Configurable	True
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

interface-name *string*

Description	Name of a subinterface
Context	network-instance name <i>string</i> traffic-engineering interface interface-name string
String Length	1 to 255
Configurable	True
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

admin-group *reference*

Description	The list of admin-groups generically associated with the interface (not application specific)
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Context	network-instance name <i>string</i> traffic-engineering interface interface-name string admin-group <i>reference</i>
Tree	admin-group
Reference	network-instance name <i>string</i> traffic-engineering admin-groups group name <i>string</i>
Configurable	True
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

interface-ref

Description	Reference to a subinterface
Context	network-instance name <i>string</i> traffic-engineering interface interface-name <i>string interface-ref</i>
Tree	interface-ref
Configurable	True
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

interface *reference*

Description	Reference to a base interface, for example a port or LAG
Context	network-instance name <i>string</i> traffic-engineering interface interface-name <i>string interface-ref interface</i> <i>reference</i>
Tree	interface
Reference	interface name <i>string</i>
Configurable	True
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

subinterface *reference*

Description	Reference to a subinterface This requires the base interface to be specified using the interface leaf in this container.
Context	network-instance name <i>string</i> traffic-engineering interface interface-name <i>string interface-ref subinterface</i> <i>reference</i>
Tree	subinterface
Reference	interface name <i>string subinterface index</i> <i>number</i>
Configurable	True

Platforms 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

srlg-membership *reference*

Description The list of srlgs generically associated with the interface (not application specific)

Context [network-instance name](#) *string* [traffic-engineering interface interface-name](#) *string* [srlg-membership](#) *reference*

Tree [srlg-membership](#)

Reference [network-instance name](#) *string* [traffic-engineering shared-risk-link-groups group name](#) *string*

Configurable True

Platforms 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

te-metric *number*

Description The TE metric associated with the interface (not application specific)

Context [network-instance name](#) *string* [traffic-engineering interface interface-name](#) *string* [te-metric](#) *number*

Tree [te-metric](#)

Range 1 to 16777215

Configurable True

Platforms 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

ipv4-te-router-id *string*

Description A routable IPv4 address to identify the router uniquely in a TE domain.

Context [network-instance name](#) *string* [traffic-engineering ipv4-te-router-id](#) *string*

Tree [ipv4-te-router-id](#)

Configurable True

Platforms 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

ipv6-te-router-id *string*

Description A routable IPv6 address to identify the router uniquely in a TE domain.

Context [network-instance name](#) *string* [traffic-engineering ipv6-te-router-id](#) *string*

Tree [ipv6-te-router-id](#)

Configurable	True
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

shared-risk-link-groups

Description	Container for configuring SRLGs
Context	network-instance name <i>string</i> traffic-engineering shared-risk-link-groups
Tree	shared-risk-link-groups
Configurable	True
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

group *name string*

Description	List of shared risk link groups defined for this network instance.
Context	network-instance name <i>string</i> traffic-engineering shared-risk-link-groups group name <i>string</i>
Tree	group
Configurable	True
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

name *string*

Description	The name of the shared risk link group
Context	network-instance name <i>string</i> traffic-engineering shared-risk-link-groups group name <i>string</i>
String Length	1 to 255
Configurable	True
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

value *number*

Description	Group ID for the SRLG
Context	network-instance name <i>string</i> traffic-engineering shared-risk-link-groups group name <i>string</i> value <i>number</i>
Tree	value
Configurable	True
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

traffic-engineering-policies

Description	Container with traffic engineering policies
Context	network-instance name <i>string</i> traffic-engineering-policies
Tree	traffic-engineering-policies
Configurable	True
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

binding-sid

Description	Configuration and state related to the label block(s) used for the binding SIDs associated with TE policies
Context	network-instance name <i>string</i> traffic-engineering-policies binding-sid
Tree	binding-sid
Configurable	True
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

static-label-block *reference*

Description	Reference to a static label range
Context	network-instance name <i>string</i> traffic-engineering-policies binding-sid static-label-block <i>reference</i>
Tree	static-label-block
Reference	system mpls label-ranges static name <i>string</i>
Configurable	True
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

static-label-block-status *keyword*

Description	Status of the label block. The label block may show as unavailable if there is pending cleanup.
Context	network-instance name <i>string</i> traffic-engineering-policies binding-sid static-label-block-status <i>keyword</i>
Tree	static-label-block-status
Options	<ul style="list-style-type: none"> available unavailable

Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

explicit-paths

Description	Named paths used to specify SR policy segment lists
Context	network-instance name <i>string</i> traffic-engineering-policies explicit-paths
Tree	explicit-paths
Configurable	True
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

path [explicit-path-name](#) *string*

Description	Enter the path list instance
Context	network-instance name <i>string</i> traffic-engineering-policies explicit-paths path explicit-path-name <i>string</i>
Tree	path
Configurable	True
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

explicit-path-name *string*

Description	A unique name to identify the explicit path
Context	network-instance name <i>string</i> traffic-engineering-policies explicit-paths path explicit-path-name <i>string</i>
String Length	1 to 255
Configurable	True
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

hop [index](#) *number*

Description	Enter the hop list instance
Context	network-instance name <i>string</i> traffic-engineering-policies explicit-paths path explicit-path-name <i>string</i> hop index <i>number</i>
Tree	hop
Configurable	True
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

index number

Description	The index number of the hop. Hops are processed in ascending sequence.
Context	network-instance name <i>string</i> traffic-engineering-policies explicit-paths path explicit-path-name <i>string</i> hop index number
Configurable	True
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

ip

Description	Enable the ip context
Context	network-instance name <i>string</i> traffic-engineering-policies explicit-paths path explicit-path-name <i>string</i> hop index number ip
Tree	ip
Configurable	True
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

hop-type keyword

Description	Enter the hop-type context
Context	network-instance name <i>string</i> traffic-engineering-policies explicit-paths path explicit-path-name <i>string</i> hop index number ip hop-type keyword
Tree	hop-type
Default	loose
Options	<ul style="list-style-type: none"> strict <p>A strict hop is always one hop away from the previous hop (or from the head-end in the case of the first hop). TE DB translates each strict hop into an adjacency-SID label. To be resolved to an adjacency SID, a strict hop must be a non-local IP address on a connected subnet (representing the neighbor's interface address on this subnet) or it must be a loopback or system address of the directly-connected neighbor.</p> loose <p>A loose hop can be any number of hops away from the previous hop (or from the head-end in the case of the first hop). TE DB translates each loose hop into a node-SID label. A loose hop can be any IP address of the remote router associated with the node SID, not just the IP address associated with the node SID itself. Note that the endpoint of the policy is implicitly considered to be a final loose hop. If the final configured hop (previous hop of this implicit loose hop) is unnecessary TEDB indicates</p>

this to SR policy manager and the adjacency SID or node SID of the final configured hop is omitted from the datapath programming.

Configurable	True
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

ip-address (*ipv4-address-unicast* | *ipv6-address-unicast-without-local*)

Description	An IPv4 or IPv6 address that is a hop to be visited on the way to the destination
Context	network-instance name <i>string</i> traffic-engineering-policies explicit-paths path explicit-path-name <i>string</i> hop index number ip ip-address (<i>ipv4-address-unicast</i> <i>ipv6-address-unicast-without-local</i>)
Tree	ip-address
Configurable	True
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

mpls-label *number*

Description	An MPLS label value representing a segment routing instruction
Context	network-instance name <i>string</i> traffic-engineering-policies explicit-paths path explicit-path-name <i>string</i> hop index number mpls-label <i>number</i>
Tree	mpls-label
Range	16 to 1048575
Configurable	True
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

policy [policy-name](#) *string*

Description	List of traffic engineering policies
Context	network-instance name <i>string</i> traffic-engineering-policies policy policy-name <i>string</i>
Tree	policy
Configurable	True
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

policy-name *string*

Description	The name of the traffic engineering policy
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Context	network-instance name <i>string</i> traffic-engineering-policies policy policy-name <i>string</i>
String Length	1 to 255
Configurable	True
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

admin-state *keyword*

Description	Enable/disable the traffic engineering policy
Context	network-instance name <i>string</i> traffic-engineering-policies policy policy-name <i>string</i> admin-state <i>keyword</i>
Tree	admin-state
Default	enable
Options	<ul style="list-style-type: none"> • enable • disable
Configurable	True
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

binding-sid

Description	Identifier that opaquely represents the Uncolored Traffic Engineering Policy (a.k.a. SR-TE LSP) to upstream routers
Context	network-instance name <i>string</i> traffic-engineering-policies policy policy-name <i>string</i> binding-sid
Tree	binding-sid
Configurable	True
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

mpls-label *number*

Description	MPLS label that represents the Uncolored Traffic Engineering Policy to upstream routers
Context	network-instance name <i>string</i> traffic-engineering-policies policy policy-name <i>string</i> binding-sid mpls-label <i>number</i>
Tree	mpls-label
Range	16 to 1048575
Configurable	True

Platforms 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

endpoint (*ipv4-address-unicast* | *ipv6-address-unicast-without-local*)

Description Destination of the TE policy

Context [network-instance name](#) *string* [traffic-engineering-policies policy policy-name](#) *string* [endpoint](#) (*ipv4-address-unicast* | *ipv6-address-unicast-without-local*)

Tree [endpoint](#)

Configurable True

Platforms 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

head-end (*ipv4-address-excluding-all-zero* | *keyword*)

Description Targeted head end address for an sr-mpls-colored policy

Context [network-instance name](#) *string* [traffic-engineering-policies policy policy-name](#) *string* [head-end](#) (*ipv4-address-excluding-all-zero* | *keyword*)

Tree [head-end](#)

Default local

Options

- local

Configurable True

Platforms 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

last-oper-state-change *string*

Description Time elapsed since the last operational state change for the Traffic Engineering Policy

Context [network-instance name](#) *string* [traffic-engineering-policies policy policy-name](#) *string* [last-oper-state-change](#) *string*

Tree [last-oper-state-change](#)

String Length 20 to 32

Configurable False

Platforms 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

maintenance

Description Maintenance context for TE Policy, hold and wait timers, sBFD, revertive behavior and alike available under this context

Context	network-instance name <i>string</i> traffic-engineering-policies policy policy-name <i>string</i> maintenance
Tree	maintenance
Configurable	True
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

maintenance-policy *reference*

Description	The maintenance policy to use with the TE policy
Context	network-instance name <i>string</i> traffic-engineering-policies policy policy-name <i>string</i> maintenance maintenance-policy <i>reference</i>
Tree	maintenance-policy
Reference	network-instance name <i>string</i> maintenance-policies policy maintenance-policy-name <i>string</i>
Configurable	True
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

metric *number*

Description	Metric for the TE Policy
Context	network-instance name <i>string</i> traffic-engineering-policies policy policy-name <i>string</i> metric <i>number</i>
Tree	metric
Range	1 to 16777215
Configurable	True
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

oper-down-reason *identityref*

Description	The reason why the Traffic Engineering policy is operationally down. One of the following values:
Context	network-instance name <i>string</i> traffic-engineering-policies policy policy-name <i>string</i> oper-down-reason <i>identityref</i>
Tree	oper-down-reason
Options	<ul style="list-style-type: none"> te-policy-admin-disabled The TE policy is administratively disabled te-policy-no-valid-segment-list

The TE policy has no valid segment lists

Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

oper-state *keyword*

Description	Traffic Engineering policy operational state.
Context	network-instance name <i>string</i> traffic-engineering-policies policy policy-name <i>string</i> oper-state <i>keyword</i>
Tree	oper-state
Options	<ul style="list-style-type: none"> up The te-policy is operationally up. down The te-policy is administratively down or no valid segment-list or due to other reasons.
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

oper-state-change-count *number*

Description	Traffic Engineering Policy operational state change count Operational status transition from up to down, down to up, etc all accounted under this counter
Context	network-instance name <i>string</i> traffic-engineering-policies policy policy-name <i>string</i> oper-state-change-count <i>number</i>
Tree	oper-state-change-count
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

policy-type *keyword*

Description	<p>Specifies the TE policy type</p> <p>TE Policy can be of type sr-mpls-colored where label based segment-list or segment-lists constitute a candidate path and color with endpoint is used to configure a path. TE Policy can be of type uncolored in which case a single primary LSP can be backed by one or more secondary LSPs</p>
Context	network-instance name <i>string</i> traffic-engineering-policies policy policy-name <i>string</i> policy-type <i>keyword</i>
Tree	policy-type

Default	sr-mpls-uncolored
Options	<ul style="list-style-type: none"> • sr-mpls-colored • sr-mpls-uncolored
Configurable	True
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

re-optimization-timer (*number* | *keyword*)

Description	Re-optimizaion timer for the TE policy
Context	network-instance name <i>string</i> traffic-engineering-policies policy policy-name <i>string</i> re-optimization-timer (<i>number</i> <i>keyword</i>)
Tree	re-optimization-timer
Range	30 to 10800
Default	30
Units	minutes
Options	<ul style="list-style-type: none"> • disable
Configurable	True
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

retry-timer *number*

Description	Time between TE policy re-establishment attempts after failure
Context	network-instance name <i>string</i> traffic-engineering-policies policy policy-name <i>string</i> retry-timer <i>number</i>
Tree	retry-timer
Range	1 to 600
Default	30
Units	seconds
Configurable	True
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

segment-list [segment-list-index](#) *number*

Description	Enter the segment-list list instance
Context	network-instance name <i>string</i> traffic-engineering-policies policy policy-name <i>string</i> segment-list segment-list-index <i>number</i>

Tree	segment-list
Configurable	True
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

segment-list-index *number*

Description	Index to enumerate the different segment lists of a TE policy.
Context	network-instance name <i>string</i> traffic-engineering-policies policy policy-name <i>string</i> segment-list segment-list-index <i>number</i>
Range	1 to 32
Configurable	True
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

admin-state *keyword*

Description	Administratively enable or disable a segment list
Context	network-instance name <i>string</i> traffic-engineering-policies policy policy-name <i>string</i> segment-list segment-list-index <i>number</i> admin-state <i>keyword</i>
Tree	admin-state
Options	<ul style="list-style-type: none"> • enable • disable
Configurable	True
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

dynamic

Description	Configuration and state for dynamic segment lists
Context	network-instance name <i>string</i> traffic-engineering-policies policy policy-name <i>string</i> segment-list segment-list-index <i>number</i> dynamic
Tree	dynamic
Configurable	True
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

path-algorithm *keyword*

Description	Path computation method
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Context	network-instance name <i>string</i> traffic-engineering-policies policy policy-name <i>string</i> segment-list segment-list-index <i>number</i> dynamic path-algorithm <i>keyword</i>
Tree	path-algorithm
Default	local-cspf
Options	<ul style="list-style-type: none"> local-cspf pce
Configurable	True
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

te-constraints

Description	Enter the te-constraints context
Context	network-instance name <i>string</i> traffic-engineering-policies policy policy-name <i>string</i> segment-list segment-list-index <i>number</i> dynamic te-constraints
Tree	te-constraints
Configurable	True
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

exclude-hop (*ipv4-address-unicast* | *ipv6-address-unicast-without-local*)

Description	Excluded IP addresses from path computation
Context	network-instance name <i>string</i> traffic-engineering-policies policy policy-name <i>string</i> segment-list segment-list-index <i>number</i> dynamic te-constraints exclude-hop (<i>ipv4-address-unicast</i> <i>ipv6-address-unicast-without-local</i>)
Tree	exclude-hop
Configurable	True
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b
Max. Elements	10

hop-limit *number*

Description	The maximum number of hops for the segment-list
Context	network-instance name <i>string</i> traffic-engineering-policies policy policy-name <i>string</i> segment-list segment-list-index <i>number</i> dynamic te-constraints hop-limit <i>number</i>
Tree	hop-limit

Range	2 to 255
Default	255
Configurable	True
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

label-stack-reduction *boolean*

Description	Set to true to enable label stack reduction for local CSPF computed segment-lists
Context	network-instance name <i>string</i> traffic-engineering-policies policy policy-name <i>string</i> segment-list segment-list-index <i>number</i> dynamic te-constraints label-stack-reduction <i>boolean</i>
Tree	label-stack-reduction
Default	true
Configurable	True
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

local-sr-protection *keyword*

Description	Protection offered for local CSPF computed segment-lists
Context	network-instance name <i>string</i> traffic-engineering-policies policy policy-name <i>string</i> segment-list segment-list-index <i>number</i> dynamic te-constraints local-sr-protection <i>keyword</i>
Tree	local-sr-protection
Default	preferred
Options	<ul style="list-style-type: none"> • none • preferred • mandated
Configurable	True
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

metric-type *keyword*

Description	Metric type used for segment-list computation
Context	network-instance name <i>string</i> traffic-engineering-policies policy policy-name <i>string</i> segment-list segment-list-index <i>number</i> dynamic te-constraints metric-type <i>keyword</i>

Tree	metric-type
Default	igp
Options	<ul style="list-style-type: none"> • igp • te
Configurable	True
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

secondary-srlg *boolean*

Description	Set to true to consider SRLG for secondary and standby segment list of uncolored type
Context	network-instance name <i>string</i> traffic-engineering-policies policy policy-name <i>string</i> segment-list segment-list-index <i>number</i> dynamic te-constraints secondary-srlg <i>boolean</i>
Tree	secondary-srlg
Default	false
Configurable	True
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

segment-depth

Description	Configuration for the maximum number of SIDs/segments
Context	network-instance name <i>string</i> traffic-engineering-policies policy policy-name <i>string</i> segment-list segment-list-index <i>number</i> dynamic te-constraints segment-depth
Tree	segment-depth
Configurable	True
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

segment-limit *number*

Description	The maximum number of segments in the segment-list
Context	network-instance name <i>string</i> traffic-engineering-policies policy policy-name <i>string</i> segment-list segment-list-index <i>number</i> dynamic te-constraints segment-depth segment-limit <i>number</i>
Tree	segment-limit
Range	1 to 14

Configurable	True
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

explicit-path *reference*

Description	Enter the explicit-path context
Context	network-instance name <i>string</i> traffic-engineering-policies policy policy-name <i>string</i> segment-list segment-list-index <i>number</i> explicit-path <i>reference</i>
Tree	explicit-path
Reference	network-instance name <i>string</i> traffic-engineering-policies explicit-paths path explicit-path-name <i>string</i>
Configurable	True
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

failed-reason *identityref*

Description	The reason why the segment list is invalid. One of the following values:
Context	network-instance name <i>string</i> traffic-engineering-policies policy policy-name <i>string</i> segment-list segment-list-index <i>number</i> failed-reason <i>identityref</i>
Tree	failed-reason
Options	<ul style="list-style-type: none"> • path-computation-request-timeout Path computation request timed out • path-computation-no-route No valid route is returned for path computation request • no-resources-available Required resources are depleted, not enough resources to establish the requested segment-list • path-computation-bad-node Path computation failure due to a resolution issue of one or more of the hops • path-computation-routing-loop Path computation failure due to routing loop • unknown Segment-list is down due to unknown reason • path-computation-no-route-owner Path computation failure as none of the IGP instances had a valid route to one of the hops

- path-computation-hop-limit-exceeded
Path computation failure due to hop limit. No path within the hop limit constraint configured
- srlg-not-disjoint
SRLG is shared with primary segment-list and there is no other viable path with dispersed SRLG
- srlg-not-computed-path
SRLG is not applicable, as primary segment-list has no applicable SRLG for path computation
- srlg-primary-segment-list-down
SRLG is not applicable, as primary segment-list is down
- unresolved-first-segment
The router is unable to resolve the first SID (MPLS label value) into one or more outgoing interface(s) and next-hop(s)
- fib-add-pending
Segment-list is kept down, when adding next-hop into the FIB
- fib-add-failed
FIB has failed to add the next-hop group. Next-hop group represents a group of next-hops for valid segment-lists under a TE-policy
- maximum-label-stack-depth-exceeded
The resolution of the named path requires more labels than supported by the datapath.
- pce-update-with-empty-ero
PCE update has empty Explicit Route Object (EROs)
- segment-list-admin-down
Segment-list is administratively down
- ipv4-hops-in-ipv6-path
IPv4 and IPv6 hops are mixed in explicit path
- ipv6-hops-in-ipv4-path
IPv6 and IPv4 hops are mixed in explicit path
- sid-hops-in-ip-path
SID (label-based) and IP hops are mixed in explicit path
- sid-hops-with-invalid-path-computation
SID hops (labeled hops) with path computation local-cspf/pcep is not allowed
- policy-down
Traffic engineering policy is down
- pce-association-conflict

- PCE-association conflict
- retry-on-config-change
Segment-list retry attempted due to config change
- clear-command
Segment-list retry attempted due to manual clear command
- secondary-segment-list
Secondary type segment-list, Primary is always preferred when available
- bfd-down
BFD is reported down
- te-rtr-id-not-configured
TE router ID config is missing
- pce-down
PCE is unavailable
- pce-error
PCE response has error or timed-out
- pcc-error
PCC responded with error

Configurable False

Platforms 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

forwarding-state *keyword*

Description Forwarding state of the segment-list, tells about the activeness of segment-list in the data-path. active - enabled for forwarding traffic in data-path, inactive - programmed in data-path, not enabled for forwarding, could be standby or waiting for sBFD to come up, backup - enabled as a backup for currently active segment-list

Context [network-instance name](#) *string* [traffic-engineering-policies policy policy-name](#) *string* [segment-list segment-list-index](#) *number* [forwarding-state](#) *keyword*

Tree [forwarding-state](#)

Options

- active
- inactive
- backup

Configurable False

Platforms 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

last-oper-state-change *string*

Description	Time elapsed since the last operational state change for the segment-list
Context	network-instance name <i>string</i> traffic-engineering-policies policy policy-name <i>string</i> segment-list segment-list-index <i>number</i> last-oper-state-change <i>string</i>
Tree	last-oper-state-change
String Length	20 to 32
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

oper-state *keyword*

Description	Segment list operational state
Context	network-instance name <i>string</i> traffic-engineering-policies policy policy-name <i>string</i> segment-list segment-list-index <i>number</i> oper-state <i>keyword</i>
Tree	oper-state
Options	<ul style="list-style-type: none"> • up The segment-list is operationally up. • down The segment-list is operationally down
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

oper-state-change-count *number*

Description	Traffic Engineering Policy segment-list operational state change count Operational status transition from up to down, down to up, etc all accounted under this counter
Context	network-instance name <i>string</i> traffic-engineering-policies policy policy-name <i>string</i> segment-list segment-list-index <i>number</i> oper-state-change-count <i>number</i>
Tree	oper-state-change-count
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

pce-control *boolean*

Description	Set to true for a PCE controlled segment-list
Context	network-instance name <i>string</i> traffic-engineering-policies policy policy-name <i>string</i> segment-list segment-list-index <i>number</i> pce-control <i>boolean</i>
Tree	pce-control
Configurable	True
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

pce-report *boolean*

Description	seto to true to enable reporting of the segment-list to the PCE
Context	network-instance name <i>string</i> traffic-engineering-policies policy policy-name <i>string</i> segment-list segment-list-index <i>number</i> pce-report <i>boolean</i>
Tree	pce-report
Default	false
Configurable	True
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

priority

Description	Configure setup and hold priorities to be conveyed to the PCE for preemption purposes
Context	network-instance name <i>string</i> traffic-engineering-policies policy policy-name <i>string</i> segment-list segment-list-index <i>number</i> priority
Tree	priority
Configurable	True
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

hold-priority *number*

Description	Hold priority of a TE policy in relation to preemption action
Context	network-instance name <i>string</i> traffic-engineering-policies policy policy-name <i>string</i> segment-list segment-list-index <i>number</i> priority hold-priority <i>number</i>
Tree	hold-priority
Range	0 to 7
Default	0

Configurable	True
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

setup-priority *number*

Description	Setup priority of a TE policy in relation to preemption action
Context	network-instance name <i>string</i> traffic-engineering-policies policy policy-name <i>string</i> segment-list segment-list-index <i>number</i> priority setup-priority <i>number</i>
Tree	setup-priority
Range	0 to 7
Default	7
Configurable	True
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

segment-list-preference *number*

Description	Preference value of this segment-list For an sr-mpls-uncolored TE policy one standby segment list is preferred over another if it has a lower preference value. The implicit default value is 100.
Context	network-instance name <i>string</i> traffic-engineering-policies policy policy-name <i>string</i> segment-list segment-list-index <i>number</i> segment-list-preference <i>number</i>
Tree	segment-list-preference
Range	1 to 255
Configurable	True
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

segment-list-type *keyword*

Description	Segment-list type: primary, standby or secondary Standby is programmed in datapath, consumes resources and is ready for a failover any time. Secondary is programmed upon failure of the previous active
Context	network-instance name <i>string</i> traffic-engineering-policies policy policy-name <i>string</i> segment-list segment-list-index <i>number</i> segment-list-type <i>keyword</i>
Tree	segment-list-type
Options	<ul style="list-style-type: none"> primary

	<ul style="list-style-type: none"> secondary standby
Configurable	True
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

policy-database

Description	Traffic Engineering Policy Database
Context	network-instance name <i>string</i> traffic-engineering-policies policy-database
Tree	policy-database
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

active-te-policies *number*

Description	Number of active Traffic Engineering Polices
Context	network-instance name <i>string</i> traffic-engineering-policies policy-database active-te-policies <i>number</i>
Tree	active-te-policies
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

sr-uncolored

Description	Uncolored Traffic Engineering Policy Paths. Also referred to as SR-TE LSPs
Context	network-instance name <i>string</i> traffic-engineering-policies policy-database sr-uncolored
Tree	sr-uncolored
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

policy [policy-name](#) *string* [protocol-origin](#) *keyword*

Description	Enter the Uncolored Traffic Engineering Policy Path list instance Also referred to as SR-TE LSP list
Context	network-instance name <i>string</i> traffic-engineering-policies policy-database sr-uncolored policy policy-name <i>string</i> protocol-origin <i>keyword</i>

Tree	policy
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

policy-name *string*

Description	Name of Uncolored Traffic Engineering Policy
Context	network-instance name <i>string</i> traffic-engineering-policies policy-database sr-uncolored policy policy-name <i>string</i> protocol-origin <i>keyword</i>
String Length	1 to 255
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

protocol-origin *keyword*

Description	Uncolored Traffic Engineering Policy, origination source. The method Policy path is computed. This list includes Path Computation Engine, explicitly configured paths, etc.
Context	network-instance name <i>string</i> traffic-engineering-policies policy-database sr-uncolored policy policy-name <i>string</i> protocol-origin <i>keyword</i>
Options	<ul style="list-style-type: none"> • pcep PCEP used as signalling mechanism for the candidate path • bgp BGP used as signalling mechanism for the candidate path • local Management interface used for candidate path instantiation
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

active-segment-list-index *number*

Description	Uncolored Traffic Engineering Policy active segment-list index
Context	network-instance name <i>string</i> traffic-engineering-policies policy-database sr-uncolored policy policy-name <i>string</i> protocol-origin <i>keyword</i> active-segment-list-index <i>number</i>
Tree	active-segment-list-index
Configurable	False

Platforms 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

binding-sid

Description Identifier that opaquely represents the Uncolored Traffic Engineering Policy (a.k.a. SR-TE LSP) to upstream routers

Context [network-instance name](#) *string* [traffic-engineering-policies policy-database sr-uncolored policy policy-name](#) *string* [protocol-origin keyword](#) *binding-sid*

Tree [binding-sid](#)

Configurable False

Platforms 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

mpls-label *number*

Description MPLS label that represents the Uncolored Traffic Engineering Policy to upstream routers

Context [network-instance name](#) *string* [traffic-engineering-policies policy-database sr-uncolored policy policy-name](#) *string* [protocol-origin keyword](#) *binding-sid* [mpls-label](#) *number*

Tree [mpls-label](#)

Range 16 to 1048575

Configurable False

Platforms 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

created-time *string*

Description Uncolored Traffic Engineering Policy creation time

Context [network-instance name](#) *string* [traffic-engineering-policies policy-database sr-uncolored policy policy-name](#) *string* [protocol-origin keyword](#) *created-time* *string*

Tree [created-time](#)

String Length 20 to 32

Configurable False

Platforms 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

endpoint (*ipv4-address-unicast* | *ipv6-address-unicast-without-local*)

Description Uncolored Traffic Engineering Policy endpoint IP address

Context	network-instance name <i>string</i> traffic-engineering-policies policy-database sr-uncolored policy policy-name <i>string</i> protocol-origin <i>keyword</i> endpoint (<i>ipv4-address-unicast</i> <i>ipv6-address-unicast-without-local</i>)
Tree	endpoint
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

head-end (*ipv4-address-unicast* | *ipv6-address-unicast-without-local*)

Description	Uncolored Traffic Engineering Policy headend IP address
Context	network-instance name <i>string</i> traffic-engineering-policies policy-database sr-uncolored policy policy-name <i>string</i> protocol-origin <i>keyword</i> head-end (<i>ipv4-address-unicast</i> <i>ipv6-address-unicast-without-local</i>)
Tree	head-end
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

last-oper-state-change *string*

Description	Time elapsed since the last operational state change for the Traffic Engineering Policy
Context	network-instance name <i>string</i> traffic-engineering-policies policy-database sr-uncolored policy policy-name <i>string</i> protocol-origin <i>keyword</i> last-oper-state-change <i>string</i>
Tree	last-oper-state-change
String Length	20 to 32
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

maintenance

Description	Maintenance context for TE Policy, hold and wait timers, sBFD, revertive behavior and alike available under this context
Context	network-instance name <i>string</i> traffic-engineering-policies policy-database sr-uncolored policy policy-name <i>string</i> protocol-origin <i>keyword</i> maintenance
Tree	maintenance
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

maintenance-policy *string*

Description	The maintenance policy to use with the TE policy
Context	network-instance name <i>string</i> traffic-engineering-policies policy-database sr-uncolored policy policy-name <i>string</i> protocol-origin keyword maintenance maintenance-policy <i>string</i>
Tree	maintenance-policy
String Length	1 to 255
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

metric *number*

Description	Uncolored Traffic Engineering Policy metric
Context	network-instance name <i>string</i> traffic-engineering-policies policy-database sr-uncolored policy policy-name <i>string</i> protocol-origin keyword metric number
Tree	metric
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

oper-down-reason *identityref*

Description	The reason why the Traffic Engineering policy is operationally down. One of the following values:
Context	network-instance name <i>string</i> traffic-engineering-policies policy-database sr-uncolored policy policy-name <i>string</i> protocol-origin keyword oper-down-reason identityref
Tree	oper-down-reason
Options	<ul style="list-style-type: none"> te-policy-admin-disabled The TE policy is administratively disabled te-policy-no-valid-segment-list The TE policy has no valid segment lists
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

oper-state *keyword*

Description	Traffic Engineering policy operational state.
Context	network-instance name <i>string</i> traffic-engineering-policies policy-database sr-uncolored policy policy-name <i>string</i> protocol-origin <i>keyword</i> oper-state <i>keyword</i>
Tree	oper-state
Options	<ul style="list-style-type: none"> • up The te-policy is operationally up. • down The te-policy is administratively down or no valid segment-list or due to other reasons.
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

oper-state-change-count *number*

Description	Traffic Engineering Policy operational state change count Operational status transition from up to down, down to up, etc all accounted under this counter
Context	network-instance name <i>string</i> traffic-engineering-policies policy-database sr-uncolored policy policy-name <i>string</i> protocol-origin <i>keyword</i> oper-state-change-count <i>number</i>
Tree	oper-state-change-count
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

policy-type *keyword*

Description	Uncolored Traffic Engineering Policy type
Context	network-instance name <i>string</i> traffic-engineering-policies policy-database sr-uncolored policy policy-name <i>string</i> protocol-origin <i>keyword</i> policy-type <i>keyword</i>
Tree	policy-type
Options	<ul style="list-style-type: none"> • sr-mpls-colored • sr-mpls-uncolored
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

segment-list *segment-list-index number*

Description	Enter the segment-list list instance
Context	network-instance name <i>string</i> traffic-engineering-policies policy-database sr-uncolored policy policy-name <i>string</i> protocol-origin <i>keyword</i> segment-list segment-list-index <i>number</i>
Tree	segment-list
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

segment-list-index *number*

Description	Index to enumerate the different segment lists.
Context	network-instance name <i>string</i> traffic-engineering-policies policy-database sr-uncolored policy policy-name <i>string</i> protocol-origin <i>keyword</i> segment-list segment-list-index <i>number</i>
Range	1 to 32
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

bfd

Description	Enter the bfd context
Context	network-instance name <i>string</i> traffic-engineering-policies policy-database sr-uncolored policy policy-name <i>string</i> protocol-origin <i>keyword</i> segment-list segment-list-index <i>number</i> bfd
Tree	bfd
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

bfd-state *keyword*

Description	The current state of the BFD session on the LSP path.
Context	network-instance name <i>string</i> traffic-engineering-policies policy-database sr-uncolored policy policy-name <i>string</i> protocol-origin <i>keyword</i> segment-list segment-list-index <i>number</i> bfd bfd-state <i>keyword</i>
Tree	bfd-state
Options	<ul style="list-style-type: none"> not-applicable

	<ul style="list-style-type: none"> • down • up
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

bfd-wait-for-up-expiry *string*

Description	The time in seconds left to wait for the bfd session to be up.
Context	network-instance name <i>string</i> traffic-engineering-policies policy-database sr-uncolored policy policy-name <i>string</i> protocol-origin keyword segment-list segment-list-index <i>number</i> bfd bfd-wait-for-up-expiry <i>string</i>
Tree	bfd-wait-for-up-expiry
String Length	20 to 32
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

bfd-wait-for-up-timer *number*

Description	<p>Specifies a wait-for-up timer value when seamless-bfd is enabled</p> <p>This timer takes effect if BFD does not come up, or BFD goes from up to down. The timer is started when BFD is first enabled on a segment-list or BFD transitions from up to down. When the timer expires if BFD is not yet come up, then the path is torn down by removing it from the TTM and the PI and the retry timer is started.</p> <p>The default is 3 seconds.</p>
Context	network-instance name <i>string</i> traffic-engineering-policies policy-database sr-uncolored policy policy-name <i>string</i> protocol-origin keyword segment-list segment-list-index <i>number</i> bfd bfd-wait-for-up-timer <i>number</i>
Tree	bfd-wait-for-up-timer
Units	seconds
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

hold-down-timer *number*

Description	<p>Specifies a hold-down timer value when seamless-bfd is enabled</p> <p>The timer is started when the number of S-BFD sessions that are up drops below the threshold. The TE-policy path is not considered to be up again until the hold-down timer has expired and the number of S-BFD sessions</p>
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that are up equals or exceeds the threshold. A grace period after session down such that sBFD session flaps does not impact active path.

The default is 3 seconds.

Context	network-instance name <i>string</i> traffic-engineering-policies policy-database sr-uncolored policy policy-name <i>string</i> protocol-origin <i>keyword</i> segment-list segment-list-index <i>number</i> bfd hold-down-timer <i>number</i>
Tree	hold-down-timer
Units	seconds
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

hold-down-timer-expiry *string*

Description	Time remaining on seamless-bfd hold down timer
Context	network-instance name <i>string</i> traffic-engineering-policies policy-database sr-uncolored policy policy-name <i>string</i> protocol-origin <i>keyword</i> segment-list segment-list-index <i>number</i> bfd hold-down-timer-expiry <i>string</i>
Tree	hold-down-timer-expiry
String Length	20 to 32
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

computed-segments

Description	Enter the computed-segments context
Context	network-instance name <i>string</i> traffic-engineering-policies policy-database sr-uncolored policy policy-name <i>string</i> protocol-origin <i>keyword</i> segment-list segment-list-index <i>number</i> computed-segments
Tree	computed-segments
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

segment [segment-index](#) *number*

Description	Enter the segment list instance
Context	network-instance name <i>string</i> traffic-engineering-policies policy-database sr-uncolored policy policy-name <i>string</i> protocol-origin <i>keyword</i> segment-list segment-list-index <i>number</i> computed-segments segment segment-index <i>number</i>

Tree	segment
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

segment-index *number*

Description	Index to enumerate the different segments in a segment-list
Context	network-instance name <i>string</i> traffic-engineering-policies policy-database sr-uncolored policy policy-name <i>string</i> protocol-origin <i>keyword</i> segment-list segment-list-index <i>number</i> computed-segments segment segment-index <i>number</i>
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

hop-type *keyword*

Description	Hop type.
Context	network-instance name <i>string</i> traffic-engineering-policies policy-database sr-uncolored policy policy-name <i>string</i> protocol-origin <i>keyword</i> segment-list segment-list-index <i>number</i> computed-segments segment segment-index <i>number</i> hop-type <i>keyword</i>
Tree	hop-type
Options	<ul style="list-style-type: none"> • ipv4 • ipv6 • unnum
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

ip-address (*ipv4-address-unicast | ipv6-address-unicast-without-local*)

Description	IP Address for this hop.
Context	network-instance name <i>string</i> traffic-engineering-policies policy-database sr-uncolored policy policy-name <i>string</i> protocol-origin <i>keyword</i> segment-list segment-list-index <i>number</i> computed-segments segment segment-index <i>number</i> ip-address (<i>ipv4-address-unicast ipv6-address-unicast-without-local</i>)
Tree	ip-address
Configurable	False

Platforms 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

is-loose *boolean*

Description Indicates if this tunnel hop is loose.

Context [network-instance name](#) *string* [traffic-engineering-policies policy-database sr-uncolored policy policy-name](#) *string* [protocol-origin](#) *keyword* [segment-list segment-list-index](#) *number* [computed-segments segment segment-index](#) *number* **is-loose** *boolean*

Tree [is-loose](#)

Configurable False

Platforms 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

router-id (*ipv4-address* | *ipv6-address*)

Description The value of router ID.

Context [network-instance name](#) *string* [traffic-engineering-policies policy-database sr-uncolored policy policy-name](#) *string* [protocol-origin](#) *keyword* [segment-list segment-list-index](#) *number* [computed-segments segment segment-index](#) *number* **router-id** (*ipv4-address* | *ipv6-address*)

Tree [router-id](#)

Configurable False

Platforms 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

sid-type *keyword*

Description Type of Segment Identifier (SID).

Context [network-instance name](#) *string* [traffic-engineering-policies policy-database sr-uncolored policy policy-name](#) *string* [protocol-origin](#) *keyword* [segment-list segment-list-index](#) *number* [computed-segments segment segment-index](#) *number* **sid-type** *keyword*

Tree [sid-type](#)

Options

- not-applicable
- node-sid
- adjacency-sid

Configurable False

Platforms 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

sid-value

Description	Enter the sid-value context
Context	network-instance name <i>string</i> traffic-engineering-policies policy-database sr-uncolored policy policy-name <i>string</i> protocol-origin keyword segment-list segment-list-index <i>number</i> computed-segments segment segment-index <i>number</i> sid-value
Tree	sid-value
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

mpls-label *number*

Description	Label recorded for this hop.
Context	network-instance name <i>string</i> traffic-engineering-policies policy-database sr-uncolored policy policy-name <i>string</i> protocol-origin keyword segment-list segment-list-index <i>number</i> computed-segments segment segment-index <i>number</i> sid-value mpls-label <i>number</i>
Tree	mpls-label
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

unnumbered-if-id *number*

Description	The value of unnumbered interface identifier of this hop.
Context	network-instance name <i>string</i> traffic-engineering-policies policy-database sr-uncolored policy policy-name <i>string</i> protocol-origin keyword segment-list segment-list-index <i>number</i> computed-segments segment segment-index <i>number</i> unnumbered-if-id <i>number</i>
Tree	unnumbered-if-id
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

dynamic

Description	Dynamic Segment List
Context	network-instance name <i>string</i> traffic-engineering-policies policy-database sr-uncolored policy policy-name <i>string</i> protocol-origin keyword segment-list segment-list-index <i>number</i> dynamic

Tree	dynamic
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

path-algorithm *keyword*

Description	Algorithm used for computation of the Segment List
Context	network-instance name <i>string</i> traffic-engineering-policies policy-database sr-uncolored policy policy-name <i>string</i> protocol-origin <i>keyword</i> segment-list segment-list-index <i>number</i> dynamic path-algorithm <i>keyword</i>
Tree	path-algorithm
Options	<ul style="list-style-type: none"> • local-cspf • pce
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

te-constraints

Description	Traffic Engineering constraints for dynamic segment-lists
Context	network-instance name <i>string</i> traffic-engineering-policies policy-database sr-uncolored policy policy-name <i>string</i> protocol-origin <i>keyword</i> segment-list segment-list-index <i>number</i> dynamic te-constraints
Tree	te-constraints
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

exclude-hop (*ipv4-address-unicast | ipv6-address-unicast-without-local*)

Description	Excluded IP addresses from path computation for the given Segment List
Context	network-instance name <i>string</i> traffic-engineering-policies policy-database sr-uncolored policy policy-name <i>string</i> protocol-origin <i>keyword</i> segment-list segment-list-index <i>number</i> dynamic te-constraints exclude-hop (<i>ipv4-address-unicast ipv6-address-unicast-without-local</i>)
Tree	exclude-hop
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

hop-limit *number*

Description	Hop limit constraint used for computation of the Segment List
Context	network-instance name <i>string</i> traffic-engineering-policies policy-database sr-uncolored policy policy-name <i>string</i> protocol-origin <i>keyword</i> segment-list segment-list-index <i>number</i> dynamic te-constraints hop-limit <i>number</i>
Tree	hop-limit
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

label-stack-reduction *boolean*

Description	If label stack reduction is enabled for the given Segment List
Context	network-instance name <i>string</i> traffic-engineering-policies policy-database sr-uncolored policy policy-name <i>string</i> protocol-origin <i>keyword</i> segment-list segment-list-index <i>number</i> dynamic te-constraints label-stack-reduction <i>boolean</i>
Tree	label-stack-reduction
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

local-sr-protection *keyword*

Description	Protection offered for local CSPF computed segment-lists
Context	network-instance name <i>string</i> traffic-engineering-policies policy-database sr-uncolored policy policy-name <i>string</i> protocol-origin <i>keyword</i> segment-list segment-list-index <i>number</i> dynamic te-constraints local-sr-protection <i>keyword</i>
Tree	local-sr-protection
Options	<ul style="list-style-type: none"> • none • preferred • mandated
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

metric-type *keyword*

Description	Metric type used for segment-list computation
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Context	network-instance name <i>string</i> traffic-engineering-policies policy-database sr-uncolored policy policy-name <i>string</i> protocol-origin <i>keyword</i> segment-list segment-list-index <i>number</i> dynamic te-constraints metric-type <i>keyword</i>
Tree	metric-type
Options	<ul style="list-style-type: none"> • igp • te
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

secondary-srlg *boolean*

Description	If SRLG constraints are taken into account while computing Secondary Segment List
Context	network-instance name <i>string</i> traffic-engineering-policies policy-database sr-uncolored policy policy-name <i>string</i> protocol-origin <i>keyword</i> segment-list segment-list-index <i>number</i> dynamic te-constraints secondary-srlg <i>boolean</i>
Tree	secondary-srlg
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

segment-depth

Description	Configuration for the maximum number of SIDs/segments
Context	network-instance name <i>string</i> traffic-engineering-policies policy-database sr-uncolored policy policy-name <i>string</i> protocol-origin <i>keyword</i> segment-list segment-list-index <i>number</i> dynamic te-constraints segment-depth
Tree	segment-depth
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

segment-limit *number*

Description	The maximum number of segments in the segment-list
Context	network-instance name <i>string</i> traffic-engineering-policies policy-database sr-uncolored policy policy-name <i>string</i> protocol-origin <i>keyword</i> segment-list segment-list-index <i>number</i> dynamic te-constraints segment-depth segment-limit <i>number</i>
Tree	segment-limit

Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

explicit-path *string*

Description	Explicit-path used for instantiating Segment List under Traffic Engineering Policy
Context	network-instance name <i>string</i> traffic-engineering-policies policy-database sr-uncolored policy policy-name <i>string</i> protocol-origin <i>keyword</i> segment-list segment-list-index <i>number</i> explicit-path <i>string</i>
Tree	explicit-path
String Length	1 to 255
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

failed-reason *identityref*

Description	The reason why the segment list is invalid. One of the following values:
Context	network-instance name <i>string</i> traffic-engineering-policies policy-database sr-uncolored policy policy-name <i>string</i> protocol-origin <i>keyword</i> segment-list segment-list-index <i>number</i> failed-reason <i>identityref</i>
Tree	failed-reason
Options	<ul style="list-style-type: none"> • path-computation-request-timeout Path computation request timed out • path-computation-no-route No valid route is returned for path computation request • no-resources-available Required resources are depleted, not enough resources to establish the requested segment-list • path-computation-bad-node Path computation failure due to a resolution issue of one or more of the hops • path-computation-routing-loop Path computation failure due to routing loop • unknown Segment-list is down due to unknown reason • path-computation-no-route-owner

- Path computation failure as none of the IGP instances had a valid route to one of the hops
- path-computation-hop-limit-exceeded
Path computation failure due to hop limit. No path within the hop limit constraint configured
- srlg-not-disjoint
SRLG is shared with primary segment-list and there is no other viable path with dispersed SRLG
- srlg-not-computed-path
SRLG is not applicable, as primary segment-list has no applicable SRLG for path computation
- srlg-primary-segment-list-down
SRLG is not applicable, as primary segment-list is down
- unresolved-first-segment
The router is unable to resolve the first SID (MPLS label value) into one or more outgoing interface(s) and next-hop(s)
- fib-add-pending
Segment-list is kept down, when adding next-hop into the FIB
- fib-add-failed
FIB has failed to add the next-hop group. Next-hop group represents a group of next-hops for valid segment-lists under a TE-policy
- maximum-label-stack-depth-exceeded
The resolution of the named path requires more labels than supported by the datapath.
- pce-update-with-empty-ero
PCE update has empty Explicit Route Object (EROs)
- segment-list-admin-down
Segment-list is administratively down
- ipv4-hops-in-ipv6-path
IPv4 and IPv6 hops are mixed in explicit path
- ipv6-hops-in-ipv4-path
IPv6 and IPv4 hops are mixed in explicit path
- sid-hops-in-ip-path
SID (label-based) and IP hops are mixed in explicit path
- sid-hops-with-invalid-path-computation
SID hops (labeled hops) with path computation local-cspf/pcep is not allowed
- policy-down

- Traffic engineering policy is down
- pce-association-conflict
PCE-association conflict
- retry-on-config-change
Segment-list retry attempted due to config change
- clear-command
Segment-list retry attempted due to manual clear command
- secondary-segment-list
Secondary type segment-list, Primary is always preferred when available
- bfd-down
BFD is reported down
- te-rtr-id-not-configured
TE router ID config is missing
- pce-down
PCE is unavailable
- pce-error
PCE response has error or timed-out
- pcc-error
PCC responded with error

Configurable

False

Platforms

7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

forwarding-state *keyword***Description**

Forwarding state of the segment-list, tells about the activeness of segment-list in the data-path. active - enabled for forwarding traffic in data-path, inactive - programmed in data-path, not enabled for forwarding, could be standby or waiting for sBFD to come up, backup - enabled as a backup for currently active segment-list

Context

[network-instance name](#) *string* [traffic-engineering-policies policy-database sr-uncolored policy policy-name](#) *string* [protocol-origin keyword segment-list segment-list-index](#) *number* [forwarding-state](#) *keyword*

Tree[forwarding-state](#)**Options**

- active
- inactive
- backup

Configurable

False

Platforms 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

igp-metric *number*

Description IGP metric of given Segment List

Context [network-instance name](#) *string* [traffic-engineering-policies policy-database sr-uncolored policy policy-name](#) *string* [protocol-origin keyword](#) [segment-list segment-list-index](#) *number* **igp-metric** *number*

Tree [igp-metric](#)

Configurable False

Platforms 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

last-oper-state-change *string*

Description Time elapsed since the last operational state change for the segment-list

Context [network-instance name](#) *string* [traffic-engineering-policies policy-database sr-uncolored policy policy-name](#) *string* [protocol-origin keyword](#) [segment-list segment-list-index](#) *number* **last-oper-state-change** *string*

Tree [last-oper-state-change](#)

String Length 20 to 32

Configurable False

Platforms 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

last-pce-update

Description Enter the last-pce-update context

Context [network-instance name](#) *string* [traffic-engineering-policies policy-database sr-uncolored policy policy-name](#) *string* [protocol-origin keyword](#) [segment-list segment-list-index](#) *number* **last-pce-update**

Tree [last-pce-update](#)

Configurable False

Platforms 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

failure-reason *identityref*

Description Indicates the reason code for last MBB failure.

Context	network-instance name <i>string</i> traffic-engineering-policies policy-database sr-uncolored policy policy-name <i>string</i> protocol-origin keyword segment-list segment-list-index <i>number</i> last-pce-update failure-reason identityref
Tree	failure-reason
Options	<ul style="list-style-type: none"> • path-computation-request-timeout Path computation request timed out • path-computation-no-route No valid route is returned for path computation request • no-resources-available Required resources are depleted, not enough resources to establish the requested segment-list • path-computation-bad-node Path computation failure due to a resolution issue of one or more of the hops • path-computation-routing-loop Path computation failure due to routing loop • unknown Segment-list is down due to unknown reason • path-computation-no-route-owner Path computation failure as none of the IGP instances had a valid route to one of the hops • path-computation-hop-limit-exceeded Path computation failure due to hop limit. No path within the hop limit constraint configured • srlg-not-disjoint SRLG is shared with primary segment-list and there is no other viable path with dispersed SRLG • srlg-not-computed-path SRLG is not applicable, as primary segment-list has no applicable SRLG for path computation • srlg-primary-segment-list-down SRLG is not applicable, as primary segment-list is down • unresolved-first-segment The router is unable to resolve the first SID (MPLS label value) into one or more outgoing interface(s) and next-hop(s) • fib-add-pending Segment-list is kept down, when adding next-hop into the FIB • fib-add-failed

FIB has failed to add the next-hop group. Next-hop group represents a group of next-hops for valid segment-lists under a TE-policy

- maximum-label-stack-depth-exceeded

The resolution of the named path requires more labels than supported by the datapath.

- pce-update-with-empty-ero

PCE update has empty Explicit Route Object (EROs)

- segment-list-admin-down

Segment-list is administratively down

- ipv4-hops-in-ipv6-path

IPv4 and IPv6 hops are mixed in explicit path

- ipv6-hops-in-ipv4-path

IPv6 and IPv4 hops are mixed in explicit path

- sid-hops-in-ip-path

SID (label-based) and IP hops are mixed in explicit path

- sid-hops-with-invalid-path-computation

SID hops (labeled hops) with path computation local-cspf/pcep is not allowed

- policy-down

Traffic engineering policy is down

- pce-association-conflict

PCE-association conflict

- retry-on-config-change

Segment-list retry attempted due to config change

- clear-command

Segment-list retry attempted due to manual clear command

- secondary-segment-list

Secondary type segment-list, Primary is always preferred when available

- bfd-down

BFD is reported down

- te-rtr-id-not-configured

TE router ID config is missing

- pce-down

PCE is unavailable

- pce-error

PCE response has error or timed-out

- pcc-error

PCC responded with error

Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

state *keyword*

Description	Indicates whether the last update was successful or failed.
Context	network-instance name <i>string</i> traffic-engineering-policies policy-database sr-uncolored policy policy-name <i>string</i> protocol-origin keyword segment-list segment-list-index <i>number</i> last-pce-update state <i>keyword</i>
Tree	state
Options	<ul style="list-style-type: none"> • success • failure
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

time *string*

Description	Indicates the system time when the last update occurred.
Context	network-instance name <i>string</i> traffic-engineering-policies policy-database sr-uncolored policy policy-name <i>string</i> protocol-origin keyword segment-list segment-list-index <i>number</i> last-pce-update time <i>string</i>
Tree	time
String Length	20 to 32
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

update-id *number*

Description	Indicates the last update ID which was processed.
Context	network-instance name <i>string</i> traffic-engineering-policies policy-database sr-uncolored policy policy-name <i>string</i> protocol-origin keyword segment-list segment-list-index <i>number</i> last-pce-update update-id <i>number</i>
Tree	update-id
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

last-reoptimization-attempt *string*

Description	Time elapsed since last path re-optimization attempt on the segment-list
Context	network-instance name <i>string</i> traffic-engineering-policies policy-database sr-uncolored policy policy-name <i>string</i> protocol-origin <i>keyword</i> segment-list segment-list-index <i>number</i> last-reoptimization-attempt <i>string</i>
Tree	last-reoptimization-attempt
String Length	20 to 32
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

last-retry-attempt *string*

Description	Time elapsed since the last retry attempt to re-established the segment-list
Context	network-instance name <i>string</i> traffic-engineering-policies policy-database sr-uncolored policy policy-name <i>string</i> protocol-origin <i>keyword</i> segment-list segment-list-index <i>number</i> last-retry-attempt <i>string</i>
Tree	last-retry-attempt
String Length	20 to 32
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

lsp-id *number*

Description	Unique internal identifier of segment-list
Context	network-instance name <i>string</i> traffic-engineering-policies policy-database sr-uncolored policy policy-name <i>string</i> protocol-origin <i>keyword</i> segment-list segment-list-index <i>number</i> lsp-id <i>number</i>
Tree	lsp-id
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

mbb

Description	The make-before-break operational information.
Context	network-instance name <i>string</i> traffic-engineering-policies policy-database sr-uncolored policy policy-name <i>string</i> protocol-origin <i>keyword</i> segment-list segment-list-index <i>number</i> mbb

Tree	mbb
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

in-progress-mbb

Description	The in progress make-before-break operational information.
Context	network-instance name <i>string</i> traffic-engineering-policies policy-database sr-uncolored policy policy-name <i>string</i> protocol-origin keyword segment-list segment-list-index <i>number</i> mbb in-progress-mbb
Tree	in-progress-mbb
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

start-time *string*

Description	Indicates the system time when the in-progress MBB started.
Context	network-instance name <i>string</i> traffic-engineering-policies policy-database sr-uncolored policy policy-name <i>string</i> protocol-origin keyword segment-list segment-list-index <i>number</i> mbb in-progress-mbb start-time <i>string</i>
Tree	start-time
String Length	20 to 32
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

type *keyword*

Description	Indicates the type of the make-before-break (MBB) that is in progress.
Context	network-instance name <i>string</i> traffic-engineering-policies policy-database sr-uncolored policy policy-name <i>string</i> protocol-origin keyword segment-list segment-list-index <i>number</i> mbb in-progress-mbb type <i>keyword</i>
Tree	type
Options	<ul style="list-style-type: none"> • none • timer-based-reoptimization • manual-resignal • pce-update
Configurable	False

Platforms 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

last-mbb

Description The last make-before-break operational information.

Context [network-instance name](#) *string* [traffic-engineering-policies policy-database sr-uncolored policy policy-name](#) *string* [protocol-origin keyword](#) [segment-list segment-list-index](#) *number* [mbb last-mbb](#)

Tree [last-mbb](#)

Configurable False

Platforms 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

end-time *string*

Description Specifies the system time when the last MBB ended.

Context [network-instance name](#) *string* [traffic-engineering-policies policy-database sr-uncolored policy policy-name](#) *string* [protocol-origin keyword](#) [segment-list segment-list-index](#) *number* [mbb last-mbb end-time](#) *string*

Tree [end-time](#)

String Length 20 to 32

Configurable False

Platforms 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

failed-reason *identityref*

Description Indicates the reason code for last MBB failure.

Context [network-instance name](#) *string* [traffic-engineering-policies policy-database sr-uncolored policy policy-name](#) *string* [protocol-origin keyword](#) [segment-list segment-list-index](#) *number* [mbb last-mbb failed-reason](#) *identityref*

Tree [failed-reason](#)

Options

- [path-computation-request-timeout](#)
Path computation request timed out
- [path-computation-no-route](#)
No valid route is returned for path computation request
- [no-resources-available](#)
Required resources are depleted, not enough resources to establish the requested segment-list
- [path-computation-bad-node](#)

- Path computation failure due to a resolution issue of one or more of the hops
- path-computation-routing-loop
Path computation failure due to routing loop
- unknown
Segment-list is down due to unknown reason
- path-computation-no-route-owner
Path computation failure as none of the IGP instances had a valid route to one of the hops
- path-computation-hop-limit-exceeded
Path computation failure due to hop limit. No path within the hop limit constraint configured
- srlg-not-disjoint
SRLG is shared with primary segment-list and there is no other viable path with dispersed SRLG
- srlg-not-computed-path
SRLG is not applicable, as primary segment-list has no applicable SRLG for path computation
- srlg-primary-segment-list-down
SRLG is not applicable, as primary segment-list is down
- unresolved-first-segment
The router is unable to resolve the first SID (MPLS label value) into one or more outgoing interface(s) and next-hop(s)
- fib-add-pending
Segment-list is kept down, when adding next-hop into the FIB
- fib-add-failed
FIB has failed to add the next-hop group. Next-hop group represents a group of next-hops for valid segment-lists under a TE-policy
- maximum-label-stack-depth-exceeded
The resolution of the named path requires more labels than supported by the datapath.
- pce-update-with-empty-ero
PCE update has empty Explicit Route Object (EROs)
- segment-list-admin-down
Segment-list is administratively down
- ipv4-hops-in-ipv6-path
IPv4 and IPv6 hops are mixed in explicit path
- ipv6-hops-in-ipv4-path

- IPv6 and IPv4 hops are mixed in explicit path
- sid-hops-in-ip-path
SID (label-based) and IP hops are mixed in explicit path
- sid-hops-with-invalid-path-computation
SID hops (labeled hops) with path computation local-cspf/pcep is not allowed
- policy-down
Traffic engineering policy is down
- pce-association-conflict
PCE-association conflict
- retry-on-config-change
Segment-list retry attempted due to config change
- clear-command
Segment-list retry attempted due to manual clear command
- secondary-segment-list
Secondary type segment-list, Primary is always preferred when available
- bfd-down
BFD is reported down
- te-rtr-id-not-configured
TE router ID config is missing
- pce-down
PCE is unavailable
- pce-error
PCE response has error or timed-out
- pcc-error
PCC responded with error

Configurable

False

Platforms

7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

state keyword**Description**

Indicates whether the last make-before-break was successful, failed or was not required as path was already optimal.

Context

[network-instance name](#) *string* [traffic-engineering-policies policy-database sr-uncolored policy policy-name](#) *string* [protocol-origin keyword segment-list segment-list-index](#) *number* [mbb last-mbb state](#) *keyword*

Tree[state](#)

Options	<ul style="list-style-type: none"> • success • failure • path-optimal
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

type *keyword*

Description	Indicates the type of the make-before-break (MBB) that is in progress.
Context	network-instance name <i>string</i> traffic-engineering-policies policy-database sr-uncolored policy policy-name <i>string</i> protocol-origin keyword segment-list segment-list-index <i>number</i> mbb last-mbb type <i>keyword</i>
Tree	type
Options	<ul style="list-style-type: none"> • none • timer-based-reoptimization • manual-resignal • pce-update
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

metric *number*

Description	Metric of a given Segment List
Context	network-instance name <i>string</i> traffic-engineering-policies policy-database sr-uncolored policy policy-name <i>string</i> protocol-origin keyword segment-list segment-list-index <i>number</i> metric <i>number</i>
Tree	metric
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

next-reoptimization-attempt *string*

Description	Time remaining for next path re-optimization attempt on the segment-list
Context	network-instance name <i>string</i> traffic-engineering-policies policy-database sr-uncolored policy policy-name <i>string</i> protocol-origin keyword segment-list segment-list-index <i>number</i> next-reoptimization-attempt <i>string</i>
Tree	next-reoptimization-attempt

String Length	20 to 32
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

next-retry-attempt *string*

Description	Time remaining for next retry attempt to re-established the segment-list
Context	network-instance name <i>string</i> traffic-engineering-policies policy-database sr-uncolored policy policy-name <i>string</i> protocol-origin keyword segment-list segment-list-index <i>number</i> next-retry-attempt <i>string</i>
Tree	next-retry-attempt
String Length	20 to 32
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

oper-state *keyword*

Description	Segment list operational state
Context	network-instance name <i>string</i> traffic-engineering-policies policy-database sr-uncolored policy policy-name <i>string</i> protocol-origin keyword segment-list segment-list-index <i>number</i> oper-state <i>keyword</i>
Tree	oper-state
Options	<ul style="list-style-type: none"> • up The segment-list is operationally up. • down The segment-list is operationally down
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

oper-state-change-count *number*

Description	Traffic Engineering Policy segment-list operational state change count Operational status transition from up to down, down to up, etc all accounted under this counter
Context	network-instance name <i>string</i> traffic-engineering-policies policy-database sr-uncolored policy policy-name <i>string</i> protocol-origin keyword segment-list segment-list-index <i>number</i> oper-state-change-count <i>number</i>
Tree	oper-state-change-count

Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

path-computation-requests *number*

Description	Number of path computation requests made for the segment-list
Context	network-instance name <i>string</i> traffic-engineering-policies policy-database sr-uncolored policy policy-name <i>string</i> protocol-origin <i>keyword</i> segment-list segment-list-index <i>number</i> path-computation-requests <i>number</i>
Tree	path-computation-requests
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

pce-control *boolean*

Description	PCE Control status for Traffic Engineering Policy Segment-list
Context	network-instance name <i>string</i> traffic-engineering-policies policy-database sr-uncolored policy policy-name <i>string</i> protocol-origin <i>keyword</i> segment-list segment-list-index <i>number</i> pce-control <i>boolean</i>
Tree	pce-control
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

pce-report *boolean*

Description	PCE Reporting for Traffic Engineering Policy Segment-list
Context	network-instance name <i>string</i> traffic-engineering-policies policy-database sr-uncolored policy policy-name <i>string</i> protocol-origin <i>keyword</i> segment-list segment-list-index <i>number</i> pce-report <i>boolean</i>
Tree	pce-report
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

retry-attempts *number*

Description	Number of unsuccessful attempts made to signal the segment-list
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Context	network-instance name <i>string</i> traffic-engineering-policies policy-database sr-uncolored policy policy-name <i>string</i> protocol-origin keyword segment-list segment-list-index <i>number</i> retry-attempts <i>number</i>
Tree	retry-attempts
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

revert-timer *number*

Description	Revert timer for the segment-list. Timer till a revert to primary/best path after it is recovered from a failure. In case of uncolored te-policy, applies to primary segment-list and in case of colored te-policy applies to best candidate path. The default is 0 seconds.
Context	network-instance name <i>string</i> traffic-engineering-policies policy-database sr-uncolored policy policy-name <i>string</i> protocol-origin keyword segment-list segment-list-index <i>number</i> revert-timer <i>number</i>
Tree	revert-timer
Units	seconds
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

revert-timer-expiry *string*

Description	Time remaining on revert-timer
Context	network-instance name <i>string</i> traffic-engineering-policies policy-database sr-uncolored policy policy-name <i>string</i> protocol-origin keyword segment-list segment-list-index <i>number</i> revert-timer-expiry <i>string</i>
Tree	revert-timer-expiry
String Length	20 to 32
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

segment-list-preference *number*

Description	Segment List preference for a given list under Traffic Engineering Policy
Context	network-instance name <i>string</i> traffic-engineering-policies policy-database sr-uncolored policy policy-name <i>string</i> protocol-origin keyword segment-list segment-list-index <i>number</i> segment-list-preference <i>number</i>

Tree	segment-list-preference
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

segment-list-type *keyword*

Description	Segment-list type: primary, standby or secondary Standby is programmed in datapath, consumes resources and is ready for a failover any time. Secondary is programmed upon failure of the previous active
Context	network-instance name <i>string</i> traffic-engineering-policies policy-database sr-uncolored policy policy-name <i>string</i> protocol-origin <i>keyword</i> segment-list segment-list-index <i>number</i> segment-list-type <i>keyword</i>
Tree	segment-list-type
Options	<ul style="list-style-type: none"> • primary • secondary • standby
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

te-metric *number*

Description	TE metric of given Segment List
Context	network-instance name <i>string</i> traffic-engineering-policies policy-database sr-uncolored policy policy-name <i>string</i> protocol-origin <i>keyword</i> segment-list segment-list-index <i>number</i> te-metric <i>number</i>
Tree	te-metric
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

segment-list-count *number*

Description	Uncolored Traffic Engineering Policy segment-list count
Context	network-instance name <i>string</i> traffic-engineering-policies policy-database sr-uncolored policy policy-name <i>string</i> protocol-origin <i>keyword</i> segment-list-count <i>number</i>
Tree	segment-list-count
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

tunnel-id *number*

Description	Uncolored Traffic Engineering Policy unique tunnel identifier
Context	network-instance name <i>string</i> traffic-engineering-policies policy-database sr-uncolored policy policy-name <i>string</i> protocol-origin <i>keyword</i> tunnel-id <i>number</i>
Tree	tunnel-id
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

total-te-policies *number*

Description	Number of total Traffic Engineering Policies (irrespective of the operational state)
Context	network-instance name <i>string</i> traffic-engineering-policies policy-database total-te-policies <i>number</i>
Tree	total-te-policies
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

tunnel-table

Description	Enter the tunnel-table context
Context	network-instance name <i>string</i> tunnel-table
Tree	tunnel-table
Configurable	False
Platforms	Supported on all platforms

ipv4

Description	The container for the IPv4 tunnels associated with the network instance.
Context	network-instance name <i>string</i> tunnel-table ipv4
Tree	ipv4
Configurable	False
Platforms	Supported on all platforms

statistics

Description	Enter the statistics context
Context	network-instance name <i>string</i> tunnel-table ipv4 statistics
Tree	statistics
Configurable	False
Platforms	Supported on all platforms

active-tunnels *number*

Description	The total number of tunnels, belonging to this address family, that are active.
Context	network-instance name <i>string</i> tunnel-table ipv4 statistics active-tunnels <i>number</i>
Tree	active-tunnels
Configurable	False
Platforms	Supported on all platforms

inactive-tunnels *number*

Description	The total number of tunnels, belonging to this address family, that are inactive (not programmed).
Context	network-instance name <i>string</i> tunnel-table ipv4 statistics inactive-tunnels <i>number</i>
Tree	inactive-tunnels
Configurable	False
Platforms	Supported on all platforms

total-tunnels *number*

Description	The total number of tunnels, active and inactive, belonging to this address family
Context	network-instance name <i>string</i> tunnel-table ipv4 statistics total-tunnels <i>number</i>
Tree	total-tunnels
Default	0
Configurable	False
Platforms	Supported on all platforms

tunnel ipv4-prefix *string type identityref owner string id number*

Description	Enter the tunnel list instance
Context	network-instance name <i>string</i> tunnel-table ipv4 tunnel ipv4-prefix <i>string type identityref owner string id number</i>
Tree	tunnel
Configurable	False
Platforms	Supported on all platforms

ipv4-prefix *string*

Description	The IPv4 prefix associated with the endpoint of the tunnel.
Context	network-instance name <i>string</i> tunnel-table ipv4 tunnel ipv4-prefix <i>string type identityref owner string id number</i>
Configurable	False
Platforms	Supported on all platforms

type *identityref*

Description	The tunnel (encapsulation) type
Context	network-instance name <i>string</i> tunnel-table ipv4 tunnel ipv4-prefix <i>string type identityref owner string id number</i>
Options	<ul style="list-style-type: none"> • ip-in-ip Tunnels with IP-in-IP encapsulation • gre Tunnels with GRE encapsulation • sr-isis Segment routing using MPLS dataplane, programmed by IS-IS • sr-ospfv2 Segment routing using MPLS dataplane, programmed by OSPFv2 • sr-ospfv3 Segment routing using MPLS dataplane, programmed by OSPFv3 • te-policy-sr-mpls-colored Tunnel setup with sr-mpls-colored type TE-Policy. Labeled Traffic Engineering Policy with color • te-policy-sr-mpls-uncolored

Tunnel setup with sr-mpls-uncolored type TE-Policy. Labeled Traffic Engineering Policy with primary and secondary segment-lists.

- vxlan

Tunnels based on VXLAN encapsulation

Configurable	False
Platforms	Supported on all platforms

owner string

Description	The name of the application that submitted the tunnel to TTM
Context	network-instance name string tunnel-table ipv4 tunnel ipv4-prefix string type identityref owner string id number
Configurable	False
Platforms	Supported on all platforms

id number

Description	An owner-assigned index value that is unique for each of the tunnels terminating at a particular prefix.
Context	network-instance name string tunnel-table ipv4 tunnel ipv4-prefix string type identityref owner string id number
Configurable	False
Platforms	Supported on all platforms

encapsulation-type keyword

Description	The type of encapsulation used by the tunnel.
Context	network-instance name string tunnel-table ipv4 tunnel ipv4-prefix string type identityref owner string id number encapsulation-type keyword
Tree	encapsulation-type
Options	<ul style="list-style-type: none"> • vxlan • mpls
Configurable	False
Platforms	Supported on all platforms

fib-programming

Description	Container for state related to the FIB programming of the tunnel
Context	network-instance name string tunnel-table ipv4 tunnel ipv4-prefix string type identityref owner string id number fib-programming
Tree	fib-programming
Configurable	False
Platforms	Supported on all platforms

not-programmed-reason keyword

Description	The reason why the tunnel is not programmed
Context	network-instance name string tunnel-table ipv4 tunnel ipv4-prefix string type identityref owner string id number fib-programming not-programmed-reason keyword
Tree	not-programmed-reason
Options	<ul style="list-style-type: none"> • out-of-tunnel-resources
Configurable	False
Platforms	Supported on all platforms

status keyword

Description	The status of the tunnel programming
Context	network-instance name string tunnel-table ipv4 tunnel ipv4-prefix string type identityref owner string id number fib-programming status keyword
Tree	status
Options	<ul style="list-style-type: none"> • active The tunnel is active and programmed into the datapath. • inactive The tunnel is inactive and not programmed into the datapath.
Configurable	False
Platforms	Supported on all platforms

internal-tags string

Description	Internal route tag written in the route/tunnel tables or BGP rib
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The internal-tag value is shown with the format 'type-string = hex-value-string'. For example:

Context	network-instance name <i>string</i> tunnel-table ipv4 tunnel ipv4-prefix <i>string</i> type identityref owner <i>string</i> id number internal-tags <i>string</i>
Tree	internal-tags
Configurable	False
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b
Max. Elements	2

ip-in-ip

Description	Enter the ip-in-ip context
Context	network-instance name <i>string</i> tunnel-table ipv4 tunnel ipv4-prefix <i>string</i> type identityref owner <i>string</i> id number ip-in-ip
Tree	ip-in-ip
Configurable	False
Platforms	Supported on all platforms

destination-address (*ipv4-address* | *ipv6-address*)

Description	The IP address that identifies the destination of the tunnel.
Context	network-instance name <i>string</i> tunnel-table ipv4 tunnel ipv4-prefix <i>string</i> type identityref owner <i>string</i> id number ip-in-ip destination-address (<i>ipv4-address</i> <i>ipv6-address</i>)
Tree	destination-address
Configurable	False
Platforms	Supported on all platforms

source-address (*ipv4-address* | *ipv6-address*)

Description	The IP address that identifies the source of the tunnel.
Context	network-instance name <i>string</i> tunnel-table ipv4 tunnel ipv4-prefix <i>string</i> type identityref owner <i>string</i> id number ip-in-ip source-address (<i>ipv4-address</i> <i>ipv6-address</i>)
Tree	source-address
Configurable	False

Platforms Supported on all platforms

last-app-update *string*

Description The date and time of the last update of this tunnel by the owning application or protocol.

Context [network-instance name](#) *string* [tunnel-table ipv4 tunnel ipv4-prefix](#) *string type identityref owner* *string id number last-app-update* *string*

Tree [last-app-update](#)

String Length 20 to 32

Configurable False

Platforms Supported on all platforms

metric *number*

Description The metric of the tunnel.

Context [network-instance name](#) *string* [tunnel-table ipv4 tunnel ipv4-prefix](#) *string type identityref owner* *string id number metric* *number*

Tree [metric](#)

Configurable False

Platforms Supported on all platforms

next-hop-group *reference*

Description Leaf reference to a next-hop-group that has the direct next-hops towards the tunnel far-end

Context [network-instance name](#) *string* [tunnel-table ipv4 tunnel ipv4-prefix](#) *string type identityref owner* *string id number next-hop-group* *reference*

Tree [next-hop-group](#)

Reference [network-instance name](#) *string* [route-table next-hop-group index](#) *number*

Configurable False

Platforms Supported on all platforms

preference *number*

Description The tunnel table preference.

Context [network-instance name](#) *string* [tunnel-table ipv4 tunnel ipv4-prefix](#) *string type identityref owner* *string id number preference* *number*

Tree	preference
Configurable	False
Platforms	Supported on all platforms

vxlan

Description	Enter the vxlan context
Context	network-instance name string tunnel-table ipv4 tunnel ipv4-prefix string type identityref owner string id number vxlan
Tree	vxlan
Configurable	False
Platforms	Supported on all platforms

destination-address (*ipv4-address | ipv6-address*)

Description	The IP address that identifies the remote VXLAN Termination Endpoint (VTEP).
Context	network-instance name string tunnel-table ipv4 tunnel ipv4-prefix string type identityref owner string id number vxlan destination-address (<i>ipv4-address ipv6-address</i>)
Tree	destination-address
Configurable	False
Platforms	Supported on all platforms

destination-udp-port *number*

Description	The destination UDP port number written into the outer IP/UDP header of VXLAN packets associated with this tunnel and originated by this router.
Context	network-instance name string tunnel-table ipv4 tunnel ipv4-prefix string type identityref owner string id number vxlan destination-udp-port <i>number</i>
Tree	destination-udp-port
Configurable	False
Platforms	Supported on all platforms

source-address (*ipv4-address | ipv6-address*)

Description	The IP address that identifies the local VXLAN Termination Endpoint (VTEP).
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Context	network-instance name <i>string</i> tunnel-table ipv4 tunnel ipv4-prefix <i>string</i> type identityref owner <i>string</i> id number vxlan source-address (<i>ipv4-address ipv6-address</i>)
Tree	source-address
Configurable	False
Platforms	Supported on all platforms

time-to-live *number*

Description	The Time To Live (TTL) value written into the outer IP header of VXLAN packets associated with this tunnel and originated by this router.
Context	network-instance name <i>string</i> tunnel-table ipv4 tunnel ipv4-prefix <i>string</i> type identityref owner <i>string</i> id number vxlan time-to-live <i>number</i>
Tree	time-to-live
Configurable	False
Platforms	Supported on all platforms

tunnel-summary

Description	Tunnel summary information
Context	network-instance name <i>string</i> tunnel-table ipv4 tunnel-summary
Tree	tunnel-summary
Configurable	False
Platforms	Supported on all platforms

tunnel-type *type identityref*

Description	Enter the tunnel-type list instance
Context	network-instance name <i>string</i> tunnel-table ipv4 tunnel-summary tunnel-type <i>type identityref</i>
Tree	tunnel-type
Configurable	False
Platforms	Supported on all platforms

type *identityref*

Description	Tunneling encapsulation format
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Context	network-instance name <i>string</i> tunnel-table ipv4 tunnel-summary tunnel-type type identityref
Options	<ul style="list-style-type: none"> • ip-in-ip Tunnels with IP-in-IP encapsulation • gre Tunnels with GRE encapsulation • sr-isis Segment routing using MPLS dataplane, programmed by IS-IS • sr-ospfv2 Segment routing using MPLS dataplane, programmed by OSPFv2 • sr-ospfv3 Segment routing using MPLS dataplane, programmed by OSPFv3 • te-policy-sr-mpls-colored Tunnel setup with sr-mpls-colored type TE-Policy. Labeled Traffic Engineering Policy with color • te-policy-sr-mpls-uncolored Tunnel setup with sr-mpls-uncolored type TE-Policy. Labeled Traffic Engineering Policy with primary and secondary segment-lists. • vxlan Tunnels based on VXLAN encapsulation
Configurable	False
Platforms	Supported on all platforms

active-tunnels *number*

Description	The total number of tunnels, using this encapsulation type, that are active.
Context	network-instance name <i>string</i> tunnel-table ipv4 tunnel-summary tunnel-type type identityref active-tunnels <i>number</i>
Tree	active-tunnels
Configurable	False
Platforms	Supported on all platforms

inactive-tunnels *number*

Description	The total number of tunnels, using this encapsulation type, that are inactive (not programmed).
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Context	network-instance name <i>string</i> tunnel-table ipv4 tunnel-summary tunnel-type type identityref inactive-tunnels <i>number</i>
Tree	inactive-tunnels
Configurable	False
Platforms	Supported on all platforms

total-tunnels *number*

Description	The total number of tunnels, active and inactive, using this encapsulation type.
Context	network-instance name <i>string</i> tunnel-table ipv4 tunnel-summary tunnel-type type identityref total-tunnels <i>number</i>
Tree	total-tunnels
Default	0
Configurable	False
Platforms	Supported on all platforms

ipv6

Description	The container for the IPv6 tunnels associated with the network instance.
Context	network-instance name <i>string</i> tunnel-table ipv6
Tree	ipv6
Configurable	False
Platforms	Supported on all platforms

statistics

Description	Enter the statistics context
Context	network-instance name <i>string</i> tunnel-table ipv6 statistics
Tree	statistics
Configurable	False
Platforms	Supported on all platforms

active-tunnels *number*

Description	The total number of tunnels, belonging to this address family, that are active.
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Context	network-instance name <i>string</i> tunnel-table ipv6 statistics active-tunnels <i>number</i>
Tree	active-tunnels
Configurable	False
Platforms	Supported on all platforms

inactive-tunnels *number*

Description	The total number of tunnels, belonging to this address family, that are inactive (not programmed).
Context	network-instance name <i>string</i> tunnel-table ipv6 statistics inactive-tunnels <i>number</i>
Tree	inactive-tunnels
Configurable	False
Platforms	Supported on all platforms

total-tunnels *number*

Description	The total number of tunnels, active and inactive, belonging to this address family
Context	network-instance name <i>string</i> tunnel-table ipv6 statistics total-tunnels <i>number</i>
Tree	total-tunnels
Default	0
Configurable	False
Platforms	Supported on all platforms

tunnel [ipv6-prefix](#) *string* [type](#) [identityref](#) [owner](#) *string* [id](#) *number*

Description	Enter the tunnel list instance
Context	network-instance name <i>string</i> tunnel-table ipv6 tunnel ipv6-prefix <i>string</i> type identityref owner <i>string</i> id <i>number</i>
Tree	tunnel
Configurable	False
Platforms	Supported on all platforms

ipv6-prefix *string*

Description	The IPv6 prefix associated with the endpoint of the tunnel.
Context	network-instance name <i>string</i> tunnel-table ipv6 tunnel ipv6-prefix <i>string type identityref owner string id number</i>
Configurable	False
Platforms	Supported on all platforms

type *identityref*

Description	The tunnel (encapsulation) type
Context	network-instance name <i>string</i> tunnel-table ipv6 tunnel ipv6-prefix <i>string type identityref owner string id number</i>
Options	<ul style="list-style-type: none"> • ip-in-ip Tunnels with IP-in-IP encapsulation • gre Tunnels with GRE encapsulation • sr-isis Segment routing using MPLS dataplane, programmed by IS-IS • sr-ospfv2 Segment routing using MPLS dataplane, programmed by OSPFv2 • sr-ospfv3 Segment routing using MPLS dataplane, programmed by OSPFv3 • te-policy-sr-mpls-colored Tunnel setup with sr-mpls-colored type TE-Policy. Labeled Traffic Engineering Policy with color • te-policy-sr-mpls-uncolored Tunnel setup with sr-mpls-uncolored type TE-Policy. Labeled Traffic Engineering Policy with primary and secondary segment-lists. • vxlan Tunnels based on VXLAN encapsulation
Configurable	False
Platforms	Supported on all platforms

owner *string*

Description	The name of the application that submitted the tunnel to TTM
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Context	network-instance name <i>string</i> tunnel-table ipv6 tunnel ipv6-prefix <i>string</i> type identityref owner <i>string</i> id number
Configurable	False
Platforms	Supported on all platforms

id number

Description	An owner-assigned index value that is unique for each of the tunnels terminating at a particular prefix.
Context	network-instance name <i>string</i> tunnel-table ipv6 tunnel ipv6-prefix <i>string</i> type identityref owner <i>string</i> id number
Configurable	False
Platforms	Supported on all platforms

encapsulation-type keyword

Description	The type of encapsulation used by the tunnel.
Context	network-instance name <i>string</i> tunnel-table ipv6 tunnel ipv6-prefix <i>string</i> type identityref owner <i>string</i> id number encapsulation-type <i>keyword</i>
Tree	encapsulation-type
Options	<ul style="list-style-type: none"> • vxlan • mpls
Configurable	False
Platforms	Supported on all platforms

fib-programming

Description	Container for state related to the FIB programming of the tunnel
Context	network-instance name <i>string</i> tunnel-table ipv6 tunnel ipv6-prefix <i>string</i> type identityref owner <i>string</i> id number fib-programming
Tree	fib-programming
Configurable	False
Platforms	Supported on all platforms

not-programmed-reason keyword

Description	The reason why the tunnel is not programmed
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Context	network-instance name <i>string</i> tunnel-table ipv6 tunnel ipv6-prefix <i>string</i> type identityref owner <i>string</i> id number fib-programming not-programmed-reason <i>keyword</i>
Tree	not-programmed-reason
Options	<ul style="list-style-type: none"> • out-of-tunnel-resources
Configurable	False
Platforms	Supported on all platforms

status *keyword*

Description	The status of the tunnel programming
Context	network-instance name <i>string</i> tunnel-table ipv6 tunnel ipv6-prefix <i>string</i> type identityref owner <i>string</i> id number fib-programming status <i>keyword</i>
Tree	status
Options	<ul style="list-style-type: none"> • active The tunnel is active and programmed into the datapath. • inactive The tunnel is inactive and not programmed into the datapath.
Configurable	False
Platforms	Supported on all platforms

internal-tags *string*

Description	Internal route tag written in the route/tunnel tables or BGP rib The internal-tag value is shown with the format 'type-string = hex-value-string'. For example:
Context	network-instance name <i>string</i> tunnel-table ipv6 tunnel ipv6-prefix <i>string</i> type identityref owner <i>string</i> id number internal-tags <i>string</i>
Tree	internal-tags
Configurable	False
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b
Max. Elements	2

ip-in-ip

Description	Enter the ip-in-ip context
Context	network-instance name string tunnel-table ipv6 tunnel ipv6-prefix string type identityref owner string id number ip-in-ip
Tree	ip-in-ip
Configurable	False
Platforms	Supported on all platforms

destination-address (*ipv4-address* | *ipv6-address*)

Description	The IP address that identifies the destination of the tunnel.
Context	network-instance name string tunnel-table ipv6 tunnel ipv6-prefix string type identityref owner string id number ip-in-ip destination-address (ipv4-address ipv6-address)
Tree	destination-address
Configurable	False
Platforms	Supported on all platforms

source-address (*ipv4-address* | *ipv6-address*)

Description	The IP address that identifies the source of the tunnel.
Context	network-instance name string tunnel-table ipv6 tunnel ipv6-prefix string type identityref owner string id number ip-in-ip source-address (ipv4-address ipv6-address)
Tree	source-address
Configurable	False
Platforms	Supported on all platforms

last-app-update *string*

Description	The date and time of the last update of this tunnel by the owning application or protocol.
Context	network-instance name string tunnel-table ipv6 tunnel ipv6-prefix string type identityref owner string id number last-app-update string
Tree	last-app-update
String Length	20 to 32
Configurable	False

Platforms Supported on all platforms

metric number

Description The metric of the tunnel.

Context [network-instance name string](#) [tunnel-table ipv6 tunnel ipv6-prefix string type identityref owner string id number metric number](#)

Tree [metric](#)

Configurable False

Platforms Supported on all platforms

next-hop-group reference

Description Leaf reference to a next-hop-group that has the direct next-hops towards the tunnel far-end

Context [network-instance name string](#) [tunnel-table ipv6 tunnel ipv6-prefix string type identityref owner string id number next-hop-group reference](#)

Tree [next-hop-group](#)

Reference [network-instance name string](#) [route-table next-hop-group index number](#)

Configurable False

Platforms Supported on all platforms

preference number

Description The tunnel table preference.

Context [network-instance name string](#) [tunnel-table ipv6 tunnel ipv6-prefix string type identityref owner string id number preference number](#)

Tree [preference](#)

Configurable False

Platforms Supported on all platforms

vxlan

Description Enter the vxlan context

Context [network-instance name string](#) [tunnel-table ipv6 tunnel ipv6-prefix string type identityref owner string id number vxlan](#)

Tree [vxlan](#)

Configurable	False
Platforms	Supported on all platforms

destination-address (*ipv4-address* | *ipv6-address*)

Description	The IP address that identifies the remote VXLAN Termination Endpoint (VTEP).
Context	network-instance name <i>string</i> tunnel-table ipv6 tunnel ipv6-prefix <i>string type identityref</i> owner <i>string id number vxlan</i> destination-address (<i>ipv4-address</i> <i>ipv6-address</i>)
Tree	destination-address
Configurable	False
Platforms	Supported on all platforms

destination-udp-port *number*

Description	The destination UDP port number written into the outer IP/UDP header of VXLAN packets associated with this tunnel and originated by this router.
Context	network-instance name <i>string</i> tunnel-table ipv6 tunnel ipv6-prefix <i>string type identityref</i> owner <i>string id number vxlan</i> destination-udp-port <i>number</i>
Tree	destination-udp-port
Configurable	False
Platforms	Supported on all platforms

source-address (*ipv4-address* | *ipv6-address*)

Description	The IP address that identifies the local VXLAN Termination Endpoint (VTEP).
Context	network-instance name <i>string</i> tunnel-table ipv6 tunnel ipv6-prefix <i>string type identityref</i> owner <i>string id number vxlan</i> source-address (<i>ipv4-address</i> <i>ipv6-address</i>)
Tree	source-address
Configurable	False
Platforms	Supported on all platforms

time-to-live *number*

Description	The Time To Live (TTL) value written into the outer IP header of VXLAN packets associated with this tunnel and originated by this router.
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Context	network-instance name <i>string</i> tunnel-table ipv6 tunnel ipv6-prefix <i>string</i> type identityref owner <i>string</i> id <i>number</i> vxlan time-to-live <i>number</i>
Tree	time-to-live
Configurable	False
Platforms	Supported on all platforms

tunnel-summary

Description	Tunnel summary information
Context	network-instance name <i>string</i> tunnel-table ipv6 tunnel-summary
Tree	tunnel-summary
Configurable	False
Platforms	Supported on all platforms

tunnel-type [type](#) *identityref*

Description	Enter the tunnel-type list instance
Context	network-instance name <i>string</i> tunnel-table ipv6 tunnel-summary tunnel-type type <i>identityref</i>
Tree	tunnel-type
Configurable	False
Platforms	Supported on all platforms

[type](#) *identityref*

Description	Tunneling encapsulation format
Context	network-instance name <i>string</i> tunnel-table ipv6 tunnel-summary tunnel-type type <i>identityref</i>
Options	<ul style="list-style-type: none"> • ip-in-ip Tunnels with IP-in-IP encapsulation • gre Tunnels with GRE encapsulation • sr-isis Segment routing using MPLS dataplane, programmed by IS-IS • sr-ospfv2 Segment routing using MPLS dataplane, programmed by OSPFv2 • sr-ospfv3

Segment routing using MPLS dataplane, programmed by OSPFv3

- te-policy-sr-mpls-colored

Tunnel setup with sr-mpls-colored type TE-Policy. Labeled Traffic Engineering Policy with color

- te-policy-sr-mpls-uncolored

Tunnel setup with sr-mpls-uncolored type TE-Policy. Labeled Traffic Engineering Policy with primary and secondary segment-lists.

- vxlan

Tunnels based on VXLAN encapsulation

Configurable	False
Platforms	Supported on all platforms

active-tunnels *number*

Description	The total number of tunnels, using this encapsulation type, that are active.
Context	network-instance name <i>string</i> tunnel-table ipv6 tunnel-summary tunnel-type type identityref active-tunnels <i>number</i>
Tree	active-tunnels
Configurable	False
Platforms	Supported on all platforms

inactive-tunnels *number*

Description	The total number of tunnels, using this encapsulation type, that are inactive (not programmed).
Context	network-instance name <i>string</i> tunnel-table ipv6 tunnel-summary tunnel-type type identityref inactive-tunnels <i>number</i>
Tree	inactive-tunnels
Configurable	False
Platforms	Supported on all platforms

total-tunnels *number*

Description	The total number of tunnels, active and inactive, using this encapsulation type.
Context	network-instance name <i>string</i> tunnel-table ipv6 tunnel-summary tunnel-type type identityref total-tunnels <i>number</i>
Tree	total-tunnels

Default	0
Configurable	False
Platforms	Supported on all platforms

type *identityref*

Description	The type of network instance. The value of this leaf indicates the type of forwarding entries that should be supported by this network instance
Context	network-instance name <i>string</i> type identityref
Tree	type
Default	default
Options	<ul style="list-style-type: none"> • host A special routing instances that refers to the hosts network instance (i.e. the network namespace of PID 1) • default A special routing instance which acts as the 'default' routing instance for a network device. • ip-vrf A private Layer 3 only routing instance. • mac-vrf A private Layer 2 only switching instance. • vpws A private Layer 2 point-to-point instance.
Configurable	True
Platforms	Supported on all platforms

udp

Description	State for UDP datagrams routed using the route tables of this network instance.
Context	network-instance name <i>string</i> udp
Tree	udp
Configurable	False
Platforms	Supported on all platforms

listening-application *local-address (ipv4-address | ipv6-address) local-port number*

Description	List of applications that are listening on a particular UDP port bound to the network-instance.
Context	network-instance name <i>string</i> udp listening-application local-address (ipv4-address ipv6-address) <i>local-port number</i>
Tree	listening-application
Configurable	False
Platforms	Supported on all platforms

local-address *(ipv4-address | ipv6-address)*

Description	The local IP address accepted by the application. An all-zeroes value for the ipv4-address means that any IPv4 address is accepted. An all-zeroes value for the ipv6-address means that any IPv6 address is accepted.
Context	network-instance name <i>string</i> udp listening-application local-address (ipv4-address ipv6-address) <i>local-port number</i>
Configurable	False
Platforms	Supported on all platforms

local-port *number*

Description	The local port number accepted by the application.
Context	network-instance name <i>string</i> udp listening-application local-address (ipv4-address ipv6-address) <i>local-port number</i>
Range	0 to 65535
Configurable	False
Platforms	Supported on all platforms

process-id *number*

Description	The process ID of the application that owns the socket.
Context	network-instance name <i>string</i> udp listening-application local-address (ipv4-address ipv6-address) <i>local-port number process-id number</i>
Tree	process-id
Configurable	False
Platforms	Supported on all platforms

statistics

Description	Enter the statistics context
Context	network-instance name <i>string</i> udp statistics
Tree	statistics
Configurable	False
Platforms	Supported on all platforms

ignored-multicast-packets *number*

Description	The total number of ignored multicast UDP datagrams.
Context	network-instance name <i>string</i> udp statistics ignored-multicast-packets <i>number</i>
Tree	ignored-multicast-packets
Default	0
Configurable	False
Platforms	Supported on all platforms

in-checksum-errors *number*

Description	Increased when a received UDP packet has an invalid checksum.
Context	network-instance name <i>string</i> udp statistics in-checksum-errors <i>number</i>
Tree	in-checksum-errors
Default	0
Configurable	False
Platforms	Supported on all platforms

in-error-packets *number*

Description	The total number of received UDP datagrams that could not be delivered for reasons other than the lack of an application at the destination port.
Context	network-instance name <i>string</i> udp statistics in-error-packets <i>number</i>
Tree	in-error-packets
Default	0
Configurable	False
Platforms	Supported on all platforms

in-no-open-ports-packets *number*

Description	The total number of received UDP datagrams for which there was no application at the destination port.
Context	network-instance name <i>string</i> udp statistics in-no-open-ports-packets <i>number</i>
Tree	in-no-open-ports-packets
Default	0
Configurable	False
Platforms	Supported on all platforms

in-packets *number*

Description	The total number of UDP datagrams delivered to UDP users.
Context	network-instance name <i>string</i> udp statistics in-packets <i>number</i>
Tree	in-packets
Default	0
Configurable	False
Platforms	Supported on all platforms

out-packets *number*

Description	The total number of UDP datagrams sent from this network instance.
Context	network-instance name <i>string</i> udp statistics out-packets <i>number</i>
Tree	out-packets
Default	0
Configurable	False
Platforms	Supported on all platforms

receive-buffer-errors *number*

Description	Increased when memory cannot be allocated to process an incoming UDP packet.
Context	network-instance name <i>string</i> udp statistics receive-buffer-errors <i>number</i>
Tree	receive-buffer-errors
Default	0

Configurable	False
Platforms	Supported on all platforms

send-buffer-errors *number*

Description	Increased when memory cannot be allocated to send a UDP packet.
Context	network-instance name <i>string</i> udp statistics send-buffer-errors <i>number</i>
Tree	send-buffer-errors
Default	0
Configurable	False
Platforms	Supported on all platforms

vxlan-interface [name](#) *string*

Description	List of vxlan-interfaces used by this network-instance
Context	network-instance name <i>string</i> vxlan-interface name <i>string</i>
Tree	vxlan-interface
Configurable	True
Platforms	7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5
Max. Elements	1

name *string*

Description	Identifier of vxlan-interface used in this network-instance
Context	network-instance name <i>string</i> vxlan-interface name <i>string</i>
String Length	8 to 17
Configurable	True
Platforms	7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5

oper-down-reason *keyword*

Description	The reason for the vxlan-interface being down in the network-instance
Context	network-instance name <i>string</i> vxlan-interface name <i>string</i> oper-down-reason <i>keyword</i>
Tree	oper-down-reason

Options	<ul style="list-style-type: none"> • vxlan-tunnel-down • net-inst-down • vxlan-if-default-net-inst-source-address-missing • vxlan-if-default-net-inst-source-if-down • vrf-type-mismatch • no-mcid
Configurable	False
Platforms	7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5

oper-state *keyword*

Description	The operational state of this vxlan-interface.
Context	network-instance name <i>string</i> vxlan-interface name <i>string</i> oper-state <i>keyword</i>
Tree	oper-state
Options	<ul style="list-style-type: none"> • up Component or process is operational • down Component or process is not operational • empty Component slot is empty • downloading Component is downloading image into memory • booting Component is booting downloaded image • starting Component image operational, application processes starting • failed Component or process has failed • synchronizing Component is currently being synchronized • upgrading Component is currently being upgraded • low-power Component is offline due to insufficient system power

- degraded
Component or process is in a degraded state
- warm-reboot
Component or process is currently warm rebooting
This state is set during a warm reboot immediately following initiation of the reboot, continuing after startup until the system has completed audit. In this state the system will not accept configuration changes.
- waiting
Component or process is currently waiting
This state can be set by event handler when the reinvoke-with-delay action is used, and indicates that the event handler is waiting for the provided delay before reinvoking the instance.

Configurable

False

Platforms

7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5

7 oam

```

oam
+ ethcfm
- cfm-stack-table
- interface
  - interface interface string level number direction keyword
  - association-id string
  - defects keyword
  - domain-id string
  - mac-address string
  - mep-id number
- subinterface
  - subinterface subinterface string primary-vlan (number |
keyword) level number direction keyword
  - association-id string
  - defects keyword
  - domain-id string
  - mac-address string
  - mep-id number
  - subinterface-type string
+ domain domain-id string
+ association association-id string
  - association-auto-discovered-meps mep-id number
  + association-format keyword
  + association-meps mep-id number
  + ccm-hold-time
  + delay-timeout number
  + ccm-interval keyword
  + ma-name
  + icc-value string
  + id string
  + name string
  + number number
  + vid number
  + mep mep-id reference
  + admin-state keyword
  + ccm-ltm-priority number
  + continuity-check
    - active-defects keyword
  + ccm-local-fault
    + action keyword
    - ccm-sequence-error-count number
  + ccm-transmit keyword
  - highest-priority-defect-found keyword
  - last-cross-connect-ccm binary
  - last-error-ccm binary
  + lowest-fault-priority-defect keyword
  - sent-interface-status keyword
  - sent-port-status keyword
  - sent-remote-defect-indicator boolean
  + direction keyword
  + interface-ref
    + interface reference
    + subinterface reference
  - linktrace
    - latest-run
      - destination-mac-address string

```

```

- end-time string
- priority number
- remote-mep-id number
- reply reply-order number
- chassis-id (mac-address | string | binary)
- chassis-id-subtype (number | keyword)
- egress-action keyword
- egress-mac string
- egress-port-id
  - port-id-subtype keyword
  - value (mac-address | string | binary)
- forwarded boolean
- ingress-action keyword
- ingress-mac string
- ingress-port-id
  - port-id-subtype keyword
  - value (mac-address | string | binary)
- last-egress-identifier
  - integer number
  - mac-address string
- ltr-relay keyword
- management-address string
- management-address-domain string
- next-egress-identifier
  - integer number
  - mac-address string
- reply-ttl number
- terminal-mep boolean
- start-time string
- test-status keyword
- transaction-id number
- transmit-ltm-flags bits
- ttl number
- next-transaction-number number
- status keyword
- unexpected-ltr-received number
- Loopback
- multicast-latest-run
  - data-length number
  - end-time string
  - interval keyword
  - priority number
  - remote-mep-mac remote-mac-address string
  - sequence-number sequence-number received-index number number
  - start-time string
  - statistics
    - received-packets number
    - transmitted-packets number
  - test-status keyword
- next-sequence-number number
- status keyword
- unicast-latest-run
  - data-length number
  - destination-mac-address string
  - end-time string
  - interval keyword
  - priority number
  - remote-mep-id number
  - sequence-number number
  - start-time string
  - statistics
    - packet-loss decimal-number
    - received-bad-msdu number
    - received-in-order number

```

```

    - received-out-of-order number
    - sent-packets number
    - test-status keyword
  - remote-mep remote-mep-id number
    - auto-discovered boolean
    - chassis-id (mac-address | string | binary)
    - chassis-id-subtype (number | keyword)
    - interface-status-tlv keyword
    - mac-address string
    - management-address string
    - management-address-domain string
    - port-status-tlv keyword
    - receiving-ccm boolean
    - remote-defect-indicator boolean
    - remote-mep-failed-ok-time number
    - remote-mep-state keyword
  + network-instance
    + name reference
  + remote-mep-auto-discovery
    + admin-state keyword
    + aging-timer (number | keyword)
  + domain-format keyword
  + level number
  + md-name
    + dns string
    + mac string
    + name string
    + two-octet-int number
  - learned-remote-mac domain-id string association-id string local-mep-id number remote-mep-id number
    - remote-mac-address string
    - stale-flag boolean
  - statistics
    - error-discards number
    - receive-congestion-drops number
    - receive-count number
    - transmit-congestion-drops number
    - transmit-count number
  + ippm
    + source-udp-port-pools
      + port port-number number
      + application-assignment keyword
      - in-use boolean
  + link-measurement
    + interface name string
      - aggregate-newest-index number
      - destination-ip-auto-assigned boolean
      - detectable-transmit-error keyword
      + dynamic-measurement
        + link-measurement-template reference
        + stamp
          + ipv4
            + admin-state keyword
            + destination-ip string
            + source-ip string
          + ipv6
            + admin-state keyword
            + destination-ip string
            + source-ip string
      - in-use-destination-udp-port number
      - in-use-source-udp-port number
    + interface-ref
      + interface reference
      + subinterface reference

```

```

- last-reported-dynamic-delay (number | keyword)
- oper-state keyword
- operational-destination-address (ipv4-address | ipv6-address)
- operational-failure keyword
- operational-source-address (ipv4-address | ipv6-address)
- report-timestamp string
- report-triggered-by keyword
- reporting boolean
- sample-newest-index number
- source-ip-auto-assigned boolean
- stamp-session-sender-id number
- statistics
  - aggregate-sample-window
    - index index number
      - average number
      - end-timestamp-utc string
      - integrity boolean
      - maximum number
      - minimum number
      - result number
      - sample-window-count number
      - window-state keyword
    - sample-window
      - index index number
      - average number
      - duplicate-packet-count number
      - end-timestamp-utc string
      - error-count number
      - integrity boolean
      - maximum number
      - minimum number
      - received-packets number
      - result number
      - stamp-malformed-flag-count number
      - stamp-unrecognized-flag-count number
      - transmitted-packets number
      - window-state keyword
      - zero-or-negative-delay-count number
+ measurement-template template-name string
+ admin-state keyword
+ aggregate-sample-window
  + multiplier number
  + threshold
    + absolute number
    + relative number
  + window-integrity number
+ delay keyword
+ description string
+ interval number
+ last-reported-dynamic-delay-hold number
+ reporting boolean
+ sample-window
  + multiplier number
  + threshold
    + absolute number
    + relative number
  + window-integrity number
+ stamp
  + destination-udp-port number
  + dscp (number | keyword)
  + forwarding-class reference
  + ipv6-destination-discovery
    + admin-state keyword
    + discovery-interval number

```



```

+ discovery-timer number
+ update-interval number
+ pad-tlv-size number
+ profile keyword
+ return-path
+ link boolean
+ source-udp-port number
+ ttl number
+ unidirectional-measurement keyword
- lsp-ping
- ldp
- fec prefix (ipv4-prefix | ipv6-prefix)
- session-id id number
- path-destination
- ip-address (ipv4-address | ipv6-address)
- next-hop (ipv4-address | ipv6-address)
- subinterface string
- sequence sequence-id number
- out-interface string
- probe-size number
- reply
- mpls-ttl number
- received boolean
- reply-sender (ipv4-address | ipv6-address)
- return-code keyword
- return-subcode number
- round-trip-time number
- udp-data-length number
- request-sent boolean
- send-failure-reason keyword
- statistics
- round-trip-time
- average number
- maximum number
- minimum number
- standard-deviation number
- test-active boolean
- sr-isis
- prefix-sid prefix (ipv4-prefix | ipv6-prefix)
- session-id id number
- path-destination
- ip-address (ipv4-address | ipv6-address)
- next-hop (ipv4-address | ipv6-address)
- subinterface string
- sequence sequence-id number
- out-interface string
- probe-size number
- reply
- mpls-ttl number
- received boolean
- reply-sender (ipv4-address | ipv6-address)
- return-code keyword
- return-subcode number
- round-trip-time number
- udp-data-length number
- request-sent boolean
- send-failure-reason keyword
- statistics
- round-trip-time
- average number
- maximum number
- minimum number
- standard-deviation number
- test-active boolean

```

```

- te-policy
  - sr-uncolored
    - policy policy-name string protocol-origin keyword
    - session-id id number
    - path-destination
      - ip-address (ipv4-address | ipv6-address)
      - next-hop (ipv4-address | ipv6-address)
      - subinterface string
    - sequence sequence-id number
      - out-interface string
      - probe-size number
      - reply
        - mpls-ttl number
        - received boolean
        - reply-sender (ipv4-address | ipv6-address)
        - return-code keyword
        - return-subcode number
        - round-trip-time number
        - udp-data-length number
      - request-sent boolean
      - send-failure-reason keyword
    - statistics
      - round-trip-time
        - average number
        - maximum number
        - minimum number
        - standard-deviation number
      - test-active boolean
- lsp-trace
  - ldp
    - fec prefix (ipv4-prefix | ipv6-prefix)
    - session-id id number
    - hop hop-index number
    - probe probe-index number
      - downstream-detailed-mapping id number
        - address-type keyword
        - downstream-interface-address (ipv4-address | ipv6-address)
        - downstream-router-address (ipv4-address | ipv6-address)
        - mpls-label index number
          - label (number | keyword)
          - protocol keyword
        - mtu number
      - last-probe-send-failure-reason keyword
      - probe-size number
      - probes-sent number
      - reply
        - mpls-ttl number
        - received boolean
        - reply-sender (ipv4-address | ipv6-address)
        - return-code keyword
        - return-subcode number
        - round-trip-time number
        - udp-data-length number
    - path-destination
      - ip-address (ipv4-address | ipv6-address)
      - next-hop (ipv4-address | ipv6-address)
      - subinterface string
    - test-active boolean
  - sr-isis
    - prefix-sid prefix (ipv4-prefix | ipv6-prefix)
    - session-id id number
    - hop hop-index number
    - probe probe-index number
      - downstream-detailed-mapping id number

```

```

- address-type keyword
- downstream-interface-address (ipv4-address | ipv6-address)
- downstream-router-address (ipv4-address | ipv6-address)
- mpls-label index number
  - label (number | keyword)
  - protocol keyword
- mtu number
- last-probe-send-failure-reason keyword
- probe-size number
- probes-sent number
- reply
  - mpls-ttl number
  - received boolean
  - reply-sender (ipv4-address | ipv6-address)
  - return-code keyword
  - return-subcode number
  - round-trip-time number
  - udp-data-length number
- path-destination
  - ip-address (ipv4-address | ipv6-address)
  - next-hop (ipv4-address | ipv6-address)
  - subinterface string
  - test-active boolean
- te-policy
- sr-uncolored
  - policy policy-name string protocol-origin keyword
  - session-id id number
  - hop hop-index number
    - probe probe-index number
      - downstream-detailed-mapping id number
        - address-type keyword
        - downstream-interface-address (ipv4-address | ipv6-address)
        - downstream-router-address (ipv4-address | ipv6-address)
        - mpls-label index number
          - label (number | keyword)
          - protocol keyword
        - mtu number
        - last-probe-send-failure-reason keyword
        - probe-size number
        - probes-sent number
        - reply
          - mpls-ttl number
          - received boolean
          - reply-sender (ipv4-address | ipv6-address)
          - return-code keyword
          - return-subcode number
          - round-trip-time number
          - udp-data-length number
      - path-destination
        - ip-address (ipv4-address | ipv6-address)
        - next-hop (ipv4-address | ipv6-address)
        - subinterface string
        - test-active boolean
    - stamp
      + session-reflector
      + inactivity-timer number
      + network-instance name reference
      + admin-state keyword
      + description string
      + ip-prefix ip-prefix (ipv4-prefix | ipv6-prefix)
      - oper-state keyword
      - statistics
        - malformed-packet number
        - packet-discards-source-destination-equal number

```

```

- prefix-match-failure number
- session-reflector-udp-port-registration-failure number
- test-frames-received number
- test-frames-sent number
- test-sessions number
- test-session-statistics session-sender-ip (ipv4-address | ipv6-address) session-
sender-udp number session-reflector-ip (ipv4-address | ipv6-address) session-reflector-
udp number session-identifier number
- current-ref-wait number
- last-sequence-number-received number
- last-sequence-number-transmitted number
- malformed-tlv number
- test-frames-received number
- test-frames-sent number
+ udp-port number
- statistics
- packet-discards-on-reception number
- packet-discards-on-transmission number
- reflector-table-entries-full number
- reflectors-configured number
- reflectors-not-operational number
- reflectors-operational number
- session-reflector-not-found number
- test-frames-received number
- test-frames-sent number
- test-session-count number
+ twamp
+ server
+ network-instance name reference
+ admin-state keyword
+ client-connection prefix (ipv4-prefix | ipv6-prefix)
+ maximum-connections number
+ maximum-sessions number
- statistics
- control-connections-active number
- control-connections-rejected number
- test-packets-received number
- test-packets-transmitted number
- test-sessions-aborted number
- test-sessions-active number
- test-sessions-completed number
- test-sessions-rejected number
- control-connection client-ip (ipv4-address | ipv6-address) client-tcp-
port number server-ip (ipv4-address | ipv6-address) server-tcp-port number
- control-packet-dscp number
- selected-mode keyword
- state keyword
- statistics
- test-packets-received number
- test-packets-transmitted number
- test-sessions-aborted number
- test-sessions-active number
- test-sessions-completed number
- test-sessions-rejected number
+ control-packet-dscp (number | keyword)
+ description string
+ enforce-test-session-start-time boolean
+ maximum-connections number
+ maximum-sessions number
- modes keyword
- oper-state keyword
+ servwait number
- session-reflector

```

```

- test-session sender-ip (ipv4-address | ipv6-address) sender-udp-
port number reflector-ip (ipv4-address | ipv6-address) reflector-udp-port number
- last-sequence-number-received number
- last-sequence-number-transmitted number
- parent-connection-client-ip (ipv4-address | ipv6-address)
- parent-connection-client-tcp-port number
- parent-connection-server-ip (ipv4-address | ipv6-address)
- parent-connection-server-tcp-port number
- statistics
- test-packets-received number
- test-packets-transmitted number
- test-packet-dscp number
- test-session-id string
- statistics
- control-connections-active number
- control-connections-rejected number
- test-packets-received number
- test-packets-transmitted number
- test-sessions-aborted number
- test-sessions-active number
- test-sessions-completed number
- test-sessions-rejected number
- statistics
- dropped-connection-states
- active number
- idle number
- process-started number
- process-stop number
- process-tw-session number
- setup-wait number
- started number
- dropped-connections
- connection-timeout number
- control-command-not-valid number
- incorrect-stop-session-count number
- invalid-invalid-hmac number
- maximum-global-limit-exceed number
- maximum-prefix-limit-exceed number
- memory-allocation-error number
- message-send-error number
- no-client-prefix-match number
- no-internal-resource number
- non-zero-sid-in-client-control-message number
- tcp-connection-closed number
- tcp-connection-fatal-error number
- tcp-unexpected-event number
- unspecified-mode number
- unsupported-mode number
- dropped-test-packet
- arrived-before-start-time number
- incorrect-packet-size number
- incorrect-source-address number
- invalid-error-estimate number
- invalid-server-octets number
- invalid-symmetric-mbz number
- no-start-sessions number
- reply-error number
- rejected-session
- bad-type-p number
- client-source-ip-unreachable number
- duplicate-session number
- invalid-ip-address-version number
- maximum-global-session-exceed number
- maximum-prefix-session-exceed number

```

-
- **no-internal-resource** *number*
 - **non-local-ip-destination** *number*
 - **non-zero-mbz-value** *number*
 - **non-zero-session-sender-sid** *number*
 - **padding-too-big** *number*
 - **refwait-timeout** *number*
 - **timeout-too-large** *number*
 - **udp-port-in-use** *number*

7.1 oam Descriptions

oam

Description	Enclosing container for OAM
Context	oam
Tree	oam
Configurable	True
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

ethcfm

Description	OAM configuration and operational data for the management of Ethernet (ETH-CFM)
Context	oam ethcfm
Tree	ethcfm
Configurable	True
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

cfm-stack-table

Description	The cfm-stack-table provides an overview of CFM MEP state in a single view
Context	oam ethcfm cfm-stack-table
Tree	cfm-stack-table
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

interface

Description	Enter the interface context
Context	oam ethcfm cfm-stack-table interface
Tree	interface
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

interface *interface string level number direction keyword*

Description	List of interfaces that have CFM configured and the association CFM operational state
Context	oam ethcfm cfm-stack-table interface interface interface string level number direction keyword
Tree	interface
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

interface *string*

Description	Interface name
Context	oam ethcfm cfm-stack-table interface interface interface string level number direction keyword
String Length	3 to 20
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

level *number*

Description	The maintenance domain level
Context	oam ethcfm cfm-stack-table interface interface interface string level number direction keyword
Range	0 to 7
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

direction *keyword*

Description	The direction the MEP faces If 'down' the MEP sends CFM PDUs away from the MAC Relay Entity. If 'up' the MEP sends CFM PDUs towards the MAC Relay Entity.
Context	oam ethcfm cfm-stack-table interface interface interface string level number direction keyword
Options	<ul style="list-style-type: none"> • down • up

Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

association-id *string*

Description	A uniquely assigned administrative name used to identify a maintenance association
Context	oam ethcfm cfm-stack-table interface interface interface <i>string level number direction keyword association-id string</i>
Tree	association-id
String Length	1 to 64
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

defects *keyword*

Description	Current received defects for the local MEP
Context	oam ethcfm cfm-stack-table interface interface interface <i>string level number direction keyword defects keyword</i>
Tree	defects
Options	<ul style="list-style-type: none"> • none • rdi-ccm • mac-status • remote-ccm • error-ccm • xcon-ccm • ais • csf-ais • csf-rdi • csf-los • eth-ed
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

domain-id *string*

Description	A uniquely assigned administrative name used to identify a maintenance domain
Context	oam ethcfm cfm-stack-table interface interface interface <i>string level number direction keyword domain-id string</i>
Tree	domain-id
String Length	1 to 64
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

mac-address *string*

Description	MAC address of the Management Point
Context	oam ethcfm cfm-stack-table interface interface interface <i>string level number direction keyword mac-address string</i>
Tree	mac-address
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

mep-id *number*

Description	A uniquely assigned MEP identifier with a given maintenance association
Context	oam ethcfm cfm-stack-table interface interface interface <i>string level number direction keyword mep-id number</i>
Tree	mep-id
Range	1 to 8191
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

subinterface

Description	Enter the subinterface context
Context	oam ethcfm cfm-stack-table subinterface
Tree	subinterface
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

subinterface *subinterface string primary-vlan (number | keyword) level number direction keyword*

Description	List of subinterfaces that have CFM configured and the association CFM operational state
Context	oam ethcfm cfm-stack-table subinterface subinterface subinterface string primary-vlan (number keyword) level number direction keyword
Tree	subinterface
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

subinterface *string*

Description	Subinterface name
Context	oam ethcfm cfm-stack-table subinterface subinterface subinterface string primary-vlan (number keyword) level number direction keyword
String Length	5 to 25
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

primary-vlan *(number | keyword)*

Description	Primary VLAN or 'none'
Context	oam ethcfm cfm-stack-table subinterface subinterface subinterface string primary-vlan (number keyword) level number direction keyword
Range	1 to 4094
Options	<ul style="list-style-type: none"> • none
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

level *number*

Description	The maintenance domain level
Context	oam ethcfm cfm-stack-table subinterface subinterface subinterface string primary-vlan (number keyword) level number direction keyword
Range	0 to 7
Configurable	False

Platforms 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

direction *keyword*

Description The direction the MEP faces
If 'down' the MEP sends CFM PDUs away from the MAC Relay Entity. If 'up' the MEP sends CFM PDUs towards the MAC Relay Entity.

Context [oam ethcfm cfm-stack-table subinterface subinterface subinterface](#) *string primary-vlan (number | keyword) level number direction keyword*

Options

- down
- up

Configurable False

Platforms 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

association-id *string*

Description A uniquely assigned administrative name used to identify a maintenance association

Context [oam ethcfm cfm-stack-table subinterface subinterface subinterface](#) *string primary-vlan (number | keyword) level number direction keyword association-id string*

Tree [association-id](#)

String Length 1 to 64

Configurable False

Platforms 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

defects *keyword*

Description Current received defects for the local MEP

Context [oam ethcfm cfm-stack-table subinterface subinterface subinterface](#) *string primary-vlan (number | keyword) level number direction keyword defects keyword*

Tree [defects](#)

Options

- none
- rdi-ccm
- mac-status
- remote-ccm
- error-ccm

- xcon-ccm
- ais
- csf-ais
- csf-rdi
- csf-los
- eth-ed

Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

domain-id *string*

Description	A uniquely assigned administrative name used to identify a maintenance domain
Context	oam ethcfm cfm-stack-table subinterface subinterface subinterface string primary-vlan (number keyword) level number direction keyword domain-id string
Tree	domain-id
String Length	1 to 64
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

mac-address *string*

Description	MAC address of the Management Point
Context	oam ethcfm cfm-stack-table subinterface subinterface subinterface string primary-vlan (number keyword) level number direction keyword mac-address string
Tree	mac-address
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

mep-id *number*

Description	A uniquely assigned MEP identifier with a given maintenance association
Context	oam ethcfm cfm-stack-table subinterface subinterface subinterface string primary-vlan (number keyword) level number direction keyword mep-id number
Tree	mep-id

Range	1 to 8191
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

subinterface-type *string*

Description	The type of subinterface bridged or routed This is the value of srl_nokia-interfaces interface/subinterface/type
Context	oam ethcfm cfm-stack-table subinterface subinterface subinterface string primary-vlan (number keyword) level number direction keyword subinterface-type string
Tree	subinterface-type
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

domain [domain-id string](#)

Description	Maintenance Domain list The Maintenance Domain includes all the configuration elements to define the individual domain behavior and scope of the CFM boundary. These are common elements that will be part of the related Maintenance Associations configured within the domain.
Context	oam ethcfm domain domain-id string
Tree	domain
Configurable	True
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b
Max. Elements	4000

domain-id *string*

Description	Unique Maintenance Domain identifier
Context	oam ethcfm domain domain-id string
String Length	1 to 64
Configurable	True
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

association *association-id string*

Description	Maintenance Association list
Context	oam ethcfm domain domain-id string association association-id string
Tree	association
Configurable	True
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b
Max. Elements	4000

association-id *string*

Description	Unique Maintenance Association identifier
Context	oam ethcfm domain domain-id string association association-id string
String Length	1 to 64
Configurable	True
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

association-auto-discovered-meps *mep-id number*

Description	Add a list entry for association-auto-discovered-meps
Context	oam ethcfm domain domain-id string association association-id string association-auto-discovered-meps mep-id number
Tree	association-auto-discovered-meps
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

mep-id *number*

Description	A list of the MEP IDs added to the MA by auto discovery An auto-discovered remote MEP ID can be added to the association-mep list though configuration. Once added to the association-mep list it is removed from the auto-discovered MEP list.
Context	oam ethcfm domain domain-id string association association-id string association-auto-discovered-meps mep-id number
Range	1 to 8191
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

association-format *keyword*

Description	Format of the ma-name
Context	oam ethcfm domain domain-id string association association-id string association-format <i>keyword</i>
Tree	association-format
Options	<ul style="list-style-type: none"> • <code>vlan-id</code> Primary VLAN ID • <code>string</code> Character string • <code>integer</code> 2 octet number • <code>vpn-id</code> IETF RFC 2685 VPN ID • <code>icc-based</code> 13 character string
Configurable	True
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

association-meps [mep-id](#) *number*

Description	Add a list entry for association-meps
Context	oam ethcfm domain domain-id string association association-id string association-meps mep-id <i>number</i>
Tree	association-meps
Configurable	True
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

mep-id *number*

Description	A list of the MEP IDs expected for the MA This is a configured list of MEPs added to the MA.
Context	oam ethcfm domain domain-id string association association-id string association-meps mep-id <i>number</i>
Range	1 to 8191
Configurable	True

Platforms 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

ccm-hold-time

Description Enter the ccm-hold-time context

Context [oam ethcfm domain domain-id string association association-id string ccm-hold-time](#)

Tree [ccm-hold-time](#)

Configurable True

Platforms 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

delay-timeout *number*

Description Additional time before a MEP declares a fault for peer CCM timeout conditions

Each unit (centisecond) is the equivalent to 10ms, or one hundredth of a second in additional time added before the recognition of a peer time-out. This is applicable to MEPs with a CCM-interval 100ms and below. A value 0 means there is no additive delay

Context [oam ethcfm domain domain-id string association association-id string ccm-hold-time delay-timeout number](#)

Tree [delay-timeout](#)

Range 0 to 1000

Default 0

Units centiseconds

Configurable True

Platforms 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

ccm-interval *keyword*

Description The interval between CCM transmissions to be used by all MEPs in Maintenance Association

Context [oam ethcfm domain domain-id string association association-id string ccm-interval keyword](#)

Tree [ccm-interval](#)

Default 1s

Options

- 10ms
- 100ms

- 1s
- 10s

Configurable	True
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

ma-name

Description	Context for association name
Context	oam ethcfm domain domain-id string association association-id string ma-name
Tree	ma-name
Configurable	True
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

icc-value *string*

Description	ITU Carrier Code (ICC) string required when using association-format icc-based
Context	oam ethcfm domain domain-id string association association-id string ma-name icc-value string
Tree	icc-value
String Length	8 to 13
Configurable	True
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

id *string*

Description	VPN ID required when using association-format vpn-id When the VPN OUI is less than 6 hex characters the configured value will be prepended with the appropriate number of zeros. When the VPN INDEX is less than 8 hex characters the configured value will be prepended with the appropriate number of zeros.
Context	oam ethcfm domain domain-id string association association-id string ma-name id string
Tree	id
String Length	3 to 15
Configurable	True
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

name *string*

Description	Name string required when using association-format string
Context	oam ethcfm domain domain-id string association association-id string ma-name name string
Tree	name
String Length	1 to 45
Configurable	True
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

number *number*

Description	Integer value required when using association-format integer
Context	oam ethcfm domain domain-id string association association-id string ma-name number number
Tree	number
Configurable	True
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

vid *number*

Description	VLAN ID number required when using association-format vlan-id
Context	oam ethcfm domain domain-id string association association-id string ma-name vid number
Tree	vid
Range	0 to 4094
Configurable	True
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

mep [mep-id](#) *reference*

Description	The list of Maintenance association End Points in a specific Maintenance Association
Context	oam ethcfm domain domain-id string association association-id string mep mep-id reference
Tree	mep
Configurable	True

Platforms 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

mep-id *reference*

Description The integer that uniquely identified the MEP in the Maintenance Association

Context [oam ethcfm domain domain-id string association association-id string mep mep-id reference](#)

Reference [oam ethcfm domain domain-id string association association-id string association-meeps mep-id number](#)

Configurable True

Platforms 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

admin-state *keyword*

Description The administrative state of the MEP

Context [oam ethcfm domain domain-id string association association-id string mep mep-id reference admin-state keyword](#)

Tree [admin-state](#)

Default disable

Options

- enable
- disable

Configurable True

Platforms 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

ccm-ltm-priority *number*

Description The dot1p priority for CCMs and LTMs transmitted by the MEP

Context [oam ethcfm domain domain-id string association association-id string mep mep-id reference ccm-ltm-priority number](#)

Tree [ccm-ltm-priority](#)

Range 0 to 7

Default 7

Configurable True

Platforms 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

continuity-check

Description	This set of data definitions describes the handling of Ethernet Continuity Check (ETH-CCM)
Context	oam ethcfm domain domain-id string association association-id string mep mep-id reference continuity-check
Tree	continuity-check
Configurable	True
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

active-defects *keyword*

Description	A list of all active CCM defect conditions in priority order from lowest to highest
Context	oam ethcfm domain domain-id string association association-id string mep mep-id reference continuity-check active-defects keyword
Tree	active-defects
Options	<ul style="list-style-type: none"> • none • rdi-ccm • mac-status • remote-ccm • error-ccm • xcon-ccm
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

ccm-local-fault

Description	Enter the ccm local fault action context
Context	oam ethcfm domain domain-id string association association-id string mep mep-id reference continuity-check ccm-local-fault
Tree	ccm-local-fault
Configurable	True
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

action *keyword*

Description	Provides the ability to operationally affect the attachment where the down MEP is configured A down MEP that experiences a defect condition matching the lowest-fault-priority defect can affect the operational state of the interface/subinterface the down MEP is configured on when the ccm-local-fault value is 'permit'. When the ccm-local-fault value is 'deny' there is no operational impact on the interface/subinterface. This leaf is only supported on down MEPs.
Context	oam ethcfm domain domain-id string association association-id string mep mep-id reference continuity-check ccm-local-fault action keyword
Tree	action
Default	deny
Options	<ul style="list-style-type: none"> • permit Action taken • deny No action taken
Configurable	True
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

ccm-sequence-error-count *number*

Description	The total number of out-of-sequence CCMs received from all remote MEPs
Context	oam ethcfm domain domain-id string association association-id string mep mep-id reference continuity-check ccm-sequence-error-count number
Tree	ccm-sequence-error-count
Default	0
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

ccm-transmit *keyword*

Description	An indicator of whether the MEP is configured to transmit CCM packets This only controls the MEPs ability to transmit CCM packets. A MEP has no administrative configuration to stop the processing of received CCM packets. The receive state machine for CCM will execute and packet processing will occur regardless of the ccm-transmit admin-state.
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Context	oam ethcfm domain domain-id string association association-id string mep mep-id reference continuity-check ccm-transmit keyword
Tree	ccm-transmit
Default	disable
Options	<ul style="list-style-type: none"> • enable • disable
Configurable	True
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

highest-priority-defect-found *keyword*

Description	<p>Value indicating the highest-priority defect present since the MEP FNG state machine was in RESET</p> <p>Multiple defect conditions may be present on a local MEP at any given time. This leaf records the highest priority defect since the MEP Fault Notification Generator (FNG) State Machine was last in the FNG_RESET state. This will be cleared when the when no defect flags are present.</p>
Context	oam ethcfm domain domain-id string association association-id string mep mep-id reference continuity-check highest-priority-defect-found keyword
Tree	highest-priority-defect-found
Options	<ul style="list-style-type: none"> • none • rdi-ccm • mac-status • remote-ccm • error-ccm • xcon-ccm
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

last-cross-connect-ccm *binary*

Description	<p>Up to 1024 bytes of last-received CCM that triggered a cross-connect-ccm fault</p> <p>The last-cross-connect-ccm will be cleared when the condition is no longer present.</p>
Context	oam ethcfm domain domain-id string association association-id string mep mep-id reference continuity-check last-cross-connect-ccm binary
Tree	last-cross-connect-ccm

String Length	1 to 1024
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

last-error-ccm *binary*

Description	Up to 1024 bytes printed from of last-received CCM that triggered an invalid-ccm fault The last-error-ccm will be cleared when the condition is no longer present.
Context	oam ethcfm domain domain-id string association association-id string mep mep-id reference continuity-check last-error-ccm binary
Tree	last-error-ccm
String Length	1 to 1024
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

lowest-fault-priority-defect *keyword*

Description	The lowest priority defect that will generate a Fault Alarm When the lowest fault priority defect is reached or exceeded, a fault alarm will be generated. This also drives the ../ccm-local-fault-action for down MEPs. When the lowest priority fault priority defect is reached the ../ccm-local-fault with a value 'permit' will operationally affect the interface or subinterface on which it is attached.
Context	oam ethcfm domain domain-id string association association-id string mep mep-id reference continuity-check lowest-fault-priority-defect keyword
Tree	lowest-fault-priority-defect
Default	mac-remote-error-xcon
Options	<ul style="list-style-type: none"> • all-def • mac-remote-error-xcon • remote-error-xcon • error-xcon • xcon • no-xcon
Configurable	True
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

sent-interface-status *keyword*

Description	<p>Latest interface-status TLV value sent to the peer in the CCM packet</p> <p>Indicates the interface status TLV information included in the most recent Connectivity Check Message (CCM) transmission from the local MEP. If the local MEP CCM transmissions are not enabled, or if no interface status TLV was included in the most recent transmission, then ccm-tx-if-status will return a value of is-no-interface-status-tlv (0).</p>
Context	<p>oam ethcfm domain domain-id string association association-id string mep mep-id reference continuity-check sent-interface-status keyword</p>
Tree	<p>sent-interface-status</p>
Options	<ul style="list-style-type: none"> • no-status-tlv <p>Indicates either that no CCM has been received or that no interface status TLV was present in the last CCM received</p> • up <p>The interface is ready to pass packets</p> • down <p>The interface cannot pass packets</p> • testing <p>The interface is in some test mode</p> • unknown <p>The interface status cannot be determined for some reason</p> • dormant <p>The interface is not in a state to pass packets but is in a pending state, waiting for some external event</p> • not-present <p>Some component of the interface is missing</p> • lower-layer-down <p>The interface is down due to state of the lower layer interface condition</p>
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

sent-port-status *keyword*

Description	<p>Latest port-status TLV value sent to the peer in the CCM packet</p> <p>Indicates the port status TLV information included in the most recent Connectivity Check Message (CCM) transmission from the local MEP. If the local MEP CCM transmissions are not enabled, or if no port status TLV was</p>
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included in the most recent transmission, then `ccm-tx-port-status` will return a value of `ps-no-port-state-tlv (0)`.

Context	oam ethcfm domain domain-id string association association-id string mep mep-id reference continuity-check sent-port-status keyword
Tree	sent-port-status
Options	<ul style="list-style-type: none"> no-status-tlv Indicates either that no CCM has been received or that no port status TLV was present in the last CCM received blocked Ordinary data cannot pass freely through the port on which the remote MEP resides up Ordinary data can pass freely through the port on which the remote MEP resides
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

sent-remote-defect-indicator *boolean*

Description	<p>Latest remote defect indicator (rdi) value sent to the peer in the CCM packet</p> <p>Indicates if the Remote Defect Indication (RDI) bit was set to on in the most recent Connectivity Check Message (CCM) transmission from the local MEP.</p> <p>If the local MEP CCM transmissions are not enabled, or if the RDI bit was not set in the most recent transmission, then <code>ccm-tx-rdi</code> will return a value of 'false (2)'.</p>
Context	oam ethcfm domain domain-id string association association-id string mep mep-id reference continuity-check sent-remote-defect-indicator boolean
Tree	sent-remote-defect-indicator
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

direction *keyword*

Description	<p>A value indicating the direction which the MEP faces on the interface/subinterface</p> <p>For all but MAC-VRF subinterfaces, the direction of the MEP must be 'down'. The MAC-VRF is a bridging entity and therefore supports the direction 'up'. The other entities are not bridging and therefore cannot support the direction 'up'.</p>
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Context	oam ethcfm domain domain-id string association association-id string mep mep-id reference direction keyword
Tree	direction
Options	<ul style="list-style-type: none"> • down • up
Configurable	True
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

interface-ref

Description	Enter the interface-ref context
Context	oam ethcfm domain domain-id string association association-id string mep mep-id reference interface-ref
Tree	interface-ref
Configurable	True
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

interface *reference*

Description	Reference to a base interface, for example a port
Context	oam ethcfm domain domain-id string association association-id string mep mep-id reference interface-ref interface reference
Tree	interface
Reference	interface name string
Configurable	True
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

subinterface *reference*

Description	Reference to a subinterface This requires the base interface to be specified using the interface leaf in this container.
Context	oam ethcfm domain domain-id string association association-id string mep mep-id reference interface-ref subinterface reference
Tree	subinterface
Reference	interface name string subinterface index number
Configurable	True

Platforms 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

linktrace

Description Data definitions related to a linktrace test result

Context [oam ethcfm domain domain-id string association association-id string mep mep-id reference linktrace](#)

Tree [linktrace](#)

Configurable False

Platforms 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

latest-run

Description Enter the latest-run context

Context [oam ethcfm domain domain-id string association association-id string mep mep-id reference linktrace latest-run](#)

Tree [latest-run](#)

Configurable False

Platforms 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

destination-mac-address *string*

Description Indicates the destination MAC address used for the last test
When the destination is a remote-mepid the MAC address will be the resolved MAC address for the remote mepid

Context [oam ethcfm domain domain-id string association association-id string mep mep-id reference linktrace latest-run destination-mac-address string](#)

Tree [destination-mac-address](#)

Configurable False

Platforms 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

end-time *string*

Description UTC date and time when a test ended

Context [oam ethcfm domain domain-id string association association-id string mep mep-id reference linktrace latest-run end-time string](#)

Tree [end-time](#)

String Length	20 to 32
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

priority number

Description	The dot1p priority to be used in the transmitted test packet
Context	oam ethcfm domain domain-id string association association-id string mep mep-id reference linktrace latest-run priority number
Tree	priority
Range	0 to 7
Default	7
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

remote-mep-id number

Description	Indicates the remote mepid when remote-mep-id was the target and not a MAC address
Context	oam ethcfm domain domain-id string association association-id string mep mep-id reference linktrace latest-run remote-mep-id number
Tree	remote-mep-id
Range	1 to 8191
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

reply reply-order number

Description	The list of LTRs associated with a specific Linktrace transaction
Context	oam ethcfm domain domain-id string association association-id string mep mep-id reference linktrace latest-run reply reply-order number
Tree	reply
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b
Max. Elements	32

reply-order *number*

Description	An index to distinguish among multiple LTRs with the same LTR transaction-id field value The reply-order are assigned sequentially from 1, in the order that the Linktrace Initiator received the LTR
Context	oam ethcfm domain domain-id string association association-id string mep mep-id reference linktrace latest-run reply reply-order number
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

chassis-id (*mac-address | string | binary*)

Description	The value relating to the chassis-id-subtype in string of MAC address format
Context	oam ethcfm domain domain-id string association association-id string mep mep-id reference linktrace latest-run reply reply-order number chassis-id (mac-address string binary)
Tree	chassis-id
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

chassis-id-subtype (*number | keyword*)

Description	Data definitions associated with the Sender ID TLV
Context	oam ethcfm domain domain-id string association association-id string mep mep-id reference linktrace latest-run reply reply-order number chassis-id-subtype (number keyword)
Tree	chassis-id-subtype
Range	8 to 255
Options	<ul style="list-style-type: none"> • CHASSIS_COMPONENT Chassis identifier based on the value of entPhysicalAlias object defined in IETF RFC 2737 • INTERFACE_ALIAS Chassis identifier based on the value of ifAlias object defined in IETF RFC 2863 • PORT_COMPONENT Chassis identifier based on the value of entPhysicalAlias object defined in IETF RFC 2737 for a port or backplane component • MAC_ADDRESS

Chassis identifier based on the value of a unicast source address (encoded in network byte order and IEEE 802.3 canonical bit order), of a port on the containing chassis as defined in IEEE Std 802-2001

- NETWORK_ADDRESS

Chassis identifier based on a network address, associated with a particular chassis. The encoded address is composed of two fields. The first field is a single octet, representing the IANA AddressFamilyNumbers value for the specific address type, and the second field is the network address value

- INTERFACE_NAME

Chassis identifier based on the name of the interface, e.g., the value of if Name object defined in IETF RFC 2863

- LOCAL

Chassis identifier based on a locally defined value

Configurable

False

Platforms

7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

egress-action *keyword*

Description

An enumerated value indicating the value returned in the Egress Action field
This leaf is not present if no value is returned in the LTR.

Context

[oam ethcfm domain domain-id string association association-id string mep mep-id reference linktrace latest-run reply reply-order number egress-action keyword](#)

Tree

[egress-action](#)

Options

- ok
Indicates the target data frame would be passed through to the MAC Relay Entity
- down
Indicates the Bridge Ports MAC Operational parameter is false
- blocked
Indicates the target data frame would not be forwarded if received on this Port due to active topology enforcement
- vid
Indicates the ingress port is not in the member set of the LTMs VID, and ingress filtering is enabled
This means the target data frame would be filtered by ingress filtering.

Configurable

False

Platforms

7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

egress-mac *string*

Description	The MAC address returned in the Egress MAC Address field This leaf is not present if no value is returned in the LTR.
Context	oam ethcfm domain domain-id string association association-id string mep mep-id reference linktrace latest-run reply reply-order number egress-mac string
Tree	egress-mac
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

egress-port-id

Description	Enter the egress-port-id context
Context	oam ethcfm domain domain-id string association association-id string mep mep-id reference linktrace latest-run reply reply-order number egress-port-id
Tree	egress-port-id
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

port-id-subtype *keyword*

Description	The Egress Port ID field and the corresponding port ID value This leaf is not present if no value is returned in the LTR.
Context	oam ethcfm domain domain-id string association association-id string mep mep-id reference linktrace latest-run reply reply-order number egress-port-id port-id-subtype keyword
Tree	port-id-subtype
Options	<ul style="list-style-type: none"> • INTERFACE_ALIAS Chassis identifier based on the value of ifAlias object defined in IETF RFC 2863 • PORT_COMPONENT Port identifier based on the value of entPhysicalAlias object defined in IETF RFC 2737 for a port component • MAC_ADDRESS Port identifier based on the value of a unicast source address (encoded in network byte order and IEEE 802.3 canonical bit order) associated with a port

- NETWORK_ADDRESS
Port identifier based on a network address, associated with a particular port
- INTERFACE_NAME
Port identifier based on the name of the interface, e.g., the value of if Name object defined in IETF RFC 2863
- AGENT_CIRCUIT_ID
Port identifier based on the circuit id in the DHCP relay agent information option as defined in IETF RFC 3046
- LOCAL
Port identifier based on a locally defined alphanumeric string

Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

value (*mac-address* | *string* | *binary*)

Description	The value of the port id subtype
Context	oam ethcfm domain domain-id string association association-id string mep mep-id reference linktrace latest-run reply reply-order number egress-port-id value (mac-address string binary)
Tree	value
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

forwarded *boolean*

Description	A Boolean value stating whether an LTM was forwarded by the responding MP
Context	oam ethcfm domain domain-id string association association-id string mep mep-id reference linktrace latest-run reply reply-order number forwarded boolean
Tree	forwarded
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

ingress-action *keyword*

Description	An enumerated value indicating the value returned in the Ingress Action field
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This leaf is not present if no value is returned in the LTR.

Context	oam ethcfm domain domain-id string association association-id string mep mep-id reference linktrace latest-run reply reply-order number ingress-action keyword
Tree	ingress-action
Options	<ul style="list-style-type: none"> ok Indicates the target data frame would be passed through to the MAC Relay Entity down Indicates the Bridge Ports MAC Operational parameter is false blocked Indicates the target data frame would not be forwarded if received on this Port due to active topology enforcement vid Indicates the ingress port is not in the member set of the LTMs VID, and ingress filtering is enabled This means the target data frame would be filtered by ingress filtering.
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

ingress-mac string

Description	The MAC address returned in the Ingress MAC Address field This leaf is not present if no value is returned in the LTR.
Context	oam ethcfm domain domain-id string association association-id string mep mep-id reference linktrace latest-run reply reply-order number ingress-mac string
Tree	ingress-mac
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

ingress-port-id

Description	Enter the ingress-port-id context
Context	oam ethcfm domain domain-id string association association-id string mep mep-id reference linktrace latest-run reply reply-order number ingress-port-id
Tree	ingress-port-id
Configurable	False

Platforms 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

port-id-subtype *keyword*

Description	The Ingress Port ID field and the corresponding port ID value This leaf is not present if no value is returned in the LTR.
Context	oam ethcfm domain domain-id string association association-id string mep mep-id reference linktrace latest-run reply reply-order number ingress-port-id port-id-subtype keyword
Tree	port-id-subtype
Options	<ul style="list-style-type: none"> • INTERFACE_ALIAS Chassis identifier based on the value of ifAlias object defined in IETF RFC 2863 • PORT_COMPONENT Port identifier based on the value of entPhysicalAlias object defined in IETF RFC 2737 for a port component • MAC_ADDRESS Port identifier based on the value of a unicast source address (encoded in network byte order and IEEE 802.3 canonical bit order) associated with a port • NETWORK_ADDRESS Port identifier based on a network address, associated with a particular port • INTERFACE_NAME Port identifier based on the name of the interface, e.g., the value of if Name object defined in IETF RFC 2863 • AGENT_CIRCUIT_ID Port identifier based on the circuit id in the DHCP relay agent information option as defined in IETF RFC 3046 • LOCAL Port identifier based on a locally defined alphanumeric string
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

value (*mac-address* | *string* | *binary*)

Description	The value of the port id subtype
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Context	oam ethcfm domain domain-id string association association-id string mep mep-id reference linktrace latest-run reply reply-order number ingress-port-id value (mac-address string binary)
Tree	value
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

last-egress-identifier

Description	TLV included with in the LTM used to identify the instantiating or relaying management point
Context	oam ethcfm domain domain-id string association association-id string mep mep-id reference linktrace latest-run reply reply-order number last-egress-identifier
Tree	last-egress-identifier
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

integer number

Description	An octet string the first two bytes of the egress-identifier
Context	oam ethcfm domain domain-id string association association-id string mep mep-id reference linktrace latest-run reply reply-order number last-egress-identifier integer number
Tree	integer
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

mac-address string

Description	The last six bytes of the egress identifier, the MAC address
Context	oam ethcfm domain domain-id string association association-id string mep mep-id reference linktrace latest-run reply reply-order number last-egress-identifier mac-address string
Tree	mac-address
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

Itr-relay *keyword*

Description	An enumerated value indicating the value returned in the Relay Action field
Context	oam ethcfm domain domain-id string association association-id string mep mep-id reference linktrace latest-run reply reply-order number ltr-relay keyword
Tree	ltr-relay
Options	<ul style="list-style-type: none"> hit Indicates the LTM reached an MP whose MAC address matches the target MAC address filtering-database Indicates the Egress Port was determined by consulting the Filtering Database mip-ccm-database Indicates the Egress Port was determined by consulting the MIP CCM Database
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

management-address *string*

Description	The address that can be used to access and manage the remote system
Context	oam ethcfm domain domain-id string association association-id string mep mep-id reference linktrace latest-run reply reply-order number management-address string
Tree	management-address
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

management-address-domain *string*

Description	Identifies the type and format of the related management-address leaf
Context	oam ethcfm domain domain-id string association association-id string mep mep-id reference linktrace latest-run reply reply-order number management-address-domain string
Tree	management-address-domain
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

next-egress-identifier

Description	TLV included with in the LTM used to identify the instantiating or relaying management point
Context	oam ethcfm domain domain-id string association association-id string mep mep-id reference linktrace latest-run reply reply-order number next-egress-identifier
Tree	next-egress-identifier
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

integer number

Description	An octet string the first two bytes of the egress-identifier
Context	oam ethcfm domain domain-id string association association-id string mep mep-id reference linktrace latest-run reply reply-order number next-egress-identifier integer number
Tree	integer
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

mac-address string

Description	The last six bytes of the egress identifier, the MAC address
Context	oam ethcfm domain domain-id string association association-id string mep mep-id reference linktrace latest-run reply reply-order number next-egress-identifier mac-address string
Tree	mac-address
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

reply-ttl number

Description	The integer Reply TTL field value returned in the LTR
Context	oam ethcfm domain domain-id string association association-id string mep mep-id reference linktrace latest-run reply reply-order number reply-ttl number
Tree	reply-ttl

Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

terminal-mep *boolean*

Description	The terminal MEP flag field was set in the LTR indicating the LTM reached a MEP boundary for the MA
Context	oam ethcfm domain domain-id string association association-id string mep mep-id reference linktrace latest-run reply reply-order number terminal-mep boolean
Tree	terminal-mep
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

start-time *string*

Description	UTC date and time when the test started
Context	oam ethcfm domain domain-id string association association-id string mep mep-id reference linktrace latest-run start-time string
Tree	start-time
String Length	20 to 32
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

test-status *keyword*

Description	<p>The status of the last test that was executed</p> <p>A value of 'completed' means the test has run and ended without intervention, to completion. A value of 'terminated-incomplete' indicates the test started but conditions existed that caused it to terminate before the natural completion. A value 'in-progress' means the test is currently executing. A value of 'failed-to-start' meant a requirement to start the test was not met and the test had failed to start. When this value is set the statistics from a prior latest-run are deleted.</p>
Context	oam ethcfm domain domain-id string association association-id string mep mep-id reference linktrace latest-run test-status keyword
Tree	test-status
Options	<ul style="list-style-type: none"> completed terminated-incomplete

- in-progress
- failed-to-start

Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

transaction-id *number*

Description	The sequence number included in the LTM packet
Context	oam ethcfm domain domain-id string association association-id string mep mep-id reference linktrace latest-run transaction-id number
Tree	transaction-id
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

transmit-ltm-flags *bits*

Description	The Flags field for LTMs transmitted by the MEP 'use-fdb-only' indicates only the network instance mac-table (or forwarding database) is to be used to forward the LTM to the next hop.
Context	oam ethcfm domain domain-id string association association-id string mep mep-id reference linktrace latest-run transmit-ltm-flags bits
Tree	transmit-ltm-flags
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

ttl *number*

Description	An initial value for the LTM time to live field
Context	oam ethcfm domain domain-id string association association-id string mep mep-id reference linktrace latest-run ttl number
Tree	ttl
Default	64
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

next-transaction-number *number*

Description	Next sequence number to be sent in a linktrace message
Context	oam ethcfm domain domain-id string association association-id string mep mep-id reference linktrace next-transaction-number number
Tree	next-transaction-number
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

status *keyword*

Description	<p>If an active linktrace test is executing from this MEP</p> <p>Only a single Linktrace test can be active on a MEP at one time. When the status is 'active' the MEP has a linktrace session open. Another linktrace test from this MEP is not allowed. When the status is 'inactive' the MEP does not currently have a linktrace session open.</p>
Context	oam ethcfm domain domain-id string association association-id string mep mep-id reference linktrace status keyword
Tree	status
Options	<ul style="list-style-type: none"> • active • inactive
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

unexpected-ltr-received *number*

Description	The total number of LTR messages received no corresponding outstanding LTM request
Context	oam ethcfm domain domain-id string association association-id string mep mep-id reference linktrace unexpected-ltr-received number
Tree	unexpected-ltr-received
Default	0
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

loopback

Description	Enter the loopback context
Context	oam ethcfm domain domain-id string association association-id string mep mep-id reference loopback
Tree	loopback
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

multicast-latest-run

Description	Enter the multicast-latest-run context
Context	oam ethcfm domain domain-id string association association-id string mep mep-id reference loopback multicast-latest-run
Tree	multicast-latest-run
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

data-length *number*

Description	An arbitrary amount of data included in the data tlv, if the data tlv is selected to be sent
Context	oam ethcfm domain domain-id string association association-id string mep mep-id reference loopback multicast-latest-run data-length number
Tree	data-length
Range	64 to 9612
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

end-time *string*

Description	UTC date and time when a test ended
Context	oam ethcfm domain domain-id string association association-id string mep mep-id reference loopback multicast-latest-run end-time string
Tree	end-time
String Length	20 to 32
Configurable	False

Platforms 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

interval *keyword*

Description The frequency of the LBM packets

Context [oam ethcfm domain domain-id string association association-id string mep mep-id reference loopback multicast-latest-run interval keyword](#)

Tree [interval](#)

Default 1s

Options

- 0s
- 10ms
- 20ms
- 50ms
- 100ms
- 200ms
- 300ms
- 400ms
- 500ms
- 600ms
- 700ms
- 800ms
- 900ms
- 1s
- 10s

Configurable False

Platforms 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

priority *number*

Description The priority parameter to be used in the transmitted LBMs

Context [oam ethcfm domain domain-id string association association-id string mep mep-id reference loopback multicast-latest-run priority number](#)

Tree [priority](#)

Range 0 to 7

Configurable False

Platforms 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

remote-mep-mac [remote-mac-address](#) *string*

Description	Enter the remote-mep-mac list instance
Context	oam ethcfm domain domain-id <i>string</i> association association-id <i>string</i> mep mep-id <i>reference</i> loopback multicast-latest-run remote-mep-mac remote-mac-address <i>string</i>
Tree	remote-mep-mac
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

remote-mac-address *string*

Description	Specifies the MAC address of the remote MEP responding to the multicast loopback message
Context	oam ethcfm domain domain-id <i>string</i> association association-id <i>string</i> mep mep-id <i>reference</i> loopback multicast-latest-run remote-mep-mac remote-mac-address <i>string</i>
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

sequence-number [sequence-number](#) *number* [received-index](#) *number*

Description	Enter the sequence-number list instance
Context	oam ethcfm domain domain-id <i>string</i> association association-id <i>string</i> mep mep-id <i>reference</i> loopback multicast-latest-run remote-mep-mac remote-mac-address <i>string</i> sequence-number <i>number</i> received-index <i>number</i>
Tree	sequence-number
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

sequence-number *number*

Description	Specifies the sequence number contained within the reply message
Context	oam ethcfm domain domain-id <i>string</i> association association-id <i>string</i> mep mep-id <i>reference</i> loopback multicast-latest-run remote-mep-mac remote-mac-address <i>string</i> sequence-number <i>number</i> received-index <i>number</i>
Configurable	False

Platforms 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

received-index *number*

Description Indicates the order in which the reply was received for the corresponding remote MAC address

This is a locally assigned index that can be used to detect out of order responses.

Context [oam ethcfm domain domain-id string association association-id string mep mep-id reference loopback multicast-latest-run remote-mep-mac remote-mac-address string sequence-number sequence-number number received-index number](#)

Configurable False

Platforms 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

start-time *string*

Description UTC date and time when the test started

Context [oam ethcfm domain domain-id string association association-id string mep mep-id reference loopback multicast-latest-run start-time string](#)

Tree [start-time](#)

String Length 20 to 32

Configurable False

Platforms 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

statistics

Description Enter the statistics context

Context [oam ethcfm domain domain-id string association association-id string mep mep-id reference loopback multicast-latest-run statistics](#)

Tree [statistics](#)

Configurable False

Platforms 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

received-packets *number*

Description Total number of valid multicast Loopback Replies received

Context	oam ethcfm domain domain-id string association association-id string mep mep-id reference loopback multicast-latest-run statistics received-packets number
Tree	received-packets
Default	0
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

transmitted-packets *number*

Description	Indicates the number of packets sent during the last multicast loopback test
Context	oam ethcfm domain domain-id string association association-id string mep mep-id reference loopback multicast-latest-run statistics transmitted-packets number
Tree	transmitted-packets
Default	0
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

test-status *keyword*

Description	<p>The status of the last test that was executed</p> <p>A value of 'completed' means the test has run and ended without intervention, to completion. A value of 'terminated-incomplete' indicates the test started but conditions existed that caused it to terminate before the natural completion. A value 'in-progress' means the test is currently executing. A value of 'failed-to-start' meant a requirement to start the test was not met and the test had failed to start. When this value is set the statistics from a prior latest-run are deleted.</p>
Context	oam ethcfm domain domain-id string association association-id string mep mep-id reference loopback multicast-latest-run test-status keyword
Tree	test-status
Options	<ul style="list-style-type: none"> • completed • terminated-incomplete • in-progress • failed-to-start
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

next-sequence-number *number*

Description	Next sequence number to be sent in a linktrace message
Context	oam ethcfm domain domain-id string association association-id string mep mep-id reference loopback next-sequence-number number
Tree	next-sequence-number
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

status *keyword*

Description	<p>If an active loopback test is executing from this MEP</p> <p>Only a single loopback test can be active on a MEP at one time. When the status is 'active' the MEP has a loopback session open. Another loopback test from this MEP is not allowed. When the status is 'inactive' the MEP does not currently have a loopback session open.</p>
Context	oam ethcfm domain domain-id string association association-id string mep mep-id reference loopback status keyword
Tree	status
Options	<ul style="list-style-type: none"> • active • inactive
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

unicast-latest-run

Description	Enter the unicast-latest-run context
Context	oam ethcfm domain domain-id string association association-id string mep mep-id reference loopback unicast-latest-run
Tree	unicast-latest-run
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

data-length *number*

Description	An arbitrary amount of data included in the data tlv, if the data tlv is selected to be sent
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Context	oam ethcfm domain domain-id string association association-id string mep mep-id reference loopback unicast-latest-run data-length number
Tree	data-length
Range	64 to 9612
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

destination-mac-address *string*

Description	Indicates the destination MAC address used for the last test When the destination is a remote-mepid the MAC address will be the resolved MAC address for the remote mepid
Context	oam ethcfm domain domain-id string association association-id string mep mep-id reference loopback unicast-latest-run destination-mac-address string
Tree	destination-mac-address
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

end-time *string*

Description	UTC date and time when a test ended
Context	oam ethcfm domain domain-id string association association-id string mep mep-id reference loopback unicast-latest-run end-time string
Tree	end-time
String Length	20 to 32
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

interval *keyword*

Description	The frequency of the LBM packets
Context	oam ethcfm domain domain-id string association association-id string mep mep-id reference loopback unicast-latest-run interval keyword
Tree	interval
Default	1s
Options	<ul style="list-style-type: none"> • 0s • 10ms

- 20ms
- 50ms
- 100ms
- 200ms
- 300ms
- 400ms
- 500ms
- 600ms
- 700ms
- 800ms
- 900ms
- 1s
- 10s

Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

priority number

Description	The dot1p priority to be used in the transmitted test packet
Context	oam ethcfm domain domain-id string association association-id string mep mep-id reference loopback unicast-latest-run priority number
Tree	priority
Range	0 to 7
Default	7
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

remote-mep-id number

Description	Indicates the remote mepid when remote-mep-id was the target and not a MAC address
Context	oam ethcfm domain domain-id string association association-id string mep mep-id reference loopback unicast-latest-run remote-mep-id number
Tree	remote-mep-id
Range	1 to 8191
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

sequence-number *number*

Description	The initial LBM sequence number used in the first LBM packet
Context	oam ethcfm domain domain-id string association association-id string mep mep-id reference loopback unicast-latest-run sequence-number number
Tree	sequence-number
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

start-time *string*

Description	UTC date and time when the test started
Context	oam ethcfm domain domain-id string association association-id string mep mep-id reference loopback unicast-latest-run start-time string
Tree	start-time
String Length	20 to 32
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

statistics

Description	Enter the statistics context
Context	oam ethcfm domain domain-id string association association-id string mep mep-id reference loopback unicast-latest-run statistics
Tree	statistics
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

packet-loss *decimal-number*

Description	Percentage of packet loss during testing
Context	oam ethcfm domain domain-id string association association-id string mep mep-id reference loopback unicast-latest-run statistics packet-loss decimal-number
Tree	packet-loss
Range	0.00 to 100.00
Units	percent

Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

received-bad-msdu *number*

Description	The total number of LBRs received whose mac_service_data_unit did not match that of the corresponding LBM, excluding OpCode
Context	oam ethcfm domain domain-id string association association-id string mep mep-id reference loopback unicast-latest-run statistics received-bad-msdu number
Tree	received-bad-msdu
Default	0
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

received-in-order *number*

Description	Total number of valid, in-order Loopback Replies received
Context	oam ethcfm domain domain-id string association association-id string mep mep-id reference loopback unicast-latest-run statistics received-in-order number
Tree	received-in-order
Default	0
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

received-out-of-order *number*

Description	The total number of valid, out-of-order Loopback Replies received
Context	oam ethcfm domain domain-id string association association-id string mep mep-id reference loopback unicast-latest-run statistics received-out-of-order number
Tree	received-out-of-order
Default	0
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

sent-packets *number*

Description	Indicates the number of packets sent during the last test
Context	oam ethcfm domain domain-id string association association-id string mep mep-id reference loopback unicast-latest-run statistics sent-packets number
Tree	sent-packets
Default	0
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

test-status *keyword*

Description	<p>The status of the last test that was executed</p> <p>A value of 'completed' means the test has run and ended without intervention, to completion. A value of 'terminated-incomplete' indicates the test started but conditions existed that caused it to terminate before the natural completion. A value 'in-progress' means the test is currently executing. A value of 'failed-to-start' meant a requirement to start the test was not met and the test had failed to start. When this value is set the statistics from a prior latest-run are deleted.</p>
Context	oam ethcfm domain domain-id string association association-id string mep mep-id reference loopback unicast-latest-run test-status keyword
Tree	test-status
Options	<ul style="list-style-type: none"> • completed • terminated-incomplete • in-progress • failed-to-start
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

remote-mep [remote-mep-id](#) *number*

Description	The list of remote MEPs in the MEP CCM database
Context	oam ethcfm domain domain-id string association association-id string mep mep-id reference remote-mep remote-mep-id number
Tree	remote-mep
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

remote-mep-id *number*

Description	The MEP ID of a remote MEP
Context	oam ethcfm domain domain-id string association association-id string mep mep-id reference remote-mep remote-mep-id number
Range	1 to 8191
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

auto-discovered *boolean*

Description	Indicates if the remote MEP has be auto-discovered 'true' indicates the remote MEP has been auto-discovered Display the method by which the remote MEP has been added to the remote-mep database. When 'false' the remote MEP has been added by manual configuration. When 'true' the remote-mep has been added using the auto discovery method.
Context	oam ethcfm domain domain-id string association association-id string mep mep-id reference remote-mep remote-mep-id number auto-discovered boolean
Tree	auto-discovered
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

chassis-id (*mac-address | string | binary*)

Description	The value relating to the chassis-id-subtype in string of MAC address format
Context	oam ethcfm domain domain-id string association association-id string mep mep-id reference remote-mep remote-mep-id number chassis-id (mac-address string binary)
Tree	chassis-id
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

chassis-id-subtype (*number | keyword*)

Description	Data definitions associated with the Sender ID TLV
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Context	oam ethcfm domain domain-id string association association-id string mep mep-id reference remote-mep remote-mep-id number chassis-id-subtype (number keyword)
Tree	chassis-id-subtype
Range	8 to 255
Options	<ul style="list-style-type: none"> • CHASSIS_COMPONENT Chassis identifier based on the value of entPhysicalAlias object defined in IETF RFC 2737 • INTERFACE_ALIAS Chassis identifier based on the value of ifAlias object defined in IETF RFC 2863 • PORT_COMPONENT Chassis identifier based on the value of entPhysicalAlias object defined in IETF RFC 2737 for a port or backplane component • MAC_ADDRESS Chassis identifier based on the value of a unicast source address (encoded in network byte order and IEEE 802.3 canonical bit order), of a port on the containing chassis as defined in IEEE Std 802-2001 • NETWORK_ADDRESS Chassis identifier based on a network address, associated with a particular chassis. The encoded address is composed of two fields. The first field is a single octet, representing the IANA AddressFamilyNumbers value for the specific address type, and the second field is the network address value • INTERFACE_NAME Chassis identifier based on the name of the interface, e.g., the value of if Name object defined in IETF RFC 2863 • LOCAL Chassis identifier based on a locally defined value
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

interface-status-tlv *keyword*

Description	The enumerated value from the Interface Status TLV from the last CCM received from the remote MEP
Context	oam ethcfm domain domain-id string association association-id string mep mep-id reference remote-mep remote-mep-id number interface-status-tlv keyword
Tree	interface-status-tlv

Options	<ul style="list-style-type: none"> no-status-tlv Indicates either that no CCM has been received or that no interface status TLV was present in the last CCM received up The interface is ready to pass packets down The interface cannot pass packets testing The interface is in some test mode unknown The interface status cannot be determined for some reason dormant The interface is not in a state to pass packets but is in a pending state, waiting for some external event not-present Some component of the interface is missing lower-layer-down The interface is down due to state of the lower layer interface condition
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Configurable False

Platforms 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

mac-address *string*

Description	The MAC address of the remote MEP.
Context	oam ethcfm domain domain-id string association association-id string mep mep-id reference remote-mep remote-mep-id number mac-address string
Tree	mac-address
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

management-address *string*

Description	The address that can be used to access and manage the remote system
Context	oam ethcfm domain domain-id string association association-id string mep mep-id reference remote-mep remote-mep-id number management-address string
Tree	management-address

Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

management-address-domain *string*

Description	Identifies the type and format of the related management-address leaf
Context	oam ethcfm domain domain-id string association association-id string mep mep-id reference remote-mep remote-mep-id number management-address-domain string
Tree	management-address-domain
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

port-status-tlv *keyword*

Description	The enumerated value from the Port Status TLV from the last CCM received from the remote MEP
Context	oam ethcfm domain domain-id string association association-id string mep mep-id reference remote-mep remote-mep-id number port-status-tlv keyword
Tree	port-status-tlv
Options	<ul style="list-style-type: none"> no-status-tlv Indicates either that no CCM has been received or that no port status TLV was present in the last CCM received blocked Ordinary data cannot pass freely through the port on which the remote MEP resides up Ordinary data can pass freely through the port on which the remote MEP resides
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

receiving-ccm *boolean*

Description	Indicates whether CCM messages are being received
Context	oam ethcfm domain domain-id string association association-id string mep mep-id reference remote-mep remote-mep-id number receiving-ccm boolean
Tree	receiving-ccm

Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

remote-defect-indicator *boolean*

Description	An indication of the state of the RDI bit in the last received CCM, 'true' for RDI set The CCM message contains a flag to indicate if a MEP has detected a defect condition. When the RDI bit is set to 1 in the PDU that means the MEP is experiencing a defect condition and is including this in the transmitted CCM packets. When no defects are detected the RDI bit is set to 0 in the packet.
Context	oam ethcfm domain domain-id string association association-id string mep mep-id reference remote-mep remote-mep-id number remote-defect-indicator boolean
Tree	remote-defect-indicator
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

remote-mep-failed-ok-time *number*

Description	The time at which the Remote MEP state machine last entered either the RMEP_FAILED or RMEP_OK state This type is based on the timeticks type defined in RFC 6991, but with 64-bit width. It represents the time, modulo 2^{64} , in hundredths of a second between two epochs.
Context	oam ethcfm domain domain-id string association association-id string mep mep-id reference remote-mep remote-mep-id number remote-mep-failed-ok-time number
Tree	remote-mep-failed-ok-time
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

remote-mep-state *keyword*

Description	An enumerated value indicating the operational state of the Remote MEP state machine
Context	oam ethcfm domain domain-id string association association-id string mep mep-id reference remote-mep remote-mep-id number remote-mep-state keyword
Tree	remote-mep-state

Options	<ul style="list-style-type: none"> • idle Indicates momentary state during reset • start Indicates the timer has not expired since the state machine was reset, and no valid CCM has yet been received • failed Indicates the timer has expired, both since the state machine was reset and since a valid CCM was received. • ok Indicates the timer has not expired since a valid CCM was received.
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Configurable False

Platforms 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

network-instance

Description	Enter the network-instance context
Context	oam ethcfm domain domain-id string association association-id string network-instance
Tree	network-instance
Configurable	True
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

name *reference*

Description	The network instance to which the information in this maintenance-association applies
Context	oam ethcfm domain domain-id string association association-id string network-instance name reference
Tree	name
Reference	network-instance name string
Configurable	True
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

remote-mep-auto-discovery

Description	This set of data definitions describes the auto discovery behavior for remote MEPs
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Context	oam ethcfm domain domain-id string association association-id string remote-mep-auto-discovery
Tree	remote-mep-auto-discovery
Configurable	True
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

admin-state *keyword*

Description	<p>Enable the ability to auto-discover remote MEPs within the Maintenance Association</p> <p>When the admin-state is 'enable' unknown remote MEP peers which have the same Maintenance Association information will be automatically added to the remote-mep database and these unknown peer MEPS will not raise the defect error-ccm. When the admin-state is 'disable' unknown remote MEP peers will not automatically be added to the remote-mep database. Unknown MEPs will cause the defect error-ccm to be raised.</p> <p>If the admin-state value is changed from 'enable' to 'disable' all previously learned MEPs for the Maintenance Association will be removed from the remote-mep database and auto-discovery will be disabled.</p>
Context	oam ethcfm domain domain-id string association association-id string remote-mep-auto-discovery admin-state keyword
Tree	admin-state
Default	disable
Options	<ul style="list-style-type: none"> • enable • disable
Configurable	True
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

aging-timer (*number | keyword*)

Description	<p>Optional time in seconds the peer MEP remains in the remote-mep database after defect remote-ccm</p> <p>Peer MEPs added to the remote-mep database do not age out unless the optional aging-timer is configured. The aging-timer value is the additional time the remote peer MEP remains in the database since the recognition of the defect remote-ccm (peer timeout where no packets have arrived from the peer in 3.5 times the ccm-interval). A value of 'none' disables aging.</p>
Context	oam ethcfm domain domain-id string association association-id string remote-mep-auto-discovery aging-timer (number keyword)
Tree	aging-timer

Range	1 to 86400
Default	none
Units	seconds
Options	<ul style="list-style-type: none"> • none
Configurable	True
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

domain-format *keyword*

Description	Format of the md-name
Context	oam ethcfm domain domain-id string domain-format keyword
Tree	domain-format
Options	<ul style="list-style-type: none"> • none No Maintenance Domain Name • dns-like Domain Name based string • mac-address MAC address • string Character string
Configurable	True
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

level *number*

Description	<p>Integer identifying the Maintenance Domain Level</p> <p>Higher numbers correspond Maintenance Domains with the greatest physical reach. Lower numbers correspond to Maintenance Domains with more limited physical reach. CFM packets with higher levels will flow transparently across domains of lower level values.</p>
Context	oam ethcfm domain domain-id string level number
Tree	level
Range	0 to 7
Default	0
Configurable	True
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

md-name

Description	Context for domain name
Context	oam ethcfm domain domain-id string md-name
Tree	md-name
Configurable	True
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

dns string

Description	DNS format sting required when using domain-format 'dns-like'
Context	oam ethcfm domain domain-id string md-name dns string
Tree	dns
String Length	1 to 43
Configurable	True
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

mac string

Description	MAC address string required when using domain-format 'mac-address'
Context	oam ethcfm domain domain-id string md-name mac string
Tree	mac
Configurable	True
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

name string

Description	Name string required when using domain-format 'string'
Context	oam ethcfm domain domain-id string md-name name string
Tree	name
String Length	1 to 43
Configurable	True
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

two-octet-int *number*

Description	Two bytes value required when using domain-format 'mac-address'
Context	oam ethcfm domain domain-id string md-name two-octet-int number
Tree	two-octet-int
Configurable	True
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

learned-remote-mac [domain-id string association-id string local-mep-id number remote-mep-id number](#)

Description	Enter the learned-remote-mac list instance
Context	oam ethcfm learned-remote-mac domain-id string association-id string local-mep-id number remote-mep-id number
Tree	learned-remote-mac
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

domain-id *string*

Description	A unique administratively assigned name used to identify a domain
Context	oam ethcfm learned-remote-mac domain-id string association-id string local-mep-id number remote-mep-id number
String Length	1 to 64
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

association-id *string*

Description	A unique administratively assigned name used to identify an association
Context	oam ethcfm learned-remote-mac domain-id string association-id string local-mep-id number remote-mep-id number
String Length	1 to 64
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

local-mep-id *number*

Description	Specifies a local MEP identifier unique over a given maintenance association
Context	oam ethcfm learned-remote-mac domain-id <i>string</i> association-id <i>string</i> local-mep-id <i>number</i> remote-mep-id <i>number</i>
Range	1 to 8191
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

remote-mep-id *number*

Description	Specifies a remote MEP identifier unique over a given maintenance association
Context	oam ethcfm learned-remote-mac domain-id <i>string</i> association-id <i>string</i> local-mep-id <i>number</i> remote-mep-id <i>number</i>
Range	1 to 8191
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

remote-mac-address *string*

Description	The the source MAC address used by the remote MEP in the most recently received CCM PDU
Context	oam ethcfm learned-remote-mac domain-id <i>string</i> association-id <i>string</i> local-mep-id <i>number</i> remote-mep-id <i>number</i> remote-mac-address <i>string</i>
Tree	remote-mac-address
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

stale-flag *boolean*

Description	<p>Indicates if the learned MAC entry for this remote MEP matches the entry found in the list on the local MEP</p> <p>The value 'false' indicates that the MAC address matches the entry found in both the lists for the same local and remote MEP values and therefore is not considered stale.</p> <p>The value 'true' indicates either the entries do not match, or there is no equivalent entry for the remote MEP in the list on the local MEP, so the learned remote MAC address in this table is considered stale.</p>
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Context	oam ethcfm learned-remote-mac domain-id string association-id string local-mep-id number remote-mep-id number stale-flag boolean
Tree	stale-flag
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

statistics

Description	Enter the ETH-CFM system level statistics context
Context	oam ethcfm statistics
Tree	statistics
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

error-discards *number*

Description	Indicates the number of discarded ETH-CFM packets received on the node A packet may be discarded for several reasons including, but not limited to, malformed PDU, invalid TLVs, MEP admin down, etc.
Context	oam ethcfm statistics error-discards number
Tree	error-discards
Default	0
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

receive-congestion-drops *number*

Description	Indicates the number of dropped ETH-CFM packets on the node in the receive direction A packet drop can be caused by resource contention.
Context	oam ethcfm statistics receive-congestion-drops number
Tree	receive-congestion-drops
Default	0
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

receive-count *number*

Description	Indicates the number of ETH-CFM packets received on the node
Context	oam ethcfm statistics receive-count <i>number</i>
Tree	receive-count
Default	0
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

transmit-congestion-drops *number*

Description	Indicates the number of dropped ETH-CFM packets on the node in the transmit direction A packet drop can be caused by resource contention.
Context	oam ethcfm statistics transmit-congestion-drops <i>number</i>
Tree	transmit-congestion-drops
Default	0
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

transmit-count *number*

Description	Indicates the number of ETH-CFM packets transmitted from the node
Context	oam ethcfm statistics transmit-count <i>number</i>
Tree	transmit-count
Default	0
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

ippm

Description	Context for IP Performance Measurement shared elements
Context	oam ippm
Tree	ippm
Configurable	True

Platforms 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

source-udp-port-pools

Description Context for source UDP port allocation to IPPM application
Context [oam ippm source-udp-port-pools](#)
Tree [source-udp-port-pools](#)
Configurable True
Platforms 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

port *port-number number*

Description List of UDP ports
Context [oam ippm source-udp-port-pools port port-number number](#)
Tree [port](#)
Configurable True
Platforms 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

port-number *number*

Description UDP port number
Context [oam ippm source-udp-port-pools port port-number number](#)
Range 64374 to 64383
Configurable True
Platforms 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

application-assignment *keyword*

Description IP Performance Measurement application assigned to the UDP port
Context [oam ippm source-udp-port-pools port port-number number application-assignment keyword](#)
Tree [application-assignment](#)
Default unassigned
Options

- oam-pm-ip
Performance monitoring IP
- link-measurement

- Link Measurement
 - unassigned
 - No IPPM application assigned

Configurable	True
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

in-use *boolean*

Description	Referenced by an application test When false no test is referencing the UDP port. When true a test is referencing the UDP port. The application assignment can only be changed when the value is false.
Context	oam ippm source-udp-port-pools port port-number number in-use <i>boolean</i>
Tree	in-use
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

link-measurement

Description	Context for Link Measurement
Context	oam link-measurement
Tree	link-measurement
Configurable	True
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

interface name *string*

Description	List of interface names
Context	oam link-measurement interface name <i>string</i>
Tree	interface
Configurable	True
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

name *string*

Description	The interface name
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This can be configured in one of two forms. Fully qualified reference to an interface subinterface, example ethernet-1/1.1, or symbolic alias, example interface-1. When the fully qualified name is specified the 'interface-ref' should not be configured. When the symbolic alias is specified the 'interface-ref' must be configured.

Context	oam link-measurement interface name <i>string</i>
String Length	1 to 255
Configurable	True
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

aggregate-newest-index *number*

Description	Index of the newest aggregate sample window for this subinterface
Context	oam link-measurement interface name <i>string</i> aggregate-newest-index <i>number</i>
Tree	aggregate-newest-index
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

destination-ip-auto-assigned *boolean*

Description	Destination IP address auto assigned
Context	oam link-measurement interface name <i>string</i> destination-ip-auto-assigned <i>boolean</i>
Tree	destination-ip-auto-assigned
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

detectable-transmit-error *keyword*

Description	Detectable error interrupting Link Measurement tests Packet transmission is prevented for the following detectable transmit errors; subinterface-down, invalid-dest-ip, invalid-subinterface-type, same-source-ip-destination-ip.
Context	oam link-measurement interface name <i>string</i> detectable-transmit-error <i>keyword</i>
Tree	detectable-transmit-error
Options	<ul style="list-style-type: none"> • none

- subinterface-down
- unexpected-error
- no-route
- source-ip-not-local
- invalid-dest-ip
- subinterface-type-not-supported
- same-source-ip-destination-ip

Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

dynamic-measurement

Description	Context for Dynamic Measurement of IP interface
Context	oam link-measurement interface name <i>string</i> dynamic-measurement
Tree	dynamic-measurement
Configurable	True
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

link-measurement-template *reference*

Description	The link measurement template assigned to the subinterface
Context	oam link-measurement interface name <i>string</i> dynamic-measurement link-measurement-template <i>reference</i>
Tree	link-measurement-template
Reference	oam link-measurement measurement-template template-name <i>string</i>
Configurable	True
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

stamp

Description	Context for STAMP IP protocol configuration
Context	oam link-measurement interface name <i>string</i> dynamic-measurement stamp
Tree	stamp
Configurable	True
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

ipv4

Description	Context for ipv4 address configuration
Context	oam link-measurement interface name <i>string</i> dynamic-measurement stamp ipv4
Tree	ipv4
Configurable	True
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

admin-state *keyword*

Description	Administrative state of STAMP IPv4 packets
Context	oam link-measurement interface name <i>string</i> dynamic-measurement stamp ipv4 admin-state <i>keyword</i>
Tree	admin-state
Default	disable
Options	<ul style="list-style-type: none"> • enable • disable
Configurable	True
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

destination-ip *string*

Description	Unicast IPv4 destination address When not specified and the primary local IP address has a prefix length of 30 or 31 the destination address will be the compliment. Otherwise, must be specified.
Context	oam link-measurement interface name <i>string</i> dynamic-measurement stamp ipv4 destination-ip <i>string</i>
Tree	destination-ip
Configurable	True
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

source-ip *string*

Description	Unicast IPv4 source address When not specified the primary local interface address will be used.
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Context	oam link-measurement interface name <i>string</i> dynamic-measurement stamp ipv4 source-ip <i>string</i>
Tree	source-ip
Configurable	True
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

ipv6

Description	Context for ipv6 address
Context	oam link-measurement interface name <i>string</i> dynamic-measurement stamp ipv6
Tree	ipv6
Configurable	True
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

admin-state *keyword*

Description	Administrative state of STAMP IPv6 packets
Context	oam link-measurement interface name <i>string</i> dynamic-measurement stamp ipv6 admin-state <i>keyword</i>
Tree	admin-state
Default	disable
Options	<ul style="list-style-type: none"> • enable • disable
Configurable	True
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

destination-ip *string*

Description	Global unicast or link-local unicast IPv6 destination address When not specified the IPv6 destination discovery is an option for the measurement template.
Context	oam link-measurement interface name <i>string</i> dynamic-measurement stamp ipv6 destination-ip <i>string</i>
Tree	destination-ip
Configurable	True
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

source-ip *string*

Description	Global unicast or link-local unicast IPv6 source address When not specified the link-local interface address will be used.
Context	oam link-measurement interface name <i>string</i> dynamic-measurement stamp ipv6 source-ip <i>string</i>
Tree	source-ip
Configurable	True
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

in-use-destination-udp-port *number*

Description	Destination UDP port in use
Context	oam link-measurement interface name <i>string</i> in-use-destination-udp-port <i>number</i>
Tree	in-use-destination-udp-port
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

in-use-source-udp-port *number*

Description	Source UDP port in use
Context	oam link-measurement interface name <i>string</i> in-use-source-udp-port <i>number</i>
Tree	in-use-source-udp-port
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

interface-ref

Description	Reference to a subinterface If interface-ref is configured the ../interface/name will be considered as an alias regardless of its form.
Context	oam link-measurement interface name <i>string</i> interface-ref
Tree	interface-ref
Configurable	True

Platforms 7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

interface *reference*

Description Reference to a base interface

Context [oam link-measurement interface name string interface-ref interface reference](#)

Tree [interface](#)

Reference [interface name string](#)

Configurable True

Platforms 7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

subinterface *reference*

Description Reference to a subinterface
This requires the base interface to be specified using the interface leaf in this container.

Context [oam link-measurement interface name string interface-ref subinterface reference](#)

Tree [subinterface](#)

Reference [interface name string subinterface index number](#)

Configurable True

Platforms 7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

last-reported-dynamic-delay (*number | keyword*)

Description Last delay measurement reported

Context [oam link-measurement interface name string last-reported-dynamic-delay \(number | keyword\)](#)

Tree [last-reported-dynamic-delay](#)

Range 0 to 2147483647

Units microseconds

Options

- none

No value has been reported

Configurable

False

Platforms

7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

oper-state keyword**Description**

Operational state of link measurement on this interface

Context

[oam link-measurement interface name](#) *string* **oper-state** *keyword*

Tree

[oper-state](#)

Options

- up
Component or process is operational
- down
Component or process is not operational
- empty
Component slot is empty
- downloading
Component is downloading image into memory
- booting
Component is booting downloaded image
- starting
Component image operational, application processes starting
- failed
Component or process has failed
- synchronizing
Component is currently being synchronized
- upgrading
Component is currently being upgraded
- low-power
Component is offline due to insufficient system power
- degraded
Component or process is in a degraded state
- warm-reboot
Component or process is currently warm rebooting
This state is set during a warm reboot immediately following initiation of the reboot, continuing after startup until the system has completed audit. In this state the system will not accept configuration changes.

- waiting
Component or process is currently waiting
This state can be set by event handler when the `reinvoke-with-delay` action is used, and indicates that the event handler is waiting for the provided delay before reinvoking the instance.

Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

operational-destination-address (*ipv4-address* | *ipv6-address*)

Description	Destination IP address used by STAMP test packets
Context	oam link-measurement interface name <i>string</i> operational-destination-address (<i>ipv4-address</i> <i>ipv6-address</i>)
Tree	operational-destination-address
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

operational-failure *keyword*

Description	Reason(s) why this interface's link measurement is operationally disabled
Context	oam link-measurement interface name <i>string</i> operational-failure <i>keyword</i>
Tree	operational-failure
Options	<ul style="list-style-type: none"> • no-protocol • template-admin-down • udp-port-unavailable • internal-error • subinterface-not-found-in-network-instance • network-instance-type-not-supported • subinterface-type-not-supported • no-template
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

operational-source-address (*ipv4-address* | *ipv6-address*)

Description	Source IP address used by STAMP test packets
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Context	oam link-measurement interface name <i>string</i> operational-source-address (<i>ipv4-address</i> <i>ipv6-address</i>)
Tree	operational-source-address
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

report-timestamp *string*

Description	Time a threshold event was last reported to the routing engine When <code>./last-reported-dynamic-delay > 0</code> , <code>report-timestamp</code> holds the time at which <code>./last-reported-dynamic-delay</code> was reported to the routing engine. When <code>./last-reported-dynamic-delay = 0</code> , <code>report-timestamp</code> holds the time at which <code>./last-reported-dynamic-delay</code> was 'cleared' (because aging timer expired). When <code>./last-reported-dynamic-delay = 'none'</code> , <code>report-timestamp</code> holds '1970-Jan-01 00:00:00.0' UTC as a placeholder representing a delay has not yet been reported to the routing engine.
Context	oam link-measurement interface name <i>string</i> report-timestamp <i>string</i>
Tree	report-timestamp
String Length	20 to 32
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

report-triggered-by *keyword*

Description	Triggering event for the report
Context	oam link-measurement interface name <i>string</i> report-triggered-by <i>keyword</i>
Tree	report-triggered-by
Options	<ul style="list-style-type: none"> • none • sample-threshold-absolute • sample-threshold-relative • aggregate-threshold-absolute • aggregate-threshold-relative • expired • reporting-disabled
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

reporting *boolean*

Description	IP interface reporting to the routing engine
Context	oam link-measurement interface name <i>string</i> reporting <i>boolean</i>
Tree	reporting
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

sample-newest-index *number*

Description	Index of the newest sample window for this subinterface
Context	oam link-measurement interface name <i>string</i> sample-newest-index <i>number</i>
Tree	sample-newest-index
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

source-ip-auto-assigned *boolean*

Description	Source IP address auto assigned
Context	oam link-measurement interface name <i>string</i> source-ip-auto-assigned <i>boolean</i>
Tree	source-ip-auto-assigned
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

stamp-session-sender-id *number*

Description	Automatically generated Session Sender ID (SSID) assigned to the session
Context	oam link-measurement interface name <i>string</i> stamp-session-sender-id <i>number</i>
Tree	stamp-session-sender-id
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

statistics

Description	Aggregate sample window information and sample window statistics
Context	oam link-measurement interface name <i>string</i> statistics
Tree	statistics
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

aggregate-sample-window

Description	Context for aggregate sample window statistics Rolling buffer maintains the last 20 results.
Context	oam link-measurement interface name <i>string</i> statistics aggregate-sample-window
Tree	aggregate-sample-window
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

index [index number](#)

Description	The index list instance
Context	oam link-measurement interface name <i>string</i> statistics aggregate-sample-window index index number
Tree	index
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

index [number](#)

Description	Index used to differentiate aggregate sample windows on the same subinterface
Context	oam link-measurement interface name <i>string</i> statistics aggregate-sample-window index index number
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

average *number*

Description	Average delay measurement reported to the aggregate sample window
Context	oam link-measurement interface name <i>string</i> statistics aggregate-sample-window index index <i>number</i> average <i>number</i>
Tree	average
Units	microseconds
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

end-timestamp-utc *string*

Description	Time (UTC) at which this aggregate sample window closed
Context	oam link-measurement interface name <i>string</i> statistics aggregate-sample-window index index <i>number</i> end-timestamp-utc <i>string</i>
Tree	end-timestamp-utc
String Length	20 to 32
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

integrity *boolean*

Description	Percentage of results meets integrity criteria
Context	oam link-measurement interface name <i>string</i> statistics aggregate-sample-window index index <i>number</i> integrity <i>boolean</i>
Tree	integrity
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

maximum *number*

Description	Maximum delay measurement reported to the aggregate sample window
Context	oam link-measurement interface name <i>string</i> statistics aggregate-sample-window index index <i>number</i> maximum <i>number</i>
Tree	maximum
Units	microseconds
Configurable	False

Platforms 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

minimum *number*

Description Minimum delay measurement reported to the aggregate sample window

Context [oam link-measurement interface name](#) *string* [statistics aggregate-sample-window index index](#) *number* [minimum](#) *number*

Tree [minimum](#)

Units microseconds

Configurable False

Platforms 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

result *number*

Description Delay being evaluated for reporting

Context [oam link-measurement interface name](#) *string* [statistics aggregate-sample-window index index](#) *number* [result](#) *number*

Tree [result](#)

Units microseconds

Configurable False

Platforms 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

sample-window-count *number*

Description Number of sample windows completed meeting integrity requirement

Context [oam link-measurement interface name](#) *string* [statistics aggregate-sample-window index index](#) *number* [sample-window-count](#) *number*

Tree [sample-window-count](#)

Default 0

Configurable False

Platforms 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

window-state *keyword*

Description Enter the window-state context

Context [oam link-measurement interface name](#) *string* [statistics aggregate-sample-window index index](#) *number* [window-state](#) *keyword*

Tree	window-state
Options	<ul style="list-style-type: none"> completed Window ran to completion in-progress Window currently active sw-reported Sample window threshold triggered report, aggregated sample window restarted asw-reported Aggregate sample window threshold triggered report terminated Window terminated prior to completion
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

sample-window

Description	Context for sample window statistics Rolling buffer maintains the last 50 results.
Context	oam link-measurement interface name <i>string</i> statistics sample-window
Tree	sample-window
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

index *index number*

Description	Index list instance
Context	oam link-measurement interface name <i>string</i> statistics sample-window index <i>index number</i>
Tree	index
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

index *number*

Description	Index used to differentiate sample windows on the same subinterface
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Context	oam link-measurement interface name <i>string</i> statistics sample-window index index <i>number</i>
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

average *number*

Description	Average delay computed
Context	oam link-measurement interface name <i>string</i> statistics sample-window index index <i>number</i> average <i>number</i>
Tree	average
Units	microseconds
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

duplicate-packet-count *number*

Description	Count of duplicate packets that have arrived during this sample window
Context	oam link-measurement interface name <i>string</i> statistics sample-window index index <i>number</i> duplicate-packet-count <i>number</i>
Tree	duplicate-packet-count
Default	0
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

end-timestamp-utc *string*

Description	Time (UTC) at which this sample window closed
Context	oam link-measurement interface name <i>string</i> statistics sample-window index index <i>number</i> end-timestamp-utc <i>string</i>
Tree	end-timestamp-utc
String Length	20 to 32
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

error-count *number*

Description	Number of erroneous delay measurements that occurred in this sample window
Context	oam link-measurement interface name <i>string</i> statistics sample-window index index <i>number</i> error-count <i>number</i>
Tree	error-count
Default	0
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

integrity *boolean*

Description	Percentage of results meets integrity criteria
Context	oam link-measurement interface name <i>string</i> statistics sample-window index index <i>number</i> integrity <i>boolean</i>
Tree	integrity
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

maximum *number*

Description	Maximum delay computed
Context	oam link-measurement interface name <i>string</i> statistics sample-window index index <i>number</i> maximum <i>number</i>
Tree	maximum
Units	microseconds
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

minimum *number*

Description	Minimum delay computed
Context	oam link-measurement interface name <i>string</i> statistics sample-window index index <i>number</i> minimum <i>number</i>
Tree	minimum
Units	microseconds

Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

received-packets *number*

Description	Number of STAMP packets received from the session-reflector
Context	oam link-measurement interface name <i>string</i> statistics sample-window index index <i>number</i> received-packets <i>number</i>
Tree	received-packets
Default	0
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

result *number*

Description	Delay evaluated for reporting
Context	oam link-measurement interface name <i>string</i> statistics sample-window index index <i>number</i> result <i>number</i>
Tree	result
Units	microseconds
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

stamp-malformed-flag-count *number*

Description	Count of packets in this sample window with the M (Malformed) bit set
Context	oam link-measurement interface name <i>string</i> statistics sample-window index index <i>number</i> stamp-malformed-flag-count <i>number</i>
Tree	stamp-malformed-flag-count
Default	0
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

stamp-unrecognized-flag-count *number*

Description	Number of packets in this sample window with the U (Unrecognized) bit set
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Context	oam link-measurement interface name <i>string</i> statistics sample-window index index <i>number</i> stamp-unrecognized-flag-count <i>number</i>
Tree	stamp-unrecognized-flag-count
Default	0
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

transmitted-packets *number*

Description	Number of STAMP packets transmitted to the session-reflector
Context	oam link-measurement interface name <i>string</i> statistics sample-window index index <i>number</i> transmitted-packets <i>number</i>
Tree	transmitted-packets
Default	0
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

window-state *keyword*

Description	Enter the window-state context
Context	oam link-measurement interface name <i>string</i> statistics sample-window index index <i>number</i> window-state <i>keyword</i>
Tree	window-state
Options	<ul style="list-style-type: none"> • completed Window ran to completion • in-progress Window currently active • sw-reported Sample window threshold triggered report, aggregated sample window restarted • terminated Window terminated prior to completion
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

zero-or-negative-delay-count *number*

Description	Count of packets that have a zero or negative computed delay during this sample window
Context	oam link-measurement interface name <i>string</i> statistics sample-window index index <i>number</i> zero-or-negative-delay-count <i>number</i>
Tree	zero-or-negative-delay-count
Default	0
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

measurement-template [template-name](#) *string*

Description	List of measurement templates
Context	oam link-measurement measurement-template template-name <i>string</i>
Tree	measurement-template
Configurable	True
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b
Max. Elements	255

template-name *string*

Description	Measurement template name Modificaiton to bin-group attributes will cause associated tests to be terminated and restarted.
Context	oam link-measurement measurement-template template-name <i>string</i>
String Length	1 to 255
Configurable	True
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

admin-state *keyword*

Description	Administrative state of the measurement template.
Context	oam link-measurement measurement-template template-name <i>string</i> admin-state <i>keyword</i>
Tree	admin-state
Default	disable

Options	<ul style="list-style-type: none"> • enable • disable
Configurable	True
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

aggregate-sample-window

Description	Context for aggregate sample window The aggregate sample window is a collection of sample windows. It executes threshold comparisons based on the results in each sample window.
Context	oam link-measurement measurement-template template-name <i>string</i> aggregate-sample-window
Tree	aggregate-sample-window
Configurable	True
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

multiplier *number*

Description	Number of sample windows comprising the aggregate sample window
Context	oam link-measurement measurement-template template-name <i>string</i> aggregate-sample-window multiplier <i>number</i>
Tree	multiplier
Range	1 to 12
Default	12
Configurable	True
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

threshold

Description	Context for threshold configuration
Context	oam link-measurement measurement-template template-name <i>string</i> aggregate-sample-window threshold
Tree	threshold
Configurable	True
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

absolute number

Description	Absolute change compared to previously reported result
Context	oam link-measurement measurement-template template-name string aggregate-sample-window threshold absolute number
Tree	absolute
Range	1 to 100000
Units	microseconds
Configurable	True
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

relative number

Description	Percentage of change compared to previously reported result
Context	oam link-measurement measurement-template template-name string aggregate-sample-window threshold relative number
Tree	relative
Range	1 to 100
Units	percent
Configurable	True
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

window-integrity number

Description	Required sample count to consider window integral When not configured, results are compared to the configured thresholds regardless of sample count.
Context	oam link-measurement measurement-template template-name string aggregate-sample-window window-integrity number
Tree	window-integrity
Range	1 to 100
Units	percent
Configurable	True
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

delay *keyword*

Description	Delay measurement type of interest
Context	oam link-measurement measurement-template template-name <i>string</i> delay <i>keyword</i>
Tree	delay
Default	minimum
Options	<ul style="list-style-type: none"> • minimum • maximum • average
Configurable	True
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

description *string*

Description	Text description for the measurement template
Context	oam link-measurement measurement-template template-name <i>string</i> description <i>string</i>
Tree	description
String Length	1 to 255
Configurable	True
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

interval *number*

Description	Interval between test packet transmissions
Context	oam link-measurement measurement-template template-name <i>string</i> interval <i>number</i>
Tree	interval
Range	1 to 10
Default	1
Units	seconds
Configurable	True
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

last-reported-dynamic-delay-hold *number*

Description	Wait time to flush the last reported delay after operational change This command configures the timer that specifies the wait time before the last reported delay measurement is flushed after a link measurement test enters the operationally down state. When 0 the last reported delay is flushed immediately without delay.
Context	oam link-measurement measurement-template template-name <i>string</i> last-reported-dynamic-delay-hold <i>number</i>
Tree	last-reported-dynamic-delay-hold
Range	0 to 86400
Default	86400
Units	seconds
Configurable	True
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

reporting *boolean*

Description	Report value reaching the threshold When true threshold events are reported to the routing engine. When false threshold events are not reported to the routing engine
Context	oam link-measurement measurement-template template-name <i>string</i> reporting <i>boolean</i>
Tree	reporting
Default	true
Configurable	True
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

sample-window

Description	Context for sample window The sample window is a collection of individual test packet results. It executes threshold comparisons using the results in the sample window.
Context	oam link-measurement measurement-template template-name <i>string</i> sample-window
Tree	sample-window
Configurable	True

Platforms 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

multiplier *number*

Description Defines the length of the measurement window, multiplier times interval

Context [oam link-measurement measurement-template template-name](#) *string*
[sample-window multiplier](#) *number*

Tree [multiplier](#)

Range 1 to 900

Default 10

Configurable True

Platforms 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

threshold

Description Context for threshold configuration

Context [oam link-measurement measurement-template template-name](#) *string*
[sample-window threshold](#)

Tree [threshold](#)

Configurable True

Platforms 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

absolute *number*

Description Absolute change compared to previously reported result

Context [oam link-measurement measurement-template template-name](#) *string*
[sample-window threshold absolute](#) *number*

Tree [absolute](#)

Range 1 to 100000

Units microseconds

Configurable True

Platforms 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

relative *number*

Description Percentage of change compared to previously reported result

Context	oam link-measurement measurement-template template-name <i>string</i> sample-window threshold relative <i>number</i>
Tree	relative
Range	1 to 500
Units	percent
Configurable	True
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

window-integrity *number*

Description	Required sample count to consider window integral When not configured, results are compared to the configured thresholds regardless of sample count.
Context	oam link-measurement measurement-template template-name <i>string</i> sample-window window-integrity <i>number</i>
Tree	window-integrity
Range	1 to 100
Units	percent
Configurable	True
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

stamp

Description	Context for STAMP options used by the measurement template
Context	oam link-measurement measurement-template template-name <i>string</i> stamp
Tree	stamp
Configurable	True
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

destination-udp-port *number*

Description	Destination UDP port
Context	oam link-measurement measurement-template template-name <i>string</i> stamp destination-udp-port <i>number</i>
Tree	destination-udp-port
Range	1 to 65535
Default	862

Configurable	True
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

dscp (*number | keyword*)

Description	DSCP value
Context	oam link-measurement measurement-template template-name string stamp dscp (<i>number keyword</i>)
Tree	dscp
Range	0 to 63
Default	CS6
Options	<ul style="list-style-type: none"> • CS0 • LE • CS1 • AF11 • AF12 • AF13 • CS2 • AF21 • AF22 • AF23 • CS3 • AF31 • AF32 • AF33 • CS4 • AF41 • AF42 • AF43 • CS5 • EF • CS6 • CS7
Configurable	True
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

forwarding-class *reference*

Description	Forwarding class for packet treatment in the local node
Context	oam link-measurement measurement-template template-name <i>string</i> stamp forwarding-class <i>reference</i>
Tree	forwarding-class
Reference	qos forwarding-classes forwarding-class name <i>string</i>
Configurable	True
Platforms	7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

ipv6-destination-discovery

Description	Context for IPv6 destination discovery Ping well-known multicast address ff02::2 (all routers) to solicit response from the peer. Use the source address in the response as the destination address in the STAMP test packets.
Context	oam link-measurement measurement-template template-name <i>string</i> stamp ipv6-destination-discovery
Tree	ipv6-destination-discovery
Configurable	True
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

admin-state *keyword*

Description	Administrative state of IPv6 destination discovery
Context	oam link-measurement measurement-template template-name <i>string</i> stamp ipv6-destination-discovery admin-state <i>keyword</i>
Tree	admin-state
Default	disable
Options	<ul style="list-style-type: none"> • enable • disable
Configurable	True
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

discovery-interval *number*

Description	Transmission frequency while in discovery phase
Context	oam link-measurement measurement-template template-name <i>string</i> stamp ipv6-destination-discovery discovery-interval <i>number</i>
Tree	discovery-interval
Range	1 to 10
Default	10
Units	seconds
Configurable	True
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

discovery-timer *number*

Description	Maximum time to remain in the discovery phase The discovery phase will end when the IPv6 peer is discovered or this timer expires.
Context	oam link-measurement measurement-template template-name <i>string</i> stamp ipv6-destination-discovery discovery-timer <i>number</i>
Tree	discovery-timer
Range	1 to 1800
Default	60
Units	seconds
Configurable	True
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

update-interval *number*

Description	Transmission frequency to maintain the peer address after discovery phase completes When 0 no maintenance of the peer address once the discovery phase ends.
Context	oam link-measurement measurement-template template-name <i>string</i> stamp ipv6-destination-discovery update-interval <i>number</i>
Tree	update-interval
Range	0 to 3600
Default	600

Units	seconds
Configurable	True
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

pad-tlv-size *number*

Description	Increase the STAMP PDU by including the PAD TLV
Context	oam link-measurement measurement-template template-name <i>string</i> stamp pad-tlv-size <i>number</i>
Tree	pad-tlv-size
Range	4 to 9714
Units	bytes
Configurable	True
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

profile *keyword*

Description	QoS profile for packet treatment in the local node
Context	oam link-measurement measurement-template template-name <i>string</i> stamp profile <i>keyword</i>
Tree	profile
Default	in
Options	<ul style="list-style-type: none"> • in The second level priority profile • out The lowest level priority profile • exceed The third level priority profile • in-plus The highest priority profile
Configurable	True
Platforms	7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

return-path

Description	Context for the STAMP return-path control
Context	oam link-measurement measurement-template template-name string stamp return-path
Tree	return-path
Configurable	True
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

link *boolean*

Description	Include the Return Path sub-TLV specifying link
Context	oam link-measurement measurement-template template-name string stamp return-path link boolean
Tree	link
Default	false
Configurable	True
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

source-udp-port *number*

Description	Automatically allocate or statically configure the source UDP port When 0 source UDP Port will automatically select an available source UDP port from the dynamic range. Configuring a specific value requires the UDP port to be assigned to the link-measurement application /oam ippm source-udp-port-pools port application-assignment.
Context	oam link-measurement measurement-template template-name string stamp source-udp-port number
Tree	source-udp-port
Range	0 64374 to 64383
Default	0
Configurable	True
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

ttl *number*

Description	Time to live
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Context	oam link-measurement measurement-template template-name <i>string</i> stamp ttl <i>number</i>
Tree	ttl
Range	1 to 255
Default	1
Configurable	True
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

unidirectional-measurement *keyword*

Description	Method used to compute the forward unidirectional delay value
Context	oam link-measurement measurement-template template-name <i>string</i> unidirectional-measurement <i>keyword</i>
Tree	unidirectional-measurement
Default	derived
Options	<ul style="list-style-type: none"> • derived Computes forward unidirectional measurement using round-trip divide by 2 • actual Computes forward unidirectional measurements using (T2-T1)
Configurable	True
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

Isp-ping

Description	Container of last ping results for different MPLS and segment routing tunnels
Context	oam lsp-ping
Tree	lsp-ping
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

ldp

Description	Container of LSP ping results for different LDP tunnels
Context	oam lsp-ping ldp
Tree	ldp

Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

fec prefix (*ipv4-prefix* | *ipv6-prefix*)

Description	Enter the fec list instance
Context	oam lsp-ping ldp fec prefix (<i>ipv4-prefix</i> <i>ipv6-prefix</i>)
Tree	fec
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

prefix (*ipv4-prefix* | *ipv6-prefix*)

Description	The IPv4 or IPv6 prefix associated with the fec This is the destination that was pinged.
Context	oam lsp-ping ldp fec prefix (<i>ipv4-prefix</i> <i>ipv6-prefix</i>)
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

session-id id number

Description	List of recent sessions (up to 10) with saved LSP ping results for the prefix
Context	oam lsp-ping ldp fec prefix (<i>ipv4-prefix</i> <i>ipv6-prefix</i>) session-id id number
Tree	session-id
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b
Max. Elements	10

id number

Description	The system-assigned session ID
Context	oam lsp-ping ldp fec prefix (<i>ipv4-prefix</i> <i>ipv6-prefix</i>) session-id id number
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

path-destination

Description	Enter the path-destination context
Context	oam lsp-ping ldp fec prefix (ipv4-prefix ipv6-prefix) session-id id number path-destination
Tree	path-destination
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

ip-address (ipv4-address | ipv6-address)

Description	IP address of the path destination
Context	oam lsp-ping ldp fec prefix (ipv4-prefix ipv6-prefix) session-id id number path-destination ip-address (ipv4-address ipv6-address)
Tree	ip-address
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

next-hop (ipv4-address | ipv6-address)

Description	Egress IP next hop address used with path destination
Context	oam lsp-ping ldp fec prefix (ipv4-prefix ipv6-prefix) session-id id number path-destination next-hop (ipv4-address ipv6-address)
Tree	next-hop
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

subinterface *string*

Description	Egress router sub-interface used with the path destination
Context	oam lsp-ping ldp fec prefix (ipv4-prefix ipv6-prefix) session-id id number path-destination subinterface <i>string</i>
Tree	subinterface
String Length	5 to 25
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

sequence *sequence-id number*

Description	List of probes sent during the test
Context	oam lsp-ping ldp fec prefix (ipv4-prefix ipv6-prefix) session-id id number sequence sequence-id number
Tree	sequence
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

sequence-id *number*

Description	Sequence ID of the probe, starting with 1 and incrementing by 1
Context	oam lsp-ping ldp fec prefix (ipv4-prefix ipv6-prefix) session-id id number sequence sequence-id number
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

out-interface *string*

Description	The subinterface that was used to transmit the echo-request message
Context	oam lsp-ping ldp fec prefix (ipv4-prefix ipv6-prefix) session-id id number sequence sequence-id number out-interface string
Tree	out-interface
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

probe-size *number*

Description	The size of the IP packet MPLS echo-request message. Probe size does not include MPLS headers, if any
Context	oam lsp-ping ldp fec prefix (ipv4-prefix ipv6-prefix) session-id id number sequence sequence-id number probe-size number
Tree	probe-size
Range	1 to 9500
Default	64
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

reply

Description	Details about the reply message for this sequence number or hop
Context	oam lsp-ping ldp fec prefix (ipv4-prefix ipv6-prefix) session-id id number sequence sequence-id number reply
Tree	reply
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

mpls-ttl *number*

Description	The value of the MPLS TTL in the top label stack entry of the received echo-reply message
Context	oam lsp-ping ldp fec prefix (ipv4-prefix ipv6-prefix) session-id id number sequence sequence-id number reply mpls-ttl number
Tree	mpls-ttl
Default	0
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

received *boolean*

Description	Reads true if the reply message was received
Context	oam lsp-ping ldp fec prefix (ipv4-prefix ipv6-prefix) session-id id number sequence sequence-id number reply received boolean
Tree	received
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

reply-sender (ipv4-address | ipv6-address)

Description	The IP address of the sender of the echo-reply message
Context	oam lsp-ping ldp fec prefix (ipv4-prefix ipv6-prefix) session-id id number sequence sequence-id number reply reply-sender (ipv4-address ipv6-address)
Tree	reply-sender
Configurable	False

Platforms 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

return-code *keyword*

Description	Return code value in the echo-reply
Context	oam lsp-ping ldp fec prefix (ipv4-prefix ipv6-prefix) session-id id number sequence sequence-id number reply return-code keyword
Tree	return-code
Default	no-return-code
Options	<ul style="list-style-type: none"> no-return-code malformed-echo-request-received one-or-more-tlvs-not-understood replying-router-is-egress-for-fec-at-stack-depth-n replying-router-has-no-mapping-for-fec-at-stack-depth-n downstream-mapping-mismatch upstream-interface-index-unknown reserved label-switched-at-stack-depth-n label-switched-but-no-MPLS-at-stack-depth-n fec-does-not-use-given-label-at-stack-depth-n no-label-entry-at-stack-depth-n protocol-unavailable-at-stack-depth-n premature-termination ddmap-tlv-has-return-code-subcode-details label-switched-with-fec-change
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

return-subcode *number*

Description	Return subcode in the echo-reply
Context	oam lsp-ping ldp fec prefix (ipv4-prefix ipv6-prefix) session-id id number sequence sequence-id number reply return-subcode number
Tree	return-subcode
Default	0
Configurable	False

Platforms 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

round-trip-time *number*

Description The round trip-time between the request and reply for this sequence number or hop

Context [oam lsp-ping ldp fec prefix \(ipv4-prefix | ipv6-prefix\) session-id id number sequence sequence-id number reply round-trip-time number](#)

Tree [round-trip-time](#)

Default 0

Units microseconds

Configurable False

Platforms 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

udp-data-length *number*

Description The length of the UDP payload

Context [oam lsp-ping ldp fec prefix \(ipv4-prefix | ipv6-prefix\) session-id id number sequence sequence-id number reply udp-data-length number](#)

Tree [udp-data-length](#)

Default 0

Units bytes

Configurable False

Platforms 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

request-sent *boolean*

Description True when it is possible for the datapath to send the request message

Context [oam lsp-ping ldp fec prefix \(ipv4-prefix | ipv6-prefix\) session-id id number sequence sequence-id number request-sent boolean](#)

Tree [request-sent](#)

Configurable False

Platforms 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

send-failure-reason *keyword*

Description	Indicates the reason why the OAM manager could not send the request message
Context	oam lsp-ping ldp fec prefix (<i>ipv4-prefix</i> <i>ipv6-prefix</i>) session-id id number sequence sequence-id number send-failure-reason keyword
Tree	send-failure-reason
Default	no errors
Options	<ul style="list-style-type: none"> • timeout • source-ip-not-local • invalid-prefix • sr-prefix-is-local • ldp-prefix-is-local • invalid-dest-ip • dest-address-type-mismatch • next-hop-ip-not-found • next-hop-if-name-not-found • packet-size-too-big • far-end-unreachable • prefix-unknown • ds-map-not-supported • unexpected-error • no errors
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

statistics

Description	Summary statistics for the test
Context	oam lsp-ping ldp fec prefix (<i>ipv4-prefix</i> <i>ipv6-prefix</i>) session-id id number statistics
Tree	statistics
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

round-trip-time

Description	Statistics for the round trip time, considering all the probes sent in the test
Context	oam lsp-ping ldp fec prefix (ipv4-prefix ipv6-prefix) session-id id number statistics round-trip-time
Tree	round-trip-time
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

average number

Description	The average round trip-time across all probes
Context	oam lsp-ping ldp fec prefix (ipv4-prefix ipv6-prefix) session-id id number statistics round-trip-time average number
Tree	average
Default	0
Units	microseconds
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

maximum number

Description	The maximum round trip-time across all probes
Context	oam lsp-ping ldp fec prefix (ipv4-prefix ipv6-prefix) session-id id number statistics round-trip-time maximum number
Tree	maximum
Default	0
Units	microseconds
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

minimum number

Description	The minimum round trip-time across all probes
Context	oam lsp-ping ldp fec prefix (ipv4-prefix ipv6-prefix) session-id id number statistics round-trip-time minimum number
Tree	minimum

Default	0
Units	microseconds
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

standard-deviation *number*

Description	The standard deviation of the round trip-time across all probes
Context	oam lsp-ping ldp fec prefix (ipv4-prefix ipv6-prefix) session-id id number statistics round-trip-time standard-deviation number
Tree	standard-deviation
Default	0
Units	microseconds
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

test-active *boolean*

Description	Indicates if the test is still running (true) or not (false)
Context	oam lsp-ping ldp fec prefix (ipv4-prefix ipv6-prefix) session-id id number test-active boolean
Tree	test-active
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

sr-isis

Description	Container of LSP ping results for different SR-ISIS tunnels
Context	oam lsp-ping sr-isis
Tree	sr-isis
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

prefix-sid [prefix \(ipv4-prefix | ipv6-prefix\)](#)

Description	Enter the prefix-sid list instance
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Context	oam lsp-ping sr-isis prefix-sid prefix (ipv4-prefix ipv6-prefix)
Tree	prefix-sid
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

prefix (*ipv4-prefix | ipv6-prefix*)

Description	The IPv4 or IPv6 prefix associated with the SID This is the destination that was pinged.
Context	oam lsp-ping sr-isis prefix-sid prefix (ipv4-prefix ipv6-prefix)
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

session-id id number

Description	List of recent sessions (up to 10) with saved LSP ping results for the prefix
Context	oam lsp-ping sr-isis prefix-sid prefix (ipv4-prefix ipv6-prefix) session-id id number
Tree	session-id
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b
Max. Elements	10

id number

Description	The system-assigned session ID
Context	oam lsp-ping sr-isis prefix-sid prefix (ipv4-prefix ipv6-prefix) session-id id number
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

path-destination

Description	Enter the path-destination context
Context	oam lsp-ping sr-isis prefix-sid prefix (ipv4-prefix ipv6-prefix) session-id id number path-destination
Tree	path-destination

Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

ip-address (*ipv4-address* | *ipv6-address*)

Description	IP address of the path destination
Context	oam lsp-ping sr-isis prefix-sid prefix (<i>ipv4-prefix</i> <i>ipv6-prefix</i>) session-id id number path-destination ip-address (<i>ipv4-address</i> <i>ipv6-address</i>)
Tree	ip-address
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

next-hop (*ipv4-address* | *ipv6-address*)

Description	Egress IP next hop address used with path destination
Context	oam lsp-ping sr-isis prefix-sid prefix (<i>ipv4-prefix</i> <i>ipv6-prefix</i>) session-id id number path-destination next-hop (<i>ipv4-address</i> <i>ipv6-address</i>)
Tree	next-hop
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

subinterface *string*

Description	Egress router sub-interface used with the path destination
Context	oam lsp-ping sr-isis prefix-sid prefix (<i>ipv4-prefix</i> <i>ipv6-prefix</i>) session-id id number path-destination subinterface <i>string</i>
Tree	subinterface
String Length	5 to 25
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

sequence [sequence-id](#) *number*

Description	List of probes sent during the test
Context	oam lsp-ping sr-isis prefix-sid prefix (<i>ipv4-prefix</i> <i>ipv6-prefix</i>) session-id id number sequence sequence-id <i>number</i>
Tree	sequence

Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

sequence-id *number*

Description	Sequence ID of the probe, starting with 1 and incrementing by 1
Context	oam lsp-ping sr-isis prefix-sid prefix (ipv4-prefix ipv6-prefix) session-id id number sequence sequence-id number
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

out-interface *string*

Description	The subinterface that was used to transmit the echo-request message
Context	oam lsp-ping sr-isis prefix-sid prefix (ipv4-prefix ipv6-prefix) session-id id number sequence sequence-id number out-interface string
Tree	out-interface
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

probe-size *number*

Description	The size of the IP packet MPLS echo-request message. Probe size does not include MPLS headers, if any
Context	oam lsp-ping sr-isis prefix-sid prefix (ipv4-prefix ipv6-prefix) session-id id number sequence sequence-id number probe-size number
Tree	probe-size
Range	1 to 9500
Default	64
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

reply

Description	Details about the reply message for this sequence number or hop
Context	oam lsp-ping sr-isis prefix-sid prefix (ipv4-prefix ipv6-prefix) session-id id number sequence sequence-id number reply

Tree	reply
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

mpls-ttl *number*

Description	The value of the MPLS TTL in the top label stack entry of the received echo-reply message
Context	oam lsp-ping sr-isis prefix-sid prefix (ipv4-prefix ipv6-prefix) session-id id number sequence sequence-id number reply mpls-ttl number
Tree	mpls-ttl
Default	0
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

received *boolean*

Description	Reads true if the reply message was received
Context	oam lsp-ping sr-isis prefix-sid prefix (ipv4-prefix ipv6-prefix) session-id id number sequence sequence-id number reply received boolean
Tree	received
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

reply-sender (*ipv4-address | ipv6-address*)

Description	The IP address of the sender of the echo-reply message
Context	oam lsp-ping sr-isis prefix-sid prefix (ipv4-prefix ipv6-prefix) session-id id number sequence sequence-id number reply reply-sender (ipv4-address ipv6-address)
Tree	reply-sender
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

return-code *keyword*

Description	Return code value in the echo-reply
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Context	oam lsp-ping sr-isis prefix-sid prefix (ipv4-prefix ipv6-prefix) session-id id number sequence-id number reply return-code keyword
Tree	return-code
Default	no-return-code
Options	<ul style="list-style-type: none"> • no-return-code • malformed-echo-request-received • one-or-more-tlvs-not-understood • replying-router-is-egress-for-fec-at-stack-depth-n • replying-router-has-no-mapping-for-fec-at-stack-depth-n • downstream-mapping-mismatch • upstream-interface-index-unknown • reserved • label-switched-at-stack-depth-n • label-switched-but-no-MPLS-at-stack-depth-n • fec-does-not-use-given-label-at-stack-depth-n • no-label-entry-at-stack-depth-n • protocol-unavailable-at-stack-depth-n • premature-termination • ddmapi-tlv-has-return-code-subcode-details • label-switched-with-fec-change
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

return-subcode *number*

Description	Return subcode in the echo-reply
Context	oam lsp-ping sr-isis prefix-sid prefix (ipv4-prefix ipv6-prefix) session-id id number sequence-id number reply return-subcode number
Tree	return-subcode
Default	0
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

round-trip-time *number*

Description	The round trip-time between the request and reply for this sequence number or hop
Context	oam lsp-ping sr-isis prefix-sid prefix (ipv4-prefix ipv6-prefix) session-id id number sequence sequence-id number reply round-trip-time number
Tree	round-trip-time
Default	0
Units	microseconds
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

udp-data-length *number*

Description	The length of the UDP payload
Context	oam lsp-ping sr-isis prefix-sid prefix (ipv4-prefix ipv6-prefix) session-id id number sequence sequence-id number reply udp-data-length number
Tree	udp-data-length
Default	0
Units	bytes
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

request-sent *boolean*

Description	True when it is possible for the datapath to send the request message
Context	oam lsp-ping sr-isis prefix-sid prefix (ipv4-prefix ipv6-prefix) session-id id number sequence sequence-id number request-sent boolean
Tree	request-sent
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

send-failure-reason *keyword*

Description	Indicates the reason why the OAM manager could not send the request message
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Context	oam lsp-ping sr-isis prefix-sid prefix (ipv4-prefix ipv6-prefix) session-id id number sequence-id number send-failure-reason keyword
Tree	send-failure-reason
Default	no errors
Options	<ul style="list-style-type: none"> • timeout • source-ip-not-local • invalid-prefix • sr-prefix-is-local • ldp-prefix-is-local • invalid-dest-ip • dest-address-type-mismatch • next-hop-ip-not-found • next-hop-if-name-not-found • packet-size-too-big • far-end-unreachable • prefix-unknown • ds-map-not-supported • unexpected-error • no errors
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

statistics

Description	Summary statistics for the test
Context	oam lsp-ping sr-isis prefix-sid prefix (ipv4-prefix ipv6-prefix) session-id id number statistics
Tree	statistics
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

round-trip-time

Description	Statistics for the round trip time, considering all the probes sent in the test
Context	oam lsp-ping sr-isis prefix-sid prefix (ipv4-prefix ipv6-prefix) session-id id number statistics round-trip-time

Tree	round-trip-time
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

average number

Description	The average round trip-time across all probes
Context	oam lsp-ping sr-isis prefix-sid prefix (ipv4-prefix ipv6-prefix) session-id id number statistics round-trip-time average number
Tree	average
Default	0
Units	microseconds
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

maximum number

Description	The maximum round trip-time across all probes
Context	oam lsp-ping sr-isis prefix-sid prefix (ipv4-prefix ipv6-prefix) session-id id number statistics round-trip-time maximum number
Tree	maximum
Default	0
Units	microseconds
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

minimum number

Description	The minimum round trip-time across all probes
Context	oam lsp-ping sr-isis prefix-sid prefix (ipv4-prefix ipv6-prefix) session-id id number statistics round-trip-time minimum number
Tree	minimum
Default	0
Units	microseconds
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

standard-deviation *number*

Description	The standard deviation of the round trip-time across all probes
Context	oam lsp-ping sr-isis prefix-sid prefix (ipv4-prefix ipv6-prefix) session-id id number statistics round-trip-time standard-deviation number
Tree	standard-deviation
Default	0
Units	microseconds
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

test-active *boolean*

Description	Indicates if the test is still running (true) or not (false)
Context	oam lsp-ping sr-isis prefix-sid prefix (ipv4-prefix ipv6-prefix) session-id id number test-active boolean
Tree	test-active
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

te-policy

Description	Parameters required to ping the endpoint of a TE-Policy tunnel
Context	oam lsp-ping te-policy
Tree	te-policy
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

sr-uncolored

Description	Enter the sr-uncolored context
Context	oam lsp-ping te-policy sr-uncolored
Tree	sr-uncolored
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

policy *policy-name string protocol-origin keyword*

Description	Enter the policy list instance
Context	oam lsp-ping te-policy sr-uncolored policy policy-name string protocol-origin keyword
Tree	policy
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

policy-name *string*

Description	Name of Uncolored Traffic Engineering Policy to be tested. Any available primary or standby or active secondary candidate-path can be probed.
Context	oam lsp-ping te-policy sr-uncolored policy policy-name string protocol-origin keyword
String Length	1 to 255
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

protocol-origin *keyword*

Description	Uncolored Traffic Engineering Policy, origination source. The method Policy path is computed. This list includes Path Computation Engine, explicitly configured paths, etc.
Context	oam lsp-ping te-policy sr-uncolored policy policy-name string protocol-origin keyword
Options	<ul style="list-style-type: none"> • pcep PCEP used as signalling mechanism for the candidate path • bgp BGP used as signalling mechanism for the candidate path • local Management interface used for candidate path instantiation
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

session-id *id number*

Description	List of recent sessions (up to 10) with saved LSP ping results for the prefix
Context	oam lsp-ping te-policy sr-uncolored policy policy-name string protocol-origin keyword session-id id number
Tree	session-id
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b
Max. Elements	10

id *number*

Description	The system-assigned session ID
Context	oam lsp-ping te-policy sr-uncolored policy policy-name string protocol-origin keyword session-id id number
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

path-destination

Description	Enter the path-destination context
Context	oam lsp-ping te-policy sr-uncolored policy policy-name string protocol-origin keyword session-id id number path-destination
Tree	path-destination
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

ip-address (*ipv4-address | ipv6-address*)

Description	IP address of the path destination
Context	oam lsp-ping te-policy sr-uncolored policy policy-name string protocol-origin keyword session-id id number path-destination ip-address (ipv4-address ipv6-address)
Tree	ip-address
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

next-hop (*ipv4-address* | *ipv6-address*)

Description	Egress IP next hop address used with path destination
Context	oam lsp-ping te-policy sr-uncolored policy policy-name string protocol-origin keyword session-id id number path-destination next-hop (ipv4-address ipv6-address)
Tree	next-hop
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

subinterface *string*

Description	Egress router sub-interface used with the path destination
Context	oam lsp-ping te-policy sr-uncolored policy policy-name string protocol-origin keyword session-id id number path-destination subinterface string
Tree	subinterface
String Length	5 to 25
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

sequence [sequence-id](#) *number*

Description	List of probes sent during the test
Context	oam lsp-ping te-policy sr-uncolored policy policy-name string protocol-origin keyword session-id id number sequence sequence-id number
Tree	sequence
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

sequence-id *number*

Description	Sequence ID of the probe, starting with 1 and incrementing by 1
Context	oam lsp-ping te-policy sr-uncolored policy policy-name string protocol-origin keyword session-id id number sequence sequence-id number
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

out-interface *string*

Description	The subinterface that was used to transmit the echo-request message
Context	oam lsp-ping te-policy sr-uncolored policy policy-name <i>string</i> protocol-origin keyword session-id id <i>number</i> sequence sequence-id <i>number</i> out-interface <i>string</i>
Tree	out-interface
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

probe-size *number*

Description	The size of the IP packet MPLS echo-request message. Probe size does not include MPLS headers, if any
Context	oam lsp-ping te-policy sr-uncolored policy policy-name <i>string</i> protocol-origin keyword session-id id <i>number</i> sequence sequence-id <i>number</i> probe-size <i>number</i>
Tree	probe-size
Range	1 to 9500
Default	64
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

reply

Description	Details about the reply message for this sequence number or hop
Context	oam lsp-ping te-policy sr-uncolored policy policy-name <i>string</i> protocol-origin keyword session-id id <i>number</i> sequence sequence-id <i>number</i> reply
Tree	reply
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

mpls-ttl *number*

Description	The value of the MPLS TTL in the top label stack entry of the received echo-reply message
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Context	oam lsp-ping te-policy sr-uncolored policy policy-name <i>string</i> protocol-origin keyword session-id id number sequence sequence-id number reply mpls-ttl number
Tree	mpls-ttl
Default	0
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

received *boolean*

Description	Reads true if the reply message was received
Context	oam lsp-ping te-policy sr-uncolored policy policy-name <i>string</i> protocol-origin keyword session-id id number sequence sequence-id number reply received boolean
Tree	received
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

reply-sender (*ipv4-address | ipv6-address*)

Description	The IP address of the sender of the echo-reply message
Context	oam lsp-ping te-policy sr-uncolored policy policy-name <i>string</i> protocol-origin keyword session-id id number sequence sequence-id number reply reply-sender (ipv4-address ipv6-address)
Tree	reply-sender
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

return-code *keyword*

Description	Return code value in the echo-reply
Context	oam lsp-ping te-policy sr-uncolored policy policy-name <i>string</i> protocol-origin keyword session-id id number sequence sequence-id number reply return-code keyword
Tree	return-code
Default	no-return-code
Options	<ul style="list-style-type: none"> no-return-code malformed-echo-request-received

- one-or-more-tlvs-not-understood
- replying-router-is-egress-for-fec-at-stack-depth-n
- replying-router-has-no-mapping-for-fec-at-stack-depth-n
- downstream-mapping-mismatch
- upstream-interface-index-unknown
- reserved
- label-switched-at-stack-depth-n
- label-switched-but-no-MPLS-at-stack-depth-n
- fec-does-not-use-given-label-at-stack-depth-n
- no-label-entry-at-stack-depth-n
- protocol-unavailable-at-stack-depth-n
- premature-termination
- ddmmap-tlv-has-return-code-subcode-details
- label-switched-with-fec-change

Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

return-subcode *number*

Description	Return subcode in the echo-reply
Context	oam lsp-ping te-policy sr-uncolored policy policy-name string protocol-origin keyword session-id id number sequence sequence-id number reply return-subcode number
Tree	return-subcode
Default	0
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

round-trip-time *number*

Description	The round trip-time between the request and reply for this sequence number or hop
Context	oam lsp-ping te-policy sr-uncolored policy policy-name string protocol-origin keyword session-id id number sequence sequence-id number reply round-trip-time number
Tree	round-trip-time
Default	0

Units	microseconds
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

udp-data-length *number*

Description	The length of the UDP payload
Context	oam lsp-ping te-policy sr-uncolored policy policy-name string protocol-origin keyword session-id id number sequence sequence-id number reply udp-data-length number
Tree	udp-data-length
Default	0
Units	bytes
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

request-sent *boolean*

Description	True when it is possible for the datapath to send the request message
Context	oam lsp-ping te-policy sr-uncolored policy policy-name string protocol-origin keyword session-id id number sequence sequence-id number request-sent boolean
Tree	request-sent
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

send-failure-reason *keyword*

Description	Indicates the reason why the OAM manager could not send the request message
Context	oam lsp-ping te-policy sr-uncolored policy policy-name string protocol-origin keyword session-id id number sequence sequence-id number send-failure-reason keyword
Tree	send-failure-reason
Default	no errors
Options	<ul style="list-style-type: none"> • timeout • source-ip-not-local • invalid-prefix

- sr-prefix-is-local
- ldp-prefix-is-local
- invalid-dest-ip
- dest-address-type-mismatch
- next-hop-ip-not-found
- next-hop-if-name-not-found
- packet-size-too-big
- far-end-unreachable
- prefix-unknown
- ds-map-not-supported
- unexpected-error
- no errors

Configurable

False

Platforms

7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

statistics

Description

Summary statistics for the test

Context

[oam lsp-ping te-policy sr-uncolored policy policy-name](#) *string* [protocol-origin keyword session-id id number statistics](#)

Tree

[statistics](#)

Configurable

False

Platforms

7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

round-trip-time

Description

Statistics for the round trip time, considering all the probes sent in the test

Context

[oam lsp-ping te-policy sr-uncolored policy policy-name](#) *string* [protocol-origin keyword session-id id number statistics round-trip-time](#)

Tree

[round-trip-time](#)

Configurable

False

Platforms

7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

average *number*

Description

The average round trip-time across all probes

Context	oam lsp-ping te-policy sr-uncolored policy policy-name <i>string</i> protocol-origin keyword session-id id <i>number</i> statistics round-trip-time average <i>number</i>
Tree	average
Default	0
Units	microseconds
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

maximum *number*

Description	The maximum round trip-time across all probes
Context	oam lsp-ping te-policy sr-uncolored policy policy-name <i>string</i> protocol-origin keyword session-id id <i>number</i> statistics round-trip-time maximum <i>number</i>
Tree	maximum
Default	0
Units	microseconds
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

minimum *number*

Description	The minimum round trip-time across all probes
Context	oam lsp-ping te-policy sr-uncolored policy policy-name <i>string</i> protocol-origin keyword session-id id <i>number</i> statistics round-trip-time minimum <i>number</i>
Tree	minimum
Default	0
Units	microseconds
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

standard-deviation *number*

Description	The standard deviation of the round trip-time across all probes
Context	oam lsp-ping te-policy sr-uncolored policy policy-name <i>string</i> protocol-origin keyword session-id id <i>number</i> statistics round-trip-time standard-deviation <i>number</i>
Tree	standard-deviation

Default	0
Units	microseconds
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

test-active *boolean*

Description	Indicates if the test is still running (true) or not (false)
Context	oam lsp-ping te-policy sr-uncolored policy policy-name string protocol-origin keyword session-id id number test-active boolean
Tree	test-active
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

lsp-trace

Description	Container of last trace results for different MPLS and segment routing tunnels
Context	oam lsp-trace
Tree	lsp-trace
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

ldp

Description	Container of LSP trace results for different LDP tunnels
Context	oam lsp-trace ldp
Tree	ldp
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

fec prefix (*ipv4-prefix | ipv6-prefix*)

Description	Enter the fec list instance
Context	oam lsp-trace ldp fec prefix (ipv4-prefix ipv6-prefix)
Tree	fec

Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

prefix (*ipv4-prefix* | *ipv6-prefix*)

Description	The IPv4 or IPv6 prefix associated with the fec This is the destination that was traced.
Context	oam lsp-trace ldp fec prefix (<i>ipv4-prefix</i> <i>ipv6-prefix</i>)
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

session-id [id number](#)

Description	List of recent sessions (up to 10) with saved LSP trace results for the prefix
Context	oam lsp-trace ldp fec prefix (<i>ipv4-prefix</i> <i>ipv6-prefix</i>) session-id id number
Tree	session-id
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b
Max. Elements	10

id [number](#)

Description	The system-assigned session ID
Context	oam lsp-trace ldp fec prefix (<i>ipv4-prefix</i> <i>ipv6-prefix</i>) session-id id number
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

hop [hop-index number](#)

Description	List of hops traced
Context	oam lsp-trace ldp fec prefix (<i>ipv4-prefix</i> <i>ipv6-prefix</i>) session-id id number hop hop-index number
Tree	hop
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

hop-index *number*

Description	The hop index, starting at minimum-mpls-ttl and incrementing by 1 up to maximum-mpls-ttl or until the destination is reached
Context	oam lsp-trace ldp fec prefix (<i>ipv4-prefix</i> <i>ipv6-prefix</i>) session-id id number hop hop-index number
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

probe [probe-index](#) *number*

Description	Probes sent to a given hop
Context	oam lsp-trace ldp fec prefix (<i>ipv4-prefix</i> <i>ipv6-prefix</i>) session-id id number hop hop-index number probe probe-index number
Tree	probe
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

probe-index *number*

Description	The probe index, probes received from a given hop. A given LSR may respond one than once, typically once with EgressRouter and once with Destination Router Match Label identifier
Context	oam lsp-trace ldp fec prefix (<i>ipv4-prefix</i> <i>ipv6-prefix</i>) session-id id number hop hop-index number probe probe-index number
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

downstream-detailed-mapping [id](#) *number*

Description	List of DDMAP TLVs included in the echo-reply from this hop The first one (with id 1) will be used by the sender.
Context	oam lsp-trace ldp fec prefix (<i>ipv4-prefix</i> <i>ipv6-prefix</i>) session-id id number hop hop-index number probe probe-index number downstream-detailed-mapping id number
Tree	downstream-detailed-mapping
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

id number

Description	Identifier of the DDMAP TLV
Context	oam lsp-trace ldp fec prefix (ipv4-prefix ipv6-prefix) session-id id number hop hop-index number probe probe-index number downstream-detailed-mapping id number
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

address-type keyword

Description	Indicates the addressing of the downstream interface
Context	oam lsp-trace ldp fec prefix (ipv4-prefix ipv6-prefix) session-id id number hop hop-index number probe probe-index number downstream-detailed-mapping id number address-type keyword
Tree	address-type
Options	<ul style="list-style-type: none"> • ipv4-numbered • ipv4-unnumbered • ipv6-numbered • ipv6-unnumbered
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

downstream-interface-address (ipv4-address | ipv6-address)

Description	The interface address of the next-hop router
Context	oam lsp-trace ldp fec prefix (ipv4-prefix ipv6-prefix) session-id id number hop hop-index number probe probe-index number downstream-detailed-mapping id number downstream-interface-address (ipv4-address ipv6-address)
Tree	downstream-interface-address
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

downstream-router-address (ipv4-address | ipv6-address)

Description	The router ID or interface address of the next-hop router
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Context	oam lsp-trace ldp fec prefix (ipv4-prefix ipv6-prefix) session-id id number hop hop-index number probe probe-index number downstream-detailed-mapping id number downstream-router-address (ipv4-address ipv6-address)
Tree	downstream-router-address
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

mpls-label [index number](#)

Description	List of labels in the label stack that would have appeared if this router were forwarding the packet through this downstream interface
Context	oam lsp-trace ldp fec prefix (ipv4-prefix ipv6-prefix) session-id id number hop hop-index number probe probe-index number downstream-detailed-mapping id number mpls-label index number
Tree	mpls-label
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

index [number](#)

Description	Index of label stack entry, starting at 1 (topmost label)
Context	oam lsp-trace ldp fec prefix (ipv4-prefix ipv6-prefix) session-id id number hop hop-index number probe probe-index number downstream-detailed-mapping id number mpls-label index number
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

label ([number](#) | [keyword](#))

Description	MPLS label value
Context	oam lsp-trace ldp fec prefix (ipv4-prefix ipv6-prefix) session-id id number hop hop-index number probe probe-index number downstream-detailed-mapping id number mpls-label index number label (number keyword)
Tree	label
Range	16 to 1048575
Options	<ul style="list-style-type: none"> • IPV4_EXPLICIT_NULL • IPV6_EXPLICIT_NULL

	<ul style="list-style-type: none"> • IMPLICIT_NULL
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

protocol *keyword*

Description	The label distribution protocol for the downstream label
Context	oam lsp-trace ldp fec prefix (ipv4-prefix ipv6-prefix) session-id id number hop hop-index number probe probe-index number downstream-detailed-mapping id number mpls-label index number protocol keyword
Tree	protocol
Default	unknown
Options	<ul style="list-style-type: none"> • unknown • static • bgp • ldp • rsvp-te • ospf • isis • ospfv3
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

mtu *number*

Description	The size in octets of the largest MPLS frame (including label stack) that fits on this downstream interface
Context	oam lsp-trace ldp fec prefix (ipv4-prefix ipv6-prefix) session-id id number hop hop-index number probe probe-index number downstream-detailed-mapping id number mtu number
Tree	mtu
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

last-probe-send-failure-reason *keyword*

Description	Indicates the reason why the OAM manager could not send the request message
Context	oam lsp-trace ldp fec prefix (<i>ipv4-prefix</i> <i>ipv6-prefix</i>) session-id id number hop hop-index number probe probe-index number last-probe-send-failure-reason <i>keyword</i>
Tree	last-probe-send-failure-reason
Default	no errors
Options	<ul style="list-style-type: none"> • timeout • source-ip-not-local • invalid-prefix • sr-prefix-is-local • ldp-prefix-is-local • invalid-dest-ip • dest-address-type-mismatch • next-hop-ip-not-found • next-hop-if-name-not-found • packet-size-too-big • far-end-unreachable • prefix-unknown • ds-map-not-supported • unexpected-error • no errors
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

probe-size *number*

Description	The size of the IP packet MPLS trace message. Probe size does not include MPLS headers, if any
Context	oam lsp-trace ldp fec prefix (<i>ipv4-prefix</i> <i>ipv6-prefix</i>) session-id id number hop hop-index number probe probe-index number probe-size <i>number</i>
Tree	probe-size
Range	1 to 9500
Default	64
Configurable	False

Platforms 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

probes-sent *number*

Description The number of echo-request messages sent to the hop until a reply was received

Context [oam lsp-trace ldp fec prefix \(ipv4-prefix | ipv6-prefix\) session-id id number hop hop-index number probe probe-index number probes-sent number](#)

Tree [probes-sent](#)

Range 1 to 10

Configurable False

Platforms 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

reply

Description Details about the reply message for this sequence number or hop

Context [oam lsp-trace ldp fec prefix \(ipv4-prefix | ipv6-prefix\) session-id id number hop hop-index number probe probe-index number reply](#)

Tree [reply](#)

Configurable False

Platforms 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

mpls-ttl *number*

Description The value of the MPLS TTL in the top label stack entry of the received echo-reply message

Context [oam lsp-trace ldp fec prefix \(ipv4-prefix | ipv6-prefix\) session-id id number hop hop-index number probe probe-index number reply mpls-ttl number](#)

Tree [mpls-ttl](#)

Default 0

Configurable False

Platforms 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

received *boolean*

Description Reads true if the reply message was received

Context [oam lsp-trace ldp fec prefix \(ipv4-prefix | ipv6-prefix\) session-id id number hop hop-index number probe probe-index number reply received boolean](#)

Tree	received
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

reply-sender (*ipv4-address* | *ipv6-address*)

Description	The IP address of the sender of the echo-reply message
Context	oam lsp-trace ldp fec prefix (<i>ipv4-prefix</i> <i>ipv6-prefix</i>) session-id id number hop hop-index number probe probe-index number reply reply-sender (<i>ipv4-address</i> <i>ipv6-address</i>)
Tree	reply-sender
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

return-code *keyword*

Description	Return code value in the echo-reply
Context	oam lsp-trace ldp fec prefix (<i>ipv4-prefix</i> <i>ipv6-prefix</i>) session-id id number hop hop-index number probe probe-index number reply return-code <i>keyword</i>
Tree	return-code
Default	no-return-code
Options	<ul style="list-style-type: none"> no-return-code malformed-echo-request-received one-or-more-tlvs-not-understood replying-router-is-egress-for-fec-at-stack-depth-n replying-router-has-no-mapping-for-fec-at-stack-depth-n downstream-mapping-mismatch upstream-interface-index-unknown reserved label-switched-at-stack-depth-n label-switched-but-no-MPLS-at-stack-depth-n fec-does-not-use-given-label-at-stack-depth-n no-label-entry-at-stack-depth-n protocol-unavailable-at-stack-depth-n premature-termination ddmap-tlv-has-return-code-subcode-details

- label-switched-with-fec-change

Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

return-subcode *number*

Description	Return subcode in the echo-reply
Context	oam lsp-trace ldp fec prefix (ipv4-prefix ipv6-prefix) session-id id number hop hop-index number probe probe-index number reply return-subcode number
Tree	return-subcode
Default	0
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

round-trip-time *number*

Description	The round trip-time between the request and reply for this sequence number or hop
Context	oam lsp-trace ldp fec prefix (ipv4-prefix ipv6-prefix) session-id id number hop hop-index number probe probe-index number reply round-trip-time number
Tree	round-trip-time
Default	0
Units	microseconds
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

udp-data-length *number*

Description	The length of the UDP payload
Context	oam lsp-trace ldp fec prefix (ipv4-prefix ipv6-prefix) session-id id number hop hop-index number probe probe-index number reply udp-data-length number
Tree	udp-data-length
Default	0
Units	bytes
Configurable	False

Platforms 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

path-destination

Description Enter the path-destination context

Context [oam lsp-trace ldp fec prefix \(ipv4-prefix | ipv6-prefix\) session-id id number path-destination](#)

Tree [path-destination](#)

Configurable False

Platforms 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

ip-address (ipv4-address | ipv6-address)

Description IP address of the path destination

Context [oam lsp-trace ldp fec prefix \(ipv4-prefix | ipv6-prefix\) session-id id number path-destination ip-address \(ipv4-address | ipv6-address\)](#)

Tree [ip-address](#)

Configurable False

Platforms 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

next-hop (ipv4-address | ipv6-address)

Description Egress IP next hop address used with path destination

Context [oam lsp-trace ldp fec prefix \(ipv4-prefix | ipv6-prefix\) session-id id number path-destination next-hop \(ipv4-address | ipv6-address\)](#)

Tree [next-hop](#)

Configurable False

Platforms 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

subinterface *string*

Description Egress router sub-interface used with the path destination

Context [oam lsp-trace ldp fec prefix \(ipv4-prefix | ipv6-prefix\) session-id id number path-destination subinterface *string*](#)

Tree [subinterface](#)

String Length 5 to 25

Configurable False

Platforms 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

test-active *boolean*

Description Indicates if the test is still running (true) or not (false)

Context [oam lsp-trace ldp fec prefix \(ipv4-prefix | ipv6-prefix\) session-id id number test-active boolean](#)

Tree [test-active](#)

Configurable False

Platforms 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

sr-isis

Description Container of LSP trace results for different SR-ISIS tunnels

Context [oam lsp-trace sr-isis](#)

Tree [sr-isis](#)

Configurable False

Platforms 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

prefix-sid [prefix \(ipv4-prefix | ipv6-prefix\)](#)

Description Enter the prefix-sid list instance

Context [oam lsp-trace sr-isis prefix-sid prefix \(ipv4-prefix | ipv6-prefix\)](#)

Tree [prefix-sid](#)

Configurable False

Platforms 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

prefix [\(ipv4-prefix | ipv6-prefix\)](#)

Description The IPv4 or IPv6 prefix associated with the SID
This is the destination that was traced.

Context [oam lsp-trace sr-isis prefix-sid prefix \(ipv4-prefix | ipv6-prefix\)](#)

Configurable False

Platforms 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

session-id *id number*

Description	List of recent sessions (up to 10) with saved LSP trace results for the prefix
Context	oam lsp-trace sr-isis prefix-sid prefix (ipv4-prefix ipv6-prefix) session-id id number
Tree	session-id
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b
Max. Elements	10

id *number*

Description	The system-assigned session ID
Context	oam lsp-trace sr-isis prefix-sid prefix (ipv4-prefix ipv6-prefix) session-id id number
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

hop *hop-index number*

Description	List of hops traced
Context	oam lsp-trace sr-isis prefix-sid prefix (ipv4-prefix ipv6-prefix) session-id id number hop hop-index number
Tree	hop
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

hop-index *number*

Description	The hop index, starting at minimum-mpls-ttl and incrementing by 1 up to maximum-mpls-ttl or until the destination is reached
Context	oam lsp-trace sr-isis prefix-sid prefix (ipv4-prefix ipv6-prefix) session-id id number hop hop-index number
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

probe *probe-index number*

Description	Probes sent to a given hop
Context	oam lsp-trace sr-isis prefix-sid prefix (ipv4-prefix ipv6-prefix) session-id id number hop hop-index number probe probe-index number
Tree	probe
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

probe-index *number*

Description	The probe index, probes received from a given hop. A given LSR may respond one than once, typically once with EgressRouter and once with Destination Router Match Label identifier
Context	oam lsp-trace sr-isis prefix-sid prefix (ipv4-prefix ipv6-prefix) session-id id number hop hop-index number probe probe-index number
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

downstream-detailed-mapping *id number*

Description	List of DDMAP TLVs included in the echo-reply from this hop The first one (with id 1) will be used by the sender.
Context	oam lsp-trace sr-isis prefix-sid prefix (ipv4-prefix ipv6-prefix) session-id id number hop hop-index number probe probe-index number downstream-detailed-mapping id number
Tree	downstream-detailed-mapping
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

id *number*

Description	Identifier of the DDMAP TLV
Context	oam lsp-trace sr-isis prefix-sid prefix (ipv4-prefix ipv6-prefix) session-id id number hop hop-index number probe probe-index number downstream-detailed-mapping id number
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

address-type *keyword*

Description	Indicates the addressing of the downstream interface
Context	oam lsp-trace sr-isis prefix-sid prefix (ipv4-prefix ipv6-prefix) session-id id number hop hop-index number probe probe-index number downstream-detailed-mapping id number address-type keyword
Tree	address-type
Options	<ul style="list-style-type: none"> • ipv4-numbered • ipv4-unnumbered • ipv6-numbered • ipv6-unnumbered
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

downstream-interface-address (*ipv4-address | ipv6-address*)

Description	The interface address of the next-hop router
Context	oam lsp-trace sr-isis prefix-sid prefix (ipv4-prefix ipv6-prefix) session-id id number hop hop-index number probe probe-index number downstream-detailed-mapping id number downstream-interface-address (ipv4-address ipv6-address)
Tree	downstream-interface-address
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

downstream-router-address (*ipv4-address | ipv6-address*)

Description	The router ID or interface address of the next-hop router
Context	oam lsp-trace sr-isis prefix-sid prefix (ipv4-prefix ipv6-prefix) session-id id number hop hop-index number probe probe-index number downstream-detailed-mapping id number downstream-router-address (ipv4-address ipv6-address)
Tree	downstream-router-address
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

mpls-label *index number*

Description	List of labels in the label stack that would have appeared if this router were forwarding the packet through this downstream interface
Context	oam lsp-trace sr-isis prefix-sid prefix (ipv4-prefix ipv6-prefix) session-id id number hop hop-index number probe probe-index number downstream-detailed-mapping id number mpls-label index number
Tree	mpls-label
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

index *number*

Description	Index of label stack entry, starting at 1 (topmost label)
Context	oam lsp-trace sr-isis prefix-sid prefix (ipv4-prefix ipv6-prefix) session-id id number hop hop-index number probe probe-index number downstream-detailed-mapping id number mpls-label index number
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

label (*number | keyword*)

Description	MPLS label value
Context	oam lsp-trace sr-isis prefix-sid prefix (ipv4-prefix ipv6-prefix) session-id id number hop hop-index number probe probe-index number downstream-detailed-mapping id number mpls-label index number label (number keyword)
Tree	label
Range	16 to 1048575
Options	<ul style="list-style-type: none"> • IPV4_EXPLICIT_NULL • IPV6_EXPLICIT_NULL • IMPLICIT_NULL
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

protocol *keyword*

Description	The label distribution protocol for the downstream label
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Context	oam lsp-trace sr-isis prefix-sid prefix (ipv4-prefix ipv6-prefix) session-id id number hop hop-index number probe probe-index number downstream-detailed-mapping id number mpls-label index number protocol keyword
Tree	protocol
Default	unknown
Options	<ul style="list-style-type: none"> • unknown • static • bgp • ldp • rsvp-te • ospf • isis • ospfv3
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

mtu number

Description	The size in octets of the largest MPLS frame (including label stack) that fits on this downstream interface
Context	oam lsp-trace sr-isis prefix-sid prefix (ipv4-prefix ipv6-prefix) session-id id number hop hop-index number probe probe-index number downstream-detailed-mapping id number mtu number
Tree	mtu
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

last-probe-send-failure-reason keyword

Description	Indicates the reason why the OAM manager could not send the request message
Context	oam lsp-trace sr-isis prefix-sid prefix (ipv4-prefix ipv6-prefix) session-id id number hop hop-index number probe probe-index number last-probe-send-failure-reason keyword
Tree	last-probe-send-failure-reason
Default	no errors
Options	<ul style="list-style-type: none"> • timeout • source-ip-not-local

- invalid-prefix
- sr-prefix-is-local
- ldp-prefix-is-local
- invalid-dest-ip
- dest-address-type-mismatch
- next-hop-ip-not-found
- next-hop-if-name-not-found
- packet-size-too-big
- far-end-unreachable
- prefix-unknown
- ds-map-not-supported
- unexpected-error
- no errors

Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

probe-size *number*

Description	The size of the IP packet MPLS trace message. Probe size does not include MPLS headers, if any
Context	oam lsp-trace sr-isis prefix-sid prefix (ipv4-prefix ipv6-prefix) session-id id number hop hop-index number probe probe-index number probe-size number
Tree	probe-size
Range	1 to 9500
Default	64
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

probes-sent *number*

Description	The number of echo-request messages sent to the hop until a reply was received
Context	oam lsp-trace sr-isis prefix-sid prefix (ipv4-prefix ipv6-prefix) session-id id number hop hop-index number probe probe-index number probes-sent number
Tree	probes-sent
Range	1 to 10

Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

reply

Description	Details about the reply message for this sequence number or hop
Context	oam lsp-trace sr-isis prefix-sid prefix (ipv4-prefix ipv6-prefix) session-id id number hop hop-index number probe probe-index number reply
Tree	reply
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

mpls-ttl *number*

Description	The value of the MPLS TTL in the top label stack entry of the received echo-reply message
Context	oam lsp-trace sr-isis prefix-sid prefix (ipv4-prefix ipv6-prefix) session-id id number hop hop-index number probe probe-index number reply mpls-ttl number
Tree	mpls-ttl
Default	0
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

received *boolean*

Description	Reads true if the reply message was received
Context	oam lsp-trace sr-isis prefix-sid prefix (ipv4-prefix ipv6-prefix) session-id id number hop hop-index number probe probe-index number reply received boolean
Tree	received
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

reply-sender (*ipv4-address | ipv6-address*)

Description	The IP address of the sender of the echo-reply message
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Context	oam lsp-trace sr-isis prefix-sid prefix (ipv4-prefix ipv6-prefix) session-id id number hop hop-index number probe probe-index number reply reply-sender (ipv4-address ipv6-address)
Tree	reply-sender
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

return-code *keyword*

Description	Return code value in the echo-reply
Context	oam lsp-trace sr-isis prefix-sid prefix (ipv4-prefix ipv6-prefix) session-id id number hop hop-index number probe probe-index number reply return-code keyword
Tree	return-code
Default	no-return-code
Options	<ul style="list-style-type: none"> no-return-code malformed-echo-request-received one-or-more-tlvs-not-understood replying-router-is-egress-for-fec-at-stack-depth-n replying-router-has-no-mapping-for-fec-at-stack-depth-n downstream-mapping-mismatch upstream-interface-index-unknown reserved label-switched-at-stack-depth-n label-switched-but-no-MPLS-at-stack-depth-n fec-does-not-use-given-label-at-stack-depth-n no-label-entry-at-stack-depth-n protocol-unavailable-at-stack-depth-n premature-termination ddmap-tlv-has-return-code-subcode-details label-switched-with-fec-change
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

return-subcode *number*

Description	Return subcode in the echo-reply
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Context	oam lsp-trace sr-isis prefix-sid prefix (ipv4-prefix ipv6-prefix) session-id id number hop hop-index number probe probe-index number reply return-subcode number
Tree	return-subcode
Default	0
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

round-trip-time *number*

Description	The round trip-time between the request and reply for this sequence number or hop
Context	oam lsp-trace sr-isis prefix-sid prefix (ipv4-prefix ipv6-prefix) session-id id number hop hop-index number probe probe-index number reply round-trip-time number
Tree	round-trip-time
Default	0
Units	microseconds
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

udp-data-length *number*

Description	The length of the UDP payload
Context	oam lsp-trace sr-isis prefix-sid prefix (ipv4-prefix ipv6-prefix) session-id id number hop hop-index number probe probe-index number reply udp-data-length number
Tree	udp-data-length
Default	0
Units	bytes
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

path-destination

Description	Enter the path-destination context
Context	oam lsp-trace sr-isis prefix-sid prefix (ipv4-prefix ipv6-prefix) session-id id number path-destination

Tree	path-destination
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

ip-address (*ipv4-address* | *ipv6-address*)

Description	IP address of the path destination
Context	oam lsp-trace sr-isis prefix-sid prefix (<i>ipv4-prefix</i> <i>ipv6-prefix</i>) session-id id number path-destination ip-address (<i>ipv4-address</i> <i>ipv6-address</i>)
Tree	ip-address
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

next-hop (*ipv4-address* | *ipv6-address*)

Description	Egress IP next hop address used with path destination
Context	oam lsp-trace sr-isis prefix-sid prefix (<i>ipv4-prefix</i> <i>ipv6-prefix</i>) session-id id number path-destination next-hop (<i>ipv4-address</i> <i>ipv6-address</i>)
Tree	next-hop
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

subinterface *string*

Description	Egress router sub-interface used with the path destination
Context	oam lsp-trace sr-isis prefix-sid prefix (<i>ipv4-prefix</i> <i>ipv6-prefix</i>) session-id id number path-destination subinterface <i>string</i>
Tree	subinterface
String Length	5 to 25
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

test-active *boolean*

Description	Indicates if the test is still running (true) or not (false)
Context	oam lsp-trace sr-isis prefix-sid prefix (<i>ipv4-prefix</i> <i>ipv6-prefix</i>) session-id id number test-active <i>boolean</i>

Tree	test-active
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

te-policy

Description	Parameters required to trace the endpoint of a TE-Policy tunnel
Context	oam lsp-trace te-policy
Tree	te-policy
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

sr-uncolored

Description	Enter the sr-uncolored context
Context	oam lsp-trace te-policy sr-uncolored
Tree	sr-uncolored
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

policy [policy-name](#) *string* [protocol-origin](#) *keyword*

Description	Enter the policy list instance
Context	oam lsp-trace te-policy sr-uncolored policy policy-name <i>string</i> protocol-origin <i>keyword</i>
Tree	policy
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

policy-name *string*

Description	Name of Uncolored Traffic Engineering Policy which is to be traced. Any available primary or standby or active secondary candidate-path can be traced.
Context	oam lsp-trace te-policy sr-uncolored policy policy-name <i>string</i> protocol-origin <i>keyword</i>
String Length	1 to 255

Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

protocol-origin *keyword*

Description	Uncolored Traffic Engineering Policy, origination source. The method Policy path is computed. This list includes Path Computation Engine, explicitly configured paths, etc.
Context	oam lsp-trace te-policy sr-uncolored policy policy-name <i>string</i> protocol-origin keyword
Options	<ul style="list-style-type: none"> • pcep PCEP used as signalling mechanism for the candidate path • bgp BGP used as signalling mechanism for the candidate path • local Management interface used for candidate path instantiation
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

session-id *id number*

Description	List of recent sessions (up to 10) with saved LSP trace results for the prefix
Context	oam lsp-trace te-policy sr-uncolored policy policy-name <i>string</i> protocol-origin keyword session-id id number
Tree	session-id
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b
Max. Elements	10

id *number*

Description	The system-assigned session ID
Context	oam lsp-trace te-policy sr-uncolored policy policy-name <i>string</i> protocol-origin keyword session-id id number
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

hop *hop-index number*

Description	List of hops traced
Context	oam lsp-trace te-policy sr-uncolored policy policy-name <i>string</i> protocol-origin <i>keyword</i> session-id id <i>number</i> hop hop-index <i>number</i>
Tree	hop
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

hop-index *number*

Description	The hop index, starting at minimum-mpls-ttl and incrementing by 1 up to maximum-mpls-ttl or until the destination is reached
Context	oam lsp-trace te-policy sr-uncolored policy policy-name <i>string</i> protocol-origin <i>keyword</i> session-id id <i>number</i> hop hop-index <i>number</i>
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

probe *probe-index number*

Description	Probes sent to a given hop
Context	oam lsp-trace te-policy sr-uncolored policy policy-name <i>string</i> protocol-origin <i>keyword</i> session-id id <i>number</i> hop hop-index <i>number</i> probe probe-index <i>number</i>
Tree	probe
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

probe-index *number*

Description	The probe index, probes received from a given hop. A given LSR may respond one than once, typically once with EgressRouter and once with Destination Router Match Label identifier
Context	oam lsp-trace te-policy sr-uncolored policy policy-name <i>string</i> protocol-origin <i>keyword</i> session-id id <i>number</i> hop hop-index <i>number</i> probe probe-index <i>number</i>
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

downstream-detailed-mapping *id number*

Description	List of DDMAP TLVs included in the echo-reply from this hop The first one (with id 1) will be used by the sender.
Context	oam lsp-trace te-policy sr-uncolored policy policy-name string protocol-origin keyword session-id id number hop hop-index number probe probe-index number downstream-detailed-mapping id number
Tree	downstream-detailed-mapping
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

id *number*

Description	Identifier of the DDMAP TLV
Context	oam lsp-trace te-policy sr-uncolored policy policy-name string protocol-origin keyword session-id id number hop hop-index number probe probe-index number downstream-detailed-mapping id number
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

address-type *keyword*

Description	Indicates the addressing of the downstream interface
Context	oam lsp-trace te-policy sr-uncolored policy policy-name string protocol-origin keyword session-id id number hop hop-index number probe probe-index number downstream-detailed-mapping id number address-type keyword
Tree	address-type
Options	<ul style="list-style-type: none"> • ipv4-numbered • ipv4-unnumbered • ipv6-numbered • ipv6-unnumbered
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

downstream-interface-address (*ipv4-address | ipv6-address*)

Description	The interface address of the next-hop router
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Context	oam lsp-trace te-policy sr-uncolored policy policy-name <i>string</i> protocol-origin keyword session-id id <i>number</i> hop hop-index <i>number</i> probe probe-index <i>number</i> downstream-detailed-mapping id <i>number</i> downstream-interface-address (ipv4-address ipv6-address)
Tree	downstream-interface-address
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

downstream-router-address ([ipv4-address](#) | [ipv6-address](#))

Description	The router ID or interface address of the next-hop router
Context	oam lsp-trace te-policy sr-uncolored policy policy-name <i>string</i> protocol-origin keyword session-id id <i>number</i> hop hop-index <i>number</i> probe probe-index <i>number</i> downstream-detailed-mapping id <i>number</i> downstream-router-address (ipv4-address ipv6-address)
Tree	downstream-router-address
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

mpls-label [index](#) *number*

Description	List of labels in the label stack that would have appeared if this router were forwarding the packet through this downstream interface
Context	oam lsp-trace te-policy sr-uncolored policy policy-name <i>string</i> protocol-origin keyword session-id id <i>number</i> hop hop-index <i>number</i> probe probe-index <i>number</i> downstream-detailed-mapping id <i>number</i> mpls-label index <i>number</i>
Tree	mpls-label
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

index *number*

Description	Index of label stack entry, starting at 1 (topmost label)
Context	oam lsp-trace te-policy sr-uncolored policy policy-name <i>string</i> protocol-origin keyword session-id id <i>number</i> hop hop-index <i>number</i> probe probe-index <i>number</i> downstream-detailed-mapping id <i>number</i> mpls-label index <i>number</i>
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

label (*number* | *keyword*)

Description	MPLS label value
Context	oam lsp-trace te-policy sr-uncolored policy policy-name <i>string</i> protocol-origin <i>keyword</i> session-id id <i>number</i> hop hop-index <i>number</i> probe probe-index <i>number</i> downstream-detailed-mapping id <i>number</i> mpls-label index <i>number</i> label (<i>number</i> <i>keyword</i>)
Tree	label
Range	16 to 1048575
Options	<ul style="list-style-type: none"> • IPV4_EXPLICIT_NULL • IPV6_EXPLICIT_NULL • IMPLICIT_NULL
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

protocol *keyword*

Description	The label distribution protocol for the downstream label
Context	oam lsp-trace te-policy sr-uncolored policy policy-name <i>string</i> protocol-origin <i>keyword</i> session-id id <i>number</i> hop hop-index <i>number</i> probe probe-index <i>number</i> downstream-detailed-mapping id <i>number</i> mpls-label index <i>number</i> protocol <i>keyword</i>
Tree	protocol
Default	unknown
Options	<ul style="list-style-type: none"> • unknown • static • bgp • ldp • rsvp-te • ospf • isis • ospfv3
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

mtu number

Description	The size in octets of the largest MPLS frame (including label stack) that fits on this downstream interface
Context	oam lsp-trace te-policy sr-uncolored policy policy-name <i>string</i> protocol-origin keyword session-id id <i>number</i> hop hop-index <i>number</i> probe probe-index <i>number</i> downstream-detailed-mapping id <i>number</i> mtu <i>number</i>
Tree	mtu
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

last-probe-send-failure-reason keyword

Description	Indicates the reason why the OAM manager could not send the request message
Context	oam lsp-trace te-policy sr-uncolored policy policy-name <i>string</i> protocol-origin keyword session-id id <i>number</i> hop hop-index <i>number</i> probe probe-index <i>number</i> last-probe-send-failure-reason <i>keyword</i>
Tree	last-probe-send-failure-reason
Default	no errors
Options	<ul style="list-style-type: none"> • timeout • source-ip-not-local • invalid-prefix • sr-prefix-is-local • ldp-prefix-is-local • invalid-dest-ip • dest-address-type-mismatch • next-hop-ip-not-found • next-hop-if-name-not-found • packet-size-too-big • far-end-unreachable • prefix-unknown • ds-map-not-supported • unexpected-error • no errors
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

probe-size *number*

Description	The size of the IP packet MPLS trace message. Probe size does not include MPLS headers, if any
Context	oam lsp-trace te-policy sr-uncolored policy policy-name <i>string</i> protocol-origin keyword session-id id <i>number</i> hop hop-index <i>number</i> probe probe-index <i>number</i> probe-size <i>number</i>
Tree	probe-size
Range	1 to 9500
Default	64
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

probes-sent *number*

Description	The number of echo-request messages sent to the hop until a reply was received
Context	oam lsp-trace te-policy sr-uncolored policy policy-name <i>string</i> protocol-origin keyword session-id id <i>number</i> hop hop-index <i>number</i> probe probe-index <i>number</i> probes-sent <i>number</i>
Tree	probes-sent
Range	1 to 10
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

reply

Description	Details about the reply message for this sequence number or hop
Context	oam lsp-trace te-policy sr-uncolored policy policy-name <i>string</i> protocol-origin keyword session-id id <i>number</i> hop hop-index <i>number</i> probe probe-index <i>number</i> reply
Tree	reply
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

mpls-ttl *number*

Description	The value of the MPLS TTL in the top label stack entry of the received echo-reply message
Context	oam lsp-trace te-policy sr-uncolored policy policy-name <i>string</i> protocol-origin keyword session-id id <i>number</i> hop hop-index <i>number</i> probe probe-index <i>number</i> reply mpls-ttl <i>number</i>
Tree	mpls-ttl
Default	0
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

received *boolean*

Description	Reads true if the reply message was received
Context	oam lsp-trace te-policy sr-uncolored policy policy-name <i>string</i> protocol-origin keyword session-id id <i>number</i> hop hop-index <i>number</i> probe probe-index <i>number</i> reply received <i>boolean</i>
Tree	received
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

reply-sender (*ipv4-address* | *ipv6-address*)

Description	The IP address of the sender of the echo-reply message
Context	oam lsp-trace te-policy sr-uncolored policy policy-name <i>string</i> protocol-origin keyword session-id id <i>number</i> hop hop-index <i>number</i> probe probe-index <i>number</i> reply reply-sender (ipv4-address ipv6-address)
Tree	reply-sender
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

return-code *keyword*

Description	Return code value in the echo-reply
Context	oam lsp-trace te-policy sr-uncolored policy policy-name <i>string</i> protocol-origin keyword session-id id <i>number</i> hop hop-index <i>number</i> probe probe-index <i>number</i> reply return-code <i>keyword</i>

Tree	return-code
Default	no-return-code
Options	<ul style="list-style-type: none"> no-return-code malformed-echo-request-received one-or-more-tlvs-not-understood replying-router-is-egress-for-fec-at-stack-depth-n replying-router-has-no-mapping-for-fec-at-stack-depth-n downstream-mapping-mismatch upstream-interface-index-unknown reserved label-switched-at-stack-depth-n label-switched-but-no-MPLS-at-stack-depth-n fec-does-not-use-given-label-at-stack-depth-n no-label-entry-at-stack-depth-n protocol-unavailable-at-stack-depth-n premature-termination ddmap-tlv-has-return-code-subcode-details label-switched-with-fec-change
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

return-subcode *number*

Description	Return subcode in the echo-reply
Context	oam lsp-trace te-policy sr-uncolored policy policy-name <i>string</i> protocol-origin <i>keyword</i> session-id <i>id</i> <i>number</i> hop hop-index <i>number</i> probe probe-index <i>number</i> reply return-subcode <i>number</i>
Tree	return-subcode
Default	0
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

round-trip-time *number*

Description	The round trip-time between the request and reply for this sequence number or hop
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Context	oam lsp-trace te-policy sr-uncolored policy policy-name <i>string</i> protocol-origin keyword session-id id <i>number</i> hop hop-index <i>number</i> probe probe-index <i>number</i> reply round-trip-time <i>number</i>
Tree	round-trip-time
Default	0
Units	microseconds
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

udp-data-length *number*

Description	The length of the UDP payload
Context	oam lsp-trace te-policy sr-uncolored policy policy-name <i>string</i> protocol-origin keyword session-id id <i>number</i> hop hop-index <i>number</i> probe probe-index <i>number</i> reply udp-data-length <i>number</i>
Tree	udp-data-length
Default	0
Units	bytes
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

path-destination

Description	Enter the path-destination context
Context	oam lsp-trace te-policy sr-uncolored policy policy-name <i>string</i> protocol-origin keyword session-id id <i>number</i> path-destination
Tree	path-destination
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

ip-address (*ipv4-address* | *ipv6-address*)

Description	IP address of the path destination
Context	oam lsp-trace te-policy sr-uncolored policy policy-name <i>string</i> protocol-origin keyword session-id id <i>number</i> path-destination ip-address (<i>ipv4-address</i> <i>ipv6-address</i>)
Tree	ip-address
Configurable	False

Platforms 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

next-hop (*ipv4-address* | *ipv6-address*)

Description Egress IP next hop address used with path destination

Context [oam lsp-trace te-policy sr-uncolored policy policy-name](#) *string* [protocol-origin keyword session-id id number path-destination next-hop](#) (*ipv4-address* | *ipv6-address*)

Tree [next-hop](#)

Configurable False

Platforms 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

subinterface *string*

Description Egress router sub-interface used with the path destination

Context [oam lsp-trace te-policy sr-uncolored policy policy-name](#) *string* [protocol-origin keyword session-id id number path-destination subinterface](#) *string*

Tree [subinterface](#)

String Length 5 to 25

Configurable False

Platforms 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

test-active *boolean*

Description Indicates if the test is still running (true) or not (false)

Context [oam lsp-trace te-policy sr-uncolored policy policy-name](#) *string* [protocol-origin keyword session-id id number test-active](#) *boolean*

Tree [test-active](#)

Configurable False

Platforms 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

stamp

Description Enable the stamp context

Context [oam stamp](#)

Tree [stamp](#)

Configurable True

Platforms 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

session-reflector

Description STAMP Session-Reflector configuration and state

Context [oam stamp session-reflector](#)

Tree [session-reflector](#)

Configurable True

Platforms 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

inactivity-timer *number*

Description STAMP test session timeout on inactivity

The amount of time (ref-wait) a test session must be inactive, no packets arriving, before the test session is removed from the Session-Reflector stateful table.

Context [oam stamp session-reflector inactivity-timer *number*](#)

Tree [inactivity-timer](#)

Range 1 to 604800

Default 900

Units seconds

Configurable True

Platforms 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

network-instance [name reference](#)

Description The list of network instances configured for STAMP Session-Reflector function

Context [oam stamp session-reflector network-instance \[name reference\]\(#\)](#)

Tree [network-instance](#)

Configurable True

Platforms 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

name *reference*

Description The name of the network instances to which the Session-Reflector state and configuration applies

Context	oam stamp session-reflector network-instance name <i>reference</i>
Reference	network-instance name <i>string</i>
Configurable	True
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

admin-state *keyword*

Description	This attribute specifies whether the STAMP Session-Reflector is enabled or disabled
Context	oam stamp session-reflector network-instance name <i>reference</i> admin-state <i>keyword</i>
Tree	admin-state
Default	disable
Options	<ul style="list-style-type: none"> • enable • disable
Configurable	True
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

description *string*

Description	A string describing the STAMP Session-Reflector
Context	oam stamp session-reflector network-instance name <i>reference</i> description <i>string</i>
Tree	description
String Length	1 to 255
Configurable	True
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

ip-prefix [ip-prefix](#) (*ipv4-prefix* | *ipv6-prefix*)

Description	The list of IP source addresses or ranges allowed to send STAMP test packets to Session-Reflector
Context	oam stamp session-reflector network-instance name <i>reference</i> ip-prefix ip-prefix (<i>ipv4-prefix</i> <i>ipv6-prefix</i>)
Tree	ip-prefix
Configurable	True
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

ip-prefix (*ipv4-prefix* | *ipv6-prefix*)

Description	The IP address or range allowed to send STAMP test packets to the Session-Reflector
Context	oam stamp session-reflector network-instance name <i>reference</i> ip-prefix ip-prefix (<i>ipv4-prefix</i> <i>ipv6-prefix</i>)
Configurable	True
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

oper-state *keyword*

Description	Enter the oper-state context
Context	oam stamp session-reflector network-instance name <i>reference</i> oper-state keyword
Tree	oper-state
Options	<ul style="list-style-type: none"> • up Component or process is operational • down Component or process is not operational • empty Component slot is empty • downloading Component is downloading image into memory • booting Component is booting downloaded image • starting Component image operational, application processes starting • failed Component or process has failed • synchronizing Component is currently being synchronized • upgrading Component is currently being upgraded • low-power Component is offline due to insufficient system power • degraded Component or process is in a degraded state

- warm-reboot
Component or process is currently warm rebooting
This state is set during a warm reboot immediately following initiation of the reboot, continuing after startup until the system has completed audit. In this state the system will not accept configuration changes.
- waiting
Component or process is currently waiting
This state can be set by event handler when the reinvoke-with-delay action is used, and indicates that the event handler is waiting for the provided delay before reinvoking the instance.

Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

statistics

Description	Enter the statistics context
Context	oam stamp session-reflector network-instance name <i>reference</i> statistics
Tree	statistics
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

malformed-packet *number*

Description	Session-Reflector was able to identify STAMP test packet but the packet was incorrectly formatted, packet discarded This counter will be increased if the malformation affects the mapping of the test packet to the test session. This would be the case where the session cannot be identified.
Context	oam stamp session-reflector network-instance name <i>reference</i> statistics malformed-packet <i>number</i>
Tree	malformed-packet
Default	0
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

packet-discards-source-destination-equal *number*

Description	Session-Reflector discarded the received test packet because source IP and destination IP are the same
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The test session is never created in the case where source IP and destination IP are the same.

Context	oam stamp session-reflector network-instance name <i>reference</i> statistics packet-discards-source-destination-equal <i>number</i>
Tree	packet-discards-source-destination-equal
Default	0
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

prefix-match-failure *number*

Description	Session-Sender IP does not have a prefix match configured on the Session-Reflector
Context	oam stamp session-reflector network-instance name <i>reference</i> statistics prefix-match-failure <i>number</i>
Tree	prefix-match-failure
Default	0
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

session-reflector-udp-port-registration-failure *number*

Description	The Session-Reflector was unable to allocate the UDP port for this network instance reflector
Context	oam stamp session-reflector network-instance name <i>reference</i> statistics session-reflector-udp-port-registration-failure <i>number</i>
Tree	session-reflector-udp-port-registration-failure
Default	0
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

test-frames-received *number*

Description	STAMP test frames received
Context	oam stamp session-reflector network-instance name <i>reference</i> statistics test-frames-received <i>number</i>
Tree	test-frames-received
Default	0

Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

test-frames-sent *number*

Description	STAMP test frames transmitted
Context	oam stamp session-reflector network-instance name <i>reference</i> statistics test-frames-sent <i>number</i>
Tree	test-frames-sent
Default	0
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

test-sessions *number*

Description	STAMP test session count
Context	oam stamp session-reflector network-instance name <i>reference</i> statistics test-sessions <i>number</i>
Tree	test-sessions
Default	0
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

test-session-statistics [session-sender-ip \(ipv4-address | ipv6-address\)](#) [session-sender-udp number](#) [session-reflector-ip \(ipv4-address | ipv6-address\)](#) [session-reflector-udp number](#) [session-identifier number](#)

Description	The per test session statistics
Context	oam stamp session-reflector network-instance name <i>reference</i> test-session-statistics session-sender-ip (ipv4-address ipv6-address) session-sender-udp number session-reflector-ip (ipv4-address ipv6-address) session-reflector-udp number session-identifier number
Tree	test-session-statistics
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

session-sender-ip (*ipv4-address* | *ipv6-address*)

Description	The Source IP address of the Session-Sender
Context	oam stamp session-reflector network-instance name reference test-session-statistics session-sender-ip (ipv4-address ipv6-address) session-sender-udp number session-reflector-ip (ipv4-address ipv6-address) session-reflector-udp number session-identifier number
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

session-sender-udp *number*

Description	The Source UDP address of the Session-Sender
Context	oam stamp session-reflector network-instance name reference test-session-statistics session-sender-ip (ipv4-address ipv6-address) session-sender-udp number session-reflector-ip (ipv4-address ipv6-address) session-reflector-udp number session-identifier number
Range	0 to 65535
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

session-reflector-ip (*ipv4-address* | *ipv6-address*)

Description	The Destination IP address in the Session-Sender STAMP test packet, an IP on the Session-Reflector
Context	oam stamp session-reflector network-instance name reference test-session-statistics session-sender-ip (ipv4-address ipv6-address) session-sender-udp number session-reflector-ip (ipv4-address ipv6-address) session-reflector-udp number session-identifier number
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

session-reflector-udp *number*

Description	The Destination UDP address in the Session-Sender STAMP test packet, the listening port on the Session-Reflector
Context	oam stamp session-reflector network-instance name reference test-session-statistics session-sender-ip (ipv4-address ipv6-address) session-sender-udp number session-reflector-ip (ipv4-address ipv6-address) session-reflector-udp number session-identifier number

Range	0 to 65535
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

session-identifier number

Description	The SSID in the Session-Sender STAMP test packet
Context	oam stamp session-reflector network-instance name reference test-session-statistics session-sender-ip (ipv4-address ipv6-address) session-sender-udp number session-reflector-ip (ipv4-address ipv6-address) session-reflector-udp number session-identifier number
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

current-ref-wait number

Description	The current value of the ref wait time for the test session
Context	oam stamp session-reflector network-instance name reference test-session-statistics session-sender-ip (ipv4-address ipv6-address) session-sender-udp number session-reflector-ip (ipv4-address ipv6-address) session-reflector-udp number session-identifier number current-ref-wait number
Tree	current-ref-wait
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

last-sequence-number-received number

Description	The last sequence number received in the Session-Sender test packet
Context	oam stamp session-reflector network-instance name reference test-session-statistics session-sender-ip (ipv4-address ipv6-address) session-sender-udp number session-reflector-ip (ipv4-address ipv6-address) session-reflector-udp number session-identifier number last-sequence-number-received number
Tree	last-sequence-number-received
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

last-sequence-number-transmitted *number*

Description	The last sequence number transmitted in the Session-Reflector test packet
Context	oam stamp session-reflector network-instance name reference test-session-statistics session-sender-ip (ipv4-address ipv6-address) session-sender-udp number session-reflector-ip (ipv4-address ipv6-address) session-reflector-udp number session-identifier number last-sequence-number-transmitted number
Tree	last-sequence-number-transmitted
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

malformed-tlv *number*

Description	<p>Session-Reflector was able to identify STAMP test packet but the packet was incorrectly formatted, packet discarded</p> <p>This counter will be increased if the malformation does not affect the mapping of the test packet to the test session. This would be the case if a TLV is malformed.</p>
Context	oam stamp session-reflector network-instance name reference test-session-statistics session-sender-ip (ipv4-address ipv6-address) session-sender-udp number session-reflector-ip (ipv4-address ipv6-address) session-reflector-udp number session-identifier number malformed-tlv number
Tree	malformed-tlv
Default	0
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

test-frames-received *number*

Description	STAMP test frames received
Context	oam stamp session-reflector network-instance name reference test-session-statistics session-sender-ip (ipv4-address ipv6-address) session-sender-udp number session-reflector-ip (ipv4-address ipv6-address) session-reflector-udp number session-identifier number test-frames-received number
Tree	test-frames-received
Default	0
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

test-frames-sent *number*

Description	STAMP test frames transmitted
Context	oam stamp session-reflector network-instance name reference test-session-statistics session-sender-ip (ipv4-address ipv6-address) session-sender-udp number session-reflector-ip (ipv4-address ipv6-address) session-reflector-udp number session-identifier number test-frames-sent number
Tree	test-frames-sent
Default	0
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

udp-port *number*

Description	The UDP Port listening port of the STAMP Session-Reflector
Context	oam stamp session-reflector network-instance name reference udp-port number
Tree	udp-port
Range	862 64364 to 64373
Default	862
Configurable	True
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

statistics

Description	Enter the statistics context
Context	oam stamp session-reflector statistics
Tree	statistics
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

packet-discards-on-reception *number*

Description	Received STAMP test packets discarded lack of resources or resource contention
Context	oam stamp session-reflector statistics packet-discards-on-reception number
Tree	packet-discards-on-reception

Default	0
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

packet-discards-on-transmission *number*

Description	Transmitted STAMP test packets discarded due to lack of resources or resource contention
Context	oam stamp session-reflector statistics packet-discards-on-transmission number
Tree	packet-discards-on-transmission
Default	0
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

reflector-table-entries-full *number*

Description	Session-Reflector no available state table entries to add new test session
Context	oam stamp session-reflector statistics reflector-table-entries-full number
Tree	reflector-table-entries-full
Default	0
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

reflectors-configured *number*

Description	Count of STAMP Session-Reflectors administratively enabled regardless of operational state
Context	oam stamp session-reflector statistics reflectors-configured number
Tree	reflectors-configured
Default	0
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

reflectors-not-operational *number*

Description	Count of STAMP Session-Reflectors with an administrative state 'enable' and operational state 'down'
Context	oam stamp session-reflector statistics reflectors-not-operational <i>number</i>
Tree	reflectors-not-operational
Default	0
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

reflectors-operational *number*

Description	Count of STAMP Session-Reflectors with an administrative state 'enable' and operational state 'up'
Context	oam stamp session-reflector statistics reflectors-operational <i>number</i>
Tree	reflectors-operational
Default	0
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

session-reflector-not-found *number*

Description	<p>Session-Sender is sending to a destination UDP port that is not part of the Session-Reflector</p> <p>The Session-Reflector has not allocated the UDP port for this network instance reflector. This counter may increase when the Session-Reflector is deleted and packets for that specific Session-Reflector had been queued for processing. This counter does not increment when there is failure to map UDP port to the STAMP protocol.</p>
Context	oam stamp session-reflector statistics session-reflector-not-found <i>number</i>
Tree	session-reflector-not-found
Default	0
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

test-frames-received *number*

Description	STAMP test frames received
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Context	oam stamp session-reflector statistics test-frames-received <i>number</i>
Tree	test-frames-received
Default	0
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

test-frames-sent *number*

Description	STAMP test frames transmitted
Context	oam stamp session-reflector statistics test-frames-sent <i>number</i>
Tree	test-frames-sent
Default	0
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

test-session-count *number*

Description	STAMP test session count
Context	oam stamp session-reflector statistics test-session-count <i>number</i>
Tree	test-session-count
Default	0
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

twamp

Description	Enable the twamp context
Context	oam twamp
Tree	twamp
Configurable	True
Platforms	7250 IXR-10e, 7250 IXR-6e, 7250 IXR-X3b

server

Description	Configuration of the TWAMP Server logical entity
Context	oam twamp server

Tree	server
Configurable	True
Platforms	7250 IXR-10e, 7250 IXR-6e, 7250 IXR-X3b

network-instance [name reference](#)

Description	Enter the network-instance list instance
Context	oam twamp server network-instance name reference
Tree	network-instance
Configurable	True
Platforms	7250 IXR-10e, 7250 IXR-6e, 7250 IXR-X3b

name *reference*

Description	The name of the TWAMP Server network instance
Context	oam twamp server network-instance name reference
Reference	network-instance name string
Configurable	True
Platforms	7250 IXR-10e, 7250 IXR-6e, 7250 IXR-X3b

admin-state *keyword*

Description	<p>TWAMP Server administrative state</p> <p>A value 'enable' administratively starts the Server and Session-Reflector. A value 'disable' administratively stops the Server and Session-Reflector, dropping any active TWAMP-Control channels and terminating all TWAMP-Test sessions.</p>
Context	oam twamp server network-instance name reference admin-state keyword
Tree	admin-state
Default	disable
Options	<ul style="list-style-type: none"> • enable • disable
Configurable	True
Platforms	7250 IXR-10e, 7250 IXR-6e, 7250 IXR-X3b

client-connection prefix (*ipv4-prefix | ipv6-prefix*)

Description	List of TWAMP Client IP prefixes that can establish TWAMP-Control connections with the Server
Context	oam twamp server network-instance name <i>reference</i> client-connection prefix (<i>ipv4-prefix ipv6-prefix</i>)
Tree	client-connection
Configurable	True
Platforms	7250 IXR-10e, 7250 IXR-6e, 7250 IXR-X3b

prefix (*ipv4-prefix | ipv6-prefix*)

Description	A TWAMP Client IP prefix the Server will accept TWAMP-Control connections from
Context	oam twamp server network-instance name <i>reference</i> client-connection prefix (<i>ipv4-prefix ipv6-prefix</i>)
Configurable	True
Platforms	7250 IXR-10e, 7250 IXR-6e, 7250 IXR-X3b

maximum-connections *number*

Description	The per Control-Client IP prefix maximum number of concurrent TWAMP-Control connections the Server supports
Context	oam twamp server network-instance name <i>reference</i> client-connection prefix (<i>ipv4-prefix ipv6-prefix</i>) maximum-connections <i>number</i>
Tree	maximum-connections
Range	1 to 64
Default	32
Configurable	True
Platforms	7250 IXR-10e, 7250 IXR-6e, 7250 IXR-X3b

maximum-sessions *number*

Description	The per Control-Client IP prefix maximum number of oncurrent TWAMP-Test sessions the Server supports
Context	oam twamp server network-instance name <i>reference</i> client-connection prefix (<i>ipv4-prefix ipv6-prefix</i>) maximum-sessions <i>number</i>
Tree	maximum-sessions

Range	1 to 128
Default	32
Configurable	True
Platforms	7250 IXR-10e, 7250 IXR-6e, 7250 IXR-X3b

statistics

Description	Enter the statistics context
Context	oam twamp server network-instance name <i>reference</i> client-connection prefix (ipv4-prefix ipv6-prefix) statistics
Tree	statistics
Configurable	False
Platforms	7250 IXR-10e, 7250 IXR-6e, 7250 IXR-X3b

control-connections-active *number*

Description	Total number of active TWAMP-Control channels
Context	oam twamp server network-instance name <i>reference</i> client-connection prefix (ipv4-prefix ipv6-prefix) statistics control-connections-active <i>number</i>
Tree	control-connections-active
Default	0
Configurable	False
Platforms	7250 IXR-10e, 7250 IXR-6e, 7250 IXR-X3b

control-connections-rejected *number*

Description	Total number of rejected TWAMP-Control channels
Context	oam twamp server network-instance name <i>reference</i> client-connection prefix (ipv4-prefix ipv6-prefix) statistics control-connections-rejected <i>number</i>
Tree	control-connections-rejected
Default	0
Configurable	False
Platforms	7250 IXR-10e, 7250 IXR-6e, 7250 IXR-X3b

test-packets-received *number*

Description	Total number of TWAMP-Test packets received relevant to the context
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Context	oam twamp server network-instance name reference client-connection prefix (ipv4-prefix ipv6-prefix) statistics test-packets-received number
Tree	test-packets-received
Default	0
Configurable	False
Platforms	7250 IXR-10e, 7250 IXR-6e, 7250 IXR-X3b

test-packets-transmitted *number*

Description	Total number of TWAMP-Test packets sent relevant to the context
Context	oam twamp server network-instance name reference client-connection prefix (ipv4-prefix ipv6-prefix) statistics test-packets-transmitted number
Tree	test-packets-transmitted
Default	0
Configurable	False
Platforms	7250 IXR-10e, 7250 IXR-6e, 7250 IXR-X3b

test-sessions-aborted *number*

Description	Total number of aborted TWAMP_test sessions relative to the context
Context	oam twamp server network-instance name reference client-connection prefix (ipv4-prefix ipv6-prefix) statistics test-sessions-aborted number
Tree	test-sessions-aborted
Default	0
Configurable	False
Platforms	7250 IXR-10e, 7250 IXR-6e, 7250 IXR-X3b

test-sessions-active *number*

Description	Total number of active TWAMP-Test sessions relative to the context
Context	oam twamp server network-instance name reference client-connection prefix (ipv4-prefix ipv6-prefix) statistics test-sessions-active number
Tree	test-sessions-active
Default	0
Configurable	False
Platforms	7250 IXR-10e, 7250 IXR-6e, 7250 IXR-X3b

test-sessions-completed *number*

Description	Total number of completed TWAMP-Test sessions relative to the context
Context	oam twamp server network-instance name <i>reference</i> client-connection prefix (ipv4-prefix ipv6-prefix) statistics test-sessions-completed number
Tree	test-sessions-completed
Default	0
Configurable	False
Platforms	7250 IXR-10e, 7250 IXR-6e, 7250 IXR-X3b

test-sessions-rejected *number*

Description	Total number of rejected TWAMP-Test sessions relative to the context
Context	oam twamp server network-instance name <i>reference</i> client-connection prefix (ipv4-prefix ipv6-prefix) statistics test-sessions-rejected number
Tree	test-sessions-rejected
Default	0
Configurable	False
Platforms	7250 IXR-10e, 7250 IXR-6e, 7250 IXR-X3b

control-connection [client-ip \(ipv4-address | ipv6-address\)](#) [client-tcp-port number](#) [server-ip \(ipv4-address | ipv6-address\)](#) [server-tcp-port number](#)

Description	List TWAMP-Control (TCP) connections
Context	oam twamp server network-instance name <i>reference</i> control-connection client-ip (ipv4-address ipv6-address) client-tcp-port number server-ip (ipv4-address ipv6-address) server-tcp-port number
Tree	control-connection
Configurable	False
Platforms	7250 IXR-10e, 7250 IXR-6e, 7250 IXR-X3b

client-ip ([ipv4-address](#) | [ipv6-address](#))

Description	The IP address of the Control-Client used in the TWAMP-Control (TCP) packets belonging to this control connection
Context	oam twamp server network-instance name <i>reference</i> control-connection client-ip (ipv4-address ipv6-address) client-tcp-port number server-ip (ipv4-address ipv6-address) server-tcp-port number

Configurable	False
Platforms	7250 IXR-10e, 7250 IXR-6e, 7250 IXR-X3b

client-tcp-port *number*

Description	The source TCP port number of the Control-Client used in the TWAMP-Control (TCP) packets belonging to this control connection
Context	oam twamp server network-instance name <i>reference</i> control-connection client-ip (ipv4-address ipv6-address) client-tcp-port number server-ip (ipv4-address ipv6-address) server-tcp-port number
Range	0 to 65535
Configurable	False
Platforms	7250 IXR-10e, 7250 IXR-6e, 7250 IXR-X3b

server-ip (*ipv4-address | ipv6-address*)

Description	The destination IP address in the TWAMP Control message sent by the Control-Client targeting an IP address of the Server
Context	oam twamp server network-instance name <i>reference</i> control-connection client-ip (ipv4-address ipv6-address) client-tcp-port number server-ip (ipv4-address ipv6-address) server-tcp-port number
Configurable	False
Platforms	7250 IXR-10e, 7250 IXR-6e, 7250 IXR-X3b

server-tcp-port *number*

Description	The destination TCP port the Server listens for TWAMP-Control messages
Context	oam twamp server network-instance name <i>reference</i> control-connection client-ip (ipv4-address ipv6-address) client-tcp-port number server-ip (ipv4-address ipv6-address) server-tcp-port number
Range	0 to 65535
Configurable	False
Platforms	7250 IXR-10e, 7250 IXR-6e, 7250 IXR-X3b

control-packet-dscp *number*

Description	The DSCP value used in the IP header of the TWAMP-Control (TCP) packets sent by the Server
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Context	oam twamp server network-instance name <i>reference</i> control-connection client-ip (ipv4-address ipv6-address) client-tcp-port number server-ip (ipv4-address ipv6-address) server-tcp-port number control-packet-dscp number
Tree	control-packet-dscp
Range	0 to 63
Configurable	False
Platforms	7250 IXR-10e, 7250 IXR-6e, 7250 IXR-X3b

selected-mode *keyword*

Description	The TWAMP Mode chosen in the Mode field of the TWAMP Set-Up-Response message
Context	oam twamp server network-instance name <i>reference</i> control-connection client-ip (ipv4-address ipv6-address) client-tcp-port number server-ip (ipv4-address ipv6-address) server-tcp-port number selected-mode keyword
Tree	selected-mode
Options	<ul style="list-style-type: none"> • unauthenticated No encryption or authentication is applied in TWAMP-Control and TWAMP-Test • authenticated Control-Client and Server pass a shared secret for authentication • encrypted Additional level of protection using encryption • unauth-test-encrypt-control Mixed Security Mode, the TWAMP-Test uses unauthenticated mode and TWAMP-Control uses encrypted mode • individual-session-control Individual TWAMP-Test sessions start and stop using individual session identifiers This allows TWAMP-Test sessions using the same control channel to be started individually instead of using the bulk all sessions start. • reflect-octets Reflect octets capability • symmetrical-size Symmetrical size for test packets between Session-Sender and Session-Reflector
Configurable	False
Platforms	7250 IXR-10e, 7250 IXR-6e, 7250 IXR-X3b

state keyword

Description	Indicates the Server TWAMP-Control connection state
Context	oam twamp server network-instance name reference control-connection client-ip (ipv4-address ipv6-address) client-tcp-port number server-ip (ipv4-address ipv6-address) server-tcp-port number state keyword
Tree	state
Options	<ul style="list-style-type: none"> active TWAMP-Control connection between the Server and the Control-Client is active Packets are arriving on the TWAMP-Control channel or there are active TWAMP-Test sessions on the TWAMP-Control channel. servwait TWAMP-Control connection between the Server and the Control-Client is in SERVWAIT This state is entered when no there are no TWAMP-Control messages between the Control-Client and Server and all test sessions on the TWAMP-Control channel have been stopped, and the REFWAIT (timeout following test session stop) has expired.
Configurable	False
Platforms	7250 IXR-10e, 7250 IXR-6e, 7250 IXR-X3b

statistics

Description	Enter the statistics context
Context	oam twamp server network-instance name reference control-connection client-ip (ipv4-address ipv6-address) client-tcp-port number server-ip (ipv4-address ipv6-address) server-tcp-port number statistics
Tree	statistics
Configurable	False
Platforms	7250 IXR-10e, 7250 IXR-6e, 7250 IXR-X3b

test-packets-received number

Description	Total number of TWAMP-Test packets received relevant to the context
Context	oam twamp server network-instance name reference control-connection client-ip (ipv4-address ipv6-address) client-tcp-port number server-ip (ipv4-address ipv6-address) server-tcp-port number statistics test-packets-received number

Tree	test-packets-received
Default	0
Configurable	False
Platforms	7250 IXR-10e, 7250 IXR-6e, 7250 IXR-X3b

test-packets-transmitted *number*

Description	Total number of TWAMP-Test packets sent relevant to the context
Context	oam twamp server network-instance name reference control-connection client-ip (ipv4-address ipv6-address) client-tcp-port number server-ip (ipv4-address ipv6-address) server-tcp-port number statistics test-packets-transmitted number
Tree	test-packets-transmitted
Default	0
Configurable	False
Platforms	7250 IXR-10e, 7250 IXR-6e, 7250 IXR-X3b

test-sessions-aborted *number*

Description	Total number of aborted TWAMP_test sessions relative to the context
Context	oam twamp server network-instance name reference control-connection client-ip (ipv4-address ipv6-address) client-tcp-port number server-ip (ipv4-address ipv6-address) server-tcp-port number statistics test-sessions-aborted number
Tree	test-sessions-aborted
Default	0
Configurable	False
Platforms	7250 IXR-10e, 7250 IXR-6e, 7250 IXR-X3b

test-sessions-active *number*

Description	Total number of active TWAMP-Test sessions relative to the context
Context	oam twamp server network-instance name reference control-connection client-ip (ipv4-address ipv6-address) client-tcp-port number server-ip (ipv4-address ipv6-address) server-tcp-port number statistics test-sessions-active number
Tree	test-sessions-active
Default	0

Configurable	False
Platforms	7250 IXR-10e, 7250 IXR-6e, 7250 IXR-X3b

test-sessions-completed *number*

Description	Total number of completed TWAMP-Test sessions relative to the context
Context	oam twamp server network-instance name reference control-connection client-ip (ipv4-address ipv6-address) client-tcp-port number server-ip (ipv4-address ipv6-address) server-tcp-port number statistics test-sessions-completed number
Tree	test-sessions-completed
Default	0
Configurable	False
Platforms	7250 IXR-10e, 7250 IXR-6e, 7250 IXR-X3b

test-sessions-rejected *number*

Description	Total number of rejected TWAMP-Test sessions relative to the context
Context	oam twamp server network-instance name reference control-connection client-ip (ipv4-address ipv6-address) client-tcp-port number server-ip (ipv4-address ipv6-address) server-tcp-port number statistics test-sessions-rejected number
Tree	test-sessions-rejected
Default	0
Configurable	False
Platforms	7250 IXR-10e, 7250 IXR-6e, 7250 IXR-X3b

control-packet-dscp (*number | keyword*)

Description	The DSCP to be placed in the IP header of TWAMP-Control (TCP) packets generated by the Server
Context	oam twamp server network-instance name reference control-packet-dscp (number keyword)
Tree	control-packet-dscp
Range	0 to 63
Default	CS7
Options	<ul style="list-style-type: none"> • CS0 • LE

- CS1
- AF11
- AF12
- AF13
- CS2
- AF21
- AF22
- AF23
- CS3
- AF31
- AF32
- AF33
- CS4
- AF41
- AF42
- AF43
- CS5
- EF
- CS6
- CS7

Configurable	True
Platforms	7250 IXR-10e, 7250 IXR-6e, 7250 IXR-X3b

description string

Description	TWAMP Server common configuration
Context	oam twamp server network-instance name <i>reference</i> description string
Tree	description
String Length	1 to 255
Configurable	True
Platforms	7250 IXR-10e, 7250 IXR-6e, 7250 IXR-X3b

enforce-test-session-start-time boolean

Description	Discard or process TWAMP-Test packets arriving before the negotiated session start time
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A Request-TW-Session includes a start-time value for the test session. A value 'true' enforces the server check that will drop the TWAMP-Test packets if the test session start-time is before the Server time of day. In environments where the TWAMP Client and TWAMP Servers are not synchronized the value 'false' can be used to skip this validation check and process TWAMP test packets that arrive before their indicated start time.

Context	oam twamp server network-instance name <i>reference</i> enforce-test-session-start-time <i>boolean</i>
Tree	enforce-test-session-start-time
Default	true
Configurable	True
Platforms	7250 IXR-10e, 7250 IXR-6e, 7250 IXR-X3b

maximum-connections *number*

Description	The system wide maximum number of concurrent TWAMP-Control connections the Server supports
Context	oam twamp server network-instance name <i>reference</i> maximum-connections <i>number</i>
Tree	maximum-connections
Range	1 to 64
Default	32
Configurable	True
Platforms	7250 IXR-10e, 7250 IXR-6e, 7250 IXR-X3b

maximum-sessions *number*

Description	The system wide maximum number of concurrent TWAMP-Test sessions the Server supports
Context	oam twamp server network-instance name <i>reference</i> maximum-sessions <i>number</i>
Tree	maximum-sessions
Range	1 to 128
Default	32
Configurable	True
Platforms	7250 IXR-10e, 7250 IXR-6e, 7250 IXR-X3b

modes *keyword*

Description	The list of TWAMP Modes this Server supports
Context	oam twamp server network-instance name reference modes keyword
Tree	modes
Options	<ul style="list-style-type: none"> • unauthenticated No encryption or authentication is applied in TWAMP-Control and TWAMP-Test • authenticated Control-Client and Server pass a shared secret for authentication • encrypted Additional level of protection using encryption • unauth-test-encrypt-control Mixed Security Mode, the TWAMP-Test uses unauthenticated mode and TWAMP-Control uses encrypted mode • individual-session-control Individual TWAMP-Test sessions start and stop using individual session identifiers This allows TWAMP-Test sessions using the same control channel to be started individually instead of using the bulk all sessions start. • reflect-octets Reflect octets capability • symmetrical-size Symmetrical size for test packets between Session-Sender and Session-Reflector
Configurable	False
Platforms	7250 IXR-10e, 7250 IXR-6e, 7250 IXR-X3b

oper-state *keyword*

Description	The operational state of the TWAMP Server and Session/Reflector
Context	oam twamp server network-instance name reference oper-state keyword
Tree	oper-state
Options	<ul style="list-style-type: none"> • up Component or process is operational • down Component or process is not operational

- empty
Component slot is empty
- downloading
Component is downloading image into memory
- booting
Component is booting downloaded image
- starting
Component image operational, application processes starting
- failed
Component or process has failed
- synchronizing
Component is currently being synchronized
- upgrading
Component is currently being upgraded
- low-power
Component is offline due to insufficient system power
- degraded
Component or process is in a degraded state
- warm-reboot
Component or process is currently warm rebooting
This state is set during a warm reboot immediately following initiation of the reboot, continuing after startup until the system has completed audit. In this state the system will not accept configuration changes.
- waiting
Component or process is currently waiting
This state can be set by event handler when the reinvoke-with-delay action is used, and indicates that the event handler is waiting for the provided delay before reinvoking the instance.

Configurable

False

Platforms

7250 IXR-10e, 7250 IXR-6e, 7250 IXR-X3b

servwait *number*

Description

TWAMP-Control (TCP) session timeout, in seconds

The length of time the Server maintains the TWAMP-Control channel in the absence of any activity for the channel. This state is entered when there is no TWAMP-Control messages between the Control-Client and Server, and

all test sessions on the TWAMP-Control channel have been stopped, and the timeout following test session stop (REFWAIT) has expired.

Context	oam twamp server network-instance name <i>reference</i> servwait number
Tree	servwait
Range	60 to 3600
Default	900
Units	seconds
Configurable	True
Platforms	7250 IXR-10e, 7250 IXR-6e, 7250 IXR-X3b

session-reflector

Description	Configuration and state for the TWAMP Session-Reflector
Context	oam twamp server network-instance name <i>reference</i> session-reflector
Tree	session-reflector
Configurable	False
Platforms	7250 IXR-10e, 7250 IXR-6e, 7250 IXR-X3b

test-session [sender-ip \(ipv4-address | ipv6-address\)](#) [sender-udp-port number](#) [reflector-ip \(ipv4-address | ipv6-address\)](#) [reflector-udp-port number](#)

Description	TWAMP Session-Reflector test sessions.
Context	oam twamp server network-instance name <i>reference</i> session-reflector test-session sender-ip (ipv4-address ipv6-address) sender-udp-port number reflector-ip (ipv4-address ipv6-address) reflector-udp-port number
Tree	test-session
Configurable	False
Platforms	7250 IXR-10e, 7250 IXR-6e, 7250 IXR-X3b

[sender-ip \(ipv4-address | ipv6-address\)](#)

Description	The IP address of the TWAMP Session-Sender for the TWAMP test packets belonging to this test session
Context	oam twamp server network-instance name <i>reference</i> session-reflector test-session sender-ip (ipv4-address ipv6-address) sender-udp-port number reflector-ip (ipv4-address ipv6-address) reflector-udp-port number
Configurable	False
Platforms	7250 IXR-10e, 7250 IXR-6e, 7250 IXR-X3b

sender-udp-port *number*

Description	The source UDP port used by the TWAMP Session-Sender for the TWAMP test packets belonging to this test session
Context	oam twamp server network-instance name <i>reference</i> session-reflector test-session sender-ip (ipv4-address ipv6-address) sender-udp-port number reflector-ip (ipv4-address ipv6-address) reflector-udp-port number
Range	0 to 65535
Configurable	False
Platforms	7250 IXR-10e, 7250 IXR-6e, 7250 IXR-X3b

reflector-ip (*ipv4-address | ipv6-address*)

Description	The IP address of the TWAMP Session-Reflector, the destination IP address used in the TWAMP test packets belonging to this test
Context	oam twamp server network-instance name <i>reference</i> session-reflector test-session sender-ip (ipv4-address ipv6-address) sender-udp-port number reflector-ip (ipv4-address ipv6-address) reflector-udp-port number
Configurable	False
Platforms	7250 IXR-10e, 7250 IXR-6e, 7250 IXR-X3b

reflector-udp-port *number*

Description	The UDP port number the TWAMP Session-Reflector listens on for TWAMP test packets belonging to this test session
Context	oam twamp server network-instance name <i>reference</i> session-reflector test-session sender-ip (ipv4-address ipv6-address) sender-udp-port number reflector-ip (ipv4-address ipv6-address) reflector-udp-port number
Range	862 49152 to 65535
Configurable	False
Platforms	7250 IXR-10e, 7250 IXR-6e, 7250 IXR-X3b

last-sequence-number-received *number*

Description	The last sequence number in the TWAMP-Test packet sent by the Session-Sender to the Session-Reflector for this test session
Context	oam twamp server network-instance name <i>reference</i> session-reflector test-session sender-ip (ipv4-address ipv6-address) sender-udp-port number reflector-ip (ipv4-address ipv6-address) reflector-udp-port number last-sequence-number-received number

Tree	last-sequence-number-received
Configurable	False
Platforms	7250 IXR-10e, 7250 IXR-6e, 7250 IXR-X3b

last-sequence-number-transmitted *number*

Description	The last sequence number in the TWAMP-Test packet sent by the Session-Reflector to the Session-Sender for this test session
Context	oam twamp server network-instance name <i>reference</i> session-reflector test-session sender-ip (<i>ipv4-address ipv6-address</i>) sender-udp-port <i>number</i> reflector-ip (<i>ipv4-address ipv6-address</i>) reflector-udp-port <i>number</i> last-sequence-number-transmitted <i>number</i>
Tree	last-sequence-number-transmitted
Configurable	False
Platforms	7250 IXR-10e, 7250 IXR-6e, 7250 IXR-X3b

parent-connection-client-ip (*ipv4-address | ipv6-address*)

Description	The IP address of the Control-Client used in the TWAMP-Control (TCP) packets belonging to this control connection which negotiated the test session
Context	oam twamp server network-instance name <i>reference</i> session-reflector test-session sender-ip (<i>ipv4-address ipv6-address</i>) sender-udp-port <i>number</i> reflector-ip (<i>ipv4-address ipv6-address</i>) reflector-udp-port <i>number</i> parent-connection-client-ip (<i>ipv4-address ipv6-address</i>)
Tree	parent-connection-client-ip
Configurable	False
Platforms	7250 IXR-10e, 7250 IXR-6e, 7250 IXR-X3b

parent-connection-client-tcp-port *number*

Description	The TCP port of the Control-Client used in the TWAMP-Control (TCP) packets belonging to this control connection which negotiated the test session
Context	oam twamp server network-instance name <i>reference</i> session-reflector test-session sender-ip (<i>ipv4-address ipv6-address</i>) sender-udp-port <i>number</i> reflector-ip (<i>ipv4-address ipv6-address</i>) reflector-udp-port <i>number</i> parent-connection-client-tcp-port <i>number</i>
Tree	parent-connection-client-tcp-port
Range	0 to 65535

Configurable	False
Platforms	7250 IXR-10e, 7250 IXR-6e, 7250 IXR-X3b

parent-connection-server-ip (*ipv4-address* | *ipv6-address*)

Description	The destination IP address in the TWAMP Control message sent by the Control-Client targeting the Server which negotiated this test session
Context	oam twamp server network-instance name reference session-reflector test-session sender-ip (<i>ipv4-address</i> <i>ipv6-address</i>) sender-udp-port number reflector-ip (<i>ipv4-address</i> <i>ipv6-address</i>) reflector-udp-port number parent-connection-server-ip (<i>ipv4-address</i> <i>ipv6-address</i>)
Tree	parent-connection-server-ip
Configurable	False
Platforms	7250 IXR-10e, 7250 IXR-6e, 7250 IXR-X3b

parent-connection-server-tcp-port *number*

Description	The destination TCP Port (862) in the TWAMP Control message sent by the Control-Client targeting the server which negotiated this test session
Context	oam twamp server network-instance name reference session-reflector test-session sender-ip (<i>ipv4-address</i> <i>ipv6-address</i>) sender-udp-port number reflector-ip (<i>ipv4-address</i> <i>ipv6-address</i>) reflector-udp-port number parent-connection-server-tcp-port <i>number</i>
Tree	parent-connection-server-tcp-port
Range	0 to 65535
Configurable	False
Platforms	7250 IXR-10e, 7250 IXR-6e, 7250 IXR-X3b

statistics

Description	Enter the statistics context
Context	oam twamp server network-instance name reference session-reflector test-session sender-ip (<i>ipv4-address</i> <i>ipv6-address</i>) sender-udp-port number reflector-ip (<i>ipv4-address</i> <i>ipv6-address</i>) reflector-udp-port number statistics
Tree	statistics
Configurable	False
Platforms	7250 IXR-10e, 7250 IXR-6e, 7250 IXR-X3b

test-packets-received *number*

Description	Total number of TWAMP-Test packets received relevant to the context
Context	oam twamp server network-instance name reference session-reflector test-session sender-ip (ipv4-address ipv6-address) sender-udp-port number reflector-ip (ipv4-address ipv6-address) reflector-udp-port number statistics test-packets-received number
Tree	test-packets-received
Default	0
Configurable	False
Platforms	7250 IXR-10e, 7250 IXR-6e, 7250 IXR-X3b

test-packets-transmitted *number*

Description	Total number of TWAMP-Test packets sent relevant to the context
Context	oam twamp server network-instance name reference session-reflector test-session sender-ip (ipv4-address ipv6-address) sender-udp-port number reflector-ip (ipv4-address ipv6-address) reflector-udp-port number statistics test-packets-transmitted number
Tree	test-packets-transmitted
Default	0
Configurable	False
Platforms	7250 IXR-10e, 7250 IXR-6e, 7250 IXR-X3b

test-packet-dscp *number*

Description	The DSCP value present in the IP header of TWAMP-Test packets belonging to this session
Context	oam twamp server network-instance name reference session-reflector test-session sender-ip (ipv4-address ipv6-address) sender-udp-port number reflector-ip (ipv4-address ipv6-address) reflector-udp-port number test-packet-dscp number
Tree	test-packet-dscp
Range	0 to 63
Configurable	False
Platforms	7250 IXR-10e, 7250 IXR-6e, 7250 IXR-X3b

test-session-id *string*

Description	A TWAMP sever auto-allocated identifier for this TWAMP-Test session that is unique to the local Server This value is communicated to the Control-Client requesting the test session using the SID field of the Accept-Session message.
Context	oam twamp server network-instance name <i>reference</i> session-reflector test-session sender-ip (ipv4-address ipv6-address) <i>number</i> reflector-ip (ipv4-address ipv6-address) <i>number</i> reflector-udp-port <i>number</i> test-session-id <i>string</i>
Tree	test-session-id
Configurable	False
Platforms	7250 IXR-10e, 7250 IXR-6e, 7250 IXR-X3b

statistics

Description	Enter the statistics context
Context	oam twamp server network-instance name <i>reference</i> statistics
Tree	statistics
Configurable	False
Platforms	7250 IXR-10e, 7250 IXR-6e, 7250 IXR-X3b

control-connections-active *number*

Description	Total number of active TWAMP-Control channels
Context	oam twamp server network-instance name <i>reference</i> statistics control-connections-active <i>number</i>
Tree	control-connections-active
Default	0
Configurable	False
Platforms	7250 IXR-10e, 7250 IXR-6e, 7250 IXR-X3b

control-connections-rejected *number*

Description	Total number of rejected TWAMP-Control channels
Context	oam twamp server network-instance name <i>reference</i> statistics control-connections-rejected <i>number</i>
Tree	control-connections-rejected

Default	0
Configurable	False
Platforms	7250 IXR-10e, 7250 IXR-6e, 7250 IXR-X3b

test-packets-received *number*

Description	Total number of TWAMP-Test packets received relevant to the context
Context	oam twamp server network-instance name reference statistics test-packets-received number
Tree	test-packets-received
Default	0
Configurable	False
Platforms	7250 IXR-10e, 7250 IXR-6e, 7250 IXR-X3b

test-packets-transmitted *number*

Description	Total number of TWAMP-Test packets sent relevant to the context
Context	oam twamp server network-instance name reference statistics test-packets-transmitted number
Tree	test-packets-transmitted
Default	0
Configurable	False
Platforms	7250 IXR-10e, 7250 IXR-6e, 7250 IXR-X3b

test-sessions-aborted *number*

Description	Total number of aborted TWAMP_test sessions relative to the context
Context	oam twamp server network-instance name reference statistics test-sessions-aborted number
Tree	test-sessions-aborted
Default	0
Configurable	False
Platforms	7250 IXR-10e, 7250 IXR-6e, 7250 IXR-X3b

test-sessions-active *number*

Description	Total number of active TWAMP-Test sessions relative to the context
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Context	oam twamp server network-instance name <i>reference</i> statistics test-sessions-active <i>number</i>
Tree	test-sessions-active
Default	0
Configurable	False
Platforms	7250 IXR-10e, 7250 IXR-6e, 7250 IXR-X3b

test-sessions-completed *number*

Description	Total number of completed TWAMP-Test sessions relative to the context
Context	oam twamp server network-instance name <i>reference</i> statistics test-sessions-completed <i>number</i>
Tree	test-sessions-completed
Default	0
Configurable	False
Platforms	7250 IXR-10e, 7250 IXR-6e, 7250 IXR-X3b

test-sessions-rejected *number*

Description	Total number of rejected TWAMP-Test sessions relative to the context
Context	oam twamp server network-instance name <i>reference</i> statistics test-sessions-rejected <i>number</i>
Tree	test-sessions-rejected
Default	0
Configurable	False
Platforms	7250 IXR-10e, 7250 IXR-6e, 7250 IXR-X3b

statistics

Description	Enter the statistics context
Context	oam twamp statistics
Tree	statistics
Configurable	False
Platforms	7250 IXR-10e, 7250 IXR-6e, 7250 IXR-X3b

dropped-connection-states

Description	The state of the TWAMP-Control channel when the failure occurred
Context	oam twamp statistics dropped-connection-states
Tree	dropped-connection-states
Configurable	False
Platforms	7250 IXR-10e, 7250 IXR-6e, 7250 IXR-X3b

active number

Description	Count of TWAMP-Control connection failures in test active state
Context	oam twamp statistics dropped-connection-states active number
Tree	active
Default	0
Configurable	False
Platforms	7250 IXR-10e, 7250 IXR-6e, 7250 IXR-X3b

idle number

Description	Count of TWAMP-Control connection failures in idle state
Context	oam twamp statistics dropped-connection-states idle number
Tree	idle
Default	0
Configurable	False
Platforms	7250 IXR-10e, 7250 IXR-6e, 7250 IXR-X3b

process-started number

Description	Count of TWAMP-Control connection failures in process-session-start state
Context	oam twamp statistics dropped-connection-states process-started number
Tree	process-started
Default	0
Configurable	False
Platforms	7250 IXR-10e, 7250 IXR-6e, 7250 IXR-X3b

process-stop *number*

Description	Count of TWAMP-Control connection failures in process-session-stop state
Context	oam twamp statistics dropped-connection-states process-stop <i>number</i>
Tree	process-stop
Default	0
Configurable	False
Platforms	7250 IXR-10e, 7250 IXR-6e, 7250 IXR-X3b

process-tw-session *number*

Description	Count of TWAMP-Control connection failures in process-session-request state
Context	oam twamp statistics dropped-connection-states process-tw-session <i>number</i>
Tree	process-tw-session
Default	0
Configurable	False
Platforms	7250 IXR-10e, 7250 IXR-6e, 7250 IXR-X3b

setup-wait *number*

Description	Count of TWAMP-Control connection failures in set-up-wait state
Context	oam twamp statistics dropped-connection-states setup-wait <i>number</i>
Tree	setup-wait
Default	0
Configurable	False
Platforms	7250 IXR-10e, 7250 IXR-6e, 7250 IXR-X3b

started *number*

Description	Count of TWAMP-Control connection failures in server-started state
Context	oam twamp statistics dropped-connection-states started <i>number</i>
Tree	started
Default	0
Configurable	False
Platforms	7250 IXR-10e, 7250 IXR-6e, 7250 IXR-X3b

dropped-connections

Description	TWAMP-Control (TCP) dropped or closed connections
Context	oam twamp statistics dropped-connections
Tree	dropped-connections
Configurable	False
Platforms	7250 IXR-10e, 7250 IXR-6e, 7250 IXR-X3b

connection-timeout *number*

Description	TCP connection timeout
Context	oam twamp statistics dropped-connections connection-timeout <i>number</i>
Tree	connection-timeout
Default	0
Configurable	False
Platforms	7250 IXR-10e, 7250 IXR-6e, 7250 IXR-X3b

control-command-not-valid *number*

Description	TCP connection failure because invalid TWAMP-Control command received from Control-Client
Context	oam twamp statistics dropped-connections control-command-not-valid <i>number</i>
Tree	control-command-not-valid
Default	0
Configurable	False
Platforms	7250 IXR-10e, 7250 IXR-6e, 7250 IXR-X3b

incorrect-stop-session-count *number*

Description	TCP connection failure because invalid session count was received in the Stop-Sessions message from the Control-Client
Context	oam twamp statistics dropped-connections incorrect-stop-session-count <i>number</i>
Tree	incorrect-stop-session-count
Default	0
Configurable	False

Platforms 7250 IXR-10e, 7250 IXR-6e, 7250 IXR-X3b

invalid-invalid-hmac *number*

Description Invalid Hash-based Message Authentication Code (HMAC)
Context [oam twamp statistics dropped-connections invalid-invalid-hmac *number*](#)
Tree [invalid-invalid-hmac](#)
Default 0
Configurable False
Platforms 7250 IXR-10e, 7250 IXR-6e, 7250 IXR-X3b

maximum-global-limit-exceed *number*

Description TCP connection failures because global connection limit exceeds
Context [oam twamp statistics dropped-connections maximum-global-limit-exceed *number*](#)
Tree [maximum-global-limit-exceed](#)
Default 0
Configurable False
Platforms 7250 IXR-10e, 7250 IXR-6e, 7250 IXR-X3b

maximum-prefix-limit-exceed *number*

Description TCP connection failures because per prefix connection limit exceeds
Context [oam twamp statistics dropped-connections maximum-prefix-limit-exceed *number*](#)
Tree [maximum-prefix-limit-exceed](#)
Default 0
Configurable False
Platforms 7250 IXR-10e, 7250 IXR-6e, 7250 IXR-X3b

memory-allocation-error *number*

Description TCP connection failure because of memory allocation error
Context [oam twamp statistics dropped-connections memory-allocation-error *number*](#)
Tree [memory-allocation-error](#)

Default	0
Configurable	False
Platforms	7250 IXR-10e, 7250 IXR-6e, 7250 IXR-X3b

message-send-error *number*

Description	TCP connection failure because of server message send error (Greeting, Start or Accept)
Context	oam twamp statistics dropped-connections message-send-error <i>number</i>
Tree	message-send-error
Default	0
Configurable	False
Platforms	7250 IXR-10e, 7250 IXR-6e, 7250 IXR-X3b

no-client-prefix-match *number*

Description	TCP connection failures because no prefix match for Client IP
Context	oam twamp statistics dropped-connections no-client-prefix-match <i>number</i>
Tree	no-client-prefix-match
Default	0
Configurable	False
Platforms	7250 IXR-10e, 7250 IXR-6e, 7250 IXR-X3b

no-internal-resource *number*

Description	TCP connection failures because internal resource unavailable
Context	oam twamp statistics dropped-connections no-internal-resource <i>number</i>
Tree	no-internal-resource
Default	0
Configurable	False
Platforms	7250 IXR-10e, 7250 IXR-6e, 7250 IXR-X3b

non-zero-sid-in-client-control-message *number*

Description	TCP connection failure because of invalid non-zero SID received from Control-Client
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Context	oam twamp statistics dropped-connections non-zero-sid-in-client-control-message <i>number</i>
Tree	non-zero-sid-in-client-control-message
Default	0
Configurable	False
Platforms	7250 IXR-10e, 7250 IXR-6e, 7250 IXR-X3b

tcp-connection-closed *number*

Description	TCP connection closed
Context	oam twamp statistics dropped-connections tcp-connection-closed <i>number</i>
Tree	tcp-connection-closed
Default	0
Configurable	False
Platforms	7250 IXR-10e, 7250 IXR-6e, 7250 IXR-X3b

tcp-connection-fatal-error *number*

Description	TCP connection errors
Context	oam twamp statistics dropped-connections tcp-connection-fatal-error <i>number</i>
Tree	tcp-connection-fatal-error
Default	0
Configurable	False
Platforms	7250 IXR-10e, 7250 IXR-6e, 7250 IXR-X3b

tcp-unexpected-event *number*

Description	TCP connection failures because of unexpected protocol events
Context	oam twamp statistics dropped-connections tcp-unexpected-event <i>number</i>
Tree	tcp-unexpected-event
Default	0
Configurable	False
Platforms	7250 IXR-10e, 7250 IXR-6e, 7250 IXR-X3b

unspecified-mode *number*

Description	TCP connection failures because unspecified TWAMP mode received from Control-Client
Context	oam twamp statistics dropped-connections unspecified-mode <i>number</i>
Tree	unspecified-mode
Default	0
Configurable	False
Platforms	7250 IXR-10e, 7250 IXR-6e, 7250 IXR-X3b

unsupported-mode *number*

Description	TCP connection failures because unsupported TWAMP mode requested by Control-Client
Context	oam twamp statistics dropped-connections unsupported-mode <i>number</i>
Tree	unsupported-mode
Default	0
Configurable	False
Platforms	7250 IXR-10e, 7250 IXR-6e, 7250 IXR-X3b

dropped-test-packet

Description	TWAMP-Test packet drop stats
Context	oam twamp statistics dropped-test-packet
Tree	dropped-test-packet
Configurable	False
Platforms	7250 IXR-10e, 7250 IXR-6e, 7250 IXR-X3b

arrived-before-start-time *number*

Description	<p>Test packets dropped because they arrived before start time</p> <p>The TWAMP-Test packets arrived on the Session-Reflector before the indicated start-time in the Request-TW-Session. This is likely caused by a difference in Time of Day (ToD) clocks used for timestamping the TWAMP-Test packet. This may occur when the Server/Session-Reflector clock is ahead of the ToD clock of the Control-Client/Session-Sender.</p>
Context	oam twamp statistics dropped-test-packet arrived-before-start-time <i>number</i>

Tree	arrived-before-start-time
Default	0
Configurable	False
Platforms	7250 IXR-10e, 7250 IXR-6e, 7250 IXR-X3b

incorrect-packet-size *number*

Description	Test packets dropped because of unexpected packet size
Context	oam twamp statistics dropped-test-packet incorrect-packet-size <i>number</i>
Tree	incorrect-packet-size
Default	0
Configurable	False
Platforms	7250 IXR-10e, 7250 IXR-6e, 7250 IXR-X3b

incorrect-source-address *number*

Description	Test packets dropped because incorrect source address
Context	oam twamp statistics dropped-test-packet incorrect-source-address <i>number</i>
Tree	incorrect-source-address
Default	0
Configurable	False
Platforms	7250 IXR-10e, 7250 IXR-6e, 7250 IXR-X3b

invalid-error-estimate *number*

Description	Test packets dropped because invalid TWAMP-Test error estimate received from the Session-Sender
Context	oam twamp statistics dropped-test-packet invalid-error-estimate <i>number</i>
Tree	invalid-error-estimate
Default	0
Configurable	False
Platforms	7250 IXR-10e, 7250 IXR-6e, 7250 IXR-X3b

invalid-server-octets *number*

Description	Test packets dropped because of invalid server octets
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Context	oam twamp statistics dropped-test-packet invalid-server-octets <i>number</i>
Tree	invalid-server-octets
Default	0
Configurable	False
Platforms	7250 IXR-10e, 7250 IXR-6e, 7250 IXR-X3b

invalid-symmetric-mbz *number*

Description	Test packets dropped because of invalid symmetric padding Must Be Zero (MBZ)
Context	oam twamp statistics dropped-test-packet invalid-symmetric-mbz <i>number</i>
Tree	invalid-symmetric-mbz
Default	0
Configurable	False
Platforms	7250 IXR-10e, 7250 IXR-6e, 7250 IXR-X3b

no-start-sessions *number*

Description	Test packets dropped because they arrived before Client-Control start-sessions message for the session
Context	oam twamp statistics dropped-test-packet no-start-sessions <i>number</i>
Tree	no-start-sessions
Default	0
Configurable	False
Platforms	7250 IXR-10e, 7250 IXR-6e, 7250 IXR-X3b

reply-error *number*

Description	Test reply send errors.
Context	oam twamp statistics dropped-test-packet reply-error <i>number</i>
Tree	reply-error
Default	0
Configurable	False
Platforms	7250 IXR-10e, 7250 IXR-6e, 7250 IXR-X3b

rejected-session

Description	Per reason code error statistics for test session rejection
Context	oam twamp statistics rejected-session
Tree	rejected-session
Configurable	False
Platforms	7250 IXR-10e, 7250 IXR-6e, 7250 IXR-X3b

bad-type-p *number*

Description	Sessions rejected because of non-DSCP type-p
Context	oam twamp statistics rejected-session bad-type-p <i>number</i>
Tree	bad-type-p
Default	0
Configurable	False
Platforms	7250 IXR-10e, 7250 IXR-6e, 7250 IXR-X3b

client-source-ip-unreachable *number*

Description	Session rejected because Control-Client IP is not reachable
Context	oam twamp statistics rejected-session client-source-ip-unreachable <i>number</i>
Tree	client-source-ip-unreachable
Default	0
Configurable	False
Platforms	7250 IXR-10e, 7250 IXR-6e, 7250 IXR-X3b

duplicate-session *number*

Description	Sessions rejected because duplicate session already exists
Context	oam twamp statistics rejected-session duplicate-session <i>number</i>
Tree	duplicate-session
Default	0
Configurable	False
Platforms	7250 IXR-10e, 7250 IXR-6e, 7250 IXR-X3b

invalid-ip-address-version *number*

Description	Sessions rejected because of bad IP version
Context	oam twamp statistics rejected-session invalid-ip-address-version <i>number</i>
Tree	invalid-ip-address-version
Default	0
Configurable	False
Platforms	7250 IXR-10e, 7250 IXR-6e, 7250 IXR-X3b

maximum-global-session-exceed *number*

Description	Sessions rejected because of global session limit exceeds
Context	oam twamp statistics rejected-session maximum-global-session-exceed <i>number</i>
Tree	maximum-global-session-exceed
Default	0
Configurable	False
Platforms	7250 IXR-10e, 7250 IXR-6e, 7250 IXR-X3b

maximum-prefix-session-exceed *number*

Description	Sessions rejected because of prefix session limit exceeds
Context	oam twamp statistics rejected-session maximum-prefix-session-exceed <i>number</i>
Tree	maximum-prefix-session-exceed
Default	0
Configurable	False
Platforms	7250 IXR-10e, 7250 IXR-6e, 7250 IXR-X3b

no-internal-resource *number*

Description	Sessions rejected because internal resource is not available
Context	oam twamp statistics rejected-session no-internal-resource <i>number</i>
Tree	no-internal-resource
Default	0
Configurable	False

Platforms 7250 IXR-10e, 7250 IXR-6e, 7250 IXR-X3b

non-local-ip-destination *number*

Description Sessions rejected because destination IP in the TWAMP-Test packet from the Session-Sender was not local to the Session-Reflector

Context [oam twamp statistics rejected-session non-local-ip-destination *number*](#)

Tree [non-local-ip-destination](#)

Default 0

Configurable False

Platforms 7250 IXR-10e, 7250 IXR-6e, 7250 IXR-X3b

non-zero-mbz-value *number*

Description Sessions rejected because Must Be Zero (MBZ) values in TWAMP-Test packet were not zero

Context [oam twamp statistics rejected-session non-zero-mbz-value *number*](#)

Tree [non-zero-mbz-value](#)

Default 0

Configurable False

Platforms 7250 IXR-10e, 7250 IXR-6e, 7250 IXR-X3b

non-zero-session-sender-sid *number*

Description Sessions rejected because Session-Sender SID is not zero

Context [oam twamp statistics rejected-session non-zero-session-sender-sid *number*](#)

Tree [non-zero-session-sender-sid](#)

Default 0

Configurable False

Platforms 7250 IXR-10e, 7250 IXR-6e, 7250 IXR-X3b

padding-too-big *number*

Description Sessions rejected because padding length requested is too large

Context [oam twamp statistics rejected-session padding-too-big *number*](#)

Tree [padding-too-big](#)

Default	0
Configurable	False
Platforms	7250 IXR-10e, 7250 IXR-6e, 7250 IXR-X3b

refwait-timeout *number*

Description	Sessions dropped because Session-Reflector inactivity timer (REFWAIT) elapsed
Context	oam twamp statistics rejected-session refwait-timeout <i>number</i>
Tree	refwait-timeout
Default	0
Configurable	False
Platforms	7250 IXR-10e, 7250 IXR-6e, 7250 IXR-X3b

timeout-too-large *number*

Description	Sessions rejected because timeout advertised is larger than reference wait (REFWAIT)
Context	oam twamp statistics rejected-session timeout-too-large <i>number</i>
Tree	timeout-too-large
Default	0
Configurable	False
Platforms	7250 IXR-10e, 7250 IXR-6e, 7250 IXR-X3b

udp-port-in-use *number*

Description	Sessions rejected because UDP Port is not available
Context	oam twamp statistics rejected-session udp-port-in-use <i>number</i>
Tree	udp-port-in-use
Default	0
Configurable	False
Platforms	7250 IXR-10e, 7250 IXR-6e, 7250 IXR-X3b

8 platform

```
platform
+ chassis
- clei-code string
- failure-reason string
- healthz
  - last-unhealthy string
  - status keyword
  - unhealthy-count number
- hw-mac-address string
+ id number
- last-boot-type string
- last-booted string
- last-booted-reason identityref
- last-change string
- manufactured-date string
- oper-state keyword
- part-number string
+ power
- control
  - peak number
  - required number
  - used number
- fabric
  - peak number
  - required number
  - used number
- fan-tray
  - peak number
  - required number
  - used number
- linecard
  - peak number
  - required number
  - used number
- total
  - capacity number
  - peak number
  - required number
  - used number
- rebooting-at string
- removable boolean
+ secondary-mac-address string
- serial-number string
- slots number
- type string
+ control slot string
- bios
  - manufacturer string
  - software-version string
- bootloader
  - manufacturer string
  - software-version string
- cgroup name string
- cpuacct-statistics
  - system number
  - user number
```



```
- memory-statistics
  - anon number
  - anon-thp number
  - current number
  - current-swap number
  - file number
  - file-dirty number
  - file-writeback number
  - kernel-stack number
  - memory-events
    - high number
    - low number
    - max number
    - oom number
    - oom-kill number
  - slab number
  - sock number
- clei-code string
- cpu index (keyword | number)
  - architecture keyword
  - hardware-interrupt
    - average-1 number
    - average-15 number
    - average-5 number
    - instant number
  - idle
    - average-1 number
    - average-15 number
    - average-5 number
    - instant number
  - iowait
    - average-1 number
    - average-15 number
    - average-5 number
    - instant number
  - nice
    - average-1 number
    - average-15 number
    - average-5 number
    - instant number
  - software-interrupt
    - average-1 number
    - average-15 number
    - average-5 number
    - instant number
  - speed decimal-number
  - system
    - average-1 number
    - average-15 number
    - average-5 number
    - instant number
  - total
    - average-1 number
    - average-15 number
    - average-5 number
    - instant number
  - type string
  - user
    - average-1 number
    - average-15 number
    - average-5 number
    - instant number
- disk name string
  - model-number string
```

```

- partition name string
  - free number
  - mount-point string
  - mount-status keyword
  - percent-used number
  - size number
  - used number
  - uuid string
- serial-number string
- size number
- statistics
  - io-errors number
  - max-erase-count number
  - read-per-second decimal-number
  - transfers-per-second decimal-number
  - utilization number
  - written-per-second decimal-number
- type keyword
- failure-reason string
- healthz
  - last-unhealthy string
  - status keyword
  - unhealthy-count number
+ interface name identityref
+ admin-state keyword
- oper-state keyword
- last-booted string
- last-booted-reason identityref
- last-change string
- last-switchover-reason
  - details string
  - trigger identityref
- locator-state keyword
- manufactured-date string
- memory
  - free number
  - physical number
  - reserved number
  - utilization number
- oper-state keyword
- part-number string
- power
  - required number
  - used number
- process pid number
  - args string
  - cpu-utilization number
  - memory-usage number
  - memory-utilization number
  - name string
  - start-time string
- rebooting-at string
- removable boolean
- role keyword
- serial-number string
- software-version string
- temperature
  - alarm-status boolean
  - instant number
  - margin number
  - maximum number
  - maximum-time string
- type string
+ fabric slot number

```

```

+ admin-state keyword
- clei-code string
- failure-reason string
- healthz
  - last-unhealthy string
  - status keyword
  - unhealthy-count number
- last-booted string
- last-booted-reason identityref
- last-change string
- locator-state keyword
- manufactured-date string
- oper-state keyword
- part-number string
- power
  - required number
  - used number
- rebooting-at string
- removable boolean
- serial-number string
- temperature
  - alarm-status boolean
  - instant number
  - margin number
  - maximum number
  - maximum-time string
- type string
- fan-tray id number
  - clei-code string
  - failure-reason string
  - healthz
    - last-unhealthy string
    - status keyword
    - unhealthy-count number
  - last-booted string
  - last-booted-reason identityref
  - last-change string
  - locator-state keyword
  - manufactured-date string
  - oper-reason keyword
  - oper-state keyword
  - part-number string
  - power
    - required number
    - used number
  - removable boolean
  - serial-number string
  - speed number
  - speed-rpm number
  - type string
+ linecard slot number
+ admin-state keyword
- bios
  - manufacturer string
  - software-version string
- clei-code string
- failure-reason string
+ forwarding-complex name keyword
  - acl
    - resource name identityref
    - free number
    - used number
+ buffer-memory
  - dram

```

```

- used number
- free number
- reserved number
- sram
  - free number
  - used number
- used number
- control-plane-traffic
  - dropped-aggregate number
  - dropped-bytes-aggregate number
  - queued-aggregate number
  - queued-bytes-aggregate number
- datapath
  - ASIC
    - resource name identityref
    - free-entries number
    - used-entries number
    - used-high-watermark number
    - used-last-high-watermark-time string
    - used-percent number
    - used-upper-threshold-exceeded boolean
  - xdp
    - resource name identityref
    - free-entries number
    - used-entries number
    - used-high-watermark number
    - used-last-high-watermark-time string
    - used-percent number
    - used-upper-threshold-exceeded boolean
- drop-counters
  - adverse-aggregate number
  - congestion-aggregate number
  - no-route number
  - packet-processing-aggregate number
+ fabric
  - availability number
  - consumed-capacity number
  - operational-capacity number
  - total-capacity number
  - utilization-egress number
  - utilization-ingress number
- fib-table
  - next-hop-group index number
  - backup-active boolean
  - backup-next-hop-group reference
  - next-hop id number
    - next-hop number
    - oper-state keyword
  - oper-state keyword
- interfaces string
- last-booted string
- last-booted-reason identityref
- last-change string
- mtu
  - resource name identityref
  - free number
  - used number
- oper-state keyword
+ p4rt
+ id number
- part-number string
+ pipeline index (number | keyword)
  - datapath
    - xdp

```

```

- resource name identityref
- free-entries number
- used-entries number
- used-percent number
- pipeline-counters
- host-interface-block
- packet-extraction
- extracted-octets number
- extracted-packets number
- extraction-reason reason identityref
- extracted-octets number
- extracted-packets number
- qos
- resource name identityref
- free number
- used number
- removable boolean
- tcam
- resource name identityref
- free-dynamic number
- free-static number
- programmed number
- reserved number
- healthz
- last-unhealthy string
- status keyword
- unhealthy-count number
- last-booted string
- last-booted-reason identityref
- last-change string
- locator-state keyword
- manufactured-date string
- oper-state keyword
- part-number string
- power
- required number
- used number
- rebooting-at string
- removable boolean
- serial-number string
- software-version string
- temperature
- alarm-status boolean
- instant number
- margin number
- maximum number
- maximum-time string
- type string
- power-supply id number
- capacity number
- clei-code string
- failure-reason string
- fan
- speed number
- speed-rpm number
- feed id number
- current decimal-number
- voltage decimal-number
- healthz
- last-unhealthy string
- status keyword
- unhealthy-count number
- input
- current decimal-number

```

```

- power decimal-number
- voltage decimal-number
- last-booted string
- last-booted-reason identityref
- last-change string
- manufactured-date string
- oper-reason keyword
- oper-state keyword
- output
  - current decimal-number
  - power decimal-number
  - voltage decimal-number
- part-number string
- removable boolean
- serial-number string
- temperature
  - alarm-status boolean
  - instant number
  - maximum number
  - maximum-time string
- type string
+ redundancy
  - active-module keyword
  - failover-time string
+ synchronization
  - last-synchronization string
  + overlay
    - last-synchronization string
    - next-synchronization string
    + synchronization-frequency number
    - state keyword
+ resource-management
+ tcam
+ unified-forwarding-resources
  - allocated-extra-ip-host-entries number
  - allocated-extra-mac-entries number
  + alpm keyword
  + ipv6-128bit-lpm-entries number
  + requested-extra-ip-host-entries number
  - xdp-restart-required boolean
+ resource-monitoring
+ acl
  + resource name identityref
  + falling-threshold-log number
  + rising-threshold-log number
+ datapath
+ asic
  + resource name identityref
  + upper-threshold-clear number
  + upper-threshold-set number
+ xdp
  + resource name identityref
  + upper-threshold-clear number
  + upper-threshold-set number
+ mtu
  + resource name identityref
  + falling-threshold-log number
  + rising-threshold-log number
+ qos
  + resource name identityref
  + falling-threshold-log number
  + rising-threshold-log number
+ tcam
  + resource name identityref

```

```

+ falling-threshold-log number
+ rising-threshold-log number
- trust
- secure-boot
- control slot string
- oper-state keyword
- root-of-trust keyword
- uefi-variables variable string
- contents
- certificate index number
- data binary
- sha1-hash index number
- digest-value binary
- sha256-hash index number
- digest-value binary
- sha256-hash-cert index number
- digest-value binary
- revocation-time string
- uefi-variables-update
- db-update-required boolean
- dbx-update-required boolean
- kek-update-required boolean
- modification-dataset-db-conflict boolean
- modification-dataset-dbx-conflict boolean
- modification-dataset-digest binary
- modification-dataset-present boolean
- modification-dataset-valid boolean
- pk-update-required boolean
- up-to-date boolean
- tpm
- control slot string
- certificates name string
- data binary
- nv-index number
- oper-state keyword
- tpm20-pcr-bank tpm20-hash-algo string
- pcr-index number

```

8.1 platform Descriptions

platform

Description	Enclosing container for platform components
Context	platform
Tree	platform
Configurable	True
Platforms	Supported on all platforms

chassis

Description	Top-level container for chassis configuration and state
Context	platform chassis
Tree	chassis
Configurable	True
Platforms	Supported on all platforms

clei-code *string*

Description	The Common Language Identification Code for this component
Context	platform chassis clei-code string
Tree	clei-code
Configurable	False
Platforms	Supported on all platforms

failure-reason *string*

Description	The reason the component transitioned to a failed state Field is empty if the component is not currently in a failure state
Context	platform chassis failure-reason string
Tree	failure-reason
Configurable	False
Platforms	Supported on all platforms

healthz

Description	The health of the component The parameters within this container indicate the status of the component beyond whether it is operationally up or down. When a signal is received that a component is in an unhealthy state the gNOI.Healthz service can be used to retrieve further diagnostic information relating to the component. The contents of this directory relate only to the specific component that it is associated with.
Context	platform chassis healthz
Tree	healthz
Configurable	False
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

last-unhealthy *string*

Description	Last unhealthy time The time at which the component was last observed to transition from the healthy state to any other state, represented as nanoseconds since the Unix epoch.
Context	platform chassis healthz last-unhealthy string
Tree	last-unhealthy
String Length	20 to 32
Configurable	False
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

status *keyword*

Description	Health status The status of the component, indicating its current health.
Context	platform chassis healthz status keyword
Tree	status
Options	<ul style="list-style-type: none"> unspecified Unspecified status The component's health status has not yet been checked by the system.

- **healthy**
Healthy status
The component is in a healthy state, and is operating within the expected parameters.
- **unhealthy**
Unhealthy status
The component is in a unhealthy state, it is not performing the function expected of it.

Configurable

False

Platforms

7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

unhealthy-count *number***Description**

Unhealthy count

The number of times the component has transitioned from the healthy state to any other state.

Context[platform chassis healthz unhealthy-count](#) *number***Tree**[unhealthy-count](#)**Default**

0

Configurable

False

Platforms

7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

hw-mac-address *string***Description**

The chassis MAC address

Read from hardware, or derived from the systems UUID

Context[platform chassis hw-mac-address](#) *string***Tree**[hw-mac-address](#)**Configurable**

False

Platforms

Supported on all platforms

id *number***Description**

A user configured chassis ID

	This value is not used by the system, but is provided for user convenience.
Context	platform chassis id <i>number</i>
Tree	id
Configurable	True
Platforms	Supported on all platforms

last-boot-type *string*

Description	The type of boot the chassis initialized from This field indicates what type of reboot occurred, whether it be warm, normal, or otherwise.
Context	platform chassis last-boot-type <i>string</i>
Tree	last-boot-type
Configurable	False
Platforms	Supported on all platforms

last-booted *string*

Description	The date and time this component last booted For components that do not boot, this is the time the component was last discovered by the active control module
Context	platform chassis last-booted <i>string</i>
Tree	last-booted
String Length	20 to 32
Configurable	False
Platforms	Supported on all platforms

last-booted-reason *identityref*

Description	The reason this component last booted or rebooted For components without the ability to 'boot' this field is never populated
Context	platform chassis last-booted-reason <i>identityref</i>
Tree	last-booted-reason
Options	<ul style="list-style-type: none"> • user-initiated-reboot A user initiated the reboot directly via a management interface • power-failure

- The system rebooted the component due to insufficient power
- critical-error
 - The system rebooted the component due to an internal critical error

Configurable	False
Platforms	Supported on all platforms

last-change *string*

Description	The date and time this component last changed state
Context	platform chassis last-change <i>string</i>
Tree	last-change
String Length	20 to 32
Configurable	False
Platforms	Supported on all platforms

manufactured-date *string*

Description	The date this component was manufactured
Context	platform chassis manufactured-date <i>string</i>
Tree	manufactured-date
String Length	20 to 32
Configurable	False
Platforms	Supported on all platforms

oper-state *keyword*

Description	The operational state of this component
Context	platform chassis oper-state <i>keyword</i>
Tree	oper-state
Options	<ul style="list-style-type: none"> up <ul style="list-style-type: none"> Component or process is operational down <ul style="list-style-type: none"> Component or process is not operational empty <ul style="list-style-type: none"> Component slot is empty downloading

- Component is downloading image into memory
- booting
Component is booting downloaded image
- starting
Component image operational, application processes starting
- failed
Component or process has failed
- synchronizing
Component is currently being synchronized
- upgrading
Component is currently being upgraded
- low-power
Component is offline due to insufficient system power
- degraded
Component or process is in a degraded state
- warm-reboot
Component or process is currently warm rebooting
This state is set during a warm reboot immediately following initiation of the reboot, continuing after startup until the system has completed audit. In this state the system will not accept configuration changes.
- waiting
Component or process is currently waiting
This state can be set by event handler when the reinvoke-with-delay action is used, and indicates that the event handler is waiting for the provided delay before reinvoking the instance.

Configurable	False
Platforms	Supported on all platforms

part-number *string*

Description	Part number for this component
Context	platform chassis part-number <i>string</i>
Tree	part-number
Configurable	False
Platforms	Supported on all platforms

power

Description	Top-level container for chassis-wide power state
Context	platform chassis power
Tree	power
Configurable	True
Platforms	Supported on all platforms

control

Description	Top-level container for power usage of control modules
Context	platform chassis power control
Tree	control
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e

peak *number*

Description	Peak power used
Context	platform chassis power control peak <i>number</i>
Tree	peak
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e

required *number*

Description	Power required to power on all present admin enabled components as part of power management
Context	platform chassis power control required <i>number</i>
Tree	required
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e

used *number*

Description	Used power
--------------------	------------

Context	platform chassis power control used number
Tree	used
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e

fabric

Description	Top-level container for power usage of fabric modules
Context	platform chassis power fabric
Tree	fabric
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e

peak number

Description	Peak power used
Context	platform chassis power fabric peak number
Tree	peak
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e

required number

Description	Power required to power on all present admin enabled components as part of power management
Context	platform chassis power fabric required number
Tree	required
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e

used number

Description	Used power
Context	platform chassis power fabric used number
Tree	used
Configurable	False

Platforms 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e

fan-tray

Description Top-level container for power usage of fan-trays
Context [platform chassis power fan-tray](#)
Tree [fan-tray](#)
Configurable False
Platforms 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e

peak number

Description Peak power used
Context [platform chassis power fan-tray peak number](#)
Tree [peak](#)
Configurable False
Platforms 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e

required number

Description Power required to power on all present admin enabled components as part of power management
Context [platform chassis power fan-tray required number](#)
Tree [required](#)
Configurable False
Platforms 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e

used number

Description Used power
Context [platform chassis power fan-tray used number](#)
Tree [used](#)
Configurable False
Platforms 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e

linecard

Description	Top-level container for power usage of linecard modules
Context	platform chassis power linecard
Tree	linecard
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e

peak number

Description	Peak power used
Context	platform chassis power linecard peak number
Tree	peak
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e

required number

Description	Power required to power on all present admin enabled components as part of power management
Context	platform chassis power linecard required number
Tree	required
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e

used number

Description	Used power
Context	platform chassis power linecard used number
Tree	used
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e

total

Description	Top-level container for total power usage and capacity
--------------------	--

Context	platform chassis power total
Tree	total
Configurable	False
Platforms	Supported on all platforms

capacity number

Description	Total power capacity provided by all power supplies
Context	platform chassis power total capacity number
Tree	capacity
Configurable	False
Platforms	Supported on all platforms

peak number

Description	Peak power used
Context	platform chassis power total peak number
Tree	peak
Configurable	False
Platforms	Supported on all platforms

required number

Description	Power required to power on all present admin enabled components as part of power management
Context	platform chassis power total required number
Tree	required
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e

used number

Description	Used power
Context	platform chassis power total used number
Tree	used
Configurable	False

Platforms Supported on all platforms

rebooting-at *string*

Description Indicates the date and time this component will reboot
If empty, no delayed reboots are queued for this component.
A non empty value implies that a delayed reboot operation has been triggered for this component, which can be aborted using 'tools platform <component> reboot cancel'.

Context [platform chassis rebooting-at string](#)

Tree [rebooting-at](#)

String Length 20 to 32

Configurable False

Platforms Supported on all platforms

removable *boolean*

Description Details if this component can be removed from the system

Context [platform chassis removable boolean](#)

Tree [removable](#)

Configurable False

Platforms Supported on all platforms

secondary-mac-address *string*

Description MAC address programmed as a secondary terminating MAC address on every IP interface, across all network instances
If an IP packet is received on a routed subinterface and it arrives with a DMAC equal to the secondary-mac-address then it is terminated and forwarded exactly the same way it would be forwarded if it had arrived on this subinterface with a DMAC equal to the subinterface MAC address.

Context [platform chassis secondary-mac-address string](#)

Tree [secondary-mac-address](#)

Configurable True

Platforms 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

serial-number *string*

Description	The serial number for this component
Context	platform chassis serial-number <i>string</i>
Tree	serial-number
Configurable	False
Platforms	Supported on all platforms

slots *number*

Description	The number of line card slots supported by the chassis
Context	platform chassis slots <i>number</i>
Tree	slots
Configurable	False
Platforms	Supported on all platforms

type *string*

Description	The chassis type
Context	platform chassis type <i>string</i>
Tree	type
Configurable	False
Platforms	Supported on all platforms

control [slot](#) *string*

Description	Top-level container for control module configuration and state
Context	platform control slot <i>string</i>
Tree	control
Configurable	True
Platforms	Supported on all platforms

slot *string*

Description	Slot identifier for the control module This is set to 'A' for systems without removable control modules.
--------------------	---

Context	platform control slot string
Configurable	True
Platforms	Supported on all platforms

bios

Description	State related to the BIOS of this component
Context	platform control slot string bios
Tree	bios
Configurable	False
Platforms	Supported on all platforms

manufacturer string

Description	The manufacturer of this component
Context	platform control slot string bios manufacturer string
Tree	manufacturer
Configurable	False
Platforms	Supported on all platforms

software-version string

Description	The software version of this component
Context	platform control slot string bios software-version string
Tree	software-version
Configurable	False
Platforms	Supported on all platforms

bootloader

Description	State related to the boot loader of this component
Context	platform control slot string bootloader
Tree	bootloader
Configurable	False
Platforms	Supported on all platforms

manufacturer *string*

Description	The manufacturer of this component
Context	platform control slot <i>string</i> bootloader manufacturer <i>string</i>
Tree	manufacturer
Configurable	False
Platforms	Supported on all platforms

software-version *string*

Description	The software version of this component
Context	platform control slot <i>string</i> bootloader software-version <i>string</i>
Tree	software-version
Configurable	False
Platforms	Supported on all platforms

cgroup *name string*

Description	List of cgroups present in the system
Context	platform control slot <i>string</i> cgroup name <i>string</i>
Tree	cgroup
Configurable	False
Platforms	Supported on all platforms

name *string*

Description	Name of the cgroup, as defined by its directory location in the filesystem
Context	platform control slot <i>string</i> cgroup name <i>string</i>
Configurable	False
Platforms	Supported on all platforms

cpuacct-statistics

Description	Top-level container for cgroup cpuacct statistics
Context	platform control slot <i>string</i> cgroup name <i>string</i> cpuacct-statistics
Tree	cpuacct-statistics

Configurable	False
Platforms	Supported on all platforms

system number

Description	CPU usage user system
Context	platform control slot string cgroup name string cpuacct-statistics system number
Tree	system
Units	useconds
Configurable	False
Platforms	Supported on all platforms

user number

Description	CPU usage user mode
Context	platform control slot string cgroup name string cpuacct-statistics user number
Tree	user
Units	useconds
Configurable	False
Platforms	Supported on all platforms

memory-statistics

Description	Top-level container for cgroup memory statistics
Context	platform control slot string cgroup name string memory-statistics
Tree	memory-statistics
Configurable	False
Platforms	Supported on all platforms

anon number

Description	Amount of memory used in anonymous mappings such as brk(), sbrk(), and mmap(MAP_ANONYMOUS)
Context	platform control slot string cgroup name string memory-statistics anon number
Tree	anon

Units	bytes
Configurable	False
Platforms	Supported on all platforms

anon-thp *number*

Description	Amount of memory used in anonymous mappings backed by transparent hugepages
Context	platform control slot <i>string</i> cgroup name <i>string</i> memory-statistics anon-thp number
Tree	anon-thp
Units	bytes
Configurable	False
Platforms	Supported on all platforms

current *number*

Description	The total amount of memory currently being used by the cgroup and its descendants. Read from <code>memory.current</code>
Context	platform control slot <i>string</i> cgroup name <i>string</i> memory-statistics current number
Tree	current
Units	bytes
Configurable	False
Platforms	Supported on all platforms

current-swap *number*

Description	The total amount of swap currently being used by the cgroup and its descendants. Read from <code>memory.swap.current</code>
Context	platform control slot <i>string</i> cgroup name <i>string</i> memory-statistics current-swap number
Tree	current-swap
Units	bytes
Configurable	False
Platforms	Supported on all platforms

file number

Description	Amount of memory used to cache filesystem data, including tmpfs and shared memory
Context	platform control slot <i>string</i> cgroup name <i>string</i> memory-statistics file number
Tree	file
Units	bytes
Configurable	False
Platforms	Supported on all platforms

file-dirty number

Description	Amount of cached filesystem data that was modified but not yet written back to disk
Context	platform control slot <i>string</i> cgroup name <i>string</i> memory-statistics file-dirty number
Tree	file-dirty
Units	bytes
Configurable	False
Platforms	Supported on all platforms

file-writeback number

Description	Amount of cached filesystem data that was modified and is currently being written back to disk
Context	platform control slot <i>string</i> cgroup name <i>string</i> memory-statistics file-writeback number
Tree	file-writeback
Units	bytes
Configurable	False
Platforms	Supported on all platforms

kernel-stack number

Description	Amount of memory allocated to kernel stacks
Context	platform control slot <i>string</i> cgroup name <i>string</i> memory-statistics kernel-stack number

Tree	kernel-stack
Units	bytes
Configurable	False
Platforms	Supported on all platforms

memory-events

Description	Top-level container for cgroup memory events
Context	platform control slot string cgroup name string memory-statistics memory-events
Tree	memory-events
Configurable	False
Platforms	Supported on all platforms

high *number*

Description	The number of times processes of the cgroup are throttled and routed to perform direct memory reclaim because the high memory boundary was exceeded.
Context	platform control slot string cgroup name string memory-statistics memory-events high number
Tree	high
Configurable	False
Platforms	Supported on all platforms

low *number*

Description	The number of times the cgroup is reclaimed due to high memory pressure even though its usage is under the low boundary.
Context	platform control slot string cgroup name string memory-statistics memory-events low number
Tree	low
Configurable	False
Platforms	Supported on all platforms

max number

Description	The number of times the cgroup's memory usage was about to go over the max boundary
Context	platform control slot <i>string</i> cgroup name <i>string</i> memory-statistics memory-events max <i>number</i>
Tree	max
Configurable	False
Platforms	Supported on all platforms

oom number

Description	The number of time the cgroup's memory usage had reached the limit and allocation was about to fail
Context	platform control slot <i>string</i> cgroup name <i>string</i> memory-statistics memory-events oom <i>number</i>
Tree	oom
Configurable	False
Platforms	Supported on all platforms

oom-kill number

Description	The number of processes belonging to this cgroup killed by any kind of out-of-memory killer
Context	platform control slot <i>string</i> cgroup name <i>string</i> memory-statistics memory-events oom-kill <i>number</i>
Tree	oom-kill
Configurable	False
Platforms	Supported on all platforms

slab number

Description	Amount of memory used for storing in-kernel data structures
Context	platform control slot <i>string</i> cgroup name <i>string</i> memory-statistics slab <i>number</i>
Tree	slab
Units	bytes
Configurable	False

Platforms Supported on all platforms

sock number

Description Amount of memory used in network transmission buffers

Context [platform control slot string cgroup name string memory-statistics sock number](#)

Tree [sock](#)

Units bytes

Configurable False

Platforms Supported on all platforms

clei-code string

Description The Common Language Identification Code for this component

Context [platform control slot string clei-code string](#)

Tree [clei-code](#)

Configurable False

Platforms Supported on all platforms

cpu index (keyword | number)

Description List of all CPUs in the system

Context [platform control slot string cpu index \(keyword | number\)](#)

Tree [cpu](#)

Configurable False

Platforms Supported on all platforms

index (keyword | number)

Description CPU index for each processor core on the system
On a single-core system, the index should be zero. The 'all' index signifies an aggregation of the CPU utilization statistics over all cores in the system.

Context [platform control slot string cpu index \(keyword | number\)](#)

Options

- all
Index value indicating all CPUs in the system

Configurable	False
Platforms	Supported on all platforms

architecture *keyword*

Description	Architecture supported by the CPU
Context	platform control slot <i>string</i> cpu index (<i>keyword</i> <i>number</i>) architecture keyword
Tree	architecture
Options	<ul style="list-style-type: none"> • x86_64 • aarch64
Configurable	False
Platforms	Supported on all platforms

hardware-interrupt

Description	Time spent servicing hardware interrupts
Context	platform control slot <i>string</i> cpu index (<i>keyword</i> <i>number</i>) hardware-interrupt
Tree	hardware-interrupt
Configurable	False
Platforms	Supported on all platforms

average-1 *number*

Description	The arithmetic mean value of this statistic over the last minute
Context	platform control slot <i>string</i> cpu index (<i>keyword</i> <i>number</i>) hardware-interrupt average-1 <i>number</i>
Tree	average-1
Range	0 to 100
Configurable	False
Platforms	Supported on all platforms

average-15 *number*

Description	The arithmetic mean value of this statistic over the last fifteen minutes
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Context	platform control slot <i>string</i> cpu index (<i>keyword number</i>) hardware-interrupt average-15 <i>number</i>
Tree	average-15
Range	0 to 100
Configurable	False
Platforms	Supported on all platforms

average-5 *number*

Description	The arithmetic mean value of this statistic over the last five minutes
Context	platform control slot <i>string</i> cpu index (<i>keyword number</i>) hardware-interrupt average-5 <i>number</i>
Tree	average-5
Range	0 to 100
Configurable	False
Platforms	Supported on all platforms

instant *number*

Description	The instantaneous percentage value
Context	platform control slot <i>string</i> cpu index (<i>keyword number</i>) hardware-interrupt instant <i>number</i>
Tree	instant
Range	0 to 100
Configurable	False
Platforms	Supported on all platforms

idle

Description	Time spent idle
Context	platform control slot <i>string</i> cpu index (<i>keyword number</i>) idle
Tree	idle
Configurable	False
Platforms	Supported on all platforms

average-1 number

Description	The arithmetic mean value of this statistic over the last minute
Context	platform control slot <i>string</i> cpu index (<i>keyword number</i>) <i>idle</i> average-1 number
Tree	average-1
Range	0 to 100
Configurable	False
Platforms	Supported on all platforms

average-15 number

Description	The arithmetic mean value of this statistic over the last fifteen minutes
Context	platform control slot <i>string</i> cpu index (<i>keyword number</i>) <i>idle</i> average-15 number
Tree	average-15
Range	0 to 100
Configurable	False
Platforms	Supported on all platforms

average-5 number

Description	The arithmetic mean value of this statistic over the last five minutes
Context	platform control slot <i>string</i> cpu index (<i>keyword number</i>) <i>idle</i> average-5 number
Tree	average-5
Range	0 to 100
Configurable	False
Platforms	Supported on all platforms

instant number

Description	The instantaneous percentage value
Context	platform control slot <i>string</i> cpu index (<i>keyword number</i>) <i>idle</i> instant number
Tree	instant
Range	0 to 100

Configurable	False
Platforms	Supported on all platforms

iowait

Description	Time spent idle, waiting for an outstanding disk I/O request
Context	platform control slot <i>string</i> cpu index (<i>keyword number</i>) iowait
Tree	iowait
Configurable	False
Platforms	Supported on all platforms

average-1 *number*

Description	The arithmetic mean value of this statistic over the last minute
Context	platform control slot <i>string</i> cpu index (<i>keyword number</i>) iowait average-1 <i>number</i>
Tree	average-1
Range	0 to 100
Configurable	False
Platforms	Supported on all platforms

average-15 *number*

Description	The arithmetic mean value of this statistic over the last fifteen minutes
Context	platform control slot <i>string</i> cpu index (<i>keyword number</i>) iowait average-15 <i>number</i>
Tree	average-15
Range	0 to 100
Configurable	False
Platforms	Supported on all platforms

average-5 *number*

Description	The arithmetic mean value of this statistic over the last five minutes
Context	platform control slot <i>string</i> cpu index (<i>keyword number</i>) iowait average-5 <i>number</i>
Tree	average-5

Range	0 to 100
Configurable	False
Platforms	Supported on all platforms

instant *number*

Description	The instantaneous percentage value
Context	platform control slot <i>string</i> cpu index (<i>keyword</i> <i>number</i>) iowait instant <i>number</i>
Tree	instant
Range	0 to 100
Configurable	False
Platforms	Supported on all platforms

nice

Description	Time spent running low-priority (niced) user processes
Context	platform control slot <i>string</i> cpu index (<i>keyword</i> <i>number</i>) nice
Tree	nice
Configurable	False
Platforms	Supported on all platforms

average-1 *number*

Description	The arithmetic mean value of this statistic over the last minute
Context	platform control slot <i>string</i> cpu index (<i>keyword</i> <i>number</i>) nice average-1 <i>number</i>
Tree	average-1
Range	0 to 100
Configurable	False
Platforms	Supported on all platforms

average-15 *number*

Description	The arithmetic mean value of this statistic over the last fifteen minutes
Context	platform control slot <i>string</i> cpu index (<i>keyword</i> <i>number</i>) nice average-15 <i>number</i>

Tree	average-15
Range	0 to 100
Configurable	False
Platforms	Supported on all platforms

average-5 *number*

Description	The arithmetic mean value of this statistic over the last five minutes
Context	platform control slot <i>string</i> cpu index (<i>keyword number</i>) nice average-5 <i>number</i>
Tree	average-5
Range	0 to 100
Configurable	False
Platforms	Supported on all platforms

instant *number*

Description	The instantaneous percentage value
Context	platform control slot <i>string</i> cpu index (<i>keyword number</i>) nice instant <i>number</i>
Tree	instant
Range	0 to 100
Configurable	False
Platforms	Supported on all platforms

software-interrupt

Description	Time spent servicing software interrupts
Context	platform control slot <i>string</i> cpu index (<i>keyword number</i>) software-interrupt
Tree	software-interrupt
Configurable	False
Platforms	Supported on all platforms

average-1 *number*

Description	The arithmetic mean value of this statistic over the last minute
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Context	platform control slot <i>string</i> cpu index (<i>keyword number</i>) software-interrupt average-1 <i>number</i>
Tree	average-1
Range	0 to 100
Configurable	False
Platforms	Supported on all platforms

average-15 *number*

Description	The arithmetic mean value of this statistic over the last fifteen minutes
Context	platform control slot <i>string</i> cpu index (<i>keyword number</i>) software-interrupt average-15 <i>number</i>
Tree	average-15
Range	0 to 100
Configurable	False
Platforms	Supported on all platforms

average-5 *number*

Description	The arithmetic mean value of this statistic over the last five minutes
Context	platform control slot <i>string</i> cpu index (<i>keyword number</i>) software-interrupt average-5 <i>number</i>
Tree	average-5
Range	0 to 100
Configurable	False
Platforms	Supported on all platforms

instant *number*

Description	The instantaneous percentage value
Context	platform control slot <i>string</i> cpu index (<i>keyword number</i>) software-interrupt instant <i>number</i>
Tree	instant
Range	0 to 100
Configurable	False
Platforms	Supported on all platforms

speed *decimal-number*

Description	Capable speed of the CPU
Context	platform control slot <i>string</i> cpu index (<i>keyword number</i>) speed <i>decimal-number</i>
Tree	speed
Units	gigahertz
Configurable	False
Platforms	Supported on all platforms

system

Description	Time spent executing at the system level This can otherwise be known as kernel time, and does not include time spent servicing hardware and software interrupts.
Context	platform control slot <i>string</i> cpu index (<i>keyword number</i>) system
Tree	system
Configurable	False
Platforms	Supported on all platforms

average-1 *number*

Description	The arithmetic mean value of this statistic over the last minute
Context	platform control slot <i>string</i> cpu index (<i>keyword number</i>) system average-1 <i>number</i>
Tree	average-1
Range	0 to 100
Configurable	False
Platforms	Supported on all platforms

average-15 *number*

Description	The arithmetic mean value of this statistic over the last fifteen minutes
Context	platform control slot <i>string</i> cpu index (<i>keyword number</i>) system average-15 <i>number</i>
Tree	average-15
Range	0 to 100

Configurable	False
Platforms	Supported on all platforms

average-5 *number*

Description	The arithmetic mean value of this statistic over the last five minutes
Context	platform control slot <i>string</i> cpu index (<i>keyword</i> <i>number</i>) system average-5 <i>number</i>
Tree	average-5
Range	0 to 100
Configurable	False
Platforms	Supported on all platforms

instant *number*

Description	The instantaneous percentage value
Context	platform control slot <i>string</i> cpu index (<i>keyword</i> <i>number</i>) system instant <i>number</i>
Tree	instant
Range	0 to 100
Configurable	False
Platforms	Supported on all platforms

total

Description	Total CPU utilization
Context	platform control slot <i>string</i> cpu index (<i>keyword</i> <i>number</i>) total
Tree	total
Configurable	False
Platforms	Supported on all platforms

average-1 *number*

Description	The arithmetic mean value of this statistic over the last minute
Context	platform control slot <i>string</i> cpu index (<i>keyword</i> <i>number</i>) total average-1 <i>number</i>
Tree	average-1

Range	0 to 100
Configurable	False
Platforms	Supported on all platforms

average-15 *number*

Description	The arithmetic mean value of this statistic over the last fifteen minutes
Context	platform control slot <i>string</i> cpu index (<i>keyword number</i>) total average-15 number
Tree	average-15
Range	0 to 100
Configurable	False
Platforms	Supported on all platforms

average-5 *number*

Description	The arithmetic mean value of this statistic over the last five minutes
Context	platform control slot <i>string</i> cpu index (<i>keyword number</i>) total average-5 number
Tree	average-5
Range	0 to 100
Configurable	False
Platforms	Supported on all platforms

instant *number*

Description	The instantaneous percentage value
Context	platform control slot <i>string</i> cpu index (<i>keyword number</i>) total instant number
Tree	instant
Range	0 to 100
Configurable	False
Platforms	Supported on all platforms

type *string*

Description	Model name of the CPU
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Context	platform control slot string cpu index (keyword number) type string
Tree	type
Configurable	False
Platforms	Supported on all platforms

user

Description	Time spent executing at the user level This can otherwise be known as application or user space time.
Context	platform control slot string cpu index (keyword number) user
Tree	user
Configurable	False
Platforms	Supported on all platforms

average-1 number

Description	The arithmetic mean value of this statistic over the last minute
Context	platform control slot string cpu index (keyword number) user average-1 number
Tree	average-1
Range	0 to 100
Configurable	False
Platforms	Supported on all platforms

average-15 number

Description	The arithmetic mean value of this statistic over the last fifteen minutes
Context	platform control slot string cpu index (keyword number) user average-15 number
Tree	average-15
Range	0 to 100
Configurable	False
Platforms	Supported on all platforms

average-5 *number*

Description	The arithmetic mean value of this statistic over the last five minutes
Context	platform control slot <i>string</i> cpu index (<i>keyword number</i>) user average-5 <i>number</i>
Tree	average-5
Range	0 to 100
Configurable	False
Platforms	Supported on all platforms

instant *number*

Description	The instantaneous percentage value
Context	platform control slot <i>string</i> cpu index (<i>keyword number</i>) user instant <i>number</i>
Tree	instant
Range	0 to 100
Configurable	False
Platforms	Supported on all platforms

disk name *string*

Description	List of disks present in the system
Context	platform control slot <i>string</i> disk name <i>string</i>
Tree	disk
Configurable	False
Platforms	Supported on all platforms

name *string*

Description	Name of the disk, as defined by its physical location in the system
Context	platform control slot <i>string</i> disk name <i>string</i>
Configurable	False
Platforms	Supported on all platforms

model-number *string*

Description	Model name of the disk
Context	platform control slot <i>string</i> disk name <i>string</i> model-number <i>string</i>
Tree	model-number
Configurable	False
Platforms	Supported on all platforms

partition name *string*

Description	List of partitions available on this disk
Context	platform control slot <i>string</i> disk name <i>string</i> partition name <i>string</i>
Tree	partition
Configurable	False
Platforms	Supported on all platforms

name *string*

Description	Name of the partition
Context	platform control slot <i>string</i> disk name <i>string</i> partition name <i>string</i>
Configurable	False
Platforms	Supported on all platforms

free *number*

Description	Space free on the partition
Context	platform control slot <i>string</i> disk name <i>string</i> partition name <i>string</i> free <i>number</i>
Tree	free
Units	bytes
Configurable	False
Platforms	Supported on all platforms

mount-point *string*

Description	Path to where this partition is mounted
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Context	platform control slot <i>string</i> disk name <i>string</i> partition name <i>string</i> mount-point <i>string</i>
Tree	mount-point
Configurable	False
Platforms	Supported on all platforms

mount-status *keyword*

Description	Current mount status of this partition
Context	platform control slot <i>string</i> disk name <i>string</i> partition name <i>string</i> mount-status <i>keyword</i>
Tree	mount-status
Options	<ul style="list-style-type: none"> • <code>ro</code> Partition is currently mounted read-only • <code>rw</code> Partition is currently mounted read-write
Configurable	False
Platforms	Supported on all platforms

percent-used *number*

Description	Percentage of the partition in use
Context	platform control slot <i>string</i> disk name <i>string</i> partition name <i>string</i> percent-used <i>number</i>
Tree	percent-used
Range	0 to 100
Configurable	False
Platforms	Supported on all platforms

size *number*

Description	Size of the partition
Context	platform control slot <i>string</i> disk name <i>string</i> partition name <i>string</i> size <i>number</i>
Tree	size
Units	bytes
Configurable	False

Platforms Supported on all platforms

used number

Description Space used on the partition

Context [platform control slot string disk name string partition name string used number](#)

Tree [used](#)

Units bytes

Configurable False

Platforms Supported on all platforms

uuid string

Description UUID of the partition

Context [platform control slot string disk name string partition name string uuid string](#)

Tree [uuid](#)

Configurable False

Platforms Supported on all platforms

serial-number string

Description Serial number of the disk

Context [platform control slot string disk name string serial-number string](#)

Tree [serial-number](#)

Configurable False

Platforms Supported on all platforms

size number

Description Total size of the disk

Context [platform control slot string disk name string size number](#)

Tree [size](#)

Configurable False

Platforms Supported on all platforms

statistics

Description	Top-level container for disk statistics
Context	platform control slot <i>string</i> disk name <i>string</i> statistics
Tree	statistics
Configurable	False
Platforms	Supported on all platforms

io-errors *number*

Description	Enter the io-errors context
Context	platform control slot <i>string</i> disk name <i>string</i> statistics io-errors <i>number</i>
Tree	io-errors
Configurable	False
Platforms	Supported on all platforms

max-erase-count *number*

Description	Enter the max-erase-count context
Context	platform control slot <i>string</i> disk name <i>string</i> statistics max-erase-count <i>number</i>
Tree	max-erase-count
Configurable	False
Platforms	Supported on all platforms

read-per-second *decimal-number*

Description	Indicates the amount of data read from the device per second
Context	platform control slot <i>string</i> disk name <i>string</i> statistics read-per-second <i>decimal-number</i>
Tree	read-per-second
Units	bytes
Configurable	False
Platforms	Supported on all platforms

transfers-per-second *decimal-number*

Description	Indicates the number of transfers per second that were issued to the device. A transfer is an I/O request to the device. Multiple logical requests can be combined into a single I/O request to the device. A transfer is of indeterminate size.
Context	platform control slot <i>string</i> disk name <i>string</i> statistics transfers-per-second <i>decimal-number</i>
Tree	transfers-per-second
Configurable	False
Platforms	Supported on all platforms

utilization *number*

Description	The current tps utilization of the disk, expressed as a percentage
Context	platform control slot <i>string</i> disk name <i>string</i> statistics utilization <i>number</i>
Tree	utilization
Range	0 to 100
Configurable	False
Platforms	Supported on all platforms

written-per-second *decimal-number*

Description	Indicates the amount of data written to the device per second
Context	platform control slot <i>string</i> disk name <i>string</i> statistics written-per-second <i>decimal-number</i>
Tree	written-per-second
Units	bytes
Configurable	False
Platforms	Supported on all platforms

type *keyword*

Description	Type of disk
Context	platform control slot <i>string</i> disk name <i>string</i> type <i>keyword</i>
Tree	type
Options	<ul style="list-style-type: none"> compactflash

	<ul style="list-style-type: none"> • <code>ssd</code> • <code>hdd</code> • <code>usb</code> • <code>mmc</code>
Configurable	False
Platforms	Supported on all platforms

failure-reason *string*

Description	The reason the component transitioned to a failed state Field is empty if the component is not currently in a failure state
Context	platform control slot <i>string</i> failure-reason <i>string</i>
Tree	failure-reason
Configurable	False
Platforms	Supported on all platforms

healthz

Description	The health of the component The parameters within this container indicate the status of the component beyond whether it is operationally up or down. When a signal is received that a component is in an unhealthy state the gNOI.Healthz service can be used to retrieve further diagnostic information relating to the component. The contents of this directory relate only to the specific component that it is associated with.
Context	platform control slot <i>string</i> healthz
Tree	healthz
Configurable	False
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

last-unhealthy *string*

Description	Last unhealthy time The time at which the component was last observed to transition from the healthy state to any other state, represented as nanoseconds since the Unix epoch.
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Context	platform control slot <i>string</i> healthz last-unhealthy <i>string</i>
Tree	last-unhealthy
String Length	20 to 32
Configurable	False
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

status *keyword*

Description	Health status The status of the component, indicating its current health.
Context	platform control slot <i>string</i> healthz status <i>keyword</i>
Tree	status
Options	<ul style="list-style-type: none"> unspecified Unspecified status The component's health status has not yet been checked by the system. healthy Healthy status The component is in a healthy state, and is operating within the expected parameters. unhealthy Unhealthy status The component is in a unhealthy state, it is not performing the function expected of it.
Configurable	False
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

unhealthy-count *number*

Description	Unhealthy count The number of times the component has transitioned from the healthy state to any other state.
Context	platform control slot <i>string</i> healthz unhealthy-count <i>number</i>
Tree	unhealthy-count

Default	0
Configurable	False
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

interface *name identityref*

Description	Enter the interface list instance
Context	platform control slot <i>string</i> interface name <i>identityref</i>
Tree	interface
Configurable	True
Platforms	7250 IXR-X3b

name *identityref*

Description	Name of a specific control module interface
Context	platform control slot <i>string</i> interface name <i>identityref</i>
Options	<ul style="list-style-type: none"> usb The single USB type A interface present on the control module
Configurable	True
Platforms	7250 IXR-X3b

admin-state *keyword*

Description	Set the administrative state of this interface
Context	platform control slot <i>string</i> interface name <i>identityref</i> admin-state <i>keyword</i>
Tree	admin-state
Options	<ul style="list-style-type: none"> enable disable
Configurable	True
Platforms	7250 IXR-X3b

oper-state *keyword*

Description	Indicates the current operational state of this interface
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Context	platform control slot <i>string</i> interface name <i>identityref</i> oper-state <i>keyword</i>
Tree	oper-state
Options	<ul style="list-style-type: none"> • up Component or process is operational • down Component or process is not operational • empty Component slot is empty • downloading Component is downloading image into memory • booting Component is booting downloaded image • starting Component image operational, application processes starting • failed Component or process has failed • synchronizing Component is currently being synchronized • upgrading Component is currently being upgraded • low-power Component is offline due to insufficient system power • degraded Component or process is in a degraded state • warm-reboot Component or process is currently warm rebooting This state is set during a warm reboot immediately following initiation of the reboot, continuing after startup until the system has completed audit. In this state the system will not accept configuration changes. • waiting Component or process is currently waiting This state can be set by event handler when the <code>reinvoke-with-delay</code> action is used, and indicates that the event handler is waiting for the provided delay before reinvoking the instance.
Configurable	False
Platforms	7250 IXR-X3b

last-booted *string*

Description	The date and time this component last booted For components that do not boot, this is the time the component was last discovered by the active control module
Context	platform control slot <i>string</i> last-booted <i>string</i>
Tree	last-booted
String Length	20 to 32
Configurable	False
Platforms	Supported on all platforms

last-booted-reason *identityref*

Description	The reason this component last booted or rebooted For components without the ability to 'boot' this field is never populated
Context	platform control slot <i>string</i> last-booted-reason <i>identityref</i>
Tree	last-booted-reason
Options	<ul style="list-style-type: none"> • user-initiated-reboot A user initiated the reboot directly via a management interface • power-failure The system rebooted the component due to insufficient power • critical-error The system rebooted the component due to an internal critical error
Configurable	False
Platforms	Supported on all platforms

last-change *string*

Description	The date and time this component last changed state
Context	platform control slot <i>string</i> last-change <i>string</i>
Tree	last-change
String Length	20 to 32
Configurable	False
Platforms	Supported on all platforms

last-switchover-reason

Description	State information relating to the last control module switchover
Context	platform control slot <i>string</i> last-switchover-reason
Tree	last-switchover-reason
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e

details *string*

Description	Any additional details relating to the last switchover This field is not populated if the system has not performed a switchover since initial startup.
Context	platform control slot <i>string</i> last-switchover-reason details <i>string</i>
Tree	details
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e

trigger *identityref*

Description	Indicates the trigger of the last switchover This field is not populated if the system has not performed a switchover since initial startup.
Context	platform control slot <i>string</i> last-switchover-reason trigger <i>identityref</i>
Tree	trigger
Options	<ul style="list-style-type: none"> • user-initiated A user initiated the switchover directly via the tools schema • control-reboot A user initiated the switchover indirectly via rebooting the active control module • control-failure The system has forced a switchover due to a failure on the active control module • linecard-connectivity The system has forced a switchover due to a loss of connectivity between the active control module and one or more linecards
Configurable	False

Platforms 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e

locator-state *keyword*

Description Details if the locator LED is active on this component

Context [platform control slot](#) *string* [locator-state](#) *keyword*

Tree [locator-state](#)

Default inactive

Options

- active
Locator LED is currently active
- inactive
Locator LED is currently inactive

Configurable False

Platforms Supported on all platforms

manufactured-date *string*

Description The date this component was manufactured

Context [platform control slot](#) *string* [manufactured-date](#) *string*

Tree [manufactured-date](#)

String Length 20 to 32

Configurable False

Platforms Supported on all platforms

memory

Description Top-level container for system memory state

Context [platform control slot](#) *string* [memory](#)

Tree [memory](#)

Configurable False

Platforms Supported on all platforms

free *number*

Description Memory available for system use

Context [platform control slot](#) *string* [memory](#) [free](#) *number*

Tree	free
Units	bytes
Configurable	False
Platforms	Supported on all platforms

physical *number*

Description	Total physical memory available on this component
Context	platform control slot <i>string</i> memory physical <i>number</i>
Tree	physical
Units	bytes
Configurable	False
Platforms	Supported on all platforms

reserved *number*

Description	Memory reserved for system use
Context	platform control slot <i>string</i> memory reserved <i>number</i>
Tree	reserved
Units	bytes
Configurable	False
Platforms	Supported on all platforms

utilization *number*

Description	Total memory utilized
Context	platform control slot <i>string</i> memory utilization <i>number</i>
Tree	utilization
Range	0 to 100
Configurable	False
Platforms	Supported on all platforms

oper-state *keyword*

Description	The operational state of this component
Context	platform control slot <i>string</i> oper-state <i>keyword</i>

Tree	oper-state
Options	<ul style="list-style-type: none"> • up Component or process is operational • down Component or process is not operational • empty Component slot is empty • downloading Component is downloading image into memory • booting Component is booting downloaded image • starting Component image operational, application processes starting • failed Component or process has failed • synchronizing Component is currently being synchronized • upgrading Component is currently being upgraded • low-power Component is offline due to insufficient system power • degraded Component or process is in a degraded state • warm-reboot Component or process is currently warm rebooting This state is set during a warm reboot immediately following initiation of the reboot, continuing after startup until the system has completed audit. In this state the system will not accept configuration changes. • waiting Component or process is currently waiting This state can be set by event handler when the reinvoke-with-delay action is used, and indicates that the event handler is waiting for the provided delay before reinvoking the instance.
Configurable	False
Platforms	Supported on all platforms

part-number *string*

Description	Part number for this component
Context	platform control slot <i>string</i> part-number <i>string</i>
Tree	part-number
Configurable	False
Platforms	Supported on all platforms

power

Description	State related to power consumption and allocation for this component
Context	platform control slot <i>string</i> power
Tree	power
Configurable	False
Platforms	Supported on all platforms

required *number*

Description	The power budget required to enable this component
Context	platform control slot <i>string</i> power required <i>number</i>
Tree	required
Units	watts
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e

used *number*

Description	The power in use by this component
Context	platform control slot <i>string</i> power used <i>number</i>
Tree	used
Units	watts
Configurable	False
Platforms	Supported on all platforms

process *pid number*

Description	List of system processes
Context	platform control slot <i>string</i> process pid number
Tree	process
Configurable	False
Platforms	Supported on all platforms

pid *number*

Description	The process ID
Context	platform control slot <i>string</i> process pid number
Configurable	False
Platforms	Supported on all platforms

args *string*

Description	Current process command line arguments Arguments with a parameter (e.g., --option 10 or -option=10) should be represented as a single element of the list with the argument name and parameter together. Flag arguments, i.e., those without a parameter should also be in their own list element.
Context	platform control slot <i>string</i> process pid number args <i>string</i>
Tree	args
Configurable	False
Platforms	Supported on all platforms

cpu-utilization *number*

Description	The percentage of CPU that is being used by the process
Context	platform control slot <i>string</i> process pid number cpu-utilization <i>number</i>
Tree	cpu-utilization
Range	0 to 100
Configurable	False
Platforms	Supported on all platforms

memory-usage *number*

Description	Bytes allocated and in use by the process
Context	platform control slot <i>string</i> process pid <i>number</i> memory-usage <i>number</i>
Tree	memory-usage
Units	bytes
Configurable	False
Platforms	Supported on all platforms

memory-utilization *number*

Description	The percentage of RAM that is being used by the process
Context	platform control slot <i>string</i> process pid <i>number</i> memory-utilization <i>number</i>
Tree	memory-utilization
Range	0 to 100
Configurable	False
Platforms	Supported on all platforms

name *string*

Description	The process name
Context	platform control slot <i>string</i> process pid <i>number</i> name <i>string</i>
Tree	name
Configurable	False
Platforms	Supported on all platforms

start-time *string*

Description	The time at which this process started
Context	platform control slot <i>string</i> process pid <i>number</i> start-time <i>string</i>
Tree	start-time
String Length	20 to 32
Configurable	False
Platforms	Supported on all platforms

rebooting-at *string*

Description	Indicates the date and time this component will reboot If empty, no delayed reboots are queued for this component. A non empty value implies that a delayed reboot operation has been triggered for this component, which can be aborted using 'tools platform <component> reboot cancel'.
Context	platform control slot <i>string</i> rebooting-at <i>string</i>
Tree	rebooting-at
String Length	20 to 32
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e

removable *boolean*

Description	Details if this component can be removed from the system
Context	platform control slot <i>string</i> removable <i>boolean</i>
Tree	removable
Configurable	False
Platforms	Supported on all platforms

role *keyword*

Description	Control module role, detailing active or standby state This field is not present on systems without removable control modules.
Context	platform control slot <i>string</i> role <i>keyword</i>
Tree	role
Options	<ul style="list-style-type: none"> • active • standby
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e

serial-number *string*

Description	The serial number for this component
Context	platform control slot <i>string</i> serial-number <i>string</i>

Tree	serial-number
Configurable	False
Platforms	Supported on all platforms

software-version *string*

Description	Image version version running on this component This version is the squashfs version, and may not represent the current per-application versions if versions have been modified after the system has been installed.
Context	platform control slot <i>string</i> software-version <i>string</i>
Tree	software-version
Configurable	False
Platforms	Supported on all platforms

temperature

Description	State related to temperature for this component
Context	platform control slot <i>string</i> temperature
Tree	temperature
Configurable	False
Platforms	Supported on all platforms

alarm-status *boolean*

Description	Indicates if a temperature sensor of this component is currently in an alarm state An alarm state is triggered if the margin is <=2 degrees, indicating that a thermal protection shut down is imminent unless adequate system cooling is provided to bring the temperature sensor back into safe operating ranges.
Context	platform control slot <i>string</i> temperature alarm-status <i>boolean</i>
Tree	alarm-status
Configurable	False
Platforms	Supported on all platforms

instant *number*

Description	Represents the highest current temperature of any sensor on this component Note that as multiple sensors may feed in, that this field and the margin field may be referencing different sensors.
Context	platform control slot <i>string</i> temperature instant <i>number</i>
Tree	instant
Configurable	False
Platforms	Supported on all platforms

margin *number*

Description	Indicates the lowest alarm margin of any sensor on this component The margin is the delta between the current sensor temperature and the thermal protection threshold for that sensor. Note that as multiple sensors may feed in, that this field and the instant field may be referencing different sensors.
Context	platform control slot <i>string</i> temperature margin <i>number</i>
Tree	margin
Configurable	False
Platforms	Supported on all platforms

maximum *number*

Description	Represents the highest temperature any sensor on this component has reached since it booted
Context	platform control slot <i>string</i> temperature maximum <i>number</i>
Tree	maximum
Configurable	False
Platforms	Supported on all platforms

maximum-time *string*

Description	Indicates the time this component reached the temperature referenced in the maximum field
Context	platform control slot <i>string</i> temperature maximum-time <i>string</i>
Tree	maximum-time

String Length	20 to 32
Configurable	False
Platforms	Supported on all platforms

type *string*

Description	Control module type, as translated from the components EEPROM
Context	platform control slot <i>string type string</i>
Tree	type
Configurable	False
Platforms	Supported on all platforms

fabric slot *number*

Description	Top-level container for fabric configuration and state
Context	platform fabric slot <i>number</i>
Tree	fabric
Configurable	True
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e

slot *number*

Description	Numeric identifier for the fabric module
Context	platform fabric slot <i>number</i>
Range	1 to 255
Configurable	True
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e

admin-state *keyword*

Description	The administrative state of this component
Context	platform fabric slot <i>number</i> admin-state <i>keyword</i>
Tree	admin-state
Default	enable
Options	<ul style="list-style-type: none"> enable

	<ul style="list-style-type: none"> • disable
Configurable	True
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e

clei-code *string*

Description	The Common Language Identification Code for this component
Context	platform fabric slot number clei-code string
Tree	clei-code
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e

failure-reason *string*

Description	The reason the component transitioned to a failed state Field is empty if the component is not currently in a failure state
Context	platform fabric slot number failure-reason string
Tree	failure-reason
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e

healthz

Description	The health of the component The paramaters within this container indicate the status of the component beyond whether it is operationally up or down. When a signal is received that a component is in an unhealthy state the gNOI.Healthz service can be used to retrieve further diagnostic information relating to the component. The contents of this directory relate only to the specific component that it is associated with.
Context	platform fabric slot number healthz
Tree	healthz
Configurable	False
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

last-unhealthy string

Description	Last unhealthy time The time at which the component was last observed to transition from the healthy state to any other state, represented as nanoseconds since the Unix epoch.
Context	platform fabric slot number healthz last-unhealthy string
Tree	last-unhealthy
String Length	20 to 32
Configurable	False
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

status keyword

Description	Health status The status of the component, indicating its current health.
Context	platform fabric slot number healthz status keyword
Tree	status
Options	<ul style="list-style-type: none"> unspecified Unspecified status The component's health status has not yet been checked by the system. healthy Healthy status The component is in a healthy state, and is operating within the expected parameters. unhealthy Unhealthy status The component is in a unhealthy state, it is not performing the function expected of it.
Configurable	False
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

unhealthy-count *number*

Description	Unhealthy count The number of times the component has transitioned from the healthy state to any other state.
Context	platform fabric slot number healthz unhealthy-count number
Tree	unhealthy-count
Default	0
Configurable	False
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

last-booted *string*

Description	The date and time this component last booted For components that do not boot, this is the time the component was last discovered by the active control module
Context	platform fabric slot number last-booted string
Tree	last-booted
String Length	20 to 32
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e

last-booted-reason *identityref*

Description	The reason this component last booted or rebooted For components without the ability to 'boot' this field is never populated
Context	platform fabric slot number last-booted-reason identityref
Tree	last-booted-reason
Options	<ul style="list-style-type: none"> • user-initiated-reboot A user initiated the reboot directly via a management interface • power-failure The system rebooted the component due to insufficient power • critical-error The system rebooted the component due to an internal critical error

Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e

last-change *string*

Description	The date and time this component last changed state
Context	platform fabric slot number last-change string
Tree	last-change
String Length	20 to 32
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e

locator-state *keyword*

Description	Details if the locator LED is active on this component
Context	platform fabric slot number locator-state keyword
Tree	locator-state
Default	inactive
Options	<ul style="list-style-type: none"> • active Locator LED is currently active • inactive Locator LED is currently inactive
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e

manufactured-date *string*

Description	The date this component was manufactured
Context	platform fabric slot number manufactured-date string
Tree	manufactured-date
String Length	20 to 32
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e

oper-state keyword

Description	The operational state of this component
Context	platform fabric slot <i>number</i> oper-state <i>keyword</i>
Tree	oper-state
Options	<ul style="list-style-type: none">• up Component or process is operational• down Component or process is not operational• empty Component slot is empty• downloading Component is downloading image into memory• booting Component is booting downloaded image• starting Component image operational, application processes starting• failed Component or process has failed• synchronizing Component is currently being synchronized• upgrading Component is currently being upgraded• low-power Component is offline due to insufficient system power• degraded Component or process is in a degraded state• warm-reboot Component or process is currently warm rebooting This state is set during a warm reboot immediately following initiation of the reboot, continuing after startup until the system has completed audit. In this state the system will not accept configuration changes.• waiting Component or process is currently waiting This state can be set by event handler when the <code>reinvoke-with-delay</code> action is used, and indicates that the event handler is waiting for the provided delay before reinvoking the instance.

Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e

part-number string

Description	Part number for this component
Context	platform fabric slot number part-number string
Tree	part-number
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e

power

Description	State related to power consumption and allocation for this component
Context	platform fabric slot number power
Tree	power
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e

required number

Description	The power budget required to enable this component
Context	platform fabric slot number power required number
Tree	required
Units	watts
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e

used number

Description	The power in use by this component
Context	platform fabric slot number power used number
Tree	used
Units	watts
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e

rebooting-at *string*

Description	Indicates the date and time this component will reboot If empty, no delayed reboots are queued for this component. A non empty value implies that a delayed reboot operation has been triggered for this component, which can be aborted using 'tools platform <component> reboot cancel'.
Context	platform fabric slot number rebooting-at string
Tree	rebooting-at
String Length	20 to 32
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e

removable *boolean*

Description	Details if this component can be removed from the system
Context	platform fabric slot number removable boolean
Tree	removable
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e

serial-number *string*

Description	The serial number for this component
Context	platform fabric slot number serial-number string
Tree	serial-number
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e

temperature

Description	State related to temperature for this component
Context	platform fabric slot number temperature
Tree	temperature
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e

alarm-status *boolean*

Description	Indicates if a temperature sensor of this component is currently in an alarm state An alarm state is triggered if the margin is ≤ 2 degrees, indicating that a thermal protection shut down is imminent unless adequate system cooling is provided to bring the temperature sensor back into safe operating ranges.
Context	platform fabric slot number temperature alarm-status <i>boolean</i>
Tree	alarm-status
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e

instant *number*

Description	Represents the highest current temperature of any sensor on this component Note that as multiple sensors may feed in, that this field and the margin field may be referencing different sensors.
Context	platform fabric slot number temperature instant <i>number</i>
Tree	instant
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e

margin *number*

Description	Indicates the lowest alarm margin of any sensor on this component The margin is the delta between the current sensor temperature and the thermal protection threshold for that sensor. Note that as multiple sensors may feed in, that this field and the instant field may be referencing different sensors.
Context	platform fabric slot number temperature margin <i>number</i>
Tree	margin
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e

maximum *number*

Description	Represents the highest temperature any sensor on this component has reached since it booted
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Context	platform fabric slot number temperature maximum number
Tree	maximum
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e

maximum-time *string*

Description	Indicates the time this component reached the temperature referenced in the maximum field
Context	platform fabric slot number temperature maximum-time string
Tree	maximum-time
String Length	20 to 32
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e

type *string*

Description	Fabric module type, as translated from the components EEPROM
Context	platform fabric slot number type string
Tree	type
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e

fan-tray *id number*

Description	Top-level container for fan module configuration and state
Context	platform fan-tray id number
Tree	fan-tray
Configurable	False
Platforms	Supported on all platforms

id *number*

Description	Numeric identifier for the fan tray
Context	platform fan-tray id number
Range	1 to 255

Configurable	False
Platforms	Supported on all platforms

clei-code *string*

Description	The Common Language Identification Code for this component
Context	platform fan-tray id <i>number</i> clei-code <i>string</i>
Tree	clei-code
Configurable	False
Platforms	Supported on all platforms

failure-reason *string*

Description	The reason the component transitioned to a failed state Field is empty if the component is not currently in a failure state
Context	platform fan-tray id <i>number</i> failure-reason <i>string</i>
Tree	failure-reason
Configurable	False
Platforms	Supported on all platforms

healthz

Description	The health of the component The paramaters within this container indicate the status of the component beyond whether it is operationally up or down. When a signal is received that a component is in an unhealthy state the gNOI.Healthz service can be used to retrieve further diagnostic information relating to the component. The contents of this directory relate only to the specific component that it is associated with.
Context	platform fan-tray id <i>number</i> healthz
Tree	healthz
Configurable	False
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

last-unhealthy string

Description	Last unhealthy time The time at which the component was last observed to transition from the healthy state to any other state, represented as nanoseconds since the Unix epoch.
Context	platform fan-tray id number healthz last-unhealthy string
Tree	last-unhealthy
String Length	20 to 32
Configurable	False
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

status keyword

Description	Health status The status of the component, indicating its current health.
Context	platform fan-tray id number healthz status keyword
Tree	status
Options	<ul style="list-style-type: none"> unspecified Unspecified status The component's health status has not yet been checked by the system. healthy Healthy status The component is in a healthy state, and is operating within the expected parameters. unhealthy Unhealthy status The component is in a unhealthy state, it is not performing the function expected of it.
Configurable	False
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

unhealthy-count *number*

Description	Unhealthy count The number of times the component has transitioned from the healthy state to any other state.
Context	platform fan-tray id number healthz unhealthy-count number
Tree	unhealthy-count
Default	0
Configurable	False
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

last-booted *string*

Description	The date and time this component last booted For components that do not boot, this is the time the component was last discovered by the active control module
Context	platform fan-tray id number last-booted string
Tree	last-booted
String Length	20 to 32
Configurable	False
Platforms	Supported on all platforms

last-booted-reason *identityref*

Description	The reason this component last booted or rebooted For components without the ability to 'boot' this field is never populated
Context	platform fan-tray id number last-booted-reason identityref
Tree	last-booted-reason
Options	<ul style="list-style-type: none"> • user-initiated-reboot A user initiated the reboot directly via a management interface • power-failure The system rebooted the component due to insufficient power • critical-error The system rebooted the component due to an internal critical error

Configurable	False
Platforms	Supported on all platforms

last-change *string*

Description	The date and time this component last changed state
Context	platform fan-tray id <i>number</i> last-change <i>string</i>
Tree	last-change
String Length	20 to 32
Configurable	False
Platforms	Supported on all platforms

locator-state *keyword*

Description	Details if the locator LED is active on this component
Context	platform fan-tray id <i>number</i> locator-state <i>keyword</i>
Tree	locator-state
Default	inactive
Options	<ul style="list-style-type: none"> • active Locator LED is currently active • inactive Locator LED is currently inactive
Configurable	False
Platforms	Supported on all platforms

manufactured-date *string*

Description	The date this component was manufactured
Context	platform fan-tray id <i>number</i> manufactured-date <i>string</i>
Tree	manufactured-date
String Length	20 to 32
Configurable	False
Platforms	Supported on all platforms

oper-reason *keyword*

Description	Indicates the reason for the current state of this fan tray
Context	platform fan-tray id number oper-reason keyword
Tree	oper-reason
Options	<ul style="list-style-type: none"> • fault Hardware fault detected • eprom-invalid EEPROM of this fan tray is either invalid or corrupt • airflow-mismatch The detected airflow of this fan tray does not match the system-calculated airflow direction The logic for determining the system-calculated direction is: - Majority wins between present fan trays - In the case where there are equal F2B or B2F fan-trays, PSUs are used as a tie break (PSUs only are counted in the event a tie breaker is needed) - F2B wins if no tie break can be used
Configurable	False
Platforms	Supported on all platforms

oper-state *keyword*

Description	The operational state of this component
Context	platform fan-tray id number oper-state keyword
Tree	oper-state
Options	<ul style="list-style-type: none"> • up Component or process is operational • down Component or process is not operational • empty Component slot is empty • downloading Component is downloading image into memory • booting Component is booting downloaded image • starting Component image operational, application processes starting • failed

- Component or process has failed
- synchronizing
Component is currently being synchronized
- upgrading
Component is currently being upgraded
- low-power
Component is offline due to insufficient system power
- degraded
Component or process is in a degraded state
- warm-reboot
Component or process is currently warm rebooting
This state is set during a warm reboot immediately following initiation of the reboot, continuing after startup until the system has completed audit. In this state the system will not accept configuration changes.
- waiting
Component or process is currently waiting
This state can be set by event handler when the reinvoke-with-delay action is used, and indicates that the event handler is waiting for the provided delay before reinvoking the instance.

Configurable	False
Platforms	Supported on all platforms

part-number *string*

Description	Part number for this component
Context	platform fan-tray id <i>number</i> part-number <i>string</i>
Tree	part-number
Configurable	False
Platforms	Supported on all platforms

power

Description	State related to power consumption and allocation for this component
Context	platform fan-tray id <i>number</i> power
Tree	power
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e

required *number*

Description	The power budget required to enable this component
Context	platform fan-tray id <i>number</i> power required <i>number</i>
Tree	required
Units	watts
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e

used *number*

Description	The power in use by this component
Context	platform fan-tray id <i>number</i> power used <i>number</i>
Tree	used
Units	watts
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e

removable *boolean*

Description	Details if this component can be removed from the system
Context	platform fan-tray id <i>number</i> removable <i>boolean</i>
Tree	removable
Configurable	False
Platforms	Supported on all platforms

serial-number *string*

Description	The serial number for this component
Context	platform fan-tray id <i>number</i> serial-number <i>string</i>
Tree	serial-number
Configurable	False
Platforms	Supported on all platforms

speed number

Description	The current speed of the fan tray
Context	platform fan-tray id number speed number
Tree	speed
Range	0 to 100
Configurable	False
Platforms	Supported on all platforms

speed-rpm number

Description	The current RPM of the fan tray
Context	platform fan-tray id number speed-rpm number
Tree	speed-rpm
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e

type string

Description	Fan tray type, as translated from the components EEPROM
Context	platform fan-tray id number type string
Tree	type
Configurable	False
Platforms	Supported on all platforms

linecard slot number

Description	Top-level container for linecard configuration and state
Context	platform linecard slot number
Tree	linecard
Configurable	True
Platforms	Supported on all platforms

slot number

Description	Numeric identifier for the linecard
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Context	platform linecard slot number
Range	1 to 8
Configurable	True
Platforms	Supported on all platforms

admin-state *keyword*

Description	The administrative state of this component
Context	platform linecard slot number admin-state keyword
Tree	admin-state
Default	enable
Options	<ul style="list-style-type: none"> • enable • disable
Configurable	True
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e

bios

Description	State related to the BIOS of this component
Context	platform linecard slot number bios
Tree	bios
Configurable	False
Platforms	Supported on all platforms

manufacturer *string*

Description	The manufacturer of this component
Context	platform linecard slot number bios manufacturer string
Tree	manufacturer
Configurable	False
Platforms	Supported on all platforms

software-version *string*

Description	The software version of this component
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Context	platform linecard slot number bios software-version string
Tree	software-version
Configurable	False
Platforms	Supported on all platforms

clei-code string

Description	The Common Language Identification Code for this component
Context	platform linecard slot number clei-code string
Tree	clei-code
Configurable	False
Platforms	Supported on all platforms

failure-reason string

Description	The reason the component transitioned to a failed state Field is empty if the component is not currently in a failure state
Context	platform linecard slot number failure-reason string
Tree	failure-reason
Configurable	False
Platforms	Supported on all platforms

forwarding-complex name keyword

Description	List of forwarding complexes on the linecard
Context	platform linecard slot number forwarding-complex name keyword
Tree	forwarding-complex
Configurable	True
Platforms	Supported on all platforms

name keyword

Description	The identifier of the forwarding complex
Context	platform linecard slot number forwarding-complex name keyword
Options	<ul style="list-style-type: none"> 0

- 1

Configurable	True
Platforms	Supported on all platforms

acl

Description	Enter the acl context
Context	platform linecard slot number forwarding-complex name keyword acl
Tree	acl
Configurable	False
Platforms	Supported on all platforms

resource name *identityref*

Description	Enter the resource list instance
Context	platform linecard slot number forwarding-complex name keyword acl resource name identityref
Tree	resource
Configurable	False
Platforms	Supported on all platforms

name *identityref*

Description	The name of the ACL resource
Context	platform linecard slot number forwarding-complex name keyword acl resource name identityref
Options	<ul style="list-style-type: none"> • input-ipv4-filter-instances This resource is used every time an IPv4 filter instance is created and applied to ingress traffic on the forwarding complex. Only one instance is used if the subinterface-specific property of the filter is set to output-only; otherwise one instance is used for every subinterface using the IPv4 filter. • input-ipv4-qos-multifield-instances This resource is used every time an IPv4 multifield classifier policy is applied to ingress traffic on a subinterface. • input-ipv4-filter-instances-routed This resource is used every time an IPv4 filter instance is created and applied to ingress traffic on routed subinterfaces. Only one instance is used if the subinterface-specific property of the filter is set to output-only;

otherwise one instance is used for every routed subinterface using the IPv4 filter.

- **input-ipv4-filter-instances-bridged**

This resource is used every time an IPv4 filter instance is created and applied to ingress traffic on bridged subinterfaces. Only one instance is used if the subinterface-specific property of the filter is set to output-only; otherwise one instance is used for every bridged subinterface using the IPv4 filter.

- **input-ipv6-filter-instances**

This resource is used every time an IPv6 filter instance is created and applied to ingress traffic on the forwarding complex. Only one instance is used if the subinterface-specific property of the filter is set to output-only; otherwise one instance is used for every subinterface using the IPv6 filter.

- **input-ipv6-qos-multifield-instances**

This resource is used every time an IPv6 multifield classifier policy is applied to ingress traffic on a subinterface.

- **input-ipv6-filter-instances-routed**

This resource is used every time an IPv6 filter instance is created and applied to ingress traffic on routed subinterfaces. Only one instance is used if the subinterface-specific property of the filter is set to output-only; otherwise one instance is used for every routed subinterface using the IPv6 filter.

- **input-ipv6-filter-instances-bridged**

This resource is used every time an IPv6 filter instance is created and applied to ingress traffic on bridged subinterfaces. Only one instance is used if the subinterface-specific property of the filter is set to output-only; otherwise one instance is used for every bridged subinterface using the IPv6 filter.

- **if-input-ipv4-stats**

Resource pool of stats entries available for ingress IPv4 ACLs

- **if-input-ipv6-stats**

Resource pool of stats entries available for ingress IPv6 ACLs

- **if-output-ipv4-stats**

Resource pool of stats entries available for egress IPv4 ACLs

- **if-output-ipv6-stats**

Resource pool of stats entries available for egress IPv6 ACLs

- **if-output-cpm-stats**

Resource pool of stats entries shared by egress IPv4/IPv6/MAC TCAM entries, and CPM-filter IPv4/IPv6/MAC TCAM entries

Egress Ipv4 -> uses single stat counter Egress Ipv6 -> uses single stat counter Egress MAC -> uses single stat counter Cpm Ipv4 -> uses two stat counters Cpm Ipv6 -> uses two stat counters Cpm MAC -> uses two stat counters

- **input-acl-qos-template-policers**
This resource is used every time an IPv4 or IPv6 input subinterface filter entry uses a rate-limit policer, or subinterface policer-template is used.
- **input-qos-template-policers**
This resource is used every time a QoS subinterface policer-template is used.
- **input-acl-ipv4-policers**
This resource is used every time an IPv4 input subinterface filter entry uses a rate-limit policer.
- **input-acl-ipv6-policers**
This resource is used every time an IPv6 input subinterface filter entry uses a rate-limit policer.
- **output-acl-cpm-filter-policers**
This resource is used every time an IPv4 or IPv6 output subinterface filter or CPM filter entry uses a rate-limit policer.

Configurable

False

Platforms

Supported on all platforms

free number**Description**

The number of resources that are unused and available

Context[platform](#) [linecard slot number](#) [forwarding-complex name](#) [keyword](#) [acl resource name](#) [identityref](#) [free number](#)**Tree**[free](#)**Configurable**

False

Platforms

Supported on all platforms

used number**Description**

The number of resources that are in use

Context[platform](#) [linecard slot number](#) [forwarding-complex name](#) [keyword](#) [acl resource name](#) [identityref](#) [used number](#)**Tree**[used](#)**Configurable**

False

Platforms

Supported on all platforms

buffer-memory

Description	Container for utilization statistics of the packet buffer memory
Context	platform linecard slot <i>number</i> forwarding-complex name keyword buffer-memory
Tree	buffer-memory
Configurable	True
Platforms	7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

dram

Description	Container for utilization statistics of the DRAM memory.
Context	platform linecard slot <i>number</i> forwarding-complex name keyword buffer-memory dram
Tree	dram
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

used *number*

Description	Used DRAM memory
Context	platform linecard slot <i>number</i> forwarding-complex name keyword buffer-memory dram used <i>number</i>
Tree	used
Range	0 to 100
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

free *number*

Description	Available buffer memory, which equals the total memory less the used memory and the reserved memory.
Context	platform linecard slot <i>number</i> forwarding-complex name keyword buffer-memory free <i>number</i>
Tree	free
Units	bytes

Configurable	False
Platforms	7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4

reserved number

Description	Buffer memory reserved for proper system operation and by the user (due to assignment of non-zero CBS for certain queues, on platforms that support CBS).
Context	platform linecard slot number forwarding-complex name keyword buffer-memory reserved number
Tree	reserved
Units	bytes
Configurable	False
Platforms	7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4

sram

Description	Container for utilization statistics of the on-chip SRAM memory.
Context	platform linecard slot number forwarding-complex name keyword buffer-memory sram
Tree	sram
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

free number

Description	Available SRAM memory
Context	platform linecard slot number forwarding-complex name keyword buffer-memory sram free number
Tree	free
Units	bytes
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

used number

Description	Used SRAM memory
Context	platform linecard slot number forwarding-complex name keyword buffer-memory sram used number
Tree	used
Units	bytes
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

used number

Description	Used buffer memory, excluding reserved memory.
Context	platform linecard slot number forwarding-complex name keyword buffer-memory used number
Tree	used
Units	bytes
Configurable	False
Platforms	7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4

control-plane-traffic

Description	Counters related to traffic destined to the control-plane
Context	platform linecard slot number forwarding-complex name keyword control-plane-traffic
Tree	control-plane-traffic
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

dropped-aggregate number

Description	The aggregation of all counters where the switch has dropped traffic related to the control plane
Context	platform linecard slot number forwarding-complex name keyword control-plane-traffic dropped-aggregate number
Tree	dropped-aggregate

Default	0
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

dropped-bytes-aggregate *number*

Description	The aggregation of all counters in bytes where the switch has dropped traffic related to the control plane
Context	platform linecard slot <i>number</i> forwarding-complex name keyword control-plane-traffic dropped-bytes-aggregate <i>number</i>
Tree	dropped-bytes-aggregate
Default	0
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

queued-aggregate *number*

Description	The aggregation of all counters where the switch has enqueued traffic related to the control plane
Context	platform linecard slot <i>number</i> forwarding-complex name keyword control-plane-traffic queued-aggregate <i>number</i>
Tree	queued-aggregate
Default	0
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

queued-bytes-aggregate *number*

Description	The aggregation of all counters in bytes where the switch has enqueued traffic related to the control plane
Context	platform linecard slot <i>number</i> forwarding-complex name keyword control-plane-traffic queued-bytes-aggregate <i>number</i>
Tree	queued-bytes-aggregate
Default	0
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

datapath

Description	Container for monitoring datapath resources of a particular forwarding complex
Context	platform linecard slot number forwarding-complex name keyword datapath
Tree	datapath
Configurable	False
Platforms	Supported on all platforms

asic

Description	Container for monitoring ASIC-specific datapath resources
Context	platform linecard slot number forwarding-complex name keyword datapath asic
Tree	asic
Configurable	False
Platforms	Supported on all platforms

resource name *identityref*

Description	List of ASIC-specific datapath resources.
Context	platform linecard slot number forwarding-complex name keyword datapath asic resource name <i>identityref</i>
Tree	resource
Configurable	False
Platforms	Supported on all platforms

name *identityref*

Description	The name of the ASIC-specific datapath resource
Context	platform linecard slot number forwarding-complex name keyword datapath asic resource name <i>identityref</i>
Options	<ul style="list-style-type: none"> ip-lpm-ipv4-routes IPv4 longest prefix match route resources <p>7220 D1/D2/D3: Reports the number of IPv4 entries in the hardware LPM table. In non-ALPM mode, free entries is the remaining number of half-wide entries in all partitions (i.e. it assumes no IPv6 routes consume</p>

those entries). In ALPM mode, free entries is the Minimum Guaranteed Capacity returned by the BCM SDK.

7220 D4/D5 and 7220 H2/H3/H4: Reports the number of IPv4 routes installed in the FIB. Free entries is the Minimum Guaranteed Capacity returned by the BCM SDK.

- ip-lpm-ipv6-routes

IPv6 longest prefix match route resources

Reports the number of IPv6 routes installed in the FIB. Free entries is the Minimum Guaranteed Capacity returned by the BCM SDK.

- ip-lpm-ipv6-shorter-routes

IPv6 longest prefix match route resources when the prefix length is less than or equal to 64

7220 D1/D2/D3: Reports the number of IPv6 entries with prefix length less than 65 bits in the hardware LPM table. In non-ALPM mode, free entries is the remaining number of single-wide + double-wide entries (i.e. it assumes no other types of routes consume those entries). In ALPM mode, free entries is based on the Minimum Guaranteed Capacity returned by the BCM SDK.

7220 H2/H3: Reports the number of IPv6 entries with prefix length less than 65 bits installed in the FIB. Free entries is based on the Minimum Guaranteed Capacity returned by the BCM SDK.

- ip-lpm-ipv6-longer-routes

IPv6 longest prefix match route resources when the prefix length is greater than 64

7220 D1/D2/D3: Reports the number of IPv6 entries with prefix length greater than 64 bits in the hardware LPM table. In non-ALPM mode, free entries is the remaining number of double-wide entries (i.e. it assumes no other types of routes consume those entries). In ALPM mode, free entries is based on the Minimum Guaranteed Capacity returned by the BCM SDK.

7220 H2/H3: Reports the number of IPv6 entries with prefix length greater than 64 bits installed in the FIB. Free entries is based on the Minimum Guaranteed Capacity returned by the BCM SDK.

- exact-match-entries

IP exact match lookup table resources

Reports the number of half-wide entries used in the LEM table. Each MPLS ILM record uses one half-wide entry. Each IPv4 address used as a host route, ARP entry or subnet broadcast address requires a half-wide entry. An IPv6 address used as a host route, or ND entry requires a single-wide entry (2 half-wide entries). Free entries is the remaining number of half-wide entries.

- ip-tunnel-source-ipv4-addresses

IP tunnel source IPv4 address resources

Each IPinIP and GRE tunnel with a different source IPv4 address uses one of these resources.

- ip-tunnel-source-ipv6-addresses

IP tunnel source IPv6 address resources

Each IPinIP and GRE tunnel with a different source IPv6 address uses one of these resources.

- underlay-ecmp-groups

Underlay ECMP group resources

ECMP groups are partitioned into overlay and underlay groups. The underlay partition is further subdivided into groups used for underlay ECMP and groups used for VP LAGs (EVPN M-H). This counts the utilization of the sub-resource used for ECMP.

- vp-lag-groups

VP LAG group resources

ECMP groups are partitioned into overlay and underlay groups. The underlay partition is further subdivided into groups used for underlay ECMP and groups used for VP LAGs (EVPN M-H). This counts the utilization of the sub-resource used for VP LAGs.

- overlay-ecmp-groups

Overlay ECMP group resources

ECMP groups are partitioned into overlay and underlay groups. This counts the utilization of the overlay ECMP partition.

- underlay-ecmp-members

Underlay ECMP member resources

ECMP members are partitioned into overlay and underlay. This counts the utilization of the partition used for underlay.

- overlay-ecmp-members

Overlay ECMP member resources

ECMP members are partitioned into overlay and underlay. This counts the utilization of the partition used for overlay.

- underlay-egress-next-hops

Underlay egress next-hop resources

Egress next-hops are partitioned into overlay and underlay. This counts the utilization of the partition used for underlay.

- overlay-egress-next-hops

Overlay egress next-hop resources

Egress next-hops are partitioned into overlay and underlay. This counts the utilization of the partition used for overlay.

- dgpp-module-ids

DGPP module ID resources

DGPPs are an aggregate id consisting of a `module_id` and a `port_id`. There are 64 modules and 120 ports per module. Each 'network' ARP entry (IP next-hop) needs a DGPP - the `module_id` is allocated against the network interface (port) and a `port_id` is allocated from within the module. A `module_id` will only be allocated when the first `ArpEntry` is added (freed when last is removed) but is owned exclusively by that network interface. A network interface may require more than one `module_id` - i.e. if there are 245 `ArpEntries` on `ethernet-1/1` (possibly spread across multiple network-instance interfaces) then 3 `module_ids` are required.

- `egress-vlan-translate-egress-vnis`
EGR_VLAN_XLATE_1 resources
Corresponds to the 'EGR_VLAN_XLATE_1' HW table (8K entries). These entries are used for finding the egress VNI to be used for VXLAN packets.
- `egress-vlan-translate-local-bias-pairs`
EGR_VLAN_XLATE_2 resources
Corresponds to the 'EGR_VLAN_XLATE_2' HW table (24K entries). These entries are used for local bias (ES pruning).
- `level-1-ecmp-groups`
Level 1 (top level) ECMP group resources.
- `level-2-ecmp-groups`
Level 2 (middle level) ECMP group resources.
- `level-3-ecmp-groups`
Level 3 (bottom level) ECMP group resources.
- `level-1-ecmp-members`
Level 1 (top level) ECMP member resources.
- `level-2-ecmp-members`
Level 2 (middle level) ECMP member resources.
- `level-3-ecmp-members`
Level 3 (bottom level) ECMP member resources.
- `level-1-non-ecmp-fecs`
Level 1 (top level) non-ECMP FEC resources.
- `level-2-non-ecmp-fecs`
Level 2 (middle level) non-ECMP FEC resources.
- `level-3-non-ecmp-fecs`
Level 3 (bottom level) non-ECMP FEC resources.
- `decap-next-hop-statistics`
Statistics resources for counting packets matching a tunnel termination entry and then forwarded to a next-hop

One resource is one packet/octet counter pair that is allocated to counting each case where packets: (a) match a gRIBI-programmed tunnel termination entry and get forwarded to a next-hop that does redirect to another network-instance (1 counter pair for all redirect targets) (b) match a gRIBI-programmed tunnel termination entry and get forwarded to a next-hop that does IP-in-IP encapsulation towards a new endpoint address (1 counter pair per new endpoint address)

Configurable	False
Platforms	Supported on all platforms

free-entries *number*

Description	The number of entries that are currently free
Context	platform linecard slot number forwarding-complex name keyword datapath asic resource name identityref free-entries number
Tree	free-entries
Configurable	False
Platforms	Supported on all platforms

used-entries *number*

Description	The number of entries that are currently used
Context	platform linecard slot number forwarding-complex name keyword datapath asic resource name identityref used-entries number
Tree	used-entries
Configurable	False
Platforms	Supported on all platforms

used-high-watermark *number*

Description	A watermark of highest number of entries used for this resource
Context	platform linecard slot number forwarding-complex name keyword datapath asic resource name identityref used-high-watermark number
Tree	used-high-watermark
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

used-last-high-watermark-time *string*

Description	The timestamp when the high-watermark was last updated
Context	platform linecard slot <i>number</i> forwarding-complex name <i>keyword</i> datapath asic resource name <i>identityref</i> used-last-high-watermark-time <i>string</i>
Tree	used-last-high-watermark-time
String Length	20 to 32
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

used-percent *number*

Description	The percentage of the resource that is currently used
Context	platform linecard slot <i>number</i> forwarding-complex name <i>keyword</i> datapath asic resource name <i>identityref</i> used-percent <i>number</i>
Tree	used-percent
Range	0 to 100
Configurable	False
Platforms	Supported on all platforms

used-upper-threshold-exceeded *boolean*

Description	This value is set to true when the used percentage value ($\text{used} / (\text{used} + \text{free}) * 100$) has reached (in a rising direction) the configured upper-threshold-set for this resource and false when the used percentage value has reached (in a falling direction) the configured upper-threshold-clear for this resource
Context	platform linecard slot <i>number</i> forwarding-complex name <i>keyword</i> datapath asic resource name <i>identityref</i> used-upper-threshold-exceeded <i>boolean</i>
Tree	used-upper-threshold-exceeded
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

xdp

Description	Container for monitoring datapath resources that are generic in concept.
Context	platform linecard slot <i>number</i> forwarding-complex name <i>keyword</i> datapath xdp

Tree	xdp
Configurable	False
Platforms	Supported on all platforms

resource [name identityref](#)

Description	List of generic datapath resources.
Context	platform linecard slot number forwarding-complex name keyword datapath xdp resource name identityref
Tree	resource
Configurable	False
Platforms	Supported on all platforms

name [identityref](#)

Description	The name of the XDP datapath resource
Context	platform linecard slot number forwarding-complex name keyword datapath xdp resource name identityref
Options	<ul style="list-style-type: none"> arp-nd-entries <p>IPv4 ARP and IPv6 neighbor discovery resources</p> <p>Each IPv4 ARP and each IPv6 neighbor entry counts as 1 used resource against a total that is platform dependent.</p> ip-hosts <p>IP host route resources</p> <p>7220 D1/D2/D3: Reports the number of entries used in the IP host table. Every local host /32 route, ARP entry and IPv4 subnet broadcast address requires 1 entry. Every IPv4 multicast snoop entry requires 2 entries. In non-ALPM operation every remote /32 route also requires 1 entry. Every local host /128 route, and ND entry requires 2 entries. Every IPv6 multicast snoop entry requires 4 entries. In non-ALPM operation every remote /128 route also requires 2 entries. Free entries reflects the total number of entries remaining in shared + dedicated UFT banks.</p> <p>7220 D4/D5: Reports the number of entries used in the IP host table. Every local host /32 route, ARP entry and IPv4 subnet broadcast address requires 1 entry. Every local host /128 route, and ND entry requires 2 entries. Every (*, G) IPv4 multicast snoop entry requires 1 entry. Every (S, G) IPv4 multicast snoop entry requires 2 entries. Every (*, G) IPv6 multicast snoop entry requires 2 entries. Every (S, G) IPv6 multicast snoop entry requires 4 entries.</p> <p>7220 H2/H3/H4: Reports the number of entries used in the IP host table. Every local host /32 route, ARP entry and IPv4 subnet broadcast address</p>

requires 1 entry. Every local host /128 route, and ND entry requires 2 entries.

- ip-lpm-routes

IP longest prefix match route resources

7250 IXR/IXRe: Every installed IPv4 and IPv6 route counts as one used route.

7220 D1/D2/D3: In ALPM-disabled mode: Reports the number of half-wide entries. An IPv4 route requires a half-wide entry. An IPv6 route that is /64 or less requires a single-wide entry (2 half-wide entries). An IPv6 route that is more than /64 requires a double-wide entry (4 half-wide entries). In ALPM mode: Every IPv4 route counts as 1 used route and every IPv6 route (regardless of prefix length) counts as 2 used routes.

7220 D4/D5: Every IPv4 route counts as 1 used route and every IPv6 route (regardless of prefix length) counts as 4 used routes.

- mac-addresses

MAC lookup table resources

Reports the number of entries used in the MAC lookup table. On 7220 D1/D2/D3, free entries reflects the total number of entries remaining in shared + dedicated UFT banks

- mac-next-hops

Direct MAC next-hop resources

A resource consumed by every next-hop of a gRIBI route that is specified as an interface name plus MAC address

- direct-ip-next-hops

Direct IP next-hop resources

Reports the number of entries, where 1 entry is used for every next-hop of an IP route or MPLS route/tunnel that is resolved directly to a local interface.

- indirect-ip-next-hops

Indirect IP next-hop resources

Reports the number of entries, where 1 entry is used for every next-hop of an IP route that requires resolution by a non-local route. This does not consider underlying ASIC resources.

- tunnel-next-hops

Tunnel next-hop resources

Reports the number of tunnel next-hop entries. 1 tunnel next-hop is required every time an indirect next-hop (e.g. a BGP next-hop) is resolved by a tunnel (BGP-LU, LDP, SR-ISIS or VXLAN)

- ecmp-groups

ECMP group resources

7250 IXR/IXRe: Reports the used number of ECMP FECs, adding L1 ECMP FECs, L2 ECMP FECs and L3 ECMP FECs.

7220 D1/D2/D3/D4/D5: Reports the used number of ECMP groups, adding overlay and underlay ECMP groups (if applicable).

7220 H2/H3/H4: Reports used number of ECMP groups.

- ecmp-members

ECMP member resources

7250 IXR/IXRe: Reports the used number of ECMP member FECs, adding L1 ECMP member FECs, L2 ECMP member FECs and L3 ECMP member FECs.

7220 D1/D2/D3/D4/D5: Reports the used number of ECMP members, adding overlay and underlay ECMP members (if applicable).

7220 H2/H3/H4: Reports used number of ECMP members.

- egress-next-hops

Egress next-hop resources

7220 D2/D3/D4/D5: Reports the number of entries used in the egress next-hop table, counting entries in the overlay partition and entries in the underlay partition. 1 entry = 1 IPv4 next-hop address or 1 IPv6 next-hop address.

7220 H2/H3/H4: Reports the number of entries used in the egress next-hop table. 1 entry = 1 IPv4 next-hop address or 1 IPv6 next-hop address.

- lag-groups

LAG group resources

Reports the number of LAG resources used, including DGPP LAGs.

- lag-members

LAG member resources

Reports the number of LAG member resources used, including DGPP LAG members.

- subinterfaces

Subinterface resources

There are a maximum of 127 subinterfaces per TH3 pipeline (limited by VFP/EFP TCAM resources). This counts the utilization of those resources.

- mpls-next-hops

MPLS next-hop (NHLFE) resources

One resource is used for every next-hop that pushes an MPLS label in every next-hop-group that is tied to an ILM entry that performs a 'swap'. One additional resource is used for every next-hop that pushes an MPLS label in every next-hop-group that is tied to an MPLS tunnel.

- mpls-incoming-labels

MPLS label lookup (ILM) resources

One resource is used for every MPLS ILM entry that performs either a 'swap' or a 'pop' operation.

- originating-tunnels

Originating tunnel resources

One resource is used for every VXLAN, LDP, SR-ISIS or IPinIP tunnel originating on this node as head-end. On TD3 and TD4 systems this equates to a DVP resource.

- terminating-tunnels

Terminating tunnel resources

One resource is used for every IPinIP tunnel terminating entry on this node.

Configurable	False
Platforms	Supported on all platforms

free-entries *number*

Description	The number of entries that are currently free
Context	platform linecard slot number forwarding-complex name keyword datapath xdp resource name identityref free-entries number
Tree	free-entries
Configurable	False
Platforms	Supported on all platforms

used-entries *number*

Description	The number of entries that are currently used
Context	platform linecard slot number forwarding-complex name keyword datapath xdp resource name identityref used-entries number
Tree	used-entries
Configurable	False
Platforms	Supported on all platforms

used-high-watermark *number*

Description	A watermark of highest number of entries used for this resource
Context	platform linecard slot number forwarding-complex name keyword datapath xdp resource name identityref used-high-watermark number
Tree	used-high-watermark

Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

used-last-high-watermark-time *string*

Description	The timestamp when the high-watermark was last updated
Context	platform linecard slot number forwarding-complex name keyword datapath xdp resource name identityref used-last-high-watermark-time <i>string</i>
Tree	used-last-high-watermark-time
String Length	20 to 32
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

used-percent *number*

Description	The percentage of the resource that is currently used
Context	platform linecard slot number forwarding-complex name keyword datapath xdp resource name identityref used-percent <i>number</i>
Tree	used-percent
Range	0 to 100
Configurable	False
Platforms	Supported on all platforms

used-upper-threshold-exceeded *boolean*

Description	This value is set to true when the used percentage value ($\text{used} / (\text{used} + \text{free}) * 100$) has reached (in a rising direction) the configured upper-threshold-set for this resource and false when the used percentage value has reached (in a falling direction) the configured upper-threshold-clear for this resource
Context	platform linecard slot number forwarding-complex name keyword datapath xdp resource name identityref used-upper-threshold-exceeded <i>boolean</i>
Tree	used-upper-threshold-exceeded
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

drop-counters

Description	State container for forwarding-complex drop counters
Context	platform linecard slot number forwarding-complex name keyword drop-counters
Tree	drop-counters
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

adverse-aggregate *number*

Description	<p>Aggregation of all counters incremented when packets are dropped unexpectedly</p> <p>This leaf counts packet discarded as result of corrupted programming state or data structures in the forwarding-complex integrated circuit.</p> <p>Note: corrupted packets received on ingress interfaces are not counted in this leaf. This is because incoming corrupted packets are not a signal of adverse state within the integrated circuit, but rather of an adjacent entity, such as a cable or transceiver.</p>
Context	platform linecard slot number forwarding-complex name keyword drop-counters adverse-aggregate number
Tree	adverse-aggregate
Default	0
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

congestion-aggregate *number*

Description	Aggregation of all counters incremented when packets are dropped because the aggregate ingress traffic rate exceeds internal performance limits of the integrated circuit
Context	platform linecard slot number forwarding-complex name keyword drop-counters congestion-aggregate number
Tree	congestion-aggregate
Default	0
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

no-route *number*

Description	Aggregation of all counters incremented when packets are dropped due to no FIB entry for an IPv4 or IPv6 packet This counter and the packet-processing-aggregate counter should be incremented for each no-route packet drop.
Context	platform linecard slot number forwarding-complex name keyword drop-counters no-route number
Tree	no-route
Default	0
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

packet-processing-aggregate *number*

Description	Aggregation of all counters incremented when packets are dropped due to legitimate programming decisions This is derived by summing: * subinterface-level in-discarded counters (counts FIB lookup failures, packets dropped due to ACL drop action, packets dropped due to TTL expiry) * subinterface-level out-error counters (packets dropped due to IP MTU exceeded) * port-level out-error counters (packets dropped due to port MTU exceeded) * port-level in-error counters (packets dropped due to MRU exceeded or packet CRC error)
Context	platform linecard slot number forwarding-complex name keyword drop-counters packet-processing-aggregate number
Tree	packet-processing-aggregate
Default	0
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

fabric

Description	Top-level container for fabric configuration and state
Context	platform linecard slot number forwarding-complex name keyword fabric
Tree	fabric
Configurable	True
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e

availability number

Description	Details the percentage bandwidth available to the fabric for the line card
Context	platform linecard slot number forwarding-complex name keyword fabric availability number
Tree	availability
Range	0 to 100
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e

consumed-capacity number

Description	Backplane-facing capacity that is consumed by front-panel ports that are connected to the integrated circuit and are operationally up
Context	platform linecard slot number forwarding-complex name keyword fabric consumed-capacity number
Tree	consumed-capacity
Units	bits per second
Configurable	False
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

operational-capacity number

Description	Total backplane-facing capacity that is currently available based on the active links
Context	platform linecard slot number forwarding-complex name keyword fabric operational-capacity number
Tree	operational-capacity
Units	bits per second
Configurable	False
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

total-capacity number

Description	Total backplane-facing capacity that is available in the presence of no link failures or degradation
Context	platform linecard slot number forwarding-complex name keyword fabric total-capacity number
Tree	total-capacity
Units	bits per second
Configurable	False
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

utilization-egress number

Description	Provides the linecard bandwidth utilization from the switch fabric
Context	platform linecard slot number forwarding-complex name keyword fabric utilization-egress number
Tree	utilization-egress
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e

utilization-ingress number

Description	Provides the linecard bandwidth utilization into the switch fabric
Context	platform linecard slot number forwarding-complex name keyword fabric utilization-ingress number
Tree	utilization-ingress
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e

fib-table

Description	Enter the fib-table context
Context	platform linecard slot number forwarding-complex name keyword fib-table
Tree	fib-table
Configurable	False

Platforms Supported on all platforms

next-hop-group *index number*

Description List of next hop groups (NHGs) in the FIB table

Context [platform linecard slot number forwarding-complex name keyword fib-table next-hop-group index number](#)

Tree [next-hop-group](#)

Configurable False

Platforms Supported on all platforms

index *number*

Description A system-wide unique identifier of a next-hop-group

Context [platform linecard slot number forwarding-complex name keyword fib-table next-hop-group index number](#)

Configurable False

Platforms Supported on all platforms

backup-active *boolean*

Description When true, this NHG is not being used to forward traffic and its backup NHG is being relied upon to provide reachability

Context [platform linecard slot number forwarding-complex name keyword fib-table next-hop-group index number backup-active boolean](#)

Tree [backup-active](#)

Configurable False

Platforms Supported on all platforms

backup-next-hop-group *reference*

Description The backup next-hop-group for the current group. When all entries within the next-hop group become unusable, the backup next-hop group is used if specified.

Context [platform linecard slot number forwarding-complex name keyword fib-table next-hop-group index number backup-next-hop-group reference](#)

Tree [backup-next-hop-group](#)

Reference	platform linecard slot <i>number</i> forwarding-complex name keyword fib-table next-hop-group index <i>number</i>
Configurable	False
Platforms	Supported on all platforms

next-hop id *number*

Description	Enter the next-hop list instance
Context	platform linecard slot <i>number</i> forwarding-complex name keyword fib-table next-hop-group index <i>number</i> next-hop id <i>number</i>
Tree	next-hop
Configurable	False
Platforms	Supported on all platforms

id *number*

Description	Index of the next-hop within the NHG
Context	platform linecard slot <i>number</i> forwarding-complex name keyword fib-table next-hop-group index <i>number</i> next-hop id <i>number</i>
Range	0 to 1023
Configurable	False
Platforms	Supported on all platforms

next-hop *number*

Description	The system-wide unique identifier of the next-hop object
Context	platform linecard slot <i>number</i> forwarding-complex name keyword fib-table next-hop-group index <i>number</i> next-hop id <i>number</i> next-hop <i>number</i>
Tree	next-hop
Configurable	False
Platforms	Supported on all platforms

oper-state *keyword*

Description	Operational state of the next-hop member
Context	platform linecard slot <i>number</i> forwarding-complex name keyword fib-table next-hop-group index <i>number</i> next-hop id <i>number</i> oper-state <i>keyword</i>

Tree	oper-state
Options	<ul style="list-style-type: none"> • up The NHG or NH is fully resolved and operational • down The NHG or NH is unresolved and not viable for carrying traffic • failed The NHG or NH is not operational because of an underlying hardware resource issue • up-unused The NH is up and resolved but not used for carrying traffic, possibly because of resilient-hash-prefix configuration
Configurable	False
Platforms	Supported on all platforms

oper-state *keyword*

Description	Operational state of the next-hop group
Context	platform linecard slot number forwarding-complex name keyword fib-table next-hop-group index number oper-state keyword
Tree	oper-state
Options	<ul style="list-style-type: none"> • up The NHG or NH is fully resolved and operational • down The NHG or NH is unresolved and not viable for carrying traffic • failed The NHG or NH is not operational because of an underlying hardware resource issue • up-unused The NH is up and resolved but not used for carrying traffic, possibly because of resilient-hash-prefix configuration
Configurable	False
Platforms	Supported on all platforms

interfaces *string*

Description	List of interfaces that belong to this forwarding complex
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Context	platform linecard slot number forwarding-complex name keyword interfaces <i>string</i>
Tree	interfaces
String Length	3 to 20
Configurable	False
Platforms	Supported on all platforms

last-booted *string*

Description	The date and time this component last booted For components that do not boot, this is the time the component was last discovered by the active control module
Context	platform linecard slot number forwarding-complex name keyword last-booted <i>string</i>
Tree	last-booted
String Length	20 to 32
Configurable	False
Platforms	Supported on all platforms

last-booted-reason *identityref*

Description	The reason this component last booted or rebooted For components without the ability to 'boot' this field is never populated
Context	platform linecard slot number forwarding-complex name keyword last-booted-reason identityref
Tree	last-booted-reason
Options	<ul style="list-style-type: none"> • user-initiated-reboot A user initiated the reboot directly via a management interface • power-failure The system rebooted the component due to insufficient power • critical-error The system rebooted the component due to an internal critical error
Configurable	False
Platforms	Supported on all platforms

last-change *string*

Description	The date and time this component last changed state
Context	platform linecard slot number forwarding-complex name <i>keyword last-change string</i>
Tree	last-change
String Length	20 to 32
Configurable	False
Platforms	Supported on all platforms

mtu

Description	Enter the mtu context
Context	platform linecard slot number forwarding-complex name <i>keyword mtu</i>
Tree	mtu
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

resource [name](#) *identityref*

Description	Enter the resource list instance
Context	platform linecard slot number forwarding-complex name <i>keyword mtu resource name identityref</i>
Tree	resource
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

name *identityref*

Description	The name of the MTU resource
Context	platform linecard slot number forwarding-complex name <i>keyword mtu resource name identityref</i>
Options	<ul style="list-style-type: none"> ip-mtu IP MTU resource pool. One resource from this pool is consumed by every different IP MTU value used by the subinterfaces on the linecard forwarding-complex. port-mtu

Port MTU resource pool. One resource from this pool is consumed by every different port MTU value used by a port on the linecard forwarding-complex.

- mpls-mtu

MPLS MTU resource pool. One resource from this pool is consumed by every different MPLS MTU value used by the subinterfaces on the linecard forwarding-complex.

Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

free number

Description	The number of resources that are unused and available
Context	platform linecard slot number forwarding-complex name keyword mtu resource name identityref free number
Tree	free
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

used number

Description	The number of resources that are in use
Context	platform linecard slot number forwarding-complex name keyword mtu resource name identityref used number
Tree	used
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

oper-state keyword

Description	The operational state of this component
Context	platform linecard slot number forwarding-complex name keyword oper-state keyword
Tree	oper-state
Options	<ul style="list-style-type: none"> • up Component or process is operational • down Component or process is not operational

- empty
Component slot is empty
- downloading
Component is downloading image into memory
- booting
Component is booting downloaded image
- starting
Component image operational, application processes starting
- failed
Component or process has failed
- synchronizing
Component is currently being synchronized
- upgrading
Component is currently being upgraded
- low-power
Component is offline due to insufficient system power
- degraded
Component or process is in a degraded state
- warm-reboot
Component or process is currently warm rebooting
This state is set during a warm reboot immediately following initiation of the reboot, continuing after startup until the system has completed audit. In this state the system will not accept configuration changes.
- waiting
Component or process is currently waiting
This state can be set by event handler when the reinvoke-with-delay action is used, and indicates that the event handler is waiting for the provided delay before reinvoking the instance.

Configurable

False

Platforms

Supported on all platforms

p4rt**Description**

Top-level container for P4Runtime forwarding complex configuration and state

Context[platform](#) [linecard slot](#) *number* [forwarding-complex name](#) *keyword* [p4rt](#)**Tree**[p4rt](#)

Configurable	True
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

id number

Description	The numeric ID used by the controller to address the forwarding complex This ID may be referred to as a 'device', 'node' or 'target' by the P4RT specification. Each ASIC is addressed by the client based on this numeric identifier.
Context	platform linecard slot number forwarding-complex name keyword p4rt id number
Tree	id
Range	1 to 18446744073709551615
Configurable	True
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

part-number string

Description	Part number for this component
Context	platform linecard slot number forwarding-complex name keyword part-number string
Tree	part-number
Configurable	False
Platforms	Supported on all platforms

pipeline index (number | keyword)

Description	List of pipelines that make up one forwarding complex.
Context	platform linecard slot number forwarding-complex name keyword pipeline index (number keyword)
Tree	pipeline
Configurable	True
Platforms	7220 IXR-H2, 7220 IXR-H3, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

index (*number* | *keyword*)

Description	The pipeline number (TH3 systems) or direction (J2 and J2C+ systems).
Context	platform linecard slot <i>number</i> forwarding-complex name <i>keyword</i> pipeline index (<i>number</i> <i>keyword</i>)
Range	0 to 7
Options	<ul style="list-style-type: none"> egress Applicable to J2 and J2C+ systems only ingress Applicable to J2 and J2C+ systems only
Configurable	True
Platforms	7220 IXR-H2, 7220 IXR-H3, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

datapath

Description	Container for monitoring datapath resources of a particular pipeline
Context	platform linecard slot <i>number</i> forwarding-complex name <i>keyword</i> pipeline index (<i>number</i> <i>keyword</i>) datapath
Tree	datapath
Configurable	False
Platforms	7220 IXR-H2, 7220 IXR-H3, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

xdp

Description	Container for monitoring datapath resources that are generic in concept. At the pipeline level only one XDP resource is currently reported:
Context	platform linecard slot <i>number</i> forwarding-complex name <i>keyword</i> pipeline index (<i>number</i> <i>keyword</i>) datapath xdp
Tree	xdp
Configurable	False
Platforms	7220 IXR-H2, 7220 IXR-H3, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

resource *name identityref*

Description	List of generic datapath resources.
Context	platform linecard slot <i>number</i> forwarding-complex name <i>keyword</i> pipeline index (<i>number</i> <i>keyword</i>) datapath xdp resource name <i>identityref</i>
Tree	resource
Configurable	False
Platforms	7220 IXR-H2, 7220 IXR-H3, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

name *identityref*

Description	The name of the XDP datapath resource
Context	platform linecard slot <i>number</i> forwarding-complex name <i>keyword</i> pipeline index (<i>number</i> <i>keyword</i>) datapath xdp resource name <i>identityref</i>
Options	<ul style="list-style-type: none"> arp-nd-entries <p>IPv4 ARP and IPv6 neighbor discovery resources</p> <p>Each IPv4 ARP and each IPv6 neighbor entry counts as 1 used resource against a total that is platform dependent.</p> ip-hosts <p>IP host route resources</p> <p>7220 D1/D2/D3: Reports the number of entries used in the IP host table. Every local host /32 route, ARP entry and IPv4 subnet broadcast address requires 1 entry. Every IPv4 multicast snoop entry requires 2 entries. In non-ALPM operation every remote /32 route also requires 1 entry. Every local host /128 route, and ND entry requires 2 entries. Every IPv6 multicast snoop entry requires 4 entries. In non-ALPM operation every remote /128 route also requires 2 entries. Free entries reflects the total number of entries remaining in shared + dedicated UFT banks.</p> <p>7220 D4/D5: Reports the number of entries used in the IP host table. Every local host /32 route, ARP entry and IPv4 subnet broadcast address requires 1 entry. Every local host /128 route, and ND entry requires 2 entries. Every (*, G) IPv4 multicast snoop entry requires 1 entry. Every (S, G) IPv4 multicast snoop entry requires 2 entries. Every (*, G) IPv6 multicast snoop entry requires 2 entries. Every (S, G) IPv6 multicast snoop entry requires 4 entries.</p> <p>7220 H2/H3/H4: Reports the number of entries used in the IP host table. Every local host /32 route, ARP entry and IPv4 subnet broadcast address requires 1 entry. Every local host /128 route, and ND entry requires 2 entries.</p> ip-lpm-routes <p>IP longest prefix match route resources</p>

7250 IXR/IXRe: Every installed IPv4 and IPv6 route counts as one used route.

7220 D1/D2/D3: In ALPM-disabled mode: Reports the number of half-wide entries. An IPv4 route requires a half-wide entry. An IPv6 route that is /64 or less requires a single-wide entry (2 half-wide entries). An IPv6 route that is more than /64 requires a double-wide entry (4 half-wide entries). In ALPM mode: Every IPv4 route counts as 1 used route and every IPv6 route (regardless of prefix length) counts as 2 used routes.

7220 D4/D5: Every IPv4 route counts as 1 used route and every IPv6 route (regardless of prefix length) counts as 4 used routes.

- mac-addresses

MAC lookup table resources

Reports the number of entries used in the MAC lookup table. On 7220 D1/D2/D3, free entries reflects the total number of entries remaining in shared + dedicated UFT banks

- mac-next-hops

Direct MAC next-hop resources

A resource consumed by every next-hop of a gRIBI route that is specified as an interface name plus MAC address

- direct-ip-next-hops

Direct IP next-hop resources

Reports the number of entries, where 1 entry is used for every next-hop of an IP route or MPLS route/tunnel that is resolved directly to a local interface.

- indirect-ip-next-hops

Indirect IP next-hop resources

Reports the number of entries, where 1 entry is used for every next-hop of an IP route that requires resolution by a non-local route. This does not consider underlying ASIC resources.

- tunnel-next-hops

Tunnel next-hop resources

Reports the number of tunnel next-hop entries. 1 tunnel next-hop is required every time an indirect next-hop (e.g. a BGP next-hop) is resolved by a tunnel (BGP-LU, LDP, SR-ISIS or VXLAN)

- ecmp-groups

ECMP group resources

7250 IXR/IXRe: Reports the used number of ECMP FECs, adding L1 ECMP FECs, L2 ECMP FECs and L3 ECMP FECs.

7220 D1/D2/D3/D4/D5: Reports the used number of ECMP groups, adding overlay and underlay ECMP groups (if applicable).

7220 H2/H3/H4: Reports used number of ECMP groups.

- **ecmp-members**
ECMP member resources
7250 IXR/IXRe: Reports the used number of ECMP member FECs, adding L1 ECMP member FECs, L2 ECMP member FECs and L3 ECMP member FECs.
7220 D1/D2/D3/D4/D5: Reports the used number of ECMP members, adding overlay and underlay ECMP members (if applicable).
7220 H2/H3/H4: Reports used number of ECMP members.
- **egress-next-hops**
Egress next-hop resources
7220 D2/D3/D4/D5: Reports the number of entries used in the egress next-hop table, counting entries in the overlay partition and entries in the underlay partition. 1 entry = 1 IPv4 next-hop address or 1 IPv6 next-hop address.
7220 H2/H3/H4: Reports the number of entries used in the egress next-hop table. 1 entry = 1 IPv4 next-hop address or 1 IPv6 next-hop address.
- **lag-groups**
LAG group resources
Reports the number of LAG resources used, including DGPP LAGs.
- **lag-members**
LAG member resources
Reports the number of LAG member resources used, including DGPP LAG members.
- **subinterfaces**
Subinterface resources
There are a maximum of 127 subinterfaces per TH3 pipeline (limited by VFP/EFP TCAM resources). This counts the utilization of those resources.
- **mpls-next-hops**
MPLS next-hop (NHLFE) resources
One resource is used for every next-hop that pushes an MPLS label in every next-hop-group that is tied to an ILM entry that performs a 'swap'. One additional resource is used for every next-hop that pushes an MPLS label in every next-hop-group that is tied to an MPLS tunnel.
- **mpls-incoming-labels**
MPLS label lookup (ILM) resources
One resource is used for every MPLS ILM entry that performs either a 'swap' or a 'pop' operation.
- **originating-tunnels**
Originating tunnel resources

One resource is used for every VXLAN, LDP, SR-ISIS or IPinIP tunnel originating on this node as head-end. On TD3 and TD4 systems this equates to a DVP resource.

- terminating-tunnels

Terminating tunnel resources

One resource is used for every IPinIP tunnel terminating entry on this node.

Configurable

False

Platforms

7220 IXR-H2, 7220 IXR-H3, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

free-entries *number*

Description

The number of entries that are currently free

Context

[platform](#) [linecard slot number](#) [forwarding-complex name](#) [keyword](#) [pipeline index \(number | keyword\)](#) [datapath xdp resource name](#) [identityref](#) [free-entries number](#)

Tree

[free-entries](#)

Configurable

False

Platforms

7220 IXR-H2, 7220 IXR-H3, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

used-entries *number*

Description

The number of entries that are currently used

Context

[platform](#) [linecard slot number](#) [forwarding-complex name](#) [keyword](#) [pipeline index \(number | keyword\)](#) [datapath xdp resource name](#) [identityref](#) [used-entries number](#)

Tree

[used-entries](#)

Configurable

False

Platforms

7220 IXR-H2, 7220 IXR-H3, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

used-percent *number*

Description

The percentage of the resource that is currently used

Context

[platform](#) [linecard slot number](#) [forwarding-complex name](#) [keyword](#) [pipeline index \(number | keyword\)](#) [datapath xdp resource name](#) [identityref](#) [used-percent number](#)

Tree	used-percent
Range	0 to 100
Configurable	False
Platforms	7220 IXR-H2, 7220 IXR-H3, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

pipeline-counters

Description	Top-level container for the packet counters associated with the different NPU sub-blocks.
Context	platform linecard slot number forwarding-complex name keyword pipeline index (number keyword) pipeline-counters
Tree	pipeline-counters
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

host-interface-block

Description	The ASIC host interface block subsystem that connects the NPU to the host CPU (on the CPM)
Context	platform linecard slot number forwarding-complex name keyword pipeline index (number keyword) pipeline-counters host-interface-block
Tree	host-interface-block
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

packet-extraction

Description	Packet extraction from the NPU towards the CPU
Context	platform linecard slot number forwarding-complex name keyword pipeline index (number keyword) pipeline-counters host-interface-block packet-extraction
Tree	packet-extraction
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

extracted-octets *number*

Description	The number of octets in Ethernet frames extracted towards the CPU from the pipeline; this includes packets that might be dropped (due to congestion or rate limiting) before reaching the final consuming application on the CPM
Context	platform linecard slot <i>number</i> forwarding-complex name <i>keyword</i> pipeline index (<i>number</i> <i>keyword</i>) pipeline-counters host-interface-block packet-extraction extracted-octets <i>number</i>
Tree	extracted-octets
Default	0
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

extracted-packets *number*

Description	The number of Ethernet frames extracted towards the CPU from the pipeline; this includes packets that might be dropped (due to congestion or rate limiting) before reaching the final consuming application on the CPM
Context	platform linecard slot <i>number</i> forwarding-complex name <i>keyword</i> pipeline index (<i>number</i> <i>keyword</i>) pipeline-counters host-interface-block packet-extraction extracted-packets <i>number</i>
Tree	extracted-packets
Default	0
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

extraction-reason [reason](#) *identityref*

Description	List of extraction reasons that are possible for the pipeline
Context	platform linecard slot <i>number</i> forwarding-complex name <i>keyword</i> pipeline index (<i>number</i> <i>keyword</i>) pipeline-counters host-interface-block packet-extraction extraction-reason reason <i>identityref</i>
Tree	extraction-reason
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

reason *identityref*

Description	A reason for extracting the packet towards the host CPU
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Context	platform linecard slot <i>number</i> forwarding-complex name <i>keyword</i> pipeline index (<i>number</i> <i>keyword</i>) pipeline-counters host-interface-block packet-extraction extraction-reason reason <i>identityref</i>
Options	<ul style="list-style-type: none"> • ipv4-header-options IPv4 header options are present in the packet. • ipv6-hop-by-hop-option IPv6 packet with topmost next-header value of zero. • icmp ICMPv4 packets with this router as destination. • icmp6 ICMPv6 packets including neighbor-solicitation and neighbor-advertisement messages. • icmp-redirect Received IPv4 and IPv6 packets that should cause an ICMP redirect to be generated. • bfd BFD and micro-BFD packets with this router as destination. • bgp BGP packets; TCP port 179. • grpc GRPC packets; TCP port 57400 • ospf OSPF packets; IP protocol 89 • vrrp VRRP packets; IP protocol 112 • ldp LDP packets; UDP port 646 • dhcp DHCP packets; UDP ports 67,68 • ip-other-terminating Any other IP packets that are locally destined • ip-blackhole-icmp Traffic matched a blackhole route with generate-icmp=true • ipv6-multicast IPv6 DA = FF01:0:0:0:0:0:1 or IPv6 DA = FF01:0:0:0:0:0:2 • ipv6-link-local IPv6 DA = FE80::/10 address

- **ipv4-broadcast**
IPv4 packets were received with a subnet broadcast address or a limited broadcast and not recognized as another type
- **ip-no-route**
IPv4 and IPv6 packets for which there was no route to the destination
- **ip-header-errors**
IP version error, IP header checksum error, IP header length error, IP header total length error, IPv6 next-header is null, IPv6 SA is link-local while IPv6 DA is global
- **ip-ttl-expired**
The IP packet is not destined for this router and it was received with TTL 0 or TTL 1
- **mpls-ttl-expired**
The MPLS packet was received with MPLS label stack TTL 0 or TTL 1
- **ip-arp-miss**
The IP DA itself or the next-hop of the route used to forward the packet has no ARP/IPv6 neighbor entry
- **ip-arp**
The received frame is an ARP packet recognized by ethertype 0x0806
- **lldp**
The received frame is an LLDP packet recognized by ethertype 0x88cc
- **isis**
The received frame is an ISIS packet
- **lacp**
The received frame is an LACP packet
- **google-discovery**
The received frame is a GDP packet recognized by ethertype 0x6007
- **capture-filter-copy**
Packets matching a capture-filter copy rule
- **cpm-filter-log**
Packets matching a CPM-filter rule with log action
- **ingress-acl-log**
Packets matching an interface IP filter rule with log action
- **egress-acl-log**
Packet matched an egress ACL rule with log action.
- **ip-mpls-mtu-exceeded**
The egress subinterface IP MTU or MPLS MTU (as applicable) is less than the size of the IP or MPLS packet that needs to be transmitted.

Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

extracted-octets *number*

Description	The number of octets in Ethernet frames extracted towards the CPU from the pipeline; this includes packets that might be dropped (due to congestion or rate limiting) before reaching the final consuming application on the CPM
Context	platform linecard slot <i>number</i> forwarding-complex name <i>keyword</i> pipeline index (<i>number</i> <i>keyword</i>) pipeline-counters host-interface-block packet-extraction extraction-reason <i>reason</i> identityref extracted-octets <i>number</i>
Tree	extracted-octets
Default	0
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

extracted-packets *number*

Description	The number of Ethernet frames extracted towards the CPU from the pipeline; this includes packets that might be dropped (due to congestion or rate limiting) before reaching the final consuming application on the CPM
Context	platform linecard slot <i>number</i> forwarding-complex name <i>keyword</i> pipeline index (<i>number</i> <i>keyword</i>) pipeline-counters host-interface-block packet-extraction extraction-reason <i>reason</i> identityref extracted-packets <i>number</i>
Tree	extracted-packets
Default	0
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

qos

Description	Enter the qos context
Context	platform linecard slot <i>number</i> forwarding-complex name <i>keyword</i> qos
Tree	qos
Configurable	False
Platforms	7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

resource *name identityref*

Description	Enter the resource list instance
Context	platform linecard slot number forwarding-complex name keyword qos resource name identityref
Tree	resource
Configurable	False
Platforms	7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

name *identityref*

Description	The name of the QoS resource
Context	platform linecard slot number forwarding-complex name keyword qos resource name identityref
Options	<ul style="list-style-type: none"> • classifier-profiles A classifier-profile resource is used every time a different combination of IPv4 DSCP classifier and IPv6 DSCP classifier is applied to an ingress subinterface. One is always used by the combination of the default IPv4 DSCP classifier and the default IPv6 DSCP classifier. • rewrite-profiles A rewrite-profile resource is used every time a different combination of IPv4 DSCP rewrite-rule and IPv6 DSCP rewrite-rule is applied to an egress subinterface. • dscp-classifier-policies Every user-defined DSCP classifier policy that is configured uses one of these resources • dscp-mpls-rewrite-policies A rewrite-policy resource is used every time a different DSCP or MPLS traffic-class rewrite-rule policy is applied to an egress subinterface. • dscp-rewrite-policies Every user-defined dscp rewrite policy that is configured uses one of these resources. • dot1p-classifier-policies Every user-defined dot1p classifier policy that is configured uses one of these resources • dot1p-rewrite-policies Every user-defined dot1p rewrite policy that is configured uses one of these resources

- input-policers
Every input-policer that is allocated to the configured subinterfaces based on input-class-map
- output-class-maps
Every user-defined output class map that is configured uses one of these resources.

Configurable

False

Platforms

7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

free number**Description**

The number of resources that are unused and available

Context[platform linecard slot number forwarding-complex name keyword qos resource name identityref free number](#)**Tree**[free](#)**Configurable**

False

Platforms

7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

used number**Description**

The number of resources that are in use

Context[platform linecard slot number forwarding-complex name keyword qos resource name identityref used number](#)**Tree**[used](#)**Configurable**

False

Platforms

7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

removable boolean**Description**

Details if this component can be removed from the system

Context[platform linecard slot number forwarding-complex name keyword removable boolean](#)**Tree**[removable](#)

Configurable	False
Platforms	Supported on all platforms

tcam

Description	Enter the tcam context
Context	platform linecard slot number forwarding-complex name keyword tcam
Tree	tcam
Configurable	False
Platforms	Supported on all platforms

resource [name identityref](#)

Description	Enter the resource list instance
Context	platform linecard slot number forwarding-complex name keyword tcam resource name identityref
Tree	resource
Configurable	False
Platforms	Supported on all platforms

name [identityref](#)

Description	The name of the TCAM resource
Context	platform linecard slot number forwarding-complex name keyword tcam resource name identityref
Options	<ul style="list-style-type: none"> • if-input-ipv4 Resource pool of TCAM entries used by IPv4 ACLs applied as subinterface-input filers • if-output-ipv4 Resource pool of TCAM entries used by IPv4 ACLs applied as subinterface-output filers • if-input-ipv6 Resource pool of TCAM entries used by IPv6 ACLs applied as subinterface-input filers • if-output-ipv6 Resource pool of TCAM entries used by IPv6 ACLs applied as subinterface-output filers • cpm-capture-ipv4

- Resource pool of TCAM entries used by IPv4 cpm-filter ACLs and capture-filter ACLs
- cpm-capture-ipv6
Resource pool of TCAM entries used by IPv6 cpm-filter ACLs and capture-filter ACLs
- system-capture-ipv4
Resource pool of TCAM entries used by IPv4 capture-filter ACLs and IPv4 system-filter ACLs
- system-capture-ipv6
Resource pool of TCAM entries used by IPv6 capture-filter ACLs and IPv6 system-filter ACLs
- system-capture
Resource pool of TCAM entries used by IPv4 + IPv6 capture-filter ACLs and system-filter ACLs
- capture-ipv4
Resource pool of TCAM entries used by IPv4 capture-filter ACLs
- capture-ipv6
Resource pool of TCAM entries used by IPv6 capture-filter ACLs
- if-output-cpm-ipv4
Resource pool of TCAM entries used by IPv4 egress ACLs and cpm-filter ACLs
- if-output-cpm-ipv6
Resource pool of TCAM entries used by IPv6 egress ACLs and cpm-filter ACLs
- if-output-cpm
Resource pool of TCAM entries used by IPv4 + IPv6 egress ACLs and cpm-filter ACLs
- if-input-mac
Resource pool of TCAM entries used by MAC ACLs applied as subinterface-input filters
- if-output-cpm-mac
Resource pool of TCAM entries used by MAC egress ACLs and MAC cpm-filter ACLs
- policy-forwarding-vrf-selection-ipv4
Resource pool of TCAM entries used by IPv4 policy-forwarding entries that redirect flows to a different network-instance
- policy-forwarding-nhg-ipv4
Resource pool of TCAM entries used by IPv4 policy-forwarding entries that redirect flows to a NHG of IP next-hops or tunnels
- policy-forwarding-nhg-ipv6

Resource pool of TCAM entries used by IPv6 policy-forwarding entries that redirect flows to a NHG of IP next-hops or tunnels

- if-input-policer

Resource pool of TCAM entries used by ingress subinterface policer templates

- if-input-ipv4-qos

Resource pool of TCAM entries associated with IPv4 multi-field QoS classification entries, when applied to subinterface input

- if-input-ipv6-qos

Resource pool of TCAM entries associated with IPv6 multi-field QoS classification entries, when applied to subinterface input

- mrouter-mfib-redirect

Resource pool of TCAM entries used by multicast snooping protocols in MAC-VRF network-instances

One TCAM entry is used per multicast snooping protocol enabled in a MAC-VRF. For instance, if igmp-snooping and mld-snooping are enabled on a MAC-VRF, two entries are used. If only igmp-snooping is enabled, only one entry is used.

- tunnel-decap-ipv4-ipv6

Resource pool of TCAM entries used for IPv4 and IPv6 tunnel-decapsulation groups

- if-output-evpn-mh-multicast-non-df

Resource pool of TCAM entries used by egress filtering of IP multicast traffic to non-Designated Forwarder subinterfaces

One TCAM entry is used when multicast snooping protocols are enabled on at least one MAC-VRF that has one or more subinterfaces associated with Ethernet Segments.

Configurable

False

Platforms

Supported on all platforms

free-dynamic number

Description

The number of available and unused TCAM entries for the entry type, assuming that all the remaining unused TCAM slices would be dynamically allocated to this one type of entry (subject to chip level constraints on the placement of double-wide and triple-wide TCAM slice groups).

Context

[platform linecard slot number forwarding-complex name keyword tcam resource name identityref free-dynamic number](#)

Tree

[free-dynamic](#)

Configurable

False

Platforms 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

free-static *number*

Description The number of available and unused TCAM entries for the entry type, assuming that the number of dynamic TCAM slices that are currently allocated to the entry type remains constant at its current value.

Context [platform](#) [linecard slot](#) [number](#) [forwarding-complex name](#) [keyword](#) [tcam resource name](#) [identityref](#) [free-static](#) [number](#)

Tree [free-static](#)

Configurable False

Platforms Supported on all platforms

programmed *number*

Description The number of TCAM entries belonging to this resource that are currently programmed into hardware. When the number of programmed entries equals the number of reserved entries HW programming of this resource type has finished.

Context [platform](#) [linecard slot](#) [number](#) [forwarding-complex name](#) [keyword](#) [tcam resource name](#) [identityref](#) [programmed](#) [number](#)

Tree [programmed](#)

Configurable False

Platforms Supported on all platforms

reserved *number*

Description The number of TCAM entries that are currently reserved in this resource pool. Reservation happens when a configuration change is committed. Reserved entries may not be programmed yet if the commit has just occurred.

Context [platform](#) [linecard slot](#) [number](#) [forwarding-complex name](#) [keyword](#) [tcam resource name](#) [identityref](#) [reserved](#) [number](#)

Tree [reserved](#)

Configurable False

Platforms Supported on all platforms

healthz

Description	The health of the component The parameters within this container indicate the status of the component beyond whether it is operationally up or down. When a signal is received that a component is in an unhealthy state the gNOI.Healthz service can be used to retrieve further diagnostic information relating to the component. The contents of this directory relate only to the specific component that it is associated with.
Context	platform linecard slot number healthz
Tree	healthz
Configurable	False
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

last-unhealthy string

Description	Last unhealthy time The time at which the component was last observed to transition from the healthy state to any other state, represented as nanoseconds since the Unix epoch.
Context	platform linecard slot number healthz last-unhealthy string
Tree	last-unhealthy
String Length	20 to 32
Configurable	False
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

status keyword

Description	Health status The status of the component, indicating its current health.
Context	platform linecard slot number healthz status keyword
Tree	status
Options	<ul style="list-style-type: none"> unspecified Unspecified status The component's health status has not yet been checked by the system.

- **healthy**
Healthy status
The component is in a healthy state, and is operating within the expected parameters.
- **unhealthy**
Unhealthy status
The component is in a unhealthy state, it is not performing the function expected of it.

Configurable

False

Platforms

7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

unhealthy-count *number***Description**

Unhealthy count

The number of times the component has transitioned from the healthy state to any other state.

Context[platform linecard slot number healthz unhealthy-count number](#)**Tree**[unhealthy-count](#)**Default**

0

Configurable

False

Platforms

7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

last-booted *string***Description**

The date and time this component last booted

For components that do not boot, this is the time the component was last discovered by the active control module

Context[platform linecard slot number last-booted string](#)**Tree**[last-booted](#)**String Length**

20 to 32

Configurable

False

Platforms

Supported on all platforms

last-booted-reason *identityref*

Description	The reason this component last booted or rebooted For components without the ability to 'boot' this field is never populated
Context	platform linecard slot number last-booted-reason identityref
Tree	last-booted-reason
Options	<ul style="list-style-type: none"> • user-initiated-reboot A user initiated the reboot directly via a management interface • power-failure The system rebooted the component due to insufficient power • critical-error The system rebooted the component due to an internal critical error
Configurable	False
Platforms	Supported on all platforms

last-change *string*

Description	The date and time this component last changed state
Context	platform linecard slot number last-change string
Tree	last-change
String Length	20 to 32
Configurable	False
Platforms	Supported on all platforms

locator-state *keyword*

Description	Details if the locator LED is active on this component
Context	platform linecard slot number locator-state keyword
Tree	locator-state
Default	inactive
Options	<ul style="list-style-type: none"> • active Locator LED is currently active • inactive Locator LED is currently inactive
Configurable	False

Platforms 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e

manufactured-date *string*

Description The date this component was manufactured
Context [platform linecard slot number manufactured-date string](#)
Tree [manufactured-date](#)
String Length 20 to 32
Configurable False
Platforms Supported on all platforms

oper-state *keyword*

Description The operational state of this component
Context [platform linecard slot number oper-state keyword](#)
Tree [oper-state](#)
Options

- up
Component or process is operational
- down
Component or process is not operational
- empty
Component slot is empty
- downloading
Component is downloading image into memory
- booting
Component is booting downloaded image
- starting
Component image operational, application processes starting
- failed
Component or process has failed
- synchronizing
Component is currently being synchronized
- upgrading
Component is currently being upgraded
- low-power
Component is offline due to insufficient system power

- degraded
Component or process is in a degraded state
- warm-reboot
Component or process is currently warm rebooting
This state is set during a warm reboot immediately following initiation of the reboot, continuing after startup until the system has completed audit. In this state the system will not accept configuration changes.
- waiting
Component or process is currently waiting
This state can be set by event handler when the reinvoke-with-delay action is used, and indicates that the event handler is waiting for the provided delay before reinvoking the instance.

Configurable	False
Platforms	Supported on all platforms

part-number *string*

Description	Part number for this component
Context	platform linecard slot number part-number string
Tree	part-number
Configurable	False
Platforms	Supported on all platforms

power

Description	State related to power consumption and allocation for this component
Context	platform linecard slot number power
Tree	power
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e

required *number*

Description	The power budget required to enable this component
Context	platform linecard slot number power required number
Tree	required
Units	watts

Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e

used *number*

Description	The power in use by this component
Context	platform linecard slot number power used number
Tree	used
Units	watts
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e

rebooting-at *string*

Description	Indicates the date and time this component will reboot If empty, no delayed reboots are queued for this component. A non empty value implies that a delayed reboot operation has been triggered for this component, which can be aborted using 'tools platform <component> reboot cancel'.
Context	platform linecard slot number rebooting-at string
Tree	rebooting-at
String Length	20 to 32
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e

removable *boolean*

Description	Details if this component can be removed from the system
Context	platform linecard slot number removable boolean
Tree	removable
Configurable	False
Platforms	Supported on all platforms

serial-number *string*

Description	The serial number for this component
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Context	platform linecard slot number serial-number string
Tree	serial-number
Configurable	False
Platforms	Supported on all platforms

software-version *string*

Description	Image version version running on this component This version is the squashfs version, and may not represent the current per-application versions if versions have been modified after the system has been installed.
Context	platform linecard slot number software-version string
Tree	software-version
Configurable	False
Platforms	Supported on all platforms

temperature

Description	State related to temperature for this component
Context	platform linecard slot number temperature
Tree	temperature
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e

alarm-status *boolean*

Description	Indicates if a temperature sensor of this component is currently in an alarm state An alarm state is triggered if the margin is ≤ 2 degrees, indicating that a thermal protection shut down is imminent unless adequate system cooling is provided to bring the temperature sensor back into safe operating ranges.
Context	platform linecard slot number temperature alarm-status boolean
Tree	alarm-status
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e

instant number

Description	Represents the highest current temperature of any sensor on this component Note that as multiple sensors may feed in, that this field and the margin field may be referencing different sensors.
Context	platform linecard slot number temperature instant number
Tree	instant
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e

margin number

Description	Indicates the lowest alarm margin of any sensor on this component The margin is the delta between the current sensor temperature and the thermal protection threshold for that sensor. Note that as multiple sensors may feed in, that this field and the instant field may be referencing different sensors.
Context	platform linecard slot number temperature margin number
Tree	margin
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e

maximum number

Description	Represents the highest temperature any sensor on this component has reached since it booted
Context	platform linecard slot number temperature maximum number
Tree	maximum
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e

maximum-time string

Description	Indicates the time this component reached the temperature referenced in the maximum field
Context	platform linecard slot number temperature maximum-time string
Tree	maximum-time

String Length	20 to 32
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e

type string

Description	Linecard type, as translated from the components EEPROM
Context	platform linecard slot number type string
Tree	type
Configurable	False
Platforms	Supported on all platforms

power-supply id number

Description	Top-level container for power supply module configuration and state
Context	platform power-supply id number
Tree	power-supply
Configurable	False
Platforms	Supported on all platforms

id number

Description	Numeric identifier for the power supply module
Context	platform power-supply id number
Range	1 to 255
Configurable	False
Platforms	Supported on all platforms

capacity number

Description	The total capacity the power supply module can provide
Context	platform power-supply id number capacity number
Tree	capacity
Units	watts
Configurable	False
Platforms	Supported on all platforms

clei-code *string*

Description	The Common Language Identification Code for this component
Context	platform power-supply id <i>number clei-code string</i>
Tree	clei-code
Configurable	False
Platforms	Supported on all platforms

failure-reason *string*

Description	The reason the component transitioned to a failed state Field is empty if the component is not currently in a failure state
Context	platform power-supply id <i>number failure-reason string</i>
Tree	failure-reason
Configurable	False
Platforms	Supported on all platforms

fan

Description	Top-level container for state relating to fans
Context	platform power-supply id <i>number fan</i>
Tree	fan
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e

speed *number*

Description	The current speed of the fan
Context	platform power-supply id <i>number fan speed number</i>
Tree	speed
Range	0 to 100
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e

speed-rpm *number*

Description	The current RPM of the fan
Context	platform power-supply id number fan speed-rpm number
Tree	speed-rpm
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e

feed id *number*

Description	List of feeds on this power-supply
Context	platform power-supply id number feed id number
Tree	feed
Configurable	False
Platforms	7250 IXR-10e, 7250 IXR-6e

id *number*

Description	ID of the feed
Context	platform power-supply id number feed id number
Configurable	False
Platforms	7250 IXR-10e, 7250 IXR-6e

current *decimal-number*

Description	Current input amperage of this feed
Context	platform power-supply id number feed id number current decimal-number
Tree	current
Units	amps
Configurable	False
Platforms	7250 IXR-10e, 7250 IXR-6e

voltage *decimal-number*

Description	Current input voltage for this feed
Context	platform power-supply id number feed id number voltage decimal-number

Tree	voltage
Units	volts
Configurable	False
Platforms	7250 IXR-10e, 7250 IXR-6e

healthz

Description	<p>The health of the component</p> <p>The parameters within this container indicate the status of the component beyond whether it is operationally up or down. When a signal is received that a component is in an unhealthy state the gNOI.Healthz service can be used to retrieve further diagnostic information relating to the component. The contents of this directory relate only to the specific component that it is associated with.</p>
Context	platform power-supply id number healthz
Tree	healthz
Configurable	False
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

last-unhealthy *string*

Description	<p>Last unhealthy time</p> <p>The time at which the component was last observed to transition from the healthy state to any other state, represented as nanoseconds since the Unix epoch.</p>
Context	platform power-supply id number healthz last-unhealthy string
Tree	last-unhealthy
String Length	20 to 32
Configurable	False
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

status *keyword*

Description	<p>Health status</p> <p>The status of the component, indicating its current health.</p>
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Context	platform power-supply id number healthz status keyword
Tree	status
Options	<ul style="list-style-type: none"> unspecified Unspecified status The component's health status has not yet been checked by the system. healthy Healthy status The component is in a healthy state, and is operating within the expected parameters. unhealthy Unhealthy status The component is in a unhealthy state, it is not performing the function expected of it.
Configurable	False
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

unhealthy-count *number*

Description	Unhealthy count The number of times the component has transitioned from the healthy state to any other state.
Context	platform power-supply id number healthz unhealthy-count number
Tree	unhealthy-count
Default	0
Configurable	False
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

input

Description	Top-level container for power-supply input state
Context	platform power-supply id number input
Tree	input
Configurable	False

Platforms Supported on all platforms

current *decimal-number*

Description Current amperage input/output for the power-supply

Context [platform power-supply id number input current decimal-number](#)

Tree [current](#)

Units amps

Configurable False

Platforms Supported on all platforms

power *decimal-number*

Description Current power input/output for the power-supply

Context [platform power-supply id number input power decimal-number](#)

Tree [power](#)

Units watts

Configurable False

Platforms Supported on all platforms

voltage *decimal-number*

Description Current voltage input/output for the power-supply

Context [platform power-supply id number input voltage decimal-number](#)

Tree [voltage](#)

Units volts

Configurable False

Platforms Supported on all platforms

last-booted *string*

Description The date and time this component last booted
For components that do not boot, this is the time the component was last discovered by the active control module

Context [platform power-supply id number last-booted string](#)

Tree [last-booted](#)

String Length	20 to 32
Configurable	False
Platforms	Supported on all platforms

last-booted-reason *identityref*

Description	The reason this component last booted or rebooted For components without the ability to 'boot' this field is never populated
Context	platform power-supply id number last-booted-reason identityref
Tree	last-booted-reason
Options	<ul style="list-style-type: none"> • user-initiated-reboot A user initiated the reboot directly via a management interface • power-failure The system rebooted the component due to insufficient power • critical-error The system rebooted the component due to an internal critical error
Configurable	False
Platforms	Supported on all platforms

last-change *string*

Description	The date and time this component last changed state
Context	platform power-supply id number last-change string
Tree	last-change
String Length	20 to 32
Configurable	False
Platforms	Supported on all platforms

manufactured-date *string*

Description	The date this component was manufactured
Context	platform power-supply id number manufactured-date string
Tree	manufactured-date
String Length	20 to 32
Configurable	False

Platforms Supported on all platforms

oper-reason *keyword*

Description Indicates the reason for the current state of the component

Context [platform power-supply id number oper-reason keyword](#)

Tree [oper-reason](#)

Options

- no-input/fault
No power input, or other hardware fault detected
- eeprom-invalid
EEPROM of this power supply is either invalid or corrupt
- airflow-mismatch
The detected airflow of this power supply does not match the system-calculated airflow direction

The logic for determining the system-calculated direction is: - Majority wins between present fan trays - In the case where there are equal F2B or B2F fan-trays, PSUs are used as a tie break (PSUs only are counted in the event a tie breaker is needed) - F2B wins if no tie break can be used

Configurable False

Platforms Supported on all platforms

oper-state *keyword*

Description The operational state of this component

Context [platform power-supply id number oper-state keyword](#)

Tree [oper-state](#)

Options

- up
Component or process is operational
- down
Component or process is not operational
- empty
Component slot is empty
- downloading
Component is downloading image into memory
- booting
Component is booting downloaded image
- starting

- Component image operational, application processes starting
- failed
Component or process has failed
- synchronizing
Component is currently being synchronized
- upgrading
Component is currently being upgraded
- low-power
Component is offline due to insufficient system power
- degraded
Component or process is in a degraded state
- warm-reboot
Component or process is currently warm rebooting
This state is set during a warm reboot immediately following initiation of the reboot, continuing after startup until the system has completed audit. In this state the system will not accept configuration changes.
- waiting
Component or process is currently waiting
This state can be set by event handler when the reinvoke-with-delay action is used, and indicates that the event handler is waiting for the provided delay before reinvoking the instance.

Configurable

False

Platforms

Supported on all platforms

output**Description**

Top-level container for power-supply output state

Context[platform power-supply id number output](#)**Tree**[output](#)**Configurable**

False

Platforms

7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e

current *decimal-number***Description**

Current amperage input/output for the power-supply

Context[platform power-supply id number output current decimal-number](#)**Tree**[current](#)

Units	amps
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e

power *decimal-number*

Description	Current power input/output for the power-supply
Context	platform power-supply id number output power decimal-number
Tree	power
Units	watts
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e

voltage *decimal-number*

Description	Current voltage input/output for the power-supply
Context	platform power-supply id number output voltage decimal-number
Tree	voltage
Units	volts
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e

part-number *string*

Description	Part number for this component
Context	platform power-supply id number part-number string
Tree	part-number
Configurable	False
Platforms	Supported on all platforms

removable *boolean*

Description	Details if this component can be removed from the system
Context	platform power-supply id number removable boolean
Tree	removable
Configurable	False

Platforms Supported on all platforms

serial-number *string*

Description The serial number for this component

Context [platform power-supply id](#) *number* [serial-number](#) *string*

Tree [serial-number](#)

Configurable False

Platforms Supported on all platforms

temperature

Description State related to temperature for this component

Context [platform power-supply id](#) *number* [temperature](#)

Tree [temperature](#)

Configurable False

Platforms Supported on all platforms

alarm-status *boolean*

Description Indicates if a temperature sensor of this component is currently in an alarm state

An alarm state is triggered if the margin is ≤ 2 degrees, indicating that a thermal protection shut down is imminent unless adequate system cooling is provided to bring the temperature sensor back into safe operating ranges.

Context [platform power-supply id](#) *number* [temperature](#) [alarm-status](#) *boolean*

Tree [alarm-status](#)

Configurable False

Platforms Supported on all platforms

instant *number*

Description Represents the highest current temperature of any sensor on this component

Note that as multiple sensors may feed in, that this field and the margin field may be referencing different sensors.

Context [platform power-supply id](#) *number* [temperature](#) [instant](#) *number*

Tree [instant](#)

Configurable	False
Platforms	Supported on all platforms

maximum number

Description	Represents the highest temperature any sensor on this component has reached since it booted
Context	platform power-supply id number temperature maximum number
Tree	maximum
Configurable	False
Platforms	Supported on all platforms

maximum-time string

Description	Indicates the time this component reached the temperature referenced in the maximum field
Context	platform power-supply id number temperature maximum-time string
Tree	maximum-time
String Length	20 to 32
Configurable	False
Platforms	Supported on all platforms

type string

Description	Power-supply type, as translated from the components EEPROM
Context	platform power-supply id number type string
Tree	type
Configurable	False
Platforms	Supported on all platforms

redundancy

Description	Top-level container for platform redundancy
Context	platform redundancy
Tree	redundancy
Configurable	True

Platforms 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e

active-module *keyword*

Description Control module currently active

Context [platform redundancy active-module](#) *keyword*

Tree [active-module](#)

Options

- A
- B

Configurable False

Platforms 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e

failover-time *string*

Description Date and time of the last control module failover

Context [platform redundancy failover-time](#) *string*

Tree [failover-time](#)

String Length 20 to 32

Configurable False

Platforms 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e

synchronization

Description Top-level container for redundancy synchronization

Context [platform redundancy synchronization](#)

Tree [synchronization](#)

Configurable True

Platforms 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e

last-synchronization *string*

Description Last date and time a synchronization of system files occurred

Context [platform redundancy synchronization last-synchronization](#) *string*

Tree [last-synchronization](#)

String Length 20 to 32

Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e

overlay

Description	Top-level container for overlay synchronization
Context	platform redundancy synchronization overlay
Tree	overlay
Configurable	True
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e

last-synchronization *string*

Description	Last date and time a synchronization of the overlay occurred
Context	platform redundancy synchronization overlay last-synchronization <i>string</i>
Tree	last-synchronization
String Length	20 to 32
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e

next-synchronization *string*

Description	Next date and time a synchronization of the overlay will occur
Context	platform redundancy synchronization overlay next-synchronization <i>string</i>
Tree	next-synchronization
String Length	20 to 32
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e

synchronization-frequency *number*

Description	Sets the frequency of overlay synchronizations This has no effect if overlay is not a configured synchronization mode. Changing this value results in the timer to the next synchronization being reset.
Context	platform redundancy synchronization overlay synchronization-frequency <i>number</i>

Tree	synchronization-frequency
Range	30 to 65535
Default	60
Units	seconds
Configurable	True
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e

state keyword

Description	Current synchronization status
Context	platform redundancy synchronization state keyword
Tree	state
Options	<ul style="list-style-type: none"> • synchronized Standby control module is ready and synchronized • synchronizing Standby control module is currently synchronizing • not-ready Standby control module is not synchronized
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e

resource-management

Description	Container for managing resources in a system-wide context
Context	platform resource-management
Tree	resource-management
Configurable	True
Platforms	Supported on all platforms

tcam

Description	Container for managing the allocation of TCAM banks to different applications.
Context	platform resource-management tcam
Tree	tcam
Configurable	True

Platforms Supported on all platforms

unified-forwarding-resources

Description Container for managing Broadcom-specific UFT resources.

Context [platform resource-management unified-forwarding-resources](#)

Tree [unified-forwarding-resources](#)

Configurable True

Platforms 7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3

allocated-extra-ip-host-entries *number*

Description The extra number of host entries that have been allocated from UFT shared banks.

Context [platform resource-management unified-forwarding-resources allocated-extra-ip-host-entries *number*](#)

Tree [allocated-extra-ip-host-entries](#)

Range 0 to 262144

Configurable False

Platforms 7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L

allocated-extra-mac-entries *number*

Description The extra number of MAC address entries that have been allocated from UFT shared banks.

Context [platform resource-management unified-forwarding-resources allocated-extra-mac-entries *number*](#)

Tree [allocated-extra-mac-entries](#)

Range 0 to 262144

Configurable False

Platforms 7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L

alpm *keyword*

Description Controls the ALPM mode.

If this is set to disabled then no UFT banks are allocated to ALPM. This mode is not supported by 7220 IXR-D4 or 7220 IXR-D5.

If this is set to enabled then 4 UFT shared banks are allocated to ALPM. This mode is not supported by 7220 IXR-D2 or 7220 IXR-D3.

If this is set to high-scale then 8 UFT shared banks are allocated to ALPM. This mode is not supported by 7220 IXR-D1.

Context	platform resource-management unified-forwarding-resources alpm <i>keyword</i>
Tree	alpm
Options	<ul style="list-style-type: none"> • disabled • enabled • high-scale
Configurable	True
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5

ipv6-128bit-lpm-entries *number*

Description	Sets the value for num_ipv6_lpm_128b_entries, which affects IP FIB scale. H2/H3 range: 0-1024 D1 range: 0-4096 D2/D3 range: 0-8192
Context	platform resource-management unified-forwarding-resources ipv6-128bit-lpm-entries <i>number</i>
Tree	ipv6-128bit-lpm-entries
Range	0 to 8192
Configurable	True
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-H2, 7220 IXR-H3

requested-extra-ip-host-entries *number*

Description	<p>The extra number of host entries that are desired.</p> <p>The number of UFT shared banks that are reserved for IPv4 and IPv6 host entries is given by: $\min(N/X, P-A)$</p> <p>where: N = configured value of requested-extra-ip-host-entries X = the size of each shared bank, which is platform specific P-A = platform-specific number of shared banks, subtracting the ALPM banks</p> <p>requested-extra-ip-host-entries is interpreted in terms of IPv4 hosts (single-wide entries). IPv6 host entries are double-wide so 1 IPv4 host entry + 1 IPv6 host-entry counts as 3 entries.</p> <p>All UFT shared banks that are not reserved by ALPM and not reserved for extra IP host entries are used for extra MAC entries.</p>
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On D1 the default value is 48K entries, which provides 3 shared banks, max is 96K. On D2/D3 the default value is 128K entries, which provides 4 shared banks, max is 256K.

Context	platform resource-management unified-forwarding-resources requested-extra-ip-host-entries <i>number</i>
Tree	requested-extra-ip-host-entries
Range	0 to 262144
Configurable	True
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L

xdp-restart-required *boolean*

Description	Reads true if the user has committed a change to one or more of the configurable values in the uft container but has not yet restarted XDP so the operational values are still the values initialized at the last XDP restart.
Context	platform resource-management unified-forwarding-resources xdp-restart-required <i>boolean</i>
Tree	xdp-restart-required
Configurable	False
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3

resource-monitoring

Description	Enter the resource-monitoring context
Context	platform resource-monitoring
Tree	resource-monitoring
Configurable	True
Platforms	Supported on all platforms

acl

Description	Enter the acl context
Context	platform resource-monitoring acl
Tree	acl
Configurable	True
Platforms	Supported on all platforms

resource name *identityref*

Description	Enter the resource list instance
Context	platform resource-monitoring acl resource name <i>identityref</i>
Tree	resource
Configurable	True
Platforms	Supported on all platforms

name *identityref*

Description	The name of the ACL resource
Context	platform resource-monitoring acl resource name <i>identityref</i>
Options	<ul style="list-style-type: none"> • input-ipv4-filter-instances This resource is used every time an IPv4 filter instance is created and applied to ingress traffic on the forwarding complex. Only one instance is used if the subinterface-specific property of the filter is set to output-only; otherwise one instance is used for every subinterface using the IPv4 filter. • input-ipv4-qos-multifield-instances This resource is used every time an IPv4 multifield classifier policy is applied to ingress traffic on a subinterface. • input-ipv4-filter-instances-routed This resource is used every time an IPv4 filter instance is created and applied to ingress traffic on routed subinterfaces. Only one instance is used if the subinterface-specific property of the filter is set to output-only; otherwise one instance is used for every routed subinterface using the IPv4 filter. • input-ipv4-filter-instances-bridged This resource is used every time an IPv4 filter instance is created and applied to ingress traffic on bridged subinterfaces. Only one instance is used if the subinterface-specific property of the filter is set to output-only; otherwise one instance is used for every bridged subinterface using the IPv4 filter. • input-ipv6-filter-instances This resource is used every time an IPv6 filter instance is created and applied to ingress traffic on the forwarding complex. Only one instance is used if the subinterface-specific property of the filter is set to output-only; otherwise one instance is used for every subinterface using the IPv6 filter. • input-ipv6-qos-multifield-instances This resource is used every time an IPv6 multifield classifier policy is applied to ingress traffic on a subinterface. • input-ipv6-filter-instances-routed

This resource is used every time an IPv6 filter instance is created and applied to ingress traffic on routed subinterfaces. Only one instance is used if the subinterface-specific property of the filter is set to output-only; otherwise one instance is used for every routed subinterface using the IPv6 filter.

- input-ipv6-filter-instances-bridged

This resource is used every time an IPv6 filter instance is created and applied to ingress traffic on bridged subinterfaces. Only one instance is used if the subinterface-specific property of the filter is set to output-only; otherwise one instance is used for every bridged subinterface using the IPv6 filter.

- if-input-ipv4-stats

Resource pool of stats entries available for ingress IPv4 ACLs

- if-input-ipv6-stats

Resource pool of stats entries available for ingress IPv6 ACLs

- if-output-ipv4-stats

Resource pool of stats entries available for egress IPv4 ACLs

- if-output-ipv6-stats

Resource pool of stats entries available for egress IPv6 ACLs

- if-output-cpm-stats

Resource pool of stats entries shared by egress IPv4/IPv6/MAC TCAM entries, and CPM-filter IPv4/IPv6/MAC TCAM entries

Egress Ipv4 -> uses single stat counter Egress Ipv6 -> uses single stat counter Egress MAC -> uses single stat counter Cpm Ipv4 -> uses two stat counters Cpm Ipv6 -> uses two stat counters Cpm MAC -> uses two stat counters

- input-acl-qos-template-policers

This resource is used every time an IPv4 or IPv6 input subinterface filter entry uses a rate-limit policer, or subinterface policer-template is used.

- input-qos-template-policers

This resource is used every time a QoS subinterface policer-template is used.

- input-acl-ipv4-policers

This resource is used every time an IPv4 input subinterface filter entry uses a rate-limit policer.

- input-acl-ipv6-policers

This resource is used every time an IPv6 input subinterface filter entry uses a rate-limit policer.

- output-acl-cpm-filter-policers

This resource is used every time an IPv4 or IPv6 output subinterface filter or CPM filter entry uses a rate-limit policer.

Configurable	True
Platforms	Supported on all platforms

falling-threshold-log *number*

Description	Sets the threshold that triggers the generation of a NOTICE log whenever the utilization of the ACL resource in any linecard/complex/core falls reaches this value in a falling direction
Context	platform resource-monitoring acl resource name <i>identityref</i> falling-threshold-log <i>number</i>
Tree	falling-threshold-log
Range	0 to 100
Default	70
Configurable	True
Platforms	Supported on all platforms

rising-threshold-log *number*

Description	Sets the threshold that triggers the generation of a WARNING log whenever the utilization of the ACL resource in any linecard/complex/core reaches this value in a rising direction
Context	platform resource-monitoring acl resource name <i>identityref</i> rising-threshold-log <i>number</i>
Tree	rising-threshold-log
Range	0 to 100
Default	90
Configurable	True
Platforms	Supported on all platforms

datapath

Description	Container for monitoring datapath resources system-wide
Context	platform resource-monitoring datapath
Tree	datapath
Configurable	True
Platforms	Supported on all platforms

asic

Description	Container for monitoring datapath resources that are specific to a subset of the chipsets supported by SRLinux.
Context	platform resource-monitoring datapath asic
Tree	asic
Configurable	True
Platforms	Supported on all platforms

resource name *identityref*

Description	List of ASIC-specific datapath resources
Context	platform resource-monitoring datapath asic resource name <i>identityref</i>
Tree	resource
Configurable	True
Platforms	Supported on all platforms

name *identityref*

Description	The name of the ASIC-specific datapath resource.
Context	platform resource-monitoring datapath asic resource name <i>identityref</i>
Options	<ul style="list-style-type: none"> ip-lpm-ipv4-routes IPv4 longest prefix match route resources 7220 D1/D2/D3: Reports the number of IPv4 entries in the hardware LPM table. In non-ALPM mode, free entries is the remaining number of half-wide entries in all partitions (i.e. it assumes no IPv6 routes consume those entries). In ALPM mode, free entries is the Minimum Guaranteed Capacity returned by the BCM SDK. 7220 D4/D5 and 7220 H2/H3/H4: Reports the number of IPv4 routes installed in the FIB. Free entries is the Minimum Guaranteed Capacity returned by the BCM SDK. ip-lpm-ipv6-routes IPv6 longest prefix match route resources Reports the number of IPv6 routes installed in the FIB. Free entries is the Minimum Guaranteed Capacity returned by the BCM SDK. ip-lpm-ipv6-shorter-routes IPv6 longest prefix match route resources when the prefix length is less than or equal to 64

7220 D1/D2/D3: Reports the number of IPv6 entries with prefix length less than 65 bits in the hardware LPM table. In non-ALPM mode, free entries is the remaining number of single-wide + double-wide entries (i.e. it assumes no other types of routes consume those entries). In ALPM mode, free entries is based on the Minimum Guaranteed Capacity returned by the BCM SDK.

7220 H2/H3: Reports the number of IPv6 entries with prefix length less than 65 bits installed in the FIB. Free entries is based on the Minimum Guaranteed Capacity returned by the BCM SDK.

- ip-lpm-ipv6-longer-routes

IPv6 longest prefix match route resources when the prefix length is greater than 64

7220 D1/D2/D3: Reports the number of IPv6 entries with prefix length greater than 64 bits in the hardware LPM table. In non-ALPM mode, free entries is the remaining number of double-wide entries (i.e. it assumes no other types of routes consume those entries). In ALPM mode, free entries is based on the Minimum Guaranteed Capacity returned by the BCM SDK.

7220 H2/H3: Reports the number of IPv6 entries with prefix length greater than 64 bits installed in the FIB. Free entries is based on the Minimum Guaranteed Capacity returned by the BCM SDK.

- exact-match-entries

IP exact match lookup table resources

Reports the number of half-wide entries used in the LEM table. Each MPLS ILM record uses one half-wide entry. Each IPv4 address used as a host route, ARP entry or subnet broadcast address requires a half-wide entry. An IPv6 address used as a host route, or ND entry requires a single-wide entry (2 half-wide entries). Free entries is the remaining number of half-wide entries.

- ip-tunnel-source-ipv4-addresses

IP tunnel source IPv4 address resources

Each IPinIP and GRE tunnel with a different source IPv4 address uses one of these resources.

- ip-tunnel-source-ipv6-addresses

IP tunnel source IPv6 address resources

Each IPinIP and GRE tunnel with a different source IPv6 address uses one of these resources.

- underlay-ecmp-groups

Underlay ECMP group resources

ECMP groups are partitioned into overlay and underlay groups. The underlay partition is further subdivided into groups used for underlay ECMP and groups used for VP LAGs (EVPN M-H). This counts the utilization of the sub-resource used for ECMP.

- **vp-lag-groups**
VP LAG group resources
ECMP groups are partitioned into overlay and underlay groups. The underlay partition is further subdivided into groups used for underlay ECMP and groups used for VP LAGs (EVPN M-H). This counts the utilization of the sub-resource used for VP LAGs.
- **overlay-ecmp-groups**
Overlay ECMP group resources
ECMP groups are partitioned into overlay and underlay groups. This counts the utilization of the overlay ECMP partition.
- **underlay-ecmp-members**
Underlay ECMP member resources
ECMP members are partitioned into overlay and underlay. This counts the utilization of the partition used for underlay.
- **overlay-ecmp-members**
Overlay ECMP member resources
ECMP members are partitioned into overlay and underlay. This counts the utilization of the partition used for overlay.
- **underlay-egress-next-hops**
Underlay egress next-hop resources
Egress next-hops are partitioned into overlay and underlay. This counts the utilization of the partition used for underlay.
- **overlay-egress-next-hops**
Overlay egress next-hop resources
Egress next-hops are partitioned into overlay and underlay. This counts the utilization of the partition used for overlay.
- **dgpp-module-ids**
DGPP module ID resources
DGPPs are an aggregate id consisting of a module_id and a port_id. There are 64 modules and 120 ports per module. Each 'network' ARP entry (IP next-hop) needs a DGPP - the module_id is allocated against the network interface (port) and a port_id is allocated from within the module. A module_id will only be allocated when the first ArpEntry is added (freed when last is removed) but is owned exclusively by that network interface. A network interface may require more than one module_id - i.e. if there are 245 ArpEntries on ethernet-1/1 (possibly spread across multiple network-instance interfaces) then 3 module_ids are required.
- **egress-vlan-translate-egress-vnis**
EGR_VLAN_XLATE_1 resources

Corresponds to the 'EGR_VLAN_XLATE_1' HW table (8K entries). These entries are used for finding the egress VNI to be used for VXLAN packets.

- egress-vlan-translate-local-bias-pairs

EGR_VLAN_XLATE_2 resources

Corresponds to the 'EGR_VLAN_XLATE_2' HW table (24K entries). These entries are used for local bias (ES pruning).

- level-1-ecmp-groups

Level 1 (top level) ECMP group resources.

- level-2-ecmp-groups

Level 2 (middle level) ECMP group resources.

- level-3-ecmp-groups

Level 3 (bottom level) ECMP group resources.

- level-1-ecmp-members

Level 1 (top level) ECMP member resources.

- level-2-ecmp-members

Level 2 (middle level) ECMP member resources.

- level-3-ecmp-members

Level 3 (bottom level) ECMP member resources.

- level-1-non-ecmp-fecs

Level 1 (top level) non-ECMP FEC resources.

- level-2-non-ecmp-fecs

Level 2 (middle level) non-ECMP FEC resources.

- level-3-non-ecmp-fecs

Level 3 (bottom level) non-ECMP FEC resources.

- decap-next-hop-statistics

Statistics resources for counting packets matching a tunnel termination entry and then forwarded to a next-hop

One resource is one packet/octet counter pair that is allocated to counting each case where packets: (a) match a gRIBI-programmed tunnel termination entry and get forwarded to a next-hop that does redirect to another network-instance (1 counter pair for all redirect targets) (b) match a gRIBI-programmed tunnel termination entry and get forwarded to a next-hop that does IP-in-IP encapsulation towards a new endpoint address (1 counter pair per new endpoint address)

Configurable

True

Platforms

Supported on all platforms

upper-threshold-clear *number*

Description	Sets the threshold that triggers the generation of a NOTICE log and the setting of 'used-upper-threshold-exceeded' to 'false' whenever the utilization of the datapath resource in any linecard (if applicable) or forwarding complex or pipeline (if applicable) reaches this value in a falling direction
Context	platform resource-monitoring datapath asic resource name <i>identityref</i> upper-threshold-clear <i>number</i>
Tree	upper-threshold-clear
Range	0 to 100
Default	70
Configurable	True
Platforms	Supported on all platforms

upper-threshold-set *number*

Description	Sets the threshold that triggers the generation of a WARNING log and the setting of 'used-upper-threshold-exceeded' to 'true' whenever the utilization of the datapath resource in any linecard (if applicable) or forwarding complex or pipeline (if applicable) reaches this value in a rising direction
Context	platform resource-monitoring datapath asic resource name <i>identityref</i> upper-threshold-set <i>number</i>
Tree	upper-threshold-set
Range	0 to 100
Default	90
Configurable	True
Platforms	Supported on all platforms

xdp

Description	Container for monitoring datapath resources that are generic in concept.
Context	platform resource-monitoring datapath xdp
Tree	xdp
Configurable	True
Platforms	Supported on all platforms

resource [name identityref](#)

Description	List of generic datapath resources
Context	platform resource-monitoring datapath xdp resource name identityref
Tree	resource
Configurable	True
Platforms	Supported on all platforms

name [identityref](#)

Description	<p>The name of the XDP datapath resource.</p> <p>Some of these resources may be software only (i.e. no correspondence to a hardware table).</p> <p>Some of these resources may depend on multiple HW tables and when the utilization is reported it represents an aggregated or summarized view.</p>
Context	platform resource-monitoring datapath xdp resource name identityref
Options	<ul style="list-style-type: none"> arp-nd-entries <p>IPv4 ARP and IPv6 neighbor discovery resources</p> <p>Each IPv4 ARP and each IPv6 neighbor entry counts as 1 used resource against a total that is platform dependent.</p> ip-hosts <p>IP host route resources</p> <p>7220 D1/D2/D3: Reports the number of entries used in the IP host table. Every local host /32 route, ARP entry and IPv4 subnet broadcast address requires 1 entry. Every IPv4 multicast snoop entry requires 2 entries. In non-ALPM operation every remote /32 route also requires 1 entry. Every local host /128 route, and ND entry requires 2 entries. Every IPv6 multicast snoop entry requires 4 entries. In non-ALPM operation every remote /128 route also requires 2 entries. Free entries reflects the total number of entries remaining in shared + dedicated UFT banks.</p> <p>7220 D4/D5: Reports the number of entries used in the IP host table. Every local host /32 route, ARP entry and IPv4 subnet broadcast address requires 1 entry. Every local host /128 route, and ND entry requires 2 entries. Every (*, G) IPv4 multicast snoop entry requires 1 entry. Every (S, G) IPv4 multicast snoop entry requires 2 entries. Every (*, G) IPv6 multicast snoop entry requires 2 entries. Every (S, G) IPv6 multicast snoop entry requires 4 entries.</p> <p>7220 H2/H3/H4: Reports the number of entries used in the IP host table. Every local host /32 route, ARP entry and IPv4 subnet broadcast address requires 1 entry. Every local host /128 route, and ND entry requires 2 entries.</p>

- ip-lpm-routes
 - IP longest prefix match route resources
 - 7250 IXR/IXRe: Every installed IPv4 and IPv6 route counts as one used route.
 - 7220 D1/D2/D3: In ALPM-disabled mode: Reports the number of half-wide entries. An IPv4 route requires a half-wide entry. An IPv6 route that is /64 or less requires a single-wide entry (2 half-wide entries). An IPv6 route that is more than /64 requires a double-wide entry (4 half-wide entries). In ALPM mode: Every IPv4 route counts as 1 used route and every IPv6 route (regardless of prefix length) counts as 2 used routes.
 - 7220 D4/D5: Every IPv4 route counts as 1 used route and every IPv6 route (regardless of prefix length) counts as 4 used routes.
- mac-addresses
 - MAC lookup table resources
 - Reports the number of entries used in the MAC lookup table. On 7220 D1/D2/D3, free entries reflects the total number of entries remaining in shared + dedicated UFT banks
- mac-next-hops
 - Direct MAC next-hop resources
 - A resource consumed by every next-hop of a gRIBI route that is specified as an interface name plus MAC address
- direct-ip-next-hops
 - Direct IP next-hop resources
 - Reports the number of entries, where 1 entry is used for every next-hop of an IP route or MPLS route/tunnel that is resolved directly to a local interface.
- indirect-ip-next-hops
 - Indirect IP next-hop resources
 - Reports the number of entries, where 1 entry is used for every next-hop of an IP route that requires resolution by a non-local route. This does not consider underlying ASIC resources.
- tunnel-next-hops
 - Tunnel next-hop resources
 - Reports the number of tunnel next-hop entries. 1 tunnel next-hop is required every time an indirect next-hop (e.g. a BGP next-hop) is resolved by a tunnel (BGP-LU, LDP, SR-ISIS or VXLAN)
- ecmp-groups
 - ECMP group resources
 - 7250 IXR/IXRe: Reports the used number of ECMP FECs, adding L1 ECMP FECs, L2 ECMP FECs and L3 ECMP FECs.
 - 7220 D1/D2/D3/D4/D5: Reports the used number of ECMP groups, adding overlay and underlay ECMP groups (if applicable).

- 7220 H2/H3/H4: Reports used number of ECMP groups.
- ecmp-members
ECMP member resources
7250 IXR/IXRe: Reports the used number of ECMP member FECs, adding L1 ECMP member FECs, L2 ECMP member FECs and L3 ECMP member FECs.
7220 D1/D2/D3/D4/D5: Reports the used number of ECMP members, adding overlay and underlay ECMP members (if applicable).
7220 H2/H3/H4: Reports used number of ECMP members.
- egress-next-hops
Egress next-hop resources
7220 D2/D3/D4/D5: Reports the number of entries used in the egress next-hop table, counting entries in the overlay partition and entries in the underlay partition. 1 entry = 1 IPv4 next-hop address or 1 IPv6 next-hop address.
7220 H2/H3/H4: Reports the number of entries used in the egress next-hop table. 1 entry = 1 IPv4 next-hop address or 1 IPv6 next-hop address.
- lag-groups
LAG group resources
Reports the number of LAG resources used, including DGPP LAGs.
- lag-members
LAG member resources
Reports the number of LAG member resources used, including DGPP LAG members.
- subinterfaces
Subinterface resources
There are a maximum of 127 subinterfaces per TH3 pipeline (limited by VFP/EFP TCAM resources). This counts the utilization of those resources.
- mpls-next-hops
MPLS next-hop (NHLFE) resources
One resource is used for every next-hop that pushes an MPLS label in every next-hop-group that is tied to an ILM entry that performs a 'swap'. One additional resource is used for every next-hop that pushes an MPLS label in every next-hop-group that is tied to an MPLS tunnel.
- mpls-incoming-labels
MPLS label lookup (ILM) resources
One resource is used for every MPLS ILM entry that performs either a 'swap' or a 'pop' operation.
- originating-tunnels

Originating tunnel resources

One resource is used for every VXLAN, LDP, SR-ISIS or IPinIP tunnel originating on this node as head-end. On TD3 and TD4 systems this equates to a DVP resource.

- terminating-tunnels

Terminating tunnel resources

One resource is used for every IPinIP tunnel terminating entry on this node.

Configurable	True
Platforms	Supported on all platforms

upper-threshold-clear *number*

Description	Sets the threshold that triggers the generation of a NOTICE log and the setting of 'used-upper-threshold-exceeded' to 'false' whenever the utilization of the datapath resource in any linecard (if applicable) or forwarding complex or pipeline (if applicable) reaches this value in a falling direction
Context	platform resource-monitoring datapath xdp resource name <i>identityref</i> upper-threshold-clear <i>number</i>
Tree	upper-threshold-clear
Range	0 to 100
Default	70
Configurable	True
Platforms	Supported on all platforms

upper-threshold-set *number*

Description	Sets the threshold that triggers the generation of a WARNING log and the setting of 'used-upper-threshold-exceeded' to 'true' whenever the utilization of the datapath resource in any linecard (if applicable) or forwarding complex or pipeline (if applicable) reaches this value in a rising direction
Context	platform resource-monitoring datapath xdp resource name <i>identityref</i> upper-threshold-set <i>number</i>
Tree	upper-threshold-set
Range	0 to 100
Default	90
Configurable	True
Platforms	Supported on all platforms

mtu

Description	Enter the mtu context
Context	platform resource-monitoring mtu
Tree	mtu
Configurable	True
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

resource name *identityref*

Description	Enter the resource list instance
Context	platform resource-monitoring mtu resource name <i>identityref</i>
Tree	resource
Configurable	True
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

name *identityref*

Description	The name of the MTU resource
Context	platform resource-monitoring mtu resource name <i>identityref</i>
Options	<ul style="list-style-type: none"> • ip-mtu IP MTU resource pool. One resource from this pool is consumed by every different IP MTU value used by the subinterfaces on the linecard forwarding-complex. • port-mtu Port MTU resource pool. One resource from this pool is consumed by every different port MTU value used by a port on the linecard forwarding-complex. • mpls-mtu MPLS MTU resource pool. One resource from this pool is consumed by every different MPLS MTU value used by the subinterfaces on the linecard forwarding-complex.
Configurable	True
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

falling-threshold-log *number*

Description	Sets the threshold that triggers the generation of a NOTICE log whenever the utilization of the MTU resource in any linecard/complex/core reaches this value in a falling direction and this is the first trigger since the last rising-threshold-log was triggered.
Context	platform resource-monitoring mtu resource name <i>identityref</i> falling-threshold-log <i>number</i>
Tree	falling-threshold-log
Range	0 to 100
Default	70
Configurable	True
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

rising-threshold-log *number*

Description	Sets the threshold that triggers the generation of a WARNING log whenever the utilization of the MTU resource in any linecard/complex/core reaches this value in a rising direction and this is the first trigger since the last restart or since the last falling-threshold-log was triggered.
Context	platform resource-monitoring mtu resource name <i>identityref</i> rising-threshold-log <i>number</i>
Tree	rising-threshold-log
Range	0 to 100
Default	90
Configurable	True
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

qos

Description	Enter the qos context
Context	platform resource-monitoring qos
Tree	qos
Configurable	True
Platforms	7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

resource [name identityref](#)

Description	Enter the resource list instance
Context	platform resource-monitoring qos resource name identityref
Tree	resource
Configurable	True
Platforms	7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

name [identityref](#)

Description	The name of the QoS resource
Context	platform resource-monitoring qos resource name identityref
Options	<ul style="list-style-type: none"> • classifier-profiles A classifier-profile resource is used every time a different combination of IPv4 DSCP classifier and IPv6 DSCP classifier is applied to an ingress subinterface. One is always used by the combination of the default IPv4 DSCP classifier and the default IPv6 DSCP classifier. • rewrite-profiles A rewrite-profile resource is used every time a different combination of IPv4 DSCP rewrite-rule and IPv6 DSCP rewrite-rule is applied to an egress subinterface. • dscp-classifier-policies Every user-defined DSCP classifier policy that is configured uses one of these resources • dscp-mpls-rewrite-policies A rewrite-policy resource is used every time a different DSCP or MPLS traffic-class rewrite-rule policy is applied to an egress subinterface. • dscp-rewrite-policies Every user-defined dscp rewrite policy that is configured uses one of these resources. • dot1p-classifier-policies Every user-defined dot1p classifier policy that is configured uses one of these resources • dot1p-rewrite-policies Every user-defined dot1p rewrite policy that is configured uses one of these resources • input-policers

Every input-policer that is allocated to the configured subinterfaces based on input-class-map

- output-class-maps

Every user-defined output class map that is configured uses one of these resources.

Configurable True

Platforms 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

falling-threshold-log *number*

Description Sets the threshold that triggers the generation of a NOTICE log whenever the utilization of the QoS resource in any linecard/complex/core falls reaches this value in a falling direction

Context [platform resource-monitoring qos resource name identityref falling-threshold-log number](#)

Tree [falling-threshold-log](#)

Range 0 to 100

Default 70

Configurable True

Platforms 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

rising-threshold-log *number*

Description Sets the threshold that triggers the generation of a WARNING log whenever the utilization of the QoS resource in any linecard/complex/core reaches this value in a rising direction

Context [platform resource-monitoring qos resource name identityref rising-threshold-log number](#)

Tree [rising-threshold-log](#)

Range 0 to 100

Default 90

Configurable True

Platforms 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

tcam

Description	Enter the tcam context
Context	platform resource-monitoring tcam
Tree	tcam
Configurable	True
Platforms	Supported on all platforms

resource name *identityref*

Description	Enter the resource list instance
Context	platform resource-monitoring tcam resource name <i>identityref</i>
Tree	resource
Configurable	True
Platforms	Supported on all platforms

name *identityref*

Description	The name of the TCAM resource
Context	platform resource-monitoring tcam resource name <i>identityref</i>
Options	<ul style="list-style-type: none"> • if-input-ipv4 Resource pool of TCAM entries used by IPv4 ACLs applied as subinterface-input filers • if-output-ipv4 Resource pool of TCAM entries used by IPv4 ACLs applied as subinterface-output filers • if-input-ipv6 Resource pool of TCAM entries used by IPv6 ACLs applied as subinterface-input filers • if-output-ipv6 Resource pool of TCAM entries used by IPv6 ACLs applied as subinterface-output filers • cpm-capture-ipv4 Resource pool of TCAM entries used by IPv4 cpm-filter ACLs and capture-filter ACLs • cpm-capture-ipv6 Resource pool of TCAM entries used by IPv6 cpm-filter ACLs and capture-filter ACLs

- **system-capture-ipv4**
Resource pool of TCAM entries used by IPv4 capture-filter ACLs and IPv4 system-filter ACLs
- **system-capture-ipv6**
Resource pool of TCAM entries used by IPv6 capture-filter ACLs and IPv6 system-filter ACLs
- **system-capture**
Resource pool of TCAM entries used by IPv4 + IPv6 capture-filter ACLs and system-filter ACLs
- **capture-ipv4**
Resource pool of TCAM entries used by IPv4 capture-filter ACLs
- **capture-ipv6**
Resource pool of TCAM entries used by IPv6 capture-filter ACLs
- **if-output-cpm-ipv4**
Resource pool of TCAM entries used by IPv4 egress ACLs and cpm-filter ACLs
- **if-output-cpm-ipv6**
Resource pool of TCAM entries used by IPv6 egress ACLs and cpm-filter ACLs
- **if-output-cpm**
Resource pool of TCAM entries used by IPv4 + IPv6 egress ACLs and cpm-filter ACLs
- **if-input-mac**
Resource pool of TCAM entries used by MAC ACLs applied as subinterface-input filters
- **if-output-cpm-mac**
Resource pool of TCAM entries used by MAC egress ACLs and MAC cpm-filter ACLs
- **policy-forwarding-vrf-selection-ipv4**
Resource pool of TCAM entries used by IPv4 policy-forwarding entries that redirect flows to a different network-instance
- **policy-forwarding-nhg-ipv4**
Resource pool of TCAM entries used by IPv4 policy-forwarding entries that redirect flows to a NHG of IP next-hops or tunnels
- **policy-forwarding-nhg-ipv6**
Resource pool of TCAM entries used by IPv6 policy-forwarding entries that redirect flows to a NHG of IP next-hops or tunnels
- **if-input-policer**
Resource pool of TCAM entries used by ingress subinterface policer templates

- **if-input-ipv4-qos**
Resource pool of TCAM entries associated with IPv4 multi-field QoS classification entries, when applied to subinterface input
 - **if-input-ipv6-qos**
Resource pool of TCAM entries associated with IPv6 multi-field QoS classification entries, when applied to subinterface input
 - **mrouter-mfib-redirect**
Resource pool of TCAM entries used by multicast snooping protocols in MAC-VRF network-instances

One TCAM entry is used per multicast snooping protocol enabled in a MAC-VRF. For instance, if igmp-snooping and mld-snooping are enabled on a MAC-VRF, two entries are used. If only igmp-snooping is enabled, only one entry is used.
 - **tunnel-decap-ipv4-ipv6**
Resource pool of TCAM entries used for IPv4 and IPv6 tunnel-decapsulation groups
 - **if-output-evpn-mh-multicast-non-df**
Resource pool of TCAM entries used by egress filtering of IP multicast traffic to non-Designated Forwarder subinterfaces

One TCAM entry is used when multicast snooping protocols are enabled on at least one MAC-VRF that has one or more subinterfaces associated with Ethernet Segments.
- | | |
|---------------------|----------------------------|
| Configurable | True |
| Platforms | Supported on all platforms |

falling-threshold-log *number*

Description	Sets the threshold that triggers the generation of a NOTICE log whenever the utilization of the TCAM resource in any linecard/complex/core falls reaches this value in a falling direction. On platforms that support dynamic TCAM the utilization considers both free-dynamic and free-static.
Context	platform resource-monitoring tcam resource name <i>identityref</i> falling-threshold-log <i>number</i>
Tree	falling-threshold-log
Range	0 to 100
Default	70
Configurable	True
Platforms	Supported on all platforms

rising-threshold-log *number*

Description	Sets the threshold that triggers the generation of a WARNING log whenever the utilization of the TCAM resource in any linecard/complex/core reaches this value in a rising direction On platforms that support dynamic TCAM the utilization considers both free-dynamic and free-static.
Context	platform resource-monitoring tcam resource name <i>identityref</i> rising-threshold-log <i>number</i>
Tree	rising-threshold-log
Range	0 to 100
Default	90
Configurable	True
Platforms	Supported on all platforms

trust

Description	State information related to Platform Trust
Context	platform trust
Tree	trust
Configurable	False
Platforms	Supported on all platforms

secure-boot

Description	State information related to Secure Boot
Context	platform trust secure-boot
Tree	secure-boot
Configurable	False
Platforms	7250 IXR-10e, 7250 IXR-6e, 7250 IXR-X3b

control *slot string*

Description	Secure Boot states related to control modules
Context	platform trust secure-boot control slot <i>string</i>
Tree	control

Configurable	False
Platforms	7250 IXR-10e, 7250 IXR-6e, 7250 IXR-X3b

slot string

Description	Slot identifier for the control module
Context	platform trust secure-boot control slot string
Configurable	False
Platforms	7250 IXR-10e, 7250 IXR-6e, 7250 IXR-X3b

oper-state keyword

Description	Secure Boot operational state
Context	platform trust secure-boot control slot string oper-state keyword
Tree	oper-state
Options	<ul style="list-style-type: none"> • up Secure Boot is enabled • down Secure Boot is disabled
Configurable	False
Platforms	7250 IXR-10e, 7250 IXR-6e, 7250 IXR-X3b

root-of-trust keyword

Description	Root of Trust for Secure Boot execution
Context	platform trust secure-boot control slot string root-of-trust keyword
Tree	root-of-trust
Options	<ul style="list-style-type: none"> • firmware Firmware Root of Trust • hardware Hardware Root of Trust
Configurable	False
Platforms	7250 IXR-10e, 7250 IXR-6e, 7250 IXR-X3b

uefi-variables *variable string*

Description	Content of the UEFI Secure Boot variables programmed in the control module
Context	platform trust secure-boot control slot <i>string</i> uefi-variables <i>variable string</i>
Tree	uefi-variables
Configurable	False
Platforms	7250 IXR-10e, 7250 IXR-6e, 7250 IXR-X3b

variable *string*

Description	UEFI Secure Boot database variable name
Context	platform trust secure-boot control slot <i>string</i> uefi-variables <i>variable string</i>
Configurable	False
Platforms	7250 IXR-10e, 7250 IXR-6e, 7250 IXR-X3b

contents

Description	Content Secure Boot database variable
Context	platform trust secure-boot control slot <i>string</i> uefi-variables <i>variable string</i> contents
Tree	contents
Configurable	False
Platforms	7250 IXR-10e, 7250 IXR-6e, 7250 IXR-X3b

certificate *index number*

Description	List of X.509 certificates
Context	platform trust secure-boot control slot <i>string</i> uefi-variables <i>variable string</i> contents certificate <i>index number</i>
Tree	certificate
Configurable	False
Platforms	7250 IXR-10e, 7250 IXR-6e, 7250 IXR-X3b

index *number*

Description	The index of the certificate
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Context	platform trust secure-boot control slot <i>string</i> uefi-variables variable <i>string</i> contents certificate index <i>number</i>
Configurable	False
Platforms	7250 IXR-10e, 7250 IXR-6e, 7250 IXR-X3b

data *binary*

Description	DER encoded X.509 certificate
Context	platform trust secure-boot control slot <i>string</i> uefi-variables variable <i>string</i> contents certificate index <i>number</i> data <i>binary</i>
Tree	data
Configurable	False
Platforms	7250 IXR-10e, 7250 IXR-6e, 7250 IXR-X3b

sha1-hash [index](#) *number*

Description	List of SHA-1 hash digests
Context	platform trust secure-boot control slot <i>string</i> uefi-variables variable <i>string</i> contents sha1-hash index <i>number</i>
Tree	sha1-hash
Configurable	False
Platforms	7250 IXR-10e, 7250 IXR-6e, 7250 IXR-X3b

index *number*

Description	The index of the hash
Context	platform trust secure-boot control slot <i>string</i> uefi-variables variable <i>string</i> contents sha1-hash index <i>number</i>
Configurable	False
Platforms	7250 IXR-10e, 7250 IXR-6e, 7250 IXR-X3b

digest-value *binary*

Description	SHA-1 digest
Context	platform trust secure-boot control slot <i>string</i> uefi-variables variable <i>string</i> contents sha1-hash index <i>number</i> digest-value <i>binary</i>
Tree	digest-value

Configurable	False
Platforms	7250 IXR-10e, 7250 IXR-6e, 7250 IXR-X3b

sha256-hash *index number*

Description	List of SHA-256 hash digests
Context	platform trust secure-boot control slot <i>string</i> uefi-variables variable <i>string</i> contents sha256-hash index number
Tree	sha256-hash
Configurable	False
Platforms	7250 IXR-10e, 7250 IXR-6e, 7250 IXR-X3b

index number

Description	The index of the hash
Context	platform trust secure-boot control slot <i>string</i> uefi-variables variable <i>string</i> contents sha256-hash index number
Configurable	False
Platforms	7250 IXR-10e, 7250 IXR-6e, 7250 IXR-X3b

digest-value *binary*

Description	SHA-256 digest
Context	platform trust secure-boot control slot <i>string</i> uefi-variables variable <i>string</i> contents sha256-hash index number digest-value binary
Tree	digest-value
Configurable	False
Platforms	7250 IXR-10e, 7250 IXR-6e, 7250 IXR-X3b

sha256-hash-cert *index number*

Description	List of SHA-256 hash digests of X.509 certificates
Context	platform trust secure-boot control slot <i>string</i> uefi-variables variable <i>string</i> contents sha256-hash-cert index number
Tree	sha256-hash-cert
Configurable	False
Platforms	7250 IXR-10e, 7250 IXR-6e, 7250 IXR-X3b

index number

Description	The index of the hash
Context	platform trust secure-boot control slot string uefi-variables variable string contents sha256-hash-cert index number
Configurable	False
Platforms	7250 IXR-10e, 7250 IXR-6e, 7250 IXR-X3b

digest-value binary

Description	SHA-256 digest of an X.509 certificate
Context	platform trust secure-boot control slot string uefi-variables variable string contents sha256-hash-cert index number digest-value binary
Tree	digest-value
Configurable	False
Platforms	7250 IXR-10e, 7250 IXR-6e, 7250 IXR-X3b

revocation-time string

Description	Certificate revocation start time
Context	platform trust secure-boot control slot string uefi-variables variable string contents sha256-hash-cert index number revocation-time string
Tree	revocation-time
Configurable	False
Platforms	7250 IXR-10e, 7250 IXR-6e, 7250 IXR-X3b

uefi-variables-update

Description	Update status of the UEFI Secure Boot variables PK, KEK, DB and DBx programmed in the control module compared to the UEFI variables update in the modification dataset
Context	platform trust secure-boot control slot string uefi-variables-update
Tree	uefi-variables-update
Configurable	False
Platforms	7250 IXR-10e, 7250 IXR-6e, 7250 IXR-X3b

db-update-required *boolean*

Description	The authorized database (db) update status compared to the modification dataset true = the authorized database (db) is not up to date, update required false = the authorized database (db) is up to date
Context	platform trust secure-boot control slot <i>string</i> uefi-variables-update db-update-required <i>boolean</i>
Tree	db-update-required
Configurable	False
Platforms	7250 IXR-10e, 7250 IXR-6e, 7250 IXR-X3b

dbx-update-required *boolean*

Description	The forbidden database (dbx) update status compared to the modification dataset true = the forbidden database (dbx) is not up to date, update required false = the forbidden database (dbx) is up to date
Context	platform trust secure-boot control slot <i>string</i> uefi-variables-update dbx-update-required <i>boolean</i>
Tree	dbx-update-required
Configurable	False
Platforms	7250 IXR-10e, 7250 IXR-6e, 7250 IXR-X3b

kek-update-required *boolean*

Description	The Key Exchange Key database (KEK) update status compared to the modification dataset true = the Key Exchange Key database (KEK) is not up to date, update required false = the Key Exchange Key database (KEK) is up to date
Context	platform trust secure-boot control slot <i>string</i> uefi-variables-update kek-update-required <i>boolean</i>
Tree	kek-update-required
Configurable	False
Platforms	7250 IXR-10e, 7250 IXR-6e, 7250 IXR-X3b

modification-dataset-db-conflict *boolean*

Description	The authorized database (db) conflict status between the modification dataset and the current running image true = conflict false = no conflict
--------------------	---

Context	platform trust secure-boot control slot string uefi-variables-update modification-dataset-db-conflict <i>boolean</i>
Tree	modification-dataset-db-conflict
Configurable	False
Platforms	7250 IXR-10e, 7250 IXR-6e, 7250 IXR-X3b

modification-dataset-dbx-conflict *boolean*

Description	The forbidden database (dbx) conflict status between the modification dataset and the current running image true = conflict false = no conflict
Context	platform trust secure-boot control slot string uefi-variables-update modification-dataset-dbx-conflict <i>boolean</i>
Tree	modification-dataset-dbx-conflict
Configurable	False
Platforms	7250 IXR-10e, 7250 IXR-6e, 7250 IXR-X3b

modification-dataset-digest *binary*

Description	The SHA256 digest of the modification dataset file
Context	platform trust secure-boot control slot string uefi-variables-update modification-dataset-digest <i>binary</i>
Tree	modification-dataset-digest
Configurable	False
Platforms	7250 IXR-10e, 7250 IXR-6e, 7250 IXR-X3b

modification-dataset-present *boolean*

Description	The modification dataset is present
Context	platform trust secure-boot control slot string uefi-variables-update modification-dataset-present <i>boolean</i>
Tree	modification-dataset-present
Configurable	False
Platforms	7250 IXR-10e, 7250 IXR-6e, 7250 IXR-X3b

modification-dataset-valid *boolean*

Description	The status of the modification dataset true = the modification dataset is valid false = the modification dataset is invalid
--------------------	---

Context	platform trust secure-boot control slot <i>string</i> uefi-variables-update modification-dataset-valid <i>boolean</i>
Tree	modification-dataset-valid
Configurable	False
Platforms	7250 IXR-10e, 7250 IXR-6e, 7250 IXR-X3b

pk-update-required *boolean*

Description	The Platform Key (PK) update status compared to the modification dataset true = the Platform Key is not up to date, update required false = the Platform Key is up to date
Context	platform trust secure-boot control slot <i>string</i> uefi-variables-update pk-update-required <i>boolean</i>
Tree	pk-update-required
Configurable	False
Platforms	7250 IXR-10e, 7250 IXR-6e, 7250 IXR-X3b

up-to-date *boolean*

Description	Status of the Secure Boot variables programmed in the control module compared to the current modification dataset true = UEFI variables are up to date false = UEFI variable update required
Context	platform trust secure-boot control slot <i>string</i> uefi-variables-update up-to-date <i>boolean</i>
Tree	up-to-date
Configurable	False
Platforms	7250 IXR-10e, 7250 IXR-6e, 7250 IXR-X3b

tpm

Description	Enter the tpm context
Context	platform trust tpm
Tree	tpm
Configurable	False
Platforms	Supported on all platforms

control *slot string*

Description	TPM status, PCR indexes and certificates per control module
Context	platform trust tpm control slot string
Tree	control
Configurable	False
Platforms	Supported on all platforms

slot *string*

Description	Slot identifier for the control module. The slot identifier is the system wide unique name for the module's TPM
Context	platform trust tpm control slot string
Configurable	False
Platforms	Supported on all platforms

certificates *name string*

Description	List of TPM certificates Three main types of certificates can be accessed via this statement, including Endorsement Key Certificate (EK), Attestation Key Certificate (AK), Device ID key Certificate (DevID)
Context	platform trust tpm control slot string certificates name string
Tree	certificates
Configurable	False
Platforms	Supported on all platforms

name *string*

Description	An arbitrary name uniquely identifying a certificate associated to a key within a TPM Endorsement Key Certificate (EK): endorsement-certificate Initial Device ID Certificate (IDeVID): initial-device-id-certificate Initial Attestation Key Certificate (IAK): initial-attestation-certificate
Context	platform trust tpm control slot string certificates name string
Configurable	False
Platforms	Supported on all platforms

data *binary*

Description	DER encoded X.509 certificate
Context	platform trust tpm control slot <i>string</i> certificates name <i>string</i> data <i>binary</i>
Tree	data
Configurable	False
Platforms	Supported on all platforms

nv-index *number*

Description	NV index for the certificate
Context	platform trust tpm control slot <i>string</i> certificates name <i>string</i> nv-index <i>number</i>
Tree	nv-index
Configurable	False
Platforms	Supported on all platforms

oper-state *keyword*

Description	TPM chip self-test status
Context	platform trust tpm control slot <i>string</i> oper-state <i>keyword</i>
Tree	oper-state
Options	<ul style="list-style-type: none"> • up The TPM currently is running normally and is ready to accept and process TPM quotes • down TPM is in a state such as startup or shutdown which precludes the processing of TPM quotes
Configurable	False
Platforms	Supported on all platforms

tpm20-pcr-bank [tpm20-hash-algo](#) *string*

Description	Specifies the list of PCRs that may be extracted for a specific Hash Algorithm A TPM2.0 bank is a set of PCRs which are extended using a particular hash algorithm
Context	platform trust tpm control slot <i>string</i> tpm20-pcr-bank tpm20-hash-algo <i>string</i>
Tree	tpm20-pcr-bank

Configurable	False
Platforms	Supported on all platforms

tpm20-hash-algo *string*

Description	The hash algorithm that is used to hash TPM2.0 PCRs
Context	platform trust tpm control slot <i>string</i> tpm20-pcr-bank tpm20-hash-algo <i>string</i>
Configurable	False
Platforms	Supported on all platforms

pcr-index *number*

Description	List the TPM2.0 PCRs available to be extracted
Context	platform trust tpm control slot <i>string</i> tpm20-pcr-bank tpm20-hash-algo <i>string</i> pcr-index <i>number</i>
Tree	pcr-index
Range	0 to 31
Configurable	False
Platforms	Supported on all platforms

9 qos

```

qos
+ buffer-management
+ buffer-allocation-profile name string
+ queues
+ pfc-queue pfc-queue-name reference
+ committed-burst-size number
+ maximum-burst-size number
+ maximum-pfc-reserved-share-bytes number
+ maximum-pfc-reserved-share-percentage number
+ pfc-off-threshold number
+ pfc-on-threshold number
+ use-dynamic-allocation boolean
+ queue queue-name reference
+ high-threshold-bytes number
+ maximum-burst-size number
+ queue-management-profile name string
+ weight-factor number
+ wred
+ wred-slope traffic-type keyword drop-probability keyword enable-ecn boolean
+ max-drop-probability-percent number
+ max-threshold number
+ max-threshold-percent number
+ min-threshold number
+ min-threshold-percent number
+ slope-enabled boolean
- weight-factor number
+ classifiers
+ dot1p-policy name string
+ dot1p value number
+ drop-probability keyword
+ forwarding-class reference
+ dscp-policy name string
+ dscp value (number | keyword)
+ drop-probability keyword
+ forwarding-class reference
+ dscp-reclassify-policy name string
+ dscp value (number | keyword)
+ forwarding-class reference
+ mpls-traffic-class-policy name string
+ traffic-class value number
+ drop-probability keyword
+ forwarding-class reference
+ multifield-classifier name string
+ entry sequence-id number
+ action
+ drop-probability keyword
+ forwarding-class reference
+ rewrite
+ set-dscp number
+ match
+ ipv4
+ destination-ip
+ address string
+ mask string
+ prefix string
+ dscp-set (number | keyword)

```



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+ first-fragment boolean
+ fragment boolean
+ icmp
+   code number
+   type (number | keyword)
+ protocol (number | keyword)
+ source-ip
+   address string
+   mask string
+   prefix string
+ ipv6
+   destination-ip
+     address string
+     mask string
+     prefix string
+   dscp-set (number | keyword)
+   icmp6
+     code number
+     type (number | keyword)
+   next-header (number | keyword)
+   source-ip
+     address string
+     mask string
+     prefix string
+ transport
+   destination-port
+     operator keyword
+     range
+       + end (number | keyword)
+       + start (number | keyword)
+     value (number | keyword)
+   source-port
+     operator keyword
+     range
+       + end (number | keyword)
+       + start (number | keyword)
+     value (number | keyword)
+   tcp-flags string
- tcam-entries
-   forwarding-complex complex-identifier string
-     input-total number
-     output-total number
-     single-instance number
+   type keyword
+ vlan-default reference
+ explicit-congestion-notification
+ ecn-dscp-policy reference
+ forwarding-classes
+ forwarding-class name string
+   output
+     + multicast-queue reference
+     + unicast-queue reference
+ input-class-map name string
+ forwarding-class name reference
+ interfaces
+ interface interface-id string
+   input
+     + classifiers
+       + classifier type keyword
+       + name reference
+     + default
+       + drop-probability keyword
+       + forwarding-class reference
+     + dot1p-policy reference

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```

+ dscp-policy reference
+ ipv4-dscp-policy reference
+ ipv6-dscp-policy reference
+ mpls-traffic-class-policy reference
+ pfc-buffer-allocation-profile reference
+ policer-templates
- policer sequence-id number
- committed-burst-size number
- committed-rate-kbps number
- maximum-burst-size number
- peak-rate-kbps number
- statistics
- accepted-octets number
- accepted-packets number
- committed-octets number
- committed-packets number
- exceeding-octets number
- exceeding-packets number
- last-clear string
- violating-octets number
- violating-packets number
+ policer-template reference
+ interface-ref
+ interface reference
+ subinterface reference
+ output
+ buffer-allocation-profile reference
- output-class-map-pending reference
+ queues
+ queue queue-name reference
- active-queue-management
- wred-slope traffic-type keyword drop-probability keyword enable-
ecn boolean
- drop boolean
- max-probability number
- max-threshold-bytes number
- min-threshold-bytes number
- forwarding-class string
- queue-depth
- high-threshold-bytes number
- last-high-threshold-time string
- maximum-burst-size number
+ queue-management-profile reference
- queue-statistics
- aggregate-statistics
- egq-dropped-octets number
- egq-dropped-packets number
- exceed-profile
- dropped-octets number
- dropped-packets number
- transmitted-octets number
- transmitted-packets number
- in-plus-profile
- dropped-octets number
- dropped-packets number
- transmitted-octets number
- transmitted-packets number
- in-profile
- dropped-octets number
- dropped-packets number
- transmitted-octets number
- transmitted-packets number
- last-clear string
- out-profile

```

```

- dropped-octets number
- dropped-packets number
- transmitted-octets number
- transmitted-packets number
- queue-depth
- high-threshold-bytes number
- last-high-threshold-time string
- virtual-output-queue slot number
- high-drop-probability
  - dropped-octets number
  - dropped-packets number
  - transmitted-octets number
  - transmitted-packets number
- low-drop-probability
  - dropped-octets number
  - dropped-packets number
  - transmitted-octets number
  - transmitted-packets number
- medium-drop-probability
  - dropped-octets number
  - dropped-packets number
  - transmitted-octets number
  - transmitted-packets number
- queue-depth
  - high-threshold-bytes number
  - last-high-threshold-time string
- per-lag-member-statistics
- member-interface member-interface-name string
- egq-dropped-octets number
- egq-dropped-packets number
- exceed-profile
  - dropped-octets number
  - dropped-packets number
  - transmitted-octets number
  - transmitted-packets number
- in-plus-profile
  - dropped-octets number
  - dropped-packets number
  - transmitted-octets number
  - transmitted-packets number
- in-profile
  - dropped-octets number
  - dropped-packets number
  - transmitted-octets number
  - transmitted-packets number
- out-profile
  - dropped-octets number
  - dropped-packets number
  - transmitted-octets number
  - transmitted-packets number
- queue-depth
  - high-threshold-bytes number
  - last-high-threshold-time string
- virtual-output-queue slot number
- high-drop-probability
  - dropped-octets number
  - dropped-packets number
  - transmitted-octets number
  - transmitted-packets number
- low-drop-probability
  - dropped-octets number
  - dropped-packets number
  - transmitted-octets number
  - transmitted-packets number

```

```

- medium-drop-probability
- dropped-octets number
- dropped-packets number
- transmitted-octets number
- transmitted-packets number
- queue-depth
- high-threshold-bytes number
- last-high-threshold-time string
- scheduling
- peak-rate-bps number
- peak-rate-percent number
- strict-priority boolean
- weight number
+ rewrite-rules
+ dot1p-policy reference
+ dscp-policy reference
+ ipv4-dscp-policy reference
+ ipv6-dscp-policy reference
+ mpls-traffic-class-policy reference
+ scheduler
+ scheduler-policy reference
+ pfc
- deadlock-detection-timer number
- oper-state keyword
+ pfc-enable boolean
+ pfc-mapping-profile reference
- pfc-queue pfc-queue-name reference
- forwarding-class reference
- pfc-committed-burst-size number
- pfc-maximum-burst-size number
- pfc-maximum-pfc-reserved-share number
- pfc-off-threshold-bytes number
- pfc-on-threshold-bytes number
- source-pfc-mac string
- statistics
- last-clear string
- pfc-priority index number
- deadlock-recovery-occurrences number
- pfc-pause-frames-generated number
- pfc-pause-frames-received number
- pfc-transitions number
- total-packet-pfc-discards number
- total-pfc-pause-frames-generated number
- total-pfc-pause-frames-received number
+ linecard slot number
+ forwarding-complex name keyword
+ input
+ pfc-buffer-reservation number
- pfc-reserved-buffer-size number
+ output
+ output-class-map name string
+ forwarding-class name reference
+ queue
+ name reference
+ re-direct-to keyword
+ pfc-mapping-profile name string
+ received-pfc-pause-frames
+ deadlock
+ detection-timer number
+ enable boolean
+ recovery-timer number
+ queue queue-name reference
+ enable-pfc boolean
+ pfc-pause-frame-priority number

```

```

+ received-traffic
+ unicast-mapping
  + pfc-queue pfc-queue-name reference
  + dot1p number
  + forwarding-class reference
  + pfc-pause-frame-priority number
+ policer-templates
+ policer-template name string
+ policer sequence-id number
  + committed-burst-size number
  + committed-rate-kbps number
  + exceed-action
  + drop-probability keyword
  + forwarding-class fc reference
  + forwarding-type keyword
  + maximum-burst-size number
  + peak-rate-kbps number
  + violate-action
  + drop
  + drop-probability keyword
  + statistics-mode keyword
+ preserve-dscp boolean
+ queues
+ pfc-queue pfc-queue-name string
  + queue-index number
+ queue name string
  + queue-index number
+ rewrite-rules
+ dot1p-policy name string
  + map forwarding-class reference
  + dot1p number
  + drop-probability drop-probability keyword
  + dot1p number
+ dscp-policy name string
  + map forwarding-class reference
  + drop-probability drop-probability keyword
  + dscp (number | keyword)
  + dscp (number | keyword)
+ ip-rewrite-policy name string
+ exceed
  + dscp (number | keyword)
  + precedence number
+ in
  + dscp (number | keyword)
  + precedence number
+ in-plus
  + dscp (number | keyword)
  + precedence number
+ out
  + dscp (number | keyword)
  + precedence number
+ mpls-traffic-class-policy name string
+ map forwarding-class reference
  + drop-probability drop-probability keyword
  + traffic-class number
  + traffic-class number
+ vxlan-outer-header-dscp-policy reference
+ scheduler-policies
+ scheduler-policy name string
+ scheduler sequence number
  + input id string
  + input-type keyword
  + peak-rate-percent number
  + queue-name reference

```

+ **weight** *number*
+ **priority** *keyword*

9.1 qos Descriptions

qos

Description	Top-level container for QoS data
Context	qos
Tree	qos
Configurable	True
Platforms	7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

buffer-management

Description	Container for the list of configured queue management profiles
Context	qos buffer-management
Tree	buffer-management
Configurable	True
Platforms	7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

buffer-allocation-profile *name string*

Description	The name of a buffer-allocation-profile
Context	qos buffer-management buffer-allocation-profile name string
Tree	buffer-allocation-profile
Configurable	True
Platforms	7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

name *string*

Description	Unique string name used for the buffer-allocation-profile
Context	qos buffer-management buffer-allocation-profile name string
String Length	1 to 255

Configurable	True
Platforms	7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

queues

Description	Buffer allocation parameters for individual queues
Context	qos buffer-management buffer-allocation-profile name <i>string</i> queues
Tree	queues
Configurable	True
Platforms	7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

[pfc-queue](#) [pfc-queue-name](#) *reference*

Description	List of pfc-queues
Context	qos buffer-management buffer-allocation-profile name <i>string</i> queues pfc-queue pfc-queue-name <i>reference</i>
Tree	pfc-queue
Configurable	True
Platforms	7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H4, 7250 IXR-10e, 7250 IXR-6e, 7250 IXR-X3b

[pfc-queue-name](#) *reference*

Description	The pfc-queue name
Context	qos buffer-management buffer-allocation-profile name <i>string</i> queues pfc-queue pfc-queue-name <i>reference</i>
Reference	qos queues pfc-queue pfc-queue-name <i>string</i>
Configurable	True
Platforms	7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H4, 7250 IXR-10e, 7250 IXR-6e, 7250 IXR-X3b

[committed-burst-size](#) *number*

Description	Reserved amount of buffer memory available for the given pfc-queue
--------------------	--

Context	qos buffer-management buffer-allocation-profile name <i>string</i> queues pfc-queue pfc-queue-name <i>reference</i> committed-burst-size <i>number</i>
Tree	committed-burst-size
Range	1536 to 262144
Default	102400
Units	bytes
Configurable	True
Platforms	7250 IXR-10e, 7250 IXR-6e, 7250 IXR-X3b

maximum-burst-size *number*

Description	Maximum amount of shared buffer memory available for the given pfc-queue
Context	qos buffer-management buffer-allocation-profile name <i>string</i> queues pfc-queue pfc-queue-name <i>reference</i> maximum-burst-size <i>number</i>
Tree	maximum-burst-size
Default	51200
Units	bytes
Configurable	True
Platforms	7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H4

maximum-pfc-reserved-share-bytes *number*

Description	Maximum level the pfc-queue can take from pfc-reserved buffer configured per given forwarding-complex expressed as bytes. If this value is configured, maximum-pfc-reserved-share-percentage value is ignored
Context	qos buffer-management buffer-allocation-profile name <i>string</i> queues pfc-queue pfc-queue-name <i>reference</i> maximum-pfc-reserved-share-bytes <i>number</i>
Tree	maximum-pfc-reserved-share-bytes
Range	0 to 104857600
Units	bytes
Configurable	True
Platforms	7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H4, 7250 IXR-10e, 7250 IXR-6e, 7250 IXR-X3b

maximum-pfc-reserved-share-percentage *number*

Description	Maximum level the pfc-queue can take from pfc-reserved buffer configured per given forwarding-complex
Context	qos buffer-management buffer-allocation-profile name <i>string</i> queues pfc-queue pfc-queue-name <i>reference</i> maximum-pfc-reserved-share-percentage <i>number</i>
Tree	maximum-pfc-reserved-share-percentage
Range	0 to 100
Default	10
Configurable	True
Platforms	7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H4, 7250 IXR-10e, 7250 IXR-6e, 7250 IXR-X3b

pfc-off-threshold *number*

Description	Defines the pfc-queue depth at which pfc-pause-frames will stop be generated. It is expressed as percentage of maximum-burst-size or committed-burst-size, respectively
Context	qos buffer-management buffer-allocation-profile name <i>string</i> queues pfc-queue pfc-queue-name <i>reference</i> pfc-off-threshold <i>number</i>
Tree	pfc-off-threshold
Range	0 to 100
Default	80
Configurable	True
Platforms	7250 IXR-10e, 7250 IXR-6e, 7250 IXR-X3b

pfc-on-threshold *number*

Description	Defines the pfc-queue depth at which pfc-pause-frames generation will start. It is expressed as percentage of maximum-burst-size or committed-burst-size, respectively
Context	qos buffer-management buffer-allocation-profile name <i>string</i> queues pfc-queue pfc-queue-name <i>reference</i> pfc-on-threshold <i>number</i>
Tree	pfc-on-threshold
Range	0 to 100
Default	100
Configurable	True

Platforms 7250 IXR-10e, 7250 IXR-6e, 7250 IXR-X3b

use-dynamic-allocation *boolean*

Description Enables dynamic allocation of the buffer space
MBS statement is ignored, if enabled

Context [qos buffer-management buffer-allocation-profile name](#) *string* [queues pfc-queue pfc-queue-name](#) *reference* [use-dynamic-allocation](#) *boolean*

Tree [use-dynamic-allocation](#)

Configurable True

Platforms qos-pfc-dynamic-buffer-allocation

queue [queue-name](#) *reference*

Description List of queues

Context [qos buffer-management buffer-allocation-profile name](#) *string* [queues queue](#) [queue-name](#) *reference*

Tree [queue](#)

Configurable True

Platforms 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

queue-name *reference*

Description The queue name

Context [qos buffer-management buffer-allocation-profile name](#) *string* [queues queue](#) [queue-name](#) *reference*

Reference [qos queues queue name](#) *string*

Configurable True

Platforms 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

high-threshold-bytes *number*

Description The queue depth that, when crossed in a rising direction, triggers a hardware interrupt and a recording of the current system time.

The default value of 0 disables the functionality.

On IXR-6/10 this parameter applies to a set of VOQs (and therefore to unicast traffic only). On 7220-D2/D3/H2/H3 this parameter applies to a unicast queue only; the configuration of this leaf is ignored when the queue-template is attached to a queue with queue-type other than unicast.

On 7220-D2/D3 the threshold is rounded up the nearest multiple of 2048 bytes. On IXR-6/10 the threshold is rounded up to the nearest multiple of 4096 bytes. On 7220-H2/H3 the threshold is rounded up to the nearest multiple of 254 bytes

Context	qos buffer-management buffer-allocation-profile name <i>string</i> queues queue queue-name <i>reference</i> high-threshold-bytes <i>number</i>
Tree	high-threshold-bytes
Default	0
Configurable	True
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-H2, 7220 IXR-H3, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

maximum-burst-size *number*

Description	<p>Maximum amount of shared buffer memory available to the queue.</p> <p>On IXR-6/10 this parameter applies to a set of VOQs. If the configured value is 0 or no value is configured the limit is 256 MB (268435456 bytes), however the use of 'alpha' may limit the effective value to less than 256 MB. A configured non-zero value sets a static limit without 'alpha'.</p> <p>On 7220-D2/D3/D5/H2/H3 this parameter applies to an egress queue and the default value of zero instructs the forwarding chip to apply its own limit based on 'alpha'. A non-zero value disables 'alpha'. The alpha value is 5 (0.25 multiplier of shared buffer space) for unicast queues and 4 (0.125 multiplier of shared buffer space) for multicast queues.</p> <p>On 7730 this parameter applies to egress-queue and setting value to 0 means default value (still need to determine that)</p> <p>Must be non-zero/non-default in order to add the active-queue-management presence container</p>
Context	qos buffer-management buffer-allocation-profile name <i>string</i> queues queue queue-name <i>reference</i> maximum-burst-size <i>number</i>
Tree	maximum-burst-size
Default	0
Units	bytes
Configurable	True

Platforms 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

queue-management-profile *name string*

Description The name of a queue management profile

Context [qos buffer-management queue-management-profile name string](#)

Tree [queue-management-profile](#)

Configurable True

Platforms 7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

name *string*

Description Unique string name used for the queue management profile

Context [qos buffer-management queue-management-profile name string](#)

String Length 1 to 255

Configurable True

Platforms 7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

weight-factor *number*

Description Weight factor to use in the calculation of the current (average weighted) queue depth

Context [qos buffer-management queue-management-profile name string weight-factor number](#)

Tree [weight-factor](#)

Range 0 to 15

Default 0

Configurable True

Platforms 7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

wred

Description	Configuration and operational state parameters relating to Weighted Random Early Detection (WRED)
Context	qos buffer-management queue-management-profile name <i>string</i> wred
Tree	wred
Configurable	True
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

wred-slope [traffic-type](#) *keyword* **drop-probability** *keyword* **enable-ecn** *boolean*

Description	List of WRED slopes
Context	qos buffer-management queue-management-profile name <i>string</i> wred wred-slope traffic-type <i>keyword</i> drop-probability <i>keyword</i> enable-ecn <i>boolean</i>
Tree	wred-slope
Configurable	True
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

traffic-type *keyword*

Description	The traffic type to which the WRED slope applies
Context	qos buffer-management queue-management-profile name <i>string</i> wred wred-slope traffic-type <i>keyword</i> drop-probability <i>keyword</i> enable-ecn <i>boolean</i>
Options	<ul style="list-style-type: none"> • tcp Refers to IPv4/IPv6 packets with a protocol/next-header indicating a value of 6 • non-tcp Refers to all packets that are not IPv4/IPv6 packets with a protocol/next-header indicating a value of 6 • all Refers to all traffic, whether it is TCP or non-TCP
Configurable	True
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

drop-probability *keyword*

Description	The drop probability to which the WRED slope applies
Context	qos buffer-management queue-management-profile name <i>string</i> wred wred-slope traffic-type <i>keyword</i> drop-probability <i>keyword</i> enable-ecn <i>boolean</i>
Options	<ul style="list-style-type: none"> • low Traffic that should be dropped last when there is congestion. Internally this is traffic that is colored green • medium Traffic that should be dropped before green traffic but after red traffic when there is congestion. Internally this is traffic that is colored yellow • high Traffic that should be dropped first when there is congestion. Internally this is traffic that is colored red • all All traffic, consisting of traffic marked low, medium and high drop-probability
Configurable	True
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

enable-ecn *boolean*

Description	When this leaf is true and the number of packets in the queue is between the minimum threshold and the maximum threshold, if the ECN field on the packet indicates that the endpoints are ECN capable and the WRED algorithm determines that the packet should have been dropped based on the drop probability, the CE bits for the packet are changed to 1, and the packet is transmitted. When set to false, the such packets will be discarded based on wred-slope
Context	qos buffer-management queue-management-profile name <i>string</i> wred wred-slope traffic-type <i>keyword</i> drop-probability <i>keyword</i> enable-ecn <i>boolean</i>
Configurable	True
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

max-drop-probability-percent *number*

Description	The probability with which packets are dropped or marked at max-threshold
Context	qos buffer-management queue-management-profile name <i>string</i> wred wred-slope traffic-type <i>keyword</i> drop-probability <i>keyword</i> enable-ecn <i>boolean</i> max-drop-probability-percent <i>number</i>
Tree	max-drop-probability-percent
Range	0 to 100
Configurable	True
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

max-threshold *number*

Description	The maximum threshold parameter for a RED-managed queue. When the average queue length exceeds the max-threshold, the packets are dropped (or marked if ECN is enabled). When both, 'drop' and 'ecn-enable' flags are set to false, packets will be drop only if the mbs of the queue is reached
Context	qos buffer-management queue-management-profile name <i>string</i> wred wred-slope traffic-type <i>keyword</i> drop-probability <i>keyword</i> enable-ecn <i>boolean</i> max-threshold <i>number</i>
Tree	max-threshold
Units	bytes
Configurable	True
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

max-threshold-percent *number*

Description	The percentage of the MBS that corresponds to the WRED maximum threshold parameter
Context	qos buffer-management queue-management-profile name <i>string</i> wred wred-slope traffic-type <i>keyword</i> drop-probability <i>keyword</i> enable-ecn <i>boolean</i> max-threshold-percent <i>number</i>
Tree	max-threshold-percent
Range	0 to 100
Configurable	True

Platforms 7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

min-threshold *number*

Description The minimum threshold parameter for a RED-managed queue. When the average queue length is less than min-threshold, the packets are admitted to the queue (without any ECN marking change)

Context [qos buffer-management queue-management-profile name](#) *string* [wred wred-slope traffic-type](#) *keyword* [drop-probability](#) *keyword* [enable-ecn](#) *boolean* [min-threshold](#) *number*

Tree [min-threshold](#)

Units bytes

Configurable True

Platforms 7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

min-threshold-percent *number*

Description The percentage of the MBS that corresponds to the WRED minimum threshold parameter

Context [qos buffer-management queue-management-profile name](#) *string* [wred wred-slope traffic-type](#) *keyword* [drop-probability](#) *keyword* [enable-ecn](#) *boolean* [min-threshold-percent](#) *number*

Tree [min-threshold-percent](#)

Range 0 to 100

Configurable True

Platforms 7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

slope-enabled *boolean*

Description Reads true if traffic is dropped by WRED

Context [qos buffer-management queue-management-profile name](#) *string* [wred wred-slope traffic-type](#) *keyword* [drop-probability](#) *keyword* [enable-ecn](#) *boolean* [slope-enabled](#) *boolean*

Tree [slope-enabled](#)

Configurable	True
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

weight-factor *number*

Description	Actual Weight factor used in the calculation of the current (average weighted) queue depth
Context	qos buffer-management queue-management-profile name <i>string</i> wred wred-slope traffic-type keyword drop-probability keyword enable-ecn <i>boolean</i> weight-factor <i>number</i>
Tree	weight-factor
Range	0 to 15
Configurable	False
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

classifiers

Description	Enter the classifiers context
Context	qos classifiers
Tree	classifiers
Configurable	True
Platforms	7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

dot1p-policy *name string*

Description	Enter the dot1p-policy list instance
Context	qos classifiers dot1p-policy name <i>string</i>
Tree	dot1p-policy
Configurable	True
Platforms	7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5

name *string*

Description	User-configured name for a 802.1p priority code point mapping policy The name 'default' is reserved for the system default dot1p mapping policy
Context	qos classifiers dot1p-policy name <i>string</i>
String Length	1 to 255
Configurable	True
Platforms	7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5

dot1p *value number*

Description	Enter the dot1p list instance
Context	qos classifiers dot1p-policy name <i>string</i> dot1p value <i>number</i>
Tree	dot1p
Configurable	True
Platforms	7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5

value *number*

Description	Enter the value context
Context	qos classifiers dot1p-policy name <i>string</i> dot1p value <i>number</i>
Range	0 to 7
Configurable	True
Platforms	7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5

drop-probability *keyword*

Description	The drop probability to which the dot1p value is mapped
Context	qos classifiers dot1p-policy name <i>string</i> dot1p value <i>number</i> drop-probability <i>keyword</i>
Tree	drop-probability
Options	<ul style="list-style-type: none"> low <p>Traffic that should be dropped last when there is congestion. Internally this is traffic that is colored green.</p>

- medium
Traffic that should be dropped before green traffic but after red traffic when there is congestion. Internally this is traffic that is colored yellow.
- high
Traffic that should be dropped first when there is congestion. Internally this is traffic that is colored red.

Configurable	True
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

forwarding-class *reference*

Description	The forwarding class
Context	qos classifiers dot1p-policy name string dot1p value number forwarding-class reference
Tree	forwarding-class
Reference	qos forwarding-classes forwarding-class name string
Configurable	True
Platforms	7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5

dscp-policy name *string*

Description	Enter the dscp-policy list instance
Context	qos classifiers dscp-policy name string
Tree	dscp-policy
Configurable	True
Platforms	7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

name *string*

Description	User-configured name for a DSCP mapping policy The name 'default' is reserved for the system default DSCP mapping policy
Context	qos classifiers dscp-policy name string
String Length	1 to 255

Configurable	True
Platforms	7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

dscp value (*number* | *keyword*)

Description	Enter the dscp list instance
Context	qos classifiers dscp-policy name <i>string</i> dscp value (<i>number</i> <i>keyword</i>)
Tree	dscp
Configurable	True
Platforms	7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

value (*number* | *keyword*)

Description	Enter the value context
Context	qos classifiers dscp-policy name <i>string</i> dscp value (<i>number</i> <i>keyword</i>)
Range	0 to 63
Options	<ul style="list-style-type: none"> • CS0 • LE • CS1 • AF11 • AF12 • AF13 • CS2 • AF21 • AF22 • AF23 • CS3 • AF31 • AF32 • AF33 • CS4 • AF41 • AF42

	<ul style="list-style-type: none"> • AF43 • CS5 • EF • CS6 • CS7
Configurable	True
Platforms	7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

drop-probability *keyword*

Description	The drop probability to which the DSCP value is mapped
Context	qos classifiers dscp-policy name string dscp value (number keyword) drop-probability keyword
Tree	drop-probability
Options	<ul style="list-style-type: none"> • low Traffic that should be dropped last when there is congestion. Internally this is traffic that is colored green. • medium Traffic that should be dropped before green traffic but after red traffic when there is congestion. Internally this is traffic that is colored yellow. • high Traffic that should be dropped first when there is congestion. Internally this is traffic that is colored red.
Configurable	True
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

forwarding-class *reference*

Description	The forwarding class
Context	qos classifiers dscp-policy name string dscp value (number keyword) forwarding-class reference
Tree	forwarding-class
Reference	qos forwarding-classes forwarding-class name string
Configurable	True

Platforms 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

dscp-reclassify-policy *name string*

Description Egress DSCP reclassification policy

Context [qos classifiers dscp-reclassify-policy name string](#)

Tree [dscp-reclassify-policy](#)

Configurable True

Platforms 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

name *string*

Description Name of egress dscp-reclassifier policy

Context [qos classifiers dscp-reclassify-policy name string](#)

String Length 1 to 255

Configurable True

Platforms 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

dscp *value (number | keyword)*

Description Enter the dscp list instance

Context [qos classifiers dscp-reclassify-policy name string dscp value \(number | keyword\)](#)

Tree [dscp](#)

Configurable True

Platforms 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

value *(number | keyword)*

Description Enter the value context

Context	qos classifiers dscp-reclassify-policy name <i>string</i> dscp value (<i>number keyword</i>)
Range	0 to 63
Options	<ul style="list-style-type: none"> • CS0 • LE • CS1 • AF11 • AF12 • AF13 • CS2 • AF21 • AF22 • AF23 • CS3 • AF31 • AF32 • AF33 • CS4 • AF41 • AF42 • AF43 • CS5 • EF • CS6 • CS7
Configurable	True
Platforms	7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

forwarding-class *reference*

Description	The forwarding class
Context	qos classifiers dscp-reclassify-policy name <i>string</i> dscp value (<i>number keyword</i>) forwarding-class <i>reference</i>
Tree	forwarding-class
Reference	qos forwarding-classes forwarding-class name <i>string</i>

Configurable	True
Platforms	7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

mpls-traffic-class-policy *name string*

Description	Enter the mpls-traffic-class-policy list instance
Context	qos classifiers mpls-traffic-class-policy name string
Tree	mpls-traffic-class-policy
Configurable	True
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

name *string*

Description	User-configured name for an MPLS traffic-class mapping policy The name 'default' is reserved for the system default MPLS TC mapping policy
Context	qos classifiers mpls-traffic-class-policy name string
String Length	1 to 255
Configurable	True
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

traffic-class *value number*

Description	Enter the traffic-class list instance
Context	qos classifiers mpls-traffic-class-policy name string traffic-class value number
Tree	traffic-class
Configurable	True
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

value *number*

Description	A single traffic-class value
Context	qos classifiers mpls-traffic-class-policy name string traffic-class value number

Range	0 to 7
Configurable	True
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

drop-probability *keyword*

Description	The drop probability to which the traffic-class value is mapped
Context	qos classifiers mpls-traffic-class-policy name <i>string</i> traffic-class value <i>number</i> drop-probability keyword
Tree	drop-probability
Options	<ul style="list-style-type: none"> low Traffic that should be dropped last when there is congestion. Internally this is traffic that is colored green. medium Traffic that should be dropped before green traffic but after red traffic when there is congestion. Internally this is traffic that is colored yellow. high Traffic that should be dropped first when there is congestion. Internally this is traffic that is colored red.
Configurable	True
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

forwarding-class *reference*

Description	The forwarding class
Context	qos classifiers mpls-traffic-class-policy name <i>string</i> traffic-class value <i>number</i> forwarding-class reference
Tree	forwarding-class
Reference	qos forwarding-classes forwarding-class name <i>string</i>
Configurable	True
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

multifield-classifier [name string](#)

Description	List of multifield-classifier QoS policies
Context	qos classifiers multifield-classifier name <i>string</i>

Tree	multifield-classifier
Configurable	True
Platforms	7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

name string

Description	The name of multifield-classifier QoS policy
Context	qos classifiers multifield-classifier name string
String Length	1 to 255
Configurable	True
Platforms	7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

entry sequence-id number

Description	List of individual QoS multifield-classifier entries
Context	qos classifiers multifield-classifier name string entry sequence-id number
Tree	entry
Configurable	True
Platforms	7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

sequence-id number

Description	A number to indicate the relative evaluation order of the different terms; lower numbered terms are evaluated before higher numbered terms
Context	qos classifiers multifield-classifier name string entry sequence-id number
Range	0 to 65535
Configurable	True
Platforms	7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

action

Description	Container for the actions to be applied to packets matching the classifier entry.
Context	qos classifiers multifield-classifier name <i>string</i> entry sequence-id <i>number</i> action
Tree	action
Configurable	True
Platforms	7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

drop-probability *keyword*

Description	Assign matching packets to the specified drop probability level The implicit default, if not specified, is low drop-probability.
Context	qos classifiers multifield-classifier name <i>string</i> entry sequence-id <i>number</i> action drop-probability <i>keyword</i>
Tree	drop-probability
Options	<ul style="list-style-type: none"> low Traffic that should be dropped last when there is congestion. Internally this is traffic that is colored green. medium Traffic that should be dropped before green traffic but after red traffic when there is congestion. Internally this is traffic that is colored yellow. high Traffic that should be dropped first when there is congestion. Internally this is traffic that is colored red.
Configurable	True
Platforms	Supported on all platforms

forwarding-class *reference*

Description	The forwarding class to which the DSCP value is mapped
Context	qos classifiers multifield-classifier name <i>string</i> entry sequence-id <i>number</i> action forwarding-class <i>reference</i>
Tree	forwarding-class
Reference	qos forwarding-classes forwarding-class name <i>string</i>

Configurable	True
Platforms	7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

rewrite

Description	Rewrite actions associated with packets that match the classifier entry. Where a packet matches these criteria, the specified rewrite actions should be performed.
Context	qos classifiers multifield-classifier name <i>string</i> entry sequence-id <i>number</i> action rewrite
Tree	rewrite
Configurable	True
Platforms	Supported on all platforms except 7250

set-dscp *number*

Description	Sets the 6-bit DSCP (differentiated services code point) value in the IP packet header.
Context	qos classifiers multifield-classifier name <i>string</i> entry sequence-id <i>number</i> action rewrite set-dscp <i>number</i>
Tree	set-dscp
Range	0 to 63
Configurable	True
Platforms	Supported on all platforms except 7250

match

Description	Matching conditions for QoS multifield-classifier
Context	qos classifiers multifield-classifier name <i>string</i> entry sequence-id <i>number</i> match
Tree	match
Configurable	True
Platforms	7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

ipv4

Description	Container for the layer-3 IPv4 match criteria
Context	qos classifiers multifield-classifier name <i>string</i> entry sequence-id <i>number</i> match ipv4
Tree	ipv4
Configurable	True
Platforms	7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

destination-ip

Description	Packet matching criteria based on destination IPv4 address
Context	qos classifiers multifield-classifier name <i>string</i> entry sequence-id <i>number</i> match ipv4 destination-ip
Tree	destination-ip
Configurable	True
Platforms	7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

address *string*

Description	Match a packet if its destination IP address logically anded with the inverse of the mask equals this IP address.
Context	qos classifiers multifield-classifier name <i>string</i> entry sequence-id <i>number</i> match ipv4 destination-ip address <i>string</i>
Tree	address
Configurable	True
Platforms	7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

mask *string*

Description	Match a packet if its destination IP address logically anded with the inverse of this mask equals the configured IP address.
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Context	qos classifiers multifield-classifier name string entry sequence-id number match ipv4 destination-ip mask string
Tree	mask
Configurable	True
Platforms	7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

prefix string

Description	Match a packet if its destination IP address is within the specified IPv4 prefix.
Context	qos classifiers multifield-classifier name string entry sequence-id number match ipv4 destination-ip prefix string
Tree	prefix
Configurable	True
Platforms	7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

dscp-set (number | keyword)

Description	A list of DSCP values to be matched for incoming packets. An OR match should be performed, such that a packet must match one of the values defined in this list. If the field is left empty then any DSCP value matches.
Context	qos classifiers multifield-classifier name string entry sequence-id number match ipv4 dscp-set (number keyword)
Tree	dscp-set
Range	0 to 63
Options	<ul style="list-style-type: none"> • CS0 • LE • CS1 • AF11 • AF12 • AF13 • CS2 • AF21 • AF22 • AF23

- CS3
- AF31
- AF32
- AF33
- CS4
- AF41
- AF42
- AF43
- CS5
- EF
- CS6
- CS7

Configurable

True

Platforms

7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

first-fragment *boolean***Description**

Match the first fragment of an IPv4 datagram

A packet matches the true condition if the IPv4 header indicates that the fragment-offset is zero and the more-fragments bit is 1. It is not valid to configure this leaf without configuring a match value for the fragment leaf.

Context

[qos classifiers multifield-classifier name string entry sequence-id number match ipv4 first-fragment boolean](#)

Tree

[first-fragment](#)

Configurable

True

Platforms

7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

fragment *boolean***Description**

Match an IPv4 fragment

A packet matches the true condition if the IPv4 header indicates that the fragment-offset is zero and the more-fragments bit is 1 or if the IPv4 header indicates that the fragment-offset is greater than 0. A packet matches the false condition if it is unfragmented.

Context	qos classifiers multifield-classifier name <i>string</i> entry sequence-id <i>number</i> match ipv4 fragment <i>boolean</i>
Tree	fragment
Configurable	True
Platforms	7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

icmp

Description	A packet matches this condition if its ICMP type and code matches one of the specified combinations The rule should also have a condition that the IP protocol equals 1 (ICMP) in order for this to be interpreted correctly.
Context	qos classifiers multifield-classifier name <i>string</i> entry sequence-id <i>number</i> match ipv4 icmp
Tree	icmp
Configurable	True
Platforms	7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

code number

Description	Match if the ICMP code value is any value in the list Requires ICMP type to be specified because codes are type dependent.
Context	qos classifiers multifield-classifier name <i>string</i> entry sequence-id <i>number</i> match ipv4 icmp code <i>number</i>
Tree	code
Configurable	True
Platforms	7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

type (*number* | *keyword*)

Description	Match a single ICMP type value.
Context	qos classifiers multifield-classifier name <i>string</i> entry sequence-id <i>number</i> match ipv4 icmp type (<i>number</i> <i>keyword</i>)

Tree	type
Range	0 to 255
Options	<ul style="list-style-type: none"> • echo-reply ICMP Echo Reply • dest-unreachable ICMP Destination Unreachable • source-quench ICMP Source Quench • redirect ICMP Redirect • echo ICMP Echo • router-advertise ICMP Router Advertisement • router-solicit ICMP Router Solicitation • time-exceeded ICMP Time Exceeded • param-problem ICMP Parameter Problem • timestamp ICMP Timestamp • timestamp-reply ICMP Timestamp Reply
Configurable	True
Platforms	7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

protocol (*number* | *keyword*)

Description	An IPv4 packet matches this condition if its IP protocol type field matches the specified value
Context	qos classifiers multifield-classifier name string entry sequence-id number match ipv4 protocol (<i>number</i> <i>keyword</i>)
Tree	protocol
Range	0 to 255

Options

- ipv6-hop
IPv6 hop-by-hop option
- icmp
Internet Control Message Protocol
- igmp
Internet Group Management Protocol
- ggp
Gateway-to-Gateway Protocol
- ipv4
IPv4 encapsulation
- st
Stream Protocol
- tcp
Transmission Control Protocol
- egp
Exterior Gateway Protocol
- igp
Interior Gateway Protocol
- udp
User Datagram Protocol
- ipv6
IPv6 encapsulation
- idrp
Inter-Domain Routing Protocol
- rsvp
Resource Reservation Protocol
- gre
Generic Routing Encapsulation
- esp
IPSec Encapsulating Security Payload
- ah
IPSec Authentication Header
- icmp6
IPSec Authentication Header
- no-next-hdr
No Next Header for IPv6

- ipv6-dest-opts
Destination Options for IPv6
- eigrp
Cisco EIGRP
- ospf
OSPFv2 and OSPFv3
- pim
Protocol Independent Multicast
- vrrp
Virtual Router Redundancy Protocol
- l2tp
Layer Two Tunneling Protocol
- sctp
Stream Control Transmission Protocol
- mpls-in-ip
MPLS Encapsulation inside IP
- rohc
Robust Header Compression

Configurable

True

Platforms

7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

source-ip**Description**

Packet matching criteria based on source IPv4 address

Context[qos classifiers multifield-classifier name string entry sequence-id number match ipv4 source-ip](#)**Tree**[source-ip](#)**Configurable**

True

Platforms

7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

address string**Description**

Match a packet if its source IP address logically anded with the inverse of the mask equals this IP address.

Context	qos classifiers multifield-classifier name string entry sequence-id number match ipv4 source-ip address string
Tree	address
Configurable	True
Platforms	7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

mask string

Description	Match a packet if its source IP address logically anded with the inverse of this mask equals the configured IP address.
Context	qos classifiers multifield-classifier name string entry sequence-id number match ipv4 source-ip mask string
Tree	mask
Configurable	True
Platforms	7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

prefix string

Description	Match a packet if its source IP address is within the specified IPv4 prefix.
Context	qos classifiers multifield-classifier name string entry sequence-id number match ipv4 source-ip prefix string
Tree	prefix
Configurable	True
Platforms	7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

ipv6

Description	Container for the layer-3 IPv6 match criteria
Context	qos classifiers multifield-classifier name string entry sequence-id number match ipv6
Tree	ipv6
Configurable	True

Platforms 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

destination-ip

Description Packet matching criteria based on destination IPv6 address

Context [qos classifiers multifield-classifier name string entry sequence-id number match ipv6 destination-ip](#)

Tree [destination-ip](#)

Configurable True

Platforms 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

address string

Description Match a packet if its destination IP address logically anded with the inverse of the mask equals this IP address.

Context [qos classifiers multifield-classifier name string entry sequence-id number match ipv6 destination-ip address string](#)

Tree [address](#)

Configurable True

Platforms 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

mask string

Description Match a packet if its destination IP address logically anded with the inverse of this mask equals the configured IP address.

Context [qos classifiers multifield-classifier name string entry sequence-id number match ipv6 destination-ip mask string](#)

Tree [mask](#)

Configurable True

Platforms 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

prefix string

Description	Match a packet if its destination IP address is within the specified IPv6 prefix.
Context	qos classifiers multifield-classifier name string entry sequence-id number match ipv6 destination-ip prefix string
Tree	prefix
Configurable	True
Platforms	7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

dscp-set (number | keyword)

Description	A list of DSCP values to be matched for incoming packets. An OR match should be performed, such that a packet must match one of the values defined in this list. If the field is left empty then any DSCP value matches.
Context	qos classifiers multifield-classifier name string entry sequence-id number match ipv6 dscp-set (number keyword)
Tree	dscp-set
Range	0 to 63
Options	<ul style="list-style-type: none"> • CS0 • LE • CS1 • AF11 • AF12 • AF13 • CS2 • AF21 • AF22 • AF23 • CS3 • AF31 • AF32 • AF33 • CS4 • AF41 • AF42 • AF43

- CS5
- EF
- CS6
- CS7

Configurable

True

Platforms

7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

icmp6**Description**

A packet matches this condition if its ICMPv6 type and code matches one of the specified combinations

The rule should also have a condition that the next-header value equals 58 (ICMPv6) in order for this to be interpreted correctly.

Context

[qos classifiers multifield-classifier name](#) *string* [entry sequence-id](#) *number* [match ipv6 icmp6](#)

Tree[icmp6](#)**Configurable**

True

Platforms

7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

code number**Description**

Match if the ICMPv6 code value is any value in the list

Requires ICMPv6 type to be specified because codes are type dependent.

Context

[qos classifiers multifield-classifier name](#) *string* [entry sequence-id](#) *number* [match ipv6 icmp6 code](#) *number*

Tree[code](#)**Configurable**

True

Platforms

7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

type (number | keyword)**Description**

Match a single ICMPv6 type value

Context	<code>qos classifiers multifield-classifier name string entry sequence-id number match ipv6 icmp6 type (number keyword)</code>
Tree	<code>type</code>
Range	0 to 255
Options	<ul style="list-style-type: none"> • <code>dest-unreachable</code> ICMPv6 Destination Unreachable • <code>packet-too-big</code> ICMPv6 Packet Too Big • <code>time-exceeded</code> ICMPv6 Time Exceeded • <code>param-problem</code> Parameter Problem • <code>echo-request</code> ICMPv6 Echo Request • <code>echo-reply</code> ICMPv6 Echo Reply • <code>mld-query</code> Multicast Listener Discovery Query • <code>mld-report</code> Multicast Listener Discovery Report • <code>mld-done</code> Multicast Listener Discovery Done • <code>router-solicit</code> ICMPv6 Router Solicitation • <code>router-advertise</code> ICMPv6 Router Advertisement • <code>neighbor-solicit</code> ICMPv6 Neighbor Solicitation • <code>neighbor-advertise</code> ICMPv6 Neighbor Advertisement • <code>redirect</code> ICMPv6 Redirect • <code>router-renumber</code> ICMPv6 Router Renumbering • <code>node-info-query</code> ICMPv6 Node Information Query

- node-info-response
ICMPv6 Node Information Response
- mld-v2
Multicast Listener Discovery Version 2
- mcast-rtr-adv
Multicast Router Advertisement
- mcast-rtr-solicit
Multicast Router Solicitation
- mcast-rtr-term
Multicast Router Termination

Configurable

True

Platforms

7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

next-header (*number* | *keyword*)**Description**

An IPv6 packet matches this condition if its first next-header field (in the IPv6 fixed header) contains the specified value

Context

[qos classifiers multifield-classifier name string entry sequence-id number match ipv6 next-header](#) (*number* | *keyword*)

Tree

[next-header](#)

Range

0 to 255

Options

- ipv6-hop
IPv6 hop-by-hop option
- icmp
Internet Control Message Protocol
- igmp
Internet Group Management Protocol
- ggp
Gateway-to-Gateway Protocol
- ipv4
IPv4 encapsulation
- st
Stream Protocol
- tcp
Transmission Control Protocol

- `egp`
Exterior Gateway Protocol
- `igp`
Interior Gateway Protocol
- `udp`
User Datagram Protocol
- `ipv6`
IPv6 encapsulation
- `idrp`
Inter-Domain Routing Protocol
- `rsvp`
Resource Reservation Protocol
- `gre`
Generic Routing Encapsulation
- `esp`
IPSec Encapsulating Security Payload
- `ah`
IPSec Authentication Header
- `icmp6`
IPSec Authentication Header
- `no-next-hdr`
No Next Header for IPv6
- `ipv6-dest-opts`
Destination Options for IPv6
- `eigrp`
Cisco EIGRP
- `ospf`
OSPFv2 and OSPFv3
- `pim`
Protocol Independent Multicast
- `vrrp`
Virtual Router Redundancy Protocol
- `l2tp`
Layer Two Tunneling Protocol
- `sctp`
Stream Control Transmission Protocol

- `mpls-in-ip`
MPLS Encapsulation inside IP
- `rohc`
Robust Header Compression

Configurable True

Platforms 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

source-ip

Description Packet matching criteria based on source IPv6 address

Context `qos classifiers multifield-classifier name string entry sequence-id number match ipv6 source-ip`

Tree `source-ip`

Configurable True

Platforms 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

address string

Description Match a packet if its source IP address logically anded with the inverse of the mask equals this IP address.

Context `qos classifiers multifield-classifier name string entry sequence-id number match ipv6 source-ip address string`

Tree `address`

Configurable True

Platforms 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

mask string

Description Match a packet if its source IP address logically anded with the inverse of this mask equals the configured IP address.

Context `qos classifiers multifield-classifier name string entry sequence-id number match ipv6 source-ip mask string`

Tree `mask`

Configurable	True
Platforms	7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

prefix string

Description	Match a packet if its source IP address is within the specified IPv6 prefix.
Context	qos classifiers multifield-classifier name string entry sequence-id number match ipv6 source-ip prefix string
Tree	prefix
Configurable	True
Platforms	7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

transport

Description	Container for the layer-4 transport match criteria
Context	qos classifiers multifield-classifier name string entry sequence-id number match transport
Tree	transport
Configurable	True
Platforms	7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

destination-port

Description	A packet matches this condition if its destination TCP or UDP port number matches the value or range that is specified The rule should also have a condition that the IP protocol equals 6 (TCP) or 17 (UDP) in order for this to be interpreted correctly.
Context	qos classifiers multifield-classifier name string entry sequence-id number match transport destination-port
Tree	destination-port
Configurable	True
Platforms	7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

operator *keyword*

Description	Comparison operator eq = equal ge = greater than or equal to le = less than or equal to
Context	qos classifiers multifield-classifier name <i>string</i> entry sequence-id <i>number</i> match transport destination-port operator <i>keyword</i>
Tree	operator
Options	<ul style="list-style-type: none"> le Less than or equal. ge Greater than or equal. eq Equal to.
Configurable	True
Platforms	7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

range

Description	Container used to specify a contiguous range of TCP/UDP port numbers
Context	qos classifiers multifield-classifier name <i>string</i> entry sequence-id <i>number</i> match transport destination-port range
Tree	range
Configurable	True
Platforms	7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

end (*number* | *keyword*)

Description	The ending port number to include in the range
Context	qos classifiers multifield-classifier name <i>string</i> entry sequence-id <i>number</i> match transport destination-port range end (<i>number</i> <i>keyword</i>)
Tree	end
Range	0 to 65535
Options	<ul style="list-style-type: none"> acap

- Application Configuration Access Protocol
- afp-tcp
Apple Filing Protocol over TCP
- arns
A Remote Network Server System
- asf-rmcp
ASF Remote Management and Control Protocol & IPMI Remote Management Protocol
- ashare
AppleShare IP Web Administration
- atalk-rm
AppleTalk Routing Maintenance
- aarp
AppleTalk Update-Based Routing Protocol
- auth
Authentication Service
- bfd
Bidirectional Forwarding Detection Single Hop
- bfd-echo
BFD Echo
- bftp
Background File Transfer Program
- bgmp
Border Gateway Multicast Protocol
- bgp
Border Gateway Protocol
- bootpc
Bootstrap Protocol (BOOTP) Client and DHCP Client
- bootps
Bootstrap Protocol (BOOTP) Server and DHCP Server
- ccso-ns
CCSO Nameserver
- chargen
Character Generator Protocol (CHARGEN)
- cisco-tdp
Cisco Tag Distribution Protocol

-
- citadel
Citadel
 - clearcase
ClearCase albd
 - commerce
Commerce Applications
 - courier
Remote Procedure Call
 - daytime
Daytime Protocol
 - dhcpv6-client
DHCPv6 Client
 - dhcpv6-server
DHCPv6 Server
 - dhcp-failover
DHCP Failover Protocol
 - dicom
Digital Imaging and Communications in Medicine
 - discard
Discard Protocol. Also Wake-on-LAN.
 - dnsix
DNSIX security protocol auditing
 - domain
Domain Name System
 - dsp
Display Support Protocol
 - echo
Echo Protocol
 - epp
Extensible Provisioning Protocol
 - esro
Efficient Short Remote Operations (ESRO)
 - exec
Remote Process Execution (Rexec)
 - finger
Finger protocol

- ftp
File Transfer Protocol control
- ftp-data
File Transfer Protocol data
- ftps
FTPS (FTP over SSL/TLS) control
- ftps-data
FTPS (FTP over SSL/TLS) data
- godi
Group Domain Of Interpretation (GDOI) protocol
- gopher
Gopher protocol
- gtp-c
GTP control messages (GTP-C)
- gtp-prime
GTP prime CDR logging protocol
- gtp-u
GTP user data messages (GTP-U)
- ha-cluster
Linux-HA high-availability heartbeat
- hostname
NIC hostname server
- hp-alarm-mgr
HP data alarm manager
- http
Hypertext Transfer Protocol
- http-alt
FileMaker Web Sharing (HTTP Alternate)
- http-mgmt
http-mgmt
- http-rpc
Remote procedure call over Hypertext Transfer Protocol
- https
Hypertext Transfer Protocol over TLS/SSL
- ieee-mms-ssl
IEEE Media Management System over SSL

- imap
Internet Message Access Protocol (IMAP)
- imap3
Internet Message Access Protocol (IMAP), version 3
- imaps
Internet Message Access Protocol over TLS/SSL
- ipp
Internet Printing Protocol
- ipsec
Internet Protocol Security (IPSec)
- ipx
Internetwork Packet Exchange (IPX)
- irc
Internet Relay Chat (IRC)
- iris-beep
IRIS (Internet Registry Information Service) over BEEP
- isakmp
Internet Security Association and Key Management Protocol (ISAKMP) /
Internet Key Exchange (IKE)
- isakmp-nat
IPSec NAT Traversal
- iscsi
iSCSI
- iso-tsap
ISO Transport Service Access Point (TSAP) Class 0 protocol
- kerberos
Kerberos authentication system
- kerberos-adm
Kerberos administration
- klogin
Kerberos login
- kpasswd
Kerberos Change/Set password
- kshell
Kerberos Remote shell
- l2tp

-
- Layer 2 Forwarding Protocol (L2F) and Layer 2 Tunneling Protocol (L2TP)
 - ldap
Lightweight Directory Access Protocol (LDAP)
 - ldaps
Lightweight Directory Access Protocol over TLS/SSL (LDAPS)
 - ldp
Label Distribution Protocol
 - lmp
Link Management Protocol (LMP)
 - login
rlogin (TCP) or Who (UDP)
 - lpd
Line Printer Daemon
 - lsp-ping
MPLS LSP-echo
 - mac-server-adm
Mac OS X Server administration
 - matip-a
Mapping of Airline Traffic over Internet Protocol (MATIP) type A
 - matip-b
Mapping of Airline Traffic over Internet Protocol (MATIP) type B
 - micro-bfd
BFD session over each LAG member link
 - microsoft-ds
Microsoft Directory Services
 - mobile-ip
Mobile IP Agent
 - monitor
Monitor
 - mpp
Message posting protocol (MPP)
 - mssql-m
Microsoft SQL Server database management system (MSSQL) monitor
 - mssql-s
Microsoft SQL Server database management system (MSSQL) server

- msdp
Multicast Source Discovery Protocol
- ms-exchange
MS Exchange Routing
- msp
Message Send Protocol
- multihop-bfd
Bidirectional Forwarding Detection Multi-Hop
- nas
Netnews Administration System (NAS)
- ncp
NetWare Core Protocol
- netrjs-1
NETRJS protocol
- netrjs-2
NETRJS protocol
- netrjs-3
NETRJS protocol
- netrjs-4
NETRJS protocol
- netbios-data
NetBIOS Datagram Service
- netbios-ns
NetBIOS Name Service
- netbios-ss
NetBIOS Session Service
- netnews
Netnews
- netwall
netwall, for Emergency Broadcasts
- new-rwho
new-rwho, new-who
- nfs
Network File System (NFS)
- nntp
Network News Transfer Protocol (NNTP)

- nntps
Network News Transfer Protocol over TLS/SSL (NNTPS)
- ntp
Network Time Protocol (NTP)
- odmr
On-Demand Mail Relay (ODMR)
- olsr
Optimized Link State Routing (OLSR)
- openvpn
OpenVPN
- pim-auto-rp
PIM Auto-RP
- pkix-timestamp
PKIX Time Stamp Protocol (TSP)
- pop2
Post Office Protocol, version 2 (POP2)
- pop3
Post Office Protocol, version 3 (POP3)
- pop3s
Post Office Protocol 3 over TLS/SSL (POP3S)
- pptp
Point-to-Point Tunneling Protocol (PPTP)
- ptp-event
Precision Time Protocol (PTP) event messages
- ptp-general
Precision Time Protocol (PTP) general messages
- print-srv
Network PostScript print server
- qmtp
Quick Mail Transfer Protocol
- qotd
Quote of the Day (QOTD)
- radius
RADIUS authentication protocol
- radius-acct
RADIUS accounting protocol

- remote-mail
Remote Mail Checking Protocol
- remotefs
Remotefs, RFS Server
- remotecmd
SupportSoft Nexus Remote Command
- rip
Routing Information Protocol
- rje
Remote Job Entry
- rlp
Resource Location Protocol
- rlzdb
RLZ DBase
- rmc
IBM RMC (Remote monitoring and Control) protocol
- rmonitor
rmonitor, Remote Monitor
- rpc2portmap
Rpc2portmap
- rsync
rsync file synchronization protocol
- rtelnet
Remote User Telnet Service (RTelnet)
- rtsp
Real Time Streaming Protocol (RTSP)
- sgmplib
Simple Gateway Monitoring Protocol (SGMP)
- silc
Secure Internet Live Conferencing (SILC)
- smux
SNMP multiplexing protocol (SMUX)
- sna-gw
IBM Systems Network Architecture (SNA) gateway access server
- snmp
Simple Network Management Protocol (SNMP)

- snmp-trap
SNMP Traps
- snpp
Simple Network Paging Protocol (SNPP)
- smtp
Simple Mail Transfer Protocol (SMTP)
- sql-svcs
Structured Query Language (SQL) Services
- sql
Structured Query Language (SQL) Service
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Secure Shell Protocol
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Email message submission (SMTP)
- sunrpc
Open Network Computing Remote Procedure Call (ONC RPC), also Sun RPC
- svcloc
Service Location Protocol (SLP)
- syslog
Syslog (UDP) and Remote Shell (TCP)
- systat
Active Users (systat service)
- tacacs
TACACS Login Host protocol
- talk
Talk
- tcpmux
TCP Port Service Multiplexer (TCPMUX)
- tcpnethasprv
tcpnethasprv, Aladdin Knowledge Systems Hasp services
- tftp
Trivial File Transfer Protocol (TFTP)
- time
Time Protocol
- timed
Timeserver

- ups
Uninterruptible power supply (UPS)
- xdmcp
X Display Manager Control Protocol (XDMCP)
- xns-ch
Xerox Network Systems (XNS) Clearinghouse (Name Server)
- xns-mail
Xerox Network Systems (XNS) Mail
- xns-time
Xerox Network Systems (XNS) Time Protocol
- z3950
ANSI Z39.50

Configurable

True

Platforms

7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

start (*number* | *keyword*)**Description**

The starting port number to include in the range

Context

[qos classifiers multifield-classifier name](#) *string* [entry sequence-id](#) *number*
[match transport destination-port range start](#) (*number* | *keyword*)

Tree[start](#)**Range**

0 to 65535

Options

- acap
Application Configuration Access Protocol
- afp-tcp
Apple Filing Protocol over TCP
- arns
A Remote Network Server System
- asf-rmcp
ASF Remote Management and Control Protocol & IPMI Remote Management Protocol
- ashare
AppleShare IP Web Administration
- atalk-rm
AppleTalk Routing Maintenance

- aurp
AppleTalk Update-Based Routing Protocol
- auth
Authentication Service
- bfd
Bidirectional Forwarding Detection Single Hop
- bfd-echo
BFD Echo
- bftp
Background File Transfer Program
- bgmp
Border Gateway Multicast Protocol
- bgp
Border Gateway Protocol
- bootpc
Bootstrap Protocol (BOOTP) Client and DHCP Client
- bootps
Bootstrap Protocol (BOOTP) Server and DHCP Server
- ccso-ns
CCSO Nameserver
- chargen
Character Generator Protocol (CHARGEN)
- cisco-tdp
Cisco Tag Distribution Protocol
- citadel
Citadel
- clearcase
ClearCase albd
- commerce
Commerce Applications
- courier
Remote Procedure Call
- daytime
Daytime Protocol
- dhcpv6-client
DHCPv6 Client

- dhcpv6-server
DHCPv6 Server
- dhcp-failover
DHCP Failover Protocol
- dicom
Digital Imaging and Communications in Medicine
- discard
Discard Protocol. Also Wake-on-LAN.
- dnsix
DNSIX security protocol auditing
- domain
Domain Name System
- dsp
Display Support Protocol
- echo
Echo Protocol
- epp
Extensible Provisioning Protocol
- esro
Efficient Short Remote Operations (ESRO)
- exec
Remote Process Execution (Rexec)
- finger
Finger protocol
- ftp
File Transfer Protocol control
- ftp-data
File Transfer Protocol data
- ftps
FTPS (FTP over SSL/TLS) control
- ftps-data
FTPS (FTP over SSL/TLS) data
- godi
Group Domain Of Interpretation (GDOI) protocol
- gopher
Gopher protocol

- gtp-c
GTP control messages (GTP-C)
- gtp-prime
GTP prime CDR logging protocol
- gtp-u
GTP user data messages (GTP-U)
- ha-cluster
Linux-HA high-availability heartbeat
- hostname
NIC hostname server
- hp-alarm-mgr
HP data alarm manager
- http
Hypertext Transfer Protocol
- http-alt
FileMaker Web Sharing (HTTP Alternate)
- http-mgmt
http-mgmt
- http-rpc
Remote procedure call over Hypertext Transfer Protocol
- https
Hypertext Transfer Protocol over TLS/SSL
- ieee-mms-ssl
IEEE Media Management System over SSL
- imap
Internet Message Access Protocol (IMAP)
- imap3
Internet Message Access Protocol (IMAP), version 3
- imaps
Internet Message Access Protocol over TLS/SSL
- ipp
Internet Printing Protocol
- ipsec
Internet Protocol Security (IPSec)
- ipx
Internetwork Packet Exchange (IPX)

- irc
Internet Relay Chat (IRC)
- iris-beep
IRIS (Internet Registry Information Service) over BEEP
- isakmp
Internet Security Association and Key Management Protocol (ISAKMP) /
Internet Key Exchange (IKE)
- isakmp-nat
IPSec NAT Traversal
- iscsi
iSCSI
- iso-tsap
ISO Transport Service Access Point (TSAP) Class 0 protocol
- kerberos
Kerberos authentication system
- kerberos-adm
Kerberos administration
- klogin
Kerberos login
- kpasswd
Kerberos Change/Set password
- kshell
Kerberos Remote shell
- l2tp
Layer 2 Forwarding Protocol (L2F) and Layer 2 Tunneling Protocol
(L2TP)
- ldap
Lightweight Directory Access Protocol (LDAP)
- ldaps
Lightweight Directory Access Protocol over TLS/SSL (LDAPS)
- ldp
Label Distribution Protocol
- lmp
Link Management Protocol (LMP)
- login
rlogin (TCP) or Who (UDP)
- lpd

- Line Printer Daemon
- lsp-ping
MPLS LSP-echo
- mac-server-adm
Mac OS X Server administration
- matip-a
Mapping of Airline Traffic over Internet Protocol (MATIP) type A
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Mapping of Airline Traffic over Internet Protocol (MATIP) type B
- micro-bfd
BFD session over each LAG member link
- microsoft-ds
Microsoft Directory Services
- mobile-ip
Mobile IP Agent
- monitor
Monitor
- mpp
Message posting protocol (MPP)
- mssql-m
Microsoft SQL Server database management system (MSSQL) monitor
- mssql-s
Microsoft SQL Server database management system (MSSQL) server
- msdp
Multicast Source Discovery Protocol
- ms-exchange
MS Exchange Routing
- msp
Message Send Protocol
- multihop-bfd
Bidirectional Forwarding Detection Multi-Hop
- nas
Netnews Administration System (NAS)
- ncp
NetWare Core Protocol
- netrjs-1

- NETRJS protocol
- netrjs-2
NETRJS protocol
- netrjs-3
NETRJS protocol
- netrjs-4
NETRJS protocol
- netbios-data
NetBIOS Datagram Service
- netbios-ns
NetBIOS Name Service
- netbios-ss
NetBIOS Session Service
- netnews
Netnews
- netwall
netwall, for Emergency Broadcasts
- new-rwho
new-rwho, new-who
- nfs
Network File System (NFS)
- nntp
Network News Transfer Protocol (NNTP)
- nntps
Network News Transfer Protocol over TLS/SSL (NNTPS)
- ntp
Network Time Protocol (NTP)
- odmr
On-Demand Mail Relay (ODMR)
- olsr
Optimized Link State Routing (OLSR)
- openvpn
OpenVPN
- pim-auto-rp
PIM Auto-RP
- pkix-timestamp

- PKIX Time Stamp Protocol (TSP)
- pop2
Post Office Protocol, version 2 (POP2)
- pop3
Post Office Protocol, version 3 (POP3)
- pop3s
Post Office Protocol 3 over TLS/SSL (POP3S)
- pptp
Point-to-Point Tunneling Protocol (PPTP)
- ptp-event
Precision Time Protocol (PTP) event messages
- ptp-general
Precision Time Protocol (PTP) general messages
- print-srv
Network PostScript print server
- qmtp
Quick Mail Transfer Protocol
- qotd
Quote of the Day (QOTD)
- radius
RADIUS authentication protocol
- radius-acct
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- remote-mail
Remote Mail Checking Protocol
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Remotefs, RFS Server
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Routing Information Protocol
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- xns-mail
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- xns-time
 - Xerox Network Systems (XNS) Time Protocol
- z3950
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Configurable	True
Platforms	7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

value (*number* | *keyword*)

Description	A destination port number
Context	qos classifiers multifield-classifier name string entry sequence-id number match transport destination-port value (<i>number</i> <i>keyword</i>)
Tree	value
Range	0 to 65535
Options	<ul style="list-style-type: none"> • <code>acap</code> Application Configuration Access Protocol • <code>afp-tcp</code> Apple Filing Protocol over TCP • <code>arns</code> A Remote Network Server System • <code>asf-rmcp</code> ASF Remote Management and Control Protocol & IPMI Remote Management Protocol • <code>ashare</code> AppleShare IP Web Administration • <code>atalk-rm</code> AppleTalk Routing Maintenance • <code>aurp</code> AppleTalk Update-Based Routing Protocol • <code>auth</code> Authentication Service • <code>bfd</code> Bidirectional Forwarding Detection Single Hop • <code>bfd-echo</code> BFD Echo • <code>bftp</code> Background File Transfer Program • <code>bgmp</code> Border Gateway Multicast Protocol

- bgp
Border Gateway Protocol
- bootpc
Bootstrap Protocol (BOOTP) Client and DHCP Client
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Bootstrap Protocol (BOOTP) Server and DHCP Server
- ccso-ns
CCSO Nameserver
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Citadel
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Commerce Applications
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ISO Transport Service Access Point (TSAP) Class 0 protocol

- kerberos
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NETRJS protocol
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NETRJS protocol
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netwall, for Emergency Broadcasts
- new-rwho
new-rwho, new-who
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PIM Auto-RP
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Remote Mail Checking Protocol
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Remotefs, RFS Server
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Remote Job Entry
- rlp
Resource Location Protocol
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Syslog (UDP) and Remote Shell (TCP)
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Active Users (systat service)
- **tacacs**
TACACS Login Host protocol
- **talk**
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TCP Port Service Multiplexer (TCPMUX)
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tcpnethaspsrv, Aladdin Knowledge Systems Hasp services
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Time Protocol
- timed
Timeserver
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Uninterruptible power supply (UPS)
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ANSI Z39.50

Configurable

True

Platforms

7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

source-port**Description**

A packet matches this condition if its source TCP or UDP port number matches the value or range that is specified

The rule should also have a condition that the IP protocol equals 6 (TCP) or 17 (UDP) in order for this to be interpreted correctly.

Context

[qos classifiers multifield-classifier name](#) *string* [entry sequence-id](#) *number* [match transport source-port](#)

Tree

[source-port](#)

Configurable

True

Platforms 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

operator *keyword*

Description Comparison operator
eq = equal ge = greater than or equal to le = less than or equal to

Context [qos classifiers multifield-classifier name](#) *string entry sequence-id number match transport source-port operator keyword*

Tree [operator](#)

Options

- le
Less than or equal.
- ge
Greater than or equal.
- eq
Equal to.

Configurable True

Platforms 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

range

Description Container used to specify a contiguous range of TCP/UDP port numbers

Context [qos classifiers multifield-classifier name](#) *string entry sequence-id number match transport source-port range*

Tree [range](#)

Configurable True

Platforms 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

end (*number* | *keyword*)

Description The ending port number to include in the range

Context [qos classifiers multifield-classifier name](#) *string entry sequence-id number match transport source-port range end (number | keyword)*

Tree	end
Range	0 to 65535
Options	<ul style="list-style-type: none">• acap Application Configuration Access Protocol• afp-tcp Apple Filing Protocol over TCP• arns A Remote Network Server System• asf-rmcp ASF Remote Management and Control Protocol & IPMI Remote Management Protocol• ashare AppleShare IP Web Administration• atalk-rm AppleTalk Routing Maintenance• aurp AppleTalk Update-Based Routing Protocol• auth Authentication Service• bfd Bidirectional Forwarding Detection Single Hop• bfd-echo BFD Echo• bftp Background File Transfer Program• bgmp Border Gateway Multicast Protocol• bgp Border Gateway Protocol• bootpc Bootstrap Protocol (BOOTP) Client and DHCP Client• bootps Bootstrap Protocol (BOOTP) Server and DHCP Server• ccso-ns CCSO Nameserver• chargen

- Character Generator Protocol (CHARGEN)
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- citadel
Citadel
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ClearCase albd
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Commerce Applications
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Daytime Protocol
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Discard Protocol. Also Wake-on-LAN.
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DNSIX security protocol auditing
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Domain Name System
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Display Support Protocol
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Extensible Provisioning Protocol
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Efficient Short Remote Operations (ESRO)
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- Remote Process Execution (Rexec)
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Finger protocol
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File Transfer Protocol control
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File Transfer Protocol data
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FTPS (FTP over SSL/TLS) control
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GTP control messages (GTP-C)
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iSCSI
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ISO Transport Service Access Point (TSAP) Class 0 protocol
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Kerberos login
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Mac OS X Server administration
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BFD session over each LAG member link
- microsoft-ds
Microsoft Directory Services
- mobile-ip
Mobile IP Agent
- monitor
Monitor
- mpp
Message posting protocol (MPP)
- mssql-m
Microsoft SQL Server database management system (MSSQL) monitor

- mssql-s
Microsoft SQL Server database management system (MSSQL) server
- msdp
Multicast Source Discovery Protocol
- ms-exchange
MS Exchange Routing
- msp
Message Send Protocol
- multihop-bfd
Bidirectional Forwarding Detection Multi-Hop
- nas
Netnews Administration System (NAS)
- ncp
NetWare Core Protocol
- netrjs-1
NETRJS protocol
- netrjs-2
NETRJS protocol
- netrjs-3
NETRJS protocol
- netrjs-4
NETRJS protocol
- netbios-data
NetBIOS Datagram Service
- netbios-ns
NetBIOS Name Service
- netbios-ss
NetBIOS Session Service
- netnews
Netnews
- netwall
netwall, for Emergency Broadcasts
- new-rwho
new-rwho, new-who
- nfs
Network File System (NFS)

- nntp
Network News Transfer Protocol (NNTP)
- nntps
Network News Transfer Protocol over TLS/SSL (NNTPS)
- ntp
Network Time Protocol (NTP)
- odmr
On-Demand Mail Relay (ODMR)
- olsr
Optimized Link State Routing (OLSR)
- openvpn
OpenVPN
- pim-auto-rp
PIM Auto-RP
- pkix-timestamp
PKIX Time Stamp Protocol (TSP)
- pop2
Post Office Protocol, version 2 (POP2)
- pop3
Post Office Protocol, version 3 (POP3)
- pop3s
Post Office Protocol 3 over TLS/SSL (POP3S)
- pptp
Point-to-Point Tunneling Protocol (PPTP)
- ptp-event
Precision Time Protocol (PTP) event messages
- ptp-general
Precision Time Protocol (PTP) general messages
- print-srv
Network PostScript print server
- qmtp
Quick Mail Transfer Protocol
- qotd
Quote of the Day (QOTD)
- radius
RADIUS authentication protocol

- radius-acct
RADIUS accounting protocol
- remote-mail
Remote Mail Checking Protocol
- remotefs
Remotefs, RFS Server
- remotecmd
SupportSoft Nexus Remote Command
- rip
Routing Information Protocol
- rje
Remote Job Entry
- rlp
Resource Location Protocol
- rlzdb
RLZ DBase
- rmc
IBM RMC (Remote monitoring and Control) protocol
- rmonitor
rmonitor, Remote Monitor
- rpc2portmap
Rpc2portmap
- rsync
rsync file synchronization protocol
- rtelnet
Remote User Telnet Service (RTelnet)
- rtsp
Real Time Streaming Protocol (RTSP)
- sgmp
Simple Gateway Monitoring Protocol (SGMP)
- silc
Secure Internet Live Conferencing (SILC)
- smux
SNMP multiplexing protocol (SMUX)
- sna-gw
IBM Systems Network Architecture (SNA) gateway access server

- snmp
Simple Network Management Protocol (SNMP)
- snmp-trap
SNMP Traps
- snpp
Simple Network Paging Protocol (SNPP)
- smtp
Simple Mail Transfer Protocol (SMTP)
- sql-svcs
Structured Query Language (SQL) Services
- sql
Structured Query Language (SQL) Service
- ssh
Secure Shell Protocol
- submission
Email message submission (SMTP)
- sunrpc
Open Network Computing Remote Procedure Call (ONC RPC), also Sun RPC
- svcloc
Service Location Protocol (SLP)
- syslog
Syslog (UDP) and Remote Shell (TCP)
- systat
Active Users (systat service)
- tacacs
TACACS Login Host protocol
- talk
Talk
- tcpmux
TCP Port Service Multiplexer (TCPMUX)
- tcpnethaspsrv
tcpnethaspsrv, Aladdin Knowledge Systems Hasp services
- tftp
Trivial File Transfer Protocol (TFTP)
- time
Time Protocol

- timed
Timeserver
- ups
Uninterruptible power supply (UPS)
- xdmcp
X Display Manager Control Protocol (XDMCP)
- xns-ch
Xerox Network Systems (XNS) Clearinghouse (Name Server)
- xns-mail
Xerox Network Systems (XNS) Mail
- xns-time
Xerox Network Systems (XNS) Time Protocol
- z3950
ANSI Z39.50

Configurable

True

Platforms

7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

start (*number* | *keyword*)**Description**

The starting port number to include in the range

Context[qos classifiers multifield-classifier name string entry sequence-id number match transport source-port range start](#) (*number* | *keyword*)**Tree**[start](#)**Range**

0 to 65535

Options

- acap
Application Configuration Access Protocol
- afp-tcp
Apple Filing Protocol over TCP
- arns
A Remote Network Server System
- asf-rmcp
ASF Remote Management and Control Protocol & IPMI Remote Management Protocol
- ashare
AppleShare IP Web Administration

- atalk-rm
AppleTalk Routing Maintenance
- aurp
AppleTalk Update-Based Routing Protocol
- auth
Authentication Service
- bfd
Bidirectional Forwarding Detection Single Hop
- bfd-echo
BFD Echo
- bftp
Background File Transfer Program
- bgmp
Border Gateway Multicast Protocol
- bgp
Border Gateway Protocol
- bootpc
Bootstrap Protocol (BOOTP) Client and DHCP Client
- bootps
Bootstrap Protocol (BOOTP) Server and DHCP Server
- ccso-ns
CCSO Nameserver
- chargen
Character Generator Protocol (CHARGEN)
- cisco-tdp
Cisco Tag Distribution Protocol
- citadel
Citadel
- clearcase
ClearCase albd
- commerce
Commerce Applications
- courier
Remote Procedure Call
- daytime
Daytime Protocol

- dhcpv6-client
DHCPv6 Client
- dhcpv6-server
DHCPv6 Server
- dhcp-failover
DHCP Failover Protocol
- dicom
Digital Imaging and Communications in Medicine
- discard
Discard Protocol. Also Wake-on-LAN.
- dnsix
DNSIX security protocol auditing
- domain
Domain Name System
- dsp
Display Support Protocol
- echo
Echo Protocol
- epp
Extensible Provisioning Protocol
- esro
Efficient Short Remote Operations (ESRO)
- exec
Remote Process Execution (Rexec)
- finger
Finger protocol
- ftp
File Transfer Protocol control
- ftp-data
File Transfer Protocol data
- ftps
FTPS (FTP over SSL/TLS) control
- ftps-data
FTPS (FTP over SSL/TLS) data
- godi
Group Domain Of Interpretation (GDOI) protocol

- gopher
Gopher protocol
- gtp-c
GTP control messages (GTP-C)
- gtp-prime
GTP prime CDR logging protocol
- gtp-u
GTP user data messages (GTP-U)
- ha-cluster
Linux-HA high-availability heartbeat
- hostname
NIC hostname server
- hp-alarm-mgr
HP data alarm manager
- http
Hypertext Transfer Protocol
- http-alt
FileMaker Web Sharing (HTTP Alternate)
- http-mgmt
http-mgmt
- http-rpc
Remote procedure call over Hypertext Transfer Protocol
- https
Hypertext Transfer Protocol over TLS/SSL
- ieee-mms-ssl
IEEE Media Management System over SSL
- imap
Internet Message Access Protocol (IMAP)
- imap3
Internet Message Access Protocol (IMAP), version 3
- imaps
Internet Message Access Protocol over TLS/SSL
- ipp
Internet Printing Protocol
- ipsec
Internet Protocol Security (IPSec)

- ipx
Internetwork Packet Exchange (IPX)
- irc
Internet Relay Chat (IRC)
- iris-beep
IRIS (Internet Registry Information Service) over BEEP
- isakmp
Internet Security Association and Key Management Protocol (ISAKMP) /
Internet Key Exchange (IKE)
- isakmp-nat
IPSec NAT Traversal
- iscsi
iSCSI
- iso-tsap
ISO Transport Service Access Point (TSAP) Class 0 protocol
- kerberos
Kerberos authentication system
- kerberos-adm
Kerberos administration
- klogin
Kerberos login
- kpasswd
Kerberos Change/Set password
- kshell
Kerberos Remote shell
- l2tp
Layer 2 Forwarding Protocol (L2F) and Layer 2 Tunneling Protocol
(L2TP)
- ldap
Lightweight Directory Access Protocol (LDAP)
- ldaps
Lightweight Directory Access Protocol over TLS/SSL (LDAPS)
- ldp
Label Distribution Protocol
- lmp
Link Management Protocol (LMP)
- login

- rlogin (TCP) or Who (UDP)
- lpd
Line Printer Daemon
- lsp-ping
MPLS LSP-echo
- mac-server-adm
Mac OS X Server administration
- matip-a
Mapping of Airline Traffic over Internet Protocol (MATIP) type A
- matip-b
Mapping of Airline Traffic over Internet Protocol (MATIP) type B
- micro-bfd
BFD session over each LAG member link
- microsoft-ds
Microsoft Directory Services
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Mobile IP Agent
- monitor
Monitor
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- NetWare Core Protocol
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- netrjs-4
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NetBIOS Session Service
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Network Time Protocol (NTP)
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- olsr
Optimized Link State Routing (OLSR)
- openvpn
OpenVPN
- pim-auto-rp

- PIM Auto-RP
- pkix-timestamp
PKIX Time Stamp Protocol (TSP)
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Post Office Protocol, version 2 (POP2)
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Post Office Protocol, version 3 (POP3)
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Quick Mail Transfer Protocol
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Quote of the Day (QOTD)
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- radius-acct
RADIUS accounting protocol
- remote-mail
Remote Mail Checking Protocol
- remotefs
Remotefs, RFS Server
- remotecmd
SupportSoft Nexus Remote Command
- rip
Routing Information Protocol
- rje
Remote Job Entry
- rlp

Resource Location Protocol

- rlzdb
RLZ DBase
- rmc
IBM RMC (Remote monitoring and Control) protocol
- rmonitor
rmonitor, Remote Monitor
- rpc2portmap
Rpc2portmap
- rsync
rsync file synchronization protocol
- rtelnet
Remote User Telnet Service (RTelnet)
- rtsp
Real Time Streaming Protocol (RTSP)
- sgmplib
Simple Gateway Monitoring Protocol (SGMP)
- silc
Secure Internet Live Conferencing (SILC)
- smux
SNMP multiplexing protocol (SMUX)
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Simple Network Management Protocol (SNMP)
- snmp-trap
SNMP Traps
- snpp
Simple Network Paging Protocol (SNPP)
- smtp
Simple Mail Transfer Protocol (SMTP)
- sql-svcs
Structured Query Language (SQL) Services
- sql
Structured Query Language (SQL) Service
- ssh

- Secure Shell Protocol
- submission
Email message submission (SMTP)
- sunrpc
Open Network Computing Remote Procedure Call (ONC RPC), also Sun RPC
- svcloc
Service Location Protocol (SLP)
- syslog
Syslog (UDP) and Remote Shell (TCP)
- systat
Active Users (systat service)
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TACACS Login Host protocol
- talk
Talk
- tcpmux
TCP Port Service Multiplexer (TCPMUX)
- tcpnethaspsrv
tcpnethaspsrv, Aladdin Knowledge Systems Hasp services
- tftp
Trivial File Transfer Protocol (TFTP)
- time
Time Protocol
- timed
Timeserver
- ups
Uninterruptible power supply (UPS)
- xdmcp
X Display Manager Control Protocol (XDMCP)
- xns-ch
Xerox Network Systems (XNS) Clearinghouse (Name Server)
- xns-mail
Xerox Network Systems (XNS) Mail
- xns-time
Xerox Network Systems (XNS) Time Protocol

	<ul style="list-style-type: none"> z3950 ANSI Z39.50
Configurable	True
Platforms	7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

value (*number* | *keyword*)

Description	A source port number
Context	qos classifiers multifield-classifier name string entry sequence-id number match transport source-port value (<i>number</i> <i>keyword</i>)
Tree	value
Range	0 to 65535
Options	<ul style="list-style-type: none"> acap Application Configuration Access Protocol afp-tcp Apple Filing Protocol over TCP arns A Remote Network Server System asf-rmcp ASF Remote Management and Control Protocol & IPMI Remote Management Protocol ashare AppleShare IP Web Administration atalk-rm AppleTalk Routing Maintenance aurp AppleTalk Update-Based Routing Protocol auth Authentication Service bfd Bidirectional Forwarding Detection Single Hop bfd-echo BFD Echo bftp Background File Transfer Program

- bgmp
Border Gateway Multicast Protocol
- bgp
Border Gateway Protocol
- bootpc
Bootstrap Protocol (BOOTP) Client and DHCP Client
- bootps
Bootstrap Protocol (BOOTP) Server and DHCP Server
- ccso-ns
CCSO Nameserver
- chargen
Character Generator Protocol (CHARGEN)
- cisco-tdp
Cisco Tag Distribution Protocol
- citadel
Citadel
- clearcase
ClearCase albd
- commerce
Commerce Applications
- courier
Remote Procedure Call
- daytime
Daytime Protocol
- dhcpv6-client
DHCPv6 Client
- dhcpv6-server
DHCPv6 Server
- dhcp-failover
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- ftp
File Transfer Protocol control
- ftp-data
File Transfer Protocol data
- ftps
FTPS (FTP over SSL/TLS) control
- ftps-data
FTPS (FTP over SSL/TLS) data
- godi
Group Domain Of Interpretation (GDOI) protocol
- gopher
Gopher protocol
- gtp-c
GTP control messages (GTP-C)
- gtp-prime
GTP prime CDR logging protocol
- gtp-u
GTP user data messages (GTP-U)
- ha-cluster
Linux-HA high-availability heartbeat
- hostname
NIC hostname server

- hp-alarm-mgr
HP data alarm manager
- http
Hypertext Transfer Protocol
- http-alt
FileMaker Web Sharing (HTTP Alternate)
- http-mgmt
http-mgmt
- http-rpc
Remote procedure call over Hypertext Transfer Protocol
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Hypertext Transfer Protocol over TLS/SSL
- ieee-mms-ssl
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- ipsec
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- irc
Internet Relay Chat (IRC)
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IRIS (Internet Registry Information Service) over BEEP
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Internet Key Exchange (IKE)
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IPSec NAT Traversal
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iSCSI

- iso-tsap
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Kerberos login
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Kerberos Change/Set password
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Mapping of Airline Traffic over Internet Protocol (MATIP) type B
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Monitor
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Netnews
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new-rwho, new-who
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Network News Transfer Protocol (NNTP)
- nntps
Network News Transfer Protocol over TLS/SSL (NNTPS)
- ntp
Network Time Protocol (NTP)
- odmr
On-Demand Mail Relay (ODMR)
- olsr
Optimized Link State Routing (OLSR)
- openvpn
OpenVPN
- pim-auto-rp
PIM Auto-RP
- pkix-timestamp
PKIX Time Stamp Protocol (TSP)
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- pop3
Post Office Protocol, version 3 (POP3)
- pop3s
Post Office Protocol 3 over TLS/SSL (POP3S)
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- ptp-event
Precision Time Protocol (PTP) event messages

- ptp-general
Precision Time Protocol (PTP) general messages
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Network PostScript print server
- qmtp
Quick Mail Transfer Protocol
- qotd
Quote of the Day (QOTD)
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RADIUS authentication protocol
- radius-acct
RADIUS accounting protocol
- remote-mail
Remote Mail Checking Protocol
- remotefs
Remotefs, RFS Server
- remotecmd
SupportSoft Nexus Remote Command
- rip
Routing Information Protocol
- rje
Remote Job Entry
- rlp
Resource Location Protocol
- rlzdb
RLZ DBase
- rmc
IBM RMC (Remote monitoring and Control) protocol
- rmonitor
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Rpc2portmap
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rsync file synchronization protocol
- rtelnet
Remote User Telnet Service (RTelnet)

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Real Time Streaming Protocol (RTSP)
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IBM Systems Network Architecture (SNA) gateway access server
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SNMP Traps
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Simple Network Paging Protocol (SNPP)
- smtp
Simple Mail Transfer Protocol (SMTP)
- sql-svcs
Structured Query Language (SQL) Services
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Structured Query Language (SQL) Service
- ssh
Secure Shell Protocol
- submission
Email message submission (SMTP)
- sunrpc
Open Network Computing Remote Procedure Call (ONC RPC), also Sun RPC
- svcloc
Service Location Protocol (SLP)
- syslog
Syslog (UDP) and Remote Shell (TCP)
- systat
Active Users (systat service)
- tacacs
TACACS Login Host protocol

- talk
Talk
- tcpmux
TCP Port Service Multiplexer (TCPMUX)
- tcpnethasprv
tcpnethasprv, Aladdin Knowledge Systems Hasp services
- tftp
Trivial File Transfer Protocol (TFTP)
- time
Time Protocol
- timed
Timeserver
- ups
Uninterruptible power supply (UPS)
- xdmcp
X Display Manager Control Protocol (XDMCP)
- xns-ch
Xerox Network Systems (XNS) Clearinghouse (Name Server)
- xns-mail
Xerox Network Systems (XNS) Mail
- xns-time
Xerox Network Systems (XNS) Time Protocol
- z3950
ANSI Z39.50

Configurable

True

Platforms

7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

tcp-flags string**Description**

A logical expression using the &, | and ! logical operators and the TCP flag names: rst, syn and ack.

Context[qos classifiers multifield-classifier name string entry sequence-id number match transport tcp-flags string](#)**Tree**[tcp-flags](#)**Configurable**

True

Platforms 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

tcam-entries

Description Information about the TCAM entries used to implement the ACL entry

Context [qos classifiers multifield-classifier name](#) [string](#) [entry](#) [sequence-id](#) [number](#)
[tcam-entries](#)

Tree [tcam-entries](#)

Configurable False

Platforms 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

forwarding-complex [complex-identifier](#) [string](#)

Description List of forwarding complexes in the system

Context [qos classifiers multifield-classifier name](#) [string](#) [entry](#) [sequence-id](#) [number](#)
[tcam-entries](#) [forwarding-complex](#) [complex-identifier](#) [string](#)

Tree [forwarding-complex](#)

Configurable False

Platforms 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

complex-identifier [string](#)

Description A forwarding complex in the format (slot-number,complex-number).

Context [qos classifiers multifield-classifier name](#) [string](#) [entry](#) [sequence-id](#) [number](#)
[tcam-entries](#) [forwarding-complex](#) [complex-identifier](#) [string](#)

Configurable False

Platforms 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

input-total [number](#)

Description The number of TCAM entries required to implement this entry on all subinterfaces of this complex where the filter is applied to ingress traffic.

For example, if a single-instance of the entry takes 2 TCAM entries and the filter is an output-only subinterface-specific filter and the filter is applied to 5 subinterfaces on output and to 5 subinterfaces on input then input-total=2. If the entry is not applied to ingress traffic on any subinterfaces of this complex then input-total=0.

Context	qos classifiers multifield-classifier name <i>string</i> entry sequence-id <i>number</i> tcam-entries forwarding-complex complex-identifier <i>string</i> input-total <i>number</i>
Tree	input-total
Configurable	False
Platforms	Supported on all platforms

output-total *number*

Description	The number of TCAM entries required to implement this entry on all subinterfaces of this complex where the filter is applied to egress traffic. For example, if a single-instance of the entry takes 2 TCAM entries and the filter is an output-only subinterface-specific filter and the filter is applied to 5 subinterfaces on output and to 5 subinterfaces on input then output-total=10. If the entry is not applied to egress traffic on any subinterfaces of this complex then output-total=0.
Context	qos classifiers multifield-classifier name <i>string</i> entry sequence-id <i>number</i> tcam-entries forwarding-complex complex-identifier <i>string</i> output-total <i>number</i>
Tree	output-total
Configurable	False
Platforms	Supported on all platforms

single-instance *number*

Description	The number of TCAM entries required to implement this entry if it is applied to only one subinterface and one traffic direction specific to this slot. This is non-zero even if the filter is not applied to any subinterfaces of this complex. It captures the effect of TCAM entry expansion to deal with L4 port or VLAN ranges, for example.
Context	qos classifiers multifield-classifier name <i>string</i> entry sequence-id <i>number</i> tcam-entries forwarding-complex complex-identifier <i>string</i> single-instance <i>number</i>
Tree	single-instance
Configurable	False

Platforms 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

type *keyword*

Description Type of the QoS multifield-classifier

Context [qos classifiers multifield-classifier name](#) *string type keyword*

Tree [type](#)

Options

- ipv4
Multifield-classifier using ipv4-based matching criteria
- ipv6
Multifield-classifier using ipv6-based matching criteria

Configurable True

Platforms 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

vxlan-default *reference*

Description Reference to the name of a DSCP mapping policy that applies to terminating VXLAN packets

Context [qos classifiers vxlan-default](#) *reference*

Tree [vxlan-default](#)

Reference [qos classifiers dscp-policy name](#) *string*

Configurable True

Platforms 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5

explicit-congestion-notification

Description Enable the explicit-congestion-notification context

Context [qos explicit-congestion-notification](#)

Tree [explicit-congestion-notification](#)

Configurable True

Platforms 7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

ecn-dscp-policy *reference*

Description	Reference to the DSCP rewrite policy to use when DSCP rewrite is required as a side effect of ECN remarking. This is required configuration in order to globally enable ECN on J2 platforms
Context	qos explicit-congestion-notification ecn-dscp-policy <i>reference</i>
Tree	ecn-dscp-policy
Reference	qos rewrite-rules dscp-policy name <i>string</i>
Configurable	True
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

forwarding-classes

Description	Enclosing container for list of user-defined forwarding class names
Context	qos forwarding-classes
Tree	forwarding-classes
Configurable	True
Platforms	7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

forwarding-class [name](#) *string*

Description	Enter the forwarding-class list instance
Context	qos forwarding-classes forwarding-class name <i>string</i>
Tree	forwarding-class
Configurable	True
Platforms	7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

name *string*

Description	User-defined name of the forwarding class The following forwarding-class names are the system-reserved default FC names on 7250 IXR systems: fc0 fc1 fc2 fc3 fc4 fc5 fc6 fc7
Context	qos forwarding-classes forwarding-class name <i>string</i>

String Length	1 to 255
Configurable	True
Platforms	7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

output

Description	Enter the output context
Context	qos forwarding-classes forwarding-class name string output
Tree	output
Configurable	True
Platforms	7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

multicast-queue *reference*

Description	Output queue for multicast packets within this forwarding class
Context	qos forwarding-classes forwarding-class name string output multicast-queue reference
Tree	multicast-queue
Reference	qos queues queue name string
Configurable	True
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

unicast-queue *reference*

Description	Output queue for unicast packets within this forwarding class For the system-reserved default forwarding classes: fc0 -> unicast-queue = unicast-queue0 fc1 -> unicast-queue = unicast-queue1 fc2 -> unicast-queue = unicast-queue2 fc3 -> unicast-queue = unicast-queue3 fc4 -> unicast-queue = unicast-queue4 fc5 -> unicast-queue = unicast-queue5 fc6 -> unicast-queue = unicast-queue6 fc7 -> unicast-queue = unicast-queue7
Context	qos forwarding-classes forwarding-class name string output unicast-queue reference
Tree	unicast-queue

Reference	qos queues queue name string
Configurable	True
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

input-class-map name string

Description	Enter the input-class-map list instance
Context	qos input-class-map name string
Tree	input-class-map
Configurable	True
Platforms	7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b
Max. Elements	32

name string

Description	User defined input-class-map name
Context	qos input-class-map name string
String Length	1 to 255
Configurable	True
Platforms	7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

forwarding-class name reference

Description	Enter the forwarding-class list instance
Context	qos input-class-map name string forwarding-class name reference
Tree	forwarding-class
Configurable	True
Platforms	7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

name *reference*

Description	The forwarding class
Context	qos input-class-map name <i>string</i> forwarding-class name <i>reference</i>
Reference	qos forwarding-classes forwarding-class name <i>string</i>
Configurable	True
Platforms	7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

interfaces

Description	Interfaces and subinterfaces with QoS configuration and state
Context	qos interfaces
Tree	interfaces
Configurable	True
Platforms	7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

interface [interface-id](#) *string*

Description	List of interfaces and subinterfaces referenced by QoS policies
Context	qos interfaces interface interface-id <i>string</i>
Tree	interface
Configurable	True
Platforms	7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b
Max. Elements	16383

interface-id *string*

Description	Identifier for the interface or subinterface
Context	qos interfaces interface interface-id <i>string</i>
Configurable	True

Platforms 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

input

Description Top-level container for QoS configuration and state relating to ingress traffic on the subinterface

Context [qos interfaces interface interface-id](#) *string input*

Tree [input](#)

Configurable True

Platforms 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

classifiers

Description Classifiers to be applied to the subinterface

Context [qos interfaces interface interface-id](#) *string input classifiers*

Tree [classifiers](#)

Configurable True

Platforms 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

classifier *type keyword*

Description A list of classifiers that should be applied to the interface

Context [qos interfaces interface interface-id](#) *string input classifiers classifier type keyword*

Tree [classifier](#)

Configurable True

Platforms 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

type keyword

Description Type of packets matched by the classifier.

Context	qos interfaces interface interface-id <i>string</i> input classifiers classifier type <i>keyword</i>
Options	<ul style="list-style-type: none"> • <code>ipv4</code> Classifier matches IPv4 Unicast packets. • <code>ipv6</code> Classifier matches IPv6 Unicast packets.
Configurable	True
Platforms	7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

name *reference*

Description	Reference to the classifier to be applied to ingress traffic on the interface
Context	qos interfaces interface interface-id <i>string</i> input classifiers classifier type <i>keyword name reference</i>
Tree	name
Reference	qos classifiers multifeild-classifier name <i>string</i>
Configurable	True
Platforms	7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

default

Description	Enable the default context
Context	qos interfaces interface interface-id <i>string</i> input classifiers default
Tree	default
Configurable	True
Platforms	7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

drop-probability *keyword*

Description	The default drop-probability for packets arriving on this subinterface that do not match any classification rule
Context	qos interfaces interface interface-id <i>string</i> input classifiers default drop-probability <i>keyword</i>

Tree	drop-probability
Options	<ul style="list-style-type: none"> low Traffic that should be dropped last when there is congestion. Internally this is traffic that is colored green. medium Traffic that should be dropped before green traffic but after red traffic when there is congestion. Internally this is traffic that is colored yellow. high Traffic that should be dropped first when there is congestion. Internally this is traffic that is colored red.
Configurable	True
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

forwarding-class *reference*

Description	The forwarding class
Context	qos interfaces interface interface-id <i>string</i> input classifiers default forwarding-class <i>reference</i>
Tree	forwarding-class
Reference	qos forwarding-classes forwarding-class name <i>string</i>
Configurable	True
Platforms	7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

dot1p-policy *reference*

Description	Reference to the name of a dot1p mapping policy
Context	qos interfaces interface interface-id <i>string</i> input classifiers dot1p-policy <i>reference</i>
Tree	dot1p-policy
Reference	qos classifiers dot1p-policy name <i>string</i>
Configurable	True
Platforms	7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5

dscp-policy *reference*

Description	Reference to the name of a DSCP mapping policy that applies to both IPv4 and IPv6 traffic
Context	qos interfaces interface interface-id <i>string</i> input classifiers dscp-policy reference
Tree	dscp-policy
Reference	qos classifiers dscp-policy name <i>string</i>
Configurable	True
Platforms	7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4

ipv4-dscp-policy *reference*

Description	Reference to the name of a DSCP mapping policy that applies only to IPv4 traffic
Context	qos interfaces interface interface-id <i>string</i> input classifiers ipv4-dscp-policy reference
Tree	ipv4-dscp-policy
Reference	qos classifiers dscp-policy name <i>string</i>
Configurable	True
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

ipv6-dscp-policy *reference*

Description	Reference to the name of a DSCP mapping policy that applies only to IPv6 traffic
Context	qos interfaces interface interface-id <i>string</i> input classifiers ipv6-dscp-policy reference
Tree	ipv6-dscp-policy
Reference	qos classifiers dscp-policy name <i>string</i>
Configurable	True
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

mpls-traffic-class-policy *reference*

Description	Reference to the name of an MPLS traffic-class mapping policy
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Context	qos interfaces interface interface-id <i>string</i> input classifiers mpls-traffic-class-policy <i>reference</i>
Tree	mpls-traffic-class-policy
Reference	qos classifiers mpls-traffic-class-policy name <i>string</i>
Configurable	True
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

pfc-buffer-allocation-profile *reference*

Description	Buffer-allocation-profile for pfc queues
Context	qos interfaces interface interface-id <i>string</i> input pfc-buffer-allocation-profile <i>reference</i>
Tree	pfc-buffer-allocation-profile
Reference	qos buffer-management buffer-allocation-profile name <i>string</i>
Configurable	True
Platforms	7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H4, 7250 IXR-10e, 7250 IXR-6e, 7250 IXR-X3b

policer-templates

Description	acl policers
Context	qos interfaces interface interface-id <i>string</i> input policer-templates
Tree	policer-templates
Configurable	True
Platforms	7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

policer [sequence-id](#) *number*

Description	The list of policer instances belonging to the template definition.
Context	qos interfaces interface interface-id <i>string</i> input policer-templates policer sequence-id <i>number</i>
Tree	policer
Configurable	False
Platforms	Supported on all platforms

sequence-id *number*

Description	Policer sequence-id
Context	qos interfaces interface interface-id <i>string</i> input policer-templates policer sequence-id <i>number</i>
Range	1 to 65535
Configurable	False
Platforms	Supported on all platforms

committed-burst-size *number*

Description	The actual/operational maximum CIR bucket depth in bytes as it is programmed into hardware.
Context	qos interfaces interface interface-id <i>string</i> input policer-templates policer sequence-id <i>number</i> committed-burst-size <i>number</i>
Tree	committed-burst-size
Units	bytes
Configurable	False
Platforms	Supported on all platforms

committed-rate-kbps *number*

Description	The actual/operational committed information rate (CIR) of the policer as it is programmed into hardware.
Context	qos interfaces interface interface-id <i>string</i> input policer-templates policer sequence-id <i>number</i> committed-rate-kbps <i>number</i>
Tree	committed-rate-kbps
Units	kbps
Configurable	False
Platforms	Supported on all platforms

maximum-burst-size *number*

Description	The actual/operational maximum PIR bucket depth in bytes as it is programmed into hardware.
Context	qos interfaces interface interface-id <i>string</i> input policer-templates policer sequence-id <i>number</i> maximum-burst-size <i>number</i>
Tree	maximum-burst-size

Units	bytes
Configurable	False
Platforms	Supported on all platforms

peak-rate-kbps *number*

Description	The actual/operational peak information rate (PIR) of the policer as it is programmed into hardware.
Context	qos interfaces interface interface-id <i>string</i> input policer-templates policer sequence-id <i>number</i> peak-rate-kbps <i>number</i>
Tree	peak-rate-kbps
Units	kbps
Configurable	False
Platforms	Supported on all platforms

statistics

Description	Enter the statistics context
Context	qos interfaces interface interface-id <i>string</i> input policer-templates policer sequence-id <i>number</i> statistics
Tree	statistics
Configurable	False
Platforms	Supported on all platforms

accepted-octets *number*

Description	The number of octets in packets that were accepted by the policer, counting all drop-probabilities at policer output Not available in forwarding-focus mode
Context	qos interfaces interface interface-id <i>string</i> input policer-templates policer sequence-id <i>number</i> statistics accepted-octets <i>number</i>
Tree	accepted-octets
Default	0
Configurable	False
Platforms	Supported on all platforms

accepted-packets *number*

Description	The number of packets that were accepted by the policer, counting all drop-probabilities at policer output Not available in forwarding-focus mode
Context	qos interfaces interface interface-id <i>string</i> input policer-templates policer sequence-id <i>number</i> statistics accepted-packets <i>number</i>
Tree	accepted-packets
Default	0
Configurable	False
Platforms	Supported on all platforms

committed-octets *number*

Description	The number of octets in packets that were accepted with low drop-probability at policer output Not available in violating-focus mode
Context	qos interfaces interface interface-id <i>string</i> input policer-templates policer sequence-id <i>number</i> statistics committed-octets <i>number</i>
Tree	committed-octets
Default	0
Configurable	False
Platforms	Supported on all platforms

committed-packets *number*

Description	The number of packets that were accepted with low drop-probability at policer output Not available in violating-focus mode
Context	qos interfaces interface interface-id <i>string</i> input policer-templates policer sequence-id <i>number</i> statistics committed-packets <i>number</i>
Tree	committed-packets
Default	0
Configurable	False
Platforms	Supported on all platforms

exceeding-octets *number*

Description	The number of octets in packets that were accepted with medium drop-probability at policer output Not available in violating-focus mode
Context	qos interfaces interface interface-id <i>string</i> input policer-templates policer sequence-id <i>number</i> statistics exceeding-octets <i>number</i>
Tree	exceeding-octets
Default	0
Configurable	False
Platforms	Supported on all platforms

exceeding-packets *number*

Description	The number of packets that were accepted with medium drop-probability at policer output Not available in violating-focus mode
Context	qos interfaces interface interface-id <i>string</i> input policer-templates policer sequence-id <i>number</i> statistics exceeding-packets <i>number</i>
Tree	exceeding-packets
Default	0
Configurable	False
Platforms	Supported on all platforms

last-clear *string*

Description	Time of the last clear command performed by the user at this level
Context	qos interfaces interface interface-id <i>string</i> input policer-templates policer sequence-id <i>number</i> statistics last-clear <i>string</i>
Tree	last-clear
String Length	20 to 32
Configurable	False
Platforms	Supported on all platforms

violating-octets *number*

Description	The number of octets in packets that were considered violating by the policer
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	Not available in forwarding-focus mode
Context	qos interfaces interface interface-id <i>string</i> input policer-templates policer sequence-id <i>number</i> statistics violating-octets <i>number</i>
Tree	violating-octets
Default	0
Configurable	False
Platforms	Supported on all platforms

violating-packets *number*

Description	The number of packets that were considered violating by the policer Not available in forwarding-focus mode
Context	qos interfaces interface interface-id <i>string</i> input policer-templates policer sequence-id <i>number</i> statistics violating-packets <i>number</i>
Tree	violating-packets
Default	0
Configurable	False
Platforms	Supported on all platforms

policer-template *reference*

Description	The name of the policer template applied to input traffic on the subinterface
Context	qos interfaces interface interface-id <i>string</i> input policer-templates policer-template <i>reference</i>
Tree	policer-template
Reference	qos policer-templates policer-template name <i>string</i>
Configurable	True
Platforms	Supported on all platforms

interface-ref

Description	Reference to an interface or subinterface
Context	qos interfaces interface interface-id <i>string</i> interface-ref
Tree	interface-ref
Configurable	True

Platforms 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

interface *reference*

Description Reference to a base interface, for example a port or LAG

Context [qos interfaces interface interface-id](#) *string* [interface-ref](#) [interface](#) *reference*

Tree [interface](#)

Reference [interface name](#) *string*

Configurable True

Platforms 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

subinterface *reference*

Description Reference to a subinterface
This requires the base interface to be specified using the interface leaf in this container

Context [qos interfaces interface interface-id](#) *string* [interface-ref](#) [subinterface](#) *reference*

Tree [subinterface](#)

Reference [interface name](#) *string* [subinterface](#) [index](#) *number*

Configurable True

Platforms 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

output

Description Top-level container for QoS configuration and state relating to egress traffic on the interface or subinterface

Context [qos interfaces interface interface-id](#) *string* [output](#)

Tree [output](#)

Configurable True

Platforms 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

buffer-allocation-profile *reference*

Description	Buffer-allocation-profile for interface output queues
Context	qos interfaces interface interface-id <i>string</i> output buffer-allocation-profile reference
Tree	buffer-allocation-profile
Reference	qos buffer-management buffer-allocation-profile name <i>string</i>
Configurable	True
Platforms	7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

output-class-map-pending *reference*

Description	List of interfaces, related to this subinterface, where the configured output-class-map is not yet operational
Context	qos interfaces interface interface-id <i>string</i> output output-class-map-pending reference
Tree	output-class-map-pending
Reference	interface name <i>string</i>
Configurable	False
Platforms	7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

queues

Description	Container for a list of queues that are instantiated on an interface
Context	qos interfaces interface interface-id <i>string</i> output queues
Tree	queues
Configurable	True
Platforms	7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

queue [queue-name](#) *reference*

Description	List of queues
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Context	qos interfaces interface interface-id <i>string</i> output queues queue queue-name reference
Tree	queue
Configurable	True
Platforms	7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

queue-name reference

Description	The queue name
Context	qos interfaces interface interface-id <i>string</i> output queues queue queue-name reference
Reference	qos queues queue name <i>string</i>
Configurable	True
Platforms	7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

active-queue-management

Description	Enter the active-queue-management context
Context	qos interfaces interface interface-id <i>string</i> output queues queue queue-name reference active-queue-management
Tree	active-queue-management
Configurable	False
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

wred-slope [traffic-type](#) *keyword* [drop-probability](#) *keyword* [enable-ecn](#) *boolean*

Description	List of WRED slopes
Context	qos interfaces interface interface-id <i>string</i> output queues queue queue-name reference active-queue-management wred-slope traffic-type <i>keyword</i> drop-probability <i>keyword</i> enable-ecn <i>boolean</i>
Tree	wred-slope
Configurable	False

Platforms 7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

traffic-type *keyword*

Description The traffic type to which the WRED slope applies

Context [qos interfaces interface interface-id](#) *string* [output queues queue queue-name](#) *reference* [active-queue-management wred-slope traffic-type](#) *keyword* [drop-probability](#) *keyword* [enable-ecn](#) *boolean*

Options

- tcp
Refers to IPv4/IPv6 packets with a protocol/next-header indicating a value of 6
- non-tcp
Refers to all packets that are not IPv4/IPv6 packets with a protocol/next-header indicating a value of 6
- all
Refers to all traffic, whether it is TCP or non-TCP

Configurable False

Platforms 7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

drop-probability *keyword*

Description The drop probability to which the WRED slope applies

Context [qos interfaces interface interface-id](#) *string* [output queues queue queue-name](#) *reference* [active-queue-management wred-slope traffic-type](#) *keyword* [drop-probability](#) *keyword* [enable-ecn](#) *boolean*

Options

- low
Traffic that should be dropped last when there is congestion. Internally this is traffic that is colored green
- medium
Traffic that should be dropped before green traffic but after red traffic when there is congestion. Internally this is traffic that is colored yellow
- high
Traffic that should be dropped first when there is congestion. Internally this is traffic that is colored red
- all

All traffic, consisting of traffic marked low, medium and high drop-probability

Configurable

False

Platforms

7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

enable-ecn *boolean***Description**

Indicates that packets should be marked with ecn-bit when the result of wred-slope would discard the packet. It is mutually exclusive with 'drop' flag

Context

[qos interfaces interface interface-id string output queues queue queue-name reference active-queue-management wred-slope traffic-type keyword drop-probability keyword enable-ecn boolean](#)

Configurable

False

Platforms

7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

drop *boolean***Description**

Indicates that packets will be dropped based on WRED slope policy

Context

[qos interfaces interface interface-id string output queues queue queue-name reference active-queue-management wred-slope traffic-type keyword drop-probability keyword enable-ecn boolean drop boolean](#)

Tree

[drop](#)

Configurable

False

Platforms

7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

max-probability *number***Description**

The maximum probability of dropping a packet (at or above the max-threshold).

On 7250 IXR-6/10 there can be a significant difference between the configured value and the operational value

Context

[qos interfaces interface interface-id string output queues queue queue-name reference active-queue-management wred-slope traffic-type keyword drop-probability keyword enable-ecn boolean max-probability number](#)

Tree	max-probability
Range	0 to 100
Configurable	False
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

max-threshold-bytes *number*

Description	The queue depth in bytes that corresponds to the WRED maximum threshold parameter
Context	qos interfaces interface interface-id string output queues queue queue-name reference active-queue-management wred-slope traffic-type keyword drop-probability keyword enable-ecn boolean max-threshold-bytes number
Tree	max-threshold-bytes
Units	bytes
Configurable	False
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

min-threshold-bytes *number*

Description	The queue depth in bytes that corresponds to the WRED minimum threshold parameter
Context	qos interfaces interface interface-id string output queues queue queue-name reference active-queue-management wred-slope traffic-type keyword drop-probability keyword enable-ecn boolean min-threshold-bytes number
Tree	min-threshold-bytes
Units	bytes
Configurable	False
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

forwarding-class *string*

Description	The list of forwarding classes that map to this queue
Context	qos interfaces interface interface-id string output queues queue queue-name reference forwarding-class string

Tree	forwarding-class
Configurable	False
Platforms	7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

queue-depth

Description	Enter the queue-depth context
Context	qos interfaces interface interface-id <i>string</i> output queues queue queue-name <i>reference</i> queue-depth
Tree	queue-depth
Configurable	False
Platforms	7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

high-threshold-bytes *number*

Description	The operational hardware value of the high threshold in bytes
Context	qos interfaces interface interface-id <i>string</i> output queues queue queue-name <i>reference</i> queue-depth high-threshold-bytes <i>number</i>
Tree	high-threshold-bytes
Units	bytes
Configurable	False
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-H2, 7220 IXR-H3, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

last-high-threshold-time *string*

Description	The last time the queue depth exceeded the high-threshold in a rising direction
Context	qos interfaces interface interface-id <i>string</i> output queues queue queue-name <i>reference</i> queue-depth last-high-threshold-time <i>string</i>
Tree	last-high-threshold-time
String Length	20 to 32
Configurable	False

Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-H2, 7220 IXR-H3, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b
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maximum-burst-size *number*

Description	Maximum queue depth in bytes
Context	qos interfaces interface interface-id <i>string</i> output queues queue queue-name <i>reference</i> queue-depth maximum-burst-size <i>number</i>
Tree	maximum-burst-size
Units	bytes
Configurable	False
Platforms	7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

queue-management-profile *reference*

Description	The queue management profile that is to be used for the queue on the interface. For example, the system may use a profile which specifies that WRED curves are used for setting an ECN mark in the IP header instead of dropping a packet in order to signal impending congestion and for determining when there is sufficient congestion to tail drop packets
Context	qos interfaces interface interface-id <i>string</i> output queues queue queue-name <i>reference</i> queue-management-profile <i>reference</i>
Tree	queue-management-profile
Reference	qos buffer-management queue-management-profile <i>name</i> <i>string</i>
Configurable	True
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

queue-statistics

Description	Enter the queue-statistics context
Context	qos interfaces interface interface-id <i>string</i> output queues queue queue-name <i>reference</i> queue-statistics
Tree	queue-statistics
Configurable	False

Platforms 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

aggregate-statistics

Description Aggregate queue statistics per interface-queue or subinterface-queue

Context [qos interfaces interface interface-id](#) *string* [output queues queue queue-name](#) *reference* [queue-statistics aggregate-statistics](#)

Tree [aggregate-statistics](#)

Configurable False

Platforms 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

egq-dropped-octets *number*

Description Number of octets dropped by the queue at egress

Context [qos interfaces interface interface-id](#) *string* [output queues queue queue-name](#) *reference* [queue-statistics aggregate-statistics egq-dropped-octets](#) *number*

Tree [egq-dropped-octets](#)

Default 0

Configurable False

Platforms 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

egq-dropped-packets *number*

Description Number of packets dropped by the queue at egress

Context [qos interfaces interface interface-id](#) *string* [output queues queue queue-name](#) *reference* [queue-statistics aggregate-statistics egq-dropped-packets](#) *number*

Tree [egq-dropped-packets](#)

Default 0

Configurable False

Platforms 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

exceed-profile

Description Stats for packets marked with Exceed profile transmitted by the queue

Context	qos interfaces interface interface-id <i>string</i> output queues queue queue-name reference queue-statistics aggregate-statistics exceed-profile
Tree	exceed-profile
Configurable	False
Platforms	7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

dropped-octets *number*

Description	Number of octets transmitted by the queue dropped by the queue
Context	qos interfaces interface interface-id <i>string</i> output queues queue queue-name reference queue-statistics aggregate-statistics exceed-profile dropped-octets number
Tree	dropped-octets
Default	0
Configurable	False
Platforms	7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

dropped-packets *number*

Description	Number of packets transmitted by the queue dropped by the queue
Context	qos interfaces interface interface-id <i>string</i> output queues queue queue-name reference queue-statistics aggregate-statistics exceed-profile dropped-packets number
Tree	dropped-packets
Default	0
Configurable	False
Platforms	7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

transmitted-octets *number*

Description	Number of octets transmitted by the queue, including transit traffic and locally originated traffic
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Context	qos interfaces interface interface-id <i>string</i> output queues queue queue-name reference queue-statistics aggregate-statistics exceed-profile transmitted-octets <i>number</i>
Tree	transmitted-octets
Default	0
Configurable	False
Platforms	7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

transmitted-packets *number*

Description	Number of packets transmitted by the queue, including transit traffic and locally originated traffic
Context	qos interfaces interface interface-id <i>string</i> output queues queue queue-name reference queue-statistics aggregate-statistics exceed-profile transmitted-packets <i>number</i>
Tree	transmitted-packets
Default	0
Configurable	False
Platforms	7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

in-plus-profile

Description	Stats for packets marked with In-Plus profile transmitted by the queue
Context	qos interfaces interface interface-id <i>string</i> output queues queue queue-name reference queue-statistics aggregate-statistics in-plus-profile
Tree	in-plus-profile
Configurable	False
Platforms	7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

dropped-octets *number*

Description	Number of octets transmitted by the queue dropped by the queue
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Context	qos interfaces interface interface-id <i>string</i> output queues queue queue-name reference queue-statistics aggregate-statistics in-plus-profile dropped-octets number
Tree	dropped-octets
Default	0
Configurable	False
Platforms	7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

dropped-packets *number*

Description	Number of packets transmitted by the queue dropped by the queue
Context	qos interfaces interface interface-id <i>string</i> output queues queue queue-name reference queue-statistics aggregate-statistics in-plus-profile dropped-packets number
Tree	dropped-packets
Default	0
Configurable	False
Platforms	7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

transmitted-octets *number*

Description	Number of octets transmitted by the queue, including transit traffic and locally originated traffic
Context	qos interfaces interface interface-id <i>string</i> output queues queue queue-name reference queue-statistics aggregate-statistics in-plus-profile transmitted-octets number
Tree	transmitted-octets
Default	0
Configurable	False
Platforms	7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

transmitted-packets *number*

Description	Number of packets transmitted by the queue, including transit traffic and locally originated traffic
Context	qos interfaces interface interface-id <i>string</i> output queues queue queue-name reference queue-statistics aggregate-statistics in-plus-profile transmitted-packets <i>number</i>
Tree	transmitted-packets
Default	0
Configurable	False
Platforms	7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

in-profile

Description	Stats for packets marked with In profile transmitted by the queue
Context	qos interfaces interface interface-id <i>string</i> output queues queue queue-name reference queue-statistics aggregate-statistics in-profile
Tree	in-profile
Configurable	False
Platforms	7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

dropped-octets *number*

Description	Number of octets transmitted by the queue dropped by the queue
Context	qos interfaces interface interface-id <i>string</i> output queues queue queue-name reference queue-statistics aggregate-statistics in-profile dropped-octets <i>number</i>
Tree	dropped-octets
Default	0
Configurable	False
Platforms	7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

dropped-packets *number*

Description	Number of packets transmitted by the queue dropped by the queue
Context	qos interfaces interface interface-id string output queues queue queue-name reference queue-statistics aggregate-statistics in-profile dropped-packets number
Tree	dropped-packets
Default	0
Configurable	False
Platforms	7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

transmitted-octets *number*

Description	Number of octets transmitted by the queue, including transit traffic and locally originated traffic
Context	qos interfaces interface interface-id string output queues queue queue-name reference queue-statistics aggregate-statistics in-profile transmitted-octets number
Tree	transmitted-octets
Default	0
Configurable	False
Platforms	7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

transmitted-packets *number*

Description	Number of packets transmitted by the queue, including transit traffic and locally originated traffic
Context	qos interfaces interface interface-id string output queues queue queue-name reference queue-statistics aggregate-statistics in-profile transmitted-packets number
Tree	transmitted-packets
Default	0
Configurable	False
Platforms	7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

last-clear *string*

Description	Timestamp of the last time the statistics associated with this queue were cleared
Context	qos interfaces interface interface-id <i>string</i> output queues queue queue-name reference queue-statistics aggregate-statistics last-clear <i>string</i>
Tree	last-clear
String Length	20 to 32
Configurable	False
Platforms	7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

out-profile

Description	Stats for packets marked with Out profile transmitted by the queue
Context	qos interfaces interface interface-id <i>string</i> output queues queue queue-name reference queue-statistics aggregate-statistics out-profile
Tree	out-profile
Configurable	False
Platforms	7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

dropped-octets *number*

Description	Number of octets transmitted by the queue dropped by the queue
Context	qos interfaces interface interface-id <i>string</i> output queues queue queue-name reference queue-statistics aggregate-statistics out-profile dropped-octets <i>number</i>
Tree	dropped-octets
Default	0
Configurable	False
Platforms	7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

dropped-packets *number*

Description	Number of packets transmitted by the queue dropped by the queue
Context	qos interfaces interface interface-id string output queues queue queue-name reference queue-statistics aggregate-statistics out-profile dropped-packets number
Tree	dropped-packets
Default	0
Configurable	False
Platforms	7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

transmitted-octets *number*

Description	Number of octets transmitted by the queue, including transit traffic and locally originated traffic
Context	qos interfaces interface interface-id string output queues queue queue-name reference queue-statistics aggregate-statistics out-profile transmitted-octets number
Tree	transmitted-octets
Default	0
Configurable	False
Platforms	7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

transmitted-packets *number*

Description	Number of packets transmitted by the queue, including transit traffic and locally originated traffic
Context	qos interfaces interface interface-id string output queues queue queue-name reference queue-statistics aggregate-statistics out-profile transmitted-packets number
Tree	transmitted-packets
Default	0
Configurable	False
Platforms	7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

queue-depth

Description	Enter the queue-depth context
Context	qos interfaces interface interface-id <i>string</i> output queues queue queue-name <i>reference</i> queue-statistics aggregate-statistics queue-depth
Tree	queue-depth
Configurable	False
Platforms	7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

high-threshold-bytes *number*

Description	The operational hardware value of the high threshold in bytes
Context	qos interfaces interface interface-id <i>string</i> output queues queue queue-name <i>reference</i> queue-statistics aggregate-statistics queue-depth high-threshold-bytes <i>number</i>
Tree	high-threshold-bytes
Units	bytes
Configurable	False
Platforms	7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

last-high-threshold-time *string*

Description	The last time the queue depth exceeded the high-threshold in a rising direction
Context	qos interfaces interface interface-id <i>string</i> output queues queue queue-name <i>reference</i> queue-statistics aggregate-statistics queue-depth last-high-threshold-time <i>string</i>
Tree	last-high-threshold-time
String Length	20 to 32
Configurable	False
Platforms	7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

virtual-output-queue *slot number*

Description	List of virtual output queues that can send traffic to this egress queue. The list always has one entry for each IMM slot in the chassis, even if one or more slots are empty
Context	qos interfaces interface interface-id string output queues queue queue-name reference queue-statistics aggregate-statistics virtual-output-queue slot number
Tree	virtual-output-queue
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

slot number

Description	The slot identifier for the virtual output queue
Context	qos interfaces interface interface-id string output queues queue queue-name reference queue-statistics aggregate-statistics virtual-output-queue slot number
Range	1 to 8
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

high-drop-probability

Description	The unicast statistics unicast packets transmitted from the VOQ to the egress queue that were classified as high drop-probability. This reads 0 when the IMM associated with the VOQ is not inserted and it resets to 0 whenever the IMM associated with the VOQ is removed
Context	qos interfaces interface interface-id string output queues queue queue-name reference queue-statistics aggregate-statistics virtual-output-queue slot number high-drop-probability
Tree	high-drop-probability
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

dropped-octets *number*

Description	Number of octets transmitted by the queue dropped by the queue
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Context	qos interfaces interface interface-id <i>string</i> output queues queue queue-name reference queue-statistics aggregate-statistics virtual-output-queue slot number high-drop-probability dropped-octets <i>number</i>
Tree	dropped-octets
Default	0
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

dropped-packets *number*

Description	Number of packets transmitted by the queue dropped by the queue
Context	qos interfaces interface interface-id <i>string</i> output queues queue queue-name reference queue-statistics aggregate-statistics virtual-output-queue slot number high-drop-probability dropped-packets <i>number</i>
Tree	dropped-packets
Default	0
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

transmitted-octets *number*

Description	Number of octets transmitted by the queue, including transit traffic and locally originated traffic
Context	qos interfaces interface interface-id <i>string</i> output queues queue queue-name reference queue-statistics aggregate-statistics virtual-output-queue slot number high-drop-probability transmitted-octets <i>number</i>
Tree	transmitted-octets
Default	0
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

transmitted-packets *number*

Description	Number of packets transmitted by the queue, including transit traffic and locally originated traffic
Context	qos interfaces interface interface-id <i>string</i> output queues queue queue-name reference queue-statistics aggregate-statistics virtual-output-queue slot number high-drop-probability transmitted-packets <i>number</i>
Tree	transmitted-packets

Default	0
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

low-drop-probability

Description	The unicast statistics from the VOQ to the egress queue that were classified as low drop-probability. This reads 0 when the IMM associated with the VOQ is not inserted and it resets to 0 whenever the IMM associated with the VOQ is removed
Context	qos interfaces interface interface-id string output queues queue queue-name reference queue-statistics aggregate-statistics virtual-output-queue slot number low-drop-probability
Tree	low-drop-probability
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

dropped-octets *number*

Description	Number of octets transmitted by the queue dropped by the queue
Context	qos interfaces interface interface-id string output queues queue queue-name reference queue-statistics aggregate-statistics virtual-output-queue slot number low-drop-probability dropped-octets number
Tree	dropped-octets
Default	0
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

dropped-packets *number*

Description	Number of packets transmitted by the queue dropped by the queue
Context	qos interfaces interface interface-id string output queues queue queue-name reference queue-statistics aggregate-statistics virtual-output-queue slot number low-drop-probability dropped-packets number
Tree	dropped-packets
Default	0
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

transmitted-octets *number*

Description	Number of octets transmitted by the queue, including transit traffic and locally originated traffic
Context	qos interfaces interface interface-id <i>string</i> output queues queue queue-name reference queue-statistics aggregate-statistics virtual-output-queue slot number low-drop-probability transmitted-octets <i>number</i>
Tree	transmitted-octets
Default	0
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

transmitted-packets *number*

Description	Number of packets transmitted by the queue, including transit traffic and locally originated traffic
Context	qos interfaces interface interface-id <i>string</i> output queues queue queue-name reference queue-statistics aggregate-statistics virtual-output-queue slot number low-drop-probability transmitted-packets <i>number</i>
Tree	transmitted-packets
Default	0
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

medium-drop-probability

Description	The unicast statistics from the VOQ to the egress queue that were classified as medium drop-probability. This reads 0 when the IMM associated with the VOQ is not inserted and it resets to 0 whenever the IMM associated with the VOQ is removed
Context	qos interfaces interface interface-id <i>string</i> output queues queue queue-name reference queue-statistics aggregate-statistics virtual-output-queue slot number medium-drop-probability
Tree	medium-drop-probability
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

dropped-octets *number*

Description	Number of octets transmitted by the queue dropped by the queue
Context	qos interfaces interface interface-id string output queues queue queue-name reference queue-statistics aggregate-statistics virtual-output-queue slot number medium-drop-probability dropped-octets number
Tree	dropped-octets
Default	0
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

dropped-packets *number*

Description	Number of packets transmitted by the queue dropped by the queue
Context	qos interfaces interface interface-id string output queues queue queue-name reference queue-statistics aggregate-statistics virtual-output-queue slot number medium-drop-probability dropped-packets number
Tree	dropped-packets
Default	0
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

transmitted-octets *number*

Description	Number of octets transmitted by the queue, including transit traffic and locally originated traffic
Context	qos interfaces interface interface-id string output queues queue queue-name reference queue-statistics aggregate-statistics virtual-output-queue slot number medium-drop-probability transmitted-octets number
Tree	transmitted-octets
Default	0
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

transmitted-packets *number*

Description	Number of packets transmitted by the queue, including transit traffic and locally originated traffic
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Context	qos interfaces interface interface-id <i>string</i> output queues queue queue-name reference queue-statistics aggregate-statistics virtual-output-queue slot number medium-drop-probability transmitted-packets <i>number</i>
Tree	transmitted-packets
Default	0
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

queue-depth

Description	Enter the queue-depth context
Context	qos interfaces interface interface-id <i>string</i> output queues queue queue-name reference queue-statistics aggregate-statistics virtual-output-queue slot number queue-depth
Tree	queue-depth
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

high-threshold-bytes *number*

Description	The operational hardware value of the high threshold in bytes
Context	qos interfaces interface interface-id <i>string</i> output queues queue queue-name reference queue-statistics aggregate-statistics virtual-output-queue slot number queue-depth high-threshold-bytes <i>number</i>
Tree	high-threshold-bytes
Units	bytes
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

last-high-threshold-time *string*

Description	The last time the depth of either VOQ associated with this slot exceeded the high-threshold in a rising direction
Context	qos interfaces interface interface-id <i>string</i> output queues queue queue-name reference queue-statistics aggregate-statistics virtual-output-queue slot number queue-depth last-high-threshold-time <i>string</i>
Tree	last-high-threshold-time
String Length	20 to 32

Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

per-lag-member-statistics

Description	Queue statistics per-LAG member. These statistics are relevant only for LAG
Context	qos interfaces interface interface-id string output queues queue queue-name reference queue-statistics per-lag-member-statistics
Tree	per-lag-member-statistics
Configurable	False
Platforms	7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

member-interface [member-interface-name string](#)

Description	Enter the member-interface list instance
Context	qos interfaces interface interface-id string output queues queue queue-name reference queue-statistics per-lag-member-statistics member-interface member-interface-name string
Tree	member-interface
Configurable	False
Platforms	7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

member-interface-name [string](#)

Description	Enter the member-interface-name context
Context	qos interfaces interface interface-id string output queues queue queue-name reference queue-statistics per-lag-member-statistics member-interface member-interface-name string
Configurable	False
Platforms	7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

egq-dropped-octets *number*

Description	Number of octets dropped by the queue at egress
Context	qos interfaces interface interface-id <i>string</i> output queues queue queue-name <i>reference</i> queue-statistics per-lag-member-statistics member-interface member-interface-name <i>string</i> egq-dropped-octets <i>number</i>
Tree	egq-dropped-octets
Default	0
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

egq-dropped-packets *number*

Description	Number of packets dropped by the queue at egress
Context	qos interfaces interface interface-id <i>string</i> output queues queue queue-name <i>reference</i> queue-statistics per-lag-member-statistics member-interface member-interface-name <i>string</i> egq-dropped-packets <i>number</i>
Tree	egq-dropped-packets
Default	0
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

exceed-profile

Description	Stats for packets marked with Exceed profile transmitted by the queue
Context	qos interfaces interface interface-id <i>string</i> output queues queue queue-name <i>reference</i> queue-statistics per-lag-member-statistics member-interface member-interface-name <i>string</i> exceed-profile
Tree	exceed-profile
Configurable	False
Platforms	7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

dropped-octets *number*

Description	Number of octets transmitted by the queue dropped by the queue
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Context	qos interfaces interface interface-id <i>string</i> output queues queue queue-name <i>reference</i> queue-statistics per-lag-member-statistics member-interface member-interface-name <i>string</i> exceed-profile dropped-octets <i>number</i>
Tree	dropped-octets
Default	0
Configurable	False
Platforms	7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

dropped-packets *number*

Description	Number of packets transmitted by the queue dropped by the queue
Context	qos interfaces interface interface-id <i>string</i> output queues queue queue-name <i>reference</i> queue-statistics per-lag-member-statistics member-interface member-interface-name <i>string</i> exceed-profile dropped-packets <i>number</i>
Tree	dropped-packets
Default	0
Configurable	False
Platforms	7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

transmitted-octets *number*

Description	Number of octets transmitted by the queue, including transit traffic and locally originated traffic
Context	qos interfaces interface interface-id <i>string</i> output queues queue queue-name <i>reference</i> queue-statistics per-lag-member-statistics member-interface member-interface-name <i>string</i> exceed-profile transmitted-octets <i>number</i>
Tree	transmitted-octets
Default	0
Configurable	False
Platforms	7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

transmitted-packets *number*

Description	Number of packets transmitted by the queue, including transit traffic and locally originated traffic
Context	qos interfaces interface interface-id <i>string</i> output queues queue queue-name <i>reference</i> queue-statistics per-lag-member-statistics member-interface member-interface-name <i>string</i> exceed-profile transmitted-packets <i>number</i>
Tree	transmitted-packets
Default	0
Configurable	False
Platforms	7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

in-plus-profile

Description	Stats for packets marked with In-Plus profile transmitted by the queue
Context	qos interfaces interface interface-id <i>string</i> output queues queue queue-name <i>reference</i> queue-statistics per-lag-member-statistics member-interface member-interface-name <i>string</i> in-plus-profile
Tree	in-plus-profile
Configurable	False
Platforms	7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

dropped-octets *number*

Description	Number of octets transmitted by the queue dropped by the queue
Context	qos interfaces interface interface-id <i>string</i> output queues queue queue-name <i>reference</i> queue-statistics per-lag-member-statistics member-interface member-interface-name <i>string</i> in-plus-profile dropped-octets <i>number</i>
Tree	dropped-octets
Default	0
Configurable	False
Platforms	7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

dropped-packets *number*

Description	Number of packets transmitted by the queue dropped by the queue
Context	qos interfaces interface interface-id string output queues queue queue-name reference queue-statistics per-lag-member-statistics member-interface member-interface-name string in-plus-profile dropped-packets number
Tree	dropped-packets
Default	0
Configurable	False
Platforms	7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

transmitted-octets *number*

Description	Number of octets transmitted by the queue, including transit traffic and locally originated traffic
Context	qos interfaces interface interface-id string output queues queue queue-name reference queue-statistics per-lag-member-statistics member-interface member-interface-name string in-plus-profile transmitted-octets number
Tree	transmitted-octets
Default	0
Configurable	False
Platforms	7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

transmitted-packets *number*

Description	Number of packets transmitted by the queue, including transit traffic and locally originated traffic
Context	qos interfaces interface interface-id string output queues queue queue-name reference queue-statistics per-lag-member-statistics member-interface member-interface-name string in-plus-profile transmitted-packets number
Tree	transmitted-packets
Default	0
Configurable	False
Platforms	7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

in-profile

Description	Stats for packets marked with In profile transmitted by the queue
Context	qos interfaces interface interface-id string output queues queue queue-name reference queue-statistics per-lag-member-statistics member-interface member-interface-name string in-profile
Tree	in-profile
Configurable	False
Platforms	7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

dropped-octets number

Description	Number of octets transmitted by the queue dropped by the queue
Context	qos interfaces interface interface-id string output queues queue queue-name reference queue-statistics per-lag-member-statistics member-interface member-interface-name string in-profile dropped-octets number
Tree	dropped-octets
Default	0
Configurable	False
Platforms	7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

dropped-packets number

Description	Number of packets transmitted by the queue dropped by the queue
Context	qos interfaces interface interface-id string output queues queue queue-name reference queue-statistics per-lag-member-statistics member-interface member-interface-name string in-profile dropped-packets number
Tree	dropped-packets
Default	0
Configurable	False
Platforms	7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

transmitted-octets *number*

Description	Number of octets transmitted by the queue, including transit traffic and locally originated traffic
Context	qos interfaces interface interface-id string output queues queue queue-name reference queue-statistics per-lag-member-statistics member-interface member-interface-name string in-profile transmitted-octets number
Tree	transmitted-octets
Default	0
Configurable	False
Platforms	7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

transmitted-packets *number*

Description	Number of packets transmitted by the queue, including transit traffic and locally originated traffic
Context	qos interfaces interface interface-id string output queues queue queue-name reference queue-statistics per-lag-member-statistics member-interface member-interface-name string in-profile transmitted-packets number
Tree	transmitted-packets
Default	0
Configurable	False
Platforms	7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

out-profile

Description	Stats for packets marked with Out profile transmitted by the queue
Context	qos interfaces interface interface-id string output queues queue queue-name reference queue-statistics per-lag-member-statistics member-interface member-interface-name string out-profile
Tree	out-profile
Configurable	False
Platforms	7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

dropped-octets *number*

Description	Number of octets transmitted by the queue dropped by the queue
Context	qos interfaces interface interface-id string output queues queue queue-name reference queue-statistics per-lag-member-statistics member-interface member-interface-name string out-profile dropped-octets number
Tree	dropped-octets
Default	0
Configurable	False
Platforms	7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

dropped-packets *number*

Description	Number of packets transmitted by the queue dropped by the queue
Context	qos interfaces interface interface-id string output queues queue queue-name reference queue-statistics per-lag-member-statistics member-interface member-interface-name string out-profile dropped-packets number
Tree	dropped-packets
Default	0
Configurable	False
Platforms	7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

transmitted-octets *number*

Description	Number of octets transmitted by the queue, including transit traffic and locally originated traffic
Context	qos interfaces interface interface-id string output queues queue queue-name reference queue-statistics per-lag-member-statistics member-interface member-interface-name string out-profile transmitted-octets number
Tree	transmitted-octets
Default	0
Configurable	False
Platforms	7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

transmitted-packets *number*

Description	Number of packets transmitted by the queue, including transit traffic and locally originated traffic
Context	qos interfaces interface interface-id <i>string</i> output queues queue queue-name <i>reference</i> queue-statistics per-lag-member-statistics member-interface member-interface-name <i>string</i> out-profile transmitted-packets <i>number</i>
Tree	transmitted-packets
Default	0
Configurable	False
Platforms	7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

queue-depth

Description	Enter the queue-depth context
Context	qos interfaces interface interface-id <i>string</i> output queues queue queue-name <i>reference</i> queue-statistics per-lag-member-statistics member-interface member-interface-name <i>string</i> queue-depth
Tree	queue-depth
Configurable	False
Platforms	7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

high-threshold-bytes *number*

Description	The operational hardware value of the high threshold in bytes
Context	qos interfaces interface interface-id <i>string</i> output queues queue queue-name <i>reference</i> queue-statistics per-lag-member-statistics member-interface member-interface-name <i>string</i> queue-depth high-threshold-bytes <i>number</i>
Tree	high-threshold-bytes
Units	bytes
Configurable	False
Platforms	7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

last-high-threshold-time *string*

Description	The last time the queue depth exceeded the high-threshold in a rising direction
Context	qos interfaces interface interface-id <i>string</i> output queues queue queue-name <i>reference</i> queue-statistics per-lag-member-statistics member-interface member-interface-name <i>string</i> queue-depth last-high-threshold-time <i>string</i>
Tree	last-high-threshold-time
String Length	20 to 32
Configurable	False
Platforms	7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

virtual-output-queue *slot number*

Description	List of virtual output queues that can send traffic to this egress queue. The list always has one entry for each IMM slot in the chassis, even if one or more slots are empty
Context	qos interfaces interface interface-id <i>string</i> output queues queue queue-name <i>reference</i> queue-statistics per-lag-member-statistics member-interface member-interface-name <i>string</i> virtual-output-queue slot number
Tree	virtual-output-queue
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

slot number

Description	The slot identifier for the virtual output queue
Context	qos interfaces interface interface-id <i>string</i> output queues queue queue-name <i>reference</i> queue-statistics per-lag-member-statistics member-interface member-interface-name <i>string</i> virtual-output-queue slot number
Range	1 to 8
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

high-drop-probability

Description	The unicast statistics unicast packets transmitted from the VOQ to the egress queue that were classified as high drop-probability. This reads 0 when the IMM associated with the VOQ is not inserted and it resets to 0 whenever the IMM associated with the VOQ is removed
Context	qos interfaces interface interface-id string output queues queue queue-name reference queue-statistics per-lag-member-statistics member-interface member-interface-name string virtual-output-queue slot number high-drop-probability
Tree	high-drop-probability
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

dropped-octets *number*

Description	Number of octets transmitted by the queue dropped by the queue
Context	qos interfaces interface interface-id string output queues queue queue-name reference queue-statistics per-lag-member-statistics member-interface member-interface-name string virtual-output-queue slot number high-drop-probability dropped-octets number
Tree	dropped-octets
Default	0
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

dropped-packets *number*

Description	Number of packets transmitted by the queue dropped by the queue
Context	qos interfaces interface interface-id string output queues queue queue-name reference queue-statistics per-lag-member-statistics member-interface member-interface-name string virtual-output-queue slot number high-drop-probability dropped-packets number
Tree	dropped-packets
Default	0
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

transmitted-octets *number*

Description	Number of octets transmitted by the queue, including transit traffic and locally originated traffic
Context	qos interfaces interface interface-id <i>string</i> output queues queue queue-name <i>reference</i> queue-statistics per-lag-member-statistics member-interface member-interface-name <i>string</i> virtual-output-queue slot <i>number</i> high-drop-probability transmitted-octets <i>number</i>
Tree	transmitted-octets
Default	0
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

transmitted-packets *number*

Description	Number of packets transmitted by the queue, including transit traffic and locally originated traffic
Context	qos interfaces interface interface-id <i>string</i> output queues queue queue-name <i>reference</i> queue-statistics per-lag-member-statistics member-interface member-interface-name <i>string</i> virtual-output-queue slot <i>number</i> high-drop-probability transmitted-packets <i>number</i>
Tree	transmitted-packets
Default	0
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

low-drop-probability

Description	The unicast statistics from the VOQ to the egress queue that were classified as low drop-probability. This reads 0 when the IMM associated with the VOQ is not inserted and it resets to 0 whenever the IMM associated with the VOQ is removed
Context	qos interfaces interface interface-id <i>string</i> output queues queue queue-name <i>reference</i> queue-statistics per-lag-member-statistics member-interface member-interface-name <i>string</i> virtual-output-queue slot <i>number</i> low-drop-probability
Tree	low-drop-probability
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

dropped-octets *number*

Description	Number of octets transmitted by the queue dropped by the queue
Context	qos interfaces interface interface-id <i>string</i> output queues queue queue-name <i>reference</i> queue-statistics per-lag-member-statistics member-interface member-interface-name <i>string</i> virtual-output-queue slot <i>number</i> low-drop-probability dropped-octets <i>number</i>
Tree	dropped-octets
Default	0
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

dropped-packets *number*

Description	Number of packets transmitted by the queue dropped by the queue
Context	qos interfaces interface interface-id <i>string</i> output queues queue queue-name <i>reference</i> queue-statistics per-lag-member-statistics member-interface member-interface-name <i>string</i> virtual-output-queue slot <i>number</i> low-drop-probability dropped-packets <i>number</i>
Tree	dropped-packets
Default	0
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

transmitted-octets *number*

Description	Number of octets transmitted by the queue, including transit traffic and locally originated traffic
Context	qos interfaces interface interface-id <i>string</i> output queues queue queue-name <i>reference</i> queue-statistics per-lag-member-statistics member-interface member-interface-name <i>string</i> virtual-output-queue slot <i>number</i> low-drop-probability transmitted-octets <i>number</i>
Tree	transmitted-octets
Default	0
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

transmitted-packets *number*

Description	Number of packets transmitted by the queue, including transit traffic and locally originated traffic
Context	qos interfaces interface interface-id <i>string</i> output queues queue queue-name <i>reference</i> queue-statistics per-lag-member-statistics member-interface member-interface-name <i>string</i> virtual-output-queue slot <i>number</i> low-drop-probability transmitted-packets <i>number</i>
Tree	transmitted-packets
Default	0
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

medium-drop-probability

Description	The unicast statistics from the VOQ to the egress queue that were classified as medium drop-probability. This reads 0 when the IMM associated with the VOQ is not inserted and it resets to 0 whenever the IMM associated with the VOQ is removed
Context	qos interfaces interface interface-id <i>string</i> output queues queue queue-name <i>reference</i> queue-statistics per-lag-member-statistics member-interface member-interface-name <i>string</i> virtual-output-queue slot <i>number</i> medium-drop-probability
Tree	medium-drop-probability
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

dropped-octets *number*

Description	Number of octets transmitted by the queue dropped by the queue
Context	qos interfaces interface interface-id <i>string</i> output queues queue queue-name <i>reference</i> queue-statistics per-lag-member-statistics member-interface member-interface-name <i>string</i> virtual-output-queue slot <i>number</i> medium-drop-probability dropped-octets <i>number</i>
Tree	dropped-octets
Default	0
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

dropped-packets *number*

Description	Number of packets transmitted by the queue dropped by the queue
Context	qos interfaces interface interface-id string output queues queue queue-name reference queue-statistics per-lag-member-statistics member-interface member-interface-name string virtual-output-queue slot number medium-drop-probability dropped-packets number
Tree	dropped-packets
Default	0
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

transmitted-octets *number*

Description	Number of octets transmitted by the queue, including transit traffic and locally originated traffic
Context	qos interfaces interface interface-id string output queues queue queue-name reference queue-statistics per-lag-member-statistics member-interface member-interface-name string virtual-output-queue slot number medium-drop-probability transmitted-octets number
Tree	transmitted-octets
Default	0
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

transmitted-packets *number*

Description	Number of packets transmitted by the queue, including transit traffic and locally originated traffic
Context	qos interfaces interface interface-id string output queues queue queue-name reference queue-statistics per-lag-member-statistics member-interface member-interface-name string virtual-output-queue slot number medium-drop-probability transmitted-packets number
Tree	transmitted-packets
Default	0
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

queue-depth

Description	Enter the queue-depth context
Context	qos interfaces interface interface-id <i>string</i> output queues queue queue-name <i>reference</i> queue-statistics per-lag-member-statistics member-interface member-interface-name <i>string</i> virtual-output-queue slot <i>number</i> queue-depth
Tree	queue-depth
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

high-threshold-bytes *number*

Description	The operational hardware value of the high threshold in bytes
Context	qos interfaces interface interface-id <i>string</i> output queues queue queue-name <i>reference</i> queue-statistics per-lag-member-statistics member-interface member-interface-name <i>string</i> virtual-output-queue slot <i>number</i> queue-depth high-threshold-bytes <i>number</i>
Tree	high-threshold-bytes
Units	bytes
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

last-high-threshold-time *string*

Description	The last time the depth of either VOQ associated with this slot exceeded the high-threshold in a rising direction
Context	qos interfaces interface interface-id <i>string</i> output queues queue queue-name <i>reference</i> queue-statistics per-lag-member-statistics member-interface member-interface-name <i>string</i> virtual-output-queue slot <i>number</i> queue-depth last-high-threshold-time <i>string</i>
Tree	last-high-threshold-time
String Length	20 to 32
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

scheduling

Description	Container for queue scheduling parameters
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Context	qos interfaces interface interface-id <i>string</i> output queues queue queue-name reference scheduling
Tree	scheduling
Configurable	False
Platforms	7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

peak-rate-bps *number*

Description	The actual/operational peak rate in bits per second
Context	qos interfaces interface interface-id <i>string</i> output queues queue queue-name reference scheduling peak-rate-bps <i>number</i>
Tree	peak-rate-bps
Configurable	False
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

peak-rate-percent *number*

Description	The maximum percentage of port bandwidth that is available to the traffic in this queue during the PIR scheduling loop. The default is 100
Context	qos interfaces interface interface-id <i>string</i> output queues queue queue-name reference scheduling peak-rate-percent <i>number</i>
Tree	peak-rate-percent
Range	1 to 100
Configurable	False
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

strict-priority *boolean*

Description	When set to true the queue is serviced as a strict priority queue, regardless of whether a weight is configured or its value. When set to false the queue is serviced using WRR, even if the queue does not have a configured weight; in this case the default weight value of 1 is used
Context	qos interfaces interface interface-id <i>string</i> output queues queue queue-name reference scheduling strict-priority <i>boolean</i>

Tree	strict-priority
Configurable	False
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

weight number

Description	Configures the relative weight of a queue. For DWRR, this is determined by the scheduler policy For Strict Priority the weight is as follows J2: unicast-0..unicast-7 -> weight 9..16 multicast-0..multicast-7 -> weight 1..8 TD3 (D2/D3/D5): unicast-0..unicast-7 -> weight 1..8 multicast-0..multicast-7 -> weight 1..8 TH3: unicast-0 -> weight 2 unicast-1 -> weight 3 unicast-2 -> weight 5 unicast-3 -> weight 6 unicast-4 -> weight 8 unicast-5 -> weight 9 unicast-6 -> weight 11 unicast-7 -> weight 12 multicast-0 -> weight 1 multicast-1 -> weight 4 multicast-2 -> weight 7 multicast-3 -> weight 10
Context	qos interfaces interface interface-id <i>string</i> output queues queue queue-name <i>reference</i> scheduling weight number
Tree	weight
Range	1 to 255
Configurable	False
Platforms	7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

rewrite-rules

Description	Enable the rewrite-rules context
Context	qos interfaces interface interface-id <i>string</i> output rewrite-rules
Tree	rewrite-rules
Configurable	True
Platforms	7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

dot1p-policy reference

Description	Reference to the name of a dot1p rewrite policy
Context	qos interfaces interface interface-id <i>string</i> output rewrite-rules dot1p-policy reference
Tree	dot1p-policy
Reference	qos rewrite-rules dot1p-policy name <i>string</i>
Configurable	True
Platforms	7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5

dscp-policy reference

Description	Reference to the name of a DSCP rewrite-rule policy that applies to both IPv4 and IPv6 traffic
Context	qos interfaces interface interface-id <i>string</i> output rewrite-rules dscp-policy reference
Tree	dscp-policy
Reference	qos rewrite-rules dscp-policy name <i>string</i>
Configurable	True
Platforms	7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4

ipv4-dscp-policy reference

Description	Reference to the name of a DSCP rewrite-rule policy that applies only to IPv4 traffic
Context	qos interfaces interface interface-id <i>string</i> output rewrite-rules ipv4-dscp-policy reference
Tree	ipv4-dscp-policy
Reference	qos rewrite-rules dscp-policy name <i>string</i>
Configurable	True
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

ipv6-dscp-policy reference

Description	Reference to the name of a DSCP rewrite-rule policy that applies only to IPv6 traffic
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Context	qos interfaces interface interface-id <i>string</i> output rewrite-rules ipv6-dscp-policy <i>reference</i>
Tree	ipv6-dscp-policy
Reference	qos rewrite-rules dscp-policy name <i>string</i>
Configurable	True
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

mpls-traffic-class-policy *reference*

Description	Reference to the name of an MPLS traffic-class rewrite-rule policy
Context	qos interfaces interface interface-id <i>string</i> output rewrite-rules mpls-traffic-class-policy <i>reference</i>
Tree	mpls-traffic-class-policy
Reference	qos rewrite-rules mpls-traffic-class-policy name <i>string</i>
Configurable	True
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

scheduler

Description	Output traffic scheduler options
Context	qos interfaces interface interface-id <i>string</i> output scheduler
Tree	scheduler
Configurable	True
Platforms	7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

scheduler-policy *reference*

Description	The scheduler policy to be applied to traffic on this interface
Context	qos interfaces interface interface-id <i>string</i> output scheduler scheduler-policy <i>reference</i>
Tree	scheduler-policy
Reference	qos scheduler-policies scheduler-policy name <i>string</i>
Configurable	True
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

pfc

Description	Parameters and information related to PFC on the interface
Context	qos interfaces interface interface-id <i>string</i> pfc
Tree	pfc
Configurable	True
Platforms	7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

deadlock-detection-timer *number*

Description	The actual value of deadlock-detection-timer
Context	qos interfaces interface interface-id <i>string</i> pfc deadlock-detection-timer <i>number</i>
Tree	deadlock-detection-timer
Configurable	False
Platforms	7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

oper-state *keyword*

Description	Details if the PFC feature is operationally available
Context	qos interfaces interface interface-id <i>string</i> pfc oper-state <i>keyword</i>
Tree	oper-state
Options	<ul style="list-style-type: none"> • up Component or process is operational • down Component or process is not operational • empty Component slot is empty • downloading Component is downloading image into memory • booting Component is booting downloaded image • starting

- Component image operational, application processes starting
- failed
Component or process has failed
- synchronizing
Component is currently being synchronized
- upgrading
Component is currently being upgraded
- low-power
Component is offline due to insufficient system power
- degraded
Component or process is in a degraded state
- warm-reboot
Component or process is currently warm rebooting
This state is set during a warm reboot immediately following initiation of the reboot, continuing after startup until the system has completed audit. In this state the system will not accept configuration changes.
- waiting
Component or process is currently waiting
This state can be set by event handler when the reinvoke-with-delay action is used, and indicates that the event handler is waiting for the provided delay before reinvoking the instance.

Configurable

False

Platforms

7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

pfc-enable *boolean***Description**

Enables/disables reaction to received pfc-frames for a given interface

Context[qos interfaces interface interface-id](#) *string* [pfc pfc-enable](#) *boolean***Tree**[pfc-enable](#)**Default**

false

Configurable

True

Platforms

7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

pfc-mapping-profile *reference*

Description	Assigns a pfc-mapping-profile to the interface. There is always default pfc-mapping-profile assigned named 'default'
Context	qos interfaces interface interface-id <i>string</i> pfc pfc-mapping-profile <i>reference</i>
Tree	pfc-mapping-profile
Reference	qos pfc-mapping-profile name <i>string</i>
Configurable	True
Platforms	7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

pfc-queue [pfc-queue-name](#) *reference*

Description	List of pfc-queues
Context	qos interfaces interface interface-id <i>string</i> pfc pfc-queue pfc-queue-name <i>reference</i>
Tree	pfc-queue
Configurable	False
Platforms	7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

pfc-queue-name *reference*

Description	The pfc-queue name
Context	qos interfaces interface interface-id <i>string</i> pfc pfc-queue pfc-queue-name <i>reference</i>
Reference	qos queues pfc-queue pfc-queue-name <i>string</i>
Configurable	False
Platforms	7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

forwarding-class *reference*

Description	The forwarding class mapped in the given pfc-queue
Context	qos interfaces interface interface-id <i>string</i> pfc pfc-queue pfc-queue-name <i>reference</i> forwarding-class <i>reference</i>

Tree	forwarding-class
Reference	qos forwarding-classes forwarding-class name <i>string</i>
Configurable	False
Platforms	7250 IXR-10e, 7250 IXR-6e, 7250 IXR-X3b

pfc-committed-burst-size *number*

Description	Displays the actual committed-burst-size of the pfc-queue
Context	qos interfaces interface interface-id <i>string</i> pfc pfc-queue pfc-queue-name <i>reference</i> pfc-committed-burst-size <i>number</i>
Tree	pfc-committed-burst-size
Configurable	False
Platforms	7250 IXR-10e, 7250 IXR-6e, 7250 IXR-X3b

pfc-maximum-burst-size *number*

Description	Displays the actual maximum-burst-size of the pfc-queue
Context	qos interfaces interface interface-id <i>string</i> pfc pfc-queue pfc-queue-name <i>reference</i> pfc-maximum-burst-size <i>number</i>
Tree	pfc-maximum-burst-size
Configurable	False
Platforms	7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H4

pfc-maximum-pfc-reserved-share *number*

Description	Displays the actual maximum share the pfc-queue can take from pfc-reserved buffer configured per given forwarding-complex
Context	qos interfaces interface interface-id <i>string</i> pfc pfc-queue pfc-queue-name <i>reference</i> pfc-maximum-pfc-reserved-share <i>number</i>
Tree	pfc-maximum-pfc-reserved-share
Units	bytes
Configurable	False
Platforms	7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

pfc-off-threshold-bytes *number*

Description	Displays the actual off-threshold of the pfc-queue
Context	qos interfaces interface interface-id <i>string</i> pfc pfc-queue pfc-queue-name <i>reference</i> pfc-off-threshold-bytes <i>number</i>
Tree	pfc-off-threshold-bytes
Configurable	False
Platforms	7250 IXR-10e, 7250 IXR-6e, 7250 IXR-X3b

pfc-on-threshold-bytes *number*

Description	Displays the actual on-threshold of the pfc-queue
Context	qos interfaces interface interface-id <i>string</i> pfc pfc-queue pfc-queue-name <i>reference</i> pfc-on-threshold-bytes <i>number</i>
Tree	pfc-on-threshold-bytes
Configurable	False
Platforms	7250 IXR-10e, 7250 IXR-6e, 7250 IXR-X3b

source-pfc-mac *string*

Description	MAC address used as source-mac address used in generated pfc-pause-frames on the interface
Context	qos interfaces interface interface-id <i>string</i> pfc source-pfc-mac <i>string</i>
Tree	source-pfc-mac
Configurable	False
Platforms	7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

statistics

Description	Statistics related to PFC functionality
Context	qos interfaces interface interface-id <i>string</i> pfc statistics
Tree	statistics
Configurable	False
Platforms	7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

last-clear *string*

Description	Timestamp of the last time the statistics associated with this queue were cleared
Context	qos interfaces interface interface-id <i>string</i> pfc statistics last-clear <i>string</i>
Tree	last-clear
String Length	20 to 32
Configurable	False
Platforms	7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

pfc-priority *index number*

Description	Enter the pfc-priority list instance
Context	qos interfaces interface interface-id <i>string</i> pfc statistics pfc-priority <i>index number</i>
Tree	pfc-priority
Configurable	False
Platforms	7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

index *number*

Description	PFC-priority index
Context	qos interfaces interface interface-id <i>string</i> pfc statistics pfc-priority <i>index number</i>
Range	0 to 7
Configurable	False
Platforms	7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

deadlock-recovery-occurrences *number*

Description	Number of deadlock recovery events
Context	qos interfaces interface interface-id <i>string</i> pfc statistics pfc-priority <i>index number</i> deadlock-recovery-occurrences <i>number</i>

Tree	deadlock-recovery-occurrences
Configurable	False
Platforms	7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

pfc-pause-frames-generated *number*

Description	Number of pfc-pause-frames generated on the interface for a given pfc-priority
Context	qos interfaces interface interface-id <i>string</i> pfc statistics pfc-priority index number pfc-pause-frames-generated <i>number</i>
Tree	pfc-pause-frames-generated
Configurable	False
Platforms	7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

pfc-pause-frames-received *number*

Description	Number of pfc-pause-frames received on the interface and given pfc-priority
Context	qos interfaces interface interface-id <i>string</i> pfc statistics pfc-priority index number pfc-pause-frames-received <i>number</i>
Tree	pfc-pause-frames-received
Configurable	False
Platforms	7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

pfc-transitions *number*

Description	Number of transitions PFC-ON --> PFC-OFF on the interface for a given pfc-priority
Context	qos interfaces interface interface-id <i>string</i> pfc statistics pfc-priority index number pfc-transitions <i>number</i>
Tree	pfc-transitions
Configurable	False
Platforms	7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

total-packet-pfc-discards *number*

Description	Total number of packets discarded because pfc-buffer-allocation was depleted. Under normal condition this counter should not be incremented
Context	qos interfaces interface interface-id <i>string</i> pfc statistics total-packet-pfc-discards <i>number</i>
Tree	total-packet-pfc-discards
Configurable	False
Platforms	7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

total-pfc-pause-frames-generated *number*

Description	Total number of pfc-pause-frames generated on the interface
Context	qos interfaces interface interface-id <i>string</i> pfc statistics total-pfc-pause-frames-generated <i>number</i>
Tree	total-pfc-pause-frames-generated
Configurable	False
Platforms	7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

total-pfc-pause-frames-received *number*

Description	Total number of pfc-pause-frames received on the interface
Context	qos interfaces interface interface-id <i>string</i> pfc statistics total-pfc-pause-frames-received <i>number</i>
Tree	total-pfc-pause-frames-received
Configurable	False
Platforms	7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

linecard [slot](#) *number*

Description	Container for QoS linecard configuration
Context	qos linecard slot <i>number</i>
Tree	linecard

Configurable	True
Platforms	7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

slot number

Description	Numeric identifier for the linecard
Context	qos linecard slot number
Range	1 to 8
Configurable	True
Platforms	7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

forwarding-complex name keyword

Description	List of forwarding complexes on the card
Context	qos linecard slot number forwarding-complex name keyword
Tree	forwarding-complex
Configurable	True
Platforms	7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

name keyword

Description	Forwarding-complex name
Context	qos linecard slot number forwarding-complex name keyword
Options	<ul style="list-style-type: none"> • 0 • 1
Configurable	True
Platforms	7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

input

Description	QoS input parameters at forwarding-complex level
Context	qos linecard slot number forwarding-complex name keyword input
Tree	input
Configurable	True
Platforms	7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H4, 7250 IXR-10e, 7250 IXR-6e, 7250 IXR-X3b

pfc-buffer-reservation *number*

Description	Percentage of the buffer reserved for accommodating incoming traffic while upstream node reacts to generated PFC-pause frames
Context	qos linecard slot number forwarding-complex name keyword input pfc-buffer-reservation number
Tree	pfc-buffer-reservation
Range	0 to 100
Default	1
Configurable	True
Platforms	7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H4

pfc-reserved-buffer-size *number*

Description	Displays the actual size of pfc-reserved buffer in bytes
Context	qos linecard slot number forwarding-complex name keyword input pfc-reserved-buffer-size number
Tree	pfc-reserved-buffer-size
Units	bytes
Configurable	False
Platforms	7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H4, 7250 IXR-10e, 7250 IXR-6e, 7250 IXR-X3b

output

Description	QoS output parameters at forwarding-complex level
Context	qos linecard slot number forwarding-complex name keyword output
Tree	output

Configurable	True
Platforms	7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

output-class-map **name** *string*

Description	Enter the output-class-map list instance
Context	qos output-class-map name <i>string</i>
Tree	output-class-map
Configurable	True
Platforms	7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b
Max. Elements	64

name *string*

Description	User defined output-class-map name
Context	qos output-class-map name <i>string</i>
String Length	1 to 255
Configurable	True
Platforms	7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

forwarding-class **name** *reference*

Description	Enter the forwarding-class list instance
Context	qos output-class-map name <i>string</i> forwarding-class name <i>reference</i>
Tree	forwarding-class
Configurable	True
Platforms	7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

name *reference*

Description	The forwarding class
Context	qos output-class-map name <i>string</i> forwarding-class name <i>reference</i>
Reference	qos forwarding-classes forwarding-class name <i>string</i>
Configurable	True
Platforms	7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

queue

Description	Container used to define whether local subinterface should be created or re-direction to remote queue at interface level should be used
Context	qos output-class-map name <i>string</i> forwarding-class name <i>reference</i> queue
Tree	queue
Configurable	True
Platforms	7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

name *reference*

Description	The queue name
Context	qos output-class-map name <i>string</i> forwarding-class name <i>reference</i> queue name <i>reference</i>
Tree	name
Reference	qos queues queue name <i>string</i>
Configurable	True
Platforms	7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

re-direct-to *keyword*

Description	The re-direction to interface level queue
Context	qos output-class-map name <i>string</i> forwarding-class name <i>reference</i> queue re-direct-to <i>keyword</i>

Tree	re-direct-to
Options	• remote
Configurable	True
Platforms	7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

pfm-mapping-profile *name string*

Description	Enter the pfm-mapping-profile list instance
Context	qos pfm-mapping-profile name string
Tree	pfm-mapping-profile
Configurable	True
Platforms	7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b
Max. Elements	7

name *string*

Description	User defined pfm-mapping-profile name. The name 'default' is reserved for system use
Context	qos pfm-mapping-profile name string
String Length	1 to 255
Configurable	True
Platforms	7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

received-pfm-pause-frames

Description	Parameters describing the behaviour when pfm-pause-frames are received on outgoing interface
Context	qos pfm-mapping-profile name string received-pfm-pause-frames
Tree	received-pfm-pause-frames
Configurable	True

Platforms 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

deadlock

Description Parameters related to avoid a deadlock related to pfc on outgoing interface

Context [qos pfc-mapping-profile name](#) *string* [received-pfc-pause-frames](#) [deadlock](#)

Tree [deadlock](#)

Configurable True

Platforms 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

detection-timer *number*

Description Number of milliseconds during which outgoing interface is receiving pfc-pause-frames before triggering recovery-timer

Context [qos pfc-mapping-profile name](#) *string* [received-pfc-pause-frames](#) [deadlock](#) [detection-timer](#) *number*

Tree [detection-timer](#)

Range 10 to 1500

Default 750

Units millisecond

Configurable True

Platforms 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

enable *boolean*

Description Enables/disables deadlock mechanism

Context [qos pfc-mapping-profile name](#) *string* [received-pfc-pause-frames](#) [deadlock](#) [enable](#) *boolean*

Tree [enable](#)

Default false

Configurable True

Platforms 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

recovery-timer *number*

Description Number of milliseconds during which the pfc-pause-frames will be ignored

Context [qos pfc-mapping-profile name](#) *string* [received-pfc-pause-frames deadlock recovery-timer](#) *number*

Tree [recovery-timer](#)

Range 100 to 1500

Default 750

Units milliseconds

Configurable True

Platforms 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

queue [queue-name](#) *reference*

Description List of egress-queue which should react to PFC-pause-frames

Context [qos pfc-mapping-profile name](#) *string* [received-pfc-pause-frames queue queue-name](#) *reference*

Tree [queue](#)

Configurable True

Platforms 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

queue-name *reference*

Description Egress-queue name

Context [qos pfc-mapping-profile name](#) *string* [received-pfc-pause-frames queue queue-name](#) *reference*

Reference [qos queues queue name](#) *string*

Configurable True

Platforms 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

enable-pfc *boolean*

Description	Enables/disables reaction to received pfc-frames for a given pfc-priority
Context	qos pfc-mapping-profile name <i>string</i> received-pfc-pause-frames queue queue-name <i>reference</i> enable-pfc <i>boolean</i>
Tree	enable-pfc
Default	false
Configurable	True
Platforms	7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

pfc-pause-frame-priority *number*

Description	The pfc-priority received in pfc-pause-frame
Context	qos pfc-mapping-profile name <i>string</i> received-pfc-pause-frames queue queue-name <i>reference</i> pfc-pause-frame-priority <i>number</i>
Tree	pfc-pause-frame-priority
Range	0 to 7
Configurable	True
Platforms	7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b
Max. Elements	1

received-traffic

Description	Parameters related to receiving traffic for pfc-generation
Context	qos pfc-mapping-profile name <i>string</i> received-traffic
Tree	received-traffic
Configurable	True
Platforms	7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H4

unicast-mapping

Description	Parameters defing mapping of incoming unicast traffic into a pfc-queues
Context	qos pfc-mapping-profile name <i>string</i> received-traffic unicast-mapping

Tree	unicast-mapping
Configurable	True
Platforms	7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H4

pfc-queue [pfc-queue-name](#) *reference*

Description	Enter the pfc-queue list instance
Context	qos pfc-mapping-profile name <i>string</i> received-traffic unicast-mapping pfc-queue pfc-queue-name <i>reference</i>
Tree	pfc-queue
Configurable	True
Platforms	7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H4

pfc-queue-name *reference*

Description	PFC-queue the packets should be mapped to
Context	qos pfc-mapping-profile name <i>string</i> received-traffic unicast-mapping pfc-queue pfc-queue-name <i>reference</i>
Reference	qos queues pfc-queue pfc-queue-name <i>string</i>
Configurable	True
Platforms	7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H4

dot1p *number*

Description	List of dot1p values of the packets which will be assigned to a given pfc-queue
Context	qos pfc-mapping-profile name <i>string</i> received-traffic unicast-mapping pfc-queue pfc-queue-name <i>reference</i> dot1p <i>number</i>
Tree	dot1p
Range	0 to 7
Configurable	True
Platforms	7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H4

forwarding-class *reference*

Description	List of forwarding-classes which packets are assigned to a given pfc-queue for untagged routed-interfaces
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Context	qos pfc-mapping-profile name <i>string</i> received-traffic unicast-mapping pfc-queue pfc-queue-name <i>reference</i> forwarding-class <i>reference</i>
Tree	forwarding-class
Reference	qos forwarding-classes forwarding-class name <i>string</i>
Configurable	True
Platforms	7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H4

pfc-pause-frame-priority *number*

Description	PFC priorities indicated in generated pfc-pause-frame if congestion occurs in a given pfc-queue
Context	qos pfc-mapping-profile name <i>string</i> received-traffic unicast-mapping pfc-queue pfc-queue-name <i>reference</i> pfc-pause-frame-priority <i>number</i>
Tree	pfc-pause-frame-priority
Range	0 to 7
Configurable	True
Platforms	7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H4
Max. Elements	1

policer-templates

Description	Enter the policer-templates context
Context	qos policer-templates
Tree	policer-templates
Configurable	True
Platforms	7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5

policer-template name *string*

Description	List of policer templates.
Context	qos policer-templates policer-template name <i>string</i>
Tree	policer-template
Configurable	True
Platforms	7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5

name *string*

Description	The name assigned to the policer template.
Context	qos policer-templates policer-template name <i>string</i>
String Length	1 to 255
Configurable	True
Platforms	7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5

policer [sequence-id](#) *number*

Description	The list of policer instances belonging to the template definition.
Context	qos policer-templates policer-template name <i>string</i> policer sequence-id <i>number</i>
Tree	policer
Configurable	True
Platforms	7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5
Max. Elements	32

sequence-id *number*

Description	A number to indicate the relative evaluation order of the different policers in a template; policers with lower sequence-id numbers are evaluated before policers with higher sequence-id numbers
Context	qos policer-templates policer-template name <i>string</i> policer sequence-id <i>number</i>
Range	1 to 65535
Configurable	True
Platforms	7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5

committed-burst-size *number*

Description	Maximum CIR bucket depth in bytes On 7220-D2/D3 the lower limit is 512 Bytes and higher limit is 268 MB
Context	qos policer-templates policer-template name <i>string</i> policer sequence-id <i>number</i> committed-burst-size <i>number</i>

Tree	committed-burst-size
Units	bytes
Configurable	True
Platforms	7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5

committed-rate-kbps *number*

Description	The committed information rate (CIR) of the policer, defined in kilobits (1024 bits) per second On 7220-D2/D3 the minimum rate is 8 Kbps
Context	qos policer-templates policer-template name <i>string</i> policer sequence-id <i>number</i> committed-rate-kbps <i>number</i>
Tree	committed-rate-kbps
Units	kbps
Configurable	True
Platforms	7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5

exceed-action

Description	Container with options that specify the handling of packets that the policer has determined are exceeding (yellow)
Context	qos policer-templates policer-template name <i>string</i> policer sequence-id <i>number</i> exceed-action
Tree	exceed-action
Configurable	True
Platforms	7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5

drop-probability *keyword*

Description	Recolor exceeding packets to the specified drop-probability level
Context	qos policer-templates policer-template name <i>string</i> policer sequence-id <i>number</i> exceed-action drop-probability <i>keyword</i>
Tree	drop-probability
Default	medium
Options	<ul style="list-style-type: none"> low

Traffic that should be dropped last when there is congestion. Internally this is traffic that is colored green.

- medium

Traffic that should be dropped before green traffic but after red traffic when there is congestion. Internally this is traffic that is colored yellow.

- high

Traffic that should be dropped first when there is congestion. Internally this is traffic that is colored red.

Configurable	True
Platforms	7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5

forwarding-class *fc reference*

Description	The list of forwarding classes with traffic to be sent to the policer. If this list is not configured then all subinterface traffic is matched.
Context	qos policer-templates policer-template name <i>string</i> policer sequence-id number forwarding-class fc reference
Tree	forwarding-class
Configurable	True
Platforms	7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5

fc *reference*

Description	A forwarding class that has traffic to match to the policer
Context	qos policer-templates policer-template name <i>string</i> policer sequence-id number forwarding-class fc reference
Reference	qos forwarding-classes forwarding-class name <i>string</i>
Configurable	True
Platforms	7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5

forwarding-type *keyword*

Description	The list of forwarding types, belonging to this forwarding-class, to match to the policer. If none are specified, this implies ALL forwarding types.
Context	qos policer-templates policer-template name <i>string</i> policer sequence-id number forwarding-class fc reference forwarding-type keyword

Tree	forwarding-type
Options	<ul style="list-style-type: none"> • unicast A packet is 'unicast' if the destination address is unicast and it matches an entry in the FIB • unknown-unicast A packet is 'unknown-unicast' if the destination address is unicast but it doesn't match any entry in the FIB and is therefore conventionally flooded • multicast A packet is 'multicast' if the destination address is a multicast address On TD3 systems this includes multicast packets with a known destination/group address and multicast packets with an unknown destination/group address. On TD4 systems this only includes known multicast packets • unknown-multicast Multicast packets with an unknown destination/group address • broadcast A packet is 'broadcast' if the destination address is a broadcast address
Configurable	True
Platforms	7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5
Max. Elements	5

maximum-burst-size *number*

Description	Maximum PIR bucket depth in bytes On 7220-D2/D3 the lower limit is 512 Bytes and higher limit is 268 MB
Context	qos policer-templates policer-template name <i>string</i> policer sequence-id number maximum-burst-size number
Tree	maximum-burst-size
Units	bytes
Configurable	True
Platforms	7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5

peak-rate-kbps *number*

Description	The peak information rate (PIR) of the policer, defined in kilobits (1024 bits) per second. On 7220-D2/D3 the minimum rate is 8 Kbps
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Context	qos policer-templates policer-template name <i>string</i> policer sequence-id number peak-rate-kbps <i>number</i>
Tree	peak-rate-kbps
Units	kbps
Configurable	True
Platforms	7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5

violate-action

Description	Container with options that specify the handling of packets that the policer has determined are violating (red)
Context	qos policer-templates policer-template name <i>string</i> policer sequence-id number violate-action
Tree	violate-action
Configurable	True
Platforms	7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5

drop

Description	Violating packets should be dropped immediately
Context	qos policer-templates policer-template name <i>string</i> policer sequence-id number violate-action drop
Tree	drop
Configurable	True
Platforms	7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5

drop-probability *keyword*

Description	Recolor violating packets to the specified drop-probability level
Context	qos policer-templates policer-template name <i>string</i> policer sequence-id number violate-action drop-probability <i>keyword</i>
Tree	drop-probability
Default	high
Options	<ul style="list-style-type: none"> low

Traffic that should be dropped last when there is congestion. Internally this is traffic that is colored green.

- medium

Traffic that should be dropped before green traffic but after red traffic when there is congestion. Internally this is traffic that is colored yellow.

- high

Traffic that should be dropped first when there is congestion. Internally this is traffic that is colored red.

Configurable	True
Platforms	7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5

statistics-mode *keyword*

Description	The statistics mode of all policers belonging to this template
Context	qos policer-templates policer-template name string statistics-mode keyword
Tree	statistics-mode
Default	violating-focus
Options	<ul style="list-style-type: none"> • violating-focus In this statistics mode only 4 counters are provided: accepted-packets, accepted-octets, violating-packets, violating-octets • forwarding-focus In this statistics mode only 4 counters are provided: committed-packets, committed-octets, exceeding-packets, exceeding-octets
Configurable	True
Platforms	7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5

preserve-dscp *boolean*

Description	When forwarding an untunneled IP packet or decapsulating an IP-in-IP packet, preserve the received DSCP and use it in the transmitted packet. This should not be enabled unless all IP packets have been classified by a multi-field classifier policy
Context	qos preserve-dscp boolean
Tree	preserve-dscp
Configurable	True

Platforms 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

queues

Description Enclosing container for the list of user-defined queue names

Context [qos queues](#)

Tree [queues](#)

Configurable True

Platforms 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

pfc-queue [pfc-queue-name](#) *string*

Description List of pfc-queues

Context [qos queues pfc-queue pfc-queue-name](#) *string*

Tree [pfc-queue](#)

Configurable True

Platforms 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H4, 7250 IXR-10e, 7250 IXR-6e, 7250 IXR-X3b

pfc-queue-name *string*

Description User-defined name of the pfc-queue

Context [qos queues pfc-queue pfc-queue-name](#) *string*

String Length 1 to 255

Configurable True

Platforms 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H4, 7250 IXR-10e, 7250 IXR-6e, 7250 IXR-X3b

queue-index *number*

Description The queue index (offset) of the pfc-queue

Context [qos queues pfc-queue pfc-queue-name](#) *string queue-index* *number*

Tree [queue-index](#)

Range 0 to 7

Configurable	True
Platforms	7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H4, 7250 IXR-10e, 7250 IXR-6e, 7250 IXR-X3b

queue name string

Description	List of user-defined queues
Context	qos queues queue name string
Tree	queue
Configurable	True
Platforms	7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

name string

Description	User-defined name of the queue The following queue names are the system-reserved default queue names on 7250 IXR systems: unicast-0 unicast-1 unicast-2 unicast-3 unicast-4 unicast-5 unicast-6 unicast-7
Context	qos queues queue name string
String Length	1 to 255
Configurable	True
Platforms	7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

queue-index number

Description	The queue index (offset) of the queue within the set of queues allocated to a given interface or subinterface
Context	qos queues queue name string queue-index number
Tree	queue-index
Range	0 to 13
Configurable	True
Platforms	7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

rewrite-rules

Description	Enter the rewrite-rules context
Context	qos rewrite-rules
Tree	rewrite-rules
Configurable	True
Platforms	7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

dot1p-policy *name string*

Description	Enter the dot1p-policy list instance
Context	qos rewrite-rules dot1p-policy name string
Tree	dot1p-policy
Configurable	True
Platforms	7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5

name *string*

Description	User-configured name for an 802.1p priority code point rewrite policy
Context	qos rewrite-rules dot1p-policy name string
String Length	1 to 255
Configurable	True
Platforms	7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5

map forwarding-class *reference*

Description	Enter the map list instance
Context	qos rewrite-rules dot1p-policy name string map forwarding-class reference
Tree	map
Configurable	True
Platforms	7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5

forwarding-class *reference*

Description	The forwarding class
Context	qos rewrite-rules dot1p-policy name <i>string</i> map forwarding-class <i>reference</i>
Reference	qos forwarding-classes forwarding-class name <i>string</i>
Configurable	True
Platforms	7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5

dot1p *number*

Description	The dot1p marking to be used for all packets associated with the FC, except those with a drop-probability-specific or profile-specific override
Context	qos rewrite-rules dot1p-policy name <i>string</i> map forwarding-class <i>reference</i> dot1p <i>number</i>
Tree	dot1p
Range	0 to 7
Configurable	True
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

drop-probability [drop-probability](#) *keyword*

Description	Enter the drop-probability list instance
Context	qos rewrite-rules dot1p-policy name <i>string</i> map forwarding-class <i>reference</i> drop-probability drop-probability <i>keyword</i>
Tree	drop-probability
Configurable	True
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

drop-probability *keyword*

Description	A drop probability level within the FC for which a different remarking is desired
Context	qos rewrite-rules dot1p-policy name <i>string</i> map forwarding-class <i>reference</i> drop-probability drop-probability <i>keyword</i>

Options	<ul style="list-style-type: none"> low Traffic that should be dropped last when there is congestion. Internally this is traffic that is colored green. medium Traffic that should be dropped before green traffic but after red traffic when there is congestion. Internally this is traffic that is colored yellow. high Traffic that should be dropped first when there is congestion. Internally this is traffic that is colored red.
Configurable	True
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

dot1p *number*

Description	The dot1p marking to be used for this specific drop-probability
Context	qos rewrite-rules dot1p-policy name <i>string</i> map forwarding-class reference drop-probability drop-probability <i>keyword dot1p number</i>
Tree	dot1p
Range	0 to 7
Configurable	True
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

dscp-policy *name string*

Description	Enter the dscp-policy list instance
Context	qos rewrite-rules dscp-policy name <i>string</i>
Tree	dscp-policy
Configurable	True
Platforms	7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

name *string*

Description	User-configured name for a DSCP rewrite policy
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Context	qos rewrite-rules dscp-policy name <i>string</i>
String Length	1 to 255
Configurable	True
Platforms	7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

map [forwarding-class](#) *reference*

Description	Enter the map list instance
Context	qos rewrite-rules dscp-policy name <i>string</i> map forwarding-class <i>reference</i>
Tree	map
Configurable	True
Platforms	7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

forwarding-class *reference*

Description	The forwarding class
Context	qos rewrite-rules dscp-policy name <i>string</i> map forwarding-class <i>reference</i>
Reference	qos forwarding-classes forwarding-class name <i>string</i>
Configurable	True
Platforms	7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

drop-probability [drop-probability](#) *keyword*

Description	Enter the drop-probability list instance
Context	qos rewrite-rules dscp-policy name <i>string</i> map forwarding-class <i>reference</i> drop-probability <i>drop-probability</i> <i>keyword</i>
Tree	drop-probability
Configurable	True
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

drop-probability *keyword*

Description	A drop probability level within the FC for which a different remarking is desired
Context	qos rewrite-rules dscp-policy name <i>string</i> map forwarding-class reference drop-probability drop-probability <i>keyword</i>
Options	<ul style="list-style-type: none"> low Traffic that should be dropped last when there is congestion. Internally this is traffic that is colored green. medium Traffic that should be dropped before green traffic but after red traffic when there is congestion. Internally this is traffic that is colored yellow. high Traffic that should be dropped first when there is congestion. Internally this is traffic that is colored red.
Configurable	True
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

dscp (*number | keyword*)

Description	The DSCP marking to be used for this specific drop-probability
Context	qos rewrite-rules dscp-policy name <i>string</i> map forwarding-class reference drop-probability drop-probability <i>keyword</i> dscp (<i>number keyword</i>)
Tree	dscp
Range	0 to 63
Options	<ul style="list-style-type: none"> CS0 LE CS1 AF11 AF12 AF13 CS2 AF21 AF22 AF23 CS3

	<ul style="list-style-type: none"> • AF31 • AF32 • AF33 • CS4 • AF41 • AF42 • AF43 • CS5 • EF • CS6 • CS7
Configurable	True
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

dscp (*number* | *keyword*)

Description	The DSCP marking to be used for all packets associated with the FC, except those with a drop-probability-specific or profile-specific override
Context	qos rewrite-rules dscp-policy name <i>string</i> map forwarding-class reference dscp (<i>number</i> <i>keyword</i>)
Tree	dscp
Range	0 to 63
Options	<ul style="list-style-type: none"> • CS0 • LE • CS1 • AF11 • AF12 • AF13 • CS2 • AF21 • AF22 • AF23 • CS3 • AF31 • AF32

- AF33
- CS4
- AF41
- AF42
- AF43
- CS5
- EF
- CS6
- CS7

Configurable

True

Platforms

7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

ip-rewrite-policy name string**Description**

Enter the ip-rewrite-policy list instance

Context[qos rewrite-rules ip-rewrite-policy name string](#)**Tree**[ip-rewrite-policy](#)**Configurable**

True

Platforms

7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

name string**Description**

User defined ip-rewrite-policy name

Context[qos rewrite-rules ip-rewrite-policy name string](#)**String Length**

1 to 255

Configurable

True

Platforms

7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

exceed**Description**

Enter the exceed context

Context[qos rewrite-rules ip-rewrite-policy name string exceed](#)

Tree	exceed
Configurable	True
Platforms	7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

dscp (*number* | *keyword*)

Description	The DSCP marking to be used for this specific profile
Context	qos rewrite-rules ip-rewrite-policy name <i>string</i> exceed dscp (<i>number</i> <i>keyword</i>)
Tree	dscp
Range	0 to 63
Options	<ul style="list-style-type: none"> • CS0 • LE • CS1 • AF11 • AF12 • AF13 • CS2 • AF21 • AF22 • AF23 • CS3 • AF31 • AF32 • AF33 • CS4 • AF41 • AF42 • AF43 • CS5 • EF • CS6 • CS7
Configurable	True

Platforms 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

precedence *number*

Description The ip-precedence marking to be used for this specific profile

Context [qos rewrite-rules ip-rewrite-policy name string exceed precedence number](#)

Tree [precedence](#)

Range 0 to 7

Configurable True

Platforms 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

in

Description Enter the in context

Context [qos rewrite-rules ip-rewrite-policy name string in](#)

Tree [in](#)

Configurable True

Platforms 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

dscp (*number* | *keyword*)

Description The DSCP marking to be used for this specific profile

Context [qos rewrite-rules ip-rewrite-policy name string in dscp \(number | keyword\)](#)

Tree [dscp](#)

Range 0 to 63

Options

- CS0
- LE
- CS1
- AF11
- AF12
- AF13
- CS2

- AF21
- AF22
- AF23
- CS3
- AF31
- AF32
- AF33
- CS4
- AF41
- AF42
- AF43
- CS5
- EF
- CS6
- CS7

Configurable

True

Platforms

7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

precedence number**Description**

The ip-precedence marking to be used for this specific profile

Context[qos rewrite-rules ip-rewrite-policy name](#) *string* [precedence number](#)**Tree**[precedence](#)**Range**

0 to 7

Configurable

True

Platforms

7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

in-plus**Description**

Enter the in-plus context

Context[qos rewrite-rules ip-rewrite-policy name](#) *string* [in-plus](#)**Tree**[in-plus](#)**Configurable**

True

Platforms 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

dscp (*number* | *keyword*)

Description	The DSCP marking to be used for this specific profile
Context	qos rewrite-rules ip-rewrite-policy name <i>string</i> in-plus dscp (<i>number</i> <i>keyword</i>)
Tree	dscp
Range	0 to 63
Options	<ul style="list-style-type: none"> • CS0 • LE • CS1 • AF11 • AF12 • AF13 • CS2 • AF21 • AF22 • AF23 • CS3 • AF31 • AF32 • AF33 • CS4 • AF41 • AF42 • AF43 • CS5 • EF • CS6 • CS7
Configurable	True
Platforms	7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

precedence number

Description	The ip-precedence marking to be used for this specific profile
Context	qos rewrite-rules ip-rewrite-policy name <i>string in-plus precedence number</i>
Tree	precedence
Range	0 to 7
Configurable	True
Platforms	7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

out

Description	Enter the out context
Context	qos rewrite-rules ip-rewrite-policy name <i>string out</i>
Tree	out
Configurable	True
Platforms	7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

dscp (number | keyword)

Description	The DSCP marking to be used for this specific profile
Context	qos rewrite-rules ip-rewrite-policy name <i>string out dscp (number keyword)</i>
Tree	dscp
Range	0 to 63
Options	<ul style="list-style-type: none"> • CS0 • LE • CS1 • AF11 • AF12 • AF13 • CS2 • AF21 • AF22 • AF23

- CS3
- AF31
- AF32
- AF33
- CS4
- AF41
- AF42
- AF43
- CS5
- EF
- CS6
- CS7

Configurable

True

Platforms

7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

precedence number**Description**

The ip-precedence marking to be used for this specific profile

Context

[qos rewrite-rules ip-rewrite-policy name](#) *string* [out precedence number](#)

Tree

[precedence](#)

Range

0 to 7

Configurable

True

Platforms

7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

mpls-traffic-class-policy name string**Description**

Enter the mpls-traffic-class-policy list instance

Context

[qos rewrite-rules mpls-traffic-class-policy name](#) *string*

Tree

[mpls-traffic-class-policy](#)

Configurable

True

Platforms

7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

name *string*

Description	User-configured name for an MPLS traffic-class rewrite policy
Context	qos rewrite-rules mpls-traffic-class-policy name string
String Length	1 to 255
Configurable	True
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

map forwarding-class *reference*

Description	Enter the map list instance
Context	qos rewrite-rules mpls-traffic-class-policy name string map forwarding-class reference
Tree	map
Configurable	True
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

forwarding-class *reference*

Description	The forwarding class
Context	qos rewrite-rules mpls-traffic-class-policy name string map forwarding-class reference
Reference	qos forwarding-classes forwarding-class name string
Configurable	True
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

drop-probability [drop-probability](#) *keyword*

Description	Enter the drop-probability list instance
Context	qos rewrite-rules mpls-traffic-class-policy name string map forwarding-class reference drop-probability drop-probability keyword
Tree	drop-probability
Configurable	True
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

drop-probability *keyword*

Description	A drop probability level within the FC for which a different remarking is desired
Context	qos rewrite-rules mpls-traffic-class-policy name string map forwarding-class reference drop-probability drop-probability keyword
Options	<ul style="list-style-type: none"> low Traffic that should be dropped last when there is congestion. Internally this is traffic that is colored green. medium Traffic that should be dropped before green traffic but after red traffic when there is congestion. Internally this is traffic that is colored yellow. high Traffic that should be dropped first when there is congestion. Internally this is traffic that is colored red.
Configurable	True
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

traffic-class *number*

Description	The MPLS traffic class marking to be used for this specific drop-probability
Context	qos rewrite-rules mpls-traffic-class-policy name string map forwarding-class reference drop-probability drop-probability keyword traffic-class number
Tree	traffic-class
Range	0 to 7
Configurable	True
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

traffic-class *number*

Description	The MPLS traffic class marking to be used for all packets associated with the FC, except those with a drop-probability-specific or profile-specific override
Context	qos rewrite-rules mpls-traffic-class-policy name string map forwarding-class reference traffic-class number
Tree	traffic-class

Range	0 to 7
Configurable	True
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

vxlan-outer-header-dscp-policy *reference*

Description	Reference to the name of a DSCP rewrite policy that applies to the outer IP header of originating VXLAN packets
Context	qos rewrite-rules vxlan-outer-header-dscp-policy <i>reference</i>
Tree	vxlan-outer-header-dscp-policy
Reference	qos rewrite-rules dscp-policy name <i>string</i>
Configurable	True
Platforms	7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

scheduler-policies

Description	Container for the list of configured scheduler policies
Context	qos scheduler-policies
Tree	scheduler-policies
Configurable	True
Platforms	7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

scheduler-policy [name *string*](#)

Description	List of scheduler policies. A scheduler policy is a set of schedulers that are to be applied together. Each scheduler within a scheduler policy takes an input, and outputs it according to a scheduling discipline that is specified within it
Context	qos scheduler-policies scheduler-policy name <i>string</i>
Tree	scheduler-policy
Configurable	True
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

name *string*

Description	Name for the scheduler policy
Context	qos scheduler-policies scheduler-policy name <i>string</i>
String Length	1 to 255
Configurable	True
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

scheduler *sequence number*

Description	List of defined QoS traffic schedulers
Context	qos scheduler-policies scheduler-policy name <i>string</i> scheduler sequence number
Tree	scheduler
Configurable	True
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

sequence *number*

Description	Sequence number for the scheduler within the scheduler policy. Schedulers are processed from lowest sequence to highest
Context	qos scheduler-policies scheduler-policy name <i>string</i> scheduler sequence number
Range	0 to 1
Configurable	True
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

input *id string*

Description	List of input sources for the scheduler
Context	qos scheduler-policies scheduler-policy name <i>string</i> scheduler sequence number input id <i>string</i>
Tree	input

Configurable	True
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

id string

Description	User-defined identifier for the scheduler input
Context	qos scheduler-policies scheduler-policy name <i>string</i> scheduler sequence number <i>input id string</i>
Configurable	True
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

input-type keyword

Description	Enter the input-type context
Context	qos scheduler-policies scheduler-policy name <i>string</i> scheduler sequence number <i>input id string input-type keyword</i>
Tree	input-type
Default	queue
Options	<ul style="list-style-type: none"> • queue
Configurable	True
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

peak-rate-percent number

Description	The maximum percentage of port bandwidth that is available to the traffic in this queue during the PIR scheduling loop. The default is 100
Context	qos scheduler-policies scheduler-policy name <i>string</i> scheduler sequence number <i>input id string peak-rate-percent number</i>
Tree	peak-rate-percent
Range	1 to 100
Default	100
Configurable	True

Platforms 7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

queue-name *reference*

Description The queue name

Context [qos scheduler-policies scheduler-policy name](#) *string* [scheduler sequence number](#) *input id string* [queue-name reference](#)

Tree [queue-name](#)

Reference [qos queues queue name](#) *string*

Configurable True

Platforms 7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

weight *number*

Description For weighted round-robin schedulers, this leaf indicates the weight of the corresponding input

Context [qos scheduler-policies scheduler-policy name](#) *string* [scheduler sequence number](#) *input id string* [weight number](#)

Tree [weight](#)

Range 1 to 255

Configurable True

Platforms 7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

priority *keyword*

Description Priority of the scheduler within the scheduler policy

Context [qos scheduler-policies scheduler-policy name](#) *string* [scheduler sequence number](#) [priority keyword](#)

Tree [priority](#)

Options

- strict

This scheduler term is considered as a strict priority term - such that packets that arrive in the queue are immediately serviced

Configurable True

Platforms

7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L,
7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250
IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

10 routing-policy

```

routing-policy
+ as-path-set name string
+ expression string
+ community-set name string
+ match-set-options keyword
+ member (identityref | bgp-std-community-type | bgp-large-community-type | string | string
| string | string | string | string | string | string | string | string | bgp-large-community-
regex-type | bgp-std-community-regex-type)
+ policy name string
+ default-action
+ bgp
+ as-path
+ prepend
+ as-number (number | keyword)
+ repeat-n number
+ remove boolean
+ replace number
+ communities
+ add reference
+ remove reference
+ replace reference
+ label-allocation
+ prefix-sid
+ reuse-igp boolean
+ local-preference
+ set number
+ med
+ set (number | keyword)
+ next-hop
+ set (ipv4-address | ipv6-address | keyword)
+ next-hop-resolution
+ set-tag-set reference
+ origin
+ set keyword
+ internal-tags
+ set-tag-set reference
+ policy-result keyword
+ route-preference
+ set number
+ statement name string
+ action
+ bgp
+ as-path
+ prepend
+ as-number (number | keyword)
+ repeat-n number
+ remove boolean
+ replace number
+ communities
+ add reference
+ remove reference
+ replace reference
+ label-allocation
+ prefix-sid
+ reuse-igp boolean
+ local-preference

```

```

    + set number
  + med
    + set (number | keyword)
  + next-hop
    + set (ipv4-address | ipv6-address | keyword)
  + next-hop-resolution
    + set-tag-set reference
  + origin
    + set keyword
+ internal-tags
  + set-tag-set reference
+ policy-result keyword
+ route-preference
  + set number
+ match
  + bgp
    + as-path-length
      + operator keyword
      + unique boolean
      + value number
    + as-path-set reference
    + community-set reference
    + evpn
      + route-type number
  + family identityref
  + internal-tags
    + tag-set reference
  + isis
    + level number
    + route-type keyword
  + multicast
    + group-address
      + prefix-set reference
    + source-address
      + prefix-set reference
  + ospf
    + area-id
    + instance-id number
    + route-type identityref
    + prefix-set reference
    + protocol identityref
+ prefix-set name string
+ prefix ip-prefix (ipv4-prefix | ipv6-prefix) mask-length-range string
+ tag-set name string
  - tag-set-index number
  + tag-value (number | hex-string)

```

10.1 routing-policy Descriptions

routing-policy

Description	Top-level container for all routing policy configuration
Context	routing-policy
Tree	routing-policy
Configurable	True
Platforms	Supported on all platforms

as-path-set *name string*

Description	AS Path regular expressions for use in policy entries
Context	routing-policy as-path-set name string
Tree	as-path-set
Configurable	True
Platforms	Supported on all platforms

name *string*

Description	A name used to identify the AS path regular expression
Context	routing-policy as-path-set name string
String Length	1 to 255
Configurable	True
Platforms	Supported on all platforms

expression *string*

Description	A regular expression where each AS number is an elemental term
Context	routing-policy as-path-set name string expression string
Tree	expression
String Length	1 to 65535
Configurable	True
Platforms	Supported on all platforms

community-set *name string*

Description	List of BGP community sets containing standard and large BGP communities
Context	routing-policy community-set name string
Tree	community-set
Configurable	True
Platforms	Supported on all platforms

name *string*

Description	A name used to identify the community set
Context	routing-policy community-set name string
String Length	1 to 255
Configurable	True
Platforms	Supported on all platforms

match-set-options *keyword*

Description	Options that determine the matching criteria that applies to the list of community members
Context	routing-policy community-set name string match-set-options keyword
Tree	match-set-options
Default	all
Options	<ul style="list-style-type: none"> • any Match is true if any of the listed community member values is present in the route • all Match is true if all of the listed community member values are present in the route • invert Match is true if none of the listed community member values are present in the route
Configurable	True
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

member (*identityref* | *bgp-std-community-type* | *bgp-large-community-type* | *string* | *string* | *string* | *string* | *string* | *string* | *string* | *string* | *string* | *string* | *bgp-large-community-regexp-type* | *bgp-std-community-regexp-type*)

Description	A standard BGP community value, regular expression or well-known name or else a large BGP community value or regular expression
Context	routing-policy community-set name string member (<i>identityref</i> <i>bgp-std-community-type</i> <i>bgp-large-community-type</i> <i>string</i> <i>string</i> <i>string</i> <i>string</i> <i>string</i> <i>string</i> <i>string</i> <i>string</i> <i>string</i> <i>string</i> <i>bgp-large-community-regexp-type</i> <i>bgp-std-community-regexp-type</i>)
Tree	member
Options	<ul style="list-style-type: none"> • no-export Do not export NLRI received carrying this community outside the bounds of this autonomous system, or this confederation if the local autonomous system is a confederation member AS. This community has a value of 0xFFFFFFFF01. • no-advertise All NLRI received carrying this community must not be advertised to other BGP peers. This community has a value of 0xFFFFFFFF02. • no-export-subconfed All NLRI received carrying this community must not be advertised to external BGP peers - including over confederation sub-AS boundaries. This community has a value of 0xFFFFFFFF03.
Configurable	True
Platforms	Supported on all platforms

policy name *string*

Description	List of policy definitions, keyed by unique name These policy definitions are expected to be referenced (by name) in policy in import-policy and/or export-policy statements.
Context	routing-policy policy name <i>string</i>
Tree	policy
Configurable	True
Platforms	Supported on all platforms

name *string*

Description	A name used to identify the policy
--------------------	------------------------------------

Context	routing-policy policy name <i>string</i>
String Length	1 to 255
Configurable	True
Platforms	Supported on all platforms

default-action

Description	Actions for routes that do not match any policy entry
Context	routing-policy policy name <i>string</i> default-action
Tree	default-action
Configurable	True
Platforms	Supported on all platforms

bgp

Description	Enter the bgp context
Context	routing-policy policy name <i>string</i> default-action bgp
Tree	bgp
Configurable	True
Platforms	Supported on all platforms

as-path

Description	Modify AS Path attribute of routes
Context	routing-policy policy name <i>string</i> default-action bgp as-path
Tree	as-path
Configurable	True
Platforms	Supported on all platforms

prepend

Description	Prepend a BGP AS number to the AS Path attribute of routes
Context	routing-policy policy name <i>string</i> default-action bgp as-path prepend
Tree	prepend
Configurable	True
Platforms	Supported on all platforms

as-number (*number* | *keyword*)

Description	The AS number to prepend to the AS Path attributes If 'auto' is specified then the peer's AS number is used in the context of an import policy and the local AS number is used in the context of an export policy.
Context	routing-policy policy name <i>string</i> default-action bgp as-path prepend as-number (<i>number</i> <i>keyword</i>)
Tree	as-number
Range	1 to 4294967295
Options	<ul style="list-style-type: none"> • auto
Configurable	True
Platforms	Supported on all platforms

repeat-n *number*

Description	The number of repetitions of the prepended AS number
Context	routing-policy policy name <i>string</i> default-action bgp as-path prepend repeat-n <i>number</i>
Tree	repeat-n
Range	1 to 50
Configurable	True
Platforms	Supported on all platforms

remove *boolean*

Description	Clear the AS path to make it empty.
Context	routing-policy policy name <i>string</i> default-action bgp as-path remove <i>boolean</i>
Tree	remove
Configurable	True
Platforms	Supported on all platforms

replace *number*

Description	Clear the existing AS path and replace it a new AS_SEQUENCE containing the listed AS numbers.
Context	routing-policy policy name <i>string</i> default-action bgp as-path replace <i>number</i>

Tree	replace
Range	1 to 4294967295
Configurable	True
Platforms	Supported on all platforms

communities

Description	Modify BGP communities attached to routes
Context	routing-policy policy name <i>string</i> default-action bgp communities
Tree	communities
Configurable	True
Platforms	Supported on all platforms

add *reference*

Description	Reference to a community-set name All of the non-regex community members in the referenced community-set are added to the COMMUNITIES and LARGE_COMMUNITIES attributes.
Context	routing-policy policy name <i>string</i> default-action bgp communities add reference
Tree	add
Reference	routing-policy community-set name <i>string</i>
Configurable	True
Platforms	Supported on all platforms

remove *reference*

Description	Reference to a community-set name The communities in the route are compared to all of the community members in the referenced community-set, and all matching communities are removed from the COMMUNITIES and LARGE_COMMUNITIES attributes.
Context	routing-policy policy name <i>string</i> default-action bgp communities remove reference
Tree	remove
Reference	routing-policy community-set name <i>string</i>
Configurable	True
Platforms	Supported on all platforms

replace *reference*

Description	Reference to a community-set name All of the existing communities are deleted and then all of the non-regex community members in the referenced community-set are encoded in new COMMUNITIES and LARGE_COMMUNITIES attributes.
Context	routing-policy policy name <i>string</i> default-action bgp communities replace reference
Tree	replace
Reference	routing-policy community-set name <i>string</i>
Configurable	True
Platforms	Supported on all platforms

label-allocation

Description	Actions that determine the method used to assign labels to BGP LU routes matched and accepted by route-table-import policies
Context	routing-policy policy name <i>string</i> default-action bgp label-allocation
Tree	label-allocation
Configurable	True
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

prefix-sid

Description	RIB-OUT label is based on prefix SID configuration
Context	routing-policy policy name <i>string</i> default-action bgp label-allocation prefix-sid
Tree	prefix-sid
Configurable	True
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

reuse-igp *boolean*

Description	When true use the programmed SR-IGP label index for the matching prefix, resulting in a stitch to the IGP segment routing tunnel
Context	routing-policy policy name <i>string</i> default-action bgp label-allocation prefix-sid reuse-igp <i>boolean</i>
Tree	reuse-igp

Configurable	True
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

local-preference

Description	Enter the local-preference context
Context	routing-policy policy name <i>string</i> default-action bgp local-preference
Tree	local-preference
Configurable	True
Platforms	Supported on all platforms

set *number*

Description	The new value of LOCAL_PREF to write into the matching BGP routes
Context	routing-policy policy name <i>string</i> default-action bgp local-preference set number
Tree	set
Configurable	True
Platforms	Supported on all platforms

med

Description	Enter the med context
Context	routing-policy policy name <i>string</i> default-action bgp med
Tree	med
Configurable	True
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

set (*number* | *keyword*)

Description	The new value of the Multi-Exit Discriminator attribute value to write into the matching BGP routes. The route-table-cost option derives the MED from the route metric.
Context	routing-policy policy name <i>string</i> default-action bgp med set (<i>number</i> <i>keyword</i>)
Tree	set

Options	<ul style="list-style-type: none"> route-table-cost
Configurable	True
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

next-hop

Description	Container for BGP next-hop modifications
Context	routing-policy policy name <i>string</i> default-action bgp next-hop
Tree	next-hop
Configurable	True
Platforms	Supported on all platforms

set (*ipv4-address* | *ipv6-address* | *keyword*)

Description	Set the protocol next-hop address of matched BGP routes
Context	routing-policy policy name <i>string</i> default-action bgp next-hop set (<i>ipv4-address</i> <i>ipv6-address</i> <i>keyword</i>)
Tree	set
Options	<ul style="list-style-type: none"> self <p>Special designation for local router's own address, i.e., next-hop-self</p>
Configurable	True
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

next-hop-resolution

Description	Actions related to next-hop resolution of matched BGP routes
Context	routing-policy policy name <i>string</i> default-action bgp next-hop-resolution
Tree	next-hop-resolution
Configurable	True
Platforms	Supported on all platforms

set-tag-set *reference*

Description	Reference to a tag-set to be used for controlling next-hop resolution
Context	routing-policy policy name <i>string</i> default-action bgp next-hop-resolution set-tag-set <i>reference</i>
Tree	set-tag-set
Reference	routing-policy tag-set name <i>string</i>
Configurable	True
Platforms	Supported on all platforms

origin

Description	Enter the origin context
Context	routing-policy policy name <i>string</i> default-action bgp origin
Tree	origin
Configurable	True
Platforms	Supported on all platforms

set *keyword*

Description	The new value of the ORIGIN attribute to write into the matching BGP routes
Context	routing-policy policy name <i>string</i> default-action bgp origin set <i>keyword</i>
Tree	set
Options	<ul style="list-style-type: none"> • igp • egp • incomplete
Configurable	True
Platforms	Supported on all platforms

internal-tags

Description	Configuration of internal tags
Context	routing-policy policy name <i>string</i> default-action internal-tags
Tree	internal-tags
Configurable	True

Platforms 7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

set-tag-set *reference*

Description Reference to a tag-set defined under routing-policy

Context [routing-policy policy name](#) *string* [default-action internal-tags set-tag-set reference](#)

Tree [set-tag-set](#)

Reference [routing-policy tag-set name](#) *string*

Configurable True

Platforms 7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

Max. Elements 1

policy-result *keyword*

Description Select the action type for routes that do not match any policy statement.

Context [routing-policy policy name](#) *string* [default-action policy-result keyword](#)

Tree [policy-result](#)

Options

- accept
The route is accepted, route property modifications are applied, and evaluation stops immediately
- reject
The route is rejected and evaluation stops immediately
- next-policy
Route policy modifications are applied and evaluation continues to the next policy

Configurable True

Platforms Supported on all platforms

route-preference

Description Options for modifying route preference

Context [routing-policy policy name](#) *string* [default-action route-preference](#)

Tree [route-preference](#)

Configurable	True
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

set number

Description	Overwrite the route preference with the specified value The IP route table preference is sometimes called the administrative distance of the route. In general, when comparing any two routes, the route with the lower preference is the one that is activated and used for forwarding. This action has an effect only in BGP import policies and VRF import policies
Context	routing-policy policy name string default-action route-preference set number
Tree	set
Configurable	True
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

statement name string

Description	Policy statements group conditions and actions within a policy definition. They are evaluated in configuration order.
Context	routing-policy policy name string statement name string
Tree	statement
Configurable	True
Platforms	Supported on all platforms

name string

Description	Name given to the policy statement (rule).
Context	routing-policy policy name string statement name string
String Length	1 to 255
Configurable	True
Platforms	Supported on all platforms

action

Description	Actions for routes that match the policy statement
Context	routing-policy policy name <i>string</i> statement name <i>string</i> action
Tree	action
Configurable	True
Platforms	Supported on all platforms

bgp

Description	Enter the bgp context
Context	routing-policy policy name <i>string</i> statement name <i>string</i> action bgp
Tree	bgp
Configurable	True
Platforms	Supported on all platforms

as-path

Description	Modify AS Path attribute of routes
Context	routing-policy policy name <i>string</i> statement name <i>string</i> action bgp as-path
Tree	as-path
Configurable	True
Platforms	Supported on all platforms

prepend

Description	Prepend a BGP AS number to the AS Path attribute of routes
Context	routing-policy policy name <i>string</i> statement name <i>string</i> action bgp as-path prepend
Tree	prepend
Configurable	True
Platforms	Supported on all platforms

as-number (*number* | *keyword*)

Description	The AS number to prepend to the AS Path attributes
--------------------	--

If 'auto' is specified then the peer's AS number is used in the context of an import policy and the local AS number is used in the context of an export policy.

Context	routing-policy policy name string statement name string action bgp as-path prepend as-number (number keyword)
Tree	as-number
Range	1 to 4294967295
Options	<ul style="list-style-type: none"> • auto
Configurable	True
Platforms	Supported on all platforms

repeat-n *number*

Description	The number of repetitions of the prepended AS number
Context	routing-policy policy name string statement name string action bgp as-path prepend repeat-n number
Tree	repeat-n
Range	1 to 50
Configurable	True
Platforms	Supported on all platforms

remove *boolean*

Description	Clear the AS path to make it empty.
Context	routing-policy policy name string statement name string action bgp as-path remove boolean
Tree	remove
Configurable	True
Platforms	Supported on all platforms

replace *number*

Description	Clear the existing AS path and replace it a new AS_SEQUENCE containing the listed AS numbers.
Context	routing-policy policy name string statement name string action bgp as-path replace number
Tree	replace

Range	1 to 4294967295
Configurable	True
Platforms	Supported on all platforms

communities

Description	Modify BGP communities attached to routes
Context	routing-policy policy name string statement name string action bgp communities
Tree	communities
Configurable	True
Platforms	Supported on all platforms

add *reference*

Description	Reference to a community-set name All of the non-regex community members in the referenced community-set are added to the COMMUNITIES and LARGE_COMMUNITIES attributes.
Context	routing-policy policy name string statement name string action bgp communities add reference
Tree	add
Reference	routing-policy community-set name string
Configurable	True
Platforms	Supported on all platforms

remove *reference*

Description	Reference to a community-set name The communities in the route are compared to all of the community members in the referenced community-set, and all matching communities are removed from the COMMUNITIES and LARGE_COMMUNITIES attributes.
Context	routing-policy policy name string statement name string action bgp communities remove reference
Tree	remove
Reference	routing-policy community-set name string
Configurable	True
Platforms	Supported on all platforms

replace *reference*

Description	Reference to a community-set name All of the existing communities are deleted and then all of the non-regex community members in the referenced community-set are encoded in new COMMUNITIES and LARGE_COMMUNITIES attributes.
Context	routing-policy policy name string statement name string action bgp communities replace reference
Tree	replace
Reference	routing-policy community-set name string
Configurable	True
Platforms	Supported on all platforms

label-allocation

Description	Actions that determine the method used to assign labels to BGP LU routes matched and accepted by route-table-import policies
Context	routing-policy policy name string statement name string action bgp label-allocation
Tree	label-allocation
Configurable	True
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

prefix-sid

Description	RIB-OUT label is based on prefix SID configuration
Context	routing-policy policy name string statement name string action bgp label-allocation prefix-sid
Tree	prefix-sid
Configurable	True
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

reuse-igp *boolean*

Description	When true use the programmed SR-IGP label index for the matching prefix, resulting in a stitch to the IGP segment routing tunnel
Context	routing-policy policy name string statement name string action bgp label-allocation prefix-sid reuse-igp boolean

Tree	reuse-igp
Configurable	True
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

local-preference

Description	Enter the local-preference context
Context	routing-policy policy name string statement name string action bgp local-preference
Tree	local-preference
Configurable	True
Platforms	Supported on all platforms

set number

Description	The new value of LOCAL_PREF to write into the matching BGP routes
Context	routing-policy policy name string statement name string action bgp local-preference set number
Tree	set
Configurable	True
Platforms	Supported on all platforms

med

Description	Enter the med context
Context	routing-policy policy name string statement name string action bgp med
Tree	med
Configurable	True
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

set (number | keyword)

Description	The new value of the Multi-Exit Discriminator attribute value to write into the matching BGP routes. The route-table-cost option derives the MED from the route metric.
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Context	routing-policy policy name string statement name string action bgp med set (number keyword)
Tree	set
Options	<ul style="list-style-type: none"> route-table-cost
Configurable	True
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

next-hop

Description	Container for BGP next-hop modifications
Context	routing-policy policy name string statement name string action bgp next-hop
Tree	next-hop
Configurable	True
Platforms	Supported on all platforms

set ([ipv4-address](#) | [ipv6-address](#) | [keyword](#))

Description	Set the protocol next-hop address of matched BGP routes
Context	routing-policy policy name string statement name string action bgp next-hop set (ipv4-address ipv6-address keyword)
Tree	set
Options	<ul style="list-style-type: none"> self <ul style="list-style-type: none"> Special designation for local router's own address, i.e., next-hop-self
Configurable	True
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

next-hop-resolution

Description	Actions related to next-hop resolution of matched BGP routes
Context	routing-policy policy name string statement name string action bgp next-hop-resolution
Tree	next-hop-resolution
Configurable	True

Platforms Supported on all platforms

set-tag-set *reference*

Description Reference to a tag-set to be used for controlling next-hop resolution

Context [routing-policy policy name string statement name string action bgp next-hop-resolution set-tag-set reference](#)

Tree [set-tag-set](#)

Reference [routing-policy tag-set name string](#)

Configurable True

Platforms Supported on all platforms

origin

Description Enter the origin context

Context [routing-policy policy name string statement name string action bgp origin](#)

Tree [origin](#)

Configurable True

Platforms Supported on all platforms

set *keyword*

Description The new value of the ORIGIN attribute to write into the matching BGP routes

Context [routing-policy policy name string statement name string action bgp origin set keyword](#)

Tree [set](#)

Options

- igp
- egp
- incomplete

Configurable True

Platforms Supported on all platforms

internal-tags

Description Configuration of internal tags

Context [routing-policy policy name string statement name string action internal-tags](#)

Tree	internal-tags
Configurable	True
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

set-tag-set *reference*

Description	Reference to a tag-set defined under routing-policy
Context	routing-policy <i>policy name string statement name string action internal-tags set-tag-set reference</i>
Tree	set-tag-set
Reference	routing-policy <i>tag-set name string</i>
Configurable	True
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b
Max. Elements	1

policy-result *keyword*

Description	Select the action to apply to matching routes If no value is configured for the policy-result then the entire statement is skipped and ignored.
Context	routing-policy <i>policy name string statement name string action policy-result keyword</i>
Tree	policy-result
Options	<ul style="list-style-type: none"> • accept The route is accepted, route property modifications are applied, and evaluation stops immediately • reject The route is rejected and evaluation stops immediately • next-statement Route policy modifications are applied and evaluation continues to the next statement • next-policy Route policy modifications are applied and evaluation continues to the next policy

Configurable	True
Platforms	Supported on all platforms

route-preference

Description	Options for modifying route preference
Context	routing-policy policy name string statement name string action route-preference
Tree	route-preference
Configurable	True
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

set number

Description	<p>Overwrite the route preference with the specified value</p> <p>The IP route table preference is sometimes called the administrative distance of the route. In general, when comparing any two routes, the route with the lower preference is the one that is activated and used for forwarding.</p> <p>This action has an effect only in BGP import policies and VRF import policies</p>
Context	routing-policy policy name string statement name string action route-preference set number
Tree	set
Configurable	True
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

match

Description	Match conditions of the policy statement
Context	routing-policy policy name string statement name string match
Tree	match
Configurable	True
Platforms	Supported on all platforms

bgp

Description	Configuration for BGP-specific policy match criteria
Context	routing-policy policy name <i>string</i> statement name <i>string</i> match bgp
Tree	bgp
Configurable	True
Platforms	Supported on all platforms

as-path-length

Description	A BGP route matches this condition if the number of (unique) AS numbers in its AS_PATH matches this value or the range implied by the value+operator.
Context	routing-policy policy name <i>string</i> statement name <i>string</i> match bgp as-path-length
Tree	as-path-length
Configurable	True
Platforms	Supported on all platforms

operator *keyword*

Description	The comparison operator that applies to the value
Context	routing-policy policy name <i>string</i> statement name <i>string</i> match bgp as-path-length operator <i>keyword</i>
Tree	operator
Options	<ul style="list-style-type: none"> • eq • ge • le
Configurable	True
Platforms	Supported on all platforms

unique *boolean*

Description	Count a repeated sequence of the same AS number as just 1 element
Context	routing-policy policy name <i>string</i> statement name <i>string</i> match bgp as-path-length unique <i>boolean</i>
Tree	unique
Configurable	True

Platforms Supported on all platforms

value *number*

Description The number of (unique) AS numbers in the AS path

Context [routing-policy policy name string statement name string match bgp as-path-length value number](#)

Tree [value](#)

Range 0 to 255

Configurable True

Platforms Supported on all platforms

as-path-set *reference*

Description Reference to an as-path-set name
A route meets this condition if it matches the regular expression

Context [routing-policy policy name string statement name string match bgp as-path-set reference](#)

Tree [as-path-set](#)

Reference [routing-policy as-path-set name string](#)

Configurable True

Platforms Supported on all platforms

community-set *reference*

Description Reference to a community-set name
A route meets this condition if has any community value matching a community member in the referenced community-set

Context [routing-policy policy name string statement name string match bgp community-set reference](#)

Tree [community-set](#)

Reference [routing-policy community-set name string](#)

Configurable True

Platforms Supported on all platforms

evpn

Description	Container for match conditions that are specific to BGP EVPN routes.
Context	routing-policy policy name string statement name string match bgp evpn
Tree	evpn
Configurable	True
Platforms	Supported on all platforms

route-type number

Description	An EVPN route meets this condition if the route-type field in the NLRI is one of the values provided in this list.
Context	routing-policy policy name string statement name string match bgp evpn route-type number
Tree	route-type
Range	1 to 5
Configurable	True
Platforms	Supported on all platforms
Max. Elements	1

family identityref

Description	The name of an address family A route meets this condition if the prefix belongs to one of the indicated address families.
Context	routing-policy policy name string statement name string match family identityref
Tree	family
Options	<ul style="list-style-type: none"> • ipv4-unicast Unlabeled IPv4 unicast routes (AFI = 1, SAFI = 1) • ipv6-unicast Unlabeled IPv6 unicast routes (AFI = 2, SAFI = 1) • l3vpn-ipv4-unicast VPN-IPv4 unicast address family (AFI = 1, SAFI = 128) • l3vpn-ipv6-unicast VPN-IPv6 unicast address family (AFI = 2, SAFI = 128) • ipv4-labeled-unicast

- Labeled IPv4 unicast routes (AFI 1, SAFI 4)
- ipv6-labeled-unicast
- Labeled IPv6 unicast routes (AFI 2, SAFI 4)
- evpn
- EVPN routes (AFI = 25, SAFI = 70)
- route-target
- Route target constraint routes (AFI 1, SAFI 132)
- sr-policy-ipv4
- SR-TE Policy (AFI 1, SAFI 73)
- sr-policy-ipv6
- SR-TE Policy (AFI 2, SAFI 73)

Configurable	True
Platforms	Supported on all platforms

internal-tags

Description	Configuration and state of internal tags
Context	routing-policy policy name string statement name string match internal-tags
Tree	internal-tags
Configurable	True
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

tag-set reference

Description	Reference to a tag-set defined under routing-policy
Context	routing-policy policy name string statement name string match internal-tags tag-set reference
Tree	tag-set
Reference	routing-policy tag-set name string
Configurable	True
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b
Max. Elements	1

isis

Description	Configuration for ISIS-specific policy match criteria
Context	routing-policy policy name string statement name string match isis
Tree	isis
Configurable	True
Platforms	Supported on all platforms

level number

Description	Match an IS-IS route based on its level
Context	routing-policy policy name string statement name string match isis level number
Tree	level
Range	1 to 2
Configurable	True
Platforms	Supported on all platforms

route-type keyword

Description	Match an IS-IS route based on its type An IS-IS IPv4 prefix is external if it is signalled in TLV 130 or TLV135 with RFC 7794 X flag=1. An IS-IS IPv6 prefix is external if the TLV 236/TLV 237 external bit = 1.
Context	routing-policy policy name string statement name string match isis route-type keyword
Tree	route-type
Options	<ul style="list-style-type: none"> • internal Match internal AND external routes • external Match only external routes
Configurable	True
Platforms	Supported on all platforms

multicast

Description	Enter the multicast context
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Context	routing-policy policy name string statement name string match multicast
Tree	multicast
Configurable	True
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

group-address

Description	Enter the group-address context
Context	routing-policy policy name string statement name string match multicast group-address
Tree	group-address
Configurable	True
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

prefix-set *reference*

Description	Multicast group IP address <S,G> the source needs to be present in the multicast source-address leafref and the group needs to present in the group-address leafref. To match a <*,G> the group has to be programmed in the group-address leafref and no source in the source-address leafref. Group address can be configured as a prefix.
Context	routing-policy policy name string statement name string match multicast group-address prefix-set reference
Tree	prefix-set
Reference	routing-policy prefix-set name string
Configurable	True
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

source-address

Description	Enter the source-address context
Context	routing-policy policy name string statement name string match multicast source-address

Tree	source-address
Configurable	True
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

prefix-set *reference*

Description	Multicast source IP address Source address can be configured as a prefix.
Context	routing-policy policy name string statement name string match multicast source-address prefix-set reference
Tree	prefix-set
Reference	routing-policy prefix-set name string
Configurable	True
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

ospf

Description	Configuration for OSPF-specific policy match criteria
Context	routing-policy policy name string statement name string match ospf
Tree	ospf
Configurable	True
Platforms	Supported on all platforms

area-id

Description	The area identifier as a dotted-quad.
Context	routing-policy policy name string statement name string match ospf area-id
Tree	area-id
Configurable	True
Platforms	Supported on all platforms

instance-id *number*

Description	OSPFv3 instance identifier
Context	routing-policy policy name <i>string</i> statement name <i>string</i> match ospf instance-id <i>number</i>
Tree	instance-id
Range	0 to 255
Configurable	True
Platforms	Supported on all platforms

route-type *identityref*

Description	The OSPF route type.
Context	routing-policy policy name <i>string</i> statement name <i>string</i> match ospf route-type <i>identityref</i>
Tree	route-type
Options	<ul style="list-style-type: none"> • type-1-ext The route has path-type type 1 external • type-2-ext The route has path-type type 2 external
Configurable	True
Platforms	Supported on all platforms

prefix-set *reference*

Description	Reference to a prefix set name
Context	routing-policy policy name <i>string</i> statement name <i>string</i> match prefix-set reference
Tree	prefix-set
Reference	routing-policy prefix-set name <i>string</i>
Configurable	True
Platforms	Supported on all platforms

protocol *identityref*

Description	The route type to match
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Context	routing-policy policy name string statement name string match protocol identityref
Tree	protocol
Options	<ul style="list-style-type: none"> routing-policy-protocol-match-type <p>Base type for the types of routes and tunnels that can be matched by a route policy statement</p>
Configurable	True
Platforms	Supported on all platforms

prefix-set *name string*

Description	List of defined prefix sets
Context	routing-policy prefix-set name string
Tree	prefix-set
Configurable	True
Platforms	Supported on all platforms

name *string*

Description	A name used to identify the prefix set
Context	routing-policy prefix-set name string
String Length	1 to 255
Configurable	True
Platforms	Supported on all platforms

prefix [ip-prefix \(ipv4-prefix | ipv6-prefix\)](#) [mask-length-range string](#)

Description	List of prefixes in the prefix set
Context	routing-policy prefix-set name string prefix ip-prefix (ipv4-prefix ipv6-prefix) mask-length-range string
Tree	prefix
Configurable	True
Platforms	Supported on all platforms

ip-prefix (*ipv4-prefix* | *ipv6-prefix*)

Description	The IPv4 or IPv6 prefix in CIDR notation
Context	routing-policy prefix-set name <i>string</i> prefix ip-prefix (<i>ipv4-prefix</i> <i>ipv6-prefix</i>) mask-length-range <i>string</i>
Configurable	True
Platforms	Supported on all platforms

mask-length-range *string*

Description	The range of prefix lengths to match Example: 10.3.192.0/21 through 10.3.192.0/24 would be expressed as prefix: 10.3.192.0/21, mask-length-range: 21..24. Example: 10.3.192.0/21 would be expressed as prefix: 10.3.192.0/21, mask-length-range: exact
Context	routing-policy prefix-set name <i>string</i> prefix ip-prefix (<i>ipv4-prefix</i> <i>ipv6-prefix</i>) mask-length-range <i>string</i>
Configurable	True
Platforms	Supported on all platforms

tag-set [name](#) *string*

Description	List of administrative tag sets
Context	routing-policy tag-set name <i>string</i>
Tree	tag-set
Configurable	True
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b
Max. Elements	1024

name *string*

Description	A name used to identify the tag set
Context	routing-policy tag-set name <i>string</i>
String Length	1 to 255
Configurable	True

Platforms 7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

tag-set-index *number*

Description System-wide persistent unique identifier assigned to the tag-set

Context [routing-policy tag-set name](#) *string tag-set-index number*

Tree [tag-set-index](#)

Configurable False

Platforms 7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

tag-value (*number* | *hex-string*)

Description Value of the tag set member

Context [routing-policy tag-set name](#) *string tag-value (number | hex-string)*

Tree [tag-value](#)

String Length 1 to 11

Range 1 to 4294967295

Configurable True

Platforms 7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

Max. Elements 2

Min. Elements 1

11 system

```

system
+ aaa
+ accounting
+ accounting-method reference
+ acctz
+ history-size number
+ event event-type identityref
+ record identityref
+ authentication
+ admin-user
- credentialz
- authorized-keys
- created-on string
- version string
- authorized-principals
- created-on string
- version string
- password
- created-on string
- version string
- failed-login-attempts number
- last-failed-login string
- last-successful-login string
- lockout
- active boolean
- end string
- start string
+ password string
- password-change-required boolean
+ role reference
+ spiffe-ids string
+ ssh-key string
+ ssh-principals string
+ superuser boolean
- username string
+ authentication-method reference
+ dynamic-spiffe
+ allow boolean
+ role reference
+ exit-on-reject boolean
+ idle-timeout number
+ linuxadmin-user
- credentialz
- authorized-keys
- created-on string
- version string
- authorized-principals
- created-on string
- version string
- password
- created-on string
- version string
+ password string
+ ssh-key string
+ ssh-principals string
- username string

```

```

+ password
+ aging number
+ change-on-first-login boolean
+ complexity-rules
+   allow-username boolean
+   maximum-length number
+   minimum-length number
+   minimum-lowercase number
+   minimum-numeric number
+   minimum-special-character number
+   minimum-uppercase number
+ hash-method keyword
+ history number
+ lockout-policy
+   attempts number
+   lockout number
+   time number
+ require-ntp-sync boolean
- session id number
- authentication-method string
- login-time string
- network-instance string
- priv-lvl number
- remote-host string
- role string
- service-name string
- spiffe-id string
- tty-name string
- username string
+ user username string
- credentialz
-   authorized-keys
-     created-on string
-     version string
-   authorized-principals
-     created-on string
-     version string
-   password
-     created-on string
-     version string
- failed-login-attempts number
- last-failed-login string
- last-successful-login string
- lockout
-   active boolean
-   end string
-   start string
+ password string
- password-change-required boolean
+ role reference
+ spiffe-ids string
+ ssh-key string
+ ssh-principals string
+ superuser boolean
+ authorization
- authz-policy
- counters
-   rpc name string
-   access-accepts number
-   access-rejects number
-   last-access-accept string
-   last-access-reject string
- created-on string
- policy string

```

```

- version string
+ role rolename string
+ cli
  + allow-command-list string
  + deny-command-list string
  + load-global-plugins boolean
  + load-user-plugins boolean
+ netconf
  + allowed-operations keyword
+ services keyword
+ superuser boolean
+ tacacs
  + priv-lvl number
+ server-group name string
+ priv-lvl-authorization boolean
+ server address (ipv4-address | ipv6-address)
  + name string
  + network-instance reference
  - oper-state keyword
+ radius
  + acct-port number
  + auth-port number
  + retransmit-attempts number
  + secret-key string
  + source-address (ipv4-address | ipv6-address)
- statistics
  - accounting-connection-failures number
  - accounting-rejects number
  - accounting-success number
  - authorization-connection-failures number
  - authorization-rejects number
  - authorization-success number
  - login-connection-failures number
  - login-rejects number
  - login-success number
+ tacacs
  + port number
  + secret-key string
  + source-address (ipv4-address | ipv6-address)
+ timeout number
+ type identityref
- app-management
  - application name string
  - author string
  - cgroup string
  - failure-action string
  - failure-threshold number
  - failure-window number
  - last-change string
  - last-start-type keyword
  - launch-command string
  - oom-score-adj number
  - path string
  - pid number
  - restricted-operations keyword
  - search-command string
  - state keyword
  - statistics
    - restart-count number
  - supported-restart-types keyword
  - version string
  - yang
    - modules string
    - source-directories string

```



```

+ authentication
+ keychain name string
- active-key-for-send (keyword | reference)
+ admin-state keyword
+ description string
- expired boolean
+ key index number
+ algorithm keyword
+ authentication-key string
+ type keyword
- usable boolean
+ banner
+ login-banner string
+ motd-banner string
+ boot
+ autoboot
+ admin-state keyword
+ attempts number
+ client-id keyword
+ interface reference
+ mode string
- oper-state string
+ timeout number
+ fips-140
+ admin-state keyword
- oper-down-reason keyword
- oper-state keyword
- golden-image string
- image string
+ bridge-table
+ evpn
+ mpls-multicast-tep
- statistics
- active-entries number
- max-entries number
- total-entries number
- tep tep (ipv4-address | ipv6-address)
- index number
- last-changed string
+ mac-learning
- mac-relearn-only boolean
+ mac-limit
- maximum-entries number
- warning-threshold-pct number
- proxy-arp
- statistics
- active-entries number
- in-active-entries number
- neighbor-origin origin keyword
- active-entries number
- in-active-entries number
- pending-entries number
- total-entries number
- pending-entries number
- total-entries number
- proxy-nd
- statistics
- active-entries number
- in-active-entries number
- neighbor-origin origin keyword
- active-entries number
- in-active-entries number
- pending-entries number
- total-entries number

```

```

    - pending-entries number
    - total-entries number
  - statistics
    - active-entries number
    - failed-entries number
    - mac-type type keyword
    - active-entries number
    - failed-entries number
    - total-entries number
    - total-entries number
+ clock
+ timezone keyword
+ configuration
+ auto-checkpoint boolean
+ auto-save boolean
- candidate name string
  - started string
  - type keyword
  - username string
- checkpoint id number
  - comment string
  - created string
  - name string
  - size number
  - tag string
  - username string
  - version string
- commit id number
  - comment string
  - ended string
  - name string
  - persist-id string
  - started string
  - status keyword
  - type keyword
  - username string
+ idle-timeout number
- last-change string
+ max-candidates number
+ max-checkpoints number
+ role name reference
+ rule path-reference string
  + action keyword
- session id number
  - exclusive boolean
  - name string
  - started string
  - type keyword
  - username string
+ control-plane-traffic
+ input
  + acl
    + acl-filter name reference type reference
+ output
  + qos
    + management-protocols-dscp (number | keyword)
+ dhcp-server
+ admin-state keyword
+ network-instance name reference
  + dhcpv4
    + admin-state keyword
    - oper-state keyword
    + options
      + bootfile-name string

```

```

+ dns-server string
+ domain-name string
+ hostname string
+ ntp-server string
+ router string
+ server-id string
+ tftp-server-address string
+ tftp-server-name string
+ static-allocation
+ host mac string
  + ip-address string
  + options
    + bootfile-name string
    + dns-server string
    + domain-name string
    + hostname string
    + ntp-server string
    + router string
    + server-id string
    + tftp-server-address string
    + tftp-server-name string
- statistics
- client-packets-discarded number
- client-packets-received number
- server-packets-sent number
+ trace-options
+ trace keyword
+ dhcpv6
+ admin-state keyword
- oper-state keyword
+ options
+ dns-server string
+ static-allocation
+ host mac string
  + ip-address string
  + options
    + dns-server string
- statistics
- client-packets-discarded number
- client-packets-received number
- server-packets-sent number
+ trace-options
+ trace keyword
+ dns
+ host-entry name string
+ ipv4-address string
+ ipv6-address string
+ network-instance reference
- oper-state keyword
+ search-list string
+ server-list (ipv4-address | ipv6-address)
+ source-address (ipv4-address | ipv6-address)
+ event-handler
+ instance name string
+ admin-state keyword
- last-errored-execution
- end-time string
- input string
- oper-down-reason keyword
- oper-down-reason-detail string
- output string
- start-time string
- stdout-stderr string
- upython-duration number

```

```

- last-execution
  - end-time string
  - input string
  - oper-down-reason keyword
  - oper-down-reason-detail string
  - output string
  - start-time string
  - stdout-stderr string
  - upython-duration number
- oper-state keyword
+ options
  + object name string
    + value string
    + values string
  + paths string
- statistics
  - execution-count number
  - execution-errors number
  - execution-successes number
  - execution-timeouts number
  - upython-duration number
  + upython-script string
+ run-as-user reference
- features string
+ ftp-server
  + network-instance name reference
  + admin-state keyword
  - oper-state keyword
  + session-limit number
  + source-address (ipv4-address | ipv6-address)
  + timeout number
+ grpc-server name string
+ admin-state keyword
- certz
  - certificate
    - created-on string
    - version string
  - crl
    - created-on string
    - version string
  - ssl-profile-id string
  - trust-anchor
    - created-on string
    - version string
- client id number
  - acctz-starting-point string
  - election-id string
  - gnmi
    - paths id number
      - mode keyword
      - path string
      - sample-interval number
  - gribi
    - persistence-mode keyword
- p4rt
  - forwarding-complex
    - device number
    - id string
    - slot number
    - primary boolean
  - remote-host (ipv4-address | ipv6-address)
  - remote-port number
  - rpc string
  - start-time string

```

```

- type keyword
- user string
- user-agent string
+ default-tls-profile boolean
+ gnmi
+ commit-confirmed-timeout number
+ commit-save boolean
+ include-defaults-in-config-only-responses boolean
+ metadata-authentication boolean
+ network-instance reference
- oper-state keyword
+ port number
+ rate-limit number
+ services identityref
+ session-limit number
+ source-address (ipv4-address | ipv6-address)
- statistics
- access-accepts number
- access-rejects number
- last-access-accept string
- last-access-reject string
- rpc name string
- access-accepts number
- access-rejects number
- last-access-accept string
- last-access-reject string
+ timeout number
+ tls-profile reference
+ trace-options keyword
+ unix-socket
+ admin-state keyword
- socket-path string
+ yang-models keyword
+ information
+ contact string
- current-datetime string
- description string
- last-booted string
+ location string
- version string
+ json-rpc-server
+ admin-state keyword
+ commit-confirmed-timeout number
+ network-instance name reference
+ http
+ admin-state keyword
- oper-state keyword
+ port number
+ session-limit number
+ source-address (ipv4-address | ipv6-address)
+ use-authentication boolean
+ https
+ admin-state keyword
- oper-state keyword
+ port number
+ session-limit number
+ source-address (ipv4-address | ipv6-address)
+ tls-profile reference
+ use-authentication boolean
+ trace-options keyword
+ unix-socket
+ admin-state keyword
- oper-state keyword
- socket-path string

```

```

+  tls-profile reference
+  use-authentication boolean
-  l2cp-transparency
-  l2cp-statistics
-  dot1x
-  in-trap-to-cpu-packets number
-  in-tunneled-packets number
-  last-clear string
-  lacp
-  in-trap-to-cpu-packets number
-  in-tunneled-packets number
-  last-clear string
-  last-clear string
-  lldp
-  in-trap-to-cpu-packets number
-  in-tunneled-packets number
-  last-clear string
-  ptp
-  in-trap-to-cpu-packets number
-  in-tunneled-packets number
-  last-clear string
-  total-in-discarded-packets number
-  total-in-packets number
-  total-in-trap-to-cpu-packets number
-  total-in-tunneled-packets number
-  xstp
-  in-trap-to-cpu-packets number
-  in-tunneled-packets number
-  last-clear string
+  lacp
+  system-id string
+  system-priority number
+  license id string
+  admin-state keyword
+  data string
+  description string
-  expiration-date string
-  expired boolean
-  in-use boolean
-  issued-date string
+  preferred boolean
-  valid boolean
+  lldp
+  admin-state keyword
-  chassis-id string
-  chassis-id-type keyword
+  hello-timer number
+  hold-multiplier number
+  interface name reference
+  admin-state keyword
-  neighbor id string
-  capability name identityref
-  enabled boolean
-  chassis-id string
-  chassis-id-type keyword
-  custom-tlv type number oui string oui-subtype string
-  value binary
-  first-message string
-  last-update string
-  management-address address string
-  type keyword
-  port-description string
-  port-id (string | binary)
-  port-id-type keyword

```

```

- system-description string
- system-name string
- oper-state keyword
- statistics
  - frame-discard number
  - frame-error-in number
  - frame-error-out number
  - frame-in number
  - frame-out number
  - last-clear string
  - tlv-discard number
  - tlv-unknown number
+ management-address subinterface string
+ type keyword
- statistics
  - entries-aged-out number
  - frame-discard number
  - frame-error-in number
  - frame-in number
  - frame-out number
  - last-clear string
  - tlv-accepted number
  - tlv-discard number
  - tlv-unknown number
- system-description string
- system-name string
+ trace-options keyword
+ load-balancing
+ hash-options
  + destination-address boolean
  + destination-port boolean
  + hash-seed (number | keyword)
  + ipv6-flow-label boolean
  + mpls-label-stack boolean
  + protocol boolean
  + source-address boolean
  + source-port boolean
  + vlan boolean
+ logging
+ buffer buffer-name string
+ facility facility-name keyword
  + priority
    + match-above keyword
    + match-exact keyword
+ filter reference
+ format (string | keyword)
+ persist number
+ rotate number
- rotations number
+ size string
+ subsystem subsystem-name keyword
  + priority
    + match-above keyword
    + match-exact keyword
+ console
+ facility facility-name keyword
  + priority
    + match-above keyword
    + match-exact keyword
+ filter reference
+ format (string | keyword)
+ subsystem subsystem-name keyword
  + priority
    + match-above keyword

```

```

    + match-exact keyword
+ file file-name string
+ directory string
+ facility facility-name keyword
  + priority
    + match-above keyword
    + match-exact keyword
+ filter reference
+ format (string | keyword)
+ rotate number
- rotations number
+ size string
+ subsystem subsystem-name keyword
  + priority
    + match-above keyword
    + match-exact keyword
+ filter filter-name string
+ contains string
+ facility facility-name keyword
  + priority
    + match-above keyword
    + match-exact keyword
+ prefix string
+ regex string
+ tag string
+ network-instance reference
+ remote-server host (ipv4-address | ipv6-address | domain-name)
+ facility facility-name keyword
  + priority
    + match-above keyword
    + match-exact keyword
+ filter reference
+ format (string | keyword)
+ remote-port number
+ source-address (ipv4-address | ipv6-address)
+ subsystem subsystem-name keyword
  + priority
    + match-above keyword
    + match-exact keyword
+ transport keyword
+ subsystem-facility keyword
+ use-fqdn boolean
+ maintenance
+ group name string
+ maintenance-mode
  + admin-state keyword
+ maintenance-profile reference
+ members
  + bgp
    + network-instance name reference
    + neighbor reference
    + peer-group reference
+ profile name string
  + bgp
    + export-policy reference
    + import-policy reference
+ management
+ openconfig
  + admin-state keyword
  - oper-state keyword
+ mirroring
+ mirroring-instance name string
  + admin-state keyword
  + description string

```



```

+ mirror-destination
+ local string
+ remote
+   + encap keyword
+   + network-instance reference
+   + tunnel-end-points
+     + admin-state keyword
+     + destination-address (ipv4-address | ipv6-address)
+     - oper-state keyword
+     + source-address (ipv4-address | ipv6-address)
-   + statistics
-     - egress-mirrored-octets number
-     - egress-mirrored-packets number
-     - ingress-mirrored-octets number
-     - ingress-mirrored-packets number
+ mirror-source
+ acl
+   + acl-filter name reference type reference
+   + entry sequence-id reference
+ interface name string
+   + direction keyword
+ subinterface name string
+   + direction keyword
-   - oper-down-reason keyword
-   - oper-state keyword
- oper-down-reason keyword
- oper-state keyword
+ mpls
+ label-ranges
+   + dynamic name string
+     - allocated-labels number
+     + end-label number
+     - free-labels number
+     + start-label number
+     - status keyword
+     - user index number
+     - owner identityref
+   + static name string
+     - allocated-labels number
+     + end-label number
+     - free-labels number
+     + shared boolean
+     + start-label number
+     - status keyword
+     - user index number
+     - owner identityref
+ services
+   + evpn
+     + dynamic-label-block reference
+   + network-instance
+     + dynamic-evpn-inclusive-multicast-label-block reference
+     + dynamic-label-block reference
+ mtu
+   + default-ip-mtu number
+   + default-l2-mtu number
+   + default-mpls-mtu number
+   + default-port-mtu number
+   + min-path-mtu number
+ multicast
+   + multicast-ids
+     - statistics
+       - current-usage number
+       - maximum-ids number
+       - multicast-id-user-type user keyword

```

```

-   - current-usage number
-   - total-pending number
-   - total-pending number
- multicast-forwarding-information-base
-   - multicast-route network-instance reference source (ipv4-address | ipv6-
address) group (ipv4-address | ipv6-address)
-   - last-update string
-   - line-card-replication-index number
+ name
+   + domain-name string
+   + host-name string
+ netconf-server name string
+   + admin-state keyword
-   - last-oper-change string
-   - oper-state keyword
+   + session-limit number
+   + ssh-server reference
- statistics
-   - active-sessions number
-   - session session-id number
-     - action-requests number
-     - commit-requests number
-     - copy-config-requests number
-     - delete-config-requests number
-     - discard-changes-requests number
-     - edit-config-requests number
-     - edit-data-requests number
-     - failed-edit-config-requests number
-     - failed-edit-data-requests number
-     - failed-lock-requests number
-     - get-config-requests number
-     - get-data-requests number
-     - get-requests number
-     - get-schema-requests number
-     - in-bad-hellos number
-     - kill-session-requests number
-     - lock-requests number
-     - process-id number
-     - unlock-requests number
-     - validate-requests number
-   - total-action-requests number
-   - total-close-session-requests number
-   - total-commit-requests number
-   - total-copy-config-requests number
-   - total-delete-config-requests number
-   - total-discard-changes-requests number
-   - total-dropped-sessions number
-   - total-edit-config-requests number
-   - total-edit-data-requests number
-   - total-error-responses number
-   - total-failed-edit-config-requests number
-   - total-failed-edit-data-requests number
-   - total-failed-lock-requests number
-   - total-get-config-requests number
-   - total-get-data-requests number
-   - total-get-requests number
-   - total-get-schema-requests number
-   - total-in-bad-hellos number
-   - total-kill-session-requests number
-   - total-lock-requests number
-   - total-requests number
-   - total-responses number
-   - total-unlock-requests number
-   - total-validate-requests number

```

```

+ trace-options
+ direction keyword
+ rpc keyword
+ unix-socket
- socket-path string
+ network-instance
+ protocols
+ bgp-vpn
+ bgp-instance id number
- oper-down-reason keyword
+ route-distinguisher
- rd (route-distinguisher-type-0 | route-distinguisher-type-1 | route-
distinguisher-type-2 | route-distinguisher-type-2b)
- route-distinguisher-origin keyword
+ route-target
- export-route-target-origin keyword
- export-rt (string | string | string | string | string | string | string |
string)
- import-route-target-origin keyword
- import-rt (string | string | string | string | string | string | string |
string)
+ evpn
+ ethernet-segments
+ bgp-instance id reference
+ ethernet-segment name string
+ admin-state keyword
- association
- network-instance name string
- bgp-instance instance number
- computed-designated-forwarder-candidates
- designated-forwarder-candidate address (ipv4-address | ipv6-
address)
- add-time string
- designated-forwarder boolean
- designated-forwarder-activation-start-time string
- designated-forwarder-activation-time number
- designated-forwarder-role-last-change string
- autodiscovery-per-ethernet-segment-routes
- attr-id reference
- esi string
- ethernet-tag-id number
- label
- value number
- value-type keyword
- neighbor (ipv4-address-with-zone | ipv6-address-with-zone)
- route-distinguisher (route-distinguisher-type-0 | route-distinguisher-
type-1 | route-distinguisher-type-2 | route-distinguisher-type-2b)
+ df-election
+ algorithm
+ manual-alg
+ primary-evi-range start-evi number
+ end-evi number
- oper-type keyword
+ preference-alg
+ capabilities
+ ac-df keyword
+ non-revertive boolean
- oper-do-not-preempt boolean
- oper-preference-value number
+ preference-value number
+ type keyword
+ interface-standby-signaling-on-non-df
+ timers
+ activation-timer number

```

```

    + esi string
    - esi-label number
    - ethernet-segment-routes
      - attr-id reference
      - esi string
      - neighbor (ipv4-address-with-zone | ipv6-address-with-zone)
      - originating-router (ipv4-address | ipv6-address)
      - route-distinguisher (route-distinguisher-type-0 | route-distinguisher-
type-1 | route-distinguisher-type-2 | route-distinguisher-type-2b)
    + interface ethernet-interface reference
    + multi-homing-mode keyword
    + next-hop l3-next-hop (ipv4-address | ipv6-address)
    + evi start number
    - oper-down-reason keyword
    - oper-esi string
    - oper-multi-homing-mode keyword
    - oper-state keyword
    + routes
      + ethernet-segment
        + originating-ip keyword
      + next-hop keyword
    + type keyword
  + timers
    + activation-timer number
    - boot-remaining-time number
    - boot-start-time string
    + boot-timer number
  + multicast
    + leave-sync-propagation number
+ ntp
+ admin-state keyword
+ network-instance reference
- oper-state keyword
+ server address (ipv4 | ipv6 | domain-name)
+ iburst boolean
- jitter number
- offset number
- poll-interval number
+ prefer boolean
- root-delay number
- root-dispersion number
- stratum number
+ source-address (ipv4-address | ipv6-address)
- synchronized (ipv4-address | ipv6-address | domain-name | string)
+ packet-link-qualification
+ profile name string
+ asic-loopback
+ ntp
  + end-time string
  + start-time string
  + teardown-time string
+ packet-generator
+ packet-rate number
+ packet-size number
+ rpc
+ duration number
+ post-sync-duration number
+ pre-sync-duration number
+ setup-duration number
+ teardown-duration number
+ protocols
+ bgp
  + restart-max-wait number
+ ra-guard-policy name string

```

```

+ action keyword
+ advertise-prefix-set reference
+ hop-limit number
+ managed-config-flag boolean
+ other-config-flag boolean
+ router-preference keyword
+ source-prefix-set reference
+ sflow
+ admin-state keyword
+ collector collector-id number
+ collector-address (ipv4-address | ipv6-address)
+ network-instance reference
- next-hop (ipv4-address | ipv6-address)
+ port number
+ source-address (ipv4-address | ipv6-address)
+ dscp number
+ sample-rate number
+ sample-size number
+ source-address (ipv4-address | ipv6-address)
- statistics
- total-offered-packets number
- total-samples-taken number
- total-sent-packets number
+ snmp
+ access-group name string
+ admin-state keyword
+ community-entry name string
+ community string
+ description string
+ prefix-list (ipv4-prefix | ipv6-prefix)
+ description string
+ security-entry name string
+ authentication
+ password string
+ protocol keyword
+ description string
+ privacy
+ password string
+ protocol keyword
+ user string
+ security-level keyword
+ network-instance name reference
+ admin-state keyword
+ engine-id string
- error-msg string
+ listen-address (ipv4-address | ipv6-address)
- oper-state keyword
- statistics
- snmp-in-asn-parse-errs number
- snmp-in-bad-community-names number
- snmp-in-bad-community-uses number
- snmp-in-bad-versions number
- snmp-in-gen-errs number
- snmp-in-get-nexts number
- snmp-in-get-requests number
- snmp-in-pkts number
- snmp-in-total-req-vars number
- snmp-invalid-msgs number
- snmp-out-gen-errs number
- snmp-out-get-responses number
- snmp-out-pkts number
- snmp-out-traps number
- snmp-silent-drops number
- snmp-unknown-pdu-handlers number

```

```

- snmp-unknown-security-models number
- usm-stats-decryption-errors number
- usm-stats-not-in-time-windows number
- usm-stats-unknown-engine-ids number
- usm-stats-unknown-user-names number
- usm-stats-unsupported-sec-levels number
- usm-stats-wrong-digests number
+ trap-group name string
+ admin-state keyword
+ description string
+ destination name string
+ address (ipv4-address | ipv6-address)
+ admin-state keyword
+ community-entry name string
+ community string
+ description string
+ description string
+ port number
+ security-entry name string
+ authentication
+ password string
+ protocol keyword
+ description string
+ engine-id string
+ privacy
+ password string
+ protocol keyword
+ user string
+ security-level keyword
+ network-instance reference
+ source-address (ipv4-address | ipv6-address)
+ ssh-server name string
+ admin-state keyword
+ allowed-authentication-types keyword
+ authorized-principal-check-tool keyword
- counters
- access-accepts number
- access-rejects number
- last-access-accept string
- last-access-reject string
- credentialz
- host-certificate
- created-on string
- version string
- host-key
- created-on string
- version string
- trusted-user-ca-keys
- created-on string
- version string
+ disable-shell boolean
+ host-key
+ preserve boolean
+ type type keyword
+ certificate string
+ private-key string
- public-key string
+ network-instance reference
- oper-state keyword
+ port number
- protocol-version number
+ rate-limit number
+ revoked-keys string
+ source-address (ipv4-address | ipv6-address)

```

```

+ timeout number
+ trust-anchors string
+ use-credentialz boolean
+ sync
+ freq-clock
- active-reference keyword
- freq-clock-state keyword
- freq-offset decimal-number
+ network-type keyword
+ ql-input-threshold keyword
+ ql-selection boolean
+ revert boolean
- system-ql-value keyword
+ wait-to-restore number
+ freq-references
+ instance instance-number number
+ admin-state keyword
- not-qualified-reason keyword
- oper-state keyword
+ priority number
+ ql-override keyword
- ql-value keyword
- reference-status keyword
+ source
+ interface reference
+ sync0
+ one-pps
+ admin-state keyword
+ ptp
+ instance instance-index number
- current-ds
- mean-delay number
- offset-from-master number
- steps-removed number
+ default-ds
+ announce-receipt-timeout number
- clock-identity binary
- clock-quality
- clock-accuracy number
- clock-class number
- offset-scaled-log-variance number
- current-time
- date-time string
- time-nano-seconds number
- time-seconds number
+ domain-number number
+ instance-enable boolean
+ instance-type keyword
+ local-priority number
+ log-announce-interval number
- number-ports number
+ priority1 number
+ priority2 number
- statistics
- anno-msg-rx number
- anno-msg-tx number
- del-req-msg-rx number
- del-req-msg-tx number
- del-resp-msg-rx number
- del-resp-msg-tx number
- delay-high-packet-loss number
- delay-packet-loss number
- discards
- alternate-master number

```

- **bad-domain** *number*
- **other** *number*
- **out-of-sequence** *number*
- **peer-disabled** *number*
- **follow-up-msg-rx** *number*
- **follow-up-msg-tx** *number*
- **multicast-msg-rate**
 - **anno-msg-rate-rx** *decimal-number*
 - **anno-msg-rate-tx** *decimal-number*
 - **del-req-msg-rate-rx** *decimal-number*
 - **del-req-msg-rate-tx** *decimal-number*
 - **del-resp-msg-rate-rx** *decimal-number*
 - **del-resp-msg-rate-tx** *decimal-number*
 - **follow-up-msg-rate-rx** *decimal-number*
 - **follow-up-msg-rate-tx** *decimal-number*
 - **other-rate-rx** *decimal-number*
 - **signaling-msg-rate-rx** *decimal-number*
 - **signaling-msg-rate-tx** *decimal-number*
 - **sync-msg-rate-rx** *decimal-number*
 - **sync-msg-rate-tx** *decimal-number*
- **other-rx** *number*
- **signaling-msg-rx** *number*
- **signaling-msg-tx** *number*
- **signaling-uni-neg-tlv**
 - **ack-cancel-anno-rx** *number*
 - **ack-cancel-anno-tx** *number*
 - **ack-cancel-delay-resp-rx** *number*
 - **ack-cancel-delay-resp-tx** *number*
 - **ack-cancel-sync-rx** *number*
 - **ack-cancel-sync-tx** *number*
 - **cancel-anno-rx** *number*
 - **cancel-anno-tx** *number*
 - **cancel-delay-resp-rx** *number*
 - **cancel-delay-resp-tx** *number*
 - **cancel-sync-rx** *number*
 - **cancel-sync-tx** *number*
 - **grant-anno-rx** *number*
 - **grant-anno-tx** *number*
 - **grant-delay-resp-rx** *number*
 - **grant-delay-resp-tx** *number*
 - **grant-sync-rx** *number*
 - **grant-sync-tx** *number*
 - **other-tlv** *number*
 - **reject-anno-rx** *number*
 - **reject-anno-tx** *number*
 - **reject-delay-resp-rx** *number*
 - **reject-delay-resp-tx** *number*
 - **reject-sync-rx** *number*
 - **reject-sync-tx** *number*
 - **request-anno-rx** *number*
 - **request-anno-tx** *number*
 - **request-delay-resp-rx** *number*
 - **request-delay-resp-tx** *number*
 - **request-sync-rx** *number*
 - **request-sync-tx** *number*
- **sync-high-packet-loss** *number*
- **sync-msg-rx** *number*
- **sync-msg-tx** *number*
- **sync-packet-loss** *number*
- **unicast-msg-rate**
 - **anno-msg-rate-rx** *decimal-number*
 - **anno-msg-rate-tx** *decimal-number*
 - **del-req-msg-rate-rx** *decimal-number*
 - **del-req-msg-rate-tx** *decimal-number*


```

- del-resp-msg-rate-rx decimal-number
- del-resp-msg-rate-tx decimal-number
- follow-up-msg-rate-rx decimal-number
- follow-up-msg-rate-tx decimal-number
- other-rate-rx decimal-number
- signaling-msg-rate-rx decimal-number
- signaling-msg-rate-tx decimal-number
- sync-msg-rate-rx decimal-number
- sync-msg-rate-tx decimal-number
- time-recovery-engine
- last-adjustment number
- last-adjustment-timestamp string
- recovery-state keyword
- state-last-changed string
- statistics
- delay-too-much-pdv number
- sync-too-much-pdv number
- time-in-acquiring number
- time-in-holdover number
- time-in-initial number
- time-in-locked number
- two-step-flag boolean
- parent-ds
- grandmaster-clock-quality
- clock-accuracy number
- clock-class number
- offset-scaled-log-variance number
- grandmaster-identity binary
- grandmaster-priority1 number
- grandmaster-priority2 number
- parent-port-identity
- clock-identity binary
- port-number number
- protocol-address
- ip
- ip-address (ipv4-address | ipv6-address)
- network-instance reference
- mac-address string
- network-protocol identityref
+ port-ds-cfg-ip-list port-index number
+ admin-state keyword
- announce-receipt-timeout number
- best-master boolean
- clock-identity binary
- grandmaster-clock-quality
- clock-accuracy number
- clock-class number
- offset-scaled-log-variance number
- grandmaster-identity binary
- grandmaster-priority1 number
- grandmaster-priority2 number
- last-rx-interface reference
- last-tx-interface reference
+ local-priority number
- log-announce-interval number
- log-min-delay-req-interval number
+ log-sync-interval number
- major-version-number number
- minor-version-number number
- parent-clock boolean
+ peer
+ ip-address (ipv4-address | ipv6-address)
- network-instance reference
- port-number number

```

- **port-state** *keyword*
- **ptp-port-number** *number*
- **statistics**
 - **anno-msg-rx** *number*
 - **anno-msg-tx** *number*
 - **del-req-msg-rx** *number*
 - **del-req-msg-tx** *number*
 - **del-resp-msg-rx** *number*
 - **del-resp-msg-tx** *number*
 - **discards**
 - **alternate-master** *number*
 - **bad-domain** *number*
 - **other** *number*
 - **out-of-sequence** *number*
 - **peer-disabled** *number*
 - **follow-up-msg-rx** *number*
 - **follow-up-msg-tx** *number*
 - **other-rx** *number*
 - **signaling-msg-rx** *number*
 - **signaling-msg-tx** *number*
 - **signaling-uni-neg-tlv**
 - **ack-cancel-anno-rx** *number*
 - **ack-cancel-anno-tx** *number*
 - **ack-cancel-delay-resp-rx** *number*
 - **ack-cancel-delay-resp-tx** *number*
 - **ack-cancel-sync-rx** *number*
 - **ack-cancel-sync-tx** *number*
 - **cancel-anno-rx** *number*
 - **cancel-anno-tx** *number*
 - **cancel-delay-resp-rx** *number*
 - **cancel-delay-resp-tx** *number*
 - **cancel-sync-rx** *number*
 - **cancel-sync-tx** *number*
 - **grant-anno-rx** *number*
 - **grant-anno-tx** *number*
 - **grant-delay-resp-rx** *number*
 - **grant-delay-resp-tx** *number*
 - **grant-sync-rx** *number*
 - **grant-sync-tx** *number*
 - **other-tlv** *number*
 - **reject-anno-rx** *number*
 - **reject-anno-tx** *number*
 - **reject-delay-resp-rx** *number*
 - **reject-delay-resp-tx** *number*
 - **reject-sync-rx** *number*
 - **reject-sync-tx** *number*
 - **request-anno-rx** *number*
 - **request-anno-tx** *number*
 - **request-delay-resp-rx** *number*
 - **request-delay-resp-tx** *number*
 - **request-sync-rx** *number*
 - **request-sync-tx** *number*
 - **sync-msg-rx** *number*
 - **sync-msg-tx** *number*
- **steps-removed** *number*
- **unicast-negotiation**
 - **rx-announce**
 - **duration** *number*
 - **log-interval** *number*
 - **state** *keyword*
 - **time-of-last-grant** *string*
 - **rx-delay-resp**
 - **duration** *number*
 - **log-interval** *number*

```

- state keyword
- time-of-last-grant string
- rx-sync
- duration number
- log-interval number
- state keyword
- time-of-last-grant string
- tx-announce
- duration number
- log-interval number
- state keyword
- time-of-last-grant string
- tx-delay-resp
- duration number
- log-interval number
- state keyword
- time-of-last-grant string
- tx-sync
- duration number
- log-interval number
- state keyword
- time-of-last-grant string
- port-ds-dsc-ip-list port-index number
- last-rx-interface reference
- last-tx-interface reference
- log-announce-interval number
- log-min-delay-req-interval number
- log-sync-interval number
- major-version-number number
- minor-version-number number
- peer
- ip-address (ipv4-address | ipv6-address)
- network-instance reference
- port-state keyword
- ptp-port-number number
- statistics
- anno-msg-rx number
- anno-msg-tx number
- del-req-msg-rx number
- del-req-msg-tx number
- del-resp-msg-rx number
- del-resp-msg-tx number
- discards
- alternate-master number
- bad-domain number
- other number
- out-of-sequence number
- peer-disabled number
- follow-up-msg-rx number
- follow-up-msg-tx number
- other-rx number
- signaling-msg-rx number
- signaling-msg-tx number
- signaling-uni-neg-tlv
- ack-cancel-anno-rx number
- ack-cancel-anno-tx number
- ack-cancel-delay-resp-rx number
- ack-cancel-delay-resp-tx number
- ack-cancel-sync-rx number
- ack-cancel-sync-tx number
- cancel-anno-rx number
- cancel-anno-tx number
- cancel-delay-resp-rx number
- cancel-delay-resp-tx number

```

```

- cancel-sync-rx number
- cancel-sync-tx number
- grant-anno-rx number
- grant-anno-tx number
- grant-delay-resp-rx number
- grant-delay-resp-tx number
- grant-sync-rx number
- grant-sync-tx number
- other-tlv number
- reject-anno-rx number
- reject-anno-tx number
- reject-delay-resp-rx number
- reject-delay-resp-tx number
- reject-sync-rx number
- reject-sync-tx number
- request-anno-rx number
- request-anno-tx number
- request-delay-resp-rx number
- request-delay-resp-tx number
- request-sync-rx number
- request-sync-tx number
- sync-msg-rx number
- sync-msg-tx number
- unicast-negotiation
- rx-announce
- duration number
- log-interval number
- state keyword
- time-of-last-grant string
- rx-delay-resp
- duration number
- log-interval number
- state keyword
- time-of-last-grant string
- rx-sync
- duration number
- log-interval number
- state keyword
- time-of-last-grant string
- tx-announce
- duration number
- log-interval number
- state keyword
- time-of-last-grant string
- tx-delay-resp
- duration number
- log-interval number
- state keyword
- time-of-last-grant string
- tx-sync
- duration number
- log-interval number
- state keyword
- time-of-last-grant string
+ port-ds-interface-list port-index number
+ admin-state keyword
- announce-receipt-timeout number
- best-master boolean
+ dest-mac keyword
+ local-priority number
- log-announce-interval number
+ log-min-delay-req-interval number
+ log-sync-interval number
- major-version-number number

```

```

+ master-only boolean
- minor-version-number number
- neighbor-count number
- neighbor-list clock-identity binary port-number number
  - mac-address string
  - parent-clock boolean
  - rx-message-rate decimal-number
- parent-clock boolean
- port-state keyword
- ptp-port-number number
+ source
+ interface reference
+ sync0
- statistics
  - anno-msg-rx number
  - anno-msg-tx number
  - del-req-msg-rx number
  - del-req-msg-tx number
  - del-req-msg-rx number
  - del-req-msg-tx number
  - discards
    - alternate-master number
    - bad-domain number
    - other number
    - out-of-sequence number
    - peer-disabled number
  - follow-up-msg-rx number
  - follow-up-msg-tx number
  - other-rx number
  - signaling-msg-rx number
  - signaling-msg-tx number
  - sync-msg-rx number
  - sync-msg-tx number
- time-properties-ds
  - current-utc-offset number
  - current-utc-offset-valid boolean
  - frequency-traceable boolean
  - leap59 boolean
  - leap61 boolean
  - ptp-timescale boolean
  - time-source keyword
  - time-traceable boolean
+ ptp-profile keyword
+ timing-source-net-inst reference
+ tls
+ server-profile name string
+ authenticate-client boolean
+ certificate string
+ certificate-revocation-list string
- certz
  - certificate
    - created-on string
    - version string
  - crl
    - created-on string
    - version string
  - ssl-profile-id string
  - trust-anchor
    - created-on string
    - version string
+ cipher-list identityref
- dynamic boolean
+ key string
+ trust-anchor string

```

+ **use-tpm-devid** *keyword*
+ **trace-options** *keyword*

11.1 system Descriptions

system

Description	Enclosing container for system management
Context	system
Tree	system
Configurable	True
Platforms	Supported on all platforms

aaa

Description	Top-level container for AAA services
Context	system aaa
Tree	aaa
Configurable	True
Platforms	Supported on all platforms

accounting

Description	Top-level container for accounting
Context	system aaa accounting
Tree	accounting
Configurable	True
Platforms	Supported on all platforms

accounting-method *reference*

Description	Ordered list of server-groups to use for accounting in the system If accounting fails with one method, the next defined method is tried -- failure of all methods results in the accounting request failing.
Context	system aaa accounting accounting-method <i>reference</i>
Tree	accounting-method
Reference	system aaa server-group name <i>string</i>
Configurable	True

Platforms Supported on all platforms

acctz

Description Top-level container for acctz accounting

Context [system aaa accounting acctz](#)

Tree [acctz](#)

Configurable True

Platforms 7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

history-size *number*

Description Size of the kept accounting events history

Context [system aaa accounting acctz history-size *number*](#)

Tree [history-size](#)

Range 1 to 100000

Default 1000

Configurable True

Platforms 7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

event [event-type *identityref*](#)

Description List of events subject to accounting

Context [system aaa accounting event \[event-type *identityref*\]\(#\)](#)

Tree [event](#)

Configurable True

Platforms Supported on all platforms

event-type *identityref*

Description The type of activity to record at the accounting server

Context [system aaa accounting event \[event-type *identityref*\]\(#\)](#)

Options

- `command`

Specifies interactive command events for AAA accounting

Configurable	True
Platforms	Supported on all platforms

record *identityref*

Description	Type of record to send to the accounting server for this activity type
Context	system aaa accounting event event-type identityref record identityref
Tree	record
Options	<ul style="list-style-type: none"> • start-stop Send start and stop records for user activities A start record is sent to the accounting server at the beginning of the activity, and a stop record at the end of the activity • stop Send only stop records for user activities A stop record is sent to the accounting server when the user activity completes
Configurable	True
Platforms	Supported on all platforms

authentication

Description	Top-level container for global authentication data
Context	system aaa authentication
Tree	authentication
Configurable	True
Platforms	Supported on all platforms

admin-user

Description	Enclosing container for admin user
Context	system aaa authentication admin-user
Tree	admin-user
Configurable	True
Platforms	Supported on all platforms

credentialz

Description	Information relating to the active user credentials as provided via Credentialz State is provided by the gNSI Credentialz service, and can be changed using the gNSI.Credentialz.RotateAccountCredentials RPC
Context	system aaa authentication admin-user credentialz
Tree	credentialz
Configurable	False
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

authorized-keys

Description	State relating to the Authorized Keys provided via Credentialz
Context	system aaa authentication admin-user credentialz authorized-keys
Tree	authorized-keys
Configurable	False
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

created-on *string*

Description	The created on timestamp as provided by the gNSI client at the time of uploading the artifact The maps to the created_on field within a Entity message in the Credentialz protobuf.
Context	system aaa authentication admin-user credentialz authorized-keys created-on string
Tree	created-on
String Length	20 to 32
Configurable	False
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

version string

Description	The version string as provided by the gNSI client at the time of uploading the artifact The maps to the version field within a Entity message in the Credentialz protobuf.
Context	system aaa authentication admin-user credentialz authorized-keys version string
Tree	version
Configurable	False
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

authorized-principals

Description	State relating to the Authorized Principals provided via Credentialz
Context	system aaa authentication admin-user credentialz authorized-principals
Tree	authorized-principals
Configurable	False
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

created-on string

Description	The created on timestamp as provided by the gNSI client at the time of uploading the artifact The maps to the created_on field within a Entity message in the Credentialz protobuf.
Context	system aaa authentication admin-user credentialz authorized-principals created-on string
Tree	created-on
String Length	20 to 32
Configurable	False
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

version string

Description	The version string as provided by the gNSI client at the time of uploading the artifact The maps to the version field within a Entity message in the Credentialz protobuf.
Context	system aaa authentication admin-user credentialz authorized-principals version string
Tree	version
Configurable	False
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

password

Description	State relating to the Password provided via Credentialz.
Context	system aaa authentication admin-user credentialz password
Tree	password
Configurable	False
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

created-on string

Description	The created on timestamp as provided by the gNSI client at the time of uploading the artifact The maps to the created_on field within a Entity message in the Credentialz protobuf.
Context	system aaa authentication admin-user credentialz password created-on string
Tree	created-on
String Length	20 to 32
Configurable	False
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

version string

Description	The version string as provided by the gNSI client at the time of uploading the artifact The maps to the version field within a Entity message in the Credentialz protobuf.
Context	system aaa authentication admin-user credentialz password version string
Tree	version
Configurable	False
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

failed-login-attempts number

Description	Number of failed login attempts from the user
Context	system aaa authentication admin-user failed-login-attempts number
Tree	failed-login-attempts
Default	0
Configurable	False
Platforms	Supported on all platforms

last-failed-login string

Description	The date and time of the last login failure from this user
Context	system aaa authentication admin-user last-failed-login string
Tree	last-failed-login
String Length	20 to 32
Configurable	False
Platforms	Supported on all platforms

last-successful-login string

Description	The date and time of the last successful login from this user
Context	system aaa authentication admin-user last-successful-login string
Tree	last-successful-login
String Length	20 to 32

Configurable	False
Platforms	Supported on all platforms

lockout

Description	Information relating to the lockout state of this user
Context	system aaa authentication admin-user lockout
Tree	lockout
Configurable	False
Platforms	Supported on all platforms

active *boolean*

Description	Indicates if a lockout is active for the user Lockouts can occur after successive failed logins, and can be cleared by 'tools system aaa authentication user <username> unlock'
Context	system aaa authentication admin-user lockout active <i>boolean</i>
Tree	active
Configurable	False
Platforms	Supported on all platforms

end *string*

Description	Indicates the time at which the most recent lockout for this user ended or will end
Context	system aaa authentication admin-user lockout end <i>string</i>
Tree	end
String Length	20 to 32
Configurable	False
Platforms	Supported on all platforms

start *string*

Description	Indicates the time at which the most recent lockout for this user started
Context	system aaa authentication admin-user lockout start <i>string</i>
Tree	start

String Length	20 to 32
Configurable	False
Platforms	Supported on all platforms

password *string*

Description	The admin password, supplied either as cleartext or as a hashed value If provided as cleartext, the system will hash the value on input, storing only the hashed value. If provided as a hashed value, the value should include any '\$' characters, for example '\$ar2\$aOvsuj0ALIU=\$r750fMa3ZEA/Di8dIfU2fQ=='
Context	system aaa authentication admin-user password string
Tree	password
Default	\$y\$j9T\$pNVjOgcNNGIWjBcdDfK/7.\$lr4uYxsztqzVj5AGiZvdWJGs.bpLWBjvHON3YgqnC2
Configurable	True
Platforms	Supported on all platforms

password-change-required *boolean*

Description	Indicates if the user must change their password on next login
Context	system aaa authentication admin-user password-change-required boolean
Tree	password-change-required
Configurable	False
Platforms	Supported on all platforms

role *reference*

Description	List of roles to assign to this user The most specific rule for a particular role takes precedence. Rules from all user roles are evaluated together, most permissive privilege taking precedence.
Context	system aaa authentication admin-user role reference
Tree	role
Reference	system aaa authorization role rolename string
Configurable	True

Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b
Max. Elements	32

spiffe-ids *string*

Description	The SPIFFE ID list for the user, including the spiffe:// URI This list of IDs is evaluated by TLS-consuming servers (e.g. gNMI, JSON-RPC) that use a TLS server-profile with authenticate-client set to true. If a match is found in any incoming offered client certificates, the provider of the certificate is associated with this local user, and given resulting permissions.
Context	system aaa authentication admin-user spiffe-ids <i>string</i>
Tree	spiffe-ids
Configurable	True
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

ssh-key *string*

Description	SSH public key(s) for the user If defined, the user may login to the system over SSH with this key. This should use the SSH public authorized key format.
Context	system aaa authentication admin-user ssh-key <i>string</i>
Tree	ssh-key
Configurable	True
Platforms	Supported on all platforms
Max. Elements	32

ssh-principals *string*

Description	List of principals to associate with this user If any of the principals in the list are matched in a SSH client's certificate, and that clients username matches this user, and the certificate is verified, the client will authenticate.
Context	system aaa authentication admin-user ssh-principals <i>string</i>

Tree	ssh-principals
Configurable	True
Platforms	Supported on all platforms
Max. Elements	32

superuser *boolean*

Description	Indicates if the admin user is a superuser A superuser is granted implicit authorization to all YANG paths, has the ability to execute all CLI plugins, and by default is permitted to access the device through any interface. Additionally, users with the superuser attribute are able to execute 'sudo' in bash. A user may also be assigned a role or list of roles, but these are only evaluated for service authorization.
Context	system aaa authentication admin-user superuser <i>boolean</i>
Tree	superuser
Default	true
Configurable	True
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

username *string*

Description	Assigned username for admin user
Context	system aaa authentication admin-user username <i>string</i>
Tree	username
Default	admin
Configurable	False
Platforms	Supported on all platforms

authentication-method *reference*

Description	Ordered list of server-groups to be used during user authentication If authentication fails with one method, the next defined method is tried -- failure of all methods results in the user being denied access.
Context	system aaa authentication authentication-method <i>reference</i>
Tree	authentication-method

Reference	system aaa server-group name string
Configurable	True
Platforms	Supported on all platforms

dynamic-spiffe

Description	Dynamic SPIFFE settings
Context	system aaa authentication dynamic-spiffe
Tree	dynamic-spiffe
Configurable	True
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

allow *boolean*

Description	Accept clients with SPIFFE ID values that are not configured under any local user With this behaviour enabled, when a client using a client certificate containing SPIFFE ID connects the system will accept the client. Otherwise the SPIFFE ID must be configured under some local user. Even if enabled, any client using local user's configured SPIFFE ID will use that user's identity in all operations
Context	system aaa authentication dynamic-spiffe allow boolean
Tree	allow
Default	false
Configurable	True
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

role *reference*

Description	List of roles to assign to all dynamic SPIFFE clients Dynamic SPIFFE clients are clients authenticated using a client certificate containing SPIFFE ID value that is not configured under any local user. The most specific rule for a particular role takes precedence. Rules from all user roles are evaluated together, most permissive privilege taking precedence.
Context	system aaa authentication dynamic-spiffe role reference

Tree	role
Reference	system aaa authorization role rolename <i>string</i>
Configurable	True
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b
Max. Elements	32

exit-on-reject *boolean*

Description	Enable/disable exit-on-reject behaviour for authentication attempts With this behaviour enabled, when a reject is received from any server the system will not try further methods, and will reject the user authentication attempt. Default behaviour is to continue trying methods until one accepts the user, or the system runs out of methods to try.
Context	system aaa authentication exit-on-reject <i>boolean</i>
Tree	exit-on-reject
Default	false
Configurable	True
Platforms	Supported on all platforms

idle-timeout *number*

Description	Set the idle timeout of all CLI sessions After the timeout is reached, the session is disconnected from the system.
Context	system aaa authentication idle-timeout <i>number</i>
Tree	idle-timeout
Default	600
Units	seconds
Configurable	True
Platforms	Supported on all platforms

linuxadmin-user

Description	Enclosing container for linuxadmin user
Context	system aaa authentication linuxadmin-user
Tree	linuxadmin-user

Configurable	True
Platforms	Supported on all platforms

credentialz

Description	Information relating to the active user credentials as provided via Credentialz State is provided by the gNSI Credentialz service, and can be changed using the gNSI.Credentialz.RotateAccountCredentials RPC
Context	system aaa authentication linuxadmin-user credentialz
Tree	credentialz
Configurable	False
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

authorized-keys

Description	State relating to the Authorized Keys provided via Credentialz
Context	system aaa authentication linuxadmin-user credentialz authorized-keys
Tree	authorized-keys
Configurable	False
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

created-on *string*

Description	The created on timestamp as provided by the gNSI client at the time of uploading the artifact The maps to the created_on field within a Entity message in the Credentialz protobuf.
Context	system aaa authentication linuxadmin-user credentialz authorized-keys created-on string
Tree	created-on
String Length	20 to 32
Configurable	False

Platforms 7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

version string

Description The version string as provided by the gNSI client at the time of uploading the artifact
The maps to the version field within a Entity message in the Credentialz protobuf.

Context [system aaa authentication linuxadmin-user credentialz authorized-keys version string](#)

Tree [version](#)

Configurable False

Platforms 7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

authorized-principals

Description State relating to the Authorized Principals provided via Credentialz

Context [system aaa authentication linuxadmin-user credentialz authorized-principals](#)

Tree [authorized-principals](#)

Configurable False

Platforms 7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

created-on string

Description The created on timestamp as provided by the gNSI client at the time of uploading the artifact
The maps to the created_on field within a Entity message in the Credentialz protobuf.

Context [system aaa authentication linuxadmin-user credentialz authorized-principals created-on string](#)

Tree [created-on](#)

String Length 20 to 32

Configurable False

Platforms 7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

version string

Description The version string as provided by the gNSI client at the time of uploading the artifact

The maps to the version field within a Entity message in the Credentialz protobuf.

Context [system aaa authentication linuxadmin-user credentialz authorized-principals version string](#)

Tree [version](#)

Configurable False

Platforms 7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

password

Description State relating to the Password provided via Credentialz.

Context [system aaa authentication linuxadmin-user credentialz password](#)

Tree [password](#)

Configurable False

Platforms 7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

created-on string

Description The created on timestamp as provided by the gNSI client at the time of uploading the artifact

The maps to the created_on field within a Entity message in the Credentialz protobuf.

Context [system aaa authentication linuxadmin-user credentialz password created-on string](#)

Tree [created-on](#)

String Length 20 to 32

Configurable False

Platforms 7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

version string

Description The version string as provided by the gNSI client at the time of uploading the artifact

The maps to the version field within a Entity message in the Credentialz protobuf.

Context [system aaa authentication linuxadmin-user credentialz password version string](#)

Tree [version](#)

Configurable False

Platforms 7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

password string

Description The linuxadmin password, supplied either as cleartext or as a hashed value
If provided as cleartext, the system will hash the value on input, storing only the hashed value. If provided as a hashed value, the value should include any '\$' characters, for example '\$6\$c66a15569d3f5952\$kA2Wpt9iqR5uMbaCUBNxsjKyXROQFdJtV1HX0CFY9wk7F326/yB3h.dERX9cH7YpeJ1N872hjzTb2tlaZFwwg0'.

Context [system aaa authentication linuxadmin-user password string](#)

Tree [password](#)

Default \$y\$j9T\$/vKPXdvWQKKPH8qPzbLs0\$Hz98mmTg.j87QMZITqY2ieGwa3Ed7kzHkp5z6kROEy4

Configurable True

Platforms Supported on all platforms

ssh-key string

Description SSH public key(s) for the user

If defined, the user may login to the system over SSH with this key. This should use the SSH public authorized key format.

Context [system aaa authentication linuxadmin-user ssh-key string](#)

Tree	ssh-key
Configurable	True
Platforms	Supported on all platforms
Max. Elements	32

ssh-principals *string*

Description	List of principals to associate with this user If any of the principals in the list are matched in a SSH client's certificate, and that client's username matches this user, and the certificate is verified, the client will authenticate.
Context	system aaa authentication linuxadmin-user ssh-principals <i>string</i>
Tree	ssh-principals
Configurable	True
Platforms	Supported on all platforms
Max. Elements	32

username *string*

Description	Assigned username for linuxadmin user
Context	system aaa authentication linuxadmin-user username <i>string</i>
Tree	username
Default	linuxadmin
Configurable	False
Platforms	Supported on all platforms

password

Description	Top-level container for policies around user passwords
Context	system aaa authentication password
Tree	password
Configurable	True
Platforms	Supported on all platforms

aging *number*

Description	Expire user passwords after this period A value of 0 means that the user passwords do not expire
Context	system aaa authentication password aging number
Tree	aging
Range	0 to 500
Default	0
Units	days
Configurable	True
Platforms	Supported on all platforms

change-on-first-login *boolean*

Description	Enable or disable a user being forced to change their password on first time login
Context	system aaa authentication password change-on-first-login boolean
Tree	change-on-first-login
Default	false
Configurable	True
Platforms	Supported on all platforms

complexity-rules

Description	Top-level container for password complexity rules
Context	system aaa authentication password complexity-rules
Tree	complexity-rules
Configurable	True
Platforms	Supported on all platforms

allow-username *boolean*

Description	Enable or disable using username as part of the user password
Context	system aaa authentication password complexity-rules allow-username boolean
Tree	allow-username

Default	true
Configurable	True
Platforms	Supported on all platforms

maximum-length *number*

Description	The maximum length of the password for local users, including admin and linuxadmin
Context	system aaa authentication password complexity-rules maximum-length number
Tree	maximum-length
Range	1 to 1023
Default	1023
Configurable	True
Platforms	Supported on all platforms

minimum-length *number*

Description	The minimum length of the password for local users, including admin and linuxadmin
Context	system aaa authentication password complexity-rules minimum-length number
Tree	minimum-length
Range	1 to 12
Default	1
Configurable	True
Platforms	Supported on all platforms

minimum-lowercase *number*

Description	The minimum lowercase characters from (a-z) that the user password must include A value of 0 results in no minimum-lowercase being enforced.
Context	system aaa authentication password complexity-rules minimum-lowercase number
Tree	minimum-lowercase
Range	0 to 10

Default	0
Configurable	True
Platforms	Supported on all platforms

minimum-numeric *number*

Description	The minimum numeric digits that the user password must include A value of 0 results in no minimum-numeric being enforced.
Context	system aaa authentication password complexity-rules minimum-numeric number
Tree	minimum-numeric
Range	0 to 10
Default	0
Configurable	True
Platforms	Supported on all platforms

minimum-special-character *number*

Description	The minimum special characters that the user password must include A value of 0 results in no minimum-special-character being enforced.
Context	system aaa authentication password complexity-rules minimum-special-character number
Tree	minimum-special-character
Range	0 to 10
Default	0
Configurable	True
Platforms	Supported on all platforms

minimum-uppercase *number*

Description	The minimum uppercase characters from (A-Z) that the user password must include A value of 0 results in no minimum-uppercase being enforced.
Context	system aaa authentication password complexity-rules minimum-uppercase number
Tree	minimum-uppercase

Range	0 to 10
Default	0
Configurable	True
Platforms	Supported on all platforms

hash-method *keyword*

Description	The hash algorithm for the passwords entered as plain text If no value is configured, then Yescrypt will be used as the hash algorithm unless overridden for specific leafs using the srl_nokia-extensions:hash-algorithm yang extension. The Argon2 (ar2) hash algorithm is not supported for the linuxadmin user and if selected then the linuxadmin password will be hashed using Yescrypt.
Context	system aaa authentication password hash-method keyword
Tree	hash-method
Options	<ul style="list-style-type: none"> • ar2 The Argon2 password hashing algorithm • sha2 The SHA512 password hashing algorithm • yescrypt The Yescrypt password hashing algorithm
Configurable	True
Platforms	Supported on all platforms

history *number*

Description	Defines how many previous passwords a new password is matched against, such that a new password can't be one of the previous n passwords
Context	system aaa authentication password history number
Tree	history
Range	0 to 20
Default	0
Configurable	True
Platforms	Supported on all platforms

lockout-policy

Description	Top-level container for lockout policy
Context	system aaa authentication password lockout-policy
Tree	lockout-policy
Configurable	True
Platforms	Supported on all platforms

attempts *number*

Description	The number of failed login attempts that will lock the account A value of 0 means unlimited number of failed login attempts is allowed
Context	system aaa authentication password lockout-policy attempts <i>number</i>
Tree	attempts
Range	0 to 64
Default	0
Configurable	True
Platforms	Supported on all platforms

lockout *number*

Description	The time duration in minutes the user account will be locked out A value of 0 means that the user account will be locked out/disabled indefinitely
Context	system aaa authentication password lockout-policy lockout <i>number</i>
Tree	lockout
Range	0 to 1440
Default	15
Units	minutes
Configurable	True
Platforms	Supported on all platforms

time *number*

Description	The time period in minutes within which the failed login attempts occur
Context	system aaa authentication password lockout-policy time <i>number</i>

Tree	time
Range	0 to 1440
Default	1
Units	minutes
Configurable	True
Platforms	Supported on all platforms

require-ntp-sync *boolean*

Description	Enable or disable dependence of password aging and user lockout on NTP sync status
Context	system aaa authentication password require-ntp-sync <i>boolean</i>
Tree	require-ntp-sync
Default	true
Configurable	True
Platforms	Supported on all platforms

session id *number*

Description	List of active sessions in the system
Context	system aaa authentication session id <i>number</i>
Tree	session
Configurable	False
Platforms	Supported on all platforms

id *number*

Description	System generated session ID
Context	system aaa authentication session id <i>number</i>
Configurable	False
Platforms	Supported on all platforms

authentication-method *string*

Description	Authentication method that authorized the user (the server-group name or local)
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Context	system aaa authentication session id number authentication-method string
Tree	authentication-method
Configurable	False
Platforms	Supported on all platforms

login-time string

Description	Time the user logged in
Context	system aaa authentication session id number login-time string
Tree	login-time
String Length	20 to 32
Configurable	False
Platforms	Supported on all platforms

network-instance string

Description	Network instance
Context	system aaa authentication session id number network-instance string
Tree	network-instance
Configurable	False
Platforms	Supported on all platforms

priv-lvl number

Description	TACACS+ authorization priv-lvl (if TACACS+ authorization is enabled)
Context	system aaa authentication session id number priv-lvl number
Tree	priv-lvl
Configurable	False
Platforms	Supported on all platforms

remote-host string

Description	Remote host of the session
Context	system aaa authentication session id number remote-host string
Tree	remote-host
Configurable	False

Platforms Supported on all platforms

role *string*

Description List of roles assigned to this user

Context [system aaa authentication session id number role string](#)

Tree [role](#)

Configurable False

Platforms Supported on all platforms

service-name *string*

Description Service name that called login for the session

Context [system aaa authentication session id number service-name string](#)

Tree [service-name](#)

Configurable False

Platforms Supported on all platforms

spiffe-id *string*

Description SPIFFE ID linked to the session

Context [system aaa authentication session id number spiffe-id string](#)

Tree [spiffe-id](#)

Configurable False

Platforms 7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

tty-name *string*

Description Terminal type

Context [system aaa authentication session id number tty-name string](#)

Tree [tty-name](#)

Configurable False

Platforms Supported on all platforms

username *string*

Description	Username linked to the session
Context	system aaa authentication session id <i>number</i> username <i>string</i>
Tree	username
Configurable	False
Platforms	Supported on all platforms

user [username](#) *string*

Description	List of local users configured on the system
Context	system aaa authentication user username <i>string</i>
Tree	user
Configurable	True
Platforms	Supported on all platforms
Max. Elements	128

username *string*

Description	Assigned username for this user
Context	system aaa authentication user username <i>string</i>
String Length	1 to 32
Configurable	True
Platforms	Supported on all platforms

credentialz

Description	Information relating to the active user credentials as provided via Credentialz State is provided by the gNSI Credentialz service, and can be changed using the gNSI.Credentialz.RotateAccountCredentials RPC
Context	system aaa authentication user username <i>string</i> credentialz
Tree	credentialz
Configurable	False
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

authorized-keys

Description	State relating to the Authorized Keys provided via Credentialz
Context	system aaa authentication user username string credentialz authorized-keys
Tree	authorized-keys
Configurable	False
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

created-on *string*

Description	The created on timestamp as provided by the gNSI client at the time of uploading the artifact The maps to the created_on field within a Entity message in the Credentialz protobuf.
Context	system aaa authentication user username string credentialz authorized-keys created-on string
Tree	created-on
String Length	20 to 32
Configurable	False
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

version *string*

Description	The version string as provided by the gNSI client at the time of uploading the artifact The maps to the version field within a Entity message in the Credentialz protobuf.
Context	system aaa authentication user username string credentialz authorized-keys version string
Tree	version
Configurable	False
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

authorized-principals

Description	State relating to the Authorized Principals provided via Credentialz
Context	system aaa authentication user username string credentialz authorized-principals
Tree	authorized-principals
Configurable	False
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

created-on *string*

Description	The created on timestamp as provided by the gNSI client at the time of uploading the artifact The maps to the created_on field within a Entity message in the Credentialz protobuf.
Context	system aaa authentication user username string credentialz authorized-principals created-on string
Tree	created-on
String Length	20 to 32
Configurable	False
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

version *string*

Description	The version string as provided by the gNSI client at the time of uploading the artifact The maps to the version field within a Entity message in the Credentialz protobuf.
Context	system aaa authentication user username string credentialz authorized-principals version string
Tree	version
Configurable	False
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

password

Description	State relating to the Password provided via Credentialz.
Context	system aaa authentication user username string credentialz password
Tree	password
Configurable	False
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

created-on string

Description	The created on timestamp as provided by the gNSI client at the time of uploading the artifact The maps to the created_on field within a Entity message in the Credentialz protobuf.
Context	system aaa authentication user username string credentialz password created-on string
Tree	created-on
String Length	20 to 32
Configurable	False
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

version string

Description	The version string as provided by the gNSI client at the time of uploading the artifact The maps to the version field within a Entity message in the Credentialz protobuf.
Context	system aaa authentication user username string credentialz password version string
Tree	version
Configurable	False
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

failed-login-attempts *number*

Description	Number of failed login attempts from the user
Context	system aaa authentication user username <i>string</i> failed-login-attempts <i>number</i>
Tree	failed-login-attempts
Default	0
Configurable	False
Platforms	Supported on all platforms

last-failed-login *string*

Description	The date and time of the last login failure from this user
Context	system aaa authentication user username <i>string</i> last-failed-login <i>string</i>
Tree	last-failed-login
String Length	20 to 32
Configurable	False
Platforms	Supported on all platforms

last-successful-login *string*

Description	The date and time of the last successful login from this user
Context	system aaa authentication user username <i>string</i> last-successful-login <i>string</i>
Tree	last-successful-login
String Length	20 to 32
Configurable	False
Platforms	Supported on all platforms

lockout

Description	Information relating to the lockout state of this user
Context	system aaa authentication user username <i>string</i> lockout
Tree	lockout
Configurable	False
Platforms	Supported on all platforms

active *boolean*

Description	Indicates if a lockout is active for the user Lockouts can occur after successive failed logins, and can be cleared by 'tools system aaa authentication user <username> unlock'
Context	system aaa authentication user username <i>string</i> lockout active <i>boolean</i>
Tree	active
Configurable	False
Platforms	Supported on all platforms

end *string*

Description	Indicates the time at which the most recent lockout for this user ended or will end
Context	system aaa authentication user username <i>string</i> lockout end <i>string</i>
Tree	end
String Length	20 to 32
Configurable	False
Platforms	Supported on all platforms

start *string*

Description	Indicates the time at which the most recent lockout for this user started
Context	system aaa authentication user username <i>string</i> lockout start <i>string</i>
Tree	start
String Length	20 to 32
Configurable	False
Platforms	Supported on all platforms

password *string*

Description	The user password, supplied either as cleartext or as a hashed value If provided as cleartext, the system will hash the value on input, storing only the hashed value. If provided as a hashed value, the value should include any '\$' characters, for example '\$ar2\$aOvsuj0ALIU=\$r750fMa3ZEA/Di8dIfU2fQ=='
Context	system aaa authentication user username <i>string</i> password <i>string</i>

Tree	password
Configurable	True
Platforms	Supported on all platforms

password-change-required *boolean*

Description	Indicates if the user must change their password on next login
Context	system aaa authentication user username <i>string</i> password-change-required <i>boolean</i>
Tree	password-change-required
Configurable	False
Platforms	Supported on all platforms

role *reference*

Description	List of roles to assign to this user The most specific rule for a particular role takes precedence. Rules from all user roles are evaluated together, most permissive privilege taking precedence.
Context	system aaa authentication user username <i>string</i> role <i>reference</i>
Tree	role
Reference	system aaa authorization role rolename <i>string</i>
Configurable	True
Platforms	Supported on all platforms
Max. Elements	32

spiffe-ids *string*

Description	The SPIFFE ID list for the user, including the spiffe:// URI This list of IDs is evaluated by TLS-consuming servers (e.g. gNMI, JSON-RPC) that use a TLS server-profile with authenticate-client set to true. If a match is found in any incoming offered client certificates, the provider of the certificate is associated with this local user, and given resulting permissions.
Context	system aaa authentication user username <i>string</i> spiffe-ids <i>string</i>
Tree	spiffe-ids
Configurable	True

Platforms 7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

ssh-key *string*

Description SSH public key(s) for the user
If defined, the user may login to the system over SSH with this key. This should use the SSH public authorized key format.

Context [system aaa authentication user username string ssh-key string](#)

Tree [ssh-key](#)

Configurable True

Platforms Supported on all platforms

Max. Elements 32

ssh-principals *string*

Description List of principals to associate with this user
If any of the principals in the list are matched in a SSH client's certificate, and that client's username matches this user, and the certificate is verified, the client will authenticate.

Context [system aaa authentication user username string ssh-principals string](#)

Tree [ssh-principals](#)

Configurable True

Platforms Supported on all platforms

Max. Elements 32

superuser *boolean*

Description Indicates that this user is a superuser
A superuser is granted implicit authorization to all YANG paths, has the ability to execute all CLI plugins, and by default is permitted to access the device through any interface.
Additionally, users with the superuser attribute are able to execute 'sudo' in bash. A user may also be assigned a role or list of roles, but these are only evaluated for service authorization.

Context [system aaa authentication user username string superuser boolean](#)

Tree [superuser](#)

Default	false
Configurable	True
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

authorization

Description	Top-level container for authorization configuration and operational state data
Context	system aaa authorization
Tree	authorization
Configurable	True
Platforms	Supported on all platforms

authz-policy

Description	Information relating to the active gRPC authorization policy This policy is provided by the gNSI gRPC service, and can be changed using the gNSI.Authz.Rotate RPC
Context	system aaa authorization authz-policy
Tree	authz-policy
Configurable	False
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

counters

Description	A collection of counters collected by the gNSI.authz module.
Context	system aaa authorization authz-policy counters
Tree	counters
Configurable	False
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

rpc name string

Description	A collection of counters collected by the gNSI.authz module for a RPC identified by the `name`.
Context	system aaa authorization authz-policy counters rpc name string
Tree	rpc
Configurable	False
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

name string

Description	The name of the RPC the counters were collected for.
Context	system aaa authorization authz-policy counters rpc name string
Configurable	False
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

access-accepts number

Description	The total number of times the gNSI.authz module allowed access to a RPC.
Context	system aaa authorization authz-policy counters rpc name string access-accepts number
Tree	access-accepts
Configurable	False
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

access-rejects number

Description	The total number of times the gNSI.authz module denied access to a RPC.
Context	system aaa authorization authz-policy counters rpc name string access-rejects number
Tree	access-rejects
Configurable	False

Platforms 7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

last-access-accept *string*

Description A timestamp of the last time the gNSI.authz allowed access to a RPC.

Context [system aaa authorization authz-policy counters rpc name string last-access-accept string](#)

Tree [last-access-accept](#)

String Length 20 to 32

Configurable False

Platforms 7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

last-access-reject *string*

Description A timestamp of the last time the gNSI.authz denied access to a RPC.

Context [system aaa authorization authz-policy counters rpc name string last-access-reject string](#)

Tree [last-access-reject](#)

String Length 20 to 32

Configurable False

Platforms 7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

created-on *string*

Description The created on timestamp as provided by the gNSI client at the time of uploading the policy
This maps to the created_on field within a UploadRequest message in the Authz protobuf.

Context [system aaa authorization authz-policy created-on string](#)

Tree [created-on](#)

String Length 20 to 32

Configurable False

Platforms 7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

policy string

Description The policy definition
 This JSON string contains the full gRPC authorization rules conforming to the gRPC authorization policy schema:
 This maps to the policy field within a UploadRequest message in the Authz protobuf.

Context [system aaa authorization authz-policy policy string](#)

Tree [policy](#)

Configurable False

Platforms 7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

version string

Description The version string as provided by the gNSI client at the time of uploading the policy
 The maps to the version field within a UploadRequest message in the Authz protobuf.

Context [system aaa authorization authz-policy version string](#)

Tree [version](#)

Configurable False

Platforms 7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

role rolename string

Description List of local roles configured on the system

Context [system aaa authorization role rolename string](#)

Tree [role](#)

Configurable True

Platforms Supported on all platforms

rolename *string*

Description	Assigned rolename for this role
Context	system aaa authorization role rolename string
String Length	1 to 255
Configurable	True
Platforms	Supported on all platforms

cli

Description	Top-level container for cli plugin configuration
Context	system aaa authorization role rolename string cli
Tree	cli
Configurable	True
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

allow-command-list *string*

Description	List of cli commands that are allowed for this role Python style regular expressions are supported. Every item is left anchored (it matches from the beginning of line). Empty allow-command-list means anything that is not in deny-command-list is allowed. If both lists are empty then everything is allowed.
Context	system aaa authorization role rolename string cli allow-command-list string
Tree	allow-command-list
Configurable	True
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b
Max. Elements	100

deny-command-list *string*

Description	List of cli commands that are denied for this role Python style regular expressions are supported. Every item is left anchored (it matches from the beginning of line). Empty deny-command-list means
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anything that is not in allow-command-list is denied. If both lists are empty then everything is allowed.

Context	system aaa authorization role rolename <i>string</i> cli deny-command-list <i>string</i>
Tree	deny-command-list
Configurable	True
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b
Max. Elements	100

load-global-plugins *boolean*

Description	Specifies whether cli should load plugins from global plugin directory (from /etc/opt/srlinux/cli/plugins/).
Context	system aaa authorization role rolename <i>string</i> cli load-global-plugins <i>boolean</i>
Tree	load-global-plugins
Default	true
Configurable	True
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

load-user-plugins *boolean*

Description	Specifies whether cli should load plugins from user home directory (from ~/cli/plugins/).
Context	system aaa authorization role rolename <i>string</i> cli load-user-plugins <i>boolean</i>
Tree	load-user-plugins
Default	true
Configurable	True
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

netconf

Description	Top-level container for netconf plugin configuration
Context	system aaa authorization role rolename <i>string</i> netconf

Tree	netconf
Configurable	True
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

allowed-operations *keyword*

Description	List of netconf operation, that are allowed for this role. Rest of the operations are denied.
Context	system aaa authorization role rolename <i>string</i> netconf allowed-operations <i>keyword</i>
Tree	allowed-operations
Options	<ul style="list-style-type: none"> • action • cancel-commit • close-session • commit • copy-config • delete-config • discard-changes • edit-config • edit-data • get • get-config • get-data • get-schema • kill-session • lock • unlock • validate
Configurable	True
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

services *keyword*

Description	Services that members of this role are authorized for
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Services are additive, if a user is a member of multiple roles, the available services are merged.

Context	<code>system aaa authorization role rolename string services keyword</code>
Tree	<code>services</code>
Options	<ul style="list-style-type: none"> • cli • gnmi • gnoi • gnsi • gribi • netconf • p4rt • json-rpc • ftp • grpc-reflection
Configurable	True
Platforms	Supported on all platforms

superuser *boolean*

Description	<p>Indicates if users with this role are given superuser</p> <p>A superuser is granted implicit authorization to all YANG paths, has the ability to execute all CLI plugins, and by default is permitted to access the device through any interface.</p> <p>Additionally, users with the superuser attribute are able to execute 'sudo' in bash. A user may also be assigned a role or list of roles, but these are only evaluated for service authorization.</p>
Context	<code>system aaa authorization role rolename string superuser boolean</code>
Tree	<code>superuser</code>
Default	false
Configurable	True
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

tacacs

Description	Top-level container for configuration relating to TACACS+ interworking with roles
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Context	system aaa authorization role rolename string tacacs
Tree	tacacs
Configurable	True
Platforms	Supported on all platforms

priv-lvl *number*

Description	The TACACS+ priv-lvl to map to this role All roles matching each specific priv-lvl, and their lessers are merged together to create the final ruleset applied to the user.
Context	system aaa authorization role rolename string tacacs priv-lvl number
Tree	priv-lvl
Range	0 to 15
Configurable	True
Platforms	Supported on all platforms

server-group *name string*

Description	List of AAA server-groups in the system Each server group specifies a type, of which all servers must use. If using the 'local' type, then no servers may be specified.
Context	system aaa server-group name string
Tree	server-group
Configurable	True
Platforms	Supported on all platforms
Max. Elements	3

name *string*

Description	User defined name for the server group
Context	system aaa server-group name string
String Length	1 to 255
Configurable	True
Platforms	Supported on all platforms

priv-lvl-authorization *boolean*

Description	Use TACACS+ priv-lvl based authorization If false, then authorization is skipped for TACACS+ users granting full admin access for those users.
Context	system aaa server-group name <i>string</i> priv-lvl-authorization <i>boolean</i>
Tree	priv-lvl-authorization
Default	false
Configurable	True
Platforms	Supported on all platforms

server [address](#) (*ipv4-address* | *ipv6-address*)

Description	List of AAA servers to use within this server-group Servers are tried in a round-robin fashion, with the first server always being tried if it is operationally available
Context	system aaa server-group name <i>string</i> server address (<i>ipv4-address</i> <i>ipv6-address</i>)
Tree	server
Configurable	True
Platforms	Supported on all platforms
Max. Elements	5

address (*ipv4-address* | *ipv6-address*)

Description	Address used to reach the server
Context	system aaa server-group name <i>string</i> server address (<i>ipv4-address</i> <i>ipv6-address</i>)
Configurable	True
Platforms	Supported on all platforms

name *string*

Description	User defined name assigned to the server
Context	system aaa server-group name <i>string</i> server address (<i>ipv4-address</i> <i>ipv6-address</i>) name <i>string</i>
Tree	name

String Length	1 to 255
Configurable	True
Platforms	Supported on all platforms

network-instance *reference*

Description	Reference to a configured network-instance used for reachability to the server This network-instance must already exist in the system, and different servers within the same server-group may use difference network-instances for connectivity.
Context	system aaa server-group name string server address (ipv4-address ipv6-address) network-instance reference
Tree	network-instance
Reference	network-instance name string
Configurable	True
Platforms	Supported on all platforms

oper-state *keyword*

Description	Details the operational state of the server A server is defined as being down if it fails to respond before the timeout period, or if a path towards the server is not available.
Context	system aaa server-group name string server address (ipv4-address ipv6-address) oper-state keyword
Tree	oper-state
Options	<ul style="list-style-type: none"> • up Component or process is operational • down Component or process is not operational • empty Component slot is empty • downloading Component is downloading image into memory • booting Component is booting downloaded image • starting

- Component image operational, application processes starting
- failed
Component or process has failed
- synchronizing
Component is currently being synchronized
- upgrading
Component is currently being upgraded
- low-power
Component is offline due to insufficient system power
- degraded
Component or process is in a degraded state
- warm-reboot
Component or process is currently warm rebooting
This state is set during a warm reboot immediately following initiation of the reboot, continuing after startup until the system has completed audit. In this state the system will not accept configuration changes.
- waiting
Component or process is currently waiting
This state can be set by event handler when the reinvoke-with-delay action is used, and indicates that the event handler is waiting for the provided delay before reinvoking the instance.

Configurable

False

Platforms

Supported on all platforms

radius**Description**

Top-level container for RADIUS server data

Context[system aaa server-group name](#) *string* [server address](#) (*ipv4-address* | *ipv6-address*) [radius](#)**Tree**[radius](#)**Configurable**

True

Platforms

Supported on all platforms

acct-port number**Description**

Port number for accounting requests

Context[system aaa server-group name](#) *string* [server address](#) (*ipv4-address* | *ipv6-address*) [radius acct-port number](#)

Tree	acct-port
Range	0 to 65535
Default	1813
Configurable	True
Platforms	Supported on all platforms

auth-port *number*

Description	Port number for authentication requests
Context	system aaa server-group name <i>string</i> server address (<i>ipv4-address</i> <i>ipv6-address</i>) radius auth-port <i>number</i>
Tree	auth-port
Range	0 to 65535
Default	1812
Configurable	True
Platforms	Supported on all platforms

retransmit-attempts *number*

Description	Number of times the system may send a request to the unresponsive server
Context	system aaa server-group name <i>string</i> server address (<i>ipv4-address</i> <i>ipv6-address</i>) radius retransmit-attempts <i>number</i>
Tree	retransmit-attempts
Default	3
Configurable	True
Platforms	Supported on all platforms

secret-key *string*

Description	The unencrypted shared key used between the system and server
Context	system aaa server-group name <i>string</i> server address (<i>ipv4-address</i> <i>ipv6-address</i>) radius secret-key <i>string</i>
Tree	secret-key
Configurable	True
Platforms	Supported on all platforms

source-address (*ipv4-address* | *ipv6-address*)

Description	Source IP address to use in messages to the RADIUS server
Context	system aaa server-group name <i>string</i> server address (<i>ipv4-address</i> <i>ipv6-address</i>) radius source-address (<i>ipv4-address</i> <i>ipv6-address</i>)
Tree	source-address
Configurable	True
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

statistics

Description	Enclosing container for server statistics
Context	system aaa server-group name <i>string</i> server address (<i>ipv4-address</i> <i>ipv6-address</i>) statistics
Tree	statistics
Configurable	False
Platforms	Supported on all platforms

accounting-connection-failures *number*

Description	Number of accounting connection failures
Context	system aaa server-group name <i>string</i> server address (<i>ipv4-address</i> <i>ipv6-address</i>) statistics accounting-connection-failures <i>number</i>
Tree	accounting-connection-failures
Default	0
Configurable	False
Platforms	Supported on all platforms

accounting-rejects *number*

Description	Number of accounting rejections
Context	system aaa server-group name <i>string</i> server address (<i>ipv4-address</i> <i>ipv6-address</i>) statistics accounting-rejects <i>number</i>
Tree	accounting-rejects
Default	0

Configurable	False
Platforms	Supported on all platforms

accounting-success *number*

Description	Number of accounting successes
Context	system aaa server-group name <i>string</i> server address (<i>ipv4-address</i> <i>ipv6-address</i>) statistics accounting-success <i>number</i>
Tree	accounting-success
Default	0
Configurable	False
Platforms	Supported on all platforms

authorization-connection-failures *number*

Description	Number of authorization connection failures
Context	system aaa server-group name <i>string</i> server address (<i>ipv4-address</i> <i>ipv6-address</i>) statistics authorization-connection-failures <i>number</i>
Tree	authorization-connection-failures
Default	0
Configurable	False
Platforms	Supported on all platforms

authorization-rejects *number*

Description	Number of authorization rejections
Context	system aaa server-group name <i>string</i> server address (<i>ipv4-address</i> <i>ipv6-address</i>) statistics authorization-rejects <i>number</i>
Tree	authorization-rejects
Default	0
Configurable	False
Platforms	Supported on all platforms

authorization-success *number*

Description	Number of authorization successes
--------------------	-----------------------------------

Context	system aaa server-group name string server address (ipv4-address ipv6-address) statistics authorization-success number
Tree	authorization-success
Default	0
Configurable	False
Platforms	Supported on all platforms

login-connection-failures *number*

Description	Number of login connection failures
Context	system aaa server-group name string server address (ipv4-address ipv6-address) statistics login-connection-failures number
Tree	login-connection-failures
Default	0
Configurable	False
Platforms	Supported on all platforms

login-rejects *number*

Description	Number of login rejections
Context	system aaa server-group name string server address (ipv4-address ipv6-address) statistics login-rejects number
Tree	login-rejects
Default	0
Configurable	False
Platforms	Supported on all platforms

login-success *number*

Description	Number of login successes
Context	system aaa server-group name string server address (ipv4-address ipv6-address) statistics login-success number
Tree	login-success
Default	0
Configurable	False
Platforms	Supported on all platforms

tacacs

Description	Top-level container for TACACS+ server data
Context	system aaa server-group name <i>string</i> server address (<i>ipv4-address</i> <i>ipv6-address</i>) tacacs
Tree	tacacs
Configurable	True
Platforms	Supported on all platforms

port *number*

Description	The port number on which to contact the TACACS+ server
Context	system aaa server-group name <i>string</i> server address (<i>ipv4-address</i> <i>ipv6-address</i>) tacacs port <i>number</i>
Tree	port
Range	0 to 65535
Default	49
Configurable	True
Platforms	Supported on all platforms

secret-key *string*

Description	The unencrypted shared key used between the system and server
Context	system aaa server-group name <i>string</i> server address (<i>ipv4-address</i> <i>ipv6-address</i>) tacacs secret-key <i>string</i>
Tree	secret-key
Configurable	True
Platforms	Supported on all platforms

source-address (*ipv4-address* | *ipv6-address*)

Description	Source address for TACACS to use for messages sent to a remote server
Context	system aaa server-group name <i>string</i> server address (<i>ipv4-address</i> <i>ipv6-address</i>) tacacs source-address (<i>ipv4-address</i> <i>ipv6-address</i>)
Tree	source-address
Configurable	True

Platforms 7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

timeout *number*

Description Set the timeout in seconds on responses from servers in this group

Context [system aaa server-group name](#) *string* **timeout** *number*

Tree [timeout](#)

Range 1 to 3600

Default 10

Units seconds

Configurable True

Platforms Supported on all platforms

type *identityref*

Description AAA server type -- all servers in the group must be of this type

Context [system aaa server-group name](#) *string* **type** *identityref*

Tree [type](#)

Options

- tacacs
 - Specifies servers using the TACACS+ protocol
 - Terminal Access Controller Access Control System (TACACS+)
- radius
 - Specifies servers using RADIUS protocol
 - Remote Authentication Dial In User Service (RADIUS) AAA server
- local
 - Specifies using Linux local methods
 - This type cannot be combined with a server address

Configurable True

Platforms Supported on all platforms

app-management

Description Top-level container for application configuration and state

Context [system app-management](#)

Tree	app-management
Configurable	False
Platforms	Supported on all platforms

application name *string*

Description	List of all applications managed by the application manager
Context	system app-management application name <i>string</i>
Tree	application
Configurable	False
Platforms	Supported on all platforms

name *string*

Description	Unique name of this application instance
Context	system app-management application name <i>string</i>
Configurable	False
Platforms	Supported on all platforms

author *string*

Description	The author of the application
Context	system app-management application name <i>string</i> author <i>string</i>
Tree	author
Configurable	False
Platforms	Supported on all platforms

cgroup *string*

Description	Cgroup in with this application is started
Context	system app-management application name <i>string</i> cgroup <i>string</i>
Tree	cgroup
Configurable	False
Platforms	Supported on all platforms

failure-action *string*

Description	The action taken after 'failure-threshold' failures within 'failure-window' This action can be to reboot the system, wait forever, or wait for a predefined number of seconds
Context	system app-management application name <i>string</i> failure-action <i>string</i>
Tree	failure-action
Configurable	False
Platforms	Supported on all platforms

failure-threshold *number*

Description	How many restarts within 'failure-window' are required to trigger the failure action Setting this value to 0 will result in no action taking place on application restarts
Context	system app-management application name <i>string</i> failure-threshold <i>number</i>
Tree	failure-threshold
Range	0 to 255
Configurable	False
Platforms	Supported on all platforms

failure-window *number*

Description	Sliding window in seconds, over which to count restarts towards failure-threshold
Context	system app-management application name <i>string</i> failure-window <i>number</i>
Tree	failure-window
Range	300 to 86400
Units	seconds
Configurable	False
Platforms	Supported on all platforms

last-change *string*

Description	Date and time the application instance last changed state
Context	system app-management application name <i>string</i> last-change <i>string</i>

Tree	last-change
String Length	20 to 32
Configurable	False
Platforms	Supported on all platforms

last-start-type *keyword*

Description	Indicates the type of the most recent start or restart of this application instance
Context	system app-management application name <i>string</i> last-start-type <i>keyword</i>
Tree	last-start-type
Options	<ul style="list-style-type: none"> • warm A warm start indicates that the application will leave state in IDB during a restart, and recover it post restart This type results in less disruption to surrounding applications and functionality. • cold A cold start indicates that the application will not leave state in IDB during a restart This type is equivalent to a normal application restart, i.e. one where the application's state is purged from the system during the restart, and recreated after.
Configurable	False
Platforms	Supported on all platforms

launch-command *string*

Description	The command used to launch the application
Context	system app-management application name <i>string</i> launch-command <i>string</i>
Tree	launch-command
Configurable	False
Platforms	Supported on all platforms

oom-score-adj *number*

Description	OOM score adj value set for this application
Context	system app-management application name <i>string</i> oom-score-adj <i>number</i>

Tree	oom-score-adj
Configurable	False
Platforms	Supported on all platforms

path *string*

Description	The directory where the application can be found
Context	system app-management application name <i>string path string</i>
Tree	path
Configurable	False
Platforms	Supported on all platforms

pid *number*

Description	Process ID of this application instance
Context	system app-management application name <i>string pid number</i>
Tree	pid
Configurable	False
Platforms	Supported on all platforms

restricted-operations *keyword*

Description	The operations that may not be manually performed on this application
Context	system app-management application name <i>string restricted-operations keyword</i>
Tree	restricted-operations
Options	<ul style="list-style-type: none"> • restart This application may not be restarted manually • stop This application may not be stopped manually • start This application may not be started manually • reload This application may not be reloaded manually • quit This application may not be terminated manually

- kill
This application may not be terminated ungracefully manually

Configurable

False

Platforms

Supported on all platforms

search-command *string***Description**

The command used to search for the applications liveness

Context[system app-management application name](#) *string* [search-command](#) *string***Tree**[search-command](#)**Configurable**

False

Platforms

Supported on all platforms

state *keyword***Description**

Current state of this application instance

Context[system app-management application name](#) *string* [state](#) *keyword***Tree**[state](#)**Options**

- running
Application instance is running
This is the normal, active state of an application
- waiting-for-config
Application instance is loaded, but has no configuration
This state requires wait-for-config true within the applications YAML configuration. This results in the application being loaded into app-mgr, but not starting until the system receives configuration for it
- error
The application has not started successfully, or has failed
This state can be caused by an application hitting the restart backoff, or an application failing to start following triggering a system reboot
- starting
The application has been asked to start
All applications enter this state after initial execution, after which application manager will wait five seconds before checking their status. IDB connected applications may announce their state before this five second window has passed, resulting in them transitioning from this state faster than PID-monitored applications.
- stopped

The application is not running
This state is most likely caused by an operator action

Configurable	False
Platforms	Supported on all platforms

statistics

Description	Top-level container for application statistics
Context	system app-management application name <i>string</i> statistics
Tree	statistics
Configurable	False
Platforms	Supported on all platforms

restart-count *number*

Description	The number of times this application instance has restarted
Context	system app-management application name <i>string</i> statistics restart-count <i>number</i>
Tree	restart-count
Default	0
Configurable	False
Platforms	Supported on all platforms

supported-restart-types *keyword*

Description	Indicates the supported restart types for this application
Context	system app-management application name <i>string</i> supported-restart-types <i>keyword</i>
Tree	supported-restart-types
Options	<ul style="list-style-type: none"> warm <p>A warm start indicates that the application will leave state in IDB during a restart, and recover it post restart</p> <p>This type results in less disruption to surrounding applications and functionality.</p> cold <p>A cold start indicates that the application will not leave state in IDB during a restart</p>

This type is equivalent to a normal application restart, i.e. one where the application's state is purged from the system during the restart, and recreated after.

Configurable	False
Platforms	Supported on all platforms

version *string*

Description	The version of the application
Context	system app-management application name <i>string</i> version <i>string</i>
Tree	version
Configurable	False
Platforms	Supported on all platforms

yang

Description	Top-level container for application state related to YANG
Context	system app-management application name <i>string</i> yang
Tree	yang
Configurable	False
Platforms	Supported on all platforms

modules *string*

Description	YANG module names used by this application instance
Context	system app-management application name <i>string</i> yang modules <i>string</i>
Tree	modules
Configurable	False
Platforms	Supported on all platforms

source-directories *string*

Description	Source directories searched for YANG modules to load These directories are used to load modules indicated in the modules leaf, and any modules imported/included within them
Context	system app-management application name <i>string</i> yang source-directories <i>string</i>

Tree	source-directories
Configurable	False
Platforms	Supported on all platforms

authentication

Description	Container for protocol authentication options available system wide
Context	system authentication
Tree	authentication
Configurable	True
Platforms	Supported on all platforms

keychain [name string](#)

Description	List of system keychains
Context	system authentication keychain name string
Tree	keychain
Configurable	True
Platforms	Supported on all platforms
Max. Elements	1024

name [string](#)

Description	The user configured name for the keychain
Context	system authentication keychain name string
String Length	1 to 255
Configurable	True
Platforms	Supported on all platforms

active-key-for-send ([keyword](#) | [reference](#))

Description	Provides the key index of the currently active Keychain key
Context	system authentication keychain name string active-key-for-send (keyword reference)
Tree	active-key-for-send
Options	<ul style="list-style-type: none"> • none

No send key is usable

Reference [system authentication keychain name](#) *string* [key index](#) *number*

Configurable False

Platforms Supported on all platforms

admin-state *keyword*

Description When set to disable, the keychain is inactive
 When a protocol refers to a keychain that is inactive, no authentication data is added to the outbound messages and/or all inbound messages with authentication data are dropped, depending on the context.
 A keychain is operationally disabled in a particular direction (send/receive) if:

Context [system authentication keychain name](#) *string* [admin-state](#) *keyword*

Tree [admin-state](#)

Default disable

Options

- enable
- disable

Configurable True

Platforms Supported on all platforms

description *string*

Description The user configured description for the keychain

Context [system authentication keychain name](#) *string* [description](#) *string*

Tree [description](#)

String Length 1 to 255

Configurable True

Platforms Supported on all platforms

expired *boolean*

Description The value of this object indicates whether the keychain is expired
 Expired can mean past end-time or prior to start-time.

Context [system authentication keychain name](#) *string* [expired](#) *boolean*

Tree [expired](#)

Configurable	False
Platforms	Supported on all platforms

key index number

Description	List of keys in the keychain
Context	system authentication keychain name <i>string</i> key index number
Tree	key
Configurable	True
Platforms	Supported on all platforms

index number

Description	Each key in a keychain requires a unique identifier, the index value specifies this identifier
Context	system authentication keychain name <i>string</i> key index number
Configurable	True
Platforms	Supported on all platforms

algorithm keyword

Description	The cryptographic algorithm used with the keying material to secure the messages
Context	system authentication keychain name <i>string</i> key index number algorithm keyword
Tree	algorithm
Options	<ul style="list-style-type: none"> • cleartext The authentication-key is encoded in plaintext • md5 The authentication-key is used to generate an MD5 digest (RFC 1321) • hmac-md5 The authentication-key is used to generate a 16-byte (128 bit) MD5 digest using the HMAC algorithm (RFC 2104) • hmac-sha-1 The authentication-key is used to generate a SHA1 digest using the HMAC algorithm (RFC 2104) • hmac-sha-256

The authentication-key is used to generate a SHA2 digest using the HMAC algorithm (RFC 2104)

The SHA-256 variant of SHA2 produces an output of 32 bytes (256 bits)

- aes-128-cmac

The authentication-key is used with the AES-128 encryption algorithm to generate a cipher MAC (RFC 4493)

- aes-256-cmac

The authentication-key is used with the AES-256 encryption algorithm to generate a cipher MAC (RFC 4493).

Configurable	True
Platforms	Supported on all platforms

authentication-key *string*

Description	The secret key to use for authentication
Context	system authentication keychain name <i>string</i> key index number <i>authentication-key string</i>
Tree	authentication-key
Configurable	True
Platforms	Supported on all platforms

type *keyword*

Description	Specifies the intended use of the keychain The type constrains the set of crypto algorithms that are available to use with each key in the keychain. It is also used to ensure that this keychain is only used by protocols for which it is intended.
Context	system authentication keychain name <i>string</i> type keyword
Tree	type
Options	<ul style="list-style-type: none"> • tcp-md5 Keychain intended to be used for TCP-MD5 authentication • isis Keychain intended to be used for authentication of IS-IS PDUs • ospf Keychain intended to be used for authentication of OSPFv2 messages • tcp-ao Keychain intended to be used for TCP-AO authentication

- vrrp
Keychain intended to be used for authentication of VRRPv2 messages
- macsec
Keychain intended to be used for key wrapping of SAK in a mka messages.

Configurable True
Platforms Supported on all platforms

usable *boolean*

Description The value of this object indicates if the keychain is usable for authentication
Context [system authentication keychain name](#) *string usable boolean*
Tree [usable](#)
Configurable False
Platforms Supported on all platforms

banner

Description Contains configuration and state related to system banners
Context [system banner](#)
Tree [banner](#)
Configurable True
Platforms Supported on all platforms

login-banner *string*

Description Banner to display before a user has authenticated
Context [system banner login-banner](#) *string*
Tree [login-banner](#)
Configurable True
Platforms Supported on all platforms

motd-banner *string*

Description Banner to display after a user has authenticated
Context [system banner motd-banner](#) *string*

Tree	motd-banner
Configurable	True
Platforms	Supported on all platforms

boot

Description	Top-level container for configuration and state data related to booting the system
Context	system boot
Tree	boot
Configurable	True
Platforms	Supported on all platforms

autoboot

Description	Top-level container for configuration and state data related to autobooting the system
Context	system boot autoboot
Tree	autoboot
Configurable	True
Platforms	Supported on all platforms

admin-state *keyword*

Description	Administratively enable or disable autoboot functionality
Context	system boot autoboot admin-state <i>keyword</i>
Tree	admin-state
Options	<ul style="list-style-type: none"> • enable • disable
Configurable	True
Platforms	Supported on all platforms

attempts *number*

Description	Sets the amount of executions to try autoboot, before rebooting the system
Context	system boot autoboot attempts <i>number</i>

Tree	attempts
Range	1 to 10
Configurable	True
Platforms	Supported on all platforms

client-id *keyword*

Description	The client ID to use on outgoing DHCP requests
Context	system boot autoboot client-id <i>keyword</i>
Tree	client-id
Options	<ul style="list-style-type: none"> serial Use the chassis serial number as the client ID
Configurable	True
Platforms	Supported on all platforms

interface *reference*

Description	Sets the interface to use for autoboot functionality
Context	system boot autoboot interface <i>reference</i>
Tree	interface
Default	mgmt0
Reference	interface name <i>string</i>
Configurable	True
Platforms	Supported on all platforms

mode *string*

Description	Ztp operation modes. One or more modes can passed
Context	system boot autoboot mode <i>string</i>
Tree	mode
Configurable	True
Platforms	Supported on all platforms

oper-state *string*

Description	The current operational status of the autoboot process
Context	system boot autoboot oper-state <i>string</i>
Tree	oper-state
Configurable	False
Platforms	Supported on all platforms

timeout *number*

Description	Sets the timeout for each attempt to autoboot
Context	system boot autoboot timeout <i>number</i>
Tree	timeout
Range	200 to 3600
Units	seconds
Configurable	True
Platforms	Supported on all platforms

fips-140

Description	Boot up the router in fips-provider mode In fips-provider mode only fips approved algorithms are allowed. In addition for fip-provider mode to take effect a reboot of the router is needed.
Context	system boot fips-140
Tree	fips-140
Configurable	True
Platforms	Supported on all platforms

admin-state *keyword*

Description	This leaf contains the configured, desired state of the fips-provider.
Context	system boot fips-140 admin-state <i>keyword</i>
Tree	admin-state
Default	disable
Options	<ul style="list-style-type: none"> enable

	<ul style="list-style-type: none"> • disable
Configurable	True
Platforms	Supported on all platforms

oper-down-reason *keyword*

Description	The reason for not enabling fips operational down
Context	system boot fips-140 oper-down-reason keyword
Tree	oper-down-reason
Options	<ul style="list-style-type: none"> • unknown
Configurable	False
Platforms	Supported on all platforms

oper-state *keyword*

Description	This leaf contains the operational state of fips-provider.
Context	system boot fips-140 oper-state keyword
Tree	oper-state
Options	<ul style="list-style-type: none"> • up Component or process is operational • down Component or process is not operational • empty Component slot is empty • downloading Component is downloading image into memory • booting Component is booting downloaded image • starting Component image operational, application processes starting • failed Component or process has failed • synchronizing Component is currently being synchronized • upgrading Component is currently being upgraded

- low-power
Component is offline due to insufficient system power
 - degraded
Component or process is in a degraded state
 - warm-reboot
Component or process is currently warm rebooting
This state is set during a warm reboot immediately following initiation of the reboot, continuing after startup until the system has completed audit. In this state the system will not accept configuration changes.
 - waiting
Component or process is currently waiting
This state can be set by event handler when the `reinvoke-with-delay` action is used, and indicates that the event handler is waiting for the provided delay before reinvoking the instance.
- Configurable** False
- Platforms** Supported on all platforms

golden-image *string*

- Description** The local image the system reverts to when a factory reset operation is requested
The value is the folder that contains the `initramfs`, `kernel`, and `squashfs` image. The search path for these directories is `/mnt/nokiaos/<folder>`
- Context** [system boot golden-image](#) *string*
- Tree** [golden-image](#)
- String Length** 1 to 255
- Configurable** False
- Platforms** 7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

image *string*

- Description** Ordered list of local images used to boot the system
This directly translates into boot configuration in `grub`, where the images are tried in the order specified by the user. Images are sourced via the internal SD card, and the value passed is the folder that contains the `initramfs`, `kernel`, and `squashfs` image. The search path for these directories is `/mnt/nokiaos/<folder>`

Context	system boot image <i>string</i>
Tree	image
String Length	1 to 255
Configurable	False
Platforms	Supported on all platforms
Max. Elements	3

bridge-table

Description	system bridge-table information
Context	system bridge-table
Tree	bridge-table
Configurable	True
Platforms	Supported on all platforms

evpn

Description	System bridge-table BGP-EVPN information
Context	system bridge-table evpn
Tree	evpn
Configurable	True
Platforms	7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

mpls-multicast-tep

Description	System bridge-table BGP-EVPN MPLS multicast Termination Endpoint information
Context	system bridge-table evpn mpls-multicast-tep
Tree	mpls-multicast-tep
Configurable	True
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

statistics

Description	Enter the statistics context
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Context	system bridge-table evpn mpls-multicast-tep statistics
Tree	statistics
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

active-entries *number*

Description	The total number of active BGP-EVPN MPLS multicast Termination Endpoints (TEPs)
Context	system bridge-table evpn mpls-multicast-tep statistics active-entries number
Tree	active-entries
Default	0
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

max-entries *number*

Description	The maximum number of BGP-EVPN MPLS multicast Termination EndPoints (TEPs) allowed in the system
Context	system bridge-table evpn mpls-multicast-tep statistics max-entries number
Tree	max-entries
Default	0
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

total-entries *number*

Description	The total number of BGP-EVPN MPLS multicast Termination EndPoints (TEPs)
Context	system bridge-table evpn mpls-multicast-tep statistics total-entries number
Tree	total-entries
Default	0
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

tep *tep* (*ipv4-address* | *ipv6-address*)

Description	Enter the tep list instance
Context	system bridge-table evpn mpls-multicast-tep tep tep (<i>ipv4-address</i> <i>ipv6-address</i>)
Tree	tep
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

tep (*ipv4-address* | *ipv6-address*)

Description	The IP address that identifies the remote BGP-EVPN MPLS multicast Termination Endpoint (TEP)
Context	system bridge-table evpn mpls-multicast-tep tep tep (<i>ipv4-address</i> <i>ipv6-address</i>)
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

index number

Description	The hardware index (system allocated) for the BGP-EVPN MPLS multicast Termination Endpoint (TEP) If a non-zero hardware index is allocated, then there are available system resources and there is at least one BGP-EVPN MPLS multicast destination (using this TEP) ready to be programmed. If the hardware index is 0, there are not resources left and the TEP is not programmed, even if an Inclusive Multicast Ethernet Tag route was correctly imported from a peer.
Context	system bridge-table evpn mpls-multicast-tep tep tep (<i>ipv4-address</i> <i>ipv6-address</i>) index number
Tree	index
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

last-changed *string*

Description	The date and time of the last update of this BGP-EVPN MPLS multicast Termination Endpoint
Context	system bridge-table evpn mpls-multicast-tep tep tep (<i>ipv4-address</i> <i>ipv6-address</i>) last-changed string

Tree	last-changed
String Length	20 to 32
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

mac-learning

Description	Enter the mac-learning context
Context	system bridge-table mac-learning
Tree	mac-learning
Configurable	True
Platforms	Supported on all platforms

mac-relearn-only *boolean*

Description	The value of this leaf indicates that the system will not learn any new mac addresses, but will relearn any that are already programmed
Context	system bridge-table mac-learning mac-relearn-only boolean
Tree	mac-relearn-only
Configurable	False
Platforms	Supported on all platforms

mac-limit

Description	Bridge Table size and thresholds.
Context	system bridge-table mac-limit
Tree	mac-limit
Configurable	True
Platforms	Supported on all platforms

maximum-entries *number*

Description	Maximum number of mac addresses allowed in the system bridge-table.
Context	system bridge-table mac-limit maximum-entries number
Tree	maximum-entries
Configurable	False

Platforms Supported on all platforms

warning-threshold-pct *number*

Description Percentage of the configured max-number-macs over which a warning is triggered. The warning message is cleared when the percentage drops below the configured percentage minus 5%

Context [system bridge-table mac-limit warning-threshold-pct](#) *number*

Tree [warning-threshold-pct](#)

Configurable False

Platforms Supported on all platforms

proxy-arp

Description system bridge-table proxy ARP entry information

Context [system bridge-table proxy-arp](#)

Tree [proxy-arp](#)

Configurable False

Platforms Supported on all platforms

statistics

Description Enter the statistics context

Context [system bridge-table proxy-arp statistics](#)

Tree [statistics](#)

Configurable False

Platforms Supported on all platforms

active-entries *number*

Description The total number of active proxy entries.

Context [system bridge-table proxy-arp statistics active-entries](#) *number*

Tree [active-entries](#)

Default 0

Configurable False

Platforms Supported on all platforms

in-active-entries *number*

Description	The total number of inactive proxy entries.
Context	system bridge-table proxy-arp statistics in-active-entries <i>number</i>
Tree	in-active-entries
Default	0
Configurable	False
Platforms	Supported on all platforms

neighbor-origin [origin](#) *keyword*

Description	the origin of the proxy entry installed in the table.
Context	system bridge-table proxy-arp statistics neighbor-origin origin <i>keyword</i>
Tree	neighbor-origin
Configurable	False
Platforms	Supported on all platforms

origin *keyword*

Description	Enter the origin context
Context	system bridge-table proxy-arp statistics neighbor-origin origin <i>keyword</i>
Options	<ul style="list-style-type: none"> • static • dynamic • evpn • duplicate
Configurable	False
Platforms	Supported on all platforms

active-entries *number*

Description	The total number of active proxy entries.
Context	system bridge-table proxy-arp statistics neighbor-origin origin <i>keyword</i> active-entries <i>number</i>
Tree	active-entries
Default	0
Configurable	False

Platforms Supported on all platforms

in-active-entries *number*

Description The total number of inactive proxy entries.

Context [system bridge-table proxy-arp statistics neighbor-origin origin](#) *keyword in-active-entries number*

Tree [in-active-entries](#)

Default 0

Configurable False

Platforms Supported on all platforms

pending-entries *number*

Description The total number of pending proxy entries.

Context [system bridge-table proxy-arp statistics neighbor-origin origin](#) *keyword pending-entries number*

Tree [pending-entries](#)

Default 0

Configurable False

Platforms Supported on all platforms

total-entries *number*

Description The total number of proxy entries.

Context [system bridge-table proxy-arp statistics neighbor-origin origin](#) *keyword total-entries number*

Tree [total-entries](#)

Default 0

Configurable False

Platforms Supported on all platforms

pending-entries *number*

Description The total number of pending proxy entries.

Context [system bridge-table proxy-arp statistics pending-entries](#) *number*

Tree [pending-entries](#)

Default	0
Configurable	False
Platforms	Supported on all platforms

total-entries *number*

Description	The total number of proxy entries.
Context	system bridge-table proxy-arp statistics total-entries number
Tree	total-entries
Default	0
Configurable	False
Platforms	Supported on all platforms

proxy-nd

Description	system bridge-table proxy ND entry information
Context	system bridge-table proxy-nd
Tree	proxy-nd
Configurable	False
Platforms	Supported on all platforms

statistics

Description	Enter the statistics context
Context	system bridge-table proxy-nd statistics
Tree	statistics
Configurable	False
Platforms	Supported on all platforms

active-entries *number*

Description	The total number of active proxy entries.
Context	system bridge-table proxy-nd statistics active-entries number
Tree	active-entries
Default	0
Configurable	False

Platforms Supported on all platforms

in-active-entries *number*

Description The total number of inactive proxy entries.

Context [system bridge-table proxy-nd statistics in-active-entries](#) *number*

Tree [in-active-entries](#)

Default 0

Configurable False

Platforms Supported on all platforms

neighbor-origin [origin](#) *keyword*

Description the origin of the proxy entry installed in the table.

Context [system bridge-table proxy-nd statistics neighbor-origin](#) [origin](#) *keyword*

Tree [neighbor-origin](#)

Configurable False

Platforms Supported on all platforms

origin *keyword*

Description Enter the origin context

Context [system bridge-table proxy-nd statistics neighbor-origin](#) [origin](#) *keyword*

Options

- static
- dynamic
- evpn
- duplicate

Configurable False

Platforms Supported on all platforms

active-entries *number*

Description The total number of active proxy entries.

Context [system bridge-table proxy-nd statistics neighbor-origin](#) [origin](#) *keyword* [active-entries](#) *number*

Tree [active-entries](#)

Default	0
Configurable	False
Platforms	Supported on all platforms

in-active-entries *number*

Description	The total number of inactive proxy entries.
Context	system bridge-table proxy-nd statistics neighbor-origin origin <i>keyword</i> in-active-entries <i>number</i>
Tree	in-active-entries
Default	0
Configurable	False
Platforms	Supported on all platforms

pending-entries *number*

Description	The total number of pending proxy entries.
Context	system bridge-table proxy-nd statistics neighbor-origin origin <i>keyword</i> pending-entries <i>number</i>
Tree	pending-entries
Default	0
Configurable	False
Platforms	Supported on all platforms

total-entries *number*

Description	The total number of proxy entries.
Context	system bridge-table proxy-nd statistics neighbor-origin origin <i>keyword</i> total-entries <i>number</i>
Tree	total-entries
Default	0
Configurable	False
Platforms	Supported on all platforms

pending-entries *number*

Description	The total number of pending proxy entries.
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Context	system bridge-table proxy-nd statistics pending-entries <i>number</i>
Tree	pending-entries
Default	0
Configurable	False
Platforms	Supported on all platforms

total-entries *number*

Description	The total number of proxy entries.
Context	system bridge-table proxy-nd statistics total-entries <i>number</i>
Tree	total-entries
Default	0
Configurable	False
Platforms	Supported on all platforms

statistics

Description	Enter the statistics context
Context	system bridge-table statistics
Tree	statistics
Configurable	False
Platforms	Supported on all platforms

active-entries *number*

Description	The total number of macs that are active on the system.
Context	system bridge-table statistics active-entries <i>number</i>
Tree	active-entries
Default	0
Configurable	False
Platforms	Supported on all platforms

failed-entries *number*

Description	The total number of macs, which have not been programmed on atleast one slot
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Context	system bridge-table statistics failed-entries <i>number</i>
Tree	failed-entries
Default	0
Configurable	False
Platforms	Supported on all platforms

mac-type [type](#) *keyword*

Description	the type of the mac in the system.
Context	system bridge-table statistics mac-type type <i>keyword</i>
Tree	mac-type
Configurable	False
Platforms	Supported on all platforms

type *keyword*

Description	Enter the type context
Context	system bridge-table statistics mac-type type <i>keyword</i>
Options	<ul style="list-style-type: none"> • static • duplicate • learnt • irb-interface • evpn • evpn-static • irb-interface-anycast • proxy-anti-spoof • reserved • eth-cfm • irb-interface-vrrp
Configurable	False
Platforms	Supported on all platforms

active-entries *number*

Description	The total number of macs of this type on the system.
Context	system bridge-table statistics mac-type type <i>keyword</i> active-entries <i>number</i>

Tree	active-entries
Default	0
Configurable	False
Platforms	Supported on all platforms

failed-entries *number*

Description	The total number of macs of this type, which have not been programmed on atleast one slot
Context	system bridge-table statistics mac-type type keyword failed-entries number
Tree	failed-entries
Default	0
Configurable	False
Platforms	Supported on all platforms

total-entries *number*

Description	The total number of macs of this type , active and inactive, on the system.
Context	system bridge-table statistics mac-type type keyword total-entries number
Tree	total-entries
Default	0
Configurable	False
Platforms	Supported on all platforms

total-entries *number*

Description	The total number of macs, active and inactive, on the system.
Context	system bridge-table statistics total-entries number
Tree	total-entries
Default	0
Configurable	False
Platforms	Supported on all platforms

clock

Description	Top-level container for system clock configuration and state
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Context	system clock
Tree	clock
Configurable	True
Platforms	Supported on all platforms

timezone *keyword*

Description	The timezone to use for the system Based on IANAs Time Zone database
Context	system clock timezone <i>keyword</i>
Tree	timezone
Options	<ul style="list-style-type: none">• Africa/Abidjan• Africa/Accra• Africa/Addis_Ababa• Africa/Algiers• Africa/Asmara• Africa/Bamako• Africa/Bangui• Africa/Banjul• Africa/Bissau• Africa/Blantyre• Africa/Brazzaville• Africa/Bujumbura• Africa/Cairo• Africa/Casablanca• Africa/Ceuta Ceuta, Melilla• Africa/Conakry• Africa/Dakar• Africa/Dar_es_Salaam• Africa/Djibouti• Africa/Douala• Africa/El_Aaiun• Africa/Freetown• Africa/Gaborone• Africa/Harare• Africa/Johannesburg

- Africa/Juba
- Africa/Kampala
- Africa/Khartoum
- Africa/Kigali
- Africa/Kinshasa
Dem. Rep. of Congo (west)
- Africa/Lagos
- Africa/Libreville
- Africa/Lome
- Africa/Luanda
- Africa/Lubumbashi
Dem. Rep. of Congo (east)
- Africa/Lusaka
- Africa/Malabo
- Africa/Maputo
- Africa/Maseru
- Africa/Mbabane
- Africa/Mogadishu
- Africa/Monrovia
- Africa/Nairobi
- Africa/Ndjamena
- Africa/Niamey
- Africa/Nouakchott
- Africa/Ouagadougou
- Africa/Porto-Novo
- Africa/Sao_Tome
- Africa/Tripoli
- Africa/Tunis
- Africa/Windhoek
- America/Adak
Aleutian Islands
- America/Anchorage
Alaska (most areas)
- America/Anguilla
- America/Antigua
- America/Araguaina

Tocantins

- America/Argentina/Buenos_Aires
Buenos Aires (BA, CF)
- America/Argentina/Catamarca
Catamarca (CT); Chubut (CH)
- America/Argentina/Cordoba
Argentina (most areas: CB, CC, CN, ER, FM, MN, SE, SF)
- America/Argentina/Jujuy
Jujuy (JY)
- America/Argentina/La_Rioja
La Rioja (LR)
- America/Argentina/Mendoza
Mendoza (MZ)
- America/Argentina/Rio_Gallegos
Santa Cruz (SC)
- America/Argentina/Salta
Salta (SA, LP, NQ, RN)
- America/Argentina/San_Juan
San Juan (SJ)
- America/Argentina/San_Luis
San Luis (SL)
- America/Argentina/Tucuman
Tucuman (TM)
- America/Argentina/Ushuaia
Tierra del Fuego (TF)
- America/Aruba
- America/Asuncion
- America/Atikokan
EST - ON (Atikokan); NU (Coral H)
- America/Bahia
Bahia
- America/Bahia_Banderas
Central Time - Bahia de Banderas
- America/Barbados
- America/Belem
Para (east); Amapa

- America/Belize
- America/Blanc-Sablon
AST - QC (Lower North Shore)
- America/Boa_Vista
Roraima
- America/Bogota
- America/Boise
Mountain - ID (south); OR (east)
- America/Cambridge_Bay
Mountain - NU (west)
- America/Campo_Grande
Mato Grosso do Sul
- America/Cancun
Eastern Standard Time - Quintana Roo
- America/Caracas
- America/Cayenne
- America/Cayman
- America/Chicago
Central (most areas)
- America/Chihuahua
Mountain Time - Chihuahua (most areas)
- America/Costa_Rica
- America/Creston
MST - BC (Creston)
- America/Cuiaba
Mato Grosso
- America/Curacao
- America/Danmarkshavn
National Park (east coast)
- America/Dawson
Pacific - Yukon (north)
- America/Dawson_Creek
MST - BC (Dawson Cr, Ft St John)
- America/Denver
Mountain (most areas)
- America/Detroit

- Eastern - MI (most areas)
- America/Dominica
- America/Edmonton
- Mountain - AB; BC (E); SK (W)
- America/Eirunepe
- Amazonas (west)
- America/EI_Salvador
- America/Fort_Nelson
- MST - BC (Ft Nelson)
- America/Fortaleza
- Brazil (northeast: MA, PI, CE, RN, PB)
- America/Glace_Bay
- Atlantic - NS (Cape Breton)
- America/Godthab
- Greenland (most areas)
- America/Goose_Bay
- Atlantic - Labrador (most areas)
- America/Grand_Turk
- America/Grenada
- America/Guadeloupe
- America/Guatemala
- America/Guayaquil
- Ecuador (mainland)
- America/Guyana
- America/Halifax
- Atlantic - NS (most areas); PE
- America/Havana
- America/Hermosillo
- Mountain Standard Time - Sonora
- America/Indiana/Indianapolis
- Eastern - IN (most areas)
- America/Indiana/Knox
- Central - IN (Starke)
- America/Indiana/Marengo
- Eastern - IN (Crawford)
- America/Indiana/Petersburg

- Eastern - IN (Pike)
- America/Indiana/Tell_City
- Central - IN (Perry)
- America/Indiana/Vevay
- Eastern - IN (Switzerland)
- America/Indiana/Vincennes
- Eastern - IN (Da, Du, K, Mn)
- America/Indiana/Winamac
- Eastern - IN (Pulaski)
- America/Inuvik
- Mountain - NT (west)
- America/Iqaluit
- Eastern - NU (most east areas)
- America/Jamaica
- America/Juneau
- Alaska - Juneau area
- America/Kentucky/Louisville
- Eastern - KY (Louisville area)
- America/Kentucky/Monticello
- Eastern - KY (Wayne)
- America/Kralendijk
- America/La_Paz
- America/Lima
- America/Los_Angeles
- Pacific
- America/Lower_Princes
- America/Maceio
- Alagoas, Sergipe
- America/Managua
- America/Manaus
- Amazonas (east)
- America/Marigot
- America/Martinique
- America/Matamoros
- Central Time US - Coahuila, Nuevo Leon, Tamaulipas (US border)
- America/Mazatlan

- Mountain Time - Baja California Sur, Nayarit, Sinaloa
- America/Menominee
Central - MI (Wisconsin border)
- America/Merida
Central Time - Campeche, Yucatan
- America/Metlakatla
Alaska - Annette Island
- America/Mexico_City
Central Time
- America/Miquelon
- America/Moncton
Atlantic - New Brunswick
- America/Monterrey
Central Time - Durango; Coahuila, Nuevo Leon, Tamaulipas (most areas)
- America/Montevideo
- America/Montserrat
- America/Nassau
- America/New_York
Eastern (most areas)
- America/Nipigon
Eastern - ON, QC (no DST 1967-73)
- America/Nome
Alaska (west)
- America/Noronha
Atlantic islands
- America/North_Dakota/Beulah
Central - ND (Mercer)
- America/North_Dakota/Center
Central - ND (Oliver)
- America/North_Dakota/New_Salem
Central - ND (Morton rural)
- America/Ojinaga
Mountain Time US - Chihuahua (US border)
- America/Panama
- America/Pangnirtung
Eastern - NU (Pangnirtung)

- America/Paramaribo
- America/Phoenix
MST - Arizona (except Navajo)
- America/Port-au-Prince
- America/Port_of_Spain
- America/Porto_Velho
Rondonia
- America/Puerto_Rico
- America/Punta_Arenas
Region of Magallanes
- America/Rainy_River
Central - ON (Rainy R, Ft Frances)
- America/Rankin_Inlet
Central - NU (central)
- America/Recife
Pernambuco
- America/Regina
CST - SK (most areas)
- America/Resolute
Central - NU (Resolute)
- America/Rio_Branco
Acre
- America/Santarem
Para (west)
- America/Santiago
Chile (most areas)
- America/Santo_Domingo
- America/Sao_Paulo
Brazil (southeast: GO, DF, MG, ES, RJ, SP, PR, SC, RS)
- America/Scoresbysund
Scoresbysund/Ittoqqortoormiit
- America/Sitka
Alaska - Sitka area
- America/St_Barthelemy
- America/St_Johns
Newfoundland; Labrador (southeast)

- America/St_Kitts
- America/St_Lucia
- America/St_Thomas
- America/St_Vincent
- America/Swift_Current
CST - SK (midwest)
- America/Tegucigalpa
- America/Thule
Thule/Pituffik
- America/Thunder_Bay
Eastern - ON (Thunder Bay)
- America/Tijuana
Pacific Time US - Baja California
- America/Toronto
Eastern - ON, QC (most areas)
- America/Tortola
- America/Vancouver
Pacific - BC (most areas)
- America/Whitehorse
Pacific - Yukon (south)
- America/Winnipeg
Central - ON (west); Manitoba
- America/Yakutat
Alaska - Yakutat
- America/Yellowknife
Mountain - NT (central)
- Antarctica/Casey
Casey
- Antarctica/Davis
Davis
- Antarctica/DumontDUrville
Dumont-d'Urville
- Antarctica/Macquarie
Macquarie Island
- Antarctica/Mawson
Mawson

- Antarctica/McMurdo
New Zealand time - McMurdo, South Pole
- Antarctica/Palmer
Palmer
- Antarctica/Rothera
Rothera
- Antarctica/Syowa
Syowa
- Antarctica/Troll
Troll
- Antarctica/Vostok
Vostok
- Arctic/Longyearbyen
- Asia/Aden
- Asia/Almaty
Kazakhstan (most areas)
- Asia/Amman
- Asia/Anadyr
MSK+09 - Bering Sea
- Asia/Aqtau
Mangghystau/Mankistau
- Asia/Aqtobe
Aqtobe/Aktobe
- Asia/Ashgabat
- Asia/Atyrau
Atyrau/Atirau/Gur'yev
- Asia/Baghdad
- Asia/Bahrain
- Asia/Baku
- Asia/Bangkok
- Asia/Barnaul
MSK+04 - Altai
- Asia/Beirut
- Asia/Bishkek
- Asia/Brunei
- Asia/Chita

- MSK+06 - Zabaykalsky
- Asia/Choibalsan
Dornod, Sukhbaatar
- Asia/Colombo
- Asia/Damascus
- Asia/Dhaka
- Asia/Dili
- Asia/Dubai
- Asia/Dushanbe
- Asia/Famagusta
Northern Cyprus
- Asia/Gaza
Gaza Strip
- Asia/Hebron
West Bank
- Asia/Ho_Chi_Minh
- Asia/Hong_Kong
- Asia/Hovd
Bayan-Olgii, Govi-Altai, Hovd, Uvs, Zavkhan
- Asia/Irkutsk
MSK+05 - Irkutsk, Buryatia
- Asia/Jakarta
Java, Sumatra
- Asia/Jayapura
New Guinea (West Papua / Irian Jaya); Maluku/Moluccas
- Asia/Jerusalem
- Asia/Kabul
- Asia/Kamchatka
MSK+09 - Kamchatka
- Asia/Karachi
- Asia/Kathmandu
- Asia/Khandyga
MSK+06 - Tomponsky, Ust-Maysky
- Asia/Kolkata
- Asia/Krasnoyarsk
MSK+04 - Krasnoyarsk area

- Asia/Kuala_Lumpur
Malaysia (peninsula)
- Asia/Kuching
Sabah, Sarawak
- Asia/Kuwait
- Asia/Macau
- Asia/Magadan
MSK+08 - Magadan
- Asia/Makassar
Borneo (east, south); Sulawesi/Celebes, Bali, Nusa Tenggara; Timor (west)
- Asia/Manila
- Asia/Muscat
- Asia/Nicosia
Cyprus (most areas)
- Asia/Novokuznetsk
MSK+04 - Kemerovo
- Asia/Novosibirsk
MSK+04 - Novosibirsk
- Asia/Omsk
MSK+03 - Omsk
- Asia/Oral
West Kazakhstan
- Asia/Phnom_Penh
- Asia/Pontianak
Borneo (west, central)
- Asia/Pyongyang
- Asia/Qatar
- Asia/Qostanay
Qostanay/Kostanay/Kustanay
- Asia/Qyzylorda
Qyzylorda/Kyzylorda/Kzyl-Orda
- Asia/Riyadh
- Asia/Sakhalin
MSK+08 - Sakhalin Island
- Asia/Samarkand
Uzbekistan (west)

- Asia/Seoul
- Asia/Shanghai
Beijing Time
- Asia/Singapore
- Asia/Srednekolymsk
MSK+08 - Sakha (E); North Kuril Is
- Asia/Taipei
- Asia/Tashkent
Uzbekistan (east)
- Asia/Tbilisi
- Asia/Tehran
- Asia/Thimphu
- Asia/Tokyo
- Asia/Tomsk
MSK+04 - Tomsk
- Asia/Ulaanbaatar
Mongolia (most areas)
- Asia/Urumqi
Xinjiang Time
- Asia/Ust-Nera
MSK+07 - Oymyakonsky
- Asia/Vientiane
- Asia/Vladivostok
MSK+07 - Amur River
- Asia/Yakutsk
MSK+06 - Lena River
- Asia/Yangon
- Asia/Yekaterinburg
MSK+02 - Urals
- Asia/Yerevan
- Atlantic/Azores
Azores
- Atlantic/Bermuda
- Atlantic/Canary
Canary Islands
- Atlantic/Cape_Verde

- Atlantic/Faroe
- Atlantic/Madeira
Madeira Islands
- Atlantic/Reykjavik
- Atlantic/South_Georgia
- Atlantic/St_Helena
- Atlantic/Stanley
- Australia/Adelaide
South Australia
- Australia/Brisbane
Queensland (most areas)
- Australia/Broken_Hill
New South Wales (Yancowinna)
- Australia/Currie
Tasmania (King Island)
- Australia/Darwin
Northern Territory
- Australia/Eucla
Western Australia (Eucla)
- Australia/Hobart
Tasmania (most areas)
- Australia/Lindeman
Queensland (Whitsunday Islands)
- Australia/Lord_Howe
Lord Howe Island
- Australia/Melbourne
Victoria
- Australia/Perth
Western Australia (most areas)
- Australia/Sydney
New South Wales (most areas)
- Europe/Amsterdam
- Europe/Andorra
- Europe/Astrakhan
MSK+01 - Astrakhan
- Europe/Athens

- Europe/Belgrade
- Europe/Berlin
Germany (most areas)
- Europe/Bratislava
- Europe/Brussels
- Europe/Bucharest
- Europe/Budapest
- Europe/Busingen
Busingen
- Europe/Chisinau
- Europe/Copenhagen
- Europe/Dublin
- Europe/Gibraltar
- Europe/Guernsey
- Europe/Helsinki
- Europe/Isle_of_Man
- Europe/Istanbul
- Europe/Jersey
- Europe/Kaliningrad
MSK-01 - Kaliningrad
- Europe/Kiev
Ukraine (most areas)
- Europe/Kirov
MSK+00 - Kirov
- Europe/Lisbon
Portugal (mainland)
- Europe/Ljubljana
- Europe/London
- Europe/Luxembourg
- Europe/Madrid
Spain (mainland)
- Europe/Malta
- Europe/Mariehamn
- Europe/Minsk
- Europe/Monaco
- Europe/Moscow

MSK+00 - Moscow area

- Europe/Oslo
- Europe/Paris
- Europe/Podgorica
- Europe/Prague
- Europe/Riga
- Europe/Rome
- Europe/Samara

MSK+01 - Samara, Udmurtia

- Europe/San_Marino
- Europe/Sarajevo
- Europe/Saratov

MSK+01 - Saratov

- Europe/Simferopol

MSK+00 - Crimea

- Europe/Skopje
- Europe/Sofia
- Europe/Stockholm
- Europe/Tallinn
- Europe/Tirane
- Europe/Ulyanovsk

MSK+01 - Ulyanovsk

- Europe/Uzhgorod

Ruthenia

- Europe/Vaduz
- Europe/Vatican
- Europe/Vienna
- Europe/Vilnius
- Europe/Volgograd

MSK+01 - Volgograd

- Europe/Warsaw
- Europe/Zagreb
- Europe/Zaporozhye

Zaporozh'ye/Zaporizhia; Lugansk/Luhansk (east)

- Europe/Zurich
- Indian/Antananarivo

- Indian/Chagos
- Indian/Christmas
- Indian/Cocos
- Indian/Comoro
- Indian/Kerguelen
- Indian/Mahe
- Indian/Maldives
- Indian/Mauritius
- Indian/Mayotte
- Indian/Reunion
- Pacific/Apia
- Pacific/Auckland
New Zealand (most areas)
- Pacific/Bougainville
Bougainville
- Pacific/Chatham
Chatham Islands
- Pacific/Chuuk
Chuuk/Truk, Yap
- Pacific/Easter
Easter Island
- Pacific/Efate
- Pacific/Enderbury
Phoenix Islands
- Pacific/Fakaofu
- Pacific/Fiji
- Pacific/Funafuti
- Pacific/Galapagos
Galapagos Islands
- Pacific/Gambier
Gambier Islands
- Pacific/Guadalcanal
- Pacific/Guam
- Pacific/Honolulu
Hawaii
- Pacific/Kiritimati

- Line Islands
- Pacific/Kosrae
Kosrae
- Pacific/Kwajalein
Kwajalein
- Pacific/Majuro
Marshall Islands (most areas)
- Pacific/Marquesas
Marquesas Islands
- Pacific/Midway
Midway Islands
- Pacific/Nauru
- Pacific/Niue
- Pacific/Norfolk
- Pacific/Noumea
- Pacific/Pago_Pago
- Pacific/Palau
- Pacific/Pitcairn
- Pacific/Pohnpei
Pohnpei/Ponape
- Pacific/Port_Moresby
Papua New Guinea (most areas)
- Pacific/Rarotonga
- Pacific/Saipan
- Pacific/Tahiti
Society Islands
- Pacific/Tarawa
Gilbert Islands
- Pacific/Tongatapu
- Pacific/Wake
Wake Island
- Pacific/Wallis
- UTC

Configurable
Platforms

True
Supported on all platforms

configuration

Description	Top-level container for configuration and state data related to the system configuration
Context	system configuration
Tree	configuration
Configurable	True
Platforms	Supported on all platforms

auto-checkpoint *boolean*

Description	Configuration checkpoint will be automatically created after every successful commit (if set to true).
Context	system configuration auto-checkpoint <i>boolean</i>
Tree	auto-checkpoint
Default	false
Configurable	True
Platforms	Supported on all platforms

auto-save *boolean*

Description	Configuration save will be automatically done after every successful commit (if set to true).
Context	system configuration auto-save <i>boolean</i>
Tree	auto-save
Default	false
Configurable	True
Platforms	Supported on all platforms

candidate *name string*

Description	List of configuration candidates currently active
Context	system configuration candidate <i>name string</i>
Tree	candidate
Configurable	False
Platforms	Supported on all platforms

name *string*

Description	Name of the configuration candidate
Context	system configuration candidate name <i>string</i>
String Length	1 to 255
Configurable	False
Platforms	Supported on all platforms

started *string*

Description	Start date and time of the configuration session
Context	system configuration candidate name <i>string</i> started <i>string</i>
Tree	started
String Length	20 to 32
Configurable	False
Platforms	Supported on all platforms

type *keyword*

Description	Type of configuration candidate
Context	system configuration candidate name <i>string</i> type <i>keyword</i>
Tree	type
Options	<ul style="list-style-type: none">• shared• private
Configurable	False
Platforms	Supported on all platforms

username *string*

Description	User that started the configuration session
Context	system configuration candidate name <i>string</i> username <i>string</i>
Tree	username
String Length	1 to 255
Configurable	False
Platforms	Supported on all platforms

checkpoint id *number*

Description	List of current checkpoints present in the system
Context	system configuration checkpoint id <i>number</i>
Tree	checkpoint
Configurable	False
Platforms	Supported on all platforms

id *number*

Description	System generated ID for the checkpoint
Context	system configuration checkpoint id <i>number</i>
Configurable	False
Platforms	Supported on all platforms

comment *string*

Description	User provided annotations associated with the checkpoint
Context	system configuration checkpoint id <i>number</i> comment <i>string</i>
Tree	comment
Configurable	False
Platforms	Supported on all platforms

created *string*

Description	Date and time this checkpoint was created
Context	system configuration checkpoint id <i>number</i> created <i>string</i>
Tree	created
String Length	20 to 32
Configurable	False
Platforms	Supported on all platforms

name *string*

Description	User provided name of the checkpoint
Context	system configuration checkpoint id <i>number</i> name <i>string</i>

Tree	name
Configurable	False
Platforms	Supported on all platforms

size *number*

Description	Size of the checkpoint configuration file
Context	system configuration checkpoint id <i>number</i> size <i>number</i>
Tree	size
Units	bytes
Configurable	False
Platforms	Supported on all platforms

tag *string*

Description	Full system version that the checkpoint was generated on
Context	system configuration checkpoint id <i>number</i> tag <i>string</i>
Tree	tag
Configurable	False
Platforms	Supported on all platforms

username *string*

Description	Username that created this checkpoint
Context	system configuration checkpoint id <i>number</i> username <i>string</i>
Tree	username
String Length	1 to 255
Configurable	False
Platforms	Supported on all platforms

version *string*

Description	System version that the checkpoint was generated on
Context	system configuration checkpoint id <i>number</i> version <i>string</i>
Tree	version
Configurable	False

Platforms Supported on all platforms

commit id number

Description List of configuration transactions
Context [system configuration commit id number](#)
Tree [commit](#)
Configurable False
Platforms Supported on all platforms

id number

Description System identifier for the commit
Context [system configuration commit id number](#)
Configurable False
Platforms Supported on all platforms

comment string

Description Operator provided comment associated with this commit
Context [system configuration commit id number comment string](#)
Tree [comment](#)
Configurable False
Platforms Supported on all platforms

ended string

Description End date and time of the commit
 This field is not populated if the commit is in progress
Context [system configuration commit id number ended string](#)
Tree [ended](#)
String Length 20 to 32
Configurable False
Platforms Supported on all platforms

name *string*

Description	Name of the configuration candidate the commit was triggered from
Context	system configuration commit id <i>number name string</i>
Tree	name
String Length	1 to 255
Configurable	False
Platforms	Supported on all platforms

persist-id *string*

Description	Persistent confirmed commit identifier
Context	system configuration commit id <i>number persist-id string</i>
Tree	persist-id
Configurable	False
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

started *string*

Description	Start date and time of the commit
Context	system configuration commit id <i>number started string</i>
Tree	started
String Length	20 to 32
Configurable	False
Platforms	Supported on all platforms

status *keyword*

Description	Current status of the commit
Context	system configuration commit id <i>number status keyword</i>
Tree	status
Options	<ul style="list-style-type: none"> • validating • publishing • unconfirmed

- checkpoint
- save
- complete
- reverting
- failed

Configurable

False

Platforms

Supported on all platforms

type *keyword***Description**

Type of configuration candidate the commit was triggered from

Context[system configuration commit id number type keyword](#)**Tree**[type](#)**Options**

- shared
- private

Configurable

False

Platforms

Supported on all platforms

username *string***Description**

User that started the commit

Context[system configuration commit id number username string](#)**Tree**[username](#)**String Length**

1 to 255

Configurable

False

Platforms

Supported on all platforms

idle-timeout *number***Description**

The idle timeout of configuration candidates

After this period of no activity, the candidate is emptied and removed from the system.

Context[system configuration idle-timeout number](#)**Tree**[idle-timeout](#)**Default**

10080

Units

minutes

Configurable	True
Platforms	Supported on all platforms

last-change *string*

Description	Date and time of the last successful commit Set to the time the configuration was loaded by management server, so is refreshed at boot time.
Context	system configuration last-change <i>string</i>
Tree	last-change
String Length	20 to 32
Configurable	False
Platforms	Supported on all platforms

max-candidates *number*

Description	The maximum number of combined private and shared candidates
Context	system configuration max-candidates <i>number</i>
Tree	max-candidates
Range	1 to 255
Default	10
Configurable	True
Platforms	Supported on all platforms

max-checkpoints *number*

Description	The number of checkpoints kept by the system
Context	system configuration max-checkpoints <i>number</i>
Tree	max-checkpoints
Range	1 to 255
Default	10
Configurable	True
Platforms	Supported on all platforms

role *name reference*

Description	List of roles configured in the system
Context	system configuration role name reference
Tree	role
Configurable	True
Platforms	Supported on all platforms
Max. Elements	32

name *reference*

Description	Enter the name context
Context	system configuration role name reference
Reference	system aaa authorization role rolename string
Configurable	True
Platforms	Supported on all platforms

rule *path-reference string*

Description	List of paths to perform access control against
Context	system configuration role name reference rule path-reference string
Tree	rule
Configurable	True
Platforms	Supported on all platforms
Max. Elements	256

path-reference *string*

Description	Reference to a valid YANG path, in CLI notation This path may include keys, wildcards, ranges, and other management server supported constructs. Ranges will be expanded. The root path can be specified with '/'. E.g. / "/interface" "/acl ipv4-filter foo* description"
Context	system configuration role name reference rule path-reference string
Configurable	True
Platforms	Supported on all platforms

action *keyword*

Description	Action to allow for this path
Context	system configuration role name reference rule path-reference string action keyword
Tree	action
Options	<ul style="list-style-type: none"> • read This path may be read by the role • write This path may be written and read by the role • deny This path may not be read or written to by the role
Configurable	True
Platforms	Supported on all platforms

session id *number*

Description	List of configuration sessions currently active
Context	system configuration session id number
Tree	session
Configurable	False
Platforms	Supported on all platforms

id *number*

Description	System generated ID for the configuration session
Context	system configuration session id number
Configurable	False
Platforms	Supported on all platforms

exclusive *boolean*

Description	Details if this session is running in exclusive mode
Context	system configuration session id number exclusive boolean
Tree	exclusive
Configurable	False

Platforms Supported on all platforms

name *string*

Description Name of the candidate the session is active on
Set to 'default' if a non-named candidate is active

Context [system configuration session id number name string](#)

Tree [name](#)

String Length 1 to 255

Configurable False

Platforms Supported on all platforms

started *string*

Description Start date and time of the configuration session

Context [system configuration session id number started string](#)

Tree [started](#)

String Length 20 to 32

Configurable False

Platforms Supported on all platforms

type *keyword*

Description Type of configuration session

Context [system configuration session id number type keyword](#)

Tree [type](#)

Options

- shared
- private

Configurable False

Platforms Supported on all platforms

username *string*

Description User that started the configuration session

Context [system configuration session id number username string](#)

Tree	username
String Length	1 to 255
Configurable	False
Platforms	Supported on all platforms

control-plane-traffic

Description	Container for the control plane traffic.
Context	system control-plane-traffic
Tree	control-plane-traffic
Configurable	True
Platforms	Supported on all platforms

input

Description	Defines parameters determining the handling of system generated traffic.
Context	system control-plane-traffic input
Tree	input
Configurable	True
Platforms	Supported on all platforms

acl

Description	Container for ACL.
Context	system control-plane-traffic input acl
Tree	acl
Configurable	True
Platforms	Supported on all platforms

acl-filter *name reference type reference*

Description	List MAC, IPv4, IPv6 ACL filter(s) to be applied on this subinterface direction
Context	system control-plane-traffic input acl acl-filter <i>name reference type reference</i>
Tree	acl-filter
Configurable	True
Platforms	Supported on all platforms

name *reference*

Description	Reference to the ACL Filter policy name
Context	system control-plane-traffic input acl acl-filter name reference type reference
Reference	acl acl-filter name string type keyword
Configurable	True
Platforms	Supported on all platforms

type *reference*

Description	Reference to the ACL Filter policy type
Context	system control-plane-traffic input acl acl-filter name reference type reference
Reference	acl acl-filter type
Configurable	True
Platforms	Supported on all platforms

output

Description	Defines parameters determining the handling of system generated traffic.
Context	system control-plane-traffic output
Tree	output
Configurable	True
Platforms	Supported on all platforms

qos

Description	Parameters describing QoS handling of system generated traffic
Context	system control-plane-traffic output qos
Tree	qos
Configurable	True
Platforms	Supported on all platforms

management-protocols-dscp (*number | keyword*)

Description	Defines dscp value the system generated traffic by management-protocols should be marked with
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Context	system control-plane-traffic output qos management-protocols-dscp (<i>number</i> <i>keyword</i>)
Tree	management-protocols-dscp
Range	0 to 63
Default	32
Options	<ul style="list-style-type: none"> • CS0 • LE • CS1 • AF11 • AF12 • AF13 • CS2 • AF21 • AF22 • AF23 • CS3 • AF31 • AF32 • AF33 • CS4 • AF41 • AF42 • AF43 • CS5 • EF • CS6 • CS7
Configurable	True
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b
 dhcp-server	
Description	Configures the dhcp server
Context	system dhcp-server

Tree	dhcp-server
Configurable	True
Platforms	Supported on all platforms

admin-state *keyword*

Description	Globally enable or disable the dhcp server Disabling this will disable all dhcp servers.
Context	system dhcp-server admin-state <i>keyword</i>
Tree	admin-state
Default	disable
Options	<ul style="list-style-type: none"> • enable • disable
Configurable	True
Platforms	Supported on all platforms

network-instance [name](#) *reference*

Description	List of network instances to run a dhcp server in
Context	system dhcp-server network-instance name <i>reference</i>
Tree	network-instance
Configurable	True
Platforms	Supported on all platforms

name *reference*

Description	Reference to a configured network instance
Context	system dhcp-server network-instance name <i>reference</i>
Reference	network-instance name <i>string</i>
Configurable	True
Platforms	Supported on all platforms

dhcpv4

Description	Enter the dhcpv4 context
Context	system dhcp-server network-instance name <i>reference</i> dhcpv4

Tree	dhcpv4
Configurable	True
Platforms	Supported on all platforms

admin-state *keyword*

Description	Administratively enable or disable the dhcp server
Context	system dhcp-server network-instance name <i>reference</i> dhcpv4 admin-state keyword
Tree	admin-state
Default	disable
Options	<ul style="list-style-type: none"> • enable • disable
Configurable	True
Platforms	Supported on all platforms

oper-state *keyword*

Description	Details if the dhcp server is operationally available
Context	system dhcp-server network-instance name <i>reference</i> dhcpv4 oper-state keyword
Tree	oper-state
Options	<ul style="list-style-type: none"> • up Component or process is operational • down Component or process is not operational • empty Component slot is empty • downloading Component is downloading image into memory • booting Component is booting downloaded image • starting Component image operational, application processes starting • failed Component or process has failed

- synchronizing
Component is currently being synchronized
- upgrading
Component is currently being upgraded
- low-power
Component is offline due to insufficient system power
- degraded
Component or process is in a degraded state
- warm-reboot
Component or process is currently warm rebooting
This state is set during a warm reboot immediately following initiation of the reboot, continuing after startup until the system has completed audit. In this state the system will not accept configuration changes.
- waiting
Component or process is currently waiting
This state can be set by event handler when the reinvoke-with-delay action is used, and indicates that the event handler is waiting for the provided delay before reinvoking the instance.

Configurable

False

Platforms

Supported on all platforms

options**Description**

Enter the options context

Context[system dhcp-server network-instance name reference dhcpv4 options](#)**Tree**[options](#)**Configurable**

True

Platforms

Supported on all platforms

bootfile-name *string***Description**

The name of the configuration file the client will use during booting - option 67

Context[system dhcp-server network-instance name reference dhcpv4 options bootfile-name *string*](#)**Tree**[bootfile-name](#)**String Length**

1 to 128

Configurable

True

Platforms Supported on all platforms

dns-server *string*

Description An Ordered List of DNS servers to return to the dhcp client - option 6

Context [system dhcp-server network-instance name reference dhcpv4 options dns-server *string*](#)

Tree [dns-server](#)

Configurable True

Platforms Supported on all platforms

Max. Elements 4

domain-name *string*

Description The domain name to return to the dhcp client that the client should use when resolving hostnames via the Domain Name System - option 15

Context [system dhcp-server network-instance name reference dhcpv4 options domain-name *string*](#)

Tree [domain-name](#)

String Length 1 to 253

Configurable True

Platforms Supported on all platforms

hostname *string*

Description Host Name option of the dhcp client - option 12

Context [system dhcp-server network-instance name reference dhcpv4 options hostname *string*](#)

Tree [hostname](#)

String Length 1 to 63

Configurable True

Platforms Supported on all platforms

ntp-server *string*

Description List of NTP Servers to return to the dhcp client - option 42

Context	system dhcp-server network-instance name <i>reference</i> dhcpv4 options ntp-server <i>string</i>
Tree	ntp-server
Configurable	True
Platforms	Supported on all platforms
Max. Elements	4

router *string*

Description	IPv4 address of the gateway for the dhcp client - option 3
Context	system dhcp-server network-instance name <i>reference</i> dhcpv4 options router <i>string</i>
Tree	router
Configurable	True
Platforms	Supported on all platforms

server-id *string*

Description	IP address the dhcp server must match any address within the network_instance e.g. sub-interface primary address, loopback address, anycast gateway address in case of multihoming - option 54
Context	system dhcp-server network-instance name <i>reference</i> dhcpv4 options server-id <i>string</i>
Tree	server-id
Configurable	True
Platforms	Supported on all platforms

tftp-server-address *string*

Description	List of IP address of the TFTP servers the client will use to download bootfile/configuration script - option 150
Context	system dhcp-server network-instance name <i>reference</i> dhcpv4 options tftp-server-address <i>string</i>
Tree	tftp-server-address
Configurable	True
Platforms	Supported on all platforms
Max. Elements	2

tftp-server-name *string*

Description	FQDN of the TFTP server the client will use to download bootfile/ configuration script - option 66
Context	system dhcp-server network-instance name <i>reference</i> dhcpv4 options tftp-server-name <i>string</i>
Tree	tftp-server-name
String Length	1 to 63
Configurable	True
Platforms	Supported on all platforms

static-allocation

Description	Enter the static-allocation context
Context	system dhcp-server network-instance name <i>reference</i> dhcpv4 static-allocation
Tree	static-allocation
Configurable	True
Platforms	Supported on all platforms

host [mac](#) *string*

Description	host name for static ip allocations
Context	system dhcp-server network-instance name <i>reference</i> dhcpv4 static-allocation host mac <i>string</i>
Tree	host
Configurable	True
Platforms	Supported on all platforms

mac *string*

Description	Enter the mac context
Context	system dhcp-server network-instance name <i>reference</i> dhcpv4 static-allocation host mac <i>string</i>
Configurable	True
Platforms	Supported on all platforms

ip-address *string*

Description	Enter the ip-address context
Context	system dhcp-server network-instance name <i>reference</i> dhcpv4 static-allocation host mac <i>string</i> ip-address <i>string</i>
Tree	ip-address
Configurable	True
Platforms	Supported on all platforms

options

Description	Enter the options context
Context	system dhcp-server network-instance name <i>reference</i> dhcpv4 static-allocation host mac <i>string</i> options
Tree	options
Configurable	True
Platforms	Supported on all platforms

bootfile-name *string*

Description	The name of the configuration file the client will use during booting - option 67
Context	system dhcp-server network-instance name <i>reference</i> dhcpv4 static-allocation host mac <i>string</i> options bootfile-name <i>string</i>
Tree	bootfile-name
String Length	1 to 128
Configurable	True
Platforms	Supported on all platforms

dns-server *string*

Description	An Ordered List of DNS servers to return to the dhcp client - option 6
Context	system dhcp-server network-instance name <i>reference</i> dhcpv4 static-allocation host mac <i>string</i> options dns-server <i>string</i>
Tree	dns-server
Configurable	True
Platforms	Supported on all platforms

Max. Elements 4

domain-name *string*

Description The domain name to return to the dhcp client that the client should use when resolving hostnames via the Domain Name System - option 15

Context [system dhcp-server network-instance name](#) *reference* [dhcpv4 static-allocation host mac](#) *string options domain-name* *string*

Tree [domain-name](#)

String Length 1 to 253

Configurable True

Platforms Supported on all platforms

hostname *string*

Description Host Name option of the dhcp client - option 12

Context [system dhcp-server network-instance name](#) *reference* [dhcpv4 static-allocation host mac](#) *string options hostname* *string*

Tree [hostname](#)

String Length 1 to 63

Configurable True

Platforms Supported on all platforms

ntp-server *string*

Description List of NTP Servers to return to the dhcp client - option 42

Context [system dhcp-server network-instance name](#) *reference* [dhcpv4 static-allocation host mac](#) *string options ntp-server* *string*

Tree [ntp-server](#)

Configurable True

Platforms Supported on all platforms

Max. Elements 4

router *string*

Description IPv4 address of the gateway for the dhcp client - option 3

Context	system dhcp-server network-instance name <i>reference</i> dhcpv4 static-allocation host mac <i>string</i> options router <i>string</i>
Tree	router
Configurable	True
Platforms	Supported on all platforms

server-id *string*

Description	IP address the dhcp server must match any address within the network_instance e.g. sub-interface primary address, loopback address, anycast gateway address in case of multihoming - option 54
Context	system dhcp-server network-instance name <i>reference</i> dhcpv4 static-allocation host mac <i>string</i> options server-id <i>string</i>
Tree	server-id
Configurable	True
Platforms	Supported on all platforms

tftp-server-address *string*

Description	List of IP address of the TFTP servers the client will use to download bootfile/configuration script - option 150
Context	system dhcp-server network-instance name <i>reference</i> dhcpv4 static-allocation host mac <i>string</i> options tftp-server-address <i>string</i>
Tree	tftp-server-address
Configurable	True
Platforms	Supported on all platforms
Max. Elements	2

tftp-server-name *string*

Description	FQDN of the TFTP server the client will use to download bootfile/configuration script - option 66
Context	system dhcp-server network-instance name <i>reference</i> dhcpv4 static-allocation host mac <i>string</i> options tftp-server-name <i>string</i>
Tree	tftp-server-name
String Length	1 to 63
Configurable	True
Platforms	Supported on all platforms

statistics

Description	Enter the statistics context
Context	system dhcp-server network-instance name reference dhcpv4 statistics
Tree	statistics
Configurable	False
Platforms	Supported on all platforms

client-packets-discarded *number*

Description	Total discarded dhcp packets from dhcp client(s)
Context	system dhcp-server network-instance name reference dhcpv4 statistics client-packets-discarded <i>number</i>
Tree	client-packets-discarded
Default	0
Configurable	False
Platforms	Supported on all platforms

client-packets-received *number*

Description	Total received dhcp packets from dhcp client(s)
Context	system dhcp-server network-instance name reference dhcpv4 statistics client-packets-received <i>number</i>
Tree	client-packets-received
Default	0
Configurable	False
Platforms	Supported on all platforms

server-packets-sent *number*

Description	Total dhcp packets sent from DHCP server towards dhcp client(s)
Context	system dhcp-server network-instance name reference dhcpv4 statistics server-packets-sent <i>number</i>
Tree	server-packets-sent
Default	0
Configurable	False

Platforms Supported on all platforms

trace-options

Description Container for tracing DHCP server operations instance

Context [system dhcp-server network-instance name reference dhcpv4 trace-options](#)

Tree [trace-options](#)

Configurable True

Platforms Supported on all platforms

trace *keyword*

Description List of events to trace

Context [system dhcp-server network-instance name reference dhcpv4 trace-options trace keyword](#)

Tree [trace](#)

Options

- messages
Capture all DHCP server messages sent and received

Configurable True

Platforms Supported on all platforms

dhcpv6

Description Enter the dhcpv6 context

Context [system dhcp-server network-instance name reference dhcpv6](#)

Tree [dhcpv6](#)

Configurable True

Platforms Supported on all platforms

admin-state *keyword*

Description Administratively enable or disable the dhcp server

Context [system dhcp-server network-instance name reference dhcpv6 admin-state keyword](#)

Tree [admin-state](#)

Default disable

Options	<ul style="list-style-type: none"> • enable • disable
Configurable	True
Platforms	Supported on all platforms

oper-state *keyword*

Description	Details if the dhcp server is operationally available
Context	system dhcp-server network-instance name reference dhcpv6 oper-state keyword
Tree	oper-state
Options	<ul style="list-style-type: none"> • up Component or process is operational • down Component or process is not operational • empty Component slot is empty • downloading Component is downloading image into memory • booting Component is booting downloaded image • starting Component image operational, application processes starting • failed Component or process has failed • synchronizing Component is currently being synchronized • upgrading Component is currently being upgraded • low-power Component is offline due to insufficient system power • degraded Component or process is in a degraded state • warm-reboot Component or process is currently warm rebooting

This state is set during a warm reboot immediately following initiation of the reboot, continuing after startup until the system has completed audit. In this state the system will not accept configuration changes.

- waiting

Component or process is currently waiting

This state can be set by event handler when the `reinvoke-with-delay` action is used, and indicates that the event handler is waiting for the provided delay before reinvoking the instance.

Configurable	False
Platforms	Supported on all platforms

options

Description	Enter the options context
Context	system dhcp-server network-instance name reference dhcpv6 options
Tree	options
Configurable	True
Platforms	Supported on all platforms

dns-server *string*

Description	An Ordered List of DNS servers to return to the dhcp client
Context	system dhcp-server network-instance name reference dhcpv6 options dns-server string
Tree	dns-server
Configurable	True
Platforms	Supported on all platforms
Max. Elements	4

static-allocation

Description	Enter the static-allocation context
Context	system dhcp-server network-instance name reference dhcpv6 static-allocation
Tree	static-allocation
Configurable	True
Platforms	Supported on all platforms

host mac string

Description	host name for static ip allocations
Context	system dhcp-server network-instance name <i>reference</i> dhcpv6 static-allocation host mac string
Tree	host
Configurable	True
Platforms	Supported on all platforms

mac string

Description	Enter the mac context
Context	system dhcp-server network-instance name <i>reference</i> dhcpv6 static-allocation host mac string
Configurable	True
Platforms	Supported on all platforms

ip-address string

Description	Enter the ip-address context
Context	system dhcp-server network-instance name <i>reference</i> dhcpv6 static-allocation host mac string ip-address string
Tree	ip-address
Configurable	True
Platforms	Supported on all platforms

options

Description	Enter the options context
Context	system dhcp-server network-instance name <i>reference</i> dhcpv6 static-allocation host mac string options
Tree	options
Configurable	True
Platforms	Supported on all platforms

dns-server *string*

Description	An Ordered List of DNS servers to return to the dhcp client
Context	system dhcp-server network-instance name <i>reference</i> dhcpv6 static-allocation host mac <i>string</i> options dns-server <i>string</i>
Tree	dns-server
Configurable	True
Platforms	Supported on all platforms
Max. Elements	4

statistics

Description	Enter the statistics context
Context	system dhcp-server network-instance name <i>reference</i> dhcpv6 statistics
Tree	statistics
Configurable	False
Platforms	Supported on all platforms

client-packets-discarded *number*

Description	Total discarded dhcp packets from dhcp client(s)
Context	system dhcp-server network-instance name <i>reference</i> dhcpv6 statistics client-packets-discarded <i>number</i>
Tree	client-packets-discarded
Default	0
Configurable	False
Platforms	Supported on all platforms

client-packets-received *number*

Description	Total received dhcp packets from dhcp client(s)
Context	system dhcp-server network-instance name <i>reference</i> dhcpv6 statistics client-packets-received <i>number</i>
Tree	client-packets-received
Default	0
Configurable	False

Platforms Supported on all platforms

server-packets-sent *number*

Description Total dhcp packets sent from DHCP server towards dhcp client(s)

Context [system dhcp-server network-instance name reference dhcpv6 statistics server-packets-sent](#) *number*

Tree [server-packets-sent](#)

Default 0

Configurable False

Platforms Supported on all platforms

trace-options

Description Container for tracing DHCP server operations instance

Context [system dhcp-server network-instance name reference dhcpv6 trace-options](#)

Tree [trace-options](#)

Configurable True

Platforms Supported on all platforms

trace *keyword*

Description List of events to trace

Context [system dhcp-server network-instance name reference dhcpv6 trace-options trace](#) *keyword*

Tree [trace](#)

Options

- messages
Capture all DHCP server messages sent and received

Configurable True

Platforms Supported on all platforms

dns

Description Top-level container for DNS configuration and state

Context [system dns](#)

Tree [dns](#)

Configurable	True
Platforms	Supported on all platforms

host-entry *name string*

Description	List of static host entries
Context	system dns host-entry name string
Tree	host-entry
Configurable	True
Platforms	Supported on all platforms

name *string*

Description	Name of host entry
Context	system dns host-entry name string
String Length	1 to 253
Configurable	True
Platforms	Supported on all platforms

ipv4-address *string*

Description	IPv4 address for the host entry
Context	system dns host-entry name string ipv4-address string
Tree	ipv4-address
Configurable	True
Platforms	Supported on all platforms

ipv6-address *string*

Description	IPv6 address for the host entry
Context	system dns host-entry name string ipv6-address string
Tree	ipv6-address
Configurable	True
Platforms	Supported on all platforms

network-instance *reference*

Description	Reference to a configured network-instance to source DNS requests from
Context	system dns network-instance reference
Tree	network-instance
Reference	network-instance name <i>string</i>
Configurable	True
Platforms	Supported on all platforms

oper-state *keyword*

Description	Details the operational state of the DNS client
Context	system dns oper-state keyword
Tree	oper-state
Options	<ul style="list-style-type: none">• up Component or process is operational• down Component or process is not operational• empty Component slot is empty• downloading Component is downloading image into memory• booting Component is booting downloaded image• starting Component image operational, application processes starting• failed Component or process has failed• synchronizing Component is currently being synchronized• upgrading Component is currently being upgraded• low-power Component is offline due to insufficient system power• degraded Component or process is in a degraded state

- warm-reboot
Component or process is currently warm rebooting
This state is set during a warm reboot immediately following initiation of the reboot, continuing after startup until the system has completed audit. In this state the system will not accept configuration changes.
- waiting
Component or process is currently waiting
This state can be set by event handler when the `reinvoke-with-delay` action is used, and indicates that the event handler is waiting for the provided delay before reinvoking the instance.

Configurable	False
Platforms	Supported on all platforms

search-list *string*

Description	An ordered list of domains to search when resolving a host name
Context	system dns search-list <i>string</i>
Tree	search-list
String Length	1 to 253
Configurable	True
Platforms	Supported on all platforms

server-list (*ipv4-address* | *ipv6-address*)

Description	List of the DNS servers that the resolver should query
Context	system dns server-list (<i>ipv4-address</i> <i>ipv6-address</i>)
Tree	server-list
Configurable	True
Platforms	Supported on all platforms
Max. Elements	3

source-address (*ipv4-address* | *ipv6-address*)

Description	Source address for DNS to use for messages sent to a remote server
Context	system dns source-address (<i>ipv4-address</i> <i>ipv6-address</i>)
Tree	source-address
Configurable	True

Platforms Supported on all platforms

event-handler

Description Top-level container for configuration and state of event handler and event handling instances

Context [system event-handler](#)

Tree [event-handler](#)

Configurable True

Platforms 7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

instance *name string*

Description List of all event handler instances
An event handler instance consists of a set of paths to be monitored for changes, and a Python script to execute if changes occur.

Context [system event-handler instance name string](#)

Tree [instance](#)

Configurable True

Platforms 7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

Max. Elements 20

name *string*

Description A user-defined name for this event handler instance

Context [system event-handler instance name string](#)

String Length 1 to 255

Configurable True

Platforms 7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

admin-state *keyword*

Description	Administratively enable or disable this event handler instance
Context	system event-handler instance name <i>string</i> admin-state <i>keyword</i>
Tree	admin-state
Default	disable
Options	<ul style="list-style-type: none"> • enable • disable
Configurable	True
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

last-errored-execution

Description	Operational state of the last errored execution of this instance
Context	system event-handler instance name <i>string</i> last-errored-execution
Tree	last-errored-execution
Configurable	False
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

end-time *string*

Description	The time this instance last finished execution This timestamp includes any actions provided as output from the execution
Context	system event-handler instance name <i>string</i> last-errored-execution end-time <i>string</i>
Tree	end-time
String Length	20 to 32
Configurable	False
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

input *string*

Description	The input provided to the script
Context	system event-handler instance name <i>string</i> last-errored-execution input <i>string</i>
Tree	input
Configurable	False
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

oper-down-reason *keyword*

Description	The reason this instance is or was in its last operational state
Context	system event-handler instance name <i>string</i> last-errored-execution oper-down-reason <i>keyword</i>
Tree	oper-down-reason
Options	<ul style="list-style-type: none"> • admin-disabled Event handler instance is admin-disabled • failed-to-compile Event handler failed to compile the script, indicating that the script likely has a syntax error • exception Event handler caught an exception in the last execution of the script • timeout The last execution of the script did not complete before a timeout occurred • subscription-failed Event handler was unable to subscribe to the provided paths • script-unavailable Event handler was unable to find the script on the filesystem • script-error The script returned something invalid • missing-function Event handler was unable to find a function named <code>event_handler_main()</code> in the provided script • system-error There was a failure in setting up the python environment

- ephemeral-action-failed
Event handler was unable to perform a ephemeral-path action in the previous execution
- cfg-action-failed
Event handler was unable to perform a cfg-path action in the previous execution
- tools-action-failed
Event handler was unable to perform a tools-path action in the previous execution
- state-action-failed
Event handler was unable to perform a state-path action in the previous execution
- script-action-failed
Event handler was unable to perform a script action in the previous execution

Configurable

False

Platforms

7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

oper-down-reason-detail *string***Description**

Any additional detail event handler can provide around the last operational state of this instance

Context[system event-handler instance name](#) *string* [last-errored-execution oper-down-reason-detail](#) *string***Tree**[oper-down-reason-detail](#)**Configurable**

False

Platforms

7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

output *string***Description**The output received from the script
If empty, no response was received.**Context**[system event-handler instance name](#) *string* [last-errored-execution output](#) *string***Tree**[output](#)

Configurable	False
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

start-time *string*

Description	The time this instance last started execution
Context	system event-handler instance name <i>string</i> last-errored-execution start-time <i>string</i>
Tree	start-time
String Length	20 to 32
Configurable	False
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

stdout-stderr *string*

Description	The output printed on STDOUT or STDERR during this execution
Context	system event-handler instance name <i>string</i> last-errored-execution stdout-stderr <i>string</i>
Tree	stdout-stderr
Configurable	False
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

upython-duration *number*

Description	Time taken for the instance to return output
Context	system event-handler instance name <i>string</i> last-errored-execution upython-duration <i>number</i>
Tree	upython-duration
Units	microseconds
Configurable	False
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

last-execution

Description	Operational state of the last execution of this instance
Context	system event-handler instance name <i>string</i> last-execution
Tree	last-execution
Configurable	False
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

end-time *string*

Description	The time this instance last finished execution This timestamp includes any actions provided as output from the execution
Context	system event-handler instance name <i>string</i> last-execution end-time <i>string</i>
Tree	end-time
String Length	20 to 32
Configurable	False
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

input *string*

Description	The input provided to the script
Context	system event-handler instance name <i>string</i> last-execution input <i>string</i>
Tree	input
Configurable	False
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

oper-down-reason *keyword*

Description	The reason this instance is or was in its last operational state
Context	system event-handler instance name <i>string</i> last-execution oper-down-reason <i>keyword</i>
Tree	oper-down-reason

Options

- **admin-disabled**
Event handler instance is admin-disabled
- **failed-to-compile**
Event handler failed to compile the script, indicating that the script likely has a syntax error
- **exception**
Event handler caught an exception in the last execution of the script
- **timeout**
The last execution of the script did not complete before a timeout occurred
- **subscription-failed**
Event handler was unable to subscribe to the provided paths
- **script-unavailable**
Event handler was unable to find the script on the filesystem
- **script-error**
The script returned something invalid
- **missing-function**
Event handler was unable to find a function named `event_handler_main()` in the provided script
- **system-error**
There was a failure in setting up the python environment
- **ephemeral-action-failed**
Event handler was unable to perform a ephemeral-path action in the previous execution
- **cfg-action-failed**
Event handler was unable to perform a cfg-path action in the previous execution
- **tools-action-failed**
Event handler was unable to perform a tools-path action in the previous execution
- **state-action-failed**
Event handler was unable to perform a state-path action in the previous execution
- **script-action-failed**
Event handler was unable to perform a script action in the previous execution

Configurable

False

Platforms 7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

oper-down-reason-detail *string*

Description Any additional detail event handler can provide around the last operational state of this instance

Context [system event-handler instance name](#) *string* [last-execution oper-down-reason-detail](#) *string*

Tree [oper-down-reason-detail](#)

Configurable False

Platforms 7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

output *string*

Description The output received from the script
If empty, no response was received.

Context [system event-handler instance name](#) *string* [last-execution output](#) *string*

Tree [output](#)

Configurable False

Platforms 7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

start-time *string*

Description The time this instance last started execution

Context [system event-handler instance name](#) *string* [last-execution start-time](#) *string*

Tree [start-time](#)

String Length 20 to 32

Configurable False

Platforms 7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

stdout-stderr *string*

Description	The output printed on STDOUT or STDERR during this execution
Context	system event-handler instance name <i>string</i> last-execution stdout-stderr <i>string</i>
Tree	stdout-stderr
Configurable	False
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

upython-duration *number*

Description	Time taken for the instance to return output
Context	system event-handler instance name <i>string</i> last-execution upython-duration <i>number</i>
Tree	upython-duration
Units	microseconds
Configurable	False
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

oper-state *keyword*

Description	Details if this event handler instance is operationally available
Context	system event-handler instance name <i>string</i> oper-state <i>keyword</i>
Tree	oper-state
Options	<ul style="list-style-type: none"> • up Component or process is operational • down Component or process is not operational • empty Component slot is empty • downloading Component is downloading image into memory • booting

- Component is booting downloaded image
- starting
Component image operational, application processes starting
- failed
Component or process has failed
- synchronizing
Component is currently being synchronized
- upgrading
Component is currently being upgraded
- low-power
Component is offline due to insufficient system power
- degraded
Component or process is in a degraded state
- warm-reboot
Component or process is currently warm rebooting
This state is set during a warm reboot immediately following initiation of the reboot, continuing after startup until the system has completed audit. In this state the system will not accept configuration changes.
- waiting
Component or process is currently waiting
This state can be set by event handler when the reinvoke-with-delay action is used, and indicates that the event handler is waiting for the provided delay before reinvoking the instance.

Configurable

False

Platforms

7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

options**Description**

Options to be passed on each execution of the script

Context[system event-handler instance name](#) *string options***Tree**[options](#)**Configurable**

True

Platforms

7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

object name string

Description	Enter the object list instance
Context	system event-handler instance name string options object name string
Tree	object
Configurable	True
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

name string

Description	The name of this object
Context	system event-handler instance name string options object name string
String Length	1 to 255
Configurable	True
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

value string

Description	A single value to associate with this object
Context	system event-handler instance name string options object name string value string
Tree	value
Configurable	True
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

values string

Description	List of values to associate with this object, these are serialized as a JSON array when provided as input to the script
Context	system event-handler instance name string options object name string values string
Tree	values

Configurable	True
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

paths *string*

Description	List of valid YANG paths in CLI notation to monitor for changes If any events are received on any of the provided paths, the configured script will be executed. This path may include keys, wildcards, ranges, and other management server supported constructs. E.g. "interface * oper-state" "acl ipv4-filter foo* description"
Context	system event-handler instance name <i>string</i> paths <i>string</i>
Tree	paths
Configurable	True
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b
Max. Elements	36

statistics

Description	Top-level container for event handler statistics
Context	system event-handler instance name <i>string</i> statistics
Tree	statistics
Configurable	False
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

execution-count *number*

Description	Indicates the total number of executions of this script
Context	system event-handler instance name <i>string</i> statistics execution-count <i>number</i>
Tree	execution-count
Default	0

Configurable	False
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

execution-errors *number*

Description	Indicates the total number of errors in executions of this script
Context	system event-handler instance name <i>string</i> statistics execution-errors <i>number</i>
Tree	execution-errors
Default	0
Configurable	False
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

execution-successes *number*

Description	Indicates the total number of successful executions of this script
Context	system event-handler instance name <i>string</i> statistics execution-successes <i>number</i>
Tree	execution-successes
Default	0
Configurable	False
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

execution-timeouts *number*

Description	Indicates the total number of timeouts in executions of this script
Context	system event-handler instance name <i>string</i> statistics execution-timeouts <i>number</i>
Tree	execution-timeouts
Default	0
Configurable	False

Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b
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upython-duration *number*

Description	Total time taken for all executions of this script to return output
Context	system event-handler instance name <i>string</i> statistics upython-duration number
Tree	upython-duration
Units	milliseconds
Configurable	False
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

upython-script *string*

Description	File name of a MicroPython script, including .py suffix This script should exist in /etc/opt/srlinux/eventmgr or /opt/srlinux/eventmgr already. Explicit paths outside of these two directories are not permitted.
Context	system event-handler instance name <i>string</i> upython-script string
Tree	upython-script
Configurable	True
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

run-as-user *reference*

Description	The user to run event handler instances as If no user is configured, scripts are executed as the 'admin' user.
Context	system event-handler run-as-user reference
Tree	run-as-user
Reference	system aaa authentication user username <i>string</i>
Configurable	True

Platforms 7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

features *string*

Description Features enabled on this platform
Context [system features *string*](#)
Tree [features](#)
String Length 1 to 255
Configurable False
Platforms Supported on all platforms

ftp-server

Description Top-level container for FTP server configuration and state
Context [system ftp-server](#)
Tree [ftp-server](#)
Configurable True
Platforms Supported on all platforms except IMGMT

network-instance [name *reference*](#)

Description List of network-instances to run an FTP server in
Context [system ftp-server network-instance \[name *reference*\]\(#\)](#)
Tree [network-instance](#)
Configurable True
Platforms Supported on all platforms except IMGMT

name *reference*

Description Reference to a configured network-instance
Context [system ftp-server network-instance \[name *reference*\]\(#\)](#)
Reference [network-instance \[name *string*\]\(#\)](#)
Configurable True
Platforms Supported on all platforms except IMGMT

admin-state *keyword*

Description	Enables or disables the FTP server in this network-instance
Context	system ftp-server network-instance name <i>reference</i> admin-state <i>keyword</i>
Tree	admin-state
Default	disable
Options	<ul style="list-style-type: none"> • enable • disable
Configurable	True
Platforms	Supported on all platforms except IMGMT

oper-state *keyword*

Description	Details the operational state of the FTP server
Context	system ftp-server network-instance name <i>reference</i> oper-state <i>keyword</i>
Tree	oper-state
Options	<ul style="list-style-type: none"> • up Component or process is operational • down Component or process is not operational • empty Component slot is empty • downloading Component is downloading image into memory • booting Component is booting downloaded image • starting Component image operational, application processes starting • failed Component or process has failed • synchronizing Component is currently being synchronized • upgrading Component is currently being upgraded • low-power

- Component is offline due to insufficient system power
- degraded
 - Component or process is in a degraded state
- warm-reboot
 - Component or process is currently warm rebooting
 - This state is set during a warm reboot immediately following initiation of the reboot, continuing after startup until the system has completed audit. In this state the system will not accept configuration changes.
- waiting
 - Component or process is currently waiting
 - This state can be set by event handler when the reinvoke-with-delay action is used, and indicates that the event handler is waiting for the provided delay before reinvoking the instance.

Configurable	False
Platforms	Supported on all platforms except IMGMT

session-limit *number*

Description	Set a limit on the number of simultaneous active FTP sessions
Context	system ftp-server network-instance name <i>reference</i> session-limit number
Tree	session-limit
Default	20
Configurable	True
Platforms	Supported on all platforms except IMGMT

source-address (*ipv4-address | ipv6-address*)

Description	IPv4 or IPv6 address for the FTP server to listen on within the network-instance Default behavior is to listen on '::', which will listen on all addresses for both IPv4 and IPv6. In order to listen on IPv4 only, this field should be set to '0.0.0.0'.
Context	system ftp-server network-instance name <i>reference</i> source-address (ipv4-address ipv6-address)
Tree	source-address
Default	::
Configurable	True
Platforms	Supported on all platforms except IMGMT

timeout *number*

Description	Set the idle timeout in seconds on FTP connections
Context	system ftp-server network-instance name <i>reference</i> timeout <i>number</i>
Tree	timeout
Default	300
Units	seconds
Configurable	True
Platforms	Supported on all platforms except IMGMT

grpc-server *name string*

Description	List of configured gRPC server instances
Context	system grpc-server <i>name string</i>
Tree	grpc-server
Configurable	True
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

name *string*

Description	User-provided name of this server instance
Context	system grpc-server <i>name string</i>
String Length	1 to 255
Configurable	True
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

admin-state *keyword*

Description	Globally enable or disable the gRPC server instance Disabling this will disable all gRPC server sockets in all network instances, and any configured unix domain sockets.
Context	system grpc-server <i>name string</i> admin-state <i>keyword</i>
Tree	admin-state

Default	disable
Options	<ul style="list-style-type: none"> • enable • disable
Configurable	True
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

certz

Description	Information relating to the active certificate and bundle/s as provided via Certz State is provided by the gNSI Certz service, and can be changed using the gNSI.Certz.Rotate RPC
Context	system grpc-server name <i>string</i> certz
Tree	certz
Configurable	False
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

certificate

Description	State relating to the active certificate provided via Certz
Context	system grpc-server name <i>string</i> certz certificate
Tree	certificate
Configurable	False
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

created-on *string*

Description	The created on timestamp as provided by the gNSI client at the time of uploading the policy The maps to the created_on field within a Entity message in the Certz protobuf.
Context	system grpc-server name <i>string</i> certz certificate created-on <i>string</i>

Tree	created-on
String Length	20 to 32
Configurable	False
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

version string

Description	The version string as provided by the gNSI client at the time of uploading the certificate or bundle/s The maps to the version field within a Entity message in the Certz protobuf.
Context	system grpc-server name string certz certificate version string
Tree	version
Configurable	False
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

crl

Description	State relating to the active certificate revocation list provided via Certz The list of certificates provided will not be used to validate mTLS or servers, even if those certificates exist within the trust anchor.
Context	system grpc-server name string certz crl
Tree	crl
Configurable	False
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

created-on string

Description	The created on timestamp as provided by the gNSI client at the time of uploading the policy The maps to the created_on field within a Entity message in the Certz protobuf.
Context	system grpc-server name string certz crl created-on string

Tree	created-on
String Length	20 to 32
Configurable	False
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

version string

Description	The version string as provided by the gNSI client at the time of uploading the certificate or bundle/s The maps to the version field within a Entity message in the Certz protobuf.
Context	system grpc-server name string certz crt version string
Tree	version
Configurable	False
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

ssl-profile-id string

Description	The ID of this gRPC server's SSL profile as used by the gNSI Certz service
Context	system grpc-server name string certz ssl-profile-id string
Tree	ssl-profile-id
Configurable	False
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

trust-anchor

Description	State relating to the active trust anchor provided via Certz This is equivalent to the certificate authority bundle, and is the list of certificates used to validate clients in mTLS, and to validate servers in outbound TLS.
Context	system grpc-server name string certz trust-anchor
Tree	trust-anchor
Configurable	False

Platforms 7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

created-on *string*

Description The created on timestamp as provided by the gNSI client at the time of uploading the policy

The maps to the created_on field within a Entity message in the Certz protobuf.

Context [system](#) [grpc-server name](#) *string* [certz](#) [trust-anchor](#) [created-on](#) *string*

Tree [created-on](#)

String Length 20 to 32

Configurable False

Platforms 7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

version *string*

Description The version string as provided by the gNSI client at the time of uploading the certificate or bundle/s

The maps to the version field within a Entity message in the Certz protobuf.

Context [system](#) [grpc-server name](#) *string* [certz](#) [trust-anchor](#) [version](#) *string*

Tree [version](#)

Configurable False

Platforms 7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

client id *number*

Description List of active gRPC client sessions

Context [system](#) [grpc-server name](#) *string* [client id](#) *number*

Tree [client](#)

Configurable False

Platforms 7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

id number

Description	System generated ID for for the client
Context	system grpc-server name <i>string</i> client id number
Range	0 to 4294967295
Configurable	False
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

acctz-starting-point string

Description	Time of the acctz accounting subscription starting point
Context	system grpc-server name <i>string</i> client id number acctz-starting-point string
Tree	acctz-starting-point
String Length	20 to 32
Configurable	False
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

election-id string

Description	Election ID of this client Provided only for services supporting an election ID
Context	system grpc-server name <i>string</i> client id number election-id string
Tree	election-id
Configurable	False
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

gnmi

Description	Container for gNMI related session info
Context	system grpc-server name <i>string</i> client id number gnmi
Tree	gnmi

Configurable	False
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

paths *id number*

Description	List of paths being subscribed to
Context	system grpc-server name <i>string</i> client id <i>number</i> gnmi paths id <i>number</i>
Tree	paths
Configurable	False
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

id *number*

Description	System generated ID for the subscribed path (within subscription)
Context	system grpc-server name <i>string</i> client id <i>number</i> gnmi paths id <i>number</i>
Range	0 to 65535
Configurable	False
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

mode *keyword*

Description	Subscription mode (on-change, sample, target-defined, poll, once)
Context	system grpc-server name <i>string</i> client id <i>number</i> gnmi paths id <i>number</i> mode <i>keyword</i>
Tree	mode
Options	<ul style="list-style-type: none"> • ON_CHANGE • SAMPLE • TARGET_DEFINED • POLL • ONCE
Configurable	False

Platforms 7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

path *string*

Description Path being subscribed to

Context [system grpc-server name string client id number gnmi paths id number path string](#)

Tree [path](#)

Configurable False

Platforms 7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

sample-interval *number*

Description Time in seconds to provide updates to the remote host, set to 0 for all subscription modes except SAMPLE

Context [system grpc-server name string client id number gnmi paths id number sample-interval number](#)

Tree [sample-interval](#)

Units seconds

Configurable False

Platforms 7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

gribi

Description Container for gRIBI related session info

Context [system grpc-server name string client id number gribi](#)

Tree [gribi](#)

Configurable False

Platforms 7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

persistence-mode *keyword*

Description	The defined persistence mode as signaled by the client
Context	system grpc-server name <i>string</i> client id <i>number</i> gribi persistence-mode keyword
Tree	persistence-mode
Options	<ul style="list-style-type: none"> • <code>preserve</code> Entries populated by the client will be persisted during a client disconnect, or control module switchover • <code>delete</code> Entries populated by the client will be purged on the client disconnecting, or a control module switchover If no persistence mode is signaled, the default is to delete entries.
Configurable	False
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

p4rt

Description	Container for P4RT related session info
Context	system grpc-server name <i>string</i> client id <i>number</i> p4rt
Tree	p4rt
Configurable	False
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

forwarding-complex

Description	Enter the forwarding-complex context
Context	system grpc-server name <i>string</i> client id <i>number</i> p4rt forwarding-complex
Tree	forwarding-complex
Configurable	False
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

device number

Description	The P4Runtime ID of the forwarding complex for which this client has established itself This is the value configured at /platform/linecard/forwarding-complex/p4rt/id, or a system derived default.
Context	system grpc-server name string client id number p4rt forwarding-complex device number
Tree	device
Configurable	False
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

id string

Description	The normalized ID for this forwarding-complex This is the slot number and complex number separated by a '/', 0 indexed. For example '1/0', or '1/1' representing two forwarding complexes on slot 1.
Context	system grpc-server name string client id number p4rt forwarding-complex id string
Tree	id
Configurable	False
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

slot number

Description	The linecard slot for which this forwarding complex resides on
Context	system grpc-server name string client id number p4rt forwarding-complex slot number
Tree	slot
Configurable	False
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

primary *boolean*

Description	Indicates if this client is the primary for the specified forwarding complex Only a single primary per forwarding complex is supported
Context	system grpc-server name <i>string</i> client id <i>number</i> p4rt <i>primary</i> <i>boolean</i>
Tree	primary
Configurable	False
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

remote-host (*ipv4-address* | *ipv6-address*)

Description	Remote host of the client
Context	system grpc-server name <i>string</i> client id <i>number</i> remote-host (<i>ipv4-address</i> <i>ipv6-address</i>)
Tree	remote-host
Configurable	False
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

remote-port *number*

Description	Remote port of the client
Context	system grpc-server name <i>string</i> client id <i>number</i> remote-port <i>number</i>
Tree	remote-port
Range	0 to 65535
Configurable	False
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

rpc *string*

Description	The called package, service, and RPC For example gnmi.gNMI.Subscribe
Context	system grpc-server name <i>string</i> client id <i>number</i> rpc <i>string</i>

Tree	rpc
Configurable	False
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

start-time string

Description	Time of the subscription creation
Context	system grpc-server name string client id number start-time string
Tree	start-time
String Length	20 to 32
Configurable	False
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

type keyword

Description	Enter the type context
Context	system grpc-server name string client id number type keyword
Tree	type
Options	<ul style="list-style-type: none"> • gnmi • acctz
Configurable	False
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

user string

Description	Authenticated username for the client
Context	system grpc-server name string client id number user string
Tree	user
Configurable	False
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

user-agent *string*

Description	User agent used for the client
Context	system grpc-server name <i>string</i> client id <i>number</i> user-agent <i>string</i>
Tree	user-agent
Configurable	False
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

default-tls-profile *boolean*

Description	Whether to use default TLS profile (generated by the system) if none is configured via <code>tls-profile</code> field
Context	system grpc-server name <i>string</i> default-tls-profile <i>boolean</i>
Tree	default-tls-profile
Default	false
Configurable	True
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

gnmi

Description	Container for gnmi configuration and state
Context	system grpc-server name <i>string</i> gnmi
Tree	gnmi
Configurable	True
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

commit-confirmed-timeout *number*

Description	Number of seconds to wait for confirmation A value of 0 means commit confirmed is not used
Context	system grpc-server name <i>string</i> gnmi commit-confirmed-timeout <i>number</i>
Tree	commit-confirmed-timeout

Range	0 to 86400
Default	0
Units	seconds
Configurable	True
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

commit-save *boolean*

Description	Specifies whether to save startup configuration after every successful commit
Context	system grpc-server name <i>string</i> gnmi commit-save <i>boolean</i>
Tree	commit-save
Default	false
Configurable	True
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

include-defaults-in-config-only-responses *boolean*

Description	Specifies whether to include field default values in get/subscribe responses when using configuration only datastore (for example running/intended datastore)
Context	system grpc-server name <i>string</i> gnmi include-defaults-in-config-only-responses <i>boolean</i>
Tree	include-defaults-in-config-only-responses
Default	false
Configurable	True
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

metadata-authentication *boolean*

Description	Enable or disable the use of username/password metadata authentication for every gRPC request
Context	system grpc-server name <i>string</i> metadata-authentication <i>boolean</i>

Tree	metadata-authentication
Default	true
Configurable	True
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

network-instance *reference*

Description	Reference to a configured network instance where the gRPC will listen on for incoming connections
Context	system grpc-server name <i>string</i> network-instance <i>reference</i>
Tree	network-instance
Reference	network-instance name <i>string</i>
Configurable	True
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

oper-state *keyword*

Description	Details if the gRPC server is operationally available
Context	system grpc-server name <i>string</i> oper-state <i>keyword</i>
Tree	oper-state
Options	<ul style="list-style-type: none"> • up Component or process is operational • down Component or process is not operational • empty Component slot is empty • downloading Component is downloading image into memory • booting Component is booting downloaded image • starting Component image operational, application processes starting • failed

	<ul style="list-style-type: none"> • Component or process has failed • synchronizing Component is currently being synchronized • upgrading Component is currently being upgraded • low-power Component is offline due to insufficient system power • degraded Component or process is in a degraded state • warm-reboot Component or process is currently warm rebooting This state is set during a warm reboot immediately following initiation of the reboot, continuing after startup until the system has completed audit. In this state the system will not accept configuration changes. • waiting Component or process is currently waiting This state can be set by event handler when the reinvoke-with-delay action is used, and indicates that the event handler is waiting for the provided delay before reinvoking the instance.
Configurable	False
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b
port number	
Description	Port the gRPC server will listen on for incoming connections
Context	system grpc-server name <i>string</i> port number
Tree	port
Range	0 to 65535
Default	57400
Configurable	True
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

rate-limit *number*

Description	Set a limit on the number of RPC calls per minute
Context	system grpc-server name <i>string</i> rate-limit <i>number</i>
Tree	rate-limit
Range	0 to 65535
Default	60
Configurable	True
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

services *identityref*

Description	The gRPC service definitions that should be enabled for this gRPC server instance
Context	system grpc-server name <i>string</i> services <i>identityref</i>
Tree	services
Options	<ul style="list-style-type: none"> • gnmi gNMI: gRPC Network Management Interface • gnoi gNOI: gRPC Network Operations Interface • gnoi.bgp gNOI: BGP Service • gnoi.factory_reset gNOI: FactoryReset Service • gnoi.file gNOI: File Service • gnoi.healthz gNOI: Healthz Service • gnoi.os gNOI: OS Service • gnoi.packet_link_qualification gNOI: PacketLinkQualification Service • gnoi.system gNOI: System Service • gnsi

- gNSI: gRPC Network Security Interface
- gnsi.acctz
gNSI: Accounting Service
- gnsi.attestz
gNSI: Attestz Service
- gnsi.authz
gNSI: Authorization Policy Management Service
- gnsi.certz
gNSI: Certificate Management Service
- gnsi.credentialz
gNSI: Credentials Management Service
- gnsi.enrollz
gNSI: Enrollz Service
- gnsi.pathz
gNSI: Path-based Authorization Policy Management Service
- gribi
gRIBI: gRPC Routing Information Base Interface
- p4rt
P4RT: P4 Runtime

Configurable

True

Platforms

7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

session-limit *number***Description**

Set a limit on the number of simultaneous active gRPC sessions

A session is defined as an individual RPC invocation, which could result in a single client generating multiple sessions. In the context of a Subscribe RPC this is the number of simultaneously active SubscribeRequests across all Subscribe RPCs.

Context`system grpc-server name string session-limit number`**Tree**`session-limit`**Range**

0 to 65535

Default

20

Configurable

True

Platforms 7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

source-address (*ipv4-address* | *ipv6-address*)

Description List of IP addresses the gRPC server will listen on within the network instance

Context [system grpc-server name](#) *string* [source-address](#) (*ipv4-address* | *ipv6-address*)

Tree [source-address](#)

Default ::

Configurable True

Platforms 7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

statistics

Description Statistics related to the gRPC server

Context [system grpc-server name](#) *string* [statistics](#)

Tree [statistics](#)

Configurable False

Platforms 7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

access-accepts *number*

Description The total number of times the gRPC allowed access to the server

Context [system grpc-server name](#) *string* [statistics](#) [access-accepts](#) *number*

Tree [access-accepts](#)

Configurable False

Platforms 7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

access-rejects *number*

Description	The total number of times the gRPC server denied access to the server
Context	system grpc-server name <i>string</i> statistics access-rejects <i>number</i>
Tree	access-rejects
Configurable	False
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

last-access-accept *string*

Description	A timestamp of the last time the gRPC allowed access to the server
Context	system grpc-server name <i>string</i> statistics last-access-accept <i>string</i>
Tree	last-access-accept
String Length	20 to 32
Configurable	False
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

last-access-reject *string*

Description	A timestamp of the last time the gRPC server denied access to the server
Context	system grpc-server name <i>string</i> statistics last-access-reject <i>string</i>
Tree	last-access-reject
String Length	20 to 32
Configurable	False
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

rpc name *string*

Description	A collection of counters collected by the gNSI.authz module for a RPC identified by the `name`.
Context	system grpc-server name <i>string</i> statistics rpc name <i>string</i>
Tree	rpc

Configurable	False
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

name *string*

Description	The name of the RPC the counters were collected for.
Context	system grpc-server name <i>string</i> statistics rpc name <i>string</i>
Configurable	False
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

access-accepts *number*

Description	The total number of times the gNSI.authz module allowed access to a RPC.
Context	system grpc-server name <i>string</i> statistics rpc name <i>string</i> access-accepts <i>number</i>
Tree	access-accepts
Configurable	False
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

access-rejects *number*

Description	The total number of times the gNSI.authz module denied access to a RPC.
Context	system grpc-server name <i>string</i> statistics rpc name <i>string</i> access-rejects <i>number</i>
Tree	access-rejects
Configurable	False
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

last-access-accept *string*

Description	A timestamp of the last time the gNSI.authz allowed access to a RPC.
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Context	system grpc-server name <i>string</i> statistics rpc name <i>string</i> last-access-accept <i>string</i>
Tree	last-access-accept
String Length	20 to 32
Configurable	False
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

last-access-reject *string*

Description	A timestamp of the last time the gNSI.authz denied access to a RPC.
Context	system grpc-server name <i>string</i> statistics rpc name <i>string</i> last-access-reject <i>string</i>
Tree	last-access-reject
String Length	20 to 32
Configurable	False
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

timeout *number*

Description	Set the idle timeout in seconds on gRPC connections
Context	system grpc-server name <i>string</i> timeout <i>number</i>
Tree	timeout
Range	0 to 65535
Default	7200
Units	seconds
Configurable	True
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

tls-profile *reference*

Description	Reference to the TLS profile to use on the gRPC server If none is specified, then TLS is not used.
--------------------	---

Context	system grpc-server name <i>string</i> tls-profile <i>reference</i>
Tree	tls-profile
Reference	system tls server-profile name <i>string</i>
Configurable	True
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

trace-options *keyword*

Description	gRPC trace options
Context	system grpc-server name <i>string</i> trace-options <i>keyword</i>
Tree	trace-options
Options	<ul style="list-style-type: none"> • request • response • common • grpc
Configurable	True
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

unix-socket

Description	Top-level container for configuration and state related to unix sockets
Context	system grpc-server name <i>string</i> unix-socket
Tree	unix-socket
Configurable	True
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

admin-state *keyword*

Description	Administratively enable or disable the gRPC server
Context	system grpc-server name <i>string</i> unix-socket admin-state <i>keyword</i>
Tree	admin-state

Default	disable
Options	<ul style="list-style-type: none"> • enable • disable
Configurable	True
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

socket-path *string*

Description	Path to the unix socket used by gRPC
Context	system grpc-server name string unix-socket socket-path string
Tree	socket-path
Configurable	False
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

yang-models *keyword*

Description	Specify yang-models to be used when origin field is not present in requests
Context	system grpc-server name string yang-models keyword
Tree	yang-models
Default	native
Options	<ul style="list-style-type: none"> • native • openconfig
Configurable	True
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

information

Description	Top-level container for system information configuration and state
Context	system information
Tree	information
Configurable	True
Platforms	Supported on all platforms

contact *string*

Description	The system contact This field represents contact information for the person or group that maintains the system. This field is exposed via SNMP at the sysContact OID.
Context	system information contact <i>string</i>
Tree	contact
Configurable	True
Platforms	Supported on all platforms

current-datetime *string*

Description	The current system date and time
Context	system information current-datetime <i>string</i>
Tree	current-datetime
String Length	20 to 32
Configurable	False
Platforms	Supported on all platforms

description *string*

Description	The system description This field is system generated, and is a combination of the system host name, software version, kernel version, and build date. The template for this field is: SRLinux-<version> <hostname> <kernel> <build date>. This field is exposed via SNMP at the sysDescr OID.
Context	system information description <i>string</i>
Tree	description
Configurable	False
Platforms	Supported on all platforms

last-booted *string*

Description	The date and time the system was last booted
Context	system information last-booted <i>string</i>
Tree	last-booted
String Length	20 to 32

Configurable	False
Platforms	Supported on all platforms

location *string*

Description	The system location This field represents the location of the system, and is commonly used by inventory management systems to group elements together. This field is exposed via SNMP at the sysLocation OID.
Context	system information location <i>string</i>
Tree	location
Configurable	True
Platforms	Supported on all platforms

version *string*

Description	The system version This field represents the version of the management server
Context	system information version <i>string</i>
Tree	version
Configurable	False
Platforms	Supported on all platforms

json-rpc-server

Description	Configures the JSON RPC access API
Context	system json-rpc-server
Tree	json-rpc-server
Configurable	True
Platforms	Supported on all platforms

admin-state *keyword*

Description	Globally enable or disable the JSON RPC server Disabling this will disable all JSON RPC servers.
Context	system json-rpc-server admin-state <i>keyword</i>

Tree	admin-state
Default	disable
Options	<ul style="list-style-type: none"> • enable • disable
Configurable	True
Platforms	Supported on all platforms

commit-confirmed-timeout *number*

Description	Number of seconds to wait for confirmation. A value of 0 means commit confirmed is not used
Context	system json-rpc-server commit-confirmed-timeout <i>number</i>
Tree	commit-confirmed-timeout
Range	0 to 86400
Default	0
Units	seconds
Configurable	True
Platforms	Supported on all platforms

network-instance [name](#) *reference*

Description	List of network instances to run the JSON RPC server in
Context	system json-rpc-server network-instance name <i>reference</i>
Tree	network-instance
Configurable	True
Platforms	Supported on all platforms

name *reference*

Description	Reference to a configured network-instance
Context	system json-rpc-server network-instance name <i>reference</i>
Reference	network-instance name <i>string</i>
Configurable	True
Platforms	Supported on all platforms

http

Description	Top-level container for the JSON RPC HTTP server
Context	system json-rpc-server network-instance name <i>reference</i> http
Tree	http
Configurable	True
Platforms	Supported on all platforms

admin-state *keyword*

Description	Administratively enable or disable the HTTP JSON RPC server This requires the JSON RPC server to be globally enabled
Context	system json-rpc-server network-instance name <i>reference</i> http admin-state keyword
Tree	admin-state
Default	disable
Options	<ul style="list-style-type: none"> • enable • disable
Configurable	True
Platforms	Supported on all platforms

oper-state *keyword*

Description	Details if the JSON RPC server is operationally available
Context	system json-rpc-server network-instance name <i>reference</i> http oper-state keyword
Tree	oper-state
Options	<ul style="list-style-type: none"> • up Component or process is operational • down Component or process is not operational • empty Component slot is empty • downloading Component is downloading image into memory • booting

- Component is booting downloaded image
- starting
Component image operational, application processes starting
- failed
Component or process has failed
- synchronizing
Component is currently being synchronized
- upgrading
Component is currently being upgraded
- low-power
Component is offline due to insufficient system power
- degraded
Component or process is in a degraded state
- warm-reboot
Component or process is currently warm rebooting
This state is set during a warm reboot immediately following initiation of the reboot, continuing after startup until the system has completed audit. In this state the system will not accept configuration changes.
- waiting
Component or process is currently waiting
This state can be set by event handler when the reinvoke-with-delay action is used, and indicates that the event handler is waiting for the provided delay before reinvoking the instance.

Configurable

False

Platforms

Supported on all platforms

port number**Description**

The port the HTTP JSON RPC server will listen on for incoming connections

Context[system json-rpc-server network-instance name reference http port number](#)**Tree**[port](#)**Range**

0 to 65535

Default

80

Configurable

True

Platforms

Supported on all platforms

session-limit *number*

Description	The number of concurrent requests the server will allow. If a request comes in while this limit is reached, the request will block until another request is finished.
Context	system json-rpc-server network-instance name <i>reference</i> http session-limit number
Tree	session-limit
Range	1 to 100
Default	10
Configurable	True
Platforms	Supported on all platforms

source-address (*ipv4-address | ipv6-address*)

Description	List of IP addresses the JSON RPC server will listen on within the network instance
Context	system json-rpc-server network-instance name <i>reference</i> http source-address (ipv4-address ipv6-address)
Tree	source-address
Default	::
Configurable	True
Platforms	Supported on all platforms

use-authentication *boolean*

Description	Enable or disable the use of username/password authentication for every JSON RPC request
Context	system json-rpc-server network-instance name <i>reference</i> http use-authentication boolean
Tree	use-authentication
Default	true
Configurable	True
Platforms	Supported on all platforms

https

Description	Top-level container for the JSON-RPC HTTPS server
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Context	system json-rpc-server network-instance name reference https
Tree	https
Configurable	True
Platforms	Supported on all platforms

admin-state *keyword*

Description	Administratively enable or disable the HTTPS JSON RPC server This requires the JSON RPC server to be globally enabled
Context	system json-rpc-server network-instance name reference https admin-state keyword
Tree	admin-state
Default	disable
Options	<ul style="list-style-type: none"> • enable • disable
Configurable	True
Platforms	Supported on all platforms

oper-state *keyword*

Description	Details if the JSON RPC server is operationally available
Context	system json-rpc-server network-instance name reference https oper-state keyword
Tree	oper-state
Options	<ul style="list-style-type: none"> • up Component or process is operational • down Component or process is not operational • empty Component slot is empty • downloading Component is downloading image into memory • booting Component is booting downloaded image • starting Component image operational, application processes starting

- failed
Component or process has failed
- synchronizing
Component is currently being synchronized
- upgrading
Component is currently being upgraded
- low-power
Component is offline due to insufficient system power
- degraded
Component or process is in a degraded state
- warm-reboot
Component or process is currently warm rebooting
This state is set during a warm reboot immediately following initiation of the reboot, continuing after startup until the system has completed audit. In this state the system will not accept configuration changes.
- waiting
Component or process is currently waiting
This state can be set by event handler when the reinvoke-with-delay action is used, and indicates that the event handler is waiting for the provided delay before reinvoking the instance.

Configurable

False

Platforms

Supported on all platforms

port number**Description**

Port the HTTPS JSON RPC server will listen on for incoming connections

Context[system json-rpc-server network-instance name reference https port number](#)**Tree**[port](#)**Range**

0 to 65535

Default

443

Configurable

True

Platforms

Supported on all platforms

session-limit number**Description**

The number of concurrent requests the server will allow. If a request comes in while this limit is reached, the request will block until another request is finished.

Context	system json-rpc-server network-instance name reference https session-limit number
Tree	session-limit
Range	1 to 100
Default	10
Configurable	True
Platforms	Supported on all platforms

source-address (*ipv4-address* | *ipv6-address*)

Description	List of IP addresses the JSON RPC server will listen on within the network instance
Context	system json-rpc-server network-instance name reference https source-address (ipv4-address ipv6-address)
Tree	source-address
Default	::
Configurable	True
Platforms	Supported on all platforms

tls-profile *reference*

Description	Reference to the TLS profile to use on the HTTP JSON RPC server
Context	system json-rpc-server network-instance name reference https tls-profile reference
Tree	tls-profile
Reference	system tls server-profile name string
Configurable	True
Platforms	Supported on all platforms

use-authentication *boolean*

Description	Enable or disable the use of username/password authentication for every JSON RPC request
Context	system json-rpc-server network-instance name reference https use-authentication boolean
Tree	use-authentication
Default	true

Configurable	True
Platforms	Supported on all platforms

trace-options *keyword*

Description	JSON RPC trace options
Context	system json-rpc-server trace-options <i>keyword</i>
Tree	trace-options
Options	<ul style="list-style-type: none"> • request • response • common
Configurable	True
Platforms	Supported on all platforms

unix-socket

Description	Top-level container for configuration and state related to unix sockets
Context	system json-rpc-server unix-socket
Tree	unix-socket
Configurable	True
Platforms	Supported on all platforms

admin-state *keyword*

Description	Administratively enable or disable the JSON RPC server via unix socket This requires the JSON RPC server to be globally enabled
Context	system json-rpc-server unix-socket admin-state <i>keyword</i>
Tree	admin-state
Default	disable
Options	<ul style="list-style-type: none"> • enable • disable
Configurable	True
Platforms	Supported on all platforms

oper-state keyword

Description	Details if the JSON RPC server is operationally available
Context	system json-rpc-server unix-socket oper-state <i>keyword</i>
Tree	oper-state
Options	<ul style="list-style-type: none">• up Component or process is operational• down Component or process is not operational• empty Component slot is empty• downloading Component is downloading image into memory• booting Component is booting downloaded image• starting Component image operational, application processes starting• failed Component or process has failed• synchronizing Component is currently being synchronized• upgrading Component is currently being upgraded• low-power Component is offline due to insufficient system power• degraded Component or process is in a degraded state• warm-reboot Component or process is currently warm rebooting This state is set during a warm reboot immediately following initiation of the reboot, continuing after startup until the system has completed audit. In this state the system will not accept configuration changes.• waiting Component or process is currently waiting This state can be set by event handler when the <code>reinvoke-with-delay</code> action is used, and indicates that the event handler is waiting for the provided delay before reinvoking the instance.

Configurable	False
Platforms	Supported on all platforms

socket-path *string*

Description	Path to the unix socket used by JSON RPC
Context	system json-rpc-server unix-socket socket-path <i>string</i>
Tree	socket-path
Configurable	False
Platforms	Supported on all platforms

tls-profile *reference*

Description	Reference to the TLS profile to use on the JSON RPC unix socket server If none is specified, then TLS is not used.
Context	system json-rpc-server unix-socket tls-profile <i>reference</i>
Tree	tls-profile
Reference	system tls server-profile name <i>string</i>
Configurable	True
Platforms	Supported on all platforms

use-authentication *boolean*

Description	Enable or disable the use of username/password authentication for every JSON RPC request
Context	system json-rpc-server unix-socket use-authentication <i>boolean</i>
Tree	use-authentication
Default	true
Configurable	True
Platforms	Supported on all platforms

l2cp-transparency

Description	Enclosing container for system level Layer-2 Control Protocol transparency.
Context	system l2cp-transparency
Tree	l2cp-transparency

Configurable	False
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

I2cp-statistics

Description	Container for Layer-2 Control Plane protocol statistics.
Context	system l2cp-transparency l2cp-statistics
Tree	l2cp-statistics
Configurable	False
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

dot1x

Description	Container for 802.1x protocols.
Context	system l2cp-transparency l2cp-statistics dot1x
Tree	dot1x
Configurable	False
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

in-trap-to-cpu-packets *number*

Description	System level incoming 802.1x frames copied to CPU. Cumulative of all Ethernet interfaces including all the copy-to-cpu 802.1x frames. 802.1x frames are identified by a destination MAC value of 01:80:c2:00:00:03 and EtherType value of 0x888e.
Context	system l2cp-transparency l2cp-statistics dot1x in-trap-to-cpu-packets number
Tree	in-trap-to-cpu-packets
Default	0
Configurable	False
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

in-tunneled-packets *number*

Description	System level incoming 802.1x tunneled frames. Cumulative of all Ethernet interfaces including all the tunneled 802.1x frames. 802.1x frames are identified by a destination MAC value of 01:80:c2:00:00:03 and EtherType value of 0x888e.
Context	system l2cp-transparency l2cp-statistics dot1x in-tunneled-packets <i>number</i>
Tree	in-tunneled-packets
Default	0
Configurable	False
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

last-clear *string*

Description	Timestamp of the last time the LACP counters were cleared.
Context	system l2cp-transparency l2cp-statistics dot1x last-clear <i>string</i>
Tree	last-clear
String Length	20 to 32
Configurable	False
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

lACP

Description	Container for LACP.
Context	system l2cp-transparency l2cp-statistics lACP
Tree	lACP
Configurable	False
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

in-trap-to-cpu-packets *number*

Description	System level incoming Link Aggregation Control Protocol frames copied to CPU. Cumulative of all Ethernet interfaces including all the copy-to-cpu LACP frames. LACP frames are identified by a destination MAC value of 01:80:c2:00:00:02, EtherType value of 0x8809 and slow protocol subtype 0x1.
Context	system l2cp-transparency l2cp-statistics lacp in-trap-to-cpu-packets <i>number</i>
Tree	in-trap-to-cpu-packets
Default	0
Configurable	False
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

in-tunneled-packets *number*

Description	System level incoming Link Aggregation Control Protocol tunneled frames. Cumulative of all Ethernet interfaces including all the tunneled LACP frames. LACP frames are identified by a destination MAC value of 01:80:c2:00:00:02, EtherType value of 0x8809 and slow protocol subtype 0x1.
Context	system l2cp-transparency l2cp-statistics lacp in-tunneled-packets <i>number</i>
Tree	in-tunneled-packets
Default	0
Configurable	False
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

last-clear *string*

Description	Timestamp of the last time the LACP counters were cleared.
Context	system l2cp-transparency l2cp-statistics lacp last-clear <i>string</i>
Tree	last-clear
String Length	20 to 32
Configurable	False

Platforms 7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

last-clear *string*

Description Timestamp of the last time the L2CP counters were cleared.

Context [system l2cp-transparency l2cp-statistics last-clear](#) *string*

Tree [last-clear](#)

String Length 20 to 32

Configurable False

Platforms 7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

lldp

Description Container for LLDP.

Context [system l2cp-transparency l2cp-statistics lldp](#)

Tree [lldp](#)

Configurable False

Platforms 7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

in-trap-to-cpu-packets *number*

Description System level incoming Link Layer Discovery Protocol frames copied to CPU. Cumulative of all Ethernet interfaces including all the copy-to-cpu LLDP frames. LLDP frames are identified by a destination MAC value of 01:80:c2:00:00:0e and EtherType value of 0x88cc.

Context [system l2cp-transparency l2cp-statistics lldp in-trap-to-cpu-packets](#) *number*

Tree [in-trap-to-cpu-packets](#)

Default 0

Configurable False

Platforms 7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

in-tunneled-packets *number*

Description	System level incoming Link Layer Discovery Protocol tunneled frames. Cumulative of all Ethernet interfaces including all the tunneled LLDP frames. LLDP frames are identified by a destination MAC value of 01:80:c2:00:00:0e and EtherType value of 0x88cc.
Context	system l2cp-transparency l2cp-statistics lldp in-tunneled-packets <i>number</i>
Tree	in-tunneled-packets
Default	0
Configurable	False
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

last-clear *string*

Description	Timestamp of the last time the LACP counters were cleared.
Context	system l2cp-transparency l2cp-statistics lldp last-clear <i>string</i>
Tree	last-clear
String Length	20 to 32
Configurable	False
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

ptp

Description	Container for Precision Time Protocol Peer-Delay protocol.
Context	system l2cp-transparency l2cp-statistics ptp
Tree	ptp
Configurable	False
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

in-trap-to-cpu-packets *number*

Description	System level incoming Precision Time Protocol Peer-Delay frames copied to CPU. Cumulative of all Ethernet interfaces including all the copy-to-cpu PTP frames. PTP frames are identified by a destination MAC value of 01:80:c2:00:00:0e and Ethertype value of 0x88F7.
Context	system l2cp-transparency l2cp-statistics ptp in-trap-to-cpu-packets <i>number</i>
Tree	in-trap-to-cpu-packets
Default	0
Configurable	False
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

in-tunneled-packets *number*

Description	System level incoming Precision Time Protocol Peer-Delay tunneled frames. Cumulative of all Ethernet interfaces including all the tunneled PTP frames. PTP frames are identified by a destination MAC value of 01:80:c2:00:00:0e and Ethertype value of 0x88F7.
Context	system l2cp-transparency l2cp-statistics ptp in-tunneled-packets <i>number</i>
Tree	in-tunneled-packets
Default	0
Configurable	False
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

last-clear *string*

Description	Timestamp of the last time the PTP counters were cleared.
Context	system l2cp-transparency l2cp-statistics ptp last-clear <i>string</i>
Tree	last-clear
String Length	20 to 32
Configurable	False

Platforms 7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

total-in-discarded-packets *number*

Description System level incoming L2CP discarded frames.
Cumulative of all Ethernet interfaces including all the discarded L2CP frames. L2CP frames are identified by a destination MAC value of 01:80:c2:00:00:0X or 01:80:c2:00:00:2X, being X any value in the 0..F range.

Context [system l2cp-transparency l2cp-statistics total-in-discarded-packets](#) *number*

Tree [total-in-discarded-packets](#)

Default 0

Configurable False

Platforms 7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

total-in-packets *number*

Description System level total incoming L2CP frames.
Cumulative of all Ethernet interfaces including the tunneled, discarded and copy-to-cpu L2CP frames. L2CP frames are identified by a destination MAC value of 01:80:c2:00:00:0X or 01:80:c2:00:00:2X, being X any value in the 0..F range.

Context [system l2cp-transparency l2cp-statistics total-in-packets](#) *number*

Tree [total-in-packets](#)

Default 0

Configurable False

Platforms 7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

total-in-trap-to-cpu-packets *number*

Description System level incoming L2CP copy-to-cpu frames.
Cumulative of all Ethernet interfaces including all the L2CP frames that are copied to CPU. L2CP frames are identified by a destination MAC value of 01:80:c2:00:00:0X or 01:80:c2:00:00:2X, being X any value in the 0..F range.

Context	system l2cp-transparency l2cp-statistics total-in-trap-to-cpu-packets number
Tree	total-in-trap-to-cpu-packets
Default	0
Configurable	False
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

total-in-tunneled-packets *number*

Description	System level incoming L2CP tunneled frames. Cumulative of all Ethernet interfaces including all the tunneled L2CP frames. L2CP frames are identified by a destination MAC value of 01:80:c2:00:00:0X or 01:80:c2:00:00:2X, being X any value in the 0..F range.
Context	system l2cp-transparency l2cp-statistics total-in-tunneled-packets number
Tree	total-in-tunneled-packets
Default	0
Configurable	False
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

xstp

Description	Container for Spanning Tree Protocols.
Context	system l2cp-transparency l2cp-statistics xstp
Tree	xstp
Configurable	False
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

in-trap-to-cpu-packets *number*

Description	System level incoming Spanning Tree Protocol frames copied to CPU. Cumulative of all Ethernet interfaces including all the copy-to-cpu Spanning Tree frames. Spanning Tree frames are identified by a destination MAC value of 01:80:c2:00:00:00 and LLC value 0x42.
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Context	system l2cp-transparency l2cp-statistics xstp in-trap-to-cpu-packets number
Tree	in-trap-to-cpu-packets
Default	0
Configurable	False
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

in-tunneled-packets *number*

Description	System level incoming Spanning Tree tunneled frames. Cumulative of all Ethernet interfaces including all the tunneled Spanning Tree frames. xSTP frames are identified by a destination MAC value of 01:80:c2:00:00:00 and LLC value 0x42.
Context	system l2cp-transparency l2cp-statistics xstp in-tunneled-packets number
Tree	in-tunneled-packets
Default	0
Configurable	False
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

last-clear *string*

Description	Timestamp of the last time the xSTP counters were cleared.
Context	system l2cp-transparency l2cp-statistics xstp last-clear string
Tree	last-clear
String Length	20 to 32
Configurable	False
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

lACP

Description	Enter the lACP context
Context	system lACP
Tree	lACP

Configurable	True
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

system-id *string*

Description	The MAC address portion of the node's System ID. This is combined with the system priority to construct the 8-octet system-id
Context	system lacp system-id string
Tree	system-id
Configurable	True
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

system-priority *number*

Description	System priority used by the node on this LAG interface. Lower value is higher priority for determining which node is the controlling system.
Context	system lacp system-priority number
Tree	system-priority
Configurable	True
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

license id *string*

Description	List of licenses configured on the system
Context	system license id string
Tree	license
Configurable	True
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b
Max. Elements	5

id string

Description	Unique identifier for this license
Context	system license id string
String Length	1 to 255
Configurable	True
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

admin-state keyword

Description	Enable or disable the use of this license
Context	system license id string admin-state keyword
Tree	admin-state
Default	disable
Options	<ul style="list-style-type: none"> • enable • disable
Configurable	True
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

data string

Description	<p>Content of the license</p> <p>This content includes a preceding UUID, followed by a space and the license data.</p> <p>For example: 00000000-0000-0000-0000-000000000000 aACUAX...r YzNRPT0AAAAA</p>
Context	system license id string data string
Tree	data
Configurable	True
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

description string

Description	A user provided description for the license
Context	system license id string description string
Tree	description
String Length	1 to 255
Configurable	True
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

expiration-date string

Description	Date and time the license will expire
Context	system license id string expiration-date string
Tree	expiration-date
String Length	20 to 32
Configurable	False
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

expired boolean

Description	Indicates if the license has expired
Context	system license id string expired boolean
Tree	expired
Configurable	False
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

in-use boolean

Description	Indicates if the license is actively in use
Context	system license id string in-use boolean
Tree	in-use

Configurable	False
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

issued-date *string*

Description	Date and time the license was issued
Context	system license id <i>string</i> issued-date <i>string</i>
Tree	issued-date
String Length	20 to 32
Configurable	False
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

preferred *boolean*

Description	Set a license as being preferred Amongst all valid licenses, the preferred license will be chosen to become active. If no license is set as preferred or the preferred license is not valid, the valid license with the most distant expiry is chosen to become active. Only a single license can be set as preferred.
Context	system license id <i>string</i> preferred <i>boolean</i>
Tree	preferred
Default	false
Configurable	True
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

valid *boolean*

Description	Indicates if the license is valid for use
Context	system license id <i>string</i> valid <i>boolean</i>
Tree	valid
Configurable	False

Platforms 7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

Ildp

Description Top-level container for LLDP configuration and state data

Context [system Ildp](#)

Tree [Ildp](#)

Configurable True

Platforms Supported on all platforms

admin-state *keyword*

Description Enable or disable LLDP at the system level

Context [system Ildp admin-state keyword](#)

Tree [admin-state](#)

Default enable

Options

- enable
- disable

Configurable True

Platforms Supported on all platforms

chassis-id *string*

Description The Chassis ID is a mandatory TLV which identifies the chassis component of the endpoint identifier associated with the transmitting LLDP agent

Context [system Ildp chassis-id string](#)

Tree [chassis-id](#)

Configurable False

Platforms Supported on all platforms

chassis-id-type *keyword*

Description The source for the chassis identifier string

It is an enumerator defined by the LldpChassisIdSubtype object from IEEE 802.1AB MIB.

Context	system lldp chassis-id-type <i>keyword</i>
Tree	chassis-id-type
Default	MAC_ADDRESS
Options	<ul style="list-style-type: none"> • CHASSIS_COMPONENT Chassis identifier based on the value of entPhysicalAlias object defined in IETF RFC 2737 • INTERFACE_ALIAS Chassis identifier based on the value of ifAlias object defined in IETF RFC 2863 • PORT_COMPONENT Chassis identifier based on the value of entPhysicalAlias object defined in IETF RFC 2737 for a port or backplane component • MAC_ADDRESS Chassis identifier based on the value of a unicast source address (encoded in network byte order and IEEE 802.3 canonical bit order), of a port on the containing chassis as defined in IEEE Std 802-2001 • NETWORK_ADDRESS Chassis identifier based on a network address, associated with a particular chassis. The encoded address is composed of two fields. The first field is a single octet, representing the IANA AddressFamilyNumbers value for the specific address type, and the second field is the network address value • INTERFACE_NAME Chassis identifier based on the name of the interface, e.g., the value of if Name object defined in IETF RFC 2863 • LOCAL Chassis identifier based on a locally defined value
Configurable	False
Platforms	Supported on all platforms

hello-timer *number*

Description	System level hello timer for the LLDP protocol
Context	system lldp hello-timer <i>number</i>
Tree	hello-timer
Default	30
Units	seconds
Configurable	True

Platforms Supported on all platforms

hold-multiplier *number*

Description System level hold multiplier, used to define neighbor aging
This field defines how many hellos need to be missed before a neighbor is aged out.
This field also is used along with the 'hello-timer' field to define the TTL TLV in outgoing LLDPDUs.

Context [system lldp hold-multiplier number](#)

Tree [hold-multiplier](#)

Default 4

Configurable True

Platforms Supported on all platforms

interface [name reference](#)

Description List of interfaces on which LLDP can be enabled

Context [system lldp interface name reference](#)

Tree [interface](#)

Configurable True

Platforms Supported on all platforms

name *reference*

Description Reference to the LLDP Ethernet interface

Context [system lldp interface name reference](#)

Reference [interface name string](#)

Configurable True

Platforms Supported on all platforms

admin-state *keyword*

Description Enable or disable LLDP on the interface

Context [system lldp interface name reference admin-state keyword](#)

Tree [admin-state](#)

Default	enable
Options	<ul style="list-style-type: none"> • enable • disable
Configurable	True
Platforms	Supported on all platforms

neighbor id string

Description	List of LLDP neighbors on this interface
Context	system lldp interface name <i>reference</i> neighbor id string
Tree	neighbor
Configurable	False
Platforms	Supported on all platforms

id string

Description	System generated identifier for the remote neighbor
Context	system lldp interface name <i>reference</i> neighbor id string
Configurable	False
Platforms	Supported on all platforms

capability name identityref

Description	List of LLDP system capabilities advertised by the neighbor
Context	system lldp interface name <i>reference</i> neighbor id string capability name identityref
Tree	capability
Configurable	False
Platforms	Supported on all platforms

name identityref

Description	<p>Name of the system capability advertised by the neighbor</p> <p>Capabilities are represented in a bitmap that defines the primary functions of the system. The capabilities are defined in IEEE 802.1AB.</p>
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Context	system lldp interface name <i>reference</i> neighbor id <i>string</i> capability name <i>identityref</i>
Options	<ul style="list-style-type: none"> • OTHER Other capability not specified; bit position 1 • REPEATER Repeater capability; bit position 2 • MAC_BRIDGE MAC bridge capability; bit position 3 • WLAN_ACCESS_POINT WLAN access point capability; bit position 4 • ROUTER Router; bit position 5 • TELEPHONE Telephone capability; bit position 6 • DOCSIS_CABLE_DEVICE DOCSIS cable device; bit position 7 • STATION_ONLY Station only capability, for devices that implement only an end station capability, and for which none of the other capabilities apply; bit position 8 • C_VLAN C-VLAN component of a VLAN Bridge; bit position 9 • S_VLAN S-VLAN component of a VLAN Bridge; bit position 10 • TWO_PORT_MAC_RELAY Two-port MAC Relay (TPMR) capability; bit position 11
Configurable	False
Platforms	Supported on all platforms
enabled <i>boolean</i>	
Description	Indicates whether the corresponding system capability is enabled on the neighbor
Context	system lldp interface name <i>reference</i> neighbor id <i>string</i> capability name <i>identityref</i> enabled <i>boolean</i>
Tree	enabled
Configurable	False
Platforms	Supported on all platforms

chassis-id string

Description	The chassis ID of the remote neighbor The Chassis ID is a mandatory TLV which identifies the chassis component of the endpoint identifier associated with the transmitting LLDP agent
Context	system lldp interface name <i>reference</i> neighbor id string chassis-id string
Tree	chassis-id
Configurable	False
Platforms	Supported on all platforms

chassis-id-type keyword

Description	The type of identifier used in the chassis-id field This field identifies the format and source of the chassis identifier string. It is an enumerator defined by the LldpChassisIdSubtype object from IEEE 802.1AB MIB.
Context	system lldp interface name <i>reference</i> neighbor id string chassis-id-type keyword
Tree	chassis-id-type
Default	MAC_ADDRESS
Options	<ul style="list-style-type: none"> • CHASSIS_COMPONENT Chassis identifier based on the value of entPhysicalAlias object defined in IETF RFC 2737 • INTERFACE_ALIAS Chassis identifier based on the value of ifAlias object defined in IETF RFC 2863 • PORT_COMPONENT Chassis identifier based on the value of entPhysicalAlias object defined in IETF RFC 2737 for a port or backplane component • MAC_ADDRESS Chassis identifier based on the value of a unicast source address (encoded in network byte order and IEEE 802.3 canonical bit order), of a port on the containing chassis as defined in IEEE Std 802-2001 • NETWORK_ADDRESS Chassis identifier based on a network address, associated with a particular chassis. The encoded address is composed of two fields. The first field is a single octet, representing the IANA AddressFamilyNumbers value for the specific address type, and the second field is the network address value

- **INTERFACE_NAME**
Chassis identifier based on the name of the interface, e.g., the value of if Name object defined in IETF RFC 2863
- **LOCAL**
Chassis identifier based on a locally defined value

Configurable	False
Platforms	Supported on all platforms

custom-tlv *type number oui string oui-subtype string*

Description	List of custom LLDP TLVs from a neighbor
Context	system lldp interface name <i>reference</i> neighbor id string custom-tlv type number oui string oui-subtype string
Tree	custom-tlv
Configurable	False
Platforms	Supported on all platforms

type *number*

Description	The integer value identifying the type of information contained in the value field.
Context	system lldp interface name <i>reference</i> neighbor id string custom-tlv type number oui string oui-subtype string
Configurable	False
Platforms	Supported on all platforms

oui *string*

Description	The organizationally unique identifier field from the custom TLV This field shall contain the organization's OUI as defined in Clause 9 of IEEE Std 802. The high-order octet is 0 and the low-order 3 octets are the SMI Network Management Private Enterprise Code of the Vendor in network byte order, as defined in the 'Assigned Numbers' RFC [RFC3232].
Context	system lldp interface name <i>reference</i> neighbor id string custom-tlv type number oui string oui-subtype string
Configurable	False
Platforms	Supported on all platforms

oui-subtype *string*

Description	The subtype value defined by the OUI for this custom TLV The organizationally defined subtype field shall contain a unique subtype value assigned by the defining organization.
Context	system lldp interface name reference neighbor id string custom-tlv type number oui string oui-subtype string
Configurable	False
Platforms	Supported on all platforms

value *binary*

Description	A variable-length octet-string containing the value for this TLV
Context	system lldp interface name reference neighbor id string custom-tlv type number oui string oui-subtype string value binary
Tree	value
Configurable	False
Platforms	Supported on all platforms

first-message *string*

Description	Date and time of the first message from neighbor
Context	system lldp interface name reference neighbor id string first-message string
Tree	first-message
String Length	20 to 32
Configurable	False
Platforms	Supported on all platforms

last-update *string*

Description	Date and time of the last update from neighbor
Context	system lldp interface name reference neighbor id string last-update string
Tree	last-update
String Length	20 to 32
Configurable	False
Platforms	Supported on all platforms

management-address *address string*

Description	List of management addresses received from the remote LLDP neighbor
Context	system lldp interface name <i>reference</i> neighbor id <i>string</i> management-address <i>address string</i>
Tree	management-address
Configurable	False
Platforms	Supported on all platforms

address *string*

Description	The management address received from the remote LLDP neighbor The Management Address is a mandatory TLV which identifies a network address associated with the LLDP agent, which can be used to reach the agent on the port identified in the Port ID TLV.
Context	system lldp interface name <i>reference</i> neighbor id <i>string</i> management-address <i>address string</i>
Configurable	False
Platforms	Supported on all platforms

type *keyword*

Description	The type of management address referenced in the address field The enumerated value for the network address type identified in this TLV. This enumeration is defined in the 'Assigned Numbers' RFC [RFC3232] and the ianaAddressFamilyNumbers object.
Context	system lldp interface name <i>reference</i> neighbor id <i>string</i> management-address <i>address string</i> type <i>keyword</i>
Tree	type
Options	<ul style="list-style-type: none"> • IPv4 Use IPv4 address for management address type • IPv6 Use IPv6 address for management address type
Configurable	False
Platforms	Supported on all platforms

port-description *string*

Description	The description of the port referenced in the port-id field The binary string containing the actual port identifier for the port which this LLDP PDU was transmitted. The source and format of this field is defined by PtopoPortId from RFC2922.
Context	system lldp interface name <i>reference</i> neighbor id <i>string</i> port-description <i>string</i>
Tree	port-description
Configurable	False
Platforms	Supported on all platforms

port-id (*string* | *binary*)

Description	The Port ID of the remote neighbor The Port ID is a mandatory TLV which identifies the port component of the endpoint identifier associated with the transmitting LLDP agent. If the specified port is an IEEE 802.3 Repeater port, then this TLV is optional.
Context	system lldp interface name <i>reference</i> neighbor id <i>string</i> port-id (<i>string</i> <i>binary</i>)
Tree	port-id
Configurable	False
Platforms	Supported on all platforms

port-id-type *keyword*

Description	The type of identifier used in the port-id field This field identifies the format and source of the port identifier string. It is an enumerator defined by the PtopoPortIdType object from RFC2922.
Context	system lldp interface name <i>reference</i> neighbor id <i>string</i> port-id-type <i>keyword</i>
Tree	port-id-type
Options	<ul style="list-style-type: none"> • INTERFACE_ALIAS Chassis identifier based on the value of ifAlias object defined in IETF RFC 2863 • PORT_COMPONENT Port identifier based on the value of entPhysicalAlias object defined in IETF RFC 2737 for a port component • MAC_ADDRESS

Port identifier based on the value of a unicast source address (encoded in network byte order and IEEE 802.3 canonical bit order) associated with a port

- NETWORK_ADDRESS

Port identifier based on a network address, associated with a particular port

- INTERFACE_NAME

Port identifier based on the name of the interface, e.g., the value of if Name object defined in IETF RFC 2863

- AGENT_CIRCUIT_ID

Port identifier based on the circuit id in the DHCP relay agent information option as defined in IETF RFC 3046

- LOCAL

Port identifier based on a locally defined alphanumeric string

Configurable

False

Platforms

Supported on all platforms

system-description *string*

Description

The system description of the remote neighbor

The system description field shall contain an alpha-numeric string that is the textual description of the network entity. The system description should include the full name and version identification of the system's hardware type, software operating system, and networking software. If implementations support IETF RFC 3418, the sysDescr object should be used for this field.

Context

[system lldp interface name](#) *reference* [neighbor id](#) *string* [system-description](#) *string*

Tree

[system-description](#)

String Length

0 to 255

Configurable

False

Platforms

Supported on all platforms

system-name *string*

Description

The administratively assigned name of the remote neighbor

The system name field shall contain an alpha-numeric string that indicates the system's administratively assigned name. The system name should be the system's fully qualified domain name. If implementations support IETF RFC 3418, the sysName object should be used for this field.

Context	system lldp interface name <i>reference</i> neighbor id <i>string</i> system-name <i>string</i>
Tree	system-name
String Length	0 to 255
Configurable	False
Platforms	Supported on all platforms

oper-state *keyword*

Description	Details the operational state of LLDP on the interface
Context	system lldp interface name <i>reference</i> oper-state <i>keyword</i>
Tree	oper-state
Options	<ul style="list-style-type: none"> • up Component or process is operational • down Component or process is not operational • empty Component slot is empty • downloading Component is downloading image into memory • booting Component is booting downloaded image • starting Component image operational, application processes starting • failed Component or process has failed • synchronizing Component is currently being synchronized • upgrading Component is currently being upgraded • low-power Component is offline due to insufficient system power • degraded Component or process is in a degraded state • warm-reboot Component or process is currently warm rebooting

This state is set during a warm reboot immediately following initiation of the reboot, continuing after startup until the system has completed audit. In this state the system will not accept configuration changes.

- waiting

Component or process is currently waiting

This state can be set by event handler when the `reinvoke-with-delay` action is used, and indicates that the event handler is waiting for the provided delay before reinvoking the instance.

Configurable	False
Platforms	Supported on all platforms

statistics

Description	LLDP counters on each interface
Context	system lldp interface name <i>reference</i> statistics
Tree	statistics
Configurable	False
Platforms	Supported on all platforms

frame-discard *number*

Description	The number of LLDP frames received and discarded
Context	system lldp interface name <i>reference</i> statistics frame-discard number
Tree	frame-discard
Default	0
Configurable	False
Platforms	Supported on all platforms

frame-error-in *number*

Description	The number of LLDP frames received with errors
Context	system lldp interface name <i>reference</i> statistics frame-error-in number
Tree	frame-error-in
Default	0
Configurable	False
Platforms	Supported on all platforms

frame-error-out *number*

Description	The number of frame transmit errors on the interface
Context	system lldp interface name <i>reference</i> statistics frame-error-out number
Tree	frame-error-out
Default	0
Configurable	False
Platforms	Supported on all platforms

frame-in *number*

Description	The number of LLDP frames received
Context	system lldp interface name <i>reference</i> statistics frame-in number
Tree	frame-in
Default	0
Configurable	False
Platforms	Supported on all platforms

frame-out *number*

Description	The number of LLDP frames transmitted
Context	system lldp interface name <i>reference</i> statistics frame-out number
Tree	frame-out
Default	0
Configurable	False
Platforms	Supported on all platforms

last-clear *string*

Description	Indicates the last time the counters were cleared
Context	system lldp interface name <i>reference</i> statistics last-clear string
Tree	last-clear
String Length	20 to 32
Configurable	False
Platforms	Supported on all platforms

tlv-discard *number*

Description	The number of TLV frames received and discarded
Context	system lldp interface name <i>reference</i> statistics tlv-discard number
Tree	tlv-discard
Default	0
Configurable	False
Platforms	Supported on all platforms

tlv-unknown *number*

Description	The number of frames received with unknown TLV
Context	system lldp interface name <i>reference</i> statistics tlv-unknown number
Tree	tlv-unknown
Default	0
Configurable	False
Platforms	Supported on all platforms

management-address [subinterface](#) *string*

Description	List of subinterfaces to source management addresses from This list is sent in the management address TLV by LLDP.
Context	system lldp management-address subinterface <i>string</i>
Tree	management-address
Configurable	True
Platforms	Supported on all platforms

subinterface *string*

Description	Reference to the subinterface to source management addresses
Context	system lldp management-address subinterface <i>string</i>
String Length	5 to 25
Configurable	True
Platforms	Supported on all platforms

type *keyword*

Description	Types of addresses sent in the management address TLV The enumerated value for the network address type identified in this TLV. This enumeration is defined in the 'Assigned Numbers' RFC [RFC3232] and the ianaAddressFamilyNumbers object.
Context	system lldp management-address subinterface <i>string type keyword</i>
Tree	type
Options	<ul style="list-style-type: none"> • IPv4 Use IPv4 address for management address type • IPv6 Use IPv6 address for management address type
Configurable	True
Platforms	Supported on all platforms

statistics

Description	Global LLDP counters
Context	system lldp statistics
Tree	statistics
Configurable	False
Platforms	Supported on all platforms

entries-aged-out *number*

Description	The number of entries aged out due to timeout.
Context	system lldp statistics entries-aged-out <i>number</i>
Tree	entries-aged-out
Default	0
Configurable	False
Platforms	Supported on all platforms

frame-discard *number*

Description	The number of LLDP frames received and discarded
Context	system lldp statistics frame-discard <i>number</i>

Tree	frame-discard
Default	0
Configurable	False
Platforms	Supported on all platforms

frame-error-in *number*

Description	The number of LLDP frames received with errors
Context	system lldp statistics frame-error-in <i>number</i>
Tree	frame-error-in
Default	0
Configurable	False
Platforms	Supported on all platforms

frame-in *number*

Description	The number of LLDP frames received
Context	system lldp statistics frame-in <i>number</i>
Tree	frame-in
Default	0
Configurable	False
Platforms	Supported on all platforms

frame-out *number*

Description	The number of LLDP frames transmitted
Context	system lldp statistics frame-out <i>number</i>
Tree	frame-out
Default	0
Configurable	False
Platforms	Supported on all platforms

last-clear *string*

Description	Indicates the last time the counters were cleared
Context	system lldp statistics last-clear <i>string</i>

Tree	last-clear
String Length	20 to 32
Configurable	False
Platforms	Supported on all platforms

tlv-accepted *number*

Description	The number of valid TLVs received.
Context	system lldp statistics tlv-accepted <i>number</i>
Tree	tlv-accepted
Default	0
Configurable	False
Platforms	Supported on all platforms

tlv-discard *number*

Description	The number of TLV frames received and discarded
Context	system lldp statistics tlv-discard <i>number</i>
Tree	tlv-discard
Default	0
Configurable	False
Platforms	Supported on all platforms

tlv-unknown *number*

Description	The number of frames received with unknown TLV
Context	system lldp statistics tlv-unknown <i>number</i>
Tree	tlv-unknown
Default	0
Configurable	False
Platforms	Supported on all platforms

system-description *string*

Description	Field detailing system description, including name and versions
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The system description field shall contain an alpha-numeric string that is the textual description of the network entity. The system description should include the full name and version identification of the system's hardware type, software operating system, and networking software.

Context	system lldp system-description <i>string</i>
Tree	system-description
String Length	0 to 255
Configurable	False
Platforms	Supported on all platforms

system-name *string*

Description	The systems administratively assigned name The system name field shall contain an alpha-numeric string that indicates the system's administratively assigned name. The system name should be the system's fully qualified domain name.
Context	system lldp system-name <i>string</i>
Tree	system-name
String Length	0 to 255
Configurable	False
Platforms	Supported on all platforms

trace-options *keyword*

Description	LLDP trace options
Context	system lldp trace-options <i>keyword</i>
Tree	trace-options
Options	<ul style="list-style-type: none"> • received • transmitted • common
Configurable	True
Platforms	Supported on all platforms

load-balancing

Description	Adjust system-wide ECMP load balancing options.
Context	system load-balancing

Tree	load-balancing
Configurable	True
Platforms	Supported on all platforms

hash-options

Description	Container for packet header fields and other inputs used in hashing calculations
Context	system load-balancing hash-options
Tree	hash-options
Configurable	True
Platforms	Supported on all platforms

destination-address *boolean*

Description	Include the destination IP address in the hash calculation
Context	system load-balancing hash-options destination-address <i>boolean</i>
Tree	destination-address
Default	true
Configurable	True
Platforms	Supported on all platforms

destination-port *boolean*

Description	Include the destination TCP/UDP port number in the hash calculation if the packet is an unfragmented IP packet carrying a TCP/UDP payload
Context	system load-balancing hash-options destination-port <i>boolean</i>
Tree	destination-port
Default	true
Configurable	True
Platforms	Supported on all platforms

hash-seed (*number* | *keyword*)

Description	The hash seed to use for random selection of ECMP/LAG members To avoid polarization effects, directly-connected nodes should have unique hash-seeds. This can be achieved through explicit configuration of the hash-
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seed, or using the generate-from-mac option (which is the default), and checking that the auto-generated hash-seed is in fact unique (by reading the state value of this leaf).

Context	system load-balancing hash-options hash-seed (<i>number</i> <i>keyword</i>)
Tree	hash-seed
Default	generate-from-mac
Options	<ul style="list-style-type: none"> • generate-from-mac
Configurable	True
Platforms	Supported on all platforms

ipv6-flow-label *boolean*

Description	<p>Include the IPv6 flow label in the hash calculation if the packet is an IPv6 packet</p> <p>It is expected that the IPv6 flow label value is written by the server or other host originating the flow and not changed by any intermediate switch or router.</p>
Context	system load-balancing hash-options ipv6-flow-label <i>boolean</i>
Tree	ipv6-flow-label
Default	false
Configurable	True
Platforms	Supported on all platforms

mpls-label-stack *boolean*

Description	Include the received labels (terminated and non-terminated) in the hash calculation
Context	system load-balancing hash-options mpls-label-stack <i>boolean</i>
Tree	mpls-label-stack
Default	false
Configurable	True
Platforms	Supported on all platforms

protocol *boolean*

Description	Include the IP protocol number in the hash calculation. For an IPv6 packet this is protocol value in the next-header field of the last extension header.
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Context	system load-balancing hash-options protocol <i>boolean</i>
Tree	protocol
Default	true
Configurable	True
Platforms	Supported on all platforms

source-address *boolean*

Description	Include the source IP address in the hash calculation
Context	system load-balancing hash-options source-address <i>boolean</i>
Tree	source-address
Default	true
Configurable	True
Platforms	Supported on all platforms

source-port *boolean*

Description	Include the source TCP/UDP port number in the hash calculation if the packet is an unfragmented IP packet carrying a TCP/UDP payload
Context	system load-balancing hash-options source-port <i>boolean</i>
Tree	source-port
Default	true
Configurable	True
Platforms	Supported on all platforms

vlan *boolean*

Description	Include the received VLAN ID in the hash calculation
Context	system load-balancing hash-options vlan <i>boolean</i>
Tree	vlan
Default	true
Configurable	True
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4

logging

Description	System logging provides the interface to syslog services to setup output entities on a selection of log sources.
Context	system logging
Tree	logging
Configurable	True
Platforms	Supported on all platforms except IMGMT

buffer [buffer-name](#) *string*

Description	Log files maintained in memory, non-persistent across system reboots These files are stored at directory <code>/var/log/srlinux/buffer</code> . Rotation into multiple files is available.
Context	system logging buffer buffer-name <i>string</i>
Tree	buffer
Configurable	True
Platforms	Supported on all platforms except IMGMT

buffer-name *string*

Description	Base name of the file(s) to be stored in memory
Context	system logging buffer buffer-name <i>string</i>
Configurable	True
Platforms	Supported on all platforms except IMGMT

facility [facility-name](#) *keyword*

Description	List of facilities to source messages from
Context	system logging buffer buffer-name <i>string</i> facility facility-name <i>keyword</i>
Tree	facility
Configurable	True
Platforms	Supported on all platforms except IMGMT

facility-name *keyword*

Description	Name of a Linux syslog facility
Context	system logging buffer buffer-name <i>string</i> facility facility-name <i>keyword</i>
Options	<ul style="list-style-type: none"> • all • audit • auth • authpriv • console • cron • daemon • ftp • kern • lpr • mail • news • ntp • syslog • user • uucp • local0 • local1 • local2 • local3 • local4 • local5 • local6 • local7
Configurable	True
Platforms	Supported on all platforms except IMGMT

priority

Description	Narrows the capture to a given severity, a range or a specific set of severities
Context	system logging buffer buffer-name <i>string</i> facility facility-name <i>keyword</i> priority

Tree	priority
Configurable	True
Platforms	Supported on all platforms except IMGMT

match-above *keyword*

Description	At a given severity and above
Context	system logging buffer buffer-name <i>string</i> facility facility-name <i>keyword</i> priority match-above <i>keyword</i>
Tree	match-above
Options	<ul style="list-style-type: none"> • emergency • alert • critical • error • warning • notice • informational • debug
Configurable	True
Platforms	Supported on all platforms except IMGMT

match-exact *keyword*

Description	Individually specified severities
Context	system logging buffer buffer-name <i>string</i> facility facility-name <i>keyword</i> priority match-exact <i>keyword</i>
Tree	match-exact
Options	<ul style="list-style-type: none"> • emergency • alert • critical • error • warning • notice • informational • debug
Configurable	True

Platforms Supported on all platforms except IMGMT

filter *reference*

Description A set of all-matching criteria that messages must fulfill in order to be captured

Context [system logging buffer buffer-name string filter reference](#)

Tree [filter](#)

Reference [system logging filter filter-name string](#)

Configurable True

Platforms Supported on all platforms except IMGMT

format (*string* | *keyword*)

Description Text format of syslog messages to a local output (buffer, file or console), in legacy rsyslog \$template style or one of the predefined templates
The default presents a date timestamp according to rfc3339. The predefined templates are the ones supported by rsyslogd.

Context [system logging buffer buffer-name string format \(string | keyword\)](#)

Tree [format](#)

Default RSYSLOG_FileFormat

Options

- RSYSLOG_FileFormat
- RSYSLOG_TraditionalFileFormat
- RSYSLOG_DebugFormat

Configurable True

Platforms Supported on all platforms except IMGMT

persist *number*

Description Time in seconds to shadow the buffer to persistent storage
Setting this field to 0 results in the buffer not being persisted. A value other than 0 will result in the log being persisted to disk based on the configured value. Logs with a non-zero persist value are persisted automatically on rollover, or at the configured value.

Context [system logging buffer buffer-name string persist number](#)

Tree [persist](#)

Range 0 | 60 to 604800

Default	0
Units	seconds
Configurable	True
Platforms	Supported on all platforms except IMGMT

rotate *number*

Description	Number of files to keep in rotation when a maximum file size is reached
Context	system logging buffer buffer-name <i>string rotate number</i>
Tree	rotate
Default	4
Configurable	True
Platforms	Supported on all platforms except IMGMT

rotations *number*

Description	Number of file rotations occurred
Context	system logging buffer buffer-name <i>string rotations number</i>
Tree	rotations
Default	0
Configurable	False
Platforms	Supported on all platforms except IMGMT

size *string*

Description	Number of bytes an individual output file cannot exceed The field allows the 'K, M, or G' suffixes as shorthand. When reaching that size, a rotation happens and subsequent data is stored in a new file with the same base name.
Context	system logging buffer buffer-name <i>string size string</i>
Tree	size
Default	10M
Configurable	True
Platforms	Supported on all platforms except IMGMT

subsystem *subsystem-name keyword*

Description	Entity or entities that may produce messages to be captured
Context	system logging buffer buffer-name <i>string</i> subsystem subsystem-name <i>keyword</i>
Tree	subsystem
Configurable	True
Platforms	Supported on all platforms except IMGMT

subsystem-name *keyword*

Description	Reference to an available subsystem to source messages from
Context	system logging buffer buffer-name <i>string</i> subsystem subsystem-name <i>keyword</i>
Options	<ul style="list-style-type: none"> • aaa • accounting • acl • app • arpd • bfd • bgp • bridgetable • chassis • debug • dhcp • ethcfm • evpn • fib • gnmi • gnsi • gribi • grpc • igmp • isis • json • lag

- ldp
- license
- linux
- lldp
- log
- mgmt
- mirror
- mld
- mpls
- netconf
- netinst
- oam_pm
- ospf
- p4rt
- pcc
- pim
- platform
- policy
- pw
- qos
- sdk
- sflow
- staticroute
- sync
- twamp
- vxlan
- xdp

Configurable

True

Platforms

Supported on all platforms except IMGMT

priority

Description

Narrows the capture to a given severity, a range or a specific set of severities

Context

[system logging buffer buffer-name](#) *string* [subsystem subsystem-name](#)
keyword [priority](#)

Tree

[priority](#)

Configurable	True
Platforms	Supported on all platforms except IMGMT

match-above *keyword*

Description	At a given severity and above
Context	system logging buffer buffer-name string subsystem subsystem-name keyword priority match-above keyword
Tree	match-above
Options	<ul style="list-style-type: none"> • emergency • alert • critical • error • warning • notice • informational • debug

Configurable	True
Platforms	Supported on all platforms except IMGMT

match-exact *keyword*

Description	Individually specified severities
Context	system logging buffer buffer-name string subsystem subsystem-name keyword priority match-exact keyword
Tree	match-exact
Options	<ul style="list-style-type: none"> • emergency • alert • critical • error • warning • notice • informational • debug

Configurable	True
Platforms	Supported on all platforms except IMGMT

console

Description	Hardware serial device normally used for bring-up and diagnostics
Context	system logging console
Tree	console
Configurable	True
Platforms	Supported on all platforms except IMGMT

facility [facility-name](#) *keyword*

Description	List of facilities to source messages from
Context	system logging console facility facility-name <i>keyword</i>
Tree	facility
Configurable	True
Platforms	Supported on all platforms except IMGMT

facility-name *keyword*

Description	Name of a Linux syslog facility
Context	system logging console facility facility-name <i>keyword</i>
Options	<ul style="list-style-type: none"> • all • audit • auth • authpriv • console • cron • daemon • ftp • kern • lpr • mail • news • ntp • syslog • user • uucp

- local0
- local1
- local2
- local3
- local4
- local5
- local6
- local7

Configurable	True
Platforms	Supported on all platforms except IMGMT

priority

Description	Narrows the capture to a given severity, a range or a specific set of severities
Context	system logging console facility facility-name keyword priority
Tree	priority
Configurable	True
Platforms	Supported on all platforms except IMGMT

match-above *keyword*

Description	At a given severity and above
Context	system logging console facility facility-name keyword priority match-above keyword
Tree	match-above
Options	<ul style="list-style-type: none"> • emergency • alert • critical • error • warning • notice • informational • debug
Configurable	True
Platforms	Supported on all platforms except IMGMT

match-exact *keyword*

Description	Individually specified severities
Context	system logging console facility facility-name <i>keyword</i> priority match-exact keyword
Tree	match-exact
Options	<ul style="list-style-type: none"> • emergency • alert • critical • error • warning • notice • informational • debug
Configurable	True
Platforms	Supported on all platforms except IMGMT

filter *reference*

Description	A set of all-matching criteria that messages must fulfill in order to be captured
Context	system logging console filter reference
Tree	filter
Reference	system logging filter filter-name <i>string</i>
Configurable	True
Platforms	Supported on all platforms except IMGMT

format (*string* | *keyword*)

Description	Text format of syslog messages to a local output (buffer, file or console), in legacy rsyslog \$template style or one of the predefined templates The default presents a date timestamp according to rfc3339. The predefined templates are the ones supported by rsyslogd.
Context	system logging console format (<i>string</i> <i>keyword</i>)
Tree	format
Default	RSYSLOG_FileFormat

Options	<ul style="list-style-type: none"> • RSYSLOG_FileFormat • RSYSLOG_TraditionalFileFormat • RSYSLOG_DebugFormat
Configurable	True
Platforms	Supported on all platforms except IMGMT

subsystem [subsystem-name](#) *keyword*

Description	Entity or entities that may produce messages to be captured
Context	system logging console subsystem subsystem-name <i>keyword</i>
Tree	subsystem
Configurable	True
Platforms	Supported on all platforms except IMGMT

subsystem-name *keyword*

Description	Reference to an available subsystem to source messages from
Context	system logging console subsystem subsystem-name <i>keyword</i>
Options	<ul style="list-style-type: none"> • aaa • accounting • acl • app • arpnd • bfd • bgp • bridgetable • chassis • debug • dhcp • ethcfm • evpn • fib • gnmi • gnsi • gribi • grpc

- igmp
- isis
- json
- lag
- ldp
- license
- linux
- lldp
- log
- mgmt
- mirror
- mld
- mpls
- netconf
- netinst
- oam_pm
- ospf
- p4rt
- pcc
- pim
- platform
- policy
- pw
- qos
- sdk
- sflow
- staticroute
- sync
- twamp
- vxlan
- xdp

Configurable

True

Platforms

Supported on all platforms except IMGMT

priority

Description	Narrows the capture to a given severity, a range or a specific set of severities
Context	system logging console subsystem subsystem-name <i>keyword</i> priority
Tree	priority
Configurable	True
Platforms	Supported on all platforms except IMGMT

match-above *keyword*

Description	At a given severity and above
Context	system logging console subsystem subsystem-name <i>keyword</i> priority match-above <i>keyword</i>
Tree	match-above
Options	<ul style="list-style-type: none"> • emergency • alert • critical • error • warning • notice • informational • debug
Configurable	True
Platforms	Supported on all platforms except IMGMT

match-exact *keyword*

Description	Individually specified severities
Context	system logging console subsystem subsystem-name <i>keyword</i> priority match-exact <i>keyword</i>
Tree	match-exact
Options	<ul style="list-style-type: none"> • emergency • alert • critical • error • warning

- notice
- informational
- debug

Configurable	True
Platforms	Supported on all platforms except IMGMT

file [file-name](#) *string*

Description	Log files maintained on disk, persistent across system reboots When a maximum file size is reached, the file is renamed and a maximum rotate number of them are kept.
Context	system logging file file-name <i>string</i>
Tree	file
Configurable	True
Platforms	Supported on all platforms except IMGMT

file-name *string*

Description	Base name of the file(s) to be stored on disk
Context	system logging file file-name <i>string</i>
Configurable	True
Platforms	Supported on all platforms except IMGMT

directory *string*

Description	Fully qualified path of a directory where the log file(s) shall be maintained
Context	system logging file file-name <i>string</i> directory <i>string</i>
Tree	directory
Default	/var/log/srlinux/file
Configurable	True
Platforms	Supported on all platforms except IMGMT

facility [facility-name](#) *keyword*

Description	List of facilities to source messages from
Context	system logging file file-name <i>string</i> facility facility-name <i>keyword</i>

Tree	facility
Configurable	True
Platforms	Supported on all platforms except IMGMT

facility-name *keyword*

Description	Name of a Linux syslog facility
Context	system logging file file-name <i>string</i> facility facility-name <i>keyword</i>
Options	<ul style="list-style-type: none"> • all • audit • auth • authpriv • console • cron • daemon • ftp • kern • lpr • mail • news • ntp • syslog • user • uucp • local0 • local1 • local2 • local3 • local4 • local5 • local6 • local7
Configurable	True
Platforms	Supported on all platforms except IMGMT

priority

Description	Narrows the capture to a given severity, a range or a specific set of severities
Context	system logging file file-name <i>string</i> facility facility-name <i>keyword</i> priority
Tree	priority
Configurable	True
Platforms	Supported on all platforms except IMGMT

match-above *keyword*

Description	At a given severity and above
Context	system logging file file-name <i>string</i> facility facility-name <i>keyword</i> priority match-above <i>keyword</i>
Tree	match-above
Options	<ul style="list-style-type: none"> • emergency • alert • critical • error • warning • notice • informational • debug
Configurable	True
Platforms	Supported on all platforms except IMGMT

match-exact *keyword*

Description	Individually specified severities
Context	system logging file file-name <i>string</i> facility facility-name <i>keyword</i> priority match-exact <i>keyword</i>
Tree	match-exact
Options	<ul style="list-style-type: none"> • emergency • alert • critical • error • warning

- notice
- informational
- debug

Configurable	True
Platforms	Supported on all platforms except IMGMT

filter *reference*

Description	A set of all-matching criteria that messages must fulfill in order to be captured
Context	system logging file file-name <i>string</i> filter reference
Tree	filter
Reference	system logging filter filter-name <i>string</i>
Configurable	True
Platforms	Supported on all platforms except IMGMT

format (*string* | *keyword*)

Description	Text format of syslog messages to a local output (buffer, file or console), in legacy rsyslog \$template style or one of the predefined templates The default presents a date timestamp according to rfc3339. The predefined templates are the ones supported by rsyslogd.
Context	system logging file file-name <i>string</i> format (string keyword)
Tree	format
Default	RSYSLOG_FileFormat
Options	<ul style="list-style-type: none"> • RSYSLOG_FileFormat • RSYSLOG_TraditionalFileFormat • RSYSLOG_DebugFormat
Configurable	True
Platforms	Supported on all platforms except IMGMT

rotate *number*

Description	Number of files to keep in rotation when a maximum file size is reached
Context	system logging file file-name <i>string</i> rotate number
Tree	rotate

Default	4
Configurable	True
Platforms	Supported on all platforms except IMGMT

rotations *number*

Description	Number of file rotations occurred
Context	system logging file file-name <i>string</i> rotations <i>number</i>
Tree	rotations
Default	0
Configurable	False
Platforms	Supported on all platforms except IMGMT

size *string*

Description	Number of bytes an individual output file cannot exceed The field allows the 'K, M, or G' suffixes as shorthand. When reaching that size, a rotation happens and subsequent data is stored in a new file with the same base name.
Context	system logging file file-name <i>string</i> size <i>string</i>
Tree	size
Default	10M
Configurable	True
Platforms	Supported on all platforms except IMGMT

subsystem [subsystem-name](#) *keyword*

Description	Entity or entities that may produce messages to be captured
Context	system logging file file-name <i>string</i> subsystem subsystem-name <i>keyword</i>
Tree	subsystem
Configurable	True
Platforms	Supported on all platforms except IMGMT

subsystem-name *keyword*

Description	Reference to an available subsystem to source messages from
--------------------	---

Context `system logging file file-name string subsystem subsystem-name keyword`

Options

- aaa
- accounting
- acl
- app
- arpd
- bfd
- bgp
- bridgetable
- chassis
- debug
- dhcp
- ethcfm
- evpn
- fib
- gnmi
- gnsi
- gribi
- grpc
- igmp
- isis
- json
- lag
- ldp
- license
- linux
- lldp
- log
- mgmt
- mirror
- mld
- mpls
- netconf
- netinst
- oam_pm
- ospf

- p4rt
- pcc
- pim
- platform
- policy
- pw
- qos
- sdk
- sflow
- staticroute
- sync
- twamp
- vxlan
- xdp

Configurable

True

Platforms

Supported on all platforms except IMGMT

priority**Description**

Narrows the capture to a given severity, a range or a specific set of severities

Context[system logging file file-name](#) *string subsystem subsystem-name keyword priority***Tree**[priority](#)**Configurable**

True

Platforms

Supported on all platforms except IMGMT

match-above *keyword***Description**

At a given severity and above

Context[system logging file file-name](#) *string subsystem subsystem-name keyword priority match-above keyword***Tree**[match-above](#)**Options**

- emergency
- alert
- critical
- error
- warning

	<ul style="list-style-type: none"> • notice • informational • debug
Configurable	True
Platforms	Supported on all platforms except IMGMT

match-exact *keyword*

Description	Individually specified severities
Context	system logging file file-name <i>string</i> subsystem subsystem-name <i>keyword</i> priority match-exact <i>keyword</i>
Tree	match-exact
Options	<ul style="list-style-type: none"> • emergency • alert • critical • error • warning • notice • informational • debug
Configurable	True
Platforms	Supported on all platforms except IMGMT

filter [filter-name](#) *string*

Description	Describes a set of criteria that captured messages are required to fulfill
Context	system logging filter filter-name <i>string</i>
Tree	filter
Configurable	True
Platforms	Supported on all platforms except IMGMT

filter-name *string*

Description	Name of the filter
Context	system logging filter filter-name <i>string</i>
Configurable	True

Platforms Supported on all platforms except IMGMT

contains *string*

Description Text to find in the MSG property of messages to capture from the stream
This is slower than prefix.

Context [system logging filter filter-name string contains string](#)

Tree [contains](#)

Configurable True

Platforms Supported on all platforms except IMGMT

facility [facility-name keyword](#)

Description List of facilities to source messages from

Context [system logging filter filter-name string facility facility-name keyword](#)

Tree [facility](#)

Configurable True

Platforms Supported on all platforms except IMGMT

facility-name *keyword*

Description Name of a Linux syslog facility

Context [system logging filter filter-name string facility facility-name keyword](#)

Options

- all
- audit
- auth
- authpriv
- console
- cron
- daemon
- ftp
- kern
- lpr
- mail
- news
- ntp

- syslog
- user
- uucp
- local0
- local1
- local2
- local3
- local4
- local5
- local6
- local7

Configurable

True

Platforms

Supported on all platforms except IMGMT

priority**Description**

Narrows the capture to a given severity, a range or a specific set of severities

Context[system logging filter filter-name](#) *string* [facility facility-name](#) *keyword* [priority](#)**Tree**[priority](#)**Configurable**

True

Platforms

Supported on all platforms except IMGMT

match-above *keyword***Description**

At a given severity and above

Context[system logging filter filter-name](#) *string* [facility facility-name](#) *keyword* [priority](#)
[match-above](#) *keyword***Tree**[match-above](#)**Options**

- emergency
- alert
- critical
- error
- warning
- notice
- informational
- debug

Configurable	True
Platforms	Supported on all platforms except IMGMT

match-exact *keyword*

Description	Individually specified severities
Context	system logging filter filter-name string facility facility-name keyword priority match-exact keyword
Tree	match-exact
Options	<ul style="list-style-type: none"> • emergency • alert • critical • error • warning • notice • informational • debug

Configurable	True
Platforms	Supported on all platforms except IMGMT

prefix *string*

Description	Text to be present at the beginning of the MSG property of a message This is a fast lookup.
Context	system logging filter filter-name string prefix string
Tree	prefix
Configurable	True
Platforms	Supported on all platforms except IMGMT

regex *string*

Description	Extended regular expression to search in the MSG property of messages
Context	system logging filter filter-name string regex string
Tree	regex
Configurable	True
Platforms	Supported on all platforms except IMGMT

tag *string*

Description	Text to be searched in the SYSLOGTAG property of messages Usually a program name or part of it.
Context	system logging filter filter-name <i>string tag string</i>
Tree	tag
Configurable	True
Platforms	Supported on all platforms except IMGMT

network-instance *reference*

Description	Reference to a configured network-instance to run rsyslogd in This network-instance will be used as a source for requests to remote syslog servers.
Context	system logging network-instance <i>reference</i>
Tree	network-instance
Reference	network-instance name <i>string</i>
Configurable	True
Platforms	Supported on all platforms except IMGMT

remote-server [host](#) (*ipv4-address | ipv6-address | domain-name*)

Description	List of output remote syslog servers
Context	system logging remote-server host (<i>ipv4-address ipv6-address domain-name</i>)
Tree	remote-server
Configurable	True
Platforms	Supported on all platforms except IMGMT

host (*ipv4-address | ipv6-address | domain-name*)

Description	Domain or IP address of a remote syslog server destination
Context	system logging remote-server host (<i>ipv4-address ipv6-address domain-name</i>)
String Length	1 to 253
Configurable	True
Platforms	Supported on all platforms except IMGMT

facility *facility-name* *keyword*

Description	List of facilities to source messages from
Context	system logging remote-server host (<i>ipv4-address</i> <i>ipv6-address</i> <i>domain-name</i>) facility <i>facility-name</i> <i>keyword</i>
Tree	facility
Configurable	True
Platforms	Supported on all platforms except IMGMT

facility-name *keyword*

Description	Name of a Linux syslog facility
Context	system logging remote-server host (<i>ipv4-address</i> <i>ipv6-address</i> <i>domain-name</i>) facility <i>facility-name</i> <i>keyword</i>
Options	<ul style="list-style-type: none">• all• audit• auth• authpriv• console• cron• daemon• ftp• kern• lpr• mail• news• ntp• syslog• user• uucp• local0• local1• local2• local3• local4• local5

	<ul style="list-style-type: none"> • local6 • local7
Configurable	True
Platforms	Supported on all platforms except IMGMT

priority

Description	Narrows the capture to a given severity, a range or a specific set of severities
Context	system logging remote-server host (ipv4-address ipv6-address domain-name) facility facility-name keyword priority
Tree	priority
Configurable	True
Platforms	Supported on all platforms except IMGMT

match-above *keyword*

Description	At a given severity and above
Context	system logging remote-server host (ipv4-address ipv6-address domain-name) facility facility-name keyword priority match-above keyword
Tree	match-above
Options	<ul style="list-style-type: none"> • emergency • alert • critical • error • warning • notice • informational • debug
Configurable	True
Platforms	Supported on all platforms except IMGMT

match-exact *keyword*

Description	Individually specified severities
Context	system logging remote-server host (ipv4-address ipv6-address domain-name) facility facility-name keyword priority match-exact keyword
Tree	match-exact

Options	<ul style="list-style-type: none"> • emergency • alert • critical • error • warning • notice • informational • debug
Configurable	True
Platforms	Supported on all platforms except IMGMT

filter *reference*

Description	A set of all-matching criteria that messages must fulfill in order to be captured
Context	system logging remote-server host (<i>ipv4-address</i> <i>ipv6-address</i> <i>domain-name</i>) filter reference
Tree	filter
Reference	system logging filter filter-name <i>string</i>
Configurable	True
Platforms	Supported on all platforms except IMGMT

format (*string* | *keyword*)

Description	Text format of syslog messages to a remote server, in legacy rsyslog \$template style or one of the predefined templates The default presents a date timestamp according to rfc3339. The predefined templates are the ones supported by rsyslogd.
Context	system logging remote-server host (<i>ipv4-address</i> <i>ipv6-address</i> <i>domain-name</i>) format (<i>string</i> <i>keyword</i>)
Tree	format
Default	RSYSLOG_SyslogProtocol23Format
Options	<ul style="list-style-type: none"> • RSYSLOG_ForwardFormat • RSYSLOG_SyslogProtocol23Format • RSYSLOG_TraditionalForwardFormat
Configurable	True
Platforms	Supported on all platforms except IMGMT

remote-port *number*

Description	Transport port for syslog to use for messages sent to a remote server
Context	system logging remote-server host (<i>ipv4-address</i> <i>ipv6-address</i> <i>domain-name</i>) remote-port <i>number</i>
Tree	remote-port
Default	514
Configurable	True
Platforms	Supported on all platforms except IMGMT

source-address (*ipv4-address* | *ipv6-address*)

Description	Source address for syslog to use for messages sent to a remote server If no source address is provided, then packets will be sent to the remote server using the source address indicated by the routing table.
Context	system logging remote-server host (<i>ipv4-address</i> <i>ipv6-address</i> <i>domain-name</i>) source-address (<i>ipv4-address</i> <i>ipv6-address</i>)
Tree	source-address
Configurable	True
Platforms	Supported on all platforms except IMGMT

subsystem [subsystem-name](#) *keyword*

Description	Entity or entities that may produce messages to be captured
Context	system logging remote-server host (<i>ipv4-address</i> <i>ipv6-address</i> <i>domain-name</i>) subsystem subsystem-name <i>keyword</i>
Tree	subsystem
Configurable	True
Platforms	Supported on all platforms except IMGMT

subsystem-name *keyword*

Description	Reference to an available subsystem to source messages from
Context	system logging remote-server host (<i>ipv4-address</i> <i>ipv6-address</i> <i>domain-name</i>) subsystem subsystem-name <i>keyword</i>
Options	<ul style="list-style-type: none"> • <code>aaa</code> • <code>accounting</code>

- acl
- app
- arpd
- bfd
- bgp
- bridgetable
- chassis
- debug
- dhcp
- ethcfm
- evpn
- fib
- gnmi
- gnsi
- gribi
- grpc
- igmp
- isis
- json
- lag
- ldp
- license
- linux
- lldp
- log
- mgmt
- mirror
- mld
- mpls
- netconf
- netinst
- oam_pm
- ospf
- p4rt
- pcc
- pim

- platform
- policy
- pw
- qos
- sdk
- sflow
- staticroute
- sync
- twamp
- vxlan
- xdp

Configurable

True

Platforms

Supported on all platforms except IMGMT

priority**Description**

Narrows the capture to a given severity, a range or a specific set of severities

Context[system logging remote-server host \(ipv4-address | ipv6-address | domain-name\) subsystem subsystem-name keyword priority](#)**Tree**[priority](#)**Configurable**

True

Platforms

Supported on all platforms except IMGMT

match-above *keyword***Description**

At a given severity and above

Context[system logging remote-server host \(ipv4-address | ipv6-address | domain-name\) subsystem subsystem-name keyword priority match-above keyword](#)**Tree**[match-above](#)**Options**

- emergency
- alert
- critical
- error
- warning
- notice
- informational

	<ul style="list-style-type: none"> • debug
Configurable	True
Platforms	Supported on all platforms except IMGMT

match-exact *keyword*

Description	Individually specified severities
Context	system logging remote-server host (ipv4-address ipv6-address domain-name) subsystem subsystem-name keyword priority match-exact keyword
Tree	match-exact
Options	<ul style="list-style-type: none"> • emergency • alert • critical • error • warning • notice • informational • debug
Configurable	True
Platforms	Supported on all platforms except IMGMT

transport *keyword*

Description	Transport protocol for syslog to use for messages sent to a remote server
Context	system logging remote-server host (ipv4-address ipv6-address domain-name) transport keyword
Tree	transport
Default	udp
Options	<ul style="list-style-type: none"> • udp • tcp
Configurable	True
Platforms	Supported on all platforms except IMGMT

subsystem-facility *keyword*

Description	Linux facility that internal application subsystems will use
--------------------	--

Context	system logging subsystem-facility <i>keyword</i>
Tree	subsystem-facility
Default	local6
Options	<ul style="list-style-type: none">• all• audit• auth• authpriv• console• cron• daemon• ftp• kern• lpr• mail• news• ntp• syslog• user• uucp• local0• local1• local2• local3• local4• local5• local6• local7• auth• authpriv• cron• daemon• ftp• kern• lpr• mail• news

- ntp
- syslog
- user
- uucp
- local0
- local1
- local2
- local3
- local4
- local5
- local6
- local7

Configurable

True

Platforms

Supported on all platforms except IMGMT

use-fqdn *boolean***Description**

Use the FQDN instead of only the hostname for logging messages

Context[system logging use-fqdn boolean](#)**Tree**[use-fqdn](#)**Default**

false

Configurable

True

Platforms

Supported on all platforms except IMGMT

maintenance**Description**

Top-level container for Maintenance Mode configuration

Context[system maintenance](#)**Tree**[maintenance](#)**Configurable**

True

Platforms

Supported on all platforms

group name *string***Description**

List of user-configured maintenance groups

Context[system maintenance group name string](#)

Tree	group
Configurable	True
Platforms	Supported on all platforms

name *string*

Description	Name of the maintenance group.
Context	system maintenance group name <i>string</i>
String Length	1 to 255
Configurable	True
Platforms	Supported on all platforms

maintenance-mode

Description	Container with options for activating and deactivating maintenance mode for this group
Context	system maintenance group name <i>string</i> maintenance-mode
Tree	maintenance-mode
Configurable	True
Platforms	Supported on all platforms

admin-state *keyword*

Description	<p>Enable or disable maintenance mode for this group</p> <p>The enable setting is blocked if there is another maintenance group with at least one BGP session in its scope that overlaps with this maintenance group and that other maintenance group is currently in maintenance mode.</p> <p>While a maintenance group is in maintenance mode it is not possible to modify the BGP configuration of its members.</p>
Context	system maintenance group name <i>string</i> maintenance-mode admin-state <i>keyword</i>
Tree	admin-state
Default	disable
Options	<ul style="list-style-type: none"> • enable • disable
Configurable	True
Platforms	Supported on all platforms

maintenance-profile *reference*

Description	Leaf reference to /system/maintenance/profile/name
Context	system maintenance group name <i>string</i> maintenance-profile <i>reference</i>
Tree	maintenance-profile
Reference	system maintenance profile name <i>string</i>
Configurable	True
Platforms	Supported on all platforms

members

Description	Container for specifying the members of the maintenance group - i.e. the components that will eventually be taken out of service for repair or replacement.
Context	system maintenance group name <i>string</i> members
Tree	members
Configurable	True
Platforms	Supported on all platforms

bgp

Description	Container for specifying the BGP members of the maintenance group
Context	system maintenance group name <i>string</i> members bgp
Tree	bgp
Configurable	True
Platforms	Supported on all platforms

network-instance [name](#) *reference*

Description	List of network instances with one or more peers to be placed in maintenance mode
Context	system maintenance group name <i>string</i> members bgp network-instance name <i>reference</i>
Tree	network-instance
Configurable	True
Platforms	Supported on all platforms

name reference

Description	A unique name identifying the network instance
Context	system maintenance group name <i>string</i> members bgp network-instance name reference
Reference	network-instance name <i>string</i>
Configurable	True
Platforms	Supported on all platforms

neighbor reference

Description	<p>List of BGP neighbors that belong to the network instance and that should be part of the maintenance group</p> <p>It is not necessary to list neighbors that are members of peer-groups that are already listed.</p> <p>If this list is empty and so is the group list, then the system interprets the meaning as ALL static and dynamic sessions belonging to the specified network-instance.</p>
Context	system maintenance group name <i>string</i> members bgp network-instance name reference neighbor reference
Tree	neighbor
Reference	network-instance name <i>string</i> protocols bgp neighbor peer-address (ipv4-address-with-zone ipv6-address-with-zone)
Configurable	True
Platforms	Supported on all platforms

peer-group reference

Description	<p>List of BGP peer groups that belong to the network instance and that should be part of the maintenance group</p> <p>If this list is empty and so is the neighbor list, then the system interprets the meaning as ALL static and dynamic sessions belonging to the specified network-instance.</p>
Context	system maintenance group name <i>string</i> members bgp network-instance name reference peer-group reference
Tree	peer-group
Reference	network-instance name <i>string</i> protocols bgp group group-name <i>string</i>
Configurable	True
Platforms	Supported on all platforms

profile name *string*

Description	Enter the profile list instance
Context	system maintenance profile name <i>string</i>
Tree	profile
Configurable	True
Platforms	Supported on all platforms

name *string*

Description	Name of the maintenance profile
Context	system maintenance profile name <i>string</i>
String Length	1 to 255
Configurable	True
Platforms	Supported on all platforms

bgp

Description	Container for BGP policies used to achieve traffic draining
Context	system maintenance profile name <i>string</i> bgp
Tree	bgp
Configurable	True
Platforms	Supported on all platforms

export-policy *reference*

Description	A reference to the pre-configured routing policy to apply as an additional/final export policy on BGP sessions in the maintenance group
Context	system maintenance profile name <i>string</i> bgp export-policy <i>reference</i>
Tree	export-policy
Reference	routing-policy policy name <i>string</i>
Configurable	True
Platforms	Supported on all platforms

import-policy *reference*

Description	A reference to the pre-configured routing policy to apply as an additional/final import policy on BGP sessions in the maintenance group
Context	system maintenance profile name <i>string</i> bgp import-policy reference
Tree	import-policy
Reference	routing-policy policy name <i>string</i>
Configurable	True
Platforms	Supported on all platforms

management

Description	Enclosing container for options relating to management server
Context	system management
Tree	management
Configurable	True
Platforms	Supported on all platforms

openconfig

Description	Top-level container for options relating to OpenConfig
Context	system management openconfig
Tree	openconfig
Configurable	True
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

admin-state *keyword*

Description	Enable or disable the OpenConfig management server This will disable OpenConfig throughout the system, and bring any gRPC servers that use it operationally down.
Context	system management openconfig admin-state <i>keyword</i>
Tree	admin-state
Options	<ul style="list-style-type: none"> • enable • disable
Configurable	True

Platforms 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

oper-state *keyword*

Description Indicates the operational state of the OpenConfig management server

Context [system management openconfig oper-state](#) *keyword*

Tree [oper-state](#)

Options

- up
Component or process is operational
- down
Component or process is not operational
- empty
Component slot is empty
- downloading
Component is downloading image into memory
- booting
Component is booting downloaded image
- starting
Component image operational, application processes starting
- failed
Component or process has failed
- synchronizing
Component is currently being synchronized
- upgrading
Component is currently being upgraded
- low-power
Component is offline due to insufficient system power
- degraded
Component or process is in a degraded state
- warm-reboot
Component or process is currently warm rebooting
This state is set during a warm reboot immediately following initiation of the reboot, continuing after startup until the system has completed audit. In this state the system will not accept configuration changes.
- waiting
Component or process is currently waiting

This state can be set by event handler when the `reinvoke-with-delay` action is used, and indicates that the event handler is waiting for the provided delay before reinvoking the instance.

Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

mirroring

Description	Top level container for configuration and operational state for mirroring
Context	system mirroring
Tree	mirroring
Configurable	True
Platforms	7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

mirroring-instance *name string*

Description	Mirroring instances configured on the local system
Context	system mirroring mirroring-instance name string
Tree	mirroring-instance
Configurable	True
Platforms	7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b
Max. Elements	8

name *string*

Description	A unique name identifying the mirroring instance
Context	system mirroring mirroring-instance name string
String Length	1 to 255
Configurable	True
Platforms	7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

admin-state *keyword*

Description	This leaf contains the configured, desired state of the mirroring instance.
Context	system mirroring mirroring-instance name <i>string</i> admin-state <i>keyword</i>
Tree	admin-state
Default	enable
Options	<ul style="list-style-type: none"> • enable • disable
Configurable	True
Platforms	7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

description *string*

Description	A user-entered description of this mirroring instance.
Context	system mirroring mirroring-instance name <i>string</i> description <i>string</i>
Tree	description
String Length	1 to 255
Configurable	True
Platforms	7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

mirror-destination

Description	Configure mirror destination
Context	system mirroring mirroring-instance name <i>string</i> mirror-destination
Tree	mirror-destination
Configurable	True
Platforms	7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

local *string*

Description	subinterface of type local-mirror-dest used as local mirror destination
--------------------	---

Context	system mirroring mirroring-instance name <i>string</i> mirror-destination local <i>string</i>
Tree	local
String Length	5 to 25
Configurable	True
Platforms	7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

remote

Description	Enable the remote context
Context	system mirroring mirroring-instance name <i>string</i> mirror-destination remote
Tree	remote
Configurable	True
Platforms	7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

encap *keyword*

Description	Enter the encap context
Context	system mirroring mirroring-instance name <i>string</i> mirror-destination remote encap <i>keyword</i>
Tree	encap
Options	<ul style="list-style-type: none"> • l2ogre • l3ogre • mpls-gre
Configurable	True
Platforms	7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

network-instance *reference*

Description	network instance to initiate remote mirror tunnel
Context	system mirroring mirroring-instance name <i>string</i> mirror-destination remote network-instance <i>reference</i>

Tree	network-instance
Reference	network-instance name <i>string</i>
Configurable	True
Platforms	7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

tunnel-end-points

Description	Enter the tunnel-end-points context
Context	system mirroring mirroring-instance name <i>string</i> mirror-destination remote tunnel-end-points
Tree	tunnel-end-points
Configurable	True
Platforms	7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

admin-state *keyword*

Description	This leaf contains the configured, desired state of the remote mirror tunnel
Context	system mirroring mirroring-instance name <i>string</i> mirror-destination remote tunnel-end-points admin-state <i>keyword</i>
Tree	admin-state
Default	enable
Options	<ul style="list-style-type: none"> • enable • disable
Configurable	True
Platforms	7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

destination-address (*ipv4-address* | *ipv6-address*)

Description	remote mirror tunnel destination endpoint ip-address
Context	system mirroring mirroring-instance name <i>string</i> mirror-destination remote tunnel-end-points destination-address (<i>ipv4-address</i> <i>ipv6-address</i>)
Tree	destination-address

Configurable	True
Platforms	7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

oper-state *keyword*

Description	This leaf contains the operational state of the remote mirror tunnel
Context	system mirroring mirroring-instance name <i>string</i> mirror-destination remote tunnel-end-points oper-state <i>keyword</i>
Tree	oper-state
Options	<ul style="list-style-type: none"> • up Component or process is operational • down Component or process is not operational • empty Component slot is empty • downloading Component is downloading image into memory • booting Component is booting downloaded image • starting Component image operational, application processes starting • failed Component or process has failed • synchronizing Component is currently being synchronized • upgrading Component is currently being upgraded • low-power Component is offline due to insufficient system power • degraded Component or process is in a degraded state • warm-reboot Component or process is currently warm rebooting This state is set during a warm reboot immediately following initiation of the reboot, continuing after startup until the system has completed audit. In this state the system will not accept configuration changes.

- waiting

Component or process is currently waiting

This state can be set by event handler when the `reinvoke-with-delay` action is used, and indicates that the event handler is waiting for the provided delay before reinvoking the instance.

Configurable

False

Platforms

7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

source-address (*ipv4-address* | *ipv6-address*)**Description**

remote mirror tunnel source endpoint ip-address

Context

[system mirroring mirroring-instance name](#) *string* [mirror-destination remote tunnel-end-points source-address](#) (*ipv4-address* | *ipv6-address*)

Tree[source-address](#)**Configurable**

True

Platforms

7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

statistics**Description**

Enter the statistics context

Context

[system mirroring mirroring-instance name](#) *string* [mirror-destination statistics](#)

Tree[statistics](#)**Configurable**

False

Platforms

7220 IXR-D4, 7220 IXR-D5, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

egress-mirrored-octets *number***Description**

The number of egress mirrored octets

Context

[system mirroring mirroring-instance name](#) *string* [mirror-destination statistics egress-mirrored-octets](#) *number*

Tree[egress-mirrored-octets](#)**Default**

0

Units

bytes

Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

egress-mirrored-packets *number*

Description	The number of egress mirrored packets
Context	system mirroring mirroring-instance name <i>string</i> mirror-destination statistics egress-mirrored-packets <i>number</i>
Tree	egress-mirrored-packets
Default	0
Units	packets
Configurable	False
Platforms	7220 IXR-D4, 7220 IXR-D5

ingress-mirrored-octets *number*

Description	The number of ingress mirrored octets
Context	system mirroring mirroring-instance name <i>string</i> mirror-destination statistics ingress-mirrored-octets <i>number</i>
Tree	ingress-mirrored-octets
Default	0
Units	bytes
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

ingress-mirrored-packets *number*

Description	The number of ingress mirrored packets
Context	system mirroring mirroring-instance name <i>string</i> mirror-destination statistics ingress-mirrored-packets <i>number</i>
Tree	ingress-mirrored-packets
Default	0
Units	packets
Configurable	False
Platforms	7220 IXR-D4, 7220 IXR-D5, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

mirror-source

Description	Configure mirror source(s)
Context	system mirroring mirroring-instance name <i>string</i> mirror-source
Tree	mirror-source
Configurable	True
Platforms	7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

acl

Description	Enter the acl context
Context	system mirroring mirroring-instance name <i>string</i> mirror-source acl
Tree	acl
Configurable	True
Platforms	7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

acl-filter [name](#) *reference* [type](#) *reference*

Description	List IPv4, IPv6 ACL filters
Context	system mirroring mirroring-instance name <i>string</i> mirror-source acl acl-filter name <i>reference</i> type <i>reference</i>
Tree	acl-filter
Configurable	True
Platforms	7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

name *reference*

Description	Enter the name context
Context	system mirroring mirroring-instance name <i>string</i> mirror-source acl acl-filter name <i>reference</i> type <i>reference</i>
Reference	acl acl-filter name <i>string</i> type <i>keyword</i>
Configurable	True

Platforms 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

type reference

Description Reference to the ACL filter policy type

Context [system mirroring mirroring-instance name](#) *string* [mirror-source acl acl-filter name](#) *reference* *type* *reference*

Reference [acl acl-filter name](#) *string* *type* *keyword*

Configurable True

Platforms 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

entry sequence-id reference

Description Add a list entry for entry

Context [system mirroring mirroring-instance name](#) *string* [mirror-source acl acl-filter name](#) *reference* *type* *reference* [entry sequence-id](#) *reference*

Tree [entry](#)

Configurable True

Platforms 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

sequence-id reference

Description Enter the sequence-id context

Context [system mirroring mirroring-instance name](#) *string* [mirror-source acl acl-filter name](#) *reference* *type* *reference* [entry sequence-id](#) *reference*

Reference [acl acl-filter name](#) *string* *type* *keyword* [entry sequence-id](#) *number*

Configurable True

Platforms 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

interface *name string*

Description	List of interfaces used as mirror source
Context	system mirroring mirroring-instance name string mirror-source interface name string
Tree	interface
Configurable	True
Platforms	7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

name *string*

Description	Enter the name context
Context	system mirroring mirroring-instance name string mirror-source interface name string
String Length	3 to 20
Configurable	True
Platforms	7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

direction *keyword*

Description	The direction of traffic to be mirrored
Context	system mirroring mirroring-instance name string mirror-source interface name string direction keyword
Tree	direction
Default	egress-only
Options	<ul style="list-style-type: none"> • ingress-only • egress-only • ingress-egress
Configurable	True
Platforms	7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

subinterface *name string*

Description	List of subinterfaces used as mirror source
Context	system mirroring mirroring-instance name string mirror-source subinterface name string
Tree	subinterface
Configurable	True
Platforms	7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

name *string*

Description	Enter the name context
Context	system mirroring mirroring-instance name string mirror-source subinterface name string
String Length	5 to 25
Configurable	True
Platforms	7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

direction *keyword*

Description	The direction of traffic to be mirrored
Context	system mirroring mirroring-instance name string mirror-source subinterface name string direction keyword
Tree	direction
Default	egress-only
Options	<ul style="list-style-type: none"> • ingress-only • egress-only • ingress-egress
Configurable	True
Platforms	7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

oper-down-reason *keyword*

Description	The reason for the mirror source being operational down. When the reason is not applicable, it is due to the mirror instance being shutdown or the mirror source is operational up.
Context	system mirroring mirroring-instance name <i>string</i> mirror-source subinterface name <i>string</i> oper-down-reason <i>keyword</i>
Tree	oper-down-reason
Options	<ul style="list-style-type: none"> • mirror-source-ingress-table-full • mirror-source-egress-table-full • not-applicable
Configurable	False
Platforms	7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

oper-state *keyword*

Description	This leaf contains the operational state of the mirror-source.
Context	system mirroring mirroring-instance name <i>string</i> mirror-source subinterface name <i>string</i> oper-state <i>keyword</i>
Tree	oper-state
Options	<ul style="list-style-type: none"> • up Component or process is operational • down Component or process is not operational • empty Component slot is empty • downloading Component is downloading image into memory • booting Component is booting downloaded image • starting Component image operational, application processes starting • failed Component or process has failed • synchronizing

- Component is currently being synchronized
- upgrading
 - Component is currently being upgraded
- low-power
 - Component is offline due to insufficient system power
- degraded
 - Component or process is in a degraded state
- warm-reboot
 - Component or process is currently warm rebooting
 - This state is set during a warm reboot immediately following initiation of the reboot, continuing after startup until the system has completed audit. In this state the system will not accept configuration changes.
- waiting
 - Component or process is currently waiting
 - This state can be set by event handler when the reinvoke-with-delay action is used, and indicates that the event handler is waiting for the provided delay before reinvoking the instance.

Configurable

False

Platforms

7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

oper-down-reason *keyword***Description**

The reason for the mirroring instance being operational down

Context[system mirroring mirroring-instance name](#) *string oper-down-reason keyword***Tree**[oper-down-reason](#)**Options**

- mirror-inst-admin-down
- no-mirror-source
- local-mirror-subif-down
- remote-mirror-dst-unreachable

Configurable

False

Platforms

7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

oper-state keyword

Description	This leaf contains the operational state of the mirroring instance.
Context	system mirroring mirroring-instance name <i>string</i> oper-state <i>keyword</i>
Tree	oper-state
Options	<ul style="list-style-type: none"> • up Component or process is operational • down Component or process is not operational • empty Component slot is empty • downloading Component is downloading image into memory • booting Component is booting downloaded image • starting Component image operational, application processes starting • failed Component or process has failed • synchronizing Component is currently being synchronized • upgrading Component is currently being upgraded • low-power Component is offline due to insufficient system power • degraded Component or process is in a degraded state • warm-reboot Component or process is currently warm rebooting This state is set during a warm reboot immediately following initiation of the reboot, continuing after startup until the system has completed audit. In this state the system will not accept configuration changes. • waiting Component or process is currently waiting This state can be set by event handler when the <code>reinvoke-with-delay</code> action is used, and indicates that the event handler is waiting for the provided delay before reinvoking the instance.

Configurable	False
Platforms	7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

mpls

Description	Container for system wide MPLS label management
Context	system mpls
Tree	mpls
Configurable	True
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

label-ranges

Description	Container for managing MPLS label blocks
Context	system mpls label-ranges
Tree	label-ranges
Configurable	True
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

dynamic [name string](#)

Description	<p>List of dynamic label blocks</p> <p>When a client application binds its operation to a dynamic label block that client application is expected to just ask for the next available label within the dynamic label block.</p> <p>At this time a dynamic label block cannot be shared by multiple different clients/protocols. Each protocol needing dynamic labels must have its own label block.</p>
Context	system mpls label-ranges dynamic name string
Tree	dynamic
Configurable	True
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

name *string*

Description	The name of the dynamic label block
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Context	system mpls label-ranges dynamic name string
String Length	1 to 255
Configurable	True
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

allocated-labels *number*

Description	The number of labels that are currently used in this block
Context	system mpls label-ranges dynamic name string allocated-labels number
Tree	allocated-labels
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

end-label *number*

Description	The ending label value of the label block. When the status is not-ready or updating, the state value may be different from the configured value
Context	system mpls label-ranges dynamic name string end-label number
Tree	end-label
Range	16 to 1048575
Configurable	True
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

free-labels *number*

Description	The number of labels that are currently available and free in this block. When the status is not-ready or updating, the state value may be different from the configured value
Context	system mpls label-ranges dynamic name string free-labels number
Tree	free-labels
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

start-label *number*

Description	The starting label value of the label block. When the status is not-ready or updating, the state value may be different from the configured value
Context	system mpls label-ranges dynamic name <i>string start-label number</i>
Tree	start-label
Range	16 to 1048575
Configurable	True
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

status *keyword*

Description	The status of the MPLS label block
Context	system mpls label-ranges dynamic name <i>string status keyword</i>
Tree	status
Options	<ul style="list-style-type: none"> • ready The label block is ready to use. • not-ready The label block is not ready to use. • delete-pending The label block is in the process of being deleted. • updating The label block is available to use but the new limits do not apply yet.
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

user *index number*

Description	The list of protocols that are using this label block. If the block is not shared there will only be 1 user
Context	system mpls label-ranges dynamic name <i>string user index number</i>
Tree	user
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

index number

Description	Index number used to enumerate the clients
Context	system mpls label-ranges dynamic name string user index number
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

owner identityref

Description	The protocol or service associated with the client
Context	system mpls label-ranges dynamic name string user index number owner identityref
Tree	owner
Options	<ul style="list-style-type: none"> • bgp The BGP/MP-BGP protocol carrying labels. • ldp The label distribution protocol (LDP). • sr-isis The IS-IS protocol with segment routing extensions • sr-ospf The OSPFv2 protocol with segment routing extensions • sr-ospfv3 The OSPFv3 protocol with segment routing extensions • sr-policy A pseudo protocol representing SR policies • static-mpls A pseudo protocol representing static MPLS routes • evpn The BGP/EVPN protocol carrying labels. • network-instance The module allocating labels for bgp based vpn/evpn services
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

static name *string*

Description	List of static label blocks When a client application binds its operation to a static label block that client application is expected to specify the exact label value it wants to use every time it requests a label within the static label block.
Context	system mpls label-ranges static name <i>string</i>
Tree	static
Configurable	True
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

name *string*

Description	The name of the static label block
Context	system mpls label-ranges static name <i>string</i>
String Length	1 to 255
Configurable	True
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

allocated-labels *number*

Description	The number of labels that are currently used in this block
Context	system mpls label-ranges static name <i>string</i> allocated-labels <i>number</i>
Tree	allocated-labels
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

end-label *number*

Description	The ending label value of the label block. When the status is not-ready or updating, the state value may be different from the configured value
Context	system mpls label-ranges static name <i>string</i> end-label <i>number</i>
Tree	end-label
Range	16 to 1048575
Configurable	True

Platforms 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

free-labels *number*

Description The number of labels that are currently available and free in this block.
When the status is not-ready or updating, the state value may be different from the configured value

Context [system mpls label-ranges static name](#) *string free-labels number*

Tree [free-labels](#)

Configurable False

Platforms 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

shared *boolean*

Description When set to true, the label block can be shared by multiple protocols. When set to false, the label block is dedicated to one protocol.

Context [system mpls label-ranges static name](#) *string shared boolean*

Tree [shared](#)

Default true

Configurable True

Platforms 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

start-label *number*

Description The starting label value of the label block.
When the status is not-ready or updating, the state value may be different from the configured value

Context [system mpls label-ranges static name](#) *string start-label number*

Tree [start-label](#)

Range 16 to 1048575

Configurable True

Platforms 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

status *keyword*

Description The status of the MPLS label block

Context [system mpls label-ranges static name](#) *string status keyword*

Tree	status
Options	<ul style="list-style-type: none"> • ready The label block is ready to use. • not-ready The label block is not ready to use. • delete-pending The label block is in the process of being deleted. • updating The label block is available to use but the new limits do not apply yet.

Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

user [index number](#)

Description	The list of protocols that are using this label block. If the block is not shared there will only be 1 user
Context	system mpls label-ranges static name <i>string</i> user index number
Tree	user
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

index number

Description	Index number used to enumerate the clients
Context	system mpls label-ranges static name <i>string</i> user index number
Configurable	False
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

owner [identityref](#)

Description	The protocol or service associated with the client
Context	system mpls label-ranges static name <i>string</i> user index number owner identityref
Tree	owner
Options	<ul style="list-style-type: none"> • bgp The BGP/MP-BGP protocol carrying labels.

- `ldp`
The label distribution protocol (LDP).
- `sr-isis`
The IS-IS protocol with segment routing extensions
- `sr-ospf`
The OSPFv2 protocol with segment routing extensions
- `sr-ospfv3`
The OSPFv3 protocol with segment routing extensions
- `sr-policy`
A pseudo protocol representing SR policies
- `static-mpls`
A pseudo protocol representing static MPLS routes
- `evpn`
The BGP/EVPN protocol carrying labels.
- `network-instance`
The module allocating labels for bgp based vpn/evpn services

Configurable

False

Platforms

7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

services**Description**

Container for system wide Services MPLS label management

Context[system mpls services](#)**Tree**[services](#)**Configurable**

True

Platforms

7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

evpn**Description**

Container for system wide Services EVPN MPLS label management

Context[system mpls services evpn](#)**Tree**[evpn](#)**Configurable**

True

Platforms

7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

dynamic-label-block *reference*

Description	Reference to a dynamic label block
Context	system mpls services evpn dynamic-label-block <i>reference</i>
Tree	dynamic-label-block
Reference	system mpls label-ranges dynamic name <i>string</i>
Configurable	True
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

network-instance

Description	Container for system wide Service Network Instance MPLS label management
Context	system mpls services network-instance
Tree	network-instance
Configurable	True
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

dynamic-evpn-inclusive-multicast-label-block *reference*

Description	Reference to the dynamic evpn inclusive multicast label block used by EVPN MAC-VRFs The label block is used by EVPN-MPLS MAC-VRF services for the allocation of labels that are advertised in EVPN Inclusive Multicast Ethernet Tag routes and that identify incoming layer-2 Broadcast, Unknown unicast and Multicast traffic.
Context	system mpls services network-instance dynamic-evpn-inclusive-multicast-label-block <i>reference</i>
Tree	dynamic-evpn-inclusive-multicast-label-block
Reference	system mpls label-ranges dynamic name <i>string</i>
Configurable	True
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

dynamic-label-block *reference*

Description	Reference to the dynamic label block used by network-instances
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The label block is used by all the applications that require MPLS label allocation in a network-instance. For example, EVPN-MPLS services, IP-VPN or Pseudowires.

Context	system mpls services network-instance dynamic-label-block <i>reference</i>
Tree	dynamic-label-block
Reference	system mpls label-ranges dynamic name <i>string</i>
Configurable	True
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

mtu

Description	Top-level container for configuration and state data related to the system MTU
Context	system mtu
Tree	mtu
Configurable	True
Platforms	Supported on all platforms

default-ip-mtu *number*

Description	System default IP MTU in bytes including the IP header but excluding Ethernet overhead The 7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D3, 7220 IXR-H2, and 7220 IXR-H3 systems support a maximum IP MTU of 9398 bytes.
Context	system mtu default-ip-mtu <i>number</i>
Tree	default-ip-mtu
Range	1280 to 9486
Default	1500
Configurable	True
Platforms	Supported on all platforms

default-l2-mtu *number*

Description	System default Layer-2 MTU in bytes for bridged subinterfaces It includes the ethernet overhead and VLAN tags but excludes 4-bytes FCS. The default-l2-mtu is also used as the oper-mac-vrf-mtu and oper-vpws-mtu value if the network-instance does not have subinterfaces.
--------------------	---

The 7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D3, 7220 IXR-H2, and 7220 IXR-H3 systems support a maximum L2 MTU of 9412 bytes.

Context	system mtu default-l2-mtu number
Tree	default-l2-mtu
Range	1500 to 9500
Default	9232
Configurable	True
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

default-mpls-mtu number

Description	System default MPLS MTU in bytes including the size of the transmitted label stack.
Context	system mtu default-mpls-mtu number
Tree	default-mpls-mtu
Range	1284 to 9496
Default	1508
Configurable	True
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

default-port-mtu number

Description	System default port MTU in bytes including ethernet overhead but excluding 4-bytes FCS The 7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D3, 7220 IXR-H2, and 7220 IXR-H3 systems support a maximum port MTU of 9412 bytes.
Context	system mtu default-port-mtu number
Tree	default-port-mtu
Range	1500 to 9500
Default	9232
Configurable	True
Platforms	Supported on all platforms

min-path-mtu *number*

Description	Sets the minimum path MTU to use when receiving an ICMP fragmentation needed message This is controlled via the kernel <code>min_pmtu</code> option. In the event an ICMP fragmentation needed message is received by the kernel, the system will drop the session to this MTU to allow packets to traverse the entire path.
Context	system mtu min-path-mtu <i>number</i>
Tree	min-path-mtu
Range	552 to 9232
Default	552
Configurable	True
Platforms	Supported on all platforms

multicast

Description	system multicast information
Context	system multicast
Tree	multicast
Configurable	True
Platforms	Supported on all platforms

multicast-ids

Description	system multicast id information
Context	system multicast multicast-ids
Tree	multicast-ids
Configurable	True
Platforms	Supported on all platforms

statistics

Description	Enter the statistics context
Context	system multicast multicast-ids statistics
Tree	statistics
Configurable	False

Platforms Supported on all platforms

current-usage *number*

Description The total number of multicast ids that are in use on the system.
Context [system multicast multicast-ids statistics current-usage](#) *number*
Tree [current-usage](#)
Default 0
Configurable False
Platforms Supported on all platforms

maximum-ids *number*

Description Maximum number of multicast ids available in the system.
Context [system multicast multicast-ids statistics maximum-ids](#) *number*
Tree [maximum-ids](#)
Configurable False
Platforms Supported on all platforms

multicast-id-user-type *user* *keyword*

Description the type of the user of multicast id in the system.
Context [system multicast multicast-ids statistics multicast-id-user-type](#) *user* *keyword*
Tree [multicast-id-user-type](#)
Configurable False
Platforms Supported on all platforms

user *keyword*

Description Enter the user context
Context [system multicast multicast-ids statistics multicast-id-user-type](#) *user* *keyword*
Options

- mac-vrf
- vxlan-interface
- l2-proxy-arp-nd
- mfib
- mac-vrf-bgp-evpn

Configurable	False
Platforms	Supported on all platforms

current-usage *number*

Description	The total number of multicast ids that are in use on the system.
Context	system multicast multicast-ids statistics multicast-id-user-type user <i>keyword</i> current-usage <i>number</i>
Tree	current-usage
Default	0
Configurable	False
Platforms	Supported on all platforms

total-pending *number*

Description	The total number of multicast ids pending allocation on the system.
Context	system multicast multicast-ids statistics multicast-id-user-type user <i>keyword</i> total-pending <i>number</i>
Tree	total-pending
Default	0
Configurable	False
Platforms	Supported on all platforms

total-pending *number*

Description	The total number of multicast ids pending allocation on the system.
Context	system multicast multicast-ids statistics total-pending <i>number</i>
Tree	total-pending
Default	0
Configurable	False
Platforms	Supported on all platforms

multicast-forwarding-information-base

Description	System Multicast Forwarding Information Base table
Context	system multicast-forwarding-information-base

Tree	multicast-forwarding-information-base
Configurable	False
Platforms	Supported on all platforms

multicast-route [network-instance](#) *reference* [source](#) (*ipv4-address* | *ipv6-address*) [group](#) (*ipv4-address* | *ipv6-address*)

Description	List of all the MFIB entries in the system
Context	system multicast-forwarding-information-base multicast-route network-instance <i>reference</i> source (<i>ipv4-address</i> <i>ipv6-address</i>) group (<i>ipv4-address</i> <i>ipv6-address</i>)
Tree	multicast-route
Configurable	False
Platforms	Supported on all platforms

network-instance *reference*

Description	Indicates that the MFIB entry is associated to this network instance
Context	system multicast-forwarding-information-base multicast-route network-instance <i>reference</i> source (<i>ipv4-address</i> <i>ipv6-address</i>) group (<i>ipv4-address</i> <i>ipv6-address</i>)
Reference	network-instance <i>name</i> <i>string</i>
Configurable	False
Platforms	Supported on all platforms

source (*ipv4-address* | *ipv6-address*)

Description	Source IP address of the MFIB entry
Context	system multicast-forwarding-information-base multicast-route network-instance <i>reference</i> source (<i>ipv4-address</i> <i>ipv6-address</i>) group (<i>ipv4-address</i> <i>ipv6-address</i>)
Configurable	False
Platforms	Supported on all platforms

group (*ipv4-address* | *ipv6-address*)

Description	Multicast group address of the MFIB entry
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Context	system multicast-forwarding-information-base multicast-route network-instance reference source (ipv4-address ipv6-address) group (ipv4-address ipv6-address)
Configurable	False
Platforms	Supported on all platforms

last-update *string*

Description	Last update of this MFIB entry
Context	system multicast-forwarding-information-base multicast-route network-instance reference source (ipv4-address ipv6-address) group (ipv4-address ipv6-address) last-update string
Tree	last-update
String Length	20 to 32
Configurable	False
Platforms	Supported on all platforms

line-card-replication-index *number*

Description	Line card Replication Index (LRID) allocated by mfib_mgr Upon programming an MFIB entry, mfib_mgr requests a Multicast Identifier (MCID) to mcid_mgr and based on the response with an allocated MCID, mfib_mgr allocates a LRID for the entry. A value 0 indicates that no MCID was received for the entry, and therefore the MFIB entry cannot forward multicast traffic.
Context	system multicast-forwarding-information-base multicast-route network-instance reference source (ipv4-address ipv6-address) group (ipv4-address ipv6-address) line-card-replication-index number
Tree	line-card-replication-index
Default	0
Configurable	False
Platforms	Supported on all platforms

name

Description	Contains configuration and state related to system naming
Context	system name
Tree	name

Configurable	True
Platforms	Supported on all platforms

domain-name *string*

Description	The system domain name
Context	system name domain-name <i>string</i>
Tree	domain-name
String Length	1 to 253
Configurable	True
Platforms	Supported on all platforms

host-name *string*

Description	The system host name
Context	system name host-name <i>string</i>
Tree	host-name
String Length	1 to 63
Configurable	True
Platforms	Supported on all platforms

netconf-server [name](#) *string*

Description	Configures the NETCONF server instance
Context	system netconf-server name <i>string</i>
Tree	netconf-server
Configurable	True
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

name *string*

Description	NETCONF service instance name
Context	system netconf-server name <i>string</i>
String Length	1 to 247

Configurable	True
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

admin-state *keyword*

Description	Administratively enable or disable the NETCONF server instance
Context	system netconf-server name <i>string</i> admin-state <i>keyword</i>
Tree	admin-state
Default	disable
Options	<ul style="list-style-type: none"> • enable • disable
Configurable	True
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

last-oper-change *string*

Description	NETCONF last operational state change Time of last change of operational state of NETCONF server instance
Context	system netconf-server name <i>string</i> last-oper-change <i>string</i>
Tree	last-oper-change
String Length	20 to 32
Configurable	False
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

oper-state *keyword*

Description	Details if the NETCONF server instance is operationally available
Context	system netconf-server name <i>string</i> oper-state <i>keyword</i>
Tree	oper-state
Options	<ul style="list-style-type: none"> • up Component or process is operational

- down
Component or process is not operational
- empty
Component slot is empty
- downloading
Component is downloading image into memory
- booting
Component is booting downloaded image
- starting
Component image operational, application processes starting
- failed
Component or process has failed
- synchronizing
Component is currently being synchronized
- upgrading
Component is currently being upgraded
- low-power
Component is offline due to insufficient system power
- degraded
Component or process is in a degraded state
- warm-reboot
Component or process is currently warm rebooting
This state is set during a warm reboot immediately following initiation of the reboot, continuing after startup until the system has completed audit. In this state the system will not accept configuration changes.
- waiting
Component or process is currently waiting
This state can be set by event handler when the reinvoke-with-delay action is used, and indicates that the event handler is waiting for the provided delay before reinvoking the instance.

Configurable

False

Platforms

7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

session-limit *number***Description**

Set a limit on the number of simultaneous active NETCONF sessions

A session is defined as an individual client connection over which a NETCONF session has been started by providing bi-directional <hello> messages

Context	system netconf-server name <i>string</i> session-limit <i>number</i>
Tree	session-limit
Range	1 to 64
Default	64
Configurable	True
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

ssh-server *reference*

Description	The SSH server instance to bind the NETCONF server to
Context	system netconf-server name <i>string</i> ssh-server <i>reference</i>
Tree	ssh-server
Reference	system ssh-server name <i>string</i>
Configurable	True
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

statistics

Description	Enter the statistics context
Context	system netconf-server name <i>string</i> statistics
Tree	statistics
Configurable	False
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

active-sessions *number*

Description	Active NETCONF sessions
	The total number of active NETCONF sessions. A session is defined as an individual client connection over which a NETCONF session has been started by providing bi-directional <hello> messages

Context	system netconf-server name <i>string</i> statistics active-sessions <i>number</i>
Tree	active-sessions
Range	1 to 64
Configurable	False
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

session [session-id](#) *number*

Description	Enter the session list instance
Context	system netconf-server name <i>string</i> statistics session session-id <i>number</i>
Tree	session
Configurable	False
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

session-id *number*

Description	Enter the session-id context
Context	system netconf-server name <i>string</i> statistics session session-id <i>number</i>
Range	1 to 4294967295
Configurable	False
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

action-requests *number*

Description	NETCONF <action> requests Number of <action> NETCONF requests that have been accepted and processed by the NETCONF server
Context	system netconf-server name <i>string</i> statistics session session-id <i>number</i> action-requests <i>number</i>
Tree	action-requests
Default	0
Configurable	False

Platforms 7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

commit-requests *number*

Description NETCONF <commit> requests
Number of commit NETCONF requests that have been accepted and processed by the NETCONF server

Context [system netconf-server name string statistics session session-id number commit-requests number](#)

Tree [commit-requests](#)

Default 0

Configurable False

Platforms 7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

copy-config-requests *number*

Description NETCONF <copy-config> requests
Number of copy-config NETCONF requests that have been accepted and processed by the NETCONF server

Context [system netconf-server name string statistics session session-id number copy-config-requests number](#)

Tree [copy-config-requests](#)

Default 0

Configurable False

Platforms 7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

delete-config-requests *number*

Description NETCONF <delete-config> requests
Number of <delete-config> NETCONF requests that have been accepted and processed by the NETCONF server

Context [system netconf-server name string statistics session session-id number delete-config-requests number](#)

Tree	delete-config-requests
Default	0
Configurable	False
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

discard-changes-requests *number*

Description	NETCONF <discard-changes> requests Number of <discard-changes> NETCONF requests that have been accepted and processed by the NETCONF server
Context	system netconf-server name <i>string</i> statistics session session-id <i>number</i> discard-changes-requests <i>number</i>
Tree	discard-changes-requests
Default	0
Configurable	False
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

edit-config-requests *number*

Description	NETCONF <edit-config> requests Number of <edit-config> NETCONF requests that have been accepted and processed by the NETCONF server
Context	system netconf-server name <i>string</i> statistics session session-id <i>number</i> edit-config-requests <i>number</i>
Tree	edit-config-requests
Default	0
Configurable	False
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

edit-data-requests *number*

Description	NETCONF <edit-data> requests
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	Number of <edit-data> NETCONF requests that have been accepted and processed by the NETCONF server
Context	system netconf-server name <i>string</i> statistics session session-id <i>number</i> edit-data-requests <i>number</i>
Tree	edit-data-requests
Default	0
Configurable	False
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

failed-edit-config-requests *number*

Description	Failed NETCONF <edit-config> requests Number of <edit-config> NETCONF requests that have failed because of locks taken by other NETCONF sessions
Context	system netconf-server name <i>string</i> statistics session session-id <i>number</i> failed-edit-config-requests <i>number</i>
Tree	failed-edit-config-requests
Default	0
Configurable	False
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

failed-edit-data-requests *number*

Description	Failed NETCONF <edit-data> requests Number of <edit-data> NETCONF requests that have failed because of locks taken by other NETCONF sessions
Context	system netconf-server name <i>string</i> statistics session session-id <i>number</i> failed-edit-data-requests <i>number</i>
Tree	failed-edit-data-requests
Default	0
Configurable	False
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

failed-lock-requests *number*

Description	Failed NETCONF <lock> requests Number of <lock> NETCONF requests that have failed because of locks taken by other NETCONF sessions
Context	system netconf-server name <i>string</i> statistics session session-id <i>number</i> failed-lock-requests <i>number</i>
Tree	failed-lock-requests
Default	0
Configurable	False
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

get-config-requests *number*

Description	NETCONF <get-config> requests Number of <get-config> NETCONF requests that have been accepted and processed by the NETCONF server
Context	system netconf-server name <i>string</i> statistics session session-id <i>number</i> get-config-requests <i>number</i>
Tree	get-config-requests
Default	0
Configurable	False
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

get-data-requests *number*

Description	NETCONF <get-data> requests Number of <get-data> NETCONF requests that have been accepted and processed by the NETCONF server
Context	system netconf-server name <i>string</i> statistics session session-id <i>number</i> get-data-requests <i>number</i>
Tree	get-data-requests
Default	0
Configurable	False

Platforms 7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

get-requests *number*

Description NETCONF <get> requests
Number of <get> NETCONF requests that have been accepted and processed by the NETCONF server

Context [system netconf-server name string statistics session session-id number get-requests number](#)

Tree [get-requests](#)

Default 0

Configurable False

Platforms 7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

get-schema-requests *number*

Description NETCONF <get-schema> requests
Number of <get-schema> NETCONF requests that have been accepted and processed by the NETCONF server

Context [system netconf-server name string statistics session session-id number get-schema-requests number](#)

Tree [get-schema-requests](#)

Default 0

Configurable False

Platforms 7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

in-bad-hellos *number*

Description Inbound bad NETCONF hello messages
Number of bad NETCONF hello messages that have been received by the NETCONF server

Context [system netconf-server name string statistics session session-id number in-bad-hellos number](#)

Tree	in-bad-hellos
Default	0
Configurable	False
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

kill-session-requests *number*

Description	NETCONF <kill-session> requests Number of <kill-session> NETCONF requests that have been accepted and processed by the NETCONF server
Context	system netconf-server name string statistics session session-id number kill-session-requests number
Tree	kill-session-requests
Default	0
Configurable	False
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

lock-requests *number*

Description	NETCONF <lock> requests Number of <lock> NETCONF requests that have been accepted and processed by the NETCONF server
Context	system netconf-server name string statistics session session-id number lock-requests number
Tree	lock-requests
Default	0
Configurable	False
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

process-id *number*

Description	The process ID of the NETCONF session
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Context	system netconf-server name <i>string</i> statistics session session-id <i>number</i> process-id <i>number</i>
Tree	process-id
Configurable	False
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

unlock-requests *number*

Description	NETCONF <unlock> requests Number of <unlock> NETCONF requests that have been accepted and processed by the NETCONF server
Context	system netconf-server name <i>string</i> statistics session session-id <i>number</i> unlock-requests <i>number</i>
Tree	unlock-requests
Default	0
Configurable	False
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

validate-requests *number*

Description	NETCONF <validate> requests Number of <validate> NETCONF requests that have been accepted and processed by the NETCONF server
Context	system netconf-server name <i>string</i> statistics session session-id <i>number</i> validate-requests <i>number</i>
Tree	validate-requests
Default	0
Configurable	False
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

total-action-requests *number*

Description	NETCONF <action> requests
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Total number of <action> NETCONF requests that have been accepted and processed by the NETCONF server

Context	system netconf-server name <i>string</i> statistics total-action-requests <i>number</i>
Tree	total-action-requests
Default	0
Configurable	False
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

total-close-session-requests *number*

Description	NETCONF <close-session> requests Total number of <close-session> NETCONF requests that have been accepted and processed by the NETCONF server
Context	system netconf-server name <i>string</i> statistics total-close-session-requests <i>number</i>
Tree	total-close-session-requests
Default	0
Configurable	False
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

total-commit-requests *number*

Description	NETCONF <commit> requests Total number of commit NETCONF requests that have been accepted and processed by the NETCONF server
Context	system netconf-server name <i>string</i> statistics total-commit-requests <i>number</i>
Tree	total-commit-requests
Default	0
Configurable	False
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

total-copy-config-requests *number*

Description	NETCONF <copy-config> requests Total number of copy-config NETCONF requests that have been accepted and processed by the NETCONF server
Context	system netconf-server name <i>string</i> statistics total-copy-config-requests <i>number</i>
Tree	total-copy-config-requests
Default	0
Configurable	False
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

total-delete-config-requests *number*

Description	NETCONF <delete-config> requests Total number of <delete-config> NETCONF requests that have been accepted and processed by the NETCONF server
Context	system netconf-server name <i>string</i> statistics total-delete-config-requests <i>number</i>
Tree	total-delete-config-requests
Default	0
Configurable	False
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

total-discard-changes-requests *number*

Description	NETCONF <discard-changes> requests Total number of <discard-changes> NETCONF requests that have been accepted and processed by the NETCONF server
Context	system netconf-server name <i>string</i> statistics total-discard-changes-requests <i>number</i>
Tree	total-discard-changes-requests
Default	0
Configurable	False

Platforms 7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

total-dropped-sessions *number*

Description NETCONF dropped sessions
Total number of dropped NETCONF sessions

Context [system netconf-server name](#) *string* [statistics total-dropped-sessions](#) *number*

Tree [total-dropped-sessions](#)

Default 0

Configurable False

Platforms 7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

total-edit-config-requests *number*

Description NETCONF <edit-config> requests
Total number of <edit-config> NETCONF requests that have been accepted and processed by the NETCONF server

Context [system netconf-server name](#) *string* [statistics total-edit-config-requests](#) *number*

Tree [total-edit-config-requests](#)

Default 0

Configurable False

Platforms 7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

total-edit-data-requests *number*

Description NETCONF <edit-data> requests
Total number of <edit-data> NETCONF requests that have been accepted and processed by the NETCONF server

Context [system netconf-server name](#) *string* [statistics total-edit-data-requests](#) *number*

Tree [total-edit-data-requests](#)

Default 0

Configurable	False
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

total-error-responses *number*

Description	NETCONF error responses Total number of NETCONF error responses that have been generated and sent by the NETCONF server
Context	system netconf-server name <i>string</i> statistics total-error-responses <i>number</i>
Tree	total-error-responses
Default	0
Configurable	False
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

total-failed-edit-config-requests *number*

Description	Failed NETCONF <edit-config> requests Total number of <edit-config> NETCONF requests that have failed because of locks taken by other NETCONF sessions
Context	system netconf-server name <i>string</i> statistics total-failed-edit-config-requests <i>number</i>
Tree	total-failed-edit-config-requests
Default	0
Configurable	False
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

total-failed-edit-data-requests *number*

Description	Failed NETCONF <edit-data> requests Total number of <edit-data> NETCONF requests that have failed because of locks taken by other NETCONF sessions
Context	system netconf-server name <i>string</i> statistics total-failed-edit-data-requests <i>number</i>

Tree	total-failed-edit-data-requests
Default	0
Configurable	False
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

total-failed-lock-requests *number*

Description	Failed NETCONF <lock> requests Total number of <lock> NETCONF requests that have failed because of locks taken by other NETCONF sessions
Context	system netconf-server name <i>string</i> statistics total-failed-lock-requests <i>number</i>
Tree	total-failed-lock-requests
Default	0
Configurable	False
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

total-get-config-requests *number*

Description	NETCONF <get-config> requests Total number of <get-config> NETCONF requests that have been accepted and processed by the NETCONF server
Context	system netconf-server name <i>string</i> statistics total-get-config-requests <i>number</i>
Tree	total-get-config-requests
Default	0
Configurable	False
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

total-get-data-requests *number*

Description	NETCONF <get-data> requests
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Total number of <get-data> NETCONF requests that have been accepted and processed by the NETCONF server

Context	system netconf-server name <i>string</i> statistics total-get-data-requests <i>number</i>
Tree	total-get-data-requests
Default	0
Configurable	False
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

total-get-requests *number*

Description	NETCONF <get> requests Total number of <get> NETCONF requests that have been accepted and processed by the NETCONF server
Context	system netconf-server name <i>string</i> statistics total-get-requests <i>number</i>
Tree	total-get-requests
Default	0
Configurable	False
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

total-get-schema-requests *number*

Description	NETCONF <get-schema> requests Total number of <get-schema> NETCONF requests that have been accepted and processed by the NETCONF server
Context	system netconf-server name <i>string</i> statistics total-get-schema-requests <i>number</i>
Tree	total-get-schema-requests
Default	0
Configurable	False
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

total-in-bad-hellos *number*

Description	Inbound bad NETCONF hello messages Total number of bad NETCONF hello messages that have been received by the NETCONF server
Context	system netconf-server name <i>string</i> statistics total-in-bad-hellos <i>number</i>
Tree	total-in-bad-hellos
Default	0
Configurable	False
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

total-kill-session-requests *number*

Description	NETCONF <kill-session> requests Total number of <kill-session> NETCONF requests that have been accepted and processed by the NETCONF server
Context	system netconf-server name <i>string</i> statistics total-kill-session-requests <i>number</i>
Tree	total-kill-session-requests
Default	0
Configurable	False
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

total-lock-requests *number*

Description	NETCONF <lock> requests Total number of <lock> NETCONF requests that have been accepted and processed by the NETCONF server
Context	system netconf-server name <i>string</i> statistics total-lock-requests <i>number</i>
Tree	total-lock-requests
Default	0
Configurable	False

Platforms 7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

total-requests *number*

Description NETCONF total requests
Total number of NETCONF requests that have been accepted and processed by the NETCONF server

Context [system netconf-server name](#) *string* [statistics total-requests](#) *number*

Tree [total-requests](#)

Default 0

Configurable False

Platforms 7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

total-responses *number*

Description NETCONF total responses
Total number of NETCONF responses that have been generated and sent by the NETCONF server

Context [system netconf-server name](#) *string* [statistics total-responses](#) *number*

Tree [total-responses](#)

Default 0

Configurable False

Platforms 7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

total-unlock-requests *number*

Description NETCONF <unlock> requests
Total number of <unlock> NETCONF requests that have been accepted and processed by the NETCONF server

Context [system netconf-server name](#) *string* [statistics total-unlock-requests](#) *number*

Tree [total-unlock-requests](#)

Default 0

Configurable	False
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

total-validate-requests *number*

Description	NETCONF <validate> requests Total number of <validate> NETCONF requests that have been accepted and processed by the NETCONF server
Context	system netconf-server name <i>string</i> statistics total-validate-requests <i>number</i>
Tree	total-validate-requests
Default	0
Configurable	False
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

trace-options

Description	Debug trace-options for NETCONF
Context	system netconf-server name <i>string</i> trace-options
Tree	trace-options
Configurable	True
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

direction *keyword*

Description	Direction to trace messages
Context	system netconf-server name <i>string</i> trace-options direction <i>keyword</i>
Tree	direction
Default	both
Options	<ul style="list-style-type: none"> both Trace input and output messages input Trace input messages

	<ul style="list-style-type: none"> output Trace output messages
Configurable	True
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b
rpc keyword	
Description	RPC messages to trace
Context	system netconf-server name <i>string</i> <i>trace-options</i> <i>rpc keyword</i>
Tree	rpc
Options	<ul style="list-style-type: none"> action Trace <action> RPC messages cancel-commit Trace <cancel-commit> RPC messages close-session Trace <close-session> RPC messages commit Trace <commit> RPC messages copy-config Trace <copy-config> RPC messages delete-config Trace <delete-config> RPC messages discard-changes Trace <discard-changes> RPC messages edit-config Trace <edit-config> RPC messages edit-data Trace <edit-data> RPC messages get-config Trace <get-config> RPC messages get-data Trace <get-data> RPC messages get-schema Trace <get-schema> RPC messages get

- Trace <get> RPC messages
- hello
 - Trace <hello> messages
- kill-session
 - Trace <kill-session> RPC messages
- lock
 - Trace <lock> RPC messages
- unknown
 - Trace messages that are unknown to the server
- unlock
 - Trace <unlock> RPC messages
- validate
 - Trace <validate> RPC messages

Configurable

True

Platforms

7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

unix-socket**Description**

Create a new unix socket and bind the NETCONF service to it

Context[system netconf-server name](#) *string* [unix-socket](#)**Tree**[unix-socket](#)**Configurable**

True

Platforms

7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

socket-path *string***Description**

Path to the unix socket used by NETCONF

Context[system netconf-server name](#) *string* [unix-socket](#) [socket-path](#) *string***Tree**[socket-path](#)**Configurable**

False

Platforms

7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

network-instance

Description	Enable the network-instance context
Context	system network-instance
Tree	network-instance
Configurable	True
Platforms	Supported on all platforms

protocols

Description	The routing protocols that are enabled for this network-instance.
Context	system network-instance protocols
Tree	protocols
Configurable	True
Platforms	Supported on all platforms

bgp-vpn

Description	Enable the bgp-vpn context
Context	system network-instance protocols bgp-vpn
Tree	bgp-vpn
Configurable	True
Platforms	Supported on all platforms

bgp-instance *id number*

Description	List of bgp-vpn instances configured in the system network-instance. Only one instance allowed in the current release.
Context	system network-instance protocols bgp-vpn bgp-instance <i>id number</i>
Tree	bgp-instance
Configurable	True
Platforms	Supported on all platforms
Max. Elements	1

id number

Description	The index of the bgp-vpn instance
Context	system network-instance protocols bgp-vpn bgp-instance id number
Range	1 to 2
Configurable	True
Platforms	Supported on all platforms

oper-down-reason keyword

Description	Reason for the system bgp-instance being down
Context	system network-instance protocols bgp-vpn bgp-instance id number oper-down-reason keyword
Tree	oper-down-reason
Options	<ul style="list-style-type: none"> • no-loopback-address • no-esi • none • network-instance-oper-down • bad-rd-format
Configurable	False
Platforms	Supported on all platforms

route-distinguisher

Description	Route Distinguisher (RD) of the bgp-vpn instance.
Context	system network-instance protocols bgp-vpn bgp-instance id number route-distinguisher
Tree	route-distinguisher
Configurable	True
Platforms	Supported on all platforms

rd (route-distinguisher-type-0 | route-distinguisher-type-1 | route-distinguisher-type-2 | route-distinguisher-type-2b)

Description	Route Distinguisher (RD) of the system bgp-vpn instance. The RD is auto-derived as <ip-address>:0 where 'ip-address' is the ipv4 address associated to the subinterface lo0.1.
--------------------	--

Context	system network-instance protocols bgp-vpn bgp-instance id number route-distinguisher rd (route-distinguisher-type-0 route-distinguisher-type-1 route-distinguisher-type-2 route-distinguisher-type-2b)
Tree	rd
Configurable	False
Platforms	Supported on all platforms

route-distinguisher-origin *keyword*

Description	Origin of the operational Route Distinguisher (RD) of the bgp-vpn instance. 'Auto-derived-from-system-ip:0' refers to the RD for the EVPN Ethernet Segment routes that is automatically allocated with the format <ip-address>:0 where 'ip-address' is the ipv4 address associated to the subinterface lo0.1.
Context	system network-instance protocols bgp-vpn bgp-instance id number route-distinguisher route-distinguisher-origin <i>keyword</i>
Tree	route-distinguisher-origin
Options	<ul style="list-style-type: none"> • auto-derived-from-system-ip:0 • none
Configurable	False
Platforms	Supported on all platforms

route-target

Description	Route Target (RT) of the system bgp-vpn instance.
Context	system network-instance protocols bgp-vpn bgp-instance id number route-target
Tree	route-target
Configurable	True
Platforms	Supported on all platforms

export-route-target-origin *keyword*

Description	Origin of the operational export Route Target (RT) of the bgp-vpn instance. 'Auto-derived-from-esi-bytes-1-6' refers to the ES-import RT for the EVPN Ethernet Segment routes that is derived from bytes 1 to 6 of the Ethernet Segment Identifier of the route.
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Context	system network-instance protocols bgp-vpn bgp-instance id number route-target export-route-target-origin keyword
Tree	export-route-target-origin
Options	<ul style="list-style-type: none"> • auto-derived-from-esi-bytes-1-6 • none
Configurable	False
Platforms	Supported on all platforms

export-rt (*string* | *string* | *string* | *string* | *string* | *string* | *string* | *string*)

Description	<p>Export Route Target (RT) in the system bgp-vpn instance.</p> <p>When used for evpn ES routes as ES-import Route Target, the RT is auto-derived from the high-order 6-octet portion of the 9-octet ESI value. Note that the ESI value excludes the left-most byte, which is reserved for the ESI type. The RT is encoded into the ES-import extended community advertised along with the ES route.</p>
Context	system network-instance protocols bgp-vpn bgp-instance id number route-target export-rt (<i>string</i> <i>string</i> <i>string</i> <i>string</i> <i>string</i> <i>string</i> <i>string</i> <i>string</i>)
Tree	export-rt
Configurable	False
Platforms	Supported on all platforms

import-route-target-origin *keyword*

Description	<p>Origin of the operational import Route Target (RT) of the bgp-vpn instance.</p> <p>'Auto-derived-from-esi-bytes-1-6' refers to the ES-import RT for the EVPN Ethernet Segment routes that is derived from bytes 1 to 6 of the Ethernet Segment Identifier of the route.</p>
Context	system network-instance protocols bgp-vpn bgp-instance id number route-target import-route-target-origin keyword
Tree	import-route-target-origin
Options	<ul style="list-style-type: none"> • auto-derived-from-esi-bytes-1-6 • none
Configurable	False
Platforms	Supported on all platforms

import-rt (*string* | *string* | *string* | *string* | *string* | *string* | *string* | *string*)

Description	Import Route Target (RT) in the system bgp-vpn instance. When used for evpn ES routes as ES-import Route Target, the RT is auto-derived from the high-order 6-octet portion of the 9-octet ESI value. Note that the ESI value excludes the left-most byte, which is reserved for the ESI type. The RT is encoded into the ES-import extended community received along with the ES route.
Context	system network-instance protocols bgp-vpn bgp-instance id number route-target import-rt (<i>string</i> <i>string</i> <i>string</i> <i>string</i> <i>string</i> <i>string</i> <i>string</i> <i>string</i>)
Tree	import-rt
Configurable	False
Platforms	Supported on all platforms

evpn

Description	Enable the evpn context
Context	system network-instance protocols evpn
Tree	evpn
Configurable	True
Platforms	7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

ethernet-segments

Description	Enable the ethernet-segments context
Context	system network-instance protocols evpn ethernet-segments
Tree	ethernet-segments
Configurable	True
Platforms	7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

bgp-instance id *reference*

Description	bgp global instances configured in net-instance
Context	system network-instance protocols evpn ethernet-segments bgp-instance id reference

Tree	bgp-instance
Configurable	True
Platforms	7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b
Max. Elements	1

id *reference*

Description	Enter the id context
Context	system network-instance protocols evpn ethernet-segments bgp-instance id reference
Reference	system network-instance protocols bgp-vpn bgp-instance id number
Configurable	True
Platforms	7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

ethernet-segment *name string*

Description	Ethernet Segment configuration and state.
Context	system network-instance protocols evpn ethernet-segments bgp-instance id reference ethernet-segment name string
Tree	ethernet-segment
Configurable	True
Platforms	7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b
Max. Elements	1024

name *string*

Description	A unique name identifying the ethernet segment.
Context	system network-instance protocols evpn ethernet-segments bgp-instance id reference ethernet-segment name string
String Length	1 to 32
Configurable	True

Platforms 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

admin-state *keyword*

Description Admin state of the ethernet segment

Context [system network-instance protocols evpn ethernet-segments bgp-instance id reference ethernet-segment name string admin-state keyword](#)

Tree [admin-state](#)

Default disable

Options

- enable
- disable

Configurable True

Platforms 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

association

Description Enter the association context

Context [system network-instance protocols evpn ethernet-segments bgp-instance id reference ethernet-segment name string association](#)

Tree [association](#)

Configurable False

Platforms 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

network-instance *name string*

Description network instance associated to this ethernet-segment

Context [system network-instance protocols evpn ethernet-segments bgp-instance id reference ethernet-segment name string association network-instance name string](#)

Tree [network-instance](#)

Configurable False

Platforms 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

name *string*

Description Enter the name context

Context [system network-instance protocols evpn ethernet-segments bgp-instance id reference ethernet-segment name string association network-instance name string](#)

Configurable False

Platforms 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

bgp-instance [instance number](#)

Description bgp-instance associated to this ethernet-segment

Context [system network-instance protocols evpn ethernet-segments bgp-instance id reference ethernet-segment name string association network-instance name string bgp-instance instance number](#)

Tree [bgp-instance](#)

Configurable False

Platforms 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

instance *number*

Description Enter the instance context

Context [system network-instance protocols evpn ethernet-segments bgp-instance id reference ethernet-segment name string association network-instance name string bgp-instance instance number](#)

Configurable False

Platforms 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

computed-designated-forwarder-candidates

Description	Enter the computed-designated-forwarder-candidates context
Context	system network-instance protocols evpn ethernet-segments bgp-instance id reference ethernet-segment name string association network-instance name string bgp-instance instance number computed-designated-forwarder-candidates
Tree	computed-designated-forwarder-candidates
Configurable	False
Platforms	7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

designated-forwarder-candidate [address](#) ([ipv4-address](#) | [ipv6-address](#))

Description	designated forwarder candidates for this evi
Context	system network-instance protocols evpn ethernet-segments bgp-instance id reference ethernet-segment name string association network-instance name string bgp-instance instance number computed-designated-forwarder-candidates designated-forwarder-candidate address (ipv4-address ipv6-address)
Tree	designated-forwarder-candidate
Configurable	False
Platforms	7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

[address](#) ([ipv4-address](#) | [ipv6-address](#))

Description	Enter the address context
Context	system network-instance protocols evpn ethernet-segments bgp-instance id reference ethernet-segment name string association network-instance name string bgp-instance instance number computed-designated-forwarder-candidates designated-forwarder-candidate address (ipv4-address ipv6-address)
Configurable	False
Platforms	7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

add-time *string*

Description	The date and time when the designated-forwarder-candidate was added to the designated forwarder candidate list for this evi
Context	system network-instance protocols evpn ethernet-segments bgp-instance id reference ethernet-segment name string association network-instance name string bgp-instance instance number computed-designated-forwarder-candidates designated-forwarder-candidate address (ipv4-address ipv6-address) add-time string
Tree	add-time
String Length	20 to 32
Configurable	False
Platforms	7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

designated-forwarder *boolean*

Description	Indicates if this designated-forwarder-candidate is the designated-forwarder.
Context	system network-instance protocols evpn ethernet-segments bgp-instance id reference ethernet-segment name string association network-instance name string bgp-instance instance number computed-designated-forwarder-candidates designated-forwarder-candidate address (ipv4-address ipv6-address) designated-forwarder boolean
Tree	designated-forwarder
Default	false
Configurable	False
Platforms	7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

designated-forwarder-activation-start-time *string*

Description	Indicates the time at which the designated-forwarder activation timer started.
Context	system network-instance protocols evpn ethernet-segments bgp-instance id reference ethernet-segment name string association network-instance name string bgp-instance instance number designated-forwarder-activation-start-time string
Tree	designated-forwarder-activation-start-time
String Length	20 to 32

Configurable	False
Platforms	7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

designated-forwarder-activation-time *number*

Description	Indicates the number of seconds for the activation timer to run, for this node to become the designated forwarder for this bgp instance.
Context	system network-instance protocols evpn ethernet-segments bgp-instance id reference ethernet-segment name string association network-instance name string bgp-instance instance number designated-forwarder-activation-time number
Tree	designated-forwarder-activation-time
Units	seconds
Configurable	False
Platforms	7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

designated-forwarder-role-last-change *string*

Description	Indicates the time at which the designated-forwarder role was changed.
Context	system network-instance protocols evpn ethernet-segments bgp-instance id reference ethernet-segment name string association network-instance name string bgp-instance instance number designated-forwarder-role-last-change string
Tree	designated-forwarder-role-last-change
String Length	20 to 32
Configurable	False
Platforms	7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

autodiscovery-per-ethernet-segment-routes

Description	Enter the autodiscovery-per-ethernet-segment-routes context
Context	system network-instance protocols evpn ethernet-segments bgp-instance id reference ethernet-segment name string autodiscovery-per-ethernet-segment-routes

Tree	autodiscovery-per-ethernet-segment-routes
Configurable	False
Platforms	7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

attr-id reference

Description	Leaf reference to networkinstance/protocols/bgp/rib/attr-sets/attr-set/index.
Context	system network-instance protocols evpn ethernet-segments bgp-instance id reference ethernet-segment name string autodiscovery-per-ethernet-segment-routes attr-id reference
Tree	attr-id
Reference	network-instance name string bgp-rib attr-sets attr-set index number
Configurable	False
Platforms	7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

esi string

Description	The Ethernet Segment Identifier encoded in the NLRI
Context	system network-instance protocols evpn ethernet-segments bgp-instance id reference ethernet-segment name string autodiscovery-per-ethernet-segment-routes esi string
Tree	esi
Configurable	False
Platforms	7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

ethernet-tag-id number

Description	The 32-bit Ethernet Tag ID encoded in the NLRI. The Ethernet Tag ID identifies a broadcast domain
Context	system network-instance protocols evpn ethernet-segments bgp-instance id reference ethernet-segment name string autodiscovery-per-ethernet-segment-routes ethernet-tag-id number
Tree	ethernet-tag-id
Configurable	False

Platforms 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

label

Description The encoded label value and type in the EVPN NLRI

Context [system network-instance protocols evpn ethernet-segments bgp-instance id reference ethernet-segment name string autodiscovery-per-ethernet-segment-routes label](#)

Tree [label](#)

Configurable False

Platforms 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

value number

Description The value of the label field

If the route is an EVPN MPLS route, the mpls-label is read out of the 20-bit high order value. If the route is an EVPN VXLAN route, the vni is read out of the 24-bit value. If the route is an EVPN SRv6 route, this field is set to zero if no transposition is used and set to a non-zero value if transposition is used. For all the cases, if this is an Auto-Discovery per ES route, this leaf is set to zero.

Context [system network-instance protocols evpn ethernet-segments bgp-instance id reference ethernet-segment name string autodiscovery-per-ethernet-segment-routes label value number](#)

Tree [value](#)

Range 0 to 16777215

Configurable False

Platforms 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

value-type keyword

Description Whether the encoded label value is an mpls-label, a vni or a transposed function or argument

Context	system network-instance protocols evpn ethernet-segments bgp-instance id reference ethernet-segment name string autodiscovery-per-ethernet-segment-routes label value-type keyword
Tree	value-type
Options	<ul style="list-style-type: none"> • mpls-label • vni • transposed-srv6-function
Configurable	False
Platforms	7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

neighbor ([ipv4-address-with-zone](#) | [ipv6-address-with-zone](#))

Description	If the route was learned from a BGP neighbor, this is the IPv4 or IPv6 address of that neighbor
Context	system network-instance protocols evpn ethernet-segments bgp-instance id reference ethernet-segment name string autodiscovery-per-ethernet-segment-routes neighbor (ipv4-address-with-zone ipv6-address-with-zone)
Tree	neighbor
Configurable	False
Platforms	7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

route-distinguisher ([route-distinguisher-type-0](#) | [route-distinguisher-type-1](#) | [route-distinguisher-type-2](#) | [route-distinguisher-type-2b](#))

Description	The route distinguisher encoded in the NLRI
Context	system network-instance protocols evpn ethernet-segments bgp-instance id reference ethernet-segment name string autodiscovery-per-ethernet-segment-routes route-distinguisher (route-distinguisher-type-0 route-distinguisher-type-1 route-distinguisher-type-2 route-distinguisher-type-2b)
Tree	route-distinguisher
Configurable	False
Platforms	7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

df-election

Description	Enter the df-election context
Context	system network-instance protocols evpn ethernet-segments bgp-instance id reference ethernet-segment name string df-election
Tree	df-election
Configurable	True
Platforms	7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

algorithm

Description	Enter the algorithm context
Context	system network-instance protocols evpn ethernet-segments bgp-instance id reference ethernet-segment name string df-election algorithm
Tree	algorithm
Configurable	True
Platforms	7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

manual-alg

Description	Enable the manual-alg context
Context	system network-instance protocols evpn ethernet-segments bgp-instance id reference ethernet-segment name string df-election algorithm manual-alg
Tree	manual-alg
Configurable	True
Platforms	7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

primary-evi-range [start-evi number](#)

Description	evi range for this ethernet-segment
Context	system network-instance protocols evpn ethernet-segments bgp-instance id reference ethernet-segment name string df-election algorithm manual-alg primary-evi-range start-evi number

Tree	primary-evi-range
Configurable	True
Platforms	7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

start-evi number

Description	start of the evi-range for this ethernet-segment
Context	system network-instance protocols evpn ethernet-segments bgp-instance id reference ethernet-segment name string df-election algorithm manual-alg primary-evi-range start-evi number
Range	1 to 65535
Configurable	True
Platforms	7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

end-evi number

Description	end of the evi-range for this ethernet-segment
Context	system network-instance protocols evpn ethernet-segments bgp-instance id reference ethernet-segment name string df-election algorithm manual-alg primary-evi-range start-evi number end-evi number
Tree	end-evi
Range	1 to 65535
Configurable	True
Platforms	7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

oper-type keyword

Description	Operational Designated Forwarder algorithm type for this ethernet-segment.
Context	system network-instance protocols evpn ethernet-segments bgp-instance id reference ethernet-segment name string df-election algorithm oper-type keyword
Tree	oper-type
Options	<ul style="list-style-type: none"> default

	<ul style="list-style-type: none"> • preference • manual
Configurable	False
Platforms	7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

preference-alg

Description	Enable the preference-alg context
Context	system network-instance protocols evpn ethernet-segments bgp-instance id reference ethernet-segment name string df-election algorithm preference-alg
Tree	preference-alg
Configurable	True
Platforms	7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

capabilities

Description	Enter the capabilities context
Context	system network-instance protocols evpn ethernet-segments bgp-instance id reference ethernet-segment name string df-election algorithm preference-alg capabilities
Tree	capabilities
Configurable	True
Platforms	7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

ac-df keyword

Description	Attachment Circuit influenced DF Election.
Context	system network-instance protocols evpn ethernet-segments bgp-instance id reference ethernet-segment name string df-election algorithm preference-alg capabilities ac-df keyword
Tree	ac-df
Default	include
Options	<ul style="list-style-type: none"> • include

- exclude

Configurable	True
Platforms	7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

non-revertive *boolean*

Description	Non Revertive mode. If set to true, the 'Don't Preempt Me' capability is advertised in the ES route.
Context	system network-instance protocols evpn ethernet-segments bgp-instance id reference ethernet-segment name string df-election algorithm preference-alg capabilities non-revertive <i>boolean</i>
Tree	non-revertive
Default	false
Configurable	True
Platforms	7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

oper-do-not-preempt *boolean*

Description	Operational do-not-preempt value
Context	system network-instance protocols evpn ethernet-segments bgp-instance id reference ethernet-segment name string df-election algorithm preference-alg oper-do-not-preempt <i>boolean</i>
Tree	oper-do-not-preempt
Configurable	False
Platforms	7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

oper-preference-value *number*

Description	Operational Preference value
Context	system network-instance protocols evpn ethernet-segments bgp-instance id reference ethernet-segment name string df-election algorithm preference-alg oper-preference-value <i>number</i>
Tree	oper-preference-value
Configurable	False

Platforms 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

preference-value *number*

Description Preference that is used to elect the designated forwarder

Context [system network-instance protocols evpn ethernet-segments bgp-instance id reference ethernet-segment name string df-election algorithm preference-alg preference-value number](#)

Tree [preference-value](#)

Range 0 to 65535

Default 32767

Configurable True

Platforms 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

type *keyword*

Description Designated Forwarder algorithm type for this ethernet-segment.

Context [system network-instance protocols evpn ethernet-segments bgp-instance id reference ethernet-segment name string df-election algorithm type keyword](#)

Tree [type](#)

Default default

Options

- default
- preference
- manual

Configurable True

Platforms 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

interface-standby-signaling-on-non-df

Description Enable the interface-standby-signaling-on-non-df context

Context [system network-instance protocols evpn ethernet-segments bgp-instance id reference ethernet-segment name string df-election interface-standby-signaling-on-non-df](#)

Tree	interface-standby-signaling-on-non-df
Configurable	True
Platforms	7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

timers

Description	Enter the timers context
Context	system network-instance protocols evpn ethernet-segments bgp-instance id reference ethernet-segment name string df-election timers
Tree	timers
Configurable	True
Platforms	7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

activation-timer *number*

Description	Remaining activation timer per Ethernet segment
Context	system network-instance protocols evpn ethernet-segments bgp-instance id reference ethernet-segment name string df-election timers activation-timer number
Tree	activation-timer
Range	0 to 100
Units	seconds
Configurable	True
Platforms	7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

esi *string*

Description	The 10-byte Ethernet Segment Identifier of the ethernet segment. ESI-0 or MAX-ESI values are not allowed. ESI values with bytes 1-6 all zeros are not allowed since they would produce a null ESI-import route-target.
Context	system network-instance protocols evpn ethernet-segments bgp-instance id reference ethernet-segment name string esi string
Tree	esi

Configurable	True
Platforms	7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

esi-label *number*

Description	The esi label allocated for this ethernet-segment. The esi-label is advertised by the EVPN Auto-Discovery-Ethernet-Segment Advertisement routes and it is expected on received EVPN packets that were generated as multicast packets from this ethernet-segments peers.
Context	system network-instance protocols evpn ethernet-segments bgp-instance id reference ethernet-segment name string esi-label number
Tree	esi-label
Range	16 to 1048575
Configurable	False
Platforms	7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

ethernet-segment-routes

Description	Enter the ethernet-segment-routes context
Context	system network-instance protocols evpn ethernet-segments bgp-instance id reference ethernet-segment name string ethernet-segment-routes
Tree	ethernet-segment-routes
Configurable	False
Platforms	7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

attr-id *reference*

Description	Leaf reference to networkinstance/protocols/bgp/rib/attr-sets/attr-set/index
Context	system network-instance protocols evpn ethernet-segments bgp-instance id reference ethernet-segment name string ethernet-segment-routes attr-id reference
Tree	attr-id
Reference	network-instance name string bgp-rib attr-sets attr-set index number

Configurable	False
Platforms	7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

esi string

Description	The Ethernet Segment Identifier
Context	system network-instance protocols evpn ethernet-segments bgp-instance id reference ethernet-segment name string ethernet-segment-routes esi string
Tree	esi
Configurable	False
Platforms	7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

neighbor (ipv4-address-with-zone | ipv6-address-with-zone)

Description	If the route was learned from a BGP neighbor, this is the IPv4 or IPv6 address of that neighbor
Context	system network-instance protocols evpn ethernet-segments bgp-instance id reference ethernet-segment name string ethernet-segment-routes neighbor (ipv4-address-with-zone ipv6-address-with-zone)
Tree	neighbor
Configurable	False
Platforms	7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

originating-router (ipv4-address | ipv6-address)

Description	The IPv4 or IPv6 address of the originating router
Context	system network-instance protocols evpn ethernet-segments bgp-instance id reference ethernet-segment name string ethernet-segment-routes originating-router (ipv4-address ipv6-address)
Tree	originating-router
Configurable	False
Platforms	7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

route-distinguisher (*route-distinguisher-type-0 | route-distinguisher-type-1 | route-distinguisher-type-2 | route-distinguisher-type-2b*)

Description	The route distinguisher encoded in the NLRI
Context	system network-instance protocols evpn ethernet-segments bgp-instance id reference ethernet-segment name string ethernet-segment-routes route-distinguisher (<i>route-distinguisher-type-0 route-distinguisher-type-1 route-distinguisher-type-2 route-distinguisher-type-2b</i>)
Tree	route-distinguisher
Configurable	False
Platforms	7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

interface [ethernet-interface](#) *reference*

Description	Add a list entry for interface
Context	system network-instance protocols evpn ethernet-segments bgp-instance id reference ethernet-segment name string interface ethernet-interface reference
Tree	interface
Configurable	True
Platforms	7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b
Max. Elements	1

ethernet-interface *reference*

Description	Interface associated with the ethernet segment.
Context	system network-instance protocols evpn ethernet-segments bgp-instance id reference ethernet-segment name string interface ethernet-interface reference
Reference	interface name string
Configurable	True
Platforms	7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

multi-homing-mode *keyword*

Description	Multi-homing mode of the ethernet segment. The state of this leaf can be different than the configured value in cases where the configured value is 'all-active' and the multi-homing mode advertised by the ES peers in the AD per-ES routes is 'single-active'. In this case, the state of this leaf will show 'single-active'.
Context	system network-instance protocols evpn ethernet-segments bgp-instance id <i>reference</i> ethernet-segment name <i>string</i> multi-homing-mode <i>keyword</i>
Tree	multi-homing-mode
Default	all-active
Options	<ul style="list-style-type: none"> • all-active • single-active
Configurable	True
Platforms	7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

next-hop [l3-next-hop](#) (*ipv4-address* | *ipv6-address*)

Description	Enter the next-hop list instance
Context	system network-instance protocols evpn ethernet-segments bgp-instance id <i>reference</i> ethernet-segment name <i>string</i> next-hop l3-next-hop (<i>ipv4-address</i> <i>ipv6-address</i>)
Tree	next-hop
Configurable	True
Platforms	7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b
Max. Elements	1

l3-next-hop (*ipv4-address* | *ipv6-address*)

Description	Layer-3 next-hop associated with the ethernet segment.
Context	system network-instance protocols evpn ethernet-segments bgp-instance id <i>reference</i> ethernet-segment name <i>string</i> next-hop l3-next-hop (<i>ipv4-address</i> <i>ipv6-address</i>)
Configurable	True

Platforms 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

evi start number

Description evi range for this ethernet-segment association

Context [system network-instance protocols evpn ethernet-segments bgp-instance id reference ethernet-segment name string next-hop l3-next-hop \(ipv4-address | ipv6-address\) evi start number](#)

Tree [evi](#)

Configurable True

Platforms 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

Max. Elements 1

start number

Description start of the evi-range for this ethernet-segment

Context [system network-instance protocols evpn ethernet-segments bgp-instance id reference ethernet-segment name string next-hop l3-next-hop \(ipv4-address | ipv6-address\) evi start number](#)

Range 1 to 65535

Configurable True

Platforms 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

oper-down-reason keyword

Description The reason for the ethernet-segment being down in the bgp-instance

Context [system network-instance protocols evpn ethernet-segments bgp-instance id reference ethernet-segment name string oper-down-reason keyword](#)

Tree [oper-down-reason](#)

Options

- admin-disabled
- no-nexthop-address
- no-originating-address
- no-associated-interface

- associated-interface-oper-down
- no-esi
- no-esi-label

Configurable

False

Platforms

7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

oper-esi string**Description**

The operational Ethernet Segment Identifier used in the ethernet segment.

Context[system network-instance protocols evpn ethernet-segments bgp-instance id reference ethernet-segment name string oper-esi string](#)**Tree**[oper-esi](#)**Configurable**

False

Platforms

7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

oper-multi-homing-mode keyword**Description**

Operational Multi-homing mode of the ethernet segment.

The state of this leaf can be different than the configured value in cases where the configured value is 'all-active' and the multi-homing mode advertised by the ES peers in the AD per-ES routes is 'single-active'. In this case, the state of this leaf will show 'single-active'.

Context[system network-instance protocols evpn ethernet-segments bgp-instance id reference ethernet-segment name string oper-multi-homing-mode keyword](#)**Tree**[oper-multi-homing-mode](#)**Options**

- all-active
- single-active

Configurable

False

Platforms

7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

oper-state keyword**Description**

This leaf contains the operational state of ethernet segment.

Context	system network-instance protocols evpn ethernet-segments bgp-instance id reference ethernet-segment name string oper-state keyword
Tree	oper-state
Options	<ul style="list-style-type: none"> • up Component or process is operational • down Component or process is not operational • empty Component slot is empty • downloading Component is downloading image into memory • booting Component is booting downloaded image • starting Component image operational, application processes starting • failed Component or process has failed • synchronizing Component is currently being synchronized • upgrading Component is currently being upgraded • low-power Component is offline due to insufficient system power • degraded Component or process is in a degraded state • warm-reboot Component or process is currently warm rebooting This state is set during a warm reboot immediately following initiation of the reboot, continuing after startup until the system has completed audit. In this state the system will not accept configuration changes. • waiting Component or process is currently waiting This state can be set by event handler when the <code>reinvoke-with-delay</code> action is used, and indicates that the event handler is waiting for the provided delay before reinvoking the instance.
Configurable	False

Platforms 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

routes

Description Enter the routes context

Context [system network-instance protocols evpn ethernet-segments bgp-instance id reference ethernet-segment name string routes](#)

Tree [routes](#)

Configurable True

Platforms 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

ethernet-segment

Description Enter the ethernet-segment context

Context [system network-instance protocols evpn ethernet-segments bgp-instance id reference ethernet-segment name string routes ethernet-segment](#)

Tree [ethernet-segment](#)

Configurable True

Platforms 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

originating-ip *keyword*

Description The originating ip-address that the inclusive multicast route will be advertised with in this evpn instance

Context [system network-instance protocols evpn ethernet-segments bgp-instance id reference ethernet-segment name string routes ethernet-segment originating-ip keyword](#)

Tree [originating-ip](#)

Default use-system-ipv4-address

Options

- use-system-ipv4-address

Configurable True

Platforms 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

next-hop keyword

Description The ip-address that will be used as the bgp-next hop for all ES and AD per-ES routes advertised for this Ethernet Segment.

Context [system network-instance protocols evpn ethernet-segments bgp-instance id reference ethernet-segment name string routes next-hop keyword](#)

Tree [next-hop](#)

Default use-system-ipv4-address

Options

- use-system-ipv4-address

Configurable True

Platforms 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

type keyword

Description Ethernet Segment type.

Context [system network-instance protocols evpn ethernet-segments bgp-instance id reference ethernet-segment name string type keyword](#)

Tree [type](#)

Default none

Options

- none
- virtual

Configurable True

Platforms 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

timers

Description Enter the timers context

Context [system network-instance protocols evpn ethernet-segments timers](#)

Tree [timers](#)

Configurable True

Platforms	7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b
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activation-timer *number*

Description	Enter the activation-timer context
Context	system network-instance protocols evpn ethernet-segments timers activation-timer <i>number</i>
Tree	activation-timer
Range	0 to 100
Default	3
Units	seconds
Configurable	True
Platforms	7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

boot-remaining-time *number*

Description	Indicates the number of seconds remaining for the boot timer to expire.
Context	system network-instance protocols evpn ethernet-segments timers boot-remaining-time <i>number</i>
Tree	boot-remaining-time
Units	seconds
Configurable	False
Platforms	7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

boot-start-time *string*

Description	Indicates the time at which the boot timer started.
Context	system network-instance protocols evpn ethernet-segments timers boot-start-time <i>string</i>
Tree	boot-start-time
String Length	20 to 32
Configurable	False

Platforms 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

boot-timer *number*

Description Remaining time before running BGP EVPN multi-homing DF election algorithm

Context [system network-instance protocols evpn ethernet-segments timers boot-timer *number*](#)

Tree [boot-timer](#)

Range 0 to 6000

Default 10

Units seconds

Configurable True

Platforms 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

multicast

Description Enable the multicast context

Context [system network-instance protocols evpn multicast](#)

Tree [multicast](#)

Configurable True

Platforms 7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5

leave-sync-propagation *number*

Description This value is the delta time applied by a node sending the leave synch route before removing the multicast state

When EVPN multi-homing is used along with igmp/mld snooping, a node receiving a leave message from a receiver will advertise an EVPN Multicast Leave Sync route to synchronize the leave state across all nodes attached to the Ethernet Segment. This route encodes the maximum response time that the receiving node needs to apply for a given (S,G) or (*,G) state before removing it. The leave-sync-propagation time accounts for the BGP propagation time so that the local node minimizes the potential churn of removing the multicast state before the route made it to the node receiving a

join for the multicast group to be removed. The value must be adjusted to the estimated BGP propagation time between the Ethernet Segment peers.

Context	system network-instance protocols evpn multicast leave-sync-propagation number
Tree	leave-sync-propagation
Range	0 to 300
Default	5
Units	seconds
Configurable	True
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5

ntp

Description	Top-level container for NTP configuration and state
Context	system ntp
Tree	ntp
Configurable	True
Platforms	Supported on all platforms

admin-state *keyword*

Description	Enables the system NTP client and indicates that the system should attempt to synchronize the clock
Context	system ntp admin-state keyword
Tree	admin-state
Options	<ul style="list-style-type: none"> • enable • disable
Configurable	True
Platforms	Supported on all platforms

network-instance *reference*

Description	Reference to a configured network-instance
Context	system ntp network-instance reference
Tree	network-instance

Reference	network-instance name <i>string</i>
Configurable	True
Platforms	Supported on all platforms

oper-state *keyword*

Description	Details the operational state of the NTP client
Context	system ntp oper-state <i>keyword</i>
Tree	oper-state
Options	<ul style="list-style-type: none"> • up Component or process is operational • down Component or process is not operational • empty Component slot is empty • downloading Component is downloading image into memory • booting Component is booting downloaded image • starting Component image operational, application processes starting • failed Component or process has failed • synchronizing Component is currently being synchronized • upgrading Component is currently being upgraded • low-power Component is offline due to insufficient system power • degraded Component or process is in a degraded state • warm-reboot Component or process is currently warm rebooting This state is set during a warm reboot immediately following initiation of the reboot, continuing after startup until the system has completed audit. In this state the system will not accept configuration changes. • waiting

Component or process is currently waiting

This state can be set by event handler when the `reinvoke-with-delay` action is used, and indicates that the event handler is waiting for the provided delay before reinvoking the instance.

Configurable	False
Platforms	Supported on all platforms

server address (*ipv4 | ipv6 | domain-name*)

Description	List of NTP servers to use for system clock synchronization
Context	system ntp server address (<i>ipv4 ipv6 domain-name</i>)
Tree	server
Configurable	True
Platforms	Supported on all platforms

address (*ipv4 | ipv6 | domain-name*)

Description	Domain or IP address of the NTP server IP address may be either IPv4 or IPv6. Domain resolution requires working DNS configuration in the same network-instance.
Context	system ntp server address (<i>ipv4 ipv6 domain-name</i>)
String Length	1 to 253
Configurable	True
Platforms	Supported on all platforms

iburst *boolean*

Description	Indicates whether this server should enable burst synchronization or not iburst, or initial burst, improves the time taken for initial synchronization by sending a burst of eight packets instead of the usual one, these packets are spaced by a two second delay
Context	system ntp server address (<i>ipv4 ipv6 domain-name</i>) iburst <i>boolean</i>
Tree	iburst
Default	false
Configurable	True
Platforms	Supported on all platforms

jitter number

Description	Measurement of the variance in latency on the network
Context	system ntp server address (<i>ipv4</i> <i>ipv6</i> <i>domain-name</i>) jitter number
Tree	jitter
Units	milliseconds
Configurable	False
Platforms	Supported on all platforms

offset number

Description	Estimate of the current time offset from the peer This is the time difference between the local and reference clock.
Context	system ntp server address (<i>ipv4</i> <i>ipv6</i> <i>domain-name</i>) offset number
Tree	offset
Units	microseconds
Configurable	False
Platforms	Supported on all platforms

poll-interval number

Description	Polling interval of the peer
Context	system ntp server address (<i>ipv4</i> <i>ipv6</i> <i>domain-name</i>) poll-interval number
Tree	poll-interval
Units	seconds
Configurable	False
Platforms	Supported on all platforms

prefer boolean

Description	Indicates whether this server should be preferred or not All other things being equal, this host will be chosen for synchronization among a set of correctly operating NTP servers
Context	system ntp server address (<i>ipv4</i> <i>ipv6</i> <i>domain-name</i>) prefer boolean
Tree	prefer
Default	false

Configurable	True
Platforms	Supported on all platforms

root-delay number

Description	The round-trip delay to the server
Context	system ntp server address (<i>ipv4</i> <i>ipv6</i> <i>domain-name</i>) root-delay number
Tree	root-delay
Units	milliseconds
Configurable	False
Platforms	Supported on all platforms

root-dispersion number

Description	Dispersion (epsilon) represents the maximum error inherent in the measurement
Context	system ntp server address (<i>ipv4</i> <i>ipv6</i> <i>domain-name</i>) root-dispersion number
Tree	root-dispersion
Units	milliseconds
Configurable	False
Platforms	Supported on all platforms

stratum number

Description	Indicates the level of the server in the NTP hierarchy as number increases, the accuracy is degraded. Primary servers are stratum 1 while a maximum value of 16 indicates unsynchronized. The values have the following meanings: 0 unspecified or invalid 1 primary server (e.g., equipped with a GPS receiver) 2-15 secondary server (via NTP) 16 unsynchronized 17-255 reserved
Context	system ntp server address (<i>ipv4</i> <i>ipv6</i> <i>domain-name</i>) stratum number
Tree	stratum
Configurable	False
Platforms	Supported on all platforms

source-address (*ipv4-address* | *ipv6-address*)

Description	Source address for NTP to use for messages sent to a remote server
Context	system ntp source-address (<i>ipv4-address</i> <i>ipv6-address</i>)
Tree	source-address
Configurable	True
Platforms	Supported on all platforms

synchronized (*ipv4-address* | *ipv6-address* | *domain-name* | *string*)

Description	Address of the NTP server that the local client is synchronized to This field is set to 'unsynchronized', if the local client is not synchronized
Context	system ntp synchronized (<i>ipv4-address</i> <i>ipv6-address</i> <i>domain-name</i> <i>string</i>)
Tree	synchronized
String Length	1 to 253
Configurable	False
Platforms	Supported on all platforms

packet-link-qualification

Description	Top-level container for gNOI Packet Link Qualification profiles
Context	system packet-link-qualification
Tree	packet-link-qualification
Configurable	True
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

profile name *string*

Description	List of configured Packet Link Qualification profiles
Context	system packet-link-qualification profile name <i>string</i>
Tree	profile
Configurable	True

Platforms 7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

name *string*

Description Name of the Packet Link Qualification profile

Context [system packet-link-qualification profile name *string*](#)

String Length 1 to 255

Configurable True

Platforms 7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

asic-loopback

Description ASIC loopback
Use the ASIC loopback mode

Context [system packet-link-qualification profile name *string* asic-loopback](#)

Tree [asic-loopback](#)

Configurable True

Platforms 7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

ntp

Description Enter the ntp context

Context [system packet-link-qualification profile name *string* ntp](#)

Tree [ntp](#)

Configurable True

Platforms 7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

end-time *string*

Description End time of the test

Context	system packet-link-qualification profile name <i>string</i> ntp end-time <i>string</i>
Tree	end-time
String Length	20 to 32
Configurable	True
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

start-time *string*

Description	Start time of the test
Context	system packet-link-qualification profile name <i>string</i> ntp start-time <i>string</i>
Tree	start-time
String Length	20 to 32
Configurable	True
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

teardown-time *string*

Description	Time at which the test should be torn down
Context	system packet-link-qualification profile name <i>string</i> ntp teardown-time <i>string</i>
Tree	teardown-time
String Length	20 to 32
Configurable	True
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

packet-generator

Description	Packet generator endpoint
Context	system packet-link-qualification profile name <i>string</i> packet-generator
Tree	packet-generator
Configurable	True

Platforms 7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

packet-rate number

Description Packet rate of the packet generator

Context [system packet-link-qualification profile name](#) *string* [packet-generator packet-rate number](#)

Tree [packet-rate](#)

Range 1 to 4294967295

Units packets per second

Configurable True

Platforms 7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

packet-size number

Description Packet size (in bytes) of the packet generator

Context [system packet-link-qualification profile name](#) *string* [packet-generator packet-size number](#)

Tree [packet-size](#)

Range 64 to 8184

Units bytes

Configurable True

Platforms 7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

rpc

Description Enter the rpc context

Context [system packet-link-qualification profile name](#) *string* [rpc](#)

Tree [rpc](#)

Configurable True

Platforms 7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

duration number

Description	Duration of the test
Context	system packet-link-qualification profile name <i>string</i> rpc duration number
Tree	duration
Range	1 to 4294967295
Units	seconds
Configurable	True
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

post-sync-duration number

Description	Duration of the post-sync phase
Context	system packet-link-qualification profile name <i>string</i> rpc post-sync-duration number
Tree	post-sync-duration
Units	seconds
Configurable	True
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

pre-sync-duration number

Description	Duration of the pre-sync phase
Context	system packet-link-qualification profile name <i>string</i> rpc pre-sync-duration number
Tree	pre-sync-duration
Units	seconds
Configurable	True
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

setup-duration *number*

Description	Duration of the setup phase
Context	system packet-link-qualification profile name <i>string</i> rpc setup-duration <i>number</i>
Tree	setup-duration
Range	20 to 4294967295
Units	seconds
Configurable	True
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

teardown-duration *number*

Description	Duration of the teardown phase
Context	system packet-link-qualification profile name <i>string</i> rpc teardown-duration <i>number</i>
Tree	teardown-duration
Range	15 to 4294967295
Units	seconds
Configurable	True
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

protocols

Description	The routing protocols that are supported by the system
Context	system protocols
Tree	protocols
Configurable	True
Platforms	Supported on all platforms

bgp

Description	Enable the bgp context
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Context	system protocols bgp
Tree	bgp
Configurable	True
Platforms	Supported on all platforms

restart-max-wait *number*

Description	The maximum amount of time that BGP will wait to receive End of RIB markers from all peers and for all address families that were up prior to restart. After this time elapses BGP declares that convergence has occurred and sends its own EOR markers to its peers.
Context	system protocols bgp restart-max-wait <i>number</i>
Tree	restart-max-wait
Range	0 to 3600
Default	600
Units	seconds
Configurable	True
Platforms	Supported on all platforms

ra-guard-policy *name string*

Description	List containing RA Guard Policy and parameters
Context	system ra-guard-policy <i>name string</i>
Tree	ra-guard-policy
Configurable	True
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5
Max. Elements	64

name *string*

Description	RA Guard Policy name
Context	system ra-guard-policy <i>name string</i>
String Length	1 to 255
Configurable	True

Platforms 7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5

action *keyword*

Description Describes the RA Guard Policy action for RA Messages matching the specified attributes. RA Messages not matching the specified attributes will be handled in the opposite manner.

Context [system ra-guard-policy name](#) *string* **action** *keyword*

Tree [action](#)

Default discard

Options

- accept
- discard

Configurable True

Platforms 7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5

advertise-prefix-set *reference*

Description Reference to a prefix set to match advertised address within RA message

Context [system ra-guard-policy name](#) *string* **advertise-prefix-set** *reference*

Tree [advertise-prefix-set](#)

Reference [routing-policy prefix-set name](#) *string*

Configurable True

Platforms 7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5

hop-limit *number*

Description Verifies the minimum advertised hop count limit, RA message value must be equal to or greater than hop-limit. If not specified the verification is skipped.

Context [system ra-guard-policy name](#) *string* **hop-limit** *number*

Tree [hop-limit](#)

Range 1 to 255

Configurable True

Platforms 7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5

managed-config-flag *boolean*

Description	Causes the RA Guard policy to match IPv6 RA messages with the M (Managed address) flag set. If not specified the verification is skipped.
Context	system ra-guard-policy name <i>string</i> managed-config-flag <i>boolean</i>
Tree	managed-config-flag
Configurable	True
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5

other-config-flag *boolean*

Description	Causes the RA Guard policy to match IPv6 RA messages with the O (Other config) flag set. If not specified the verification is skipped.
Context	system ra-guard-policy name <i>string</i> other-config-flag <i>boolean</i>
Tree	other-config-flag
Configurable	True
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5

router-preference *keyword*

Description	Verifies that the advertised default router preference parameter value is equal to or less than the specified limit. If not specified the verification is skipped.
Context	system ra-guard-policy name <i>string</i> router-preference <i>keyword</i>
Tree	router-preference
Options	<ul style="list-style-type: none"> • high • medium • low
Configurable	True
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5

source-prefix-set *reference*

Description	Reference to a prefix set to match RA source address. If not specified the verification is skipped.
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Context	system ra-guard-policy name <i>string</i> source-prefix-set <i>reference</i>
Tree	source-prefix-set
Reference	routing-policy prefix-set name <i>string</i>
Configurable	True
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5

sflow

Description	Context to configure sFlow Agent parameters and report sFlow state
Context	system sflow
Tree	sflow
Configurable	True
Platforms	Supported on all platforms

admin-state *keyword*

Description	Administratively enable or disable sFlow for the system
Context	system sflow admin-state <i>keyword</i>
Tree	admin-state
Default	disable
Options	<ul style="list-style-type: none"> • enable • disable
Configurable	True
Platforms	Supported on all platforms

collector [collector-id](#) *number*

Description	List of sFlow collectors to which sFlow sample data is sent
Context	system sflow collector collector-id <i>number</i>
Tree	collector
Configurable	True
Platforms	Supported on all platforms
Max. Elements	8

collector-id *number*

Description	Specify the collector ID
Context	system sflow collector collector-id <i>number</i>
Range	1 to 8
Configurable	True
Platforms	Supported on all platforms

collector-address (*ipv4-address* | *ipv6-address*)

Description	The IP address for an sFlow collector
Context	system sflow collector collector-id <i>number</i> collector-address (<i>ipv4-address</i> <i>ipv6-address</i>)
Tree	collector-address
Configurable	True
Platforms	Supported on all platforms

network-instance *reference*

Description	Reference to a configured network-instance
Context	system sflow collector collector-id <i>number</i> network-instance <i>reference</i>
Tree	network-instance
Reference	network-instance <i>name</i> <i>string</i>
Configurable	True
Platforms	Supported on all platforms

next-hop (*ipv4-address* | *ipv6-address*)

Description	Specifies the active IP next hop used to reach the associated collector
Context	system sflow collector collector-id <i>number</i> next-hop (<i>ipv4-address</i> <i>ipv6-address</i>)
Tree	next-hop
Configurable	False
Platforms	Supported on all platforms

port number

Description	Specifies the destination UDP port number to be used in sFlow packets
Context	system sflow collector collector-id number port number
Tree	port
Default	6343
Configurable	True
Platforms	Supported on all platforms

source-address (*ipv4-address* | *ipv6-address*)

Description	Specifies the IP address to be used as the source address in sFlow packets
Context	system sflow collector collector-id number source-address (ipv4-address ipv6-address)
Tree	source-address
Configurable	True
Platforms	Supported on all platforms

dscp number

Description	Specify sFlow DSCP value This value specifies the DSCP value used in IP header of samples sent to the associated collectors.
Context	system sflow dscp number
Tree	dscp
Range	0 to 63
Default	0
Configurable	True
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

sample-rate number

Description	Specify sFlow sample rate This value is the rate at which traffic will be sampled at a rate of 1:N received packets.
Context	system sflow sample-rate number

Tree	sample-rate
Range	1 to 2000000
Default	10000
Configurable	True
Platforms	Supported on all platforms

sample-size *number*

Description	Specify sFlow sample size This value specifies the number of bytes the sFlow agent samples from each frame.
Context	system sflow sample-size number
Tree	sample-size
Range	256 512
Default	256
Configurable	True
Platforms	Supported on all platforms

source-address (*ipv4-address* | *ipv6-address*)

Description	Specifies the IP address to be used as the source address in sFlow packets
Context	system sflow source-address (<i>ipv4-address</i> <i>ipv6-address</i>)
Tree	source-address
Configurable	True
Platforms	Supported on all platforms

statistics

Description	Enter the statistics context
Context	system sflow statistics
Tree	statistics
Configurable	False
Platforms	Supported on all platforms

total-offered-packets *number*

Description	Total number of packets subject to sFlow sampling
Context	system sflow statistics total-offered-packets <i>number</i>
Tree	total-offered-packets
Default	0
Configurable	False
Platforms	Supported on all platforms

total-samples-taken *number*

Description	Total number of sFlow samples taken
Context	system sflow statistics total-samples-taken <i>number</i>
Tree	total-samples-taken
Default	0
Configurable	False
Platforms	Supported on all platforms

total-sent-packets *number*

Description	Total number of sFlow packets sent to collectors
Context	system sflow statistics total-sent-packets <i>number</i>
Tree	total-sent-packets
Default	0
Configurable	False
Platforms	Supported on all platforms

snmp

Description	Top-level container for SNMP configuration and state
Context	system snmp
Tree	snmp
Configurable	True
Platforms	Supported on all platforms except IMGMT

access-group name *string*

Description	List of configured SNMP access-groups
Context	system snmp access-group name <i>string</i>
Tree	access-group
Configurable	True
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

name *string*

Description	Name of the SNMP access-group
Context	system snmp access-group name <i>string</i>
String Length	1 to 255
Configurable	True
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

admin-state *keyword*

Description	Enables the SNMP access-group
Context	system snmp access-group name <i>string</i> admin-state <i>keyword</i>
Tree	admin-state
Default	enable
Options	<ul style="list-style-type: none"> • enable • disable
Configurable	True
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

community-entry name *string*

Description	List of configured SNMPv2 communities
Context	system snmp access-group name <i>string</i> community-entry name <i>string</i>

Tree	community-entry
Configurable	True
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

name string

Description	Unique name for the SNMPv2 community.
Context	system snmp access-group name string community-entry name string
String Length	1 to 255
Configurable	True
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

community string

Description	SNMPv2 community
Context	system snmp access-group name string community-entry name string community string
Tree	community
String Length	1 to 255
Configurable	True
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

description string

Description	Description for the SNMPv2 community
Context	system snmp access-group name string community-entry name string description string
Tree	description
String Length	1 to 255
Configurable	True
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

prefix-list (*ipv4-prefix* | *ipv6-prefix*)

Description	Prefixes where this community can be used, both IPv4 and IPv6 addresses. A /32 or /128 mask can be used to limit it to a single ip-address
Context	system snmp access-group name <i>string</i> community-entry name <i>string</i> prefix-list (<i>ipv4-prefix</i> <i>ipv6-prefix</i>)
Tree	prefix-list
Configurable	True
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b
Max. Elements	16

description *string*

Description	Description for this access-group
Context	system snmp access-group name <i>string</i> description <i>string</i>
Tree	description
String Length	1 to 255
Configurable	True
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

security-entry [name](#) *string*

Description	List of configured SNMPv3 users
Context	system snmp access-group name <i>string</i> security-entry name <i>string</i>
Tree	security-entry
Configurable	True
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

name *string*

Description	Unique name of the SNMPv3 security
Context	system snmp access-group name <i>string</i> security-entry name <i>string</i>

String Length	1 to 255
Configurable	True
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

authentication

Description	Authentication parameters for this user.
Context	system snmp access-group name string security-entry name string authentication
Tree	authentication
Configurable	True
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

password *string*

Description	The user authentication password, supplied either as cleartext or as a hashed value. If provided as cleartext, the system will hash the value on input, storing only the hashed value. If provided as a hashed value, the value should include any '\$' characters, for example '\$ar2\$aOvsuj0ALIU=\$r750fMa3ZEA/Di8dIfU2fQ=='
Context	system snmp access-group name string security-entry name string authentication password string
Tree	password
String Length	8 to 255
Configurable	True
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

protocol *keyword*

Description	Authentication protocol used by this user.
Context	system snmp access-group name string security-entry name string authentication protocol keyword
Tree	protocol

Default	hmac-md5-96
Options	<ul style="list-style-type: none"> • hmac-md5-96 MD5 • hmac-sha1-96 SHA • hmac-sha2-224 SHA-224 • hmac-sha2-256 SHA-256 • hmac-sha2-384 SHA-384 • hmac-sha2-512 SHA-512
Configurable	True
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

description *string*

Description	Description for this user
Context	system snmp access-group name string security-entry name string description string
Tree	description
String Length	1 to 255
Configurable	True
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

privacy

Description	Privacy parameters for this user.
Context	system snmp access-group name string security-entry name string privacy
Tree	privacy
Configurable	True

Platforms 7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

password *string*

Description The user privacy password, supplied either as cleartext or as a hashed value. If not provided, authentication/password will be used.

If provided as cleartext, the system will hash the value on input, storing only the hashed value. If provided as a hashed value, the value should include any '\$' characters, for example '\$ar2\$aOvsuj0ALIU=\$r750fMa3ZEA/Di8dIfU2fQ=='.

Context [system snmp access-group name](#) *string* [security-entry name](#) *string* [privacy password](#) *string*

Tree [password](#)

String Length 8 to 255

Configurable True

Platforms 7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

protocol *keyword*

Description Privacy protocol used by this user.

Context [system snmp access-group name](#) *string* [security-entry name](#) *string* [privacy protocol](#) *keyword*

Tree [protocol](#)

Default cbc-des

Options

- cbc-des
DES
- cfb128-aes-128
AES
- cfb128-aes-192
AES-192
- cfb128-aes-256
AES-256

Configurable True

Platforms 7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

user string

Description User name used in SNMPv3 authentication and privacy

Context [system snmp access-group name string security-entry name string user string](#)

Tree [user](#)

String Length 1 to 255

Configurable True

Platforms 7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

security-level keyword

Description Minimum security level required for this access-group.

Context [system snmp access-group name string security-level keyword](#)

Tree [security-level](#)

Options

- no-auth-no-priv
- auth-no-priv
- auth-priv

Configurable True

Platforms 7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

network-instance name reference

Description List of network-instances to run an SNMP server in

Context [system snmp network-instance name reference](#)

Tree [network-instance](#)

Configurable True

Platforms Supported on all platforms except IMGMT

Max. Elements 5

name *reference*

Description	Reference to a configured network-instance
Context	system snmp network-instance name reference
Reference	network-instance name string
Configurable	True
Platforms	Supported on all platforms except IMGMT

admin-state *keyword*

Description	Enables the SNMP server in this network-instance
Context	system snmp network-instance name reference admin-state keyword
Tree	admin-state
Default	disable
Options	<ul style="list-style-type: none"> • enable • disable
Configurable	True
Platforms	Supported on all platforms except IMGMT

engine-id *string*

Description	The local SNMP engine's administratively assigned unique identifier. If this leaf is not set, the device automatically calculates an engine ID, as described in RFC 3411.
Context	system snmp network-instance name reference engine-id string
Tree	engine-id
Configurable	True
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

error-msg *string*

Description	Indicates a possible error message if the snmp-server was stopped at runtime
Context	system snmp network-instance name reference error-msg string

Tree	error-msg
Configurable	False
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

listen-address (*ipv4-address* | *ipv6-address*)

Description	List of IP addresses for the SNMP server to listen on within the network-instance
Context	system snmp network-instance name <i>reference</i> listen-address (<i>ipv4-address</i> <i>ipv6-address</i>)
Tree	listen-address
Default	::
Configurable	True
Platforms	Supported on all platforms except IMGMT
Max. Elements	16

oper-state *keyword*

Description	Details the operational state of the SNMP server
Context	system snmp network-instance name <i>reference</i> oper-state <i>keyword</i>
Tree	oper-state
Options	<ul style="list-style-type: none"> • up Component or process is operational • down Component or process is not operational • empty Component slot is empty • downloading Component is downloading image into memory • booting Component is booting downloaded image • starting Component image operational, application processes starting • failed Component or process has failed

- synchronizing
Component is currently being synchronized
- upgrading
Component is currently being upgraded
- low-power
Component is offline due to insufficient system power
- degraded
Component or process is in a degraded state
- warm-reboot
Component or process is currently warm rebooting
This state is set during a warm reboot immediately following initiation of the reboot, continuing after startup until the system has completed audit. In this state the system will not accept configuration changes.
- waiting
Component or process is currently waiting
This state can be set by event handler when the reinvoke-with-delay action is used, and indicates that the event handler is waiting for the provided delay before reinvoking the instance.

Configurable

False

Platforms

Supported on all platforms except IMGMT

statistics**Description**

Container for snmp statistics, as defined by RFC 1213, RFC 3418, RFC 3414 and RFC 3412

Context[system snmp network-instance name reference statistics](#)**Tree**[statistics](#)**Configurable**

False

Platforms

7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

snmp-in-asn-parse-errs *number***Description**

The total number of ASN.1 or BER errors encountered by the SNMP entity when decoding received SNMP messages.

Context[system snmp network-instance name reference statistics snmp-in-asn-parse-errs number](#)**Tree**[snmp-in-asn-parse-errs](#)

Default	0
Configurable	False
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

snmp-in-bad-community-names *number*

Description	The total number of community-based SNMP messages (for example, SNMPv1) delivered to the SNMP entity which used an SNMP community name not known to said entity.
Context	system snmp network-instance name <i>reference</i> statistics snmp-in-bad-community-names <i>number</i>
Tree	snmp-in-bad-community-names
Default	0
Configurable	False
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

snmp-in-bad-community-uses *number*

Description	The total number of community-based SNMP messages (for example, SNMPv1) delivered to the SNMP entity which represented an SNMP operation that was not allowed for the SNMP community named in the message.
Context	system snmp network-instance name <i>reference</i> statistics snmp-in-bad-community-uses <i>number</i>
Tree	snmp-in-bad-community-uses
Default	0
Configurable	False
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

snmp-in-bad-versions *number*

Description	The total number of SNMP messages which were delivered to the SNMP entity and were for an unsupported SNMP version.
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Context	system snmp network-instance name <i>reference</i> statistics snmp-in-bad-versions <i>number</i>
Tree	snmp-in-bad-versions
Default	0
Configurable	False
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

snmp-in-gen-errs *number*

Description	The total number of SNMP PDUs which were delivered to the SNMP protocol entity and for which the value of the error-status field is 'genErr'.
Context	system snmp network-instance name <i>reference</i> statistics snmp-in-gen-errs <i>number</i>
Tree	snmp-in-gen-errs
Default	0
Configurable	False
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

snmp-in-get-nexts *number*

Description	The total number of SNMP Get-Next PDUs which have been accepted and processed by the SNMP protocol entity.
Context	system snmp network-instance name <i>reference</i> statistics snmp-in-get-nexts <i>number</i>
Tree	snmp-in-get-nexts
Default	0
Configurable	False
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

snmp-in-get-requests *number*

Description	The total number of SNMP Get-Request PDUs which have been accepted and processed by the SNMP protocol entity.
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Context	system snmp network-instance name <i>reference</i> statistics snmp-in-get-requests <i>number</i>
Tree	snmp-in-get-requests
Default	0
Configurable	False
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

snmp-in-pkts *number*

Description	The total number of messages delivered to the SNMP entity from the transport service.
Context	system snmp network-instance name <i>reference</i> statistics snmp-in-pkts <i>number</i>
Tree	snmp-in-pkts
Default	0
Configurable	False
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

snmp-in-total-req-vars *number*

Description	The total number of MIB objects which have been retrieved successfully by the SNMP protocol entity as the result of receiving valid SNMP Get-Request and Get-Next PDUs.
Context	system snmp network-instance name <i>reference</i> statistics snmp-in-total-req-vars <i>number</i>
Tree	snmp-in-total-req-vars
Default	0
Configurable	False
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

snmp-invalid-msgs *number*

Description	The total number of packets received by the SNMP engine which were dropped because there were invalid or inconsistent components in the SNMP message.
Context	system snmp network-instance name <i>reference</i> statistics snmp-invalid-msgs number
Tree	snmp-invalid-msgs
Default	0
Configurable	False
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

snmp-out-gen-errs *number*

Description	The total number of SNMP PDUs which were generated by the SNMP protocol entity and for which the value of the error-status field is 'genErr'.
Context	system snmp network-instance name <i>reference</i> statistics snmp-out-gen-errs number
Tree	snmp-out-gen-errs
Default	0
Configurable	False
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

snmp-out-get-responses *number*

Description	The total number of SNMP Get-Response PDUs which have been generated by the SNMP protocol entity.
Context	system snmp network-instance name <i>reference</i> statistics snmp-out-get-responses number
Tree	snmp-out-get-responses
Default	0
Configurable	False
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

snmp-out-pkts *number*

Description	The total number of SNMP Messages which were passed from the SNMP protocol entity to the transport service.
Context	system snmp network-instance name <i>reference</i> statistics snmp-out-pkts number
Tree	snmp-out-pkts
Default	0
Configurable	False
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

snmp-out-traps *number*

Description	The total number of SNMP Trap PDUs which have been generated by the SNMP protocol entity.
Context	system snmp network-instance name <i>reference</i> statistics snmp-out-traps number
Tree	snmp-out-traps
Default	0
Configurable	False
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

snmp-silent-drops *number*

Description	The total number of Confirmed Class PDUs (such as GetRequest-PDUs, GetNextRequest-PDUs, GetBulkRequest-PDUs, SetRequest-PDUs, and Inform Request-PDUs) delivered to the SNMP entity which were silently dropped because the size of a reply containing an alternate Response Class PDU (such as a Response-PDU) with an empty variable-bindings field was greater than either a local constraint or the maximum message size associated with the originator of the request.
Context	system snmp network-instance name <i>reference</i> statistics snmp-silent-drops number
Tree	snmp-silent-drops
Default	0
Configurable	False

Platforms 7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

snmp-unknown-pdu-handlers *number*

Description The total number of packets received by the SNMP engine which were dropped because the PDU contained in the packet could not be passed to an application responsible for handling the pduType, e.g. no SNMP application had registered for the proper combination of the contextEngineID and the pduType.

Context [system snmp network-instance name reference statistics snmp-unknown-pdu-handlers number](#)

Tree [snmp-unknown-pdu-handlers](#)

Default 0

Configurable False

Platforms 7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

snmp-unknown-security-models *number*

Description The total number of packets received by the SNMP engine which were dropped because they referenced a securityModel that was not known to or supported by the SNMP engine.

Context [system snmp network-instance name reference statistics snmp-unknown-security-models number](#)

Tree [snmp-unknown-security-models](#)

Default 0

Configurable False

Platforms 7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

usm-stats-decryption-errors *number*

Description The total number of packets received by the SNMP engine which were dropped because they could not be decrypted.

Context [system snmp network-instance name reference statistics usm-stats-decryption-errors number](#)

Tree [usm-stats-decryption-errors](#)

Default	0
Configurable	False
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

usm-stats-not-in-time-windows *number*

Description	The total number of packets received by the SNMP engine which were dropped because they appeared outside of the authoritative SNMP engine's window.
Context	system snmp network-instance name <i>reference</i> statistics usm-stats-not-in-time-windows <i>number</i>
Tree	usm-stats-not-in-time-windows
Default	0
Configurable	False
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

usm-stats-unknown-engine-ids *number*

Description	The total number of packets received by the SNMP engine which were dropped because they referenced an snmpEngineID that was not known to the SNMP engine.
Context	system snmp network-instance name <i>reference</i> statistics usm-stats-unknown-engine-ids <i>number</i>
Tree	usm-stats-unknown-engine-ids
Default	0
Configurable	False
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

usm-stats-unknown-user-names *number*

Description	The total number of packets received by the SNMP engine which were dropped because they referenced a user that was not known to the SNMP engine.
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Context	system snmp network-instance name <i>reference</i> statistics usm-stats-unknown-user-names <i>number</i>
Tree	usm-stats-unknown-user-names
Default	0
Configurable	False
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

usm-stats-unsupported-sec-levels *number*

Description	The total number of packets received by the SNMP engine which were dropped because they requested a securityLevel that was unknown to the SNMP engine or otherwise unavailable.
Context	system snmp network-instance name <i>reference</i> statistics usm-stats-unsupported-sec-levels <i>number</i>
Tree	usm-stats-unsupported-sec-levels
Default	0
Configurable	False
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

usm-stats-wrong-digests *number*

Description	The total number of packets received by the SNMP engine which were dropped because they didn't contain the expected digest value.
Context	system snmp network-instance name <i>reference</i> statistics usm-stats-wrong-digests <i>number</i>
Tree	usm-stats-wrong-digests
Default	0
Configurable	False
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

trap-group [name](#) *string*

Description	List of configured SNMP trap-groups
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Context	system snmp trap-group name <i>string</i>
Tree	trap-group
Configurable	True
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

name *string*

Description	Name of the SNMP trap-group
Context	system snmp trap-group name <i>string</i>
String Length	1 to 255
Configurable	True
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

admin-state *keyword*

Description	Enables the SNMP traps in the network-instance
Context	system snmp trap-group name <i>string</i> admin-state <i>keyword</i>
Tree	admin-state
Default	enable
Options	<ul style="list-style-type: none"> • enable • disable
Configurable	True
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

description *string*

Description	Description for this trap-group
Context	system snmp trap-group name <i>string</i> description <i>string</i>
Tree	description
String Length	1 to 255
Configurable	True

Platforms 7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

destination *name string*

Description List of configured SNMPv3 trap-destinations

Context [system snmp trap-group name string destination name string](#)

Tree [destination](#)

Configurable True

Platforms 7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

Max. Elements 16

name *string*

Description Name of the SNMPv3 destination

Context [system snmp trap-group name string destination name string](#)

String Length 1 to 255

Configurable True

Platforms 7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

address (*ipv4-address* | *ipv6-address*)

Description Destination IP addresses for the SNMP trap

Context [system snmp trap-group name string destination name string address \(ipv4-address | ipv6-address\)](#)

Tree [address](#)

Configurable True

Platforms 7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

admin-state *keyword*

Description Enables the SNMP traps to this destination

Context	system snmp trap-group name <i>string</i> destination name <i>string</i> admin-state <i>keyword</i>
Tree	admin-state
Default	enable
Options	<ul style="list-style-type: none"> • enable • disable
Configurable	True
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

community-entry [name](#) *string*

Description	SNMPv2 community configured on this destination
Context	system snmp trap-group name <i>string</i> destination name <i>string</i> community-entry name <i>string</i>
Tree	community-entry
Configurable	True
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b
Max. Elements	1

name *string*

Description	Unique name for the SNMP community on this destination.
Context	system snmp trap-group name <i>string</i> destination name <i>string</i> community-entry name <i>string</i>
String Length	1 to 255
Configurable	True
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

community *string*

Description	SNMPv2 community
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Context	system snmp trap-group name <i>string</i> destination name <i>string</i> community-entry name <i>string</i> community <i>string</i>
Tree	community
String Length	1 to 255
Configurable	True
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

description *string*

Description	Description for the SNMPv2 community
Context	system snmp trap-group name <i>string</i> destination name <i>string</i> community-entry name <i>string</i> description <i>string</i>
Tree	description
String Length	1 to 255
Configurable	True
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

description *string*

Description	Description for this destination
Context	system snmp trap-group name <i>string</i> destination name <i>string</i> description <i>string</i>
Tree	description
String Length	1 to 255
Configurable	True
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

port *number*

Description	Destination port for the SNMP trap
Context	system snmp trap-group name <i>string</i> destination name <i>string</i> port <i>number</i>
Tree	port

Range	0 to 65535
Default	162
Configurable	True
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

security-entry *name string*

Description	SNMPv3 security configured on this destination
Context	system snmp trap-group name string destination name string security-entry name string
Tree	security-entry
Configurable	True
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b
Max. Elements	1

name *string*

Description	Unique name of the SNMPv3 security.
Context	system snmp trap-group name string destination name string security-entry name string
String Length	1 to 255
Configurable	True
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

authentication

Description	Authentication parameters for this user.
Context	system snmp trap-group name string destination name string security-entry name string authentication
Tree	authentication
Configurable	True

Platforms 7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

password *string*

Description The user authentication password, supplied either as cleartext or as a hashed value.
If provided as cleartext, the system will hash the value on input, storing only the hashed value. If provided as a hashed value, the value should include any '\$' characters, for example '\$ar2\$aOvsuj0ALIU=\$r750fMa3ZEA/Di8dIfU2fQ=='.
Context [system snmp trap-group name *string* destination name *string* security-entry name *string* authentication password *string*](#)
Tree [password](#)
String Length 8 to 255
Configurable True
Platforms 7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

protocol *keyword*

Description Authentication protocol used by this user.
Context [system snmp trap-group name *string* destination name *string* security-entry name *string* authentication protocol *keyword*](#)
Tree [protocol](#)
Default hmac-md5-96
Options

- hmac-md5-96
MD5
- hmac-sha1-96
SHA
- hmac-sha2-224
SHA-224
- hmac-sha2-256
SHA-256
- hmac-sha2-384
SHA-384
- hmac-sha2-512

SHA-512

Configurable	True
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

description *string*

Description	Description for this user
Context	system snmp trap-group name <i>string</i> destination name <i>string</i> security-entry name <i>string</i> description <i>string</i>
Tree	description
String Length	1 to 255
Configurable	True
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

engine-id *string*

Description	The unique identifier for the SNMP engine of a trap sender. If this leaf is not set, the local SNMP engine will be used, this needs to be configured on the destination side too
Context	system snmp trap-group name <i>string</i> destination name <i>string</i> security-entry name <i>string</i> engine-id <i>string</i>
Tree	engine-id
Configurable	True
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

privacy

Description	Privacy parameters for this user.
Context	system snmp trap-group name <i>string</i> destination name <i>string</i> security-entry name <i>string</i> privacy
Tree	privacy
Configurable	True

Platforms 7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

password *string*

Description The user privacy password, supplied either as cleartext or as a hashed value. If not provided, authentication/password will be used.

If provided as cleartext, the system will hash the value on input, storing only the hashed value. If provided as a hashed value, the value should include any '\$' characters, for example '\$ar2\$aOvsuj0ALIU=\$r750fMa3ZEA/Di8dIfU2fQ=='.

Context [system snmp trap-group name *string* destination name *string* security-entry name *string* privacy password *string*](#)

Tree [password](#)

String Length 8 to 255

Configurable True

Platforms 7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

protocol *keyword*

Description Privacy protocol used by this user.

Context [system snmp trap-group name *string* destination name *string* security-entry name *string* privacy protocol *keyword*](#)

Tree [protocol](#)

Default cbc-des

Options

- cbc-des
DES
- cfb128-aes-128
AES
- cfb128-aes-192
AES-192
- cfb128-aes-256
AES-256

Configurable True

Platforms 7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

user string

Description User name used in SNMPv3 authentication and privacy

Context [system snmp trap-group name string destination name string security-entry name string user string](#)

Tree [user](#)

String Length 1 to 255

Configurable True

Platforms 7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

security-level keyword

Description Security level required for this destination

Context [system snmp trap-group name string destination name string security-level keyword](#)

Tree [security-level](#)

Options

- no-auth-no-priv
- auth-no-priv
- auth-priv

Configurable True

Platforms 7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

network-instance reference

Description Reference to a network-instance configured for SNMP

Context [system snmp trap-group name string network-instance reference](#)

Tree [network-instance](#)

Reference [system snmp network-instance name reference](#)

Configurable True

Platforms 7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

source-address (*ipv4-address* | *ipv6-address*)

Description IP address for the SNMP server to use as source-address within the network-instance

Context [system snmp trap-group name](#) *string* [source-address](#) (*ipv4-address* | *ipv6-address*)

Tree [source-address](#)

Default ::

Configurable True

Platforms 7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

ssh-server [name](#) *string*

Description Enter the ssh-server list instance

Context [system ssh-server name](#) *string*

Tree [ssh-server](#)

Configurable True

Platforms Supported on all platforms

name *string*

Description User-provided name of this server instance

Context [system ssh-server name](#) *string*

String Length 1 to 255

Configurable True

Platforms Supported on all platforms

admin-state *keyword*

Description Enable or disable the SSH server instance

Context [system ssh-server name](#) *string* [admin-state](#) *keyword*

Tree [admin-state](#)

Default	disable
Options	<ul style="list-style-type: none"> • enable • disable
Configurable	True
Platforms	Supported on all platforms

allowed-authentication-types *keyword*

Description	<p>List of allowed authentication types</p> <p>This sets the AuthenticationMethods option within each SSH servers configuration file. Also sets PasswordAuthentication PubkeyAuthentication KbdInteractiveAuthentication options within each SSH servers configuration file.</p>
Context	system ssh-server name <i>string</i> allowed-authentication-types <i>keyword</i>
Tree	allowed-authentication-types
Default	publickey
Options	<ul style="list-style-type: none"> • password • publickey • keyboard-interactive
Configurable	True
Platforms	Supported on all platforms

authorized-principal-check-tool *keyword*

Description	<p>Configure the tool used to check the authorized principals</p> <p>Setting the value to hiba-chk sets the AuthorizedPrincipalsCommand to hiba-chk tool. If unset, the aaamgr will do the principal checking.</p>
Context	system ssh-server name <i>string</i> authorized-principal-check-tool <i>keyword</i>
Tree	authorized-principal-check-tool
Options	<ul style="list-style-type: none"> • hiba-chk
Configurable	True
Platforms	Supported on all platforms

counters

Description	A collection of counters that were collected by the SSH server during the SSH authentication process.
Context	system ssh-server name string counters
Tree	counters
Configurable	False
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

access-accepts number

Description	The total number of times the SSH allowed access to the server.
Context	system ssh-server name string counters access-accepts number
Tree	access-accepts
Configurable	False
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

access-rejects number

Description	The total number of times the SSH server denied access to the server.
Context	system ssh-server name string counters access-rejects number
Tree	access-rejects
Configurable	False
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

last-access-accept string

Description	A timestamp of the last time the SSH allowed access to the server.
Context	system ssh-server name string counters last-access-accept string
Tree	last-access-accept
String Length	20 to 32
Configurable	False

Platforms 7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

last-access-reject *string*

Description A timestamp of the last time the SSH server denied access to the server.

Context [system ssh-server name string counters last-access-reject string](#)

Tree [last-access-reject](#)

String Length 20 to 32

Configurable False

Platforms 7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

credentialz

Description Information relating to the active host keys and certificates as provided via Credentialz

State is provided by the gNSI Credentialz service, and can be changed using the gNSI.Credentialz.RotateHostParameters RPC

Context [system ssh-server name string credentialz](#)

Tree [credentialz](#)

Configurable False

Platforms 7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

host-certificate

Description State relating to the Host Certificates provided via Credentialz

Context [system ssh-server name string credentialz host-certificate](#)

Tree [host-certificate](#)

Configurable False

Platforms 7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

created-on *string*

Description	The created on timestamp as provided by the gNSI client at the time of uploading the artifact The maps to the created_on field within a Entity message in the Credentialz protobuf.
Context	system ssh-server name string credentialz host-certificate created-on string
Tree	created-on
String Length	20 to 32
Configurable	False
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

version *string*

Description	The version string as provided by the gNSI client at the time of uploading the artifact The maps to the version field within a Entity message in the Credentialz protobuf.
Context	system ssh-server name string credentialz host-certificate version string
Tree	version
Configurable	False
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

host-key

Description	State relating to the Host Keys provided via Credentialz
Context	system ssh-server name string credentialz host-key
Tree	host-key
Configurable	False
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

created-on string

Description	The created on timestamp as provided by the gNSI client at the time of uploading the artifact The maps to the created_on field within a Entity message in the Credentialz protobuf.
Context	system ssh-server name string credentialz host-key created-on string
Tree	created-on
String Length	20 to 32
Configurable	False
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

version string

Description	The version string as provided by the gNSI client at the time of uploading the artifact The maps to the version field within a Entity message in the Credentialz protobuf.
Context	system ssh-server name string credentialz host-key version string
Tree	version
Configurable	False
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

trusted-user-ca-keys

Description	State relating to the Certificate Authorities provided via Credentialz.
Context	system ssh-server name string credentialz trusted-user-ca-keys
Tree	trusted-user-ca-keys
Configurable	False
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

created-on *string*

Description	The created on timestamp as provided by the gNSI client at the time of uploading the artifact The maps to the created_on field within a Entity message in the Credentialz protobuf.
Context	system ssh-server name <i>string</i> credentialz trusted-user-ca-keys created-on <i>string</i>
Tree	created-on
String Length	20 to 32
Configurable	False
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

version *string*

Description	The version string as provided by the gNSI client at the time of uploading the artifact The maps to the version field within a Entity message in the Credentialz protobuf.
Context	system ssh-server name <i>string</i> credentialz trusted-user-ca-keys version <i>string</i>
Tree	version
Configurable	False
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

disable-shell *boolean*

Description	Disable the ability to spawn a shell for incoming connections
Context	system ssh-server name <i>string</i> disable-shell <i>boolean</i>
Tree	disable-shell
Default	false
Configurable	True
Platforms	Supported on all platforms

host-key

Description	Enter the host-key context
Context	system ssh-server name <i>string</i> host-key
Tree	host-key
Configurable	True
Platforms	Supported on all platforms

preserve *boolean*

Description	<p>Indicates whether the autogenerated SSH server host keys should be preserved on reboots</p> <p>Setting this to true will result in host keys in /etc/sshd not being cleared on a reboot. Alternatively setting this to false will result in host keys being removed and regenerated on each reboot of the system.</p> <p>This is useful only when the host keys are not statically configured and not dynamically configured using gNSI Credentialz service (and therefore are suitable to be potentially regenerated on every reboot).</p> <p>Takes effect only if the value is set to false for every configured ssh server instance.</p>
Context	system ssh-server name <i>string</i> host-key preserve <i>boolean</i>
Tree	preserve
Default	true
Configurable	True
Platforms	Supported on all platforms

type *type* *keyword*

Description	List of the SSH servers host private-keys and certificates
Context	system ssh-server name <i>string</i> host-key type <i>type</i> <i>keyword</i>
Tree	type
Configurable	True
Platforms	Supported on all platforms

type *keyword*

Description	Type of generated host key
--------------------	----------------------------

Context [system ssh-server name string host-key type type keyword](#)

- Options**
- [ssh-rsa-3076](#)
 - [ecdsa-sha2-nistp256](#)
 - [ecdsa-sha2-nistp521](#)
 - [ssh-ed25519](#)
 - [ssh-rsa-2048](#)
 - [ssh-rsa-4096](#)

Configurable True

Platforms Supported on all platforms

certificate string

Description Each item value should be the host key certificate as read from the *-cert.pub file generated by the CA including the certificate type, e.g. 'ssh-rsa-cert-v01@openssh.com AAAA<...> comment'.
This certificate is returned to clients during SSH init for the client to verify the host it is communicating with.
This sets the HostCertificate option within each SSH servers configuration file. The certificate should be generated by first extracting the systems current public key and having this signed by a CA.

Context [system ssh-server name string host-key type type keyword certificate string](#)

Tree [certificate](#)

Configurable True

Platforms Supported on all platforms

private-key string

Description The value should be the host private key as read from the private key file.
This sets the HostKey option within each SSH servers configuration file.

Context [system ssh-server name string host-key type type keyword private-key string](#)

Tree [private-key](#)

Configurable True

Platforms Supported on all platforms

public-key string

Description The value is be the host public key as read from the public key file.

Context	system ssh-server name string host-key type type keyword public-key string
Tree	public-key
Configurable	False
Platforms	Supported on all platforms

network-instance *reference*

Description	Network instance to run the SSH server in
Context	system ssh-server name string network-instance reference
Tree	network-instance
Reference	network-instance name string
Configurable	True
Platforms	Supported on all platforms except IMGMT

oper-state *keyword*

Description	Operational state of the SSH server instance
Context	system ssh-server name string oper-state keyword
Tree	oper-state
Options	<ul style="list-style-type: none"> • up Component or process is operational • down Component or process is not operational • empty Component slot is empty • downloading Component is downloading image into memory • booting Component is booting downloaded image • starting Component image operational, application processes starting • failed Component or process has failed • synchronizing Component is currently being synchronized • upgrading

- Component is currently being upgraded
- low-power
Component is offline due to insufficient system power
- degraded
Component or process is in a degraded state
- warm-reboot
Component or process is currently warm rebooting
This state is set during a warm reboot immediately following initiation of the reboot, continuing after startup until the system has completed audit. In this state the system will not accept configuration changes.
- waiting
Component or process is currently waiting
This state can be set by event handler when the reinvoke-with-delay action is used, and indicates that the event handler is waiting for the provided delay before reinvoking the instance.

Configurable	False
Platforms	Supported on all platforms

port number

Description	Port the SSH server instance will listen on for incoming connections
Context	system ssh-server name <i>string</i> port number
Tree	port
Range	0 to 65535
Default	22
Configurable	True
Platforms	Supported on all platforms

protocol-version number

Description	Protocol version in use by the SSH server
Context	system ssh-server name <i>string</i> protocol-version number
Tree	protocol-version
Configurable	False
Platforms	Supported on all platforms

rate-limit *number*

Description	Set a limit on the number of unauthenticated sessions to the SSH server after this number is met, the server will start dropping connection attempts
Context	system ssh-server name <i>string</i> rate-limit <i>number</i>
Tree	rate-limit
Default	20
Configurable	True
Platforms	Supported on all platforms

revoked-keys *string*

Description	List of revoked public keys Each items value should be the public key of a revoked keypair, e.g. 'ssh-rsa AAAA<...>= comment'. Any keys provided here cannot be used for public key authentication. This sets the RevokedKeys option within each SSH servers configuration file.
Context	system ssh-server name <i>string</i> revoked-keys <i>string</i>
Tree	revoked-keys
Configurable	True
Platforms	Supported on all platforms

source-address (*ipv4-address* | *ipv6-address*)

Description	List of IP addresses for the SSH server to listen on within the network-instance
Context	system ssh-server name <i>string</i> source-address (<i>ipv4-address</i> <i>ipv6-address</i>)
Tree	source-address
Configurable	True
Platforms	Supported on all platforms

timeout *number*

Description	Set the idle timeout in seconds on SSH connections
Context	system ssh-server name <i>string</i> timeout <i>number</i>
Tree	timeout

Default	0
Units	seconds
Configurable	True
Platforms	Supported on all platforms

trust-anchors *string*

Description	<p>List of public keys used to verify user certificates during authentication</p> <p>Each items value should be the public key of a CA, e.g. 'ssh-rsa AAAA<...>=comment'. If no trust anchors are configured, authentication using SSH certificates will not function.</p> <p>This sets the TrustedUserCAKeys option within each SSH servers configuration file.</p>
Context	system ssh-server name <i>string</i> trust-anchors <i>string</i>
Tree	trust-anchors
Configurable	True
Platforms	Supported on all platforms

use-credentialz *boolean*

Description	<p>Use the gNSI Credentialz service global SSH configuration for this SSH server instance</p> <p>Setting this to true will apply any gNSI Credentialz configuration for this SSH server instance. Static configuration will override any gNSI Credentialz configuration.</p>
Context	system ssh-server name <i>string</i> use-credentialz <i>boolean</i>
Tree	use-credentialz
Configurable	True
Platforms	Supported on all platforms

sync

Description	Context to configure sync parameters and report sessions state
Context	system sync
Tree	sync
Configurable	True
Platforms	7220 IXR-D5, 7250 IXR-X3b

freq-clock

Description	Enter the freq-clock context
Context	system sync freq-clock
Tree	freq-clock
Configurable	True
Platforms	7220 IXR-D5, 7250 IXR-X3b

active-reference *keyword*

Description	Indicates the current selected reference This will be an instance-number; or internal for the case of holdover or freerun.
Context	system sync freq-clock active-reference <i>keyword</i>
Tree	active-reference
Options	<ul style="list-style-type: none"> • 1 • 2 • 3 • 4 • 5 • internal
Configurable	False
Platforms	7220 IXR-D5, 7250 IXR-X3b

freq-clock-state *keyword*

Description	Shows the frequency clock mode state
Context	system sync freq-clock freq-clock-state <i>keyword</i>
Tree	freq-clock-state
Options	<ul style="list-style-type: none"> • not-present Frequency clock is locked to a line timing reference signal • master-free-run Frequency clock is master free run mode • master-holdover Frequency clock is master holdover mode • master-locked

Frequency clock is master locked mode

- slave

Frequency clock is slave mode

- acquiring

Frequency clock is acquiring mode

Configurable False

Platforms 7220 IXR-D5, 7250 IXR-X3b

freq-offset *decimal-number*

Description The frequency offset between the central frequency clock and the selected reference in ppb

Context [system sync freq-clock freq-offset decimal-number](#)

Tree [freq-offset](#)

Units parts-per-billion

Configurable False

Platforms 7220 IXR-D5, 7250 IXR-X3b

network-type *keyword*

Description Configures SyncE for SSM code-type as SONET or SDH mode `sdh` specifies the values corresponding to ITU-T G.781 Option 1 compliant networks. `sonet` specifies the values corresponding to ITU-T G.781 Option 2 compliant networks.

Context [system sync freq-clock network-type keyword](#)

Tree [network-type](#)

Default sonet

- Options**
- `sdh`
`sdh` specifies the values corresponding to G.781 Option 1 compliant networks
 - `sonet`
`sonet` specifies the values corresponding to G.781 Option 2 compliant networks

Configurable True

Platforms 7220 IXR-D5, 7250 IXR-X3b

ql-input-threshold *keyword*

Description	This command configures the minimum acceptable QL value Frequency references with lower QL will not be considered for selection by the system timing module. Options: unused, prs, stu, st2, tnc, st3e, st3, prc, ssua, ssub, sec, eec1, eec2
Context	system sync freq-clock ql-input-threshold <i>keyword</i>
Tree	ql-input-threshold
Default	unused
Options	<ul style="list-style-type: none"> • unused No override or minimum QL level selected • prs QL of PRS • stu QL of STU • st2 QL of Stratum 2 • tnc QL of TNC • st3e QL of Stratum 3E • st3 QL of Stratum 3 • prc QL of PRC • ssua QL of SSU-A • ssub QL of SSU-B • sec QL of SEC • eec1 QL of EEC-1 • eec2 QL of EEC-2
Configurable	True

Platforms 7220 IXR-D5, 7250 IXR-X3b

ql-selection *boolean*

Description Configures if frequency reference selection takes the QL (Quality Level) into account. When enabled, the selection of system timing reference and BITS output timing reference takes into account quality level. Quality level is conveyed via the SSM or forced using the ql-override command..

Context [system sync freq-clock ql-selection](#) *boolean*

Tree [ql-selection](#)

Default false

Configurable True

Platforms 7220 IXR-D5, 7250 IXR-X3b

revert *boolean*

Description This command configures if the frequency clock is in revertive mode. In revertive mode, when a failed reference becomes operational, the system will automatically switch to the recovered reference if it is of higher priority and/or QL. When the mode is non-revertive, a failed clock source is not automatically selected.

Context [system sync freq-clock revert](#) *boolean*

Tree [revert](#)

Default false

Configurable True

Platforms 7220 IXR-D5, 7250 IXR-X3b

system-ql-value *keyword*

Description System QL value based on the reference selected

Context [system sync freq-clock system-ql-value](#) *keyword*

Tree [system-ql-value](#)

Options

- unknown
Unknown
- prs
QL of PRS
- stu
QL of STU

- st2
QL of Stratum 2
 - tnc
QL of TNC
 - st3e
QL of Stratum 3E
 - st3
QL of Stratum 3
 - smc
QL of SMC
 - st4
QL of Stratum 4
 - dus
QL of DNU
 - prc
QL of PRC
 - ssua
QL of SSU-A
 - ssub
QL of SSU-B
 - sec
QL of SEC
 - dnu
QL of DNU
 - inv
QL of INV
 - pno
QL of PNO
 - eec1
QL of EEC-1
 - eec2
QL of EEC-2
 - failed
Failed
- Configurable** False
- Platforms** 7220 IXR-D5, 7250 IXR-X3b

wait-to-restore *number*

Description	This command configures the time for the Wait to Restore timer. A previously failed input reference must be valid for the time specified before it is used for the clock input reference.
Context	system sync freq-clock wait-to-restore <i>number</i>
Tree	wait-to-restore
Range	0 to 12
Default	5
Units	minutes
Configurable	True
Platforms	7220 IXR-D5, 7250 IXR-X3b

freq-references

Description	Enter the freq-references context
Context	system sync freq-references
Tree	freq-references
Configurable	True
Platforms	7220 IXR-D5, 7250 IXR-X3b

instance [instance-number](#) *number*

Description	List of line references configured for frequency
Context	system sync freq-references instance instance-number <i>number</i>
Tree	instance
Configurable	True
Platforms	7220 IXR-D5, 7250 IXR-X3b

instance-number *number*

Description	The instance number of the each line reference
Context	system sync freq-references instance instance-number <i>number</i>
Range	1 to 5
Configurable	True
Platforms	7220 IXR-D5, 7250 IXR-X3b

admin-state *keyword*

Description	Configure the administrative state of this frequency reference instance
Context	system sync freq-references instance instance-number number admin-state keyword
Tree	admin-state
Default	disable
Options	<ul style="list-style-type: none"> • enable • disable
Configurable	True
Platforms	7220 IXR-D5, 7250 IXR-X3b

not-qualified-reason *keyword*

Description	If the reference is not qualified, this identifies the reason
Context	system sync freq-references instance instance-number number not-qualified-reason keyword
Tree	not-qualified-reason
Options	<ul style="list-style-type: none"> • not-applicable Reason is not applicable • los Reference is not-qualified because of Loss of Signal (LOS) • ssm-quality Reference is not-qualified because of received SSM/QL level • out-of-range Reference is not-qualified because the reference is out of range in frequency • wtr Reference is not-qualified because the wait-to-restore timer has not expired • admin-disabled Reference is not-qualified because the reference has not been admin enabled
Configurable	False
Platforms	7220 IXR-D5, 7250 IXR-X3b

oper-state *keyword*

Description	Indicates the operational state of this line reference
Context	system sync freq-references instance instance-number <i>number</i> oper-state <i>keyword</i>
Tree	oper-state
Options	<ul style="list-style-type: none">• up Component or process is operational• down Component or process is not operational• empty Component slot is empty• downloading Component is downloading image into memory• booting Component is booting downloaded image• starting Component image operational, application processes starting• failed Component or process has failed• synchronizing Component is currently being synchronized• upgrading Component is currently being upgraded• low-power Component is offline due to insufficient system power• degraded Component or process is in a degraded state• warm-reboot Component or process is currently warm rebooting This state is set during a warm reboot immediately following initiation of the reboot, continuing after startup until the system has completed audit. In this state the system will not accept configuration changes.• waiting Component or process is currently waiting

This state can be set by event handler when the `reinvoke-with-delay` action is used, and indicates that the event handler is waiting for the provided delay before reinvoking the instance.

Configurable	False
Platforms	7220 IXR-D5, 7250 IXR-X3b

priority number

Description	Sets the priority of this line timing reference for the system timing selection process 1 = highest priority 5 = lowest priority Duplicate numbers are not allowed
Context	system sync freq-references instance instance-number number priority number
Tree	priority
Range	1 to 5
Default	3
Configurable	True
Platforms	7220 IXR-D5, 7250 IXR-X3b

ql-override keyword

Description	Override the incoming QL/SSM value for this line reference Quality level override of a timing reference Options are unused, prs, stu, st2, tnc, st3e, st3, prc, ssua, ssub, sec, eec1, eec2
Context	system sync freq-references instance instance-number number ql-override keyword
Tree	ql-override
Default	unused
Options	<ul style="list-style-type: none"> • unused No override or minimum QL level selected • prs QL of PRS • stu QL of STU • st2 QL of Stratum 2 • tnc QL of TNC

	<ul style="list-style-type: none"> • st3e QL of Stratum 3E • st3 QL of Stratum 3 • prc QL of PRC • ssua QL of SSU-A • ssub QL of SSU-B • sec QL of SEC • eec1 QL of EEC-1 • eec2 QL of EEC-2
Configurable	True
Platforms	7220 IXR-D5, 7250 IXR-X3b

ql-value *keyword*

Description	The incoming QL/SSM value from this line reference
Context	system sync freq-references instance instance-number number ql-value keyword
Tree	ql-value
Options	<ul style="list-style-type: none"> • unknown Unknown • prs QL of PRS • stu QL of STU • st2 QL of Stratum 2 • tnc QL of TNC • st3e

QL of Stratum 3E

- st3

QL of Stratum 3

- smc

QL of SMC

- st4

QL of Stratum 4

- dus

QL of DNU

- prc

QL of PRC

- ssua

QL of SSU-A

- ssub

QL of SSU-B

- sec

QL of SEC

- dnu

QL of DNU

- inv

QL of INV

- pno

QL of PNO

- eec1

QL of EEC-1

- eec2

QL of EEC-2

- failed

Failed

Configurable

False

Platforms

7220 IXR-D5, 7250 IXR-X3b

reference-status *keyword*

Description

The current status this line reference

Context	system sync freq-references instance instance-number number reference-status keyword
Tree	reference-status
Options	<ul style="list-style-type: none"> qualified Reference is in normal qualified state not-qualified Reference is in not-qualified state
Configurable	False
Platforms	7220 IXR-D5, 7250 IXR-X3b

source

Description	Source for this input frequency reference This shall be either a leafref to an interface or an application. The leafref must point to an existing physical ethernet interface.
Context	system sync freq-references instance instance-number number source
Tree	source
Configurable	True
Platforms	7220 IXR-D5, 7250 IXR-X3b

interface *reference*

Description	Enter the interface context
Context	system sync freq-references instance instance-number number source interface reference
Tree	interface
Reference	interface name string
Configurable	True
Platforms	7220 IXR-D5, 7250 IXR-X3b

sync0

Description	Enable the sync0 context
Context	system sync freq-references instance instance-number number source sync0
Tree	sync0

Configurable	True
Platforms	Supported on 7220 IXR-D5, 7250 IXR-X3b

one-pps

Description	Enter the one-pps context
Context	system sync one-pps
Tree	one-pps
Configurable	True
Platforms	7220 IXR-D5

admin-state *keyword*

Description	Configure the administrative state of the 1PPS (50 ohm) output port When enabled, output is enabled. Otherwise, the output is disabled.
Context	system sync one-pps admin-state <i>keyword</i>
Tree	admin-state
Default	disable
Options	<ul style="list-style-type: none"> • enable • disable
Configurable	True
Platforms	7220 IXR-D5

ptp

Description	Enter the ptp context
Context	system sync ptp
Tree	ptp
Configurable	True
Platforms	7220 IXR-D5, 7250 IXR-X3b

instance [instance-index](#) *number*

Description	List of one or more PTP instances in the product (PTP Node)
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Each PTP instance represents a distinct instance of PTP implementation (i.e. distinct Ordinary Clock, Boundary Clock, or Transparent Clock), maintaining a distinct time.

Context	system sync ptp instance instance-index number
Tree	instance
Configurable	True
Platforms	7220 IXR-D5, 7250 IXR-X3b

instance-index number

Description	The instance index of the current PTP instance This instance index is used for management purposes only. This instance index does not represent the PTP domain number and is not used in PTP messages.
Context	system sync ptp instance instance-index number
Range	1 to 2
Configurable	True
Platforms	7220 IXR-D5, 7250 IXR-X3b

current-ds

Description	Provides current data from operation of the protocol
Context	system sync ptp instance instance-index number current-ds
Tree	current-ds
Configurable	False
Platforms	7220 IXR-D5, 7250 IXR-X3b

mean-delay number

Description	The mean propagation time between this PTP instance and the master clock
Context	system sync ptp instance instance-index number current-ds mean-delay number
Tree	mean-delay
Configurable	False
Platforms	7220 IXR-D5, 7250 IXR-X3b

offset-from-master *number*

Description	The time difference between this PTP instance and the master clock
Context	system sync ptp instance instance-index number current-ds offset-from-master number
Tree	offset-from-master
Configurable	False
Platforms	7220 IXR-D5, 7250 IXR-X3b

steps-removed *number*

Description	The number of PTP clock steps in the path between the this PTP instance and the GM
Context	system sync ptp instance instance-index number current-ds steps-removed number
Tree	steps-removed
Configurable	False
Platforms	7220 IXR-D5, 7250 IXR-X3b

default-ds

Description	The default data set of the PTP instance In the context of the protocol, this data set is required for an Ordinary Clock or Boundary Clock
Context	system sync ptp instance instance-index number default-ds
Tree	default-ds
Configurable	True
Platforms	7220 IXR-D5, 7250 IXR-X3b

announce-receipt-timeout *number*

Description	Sets the time limit for missed Announce packets before the master clock is deemed down This command configures the announceReceiptTimeout value for all peer associations. This defines the number of Announce message intervals that must expire with no received Announce messages before declaring an ANNOUNCE_RECEIPT_TIMEOUT event.
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Context	system sync ptp instance instance-index number default-ds announce-receipt-timeout number
Tree	announce-receipt-timeout
Range	2 to 10
Default	3
Configurable	True
Platforms	7220 IXR-D5, 7250 IXR-X3b

clock-identity *binary*

Description	The clockIdentity of the local clock
Context	system sync ptp instance instance-index number default-ds clock-identity binary
Tree	clock-identity
String Length	8
Configurable	False
Platforms	7220 IXR-D5, 7250 IXR-X3b

clock-quality

Description	The clockQuality of the local clock
Context	system sync ptp instance instance-index number default-ds clock-quality
Tree	clock-quality
Configurable	False
Platforms	7220 IXR-D5, 7250 IXR-X3b

clock-accuracy *number*

Description	The clockAccuracy indicates the expected accuracy of the clock
Context	system sync ptp instance instance-index number default-ds clock-quality clock-accuracy number
Tree	clock-accuracy
Configurable	False
Platforms	7220 IXR-D5, 7250 IXR-X3b

clock-class *number*

Description	The clockClass denotes the traceability of the time or frequency distributed by the clock
Context	system sync ptp instance instance-index <i>number</i> default-ds clock-quality clock-class <i>number</i>
Tree	clock-class
Configurable	False
Platforms	7220 IXR-D5, 7250 IXR-X3b

offset-scaled-log-variance *number*

Description	The offsetScaledLogVariance provides an estimate of the variations of the clock
Context	system sync ptp instance instance-index <i>number</i> default-ds clock-quality offset-scaled-log-variance <i>number</i>
Tree	offset-scaled-log-variance
Configurable	False
Platforms	7220 IXR-D5, 7250 IXR-X3b

current-time

Description	The current time in the current data set
Context	system sync ptp instance instance-index <i>number</i> default-ds current-time
Tree	current-time
Configurable	False
Platforms	7220 IXR-D5, 7250 IXR-X3b

date-time *string*

Description	PTP current time converted to UTC and presented as a date-time string
Context	system sync ptp instance instance-index <i>number</i> default-ds current-time date-time <i>string</i>
Tree	date-time
String Length	20 to 32
Configurable	False
Platforms	7220 IXR-D5, 7250 IXR-X3b

time-nano-seconds *number*

Description	Nano-seconds of time
Context	system sync ptp instance instance-index number default-ds current-time time-nano-seconds number
Tree	time-nano-seconds
Configurable	False
Platforms	7220 IXR-D5, 7250 IXR-X3b

time-seconds *number*

Description	Seconds of time
Context	system sync ptp instance instance-index number default-ds current-time time-seconds number
Tree	time-seconds
Configurable	False
Platforms	7220 IXR-D5, 7250 IXR-X3b

domain-number *number*

Description	The IEEE Std 1588 domainNumber of the PTP instance A domain consists of one or more PTP instances communicating with each other as defined by the protocol. A domain shall define the scope of PTP message communication, state, operations, data sets, and timescale. Therefore, each domain represents a distinct time. The default domain number is defined by the profile. itug8275dot1: 24 itug8275dot2: 44
Context	system sync ptp instance instance-index number default-ds domain-number number
Tree	domain-number
Range	0 to 255
Configurable	True
Platforms	7220 IXR-D5, 7250 IXR-X3b

instance-enable *boolean*

Description	Enable PTP clock
Context	system sync ptp instance instance-index number default-ds instance-enable boolean

Tree	instance-enable
Default	false
Configurable	True
Platforms	7220 IXR-D5, 7250 IXR-X3b

instance-type *keyword*

Description	The type of PTP instance as per IEEE1588 standard For G.8275.1: oc is for T-GM, bc is for T-BC; T-TSC not supported since T-BC can be used for this role For G.8275.2: oc is for T-GM, bc is for T-BC-A and T-BC-P; T-TSC-A and T-TSC-P are not supported since T-BC-A or T-BC-P can be used for this role
Context	system sync ptp instance instance-index number default-ds instance-type keyword
Tree	instance-type
Default	bc
Options	<ul style="list-style-type: none"> bc boundary clock
Configurable	True
Platforms	7220 IXR-D5, 7250 IXR-X3b

local-priority *number*

Description	The IEEE Std 1588 priority2 of the PTP instance The priority2 member is compared by the Best Master Clock Algorithm (BMCA) after priority1 and clockQuality. Lower values take precedence.
Context	system sync ptp instance instance-index number default-ds local-priority number
Tree	local-priority
Range	1 to 255
Default	128
Configurable	True
Platforms	7220 IXR-D5, 7250 IXR-X3b

log-announce-interval *number*

Description	The base-2 logarithm of the mean announceInterval
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This is the mean time interval between successive Announce messages. The default log announce interval is defined by the profile. itug8275dot1: -3 (8 messages per second) itug8275dot2: 1 (1 message every two seconds)

Context	system sync ptp instance instance-index number default-ds log-announce-interval number
Tree	log-announce-interval
Range	-3 to 4
Configurable	True
Platforms	7220 IXR-D5, 7250 IXR-X3b

number-ports *number*

Description	The number of PTP ports on the instance
Context	system sync ptp instance instance-index number default-ds number-ports number
Tree	number-ports
Configurable	False
Platforms	7220 IXR-D5, 7250 IXR-X3b

priority1 *number*

Description	The IEEE Std 1588 priority1 of the PTP instance Since priority1 is one of the first comparisons performed by the Best Master Clock Algorithm (BMCA). Range is 0-255.
Context	system sync ptp instance instance-index number default-ds priority1 number
Tree	priority1
Range	0 to 255
Default	128
Configurable	True
Platforms	7220 IXR-D5, 7250 IXR-X3b

priority2 *number*

Description	The IEEE Std 1588 priority2 of the PTP instance The priority2 member is compared by the Best Master Clock Algorithm (BMCA) after priority1 and clockQuality. Lower values take precedence.
Context	system sync ptp instance instance-index number default-ds priority2 number

Tree	priority2
Range	0 to 255
Default	128
Configurable	True
Platforms	7220 IXR-D5, 7250 IXR-X3b

statistics

Description	Aggregate statistics for the PTP clock
Context	system sync ptp instance instance-index number default-ds statistics
Tree	statistics
Configurable	False
Platforms	7220 IXR-D5, 7250 IXR-X3b

anno-msg-rx *number*

Description	Specifies the number of announce messages received
Context	system sync ptp instance instance-index number default-ds statistics anno-msg-rx number
Tree	anno-msg-rx
Configurable	False
Platforms	7220 IXR-D5, 7250 IXR-X3b

anno-msg-tx *number*

Description	Specifies the number of announce messages transmitted
Context	system sync ptp instance instance-index number default-ds statistics anno-msg-tx number
Tree	anno-msg-tx
Configurable	False
Platforms	7220 IXR-D5, 7250 IXR-X3b

del-req-msg-rx *number*

Description	Specifies the number of delay-req messages received
Context	system sync ptp instance instance-index number default-ds statistics del-req-msg-rx number

Tree	del-req-msg-rx
Configurable	False
Platforms	7220 IXR-D5, 7250 IXR-X3b

del-req-msg-tx number

Description	Specifies the number of delay-req messages transmitted
Context	system sync ptp instance instance-index number default-ds statistics del-req-msg-tx number
Tree	del-req-msg-tx
Configurable	False
Platforms	7220 IXR-D5, 7250 IXR-X3b

del-resp-msg-rx number

Description	Specifies the number of delay-resp messages received
Context	system sync ptp instance instance-index number default-ds statistics del-resp-msg-rx number
Tree	del-resp-msg-rx
Configurable	False
Platforms	7220 IXR-D5, 7250 IXR-X3b

del-resp-msg-tx number

Description	Specifies the number of delay-resp messages transmitted
Context	system sync ptp instance instance-index number default-ds statistics del-resp-msg-tx number
Tree	del-resp-msg-tx
Configurable	False
Platforms	7220 IXR-D5, 7250 IXR-X3b

delay-high-packet-loss number

Description	The number of events with high packet loss for delay req packets
Context	system sync ptp instance instance-index number default-ds statistics delay-high-packet-loss number
Tree	delay-high-packet-loss

Default	0
Configurable	False
Platforms	7220 IXR-D5, 7250 IXR-X3b

delay-packet-loss *number*

Description	The number of events with detected packet loss for the delay request/response packets
Context	system sync ptp instance instance-index <i>number</i> default-ds statistics delay-packet-loss <i>number</i>
Tree	delay-packet-loss
Default	0
Configurable	False
Platforms	7220 IXR-D5, 7250 IXR-X3b

discards

Description	Aggregate discard statistics for the PTP clock
Context	system sync ptp instance instance-index <i>number</i> default-ds statistics discards
Tree	discards
Configurable	False
Platforms	7220 IXR-D5, 7250 IXR-X3b

alternate-master *number*

Description	Specifies the number of alternate master messages that were discarded
Context	system sync ptp instance instance-index <i>number</i> default-ds statistics discards alternate-master <i>number</i>
Tree	alternate-master
Configurable	False
Platforms	7220 IXR-D5, 7250 IXR-X3b

bad-domain *number*

Description	Specifies the number of bad domain messages that were discarded
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Context	system sync ptp instance instance-index number default-ds statistics discards bad-domain number
Tree	bad-domain
Configurable	False
Platforms	7220 IXR-D5, 7250 IXR-X3b

other number

Description	Specifies the number of other messages that were discarded
Context	system sync ptp instance instance-index number default-ds statistics discards other number
Tree	other
Configurable	False
Platforms	7220 IXR-D5, 7250 IXR-X3b

out-of-sequence number

Description	Specifies the number of out of sequence messages that were discarded
Context	system sync ptp instance instance-index number default-ds statistics discards out-of-sequence number
Tree	out-of-sequence
Configurable	False
Platforms	7220 IXR-D5, 7250 IXR-X3b

peer-disabled number

Description	Specifies the number of PTP messages that were discarded from disabled PTP peer Occurs when a PTP peer has been administratively disabled. This information is only available for configured and discovered peers.
Context	system sync ptp instance instance-index number default-ds statistics discards peer-disabled number
Tree	peer-disabled
Configurable	False
Platforms	7220 IXR-D5, 7250 IXR-X3b

follow-up-msg-rx *number*

Description	Specifies the number of follow-up messages received
Context	system sync ptp instance instance-index number default-ds statistics follow-up-msg-rx number
Tree	follow-up-msg-rx
Configurable	False
Platforms	7220 IXR-D5, 7250 IXR-X3b

follow-up-msg-tx *number*

Description	Specifies the number of follow-up messages transmitted
Context	system sync ptp instance instance-index number default-ds statistics follow-up-msg-tx number
Tree	follow-up-msg-tx
Configurable	False
Platforms	7220 IXR-D5, 7250 IXR-X3b

multicast-msg-rate

Description	Aggregate multicast message rates for the PTP clock
Context	system sync ptp instance instance-index number default-ds statistics multicast-msg-rate
Tree	multicast-msg-rate
Configurable	False
Platforms	7220 IXR-D5, 7250 IXR-X3b

anno-msg-rate-rx *decimal-number*

Description	Specifies the rate of messages of announce messages received
Context	system sync ptp instance instance-index number default-ds statistics multicast-msg-rate anno-msg-rate-rx decimal-number
Tree	anno-msg-rate-rx
Units	messages-per-second
Configurable	False
Platforms	7220 IXR-D5, 7250 IXR-X3b

anno-msg-rate-tx *decimal-number*

Description	Specifies the rate of messages of announce messages transmitted
Context	system sync ptp instance instance-index number default-ds statistics multicast-msg-rate anno-msg-rate-tx decimal-number
Tree	anno-msg-rate-tx
Units	messages-per-second
Configurable	False
Platforms	7220 IXR-D5, 7250 IXR-X3b

del-req-msg-rate-rx *decimal-number*

Description	Specifies the rate of messages of delay-req messages received
Context	system sync ptp instance instance-index number default-ds statistics multicast-msg-rate del-req-msg-rate-rx decimal-number
Tree	del-req-msg-rate-rx
Units	messages-per-second
Configurable	False
Platforms	7220 IXR-D5, 7250 IXR-X3b

del-req-msg-rate-tx *decimal-number*

Description	Specifies the rate of messages of delay-req messages transmitted
Context	system sync ptp instance instance-index number default-ds statistics multicast-msg-rate del-req-msg-rate-tx decimal-number
Tree	del-req-msg-rate-tx
Units	messages-per-second
Configurable	False
Platforms	7220 IXR-D5, 7250 IXR-X3b

del-resp-msg-rate-rx *decimal-number*

Description	Specifies the rate of messages of delay-resp messages received
Context	system sync ptp instance instance-index number default-ds statistics multicast-msg-rate del-resp-msg-rate-rx decimal-number
Tree	del-resp-msg-rate-rx
Units	messages-per-second

Configurable	False
Platforms	7220 IXR-D5, 7250 IXR-X3b

del-resp-msg-rate-tx *decimal-number*

Description	Specifies the rate of messages of delay-resp messages transmitted
Context	system sync ptp instance instance-index number default-ds statistics multicast-msg-rate del-resp-msg-rate-tx <i>decimal-number</i>
Tree	del-resp-msg-rate-tx
Units	messages-per-second
Configurable	False
Platforms	7220 IXR-D5, 7250 IXR-X3b

follow-up-msg-rate-rx *decimal-number*

Description	Specifies the rate of messages of follow-up messages received
Context	system sync ptp instance instance-index number default-ds statistics multicast-msg-rate follow-up-msg-rate-rx <i>decimal-number</i>
Tree	follow-up-msg-rate-rx
Units	messages-per-second
Configurable	False
Platforms	7220 IXR-D5, 7250 IXR-X3b

follow-up-msg-rate-tx *decimal-number*

Description	Specifies the rate of messages of follow-up messages transmitted
Context	system sync ptp instance instance-index number default-ds statistics multicast-msg-rate follow-up-msg-rate-tx <i>decimal-number</i>
Tree	follow-up-msg-rate-tx
Units	messages-per-second
Configurable	False
Platforms	7220 IXR-D5, 7250 IXR-X3b

other-rate-rx *decimal-number*

Description	Specifies the rate of messages of other messages received
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Context	system sync ptp instance instance-index number default-ds statistics multicast-msg-rate other-rate-rx decimal-number
Tree	other-rate-rx
Units	messages-per-second
Configurable	False
Platforms	7220 IXR-D5, 7250 IXR-X3b

signaling-msg-rate-rx *decimal-number*

Description	Specifies the rate of messages of signaling messages received
Context	system sync ptp instance instance-index number default-ds statistics multicast-msg-rate signaling-msg-rate-rx decimal-number
Tree	signaling-msg-rate-rx
Units	messages-per-second
Configurable	False
Platforms	7220 IXR-D5, 7250 IXR-X3b

signaling-msg-rate-tx *decimal-number*

Description	Specifies the rate of messages of signaling messages transmitted
Context	system sync ptp instance instance-index number default-ds statistics multicast-msg-rate signaling-msg-rate-tx decimal-number
Tree	signaling-msg-rate-tx
Units	messages-per-second
Configurable	False
Platforms	7220 IXR-D5, 7250 IXR-X3b

sync-msg-rate-rx *decimal-number*

Description	Specifies the rate of messages of sync messages received
Context	system sync ptp instance instance-index number default-ds statistics multicast-msg-rate sync-msg-rate-rx decimal-number
Tree	sync-msg-rate-rx
Units	messages-per-second
Configurable	False
Platforms	7220 IXR-D5, 7250 IXR-X3b

sync-msg-rate-tx *decimal-number*

Description	Specifies the rate of messages of sync messages transmitted
Context	system sync ptp instance instance-index number default-ds statistics multicast-msg-rate sync-msg-rate-tx decimal-number
Tree	sync-msg-rate-tx
Units	messages-per-second
Configurable	False
Platforms	7220 IXR-D5, 7250 IXR-X3b

other-rx *number*

Description	Specifies the number of other messages received
Context	system sync ptp instance instance-index number default-ds statistics other-rx number
Tree	other-rx
Configurable	False
Platforms	7220 IXR-D5, 7250 IXR-X3b

signaling-msg-rx *number*

Description	Specifies the number of follow-up messages received
Context	system sync ptp instance instance-index number default-ds statistics signaling-msg-rx number
Tree	signaling-msg-rx
Configurable	False
Platforms	7220 IXR-D5, 7250 IXR-X3b

signaling-msg-tx *number*

Description	Specifies the number of follow-up messages transmitted
Context	system sync ptp instance instance-index number default-ds statistics signaling-msg-tx number
Tree	signaling-msg-tx
Configurable	False
Platforms	7220 IXR-D5, 7250 IXR-X3b

signaling-uni-neg-tlv

Description	Counts of different unicast negotiation TLVs
Context	system sync ptp instance instance-index number default-ds statistics signaling-uni-neg-tlv
Tree	signaling-uni-neg-tlv
Configurable	False
Platforms	7220 IXR-D5, 7250 IXR-X3b

ack-cancel-anno-rx number

Description	Specifies the number of acknowledgements of cancels for announce messages have been received
Context	system sync ptp instance instance-index number default-ds statistics signaling-uni-neg-tlv ack-cancel-anno-rx number
Tree	ack-cancel-anno-rx
Default	0
Configurable	False
Platforms	7220 IXR-D5, 7250 IXR-X3b

ack-cancel-anno-tx number

Description	Specifies the number of acknowledgements of cancels for announce messages have been transmitted
Context	system sync ptp instance instance-index number default-ds statistics signaling-uni-neg-tlv ack-cancel-anno-tx number
Tree	ack-cancel-anno-tx
Default	0
Configurable	False
Platforms	7220 IXR-D5, 7250 IXR-X3b

ack-cancel-delay-resp-rx number

Description	Specifies the number of acknowledgements of cancels for delay-resp messages have been received
Context	system sync ptp instance instance-index number default-ds statistics signaling-uni-neg-tlv ack-cancel-delay-resp-rx number
Tree	ack-cancel-delay-resp-rx

Default	0
Configurable	False
Platforms	7220 IXR-D5, 7250 IXR-X3b

ack-cancel-delay-resp-tx *number*

Description	Specifies the number of acknowledgements of cancels for delay-resp messages have been transmitted
Context	system sync ptp instance instance-index <i>number</i> default-ds statistics signaling-uni-neg-tlv ack-cancel-delay-resp-tx <i>number</i>
Tree	ack-cancel-delay-resp-tx
Default	0
Configurable	False
Platforms	7220 IXR-D5, 7250 IXR-X3b

ack-cancel-sync-rx *number*

Description	Specifies the number of acknowledgements of cancels for sync messages have been received
Context	system sync ptp instance instance-index <i>number</i> default-ds statistics signaling-uni-neg-tlv ack-cancel-sync-rx <i>number</i>
Tree	ack-cancel-sync-rx
Default	0
Configurable	False
Platforms	7220 IXR-D5, 7250 IXR-X3b

ack-cancel-sync-tx *number*

Description	Specifies the number of acknowledgements of cancels for sync messages have been transmitted
Context	system sync ptp instance instance-index <i>number</i> default-ds statistics signaling-uni-neg-tlv ack-cancel-sync-tx <i>number</i>
Tree	ack-cancel-sync-tx
Default	0
Configurable	False
Platforms	7220 IXR-D5, 7250 IXR-X3b

cancel-anno-rx *number*

Description	Specifies the number of cancels for announce messages have been received
Context	system sync ptp instance instance-index number default-ds statistics signaling-uni-neg-tlv cancel-anno-rx number
Tree	cancel-anno-rx
Default	0
Configurable	False
Platforms	7220 IXR-D5, 7250 IXR-X3b

cancel-anno-tx *number*

Description	Specifies the number of cancels for announce messages have been transmitted
Context	system sync ptp instance instance-index number default-ds statistics signaling-uni-neg-tlv cancel-anno-tx number
Tree	cancel-anno-tx
Default	0
Configurable	False
Platforms	7220 IXR-D5, 7250 IXR-X3b

cancel-delay-resp-rx *number*

Description	Specifies the number of cancels for delay-resp messages have been received
Context	system sync ptp instance instance-index number default-ds statistics signaling-uni-neg-tlv cancel-delay-resp-rx number
Tree	cancel-delay-resp-rx
Default	0
Configurable	False
Platforms	7220 IXR-D5, 7250 IXR-X3b

cancel-delay-resp-tx *number*

Description	Specifies the number of cancels for delay-resp messages have been transmitted
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Context	system sync ptp instance instance-index number default-ds statistics signaling-uni-neg-tlv cancel-delay-resp-tx number
Tree	cancel-delay-resp-tx
Default	0
Configurable	False
Platforms	7220 IXR-D5, 7250 IXR-X3b

cancel-sync-rx number

Description	Specifies the number of cancels for sync messages have been received
Context	system sync ptp instance instance-index number default-ds statistics signaling-uni-neg-tlv cancel-sync-rx number
Tree	cancel-sync-rx
Default	0
Configurable	False
Platforms	7220 IXR-D5, 7250 IXR-X3b

cancel-sync-tx number

Description	Specifies the number of cancels for sync messages have been transmitted
Context	system sync ptp instance instance-index number default-ds statistics signaling-uni-neg-tlv cancel-sync-tx number
Tree	cancel-sync-tx
Default	0
Configurable	False
Platforms	7220 IXR-D5, 7250 IXR-X3b

grant-anno-rx number

Description	Specifies the number of grants for announce messages have been received
Context	system sync ptp instance instance-index number default-ds statistics signaling-uni-neg-tlv grant-anno-rx number
Tree	grant-anno-rx
Default	0
Configurable	False
Platforms	7220 IXR-D5, 7250 IXR-X3b

grant-anno-tx *number*

Description	Specifies the number of grants for announce messages have been transmitted
Context	system sync ptp instance instance-index number default-ds statistics signaling-uni-neg-tlv grant-anno-tx number
Tree	grant-anno-tx
Default	0
Configurable	False
Platforms	7220 IXR-D5, 7250 IXR-X3b

grant-delay-resp-rx *number*

Description	Specifies the number of grants for delay-resp messages have been received
Context	system sync ptp instance instance-index number default-ds statistics signaling-uni-neg-tlv grant-delay-resp-rx number
Tree	grant-delay-resp-rx
Default	0
Configurable	False
Platforms	7220 IXR-D5, 7250 IXR-X3b

grant-delay-resp-tx *number*

Description	Specifies the number of grants for delay-resp messages have been transmitted
Context	system sync ptp instance instance-index number default-ds statistics signaling-uni-neg-tlv grant-delay-resp-tx number
Tree	grant-delay-resp-tx
Default	0
Configurable	False
Platforms	7220 IXR-D5, 7250 IXR-X3b

grant-sync-rx *number*

Description	Specifies the number of grants for sync messages have been received
Context	system sync ptp instance instance-index number default-ds statistics signaling-uni-neg-tlv grant-sync-rx number

Tree	grant-sync-rx
Default	0
Configurable	False
Platforms	7220 IXR-D5, 7250 IXR-X3b

grant-sync-tx *number*

Description	Specifies the number of grants for sync messages have been transmitted
Context	system sync ptp instance instance-index <i>number</i> default-ds statistics signaling-uni-neg-tlv grant-sync-tx <i>number</i>
Tree	grant-sync-tx
Default	0
Configurable	False
Platforms	7220 IXR-D5, 7250 IXR-X3b

other-tlv *number*

Description	The count of unsupported signaling message TLVs received.
Context	system sync ptp instance instance-index <i>number</i> default-ds statistics signaling-uni-neg-tlv other-tlv <i>number</i>
Tree	other-tlv
Default	0
Configurable	False
Platforms	7220 IXR-D5, 7250 IXR-X3b

reject-anno-rx *number*

Description	Specifies the number of rejections for announce messages have been received
Context	system sync ptp instance instance-index <i>number</i> default-ds statistics signaling-uni-neg-tlv reject-anno-rx <i>number</i>
Tree	reject-anno-rx
Default	0
Configurable	False
Platforms	7220 IXR-D5, 7250 IXR-X3b

reject-anno-tx *number*

Description	Specifies the number of rejections for announce messages have been transmitted
Context	system sync ptp instance instance-index number default-ds statistics signaling-uni-neg-tlv reject-anno-tx number
Tree	reject-anno-tx
Default	0
Configurable	False
Platforms	7220 IXR-D5, 7250 IXR-X3b

reject-delay-resp-rx *number*

Description	Specifies the number of rejections for delay-resp messages have been received
Context	system sync ptp instance instance-index number default-ds statistics signaling-uni-neg-tlv reject-delay-resp-rx number
Tree	reject-delay-resp-rx
Default	0
Configurable	False
Platforms	7220 IXR-D5, 7250 IXR-X3b

reject-delay-resp-tx *number*

Description	Specifies the number of rejections for delay-resp messages have been transmitted
Context	system sync ptp instance instance-index number default-ds statistics signaling-uni-neg-tlv reject-delay-resp-tx number
Tree	reject-delay-resp-tx
Default	0
Configurable	False
Platforms	7220 IXR-D5, 7250 IXR-X3b

reject-sync-rx *number*

Description	Specifies the number of rejections for sync messages have been received
Context	system sync ptp instance instance-index number default-ds statistics signaling-uni-neg-tlv reject-sync-rx number

Tree	reject-sync-rx
Default	0
Configurable	False
Platforms	7220 IXR-D5, 7250 IXR-X3b

reject-sync-tx *number*

Description	Specifies the number of rejections for sync messages have been transmitted
Context	system sync ptp instance instance-index number default-ds statistics signaling-uni-neg-tlv reject-sync-tx number
Tree	reject-sync-tx
Default	0
Configurable	False
Platforms	7220 IXR-D5, 7250 IXR-X3b

request-anno-rx *number*

Description	Specifies the number of requests for announce messages have been received
Context	system sync ptp instance instance-index number default-ds statistics signaling-uni-neg-tlv request-anno-rx number
Tree	request-anno-rx
Default	0
Configurable	False
Platforms	7220 IXR-D5, 7250 IXR-X3b

request-anno-tx *number*

Description	Specifies the number of requests for announce messages have been transmitted
Context	system sync ptp instance instance-index number default-ds statistics signaling-uni-neg-tlv request-anno-tx number
Tree	request-anno-tx
Default	0
Configurable	False
Platforms	7220 IXR-D5, 7250 IXR-X3b

request-delay-resp-rx *number*

Description	Specifies the number of requests for delay-resp messages have been received
Context	system sync ptp instance instance-index <i>number</i> default-ds statistics signaling-uni-neg-tlv request-delay-resp-rx <i>number</i>
Tree	request-delay-resp-rx
Default	0
Configurable	False
Platforms	7220 IXR-D5, 7250 IXR-X3b

request-delay-resp-tx *number*

Description	Specifies the number of requests for delay-resp messages have been transmitted
Context	system sync ptp instance instance-index <i>number</i> default-ds statistics signaling-uni-neg-tlv request-delay-resp-tx <i>number</i>
Tree	request-delay-resp-tx
Default	0
Configurable	False
Platforms	7220 IXR-D5, 7250 IXR-X3b

request-sync-rx *number*

Description	Specifies the number of requests for sync messages have been received
Context	system sync ptp instance instance-index <i>number</i> default-ds statistics signaling-uni-neg-tlv request-sync-rx <i>number</i>
Tree	request-sync-rx
Default	0
Configurable	False
Platforms	7220 IXR-D5, 7250 IXR-X3b

request-sync-tx *number*

Description	Specifies the number of requests for sync messages have been transmitted
Context	system sync ptp instance instance-index <i>number</i> default-ds statistics signaling-uni-neg-tlv request-sync-tx <i>number</i>

Tree	request-sync-tx
Default	0
Configurable	False
Platforms	7220 IXR-D5, 7250 IXR-X3b

sync-high-packet-loss *number*

Description	The number of events with high packet loss of sync packets
Context	system sync ptp instance instance-index number default-ds statistics sync-high-packet-loss number
Tree	sync-high-packet-loss
Default	0
Configurable	False
Platforms	7220 IXR-D5, 7250 IXR-X3b

sync-msg-rx *number*

Description	Specifies the number of sync messages received
Context	system sync ptp instance instance-index number default-ds statistics sync-msg-rx number
Tree	sync-msg-rx
Configurable	False
Platforms	7220 IXR-D5, 7250 IXR-X3b

sync-msg-tx *number*

Description	Specifies the number of sync messages transmitted
Context	system sync ptp instance instance-index number default-ds statistics sync-msg-tx number
Tree	sync-msg-tx
Configurable	False
Platforms	7220 IXR-D5, 7250 IXR-X3b

sync-packet-loss *number*

Description	The number of events with detected packet loss of sync packets from the master clock
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Context	system sync ptp instance instance-index number default-ds statistics sync-packet-loss number
Tree	sync-packet-loss
Default	0
Configurable	False
Platforms	7220 IXR-D5, 7250 IXR-X3b

unicast-msg-rate

Description	Aggregate unicast message rates for the PTP clock
Context	system sync ptp instance instance-index number default-ds statistics unicast-msg-rate
Tree	unicast-msg-rate
Configurable	False
Platforms	7220 IXR-D5, 7250 IXR-X3b

anno-msg-rate-rx *decimal-number*

Description	Specifies the rate of messages of announce messages received
Context	system sync ptp instance instance-index number default-ds statistics unicast-msg-rate anno-msg-rate-rx decimal-number
Tree	anno-msg-rate-rx
Units	messages-per-second
Configurable	False
Platforms	7220 IXR-D5, 7250 IXR-X3b

anno-msg-rate-tx *decimal-number*

Description	Specifies the rate of messages of announce messages transmitted
Context	system sync ptp instance instance-index number default-ds statistics unicast-msg-rate anno-msg-rate-tx decimal-number
Tree	anno-msg-rate-tx
Units	messages-per-second
Configurable	False
Platforms	7220 IXR-D5, 7250 IXR-X3b

del-req-msg-rate-rx *decimal-number*

Description	Specifies the rate of messages of delay-req messages received
Context	system sync ptp instance instance-index number default-ds statistics unicast-msg-rate del-req-msg-rate-rx decimal-number
Tree	del-req-msg-rate-rx
Units	messages-per-second
Configurable	False
Platforms	7220 IXR-D5, 7250 IXR-X3b

del-req-msg-rate-tx *decimal-number*

Description	Specifies the rate of messages of delay-req messages transmitted
Context	system sync ptp instance instance-index number default-ds statistics unicast-msg-rate del-req-msg-rate-tx decimal-number
Tree	del-req-msg-rate-tx
Units	messages-per-second
Configurable	False
Platforms	7220 IXR-D5, 7250 IXR-X3b

del-resp-msg-rate-rx *decimal-number*

Description	Specifies the rate of messages of delay-resp messages received
Context	system sync ptp instance instance-index number default-ds statistics unicast-msg-rate del-resp-msg-rate-rx decimal-number
Tree	del-resp-msg-rate-rx
Units	messages-per-second
Configurable	False
Platforms	7220 IXR-D5, 7250 IXR-X3b

del-resp-msg-rate-tx *decimal-number*

Description	Specifies the rate of messages of delay-resp messages transmitted
Context	system sync ptp instance instance-index number default-ds statistics unicast-msg-rate del-resp-msg-rate-tx decimal-number
Tree	del-resp-msg-rate-tx
Units	messages-per-second

Configurable	False
Platforms	7220 IXR-D5, 7250 IXR-X3b

follow-up-msg-rate-rx *decimal-number*

Description	Specifies the rate of messages of follow-up messages received
Context	system sync ptp instance instance-index number default-ds statistics unicast-msg-rate follow-up-msg-rate-rx <i>decimal-number</i>
Tree	follow-up-msg-rate-rx
Units	messages-per-second
Configurable	False
Platforms	7220 IXR-D5, 7250 IXR-X3b

follow-up-msg-rate-tx *decimal-number*

Description	Specifies the rate of messages of follow-up messages transmitted
Context	system sync ptp instance instance-index number default-ds statistics unicast-msg-rate follow-up-msg-rate-tx <i>decimal-number</i>
Tree	follow-up-msg-rate-tx
Units	messages-per-second
Configurable	False
Platforms	7220 IXR-D5, 7250 IXR-X3b

other-rate-rx *decimal-number*

Description	Specifies the rate of messages of other messages received
Context	system sync ptp instance instance-index number default-ds statistics unicast-msg-rate other-rate-rx <i>decimal-number</i>
Tree	other-rate-rx
Units	messages-per-second
Configurable	False
Platforms	7220 IXR-D5, 7250 IXR-X3b

signaling-msg-rate-rx *decimal-number*

Description	Specifies the rate of messages of signaling messages received
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Context	system sync ptp instance instance-index number default-ds statistics unicast-msg-rate signaling-msg-rate-rx decimal-number
Tree	signaling-msg-rate-rx
Units	messages-per-second
Configurable	False
Platforms	7220 IXR-D5, 7250 IXR-X3b

signaling-msg-rate-tx decimal-number

Description	Specifies the rate of messages of signaling messages transmitted
Context	system sync ptp instance instance-index number default-ds statistics unicast-msg-rate signaling-msg-rate-tx decimal-number
Tree	signaling-msg-rate-tx
Units	messages-per-second
Configurable	False
Platforms	7220 IXR-D5, 7250 IXR-X3b

sync-msg-rate-rx decimal-number

Description	Specifies the rate of messages of sync messages received
Context	system sync ptp instance instance-index number default-ds statistics unicast-msg-rate sync-msg-rate-rx decimal-number
Tree	sync-msg-rate-rx
Units	messages-per-second
Configurable	False
Platforms	7220 IXR-D5, 7250 IXR-X3b

sync-msg-rate-tx decimal-number

Description	Specifies the rate of messages of sync messages transmitted
Context	system sync ptp instance instance-index number default-ds statistics unicast-msg-rate sync-msg-rate-tx decimal-number
Tree	sync-msg-rate-tx
Units	messages-per-second
Configurable	False
Platforms	7220 IXR-D5, 7250 IXR-X3b

time-recovery-engine

Description	Enter the time-recovery-engine context
Context	system sync ptp instance instance-index number default-ds time-recovery-engine
Tree	time-recovery-engine
Configurable	False
Platforms	7220 IXR-D5, 7250 IXR-X3b

last-adjustment number

Description	Specifies the last adjustment in nanoseconds to the local time of the PTP clock
Context	system sync ptp instance instance-index number default-ds time-recovery-engine last-adjustment number
Tree	last-adjustment
Units	nanoseconds
Configurable	False
Platforms	7220 IXR-D5, 7250 IXR-X3b

last-adjustment-timestamp string

Description	The time when last-adjustment was last calculated
Context	system sync ptp instance instance-index number default-ds time-recovery-engine last-adjustment-timestamp string
Tree	last-adjustment-timestamp
String Length	20 to 32
Configurable	False
Platforms	7220 IXR-D5, 7250 IXR-X3b

recovery-state keyword

Description	Specifies the current state of the time recovery engine in the PTP clock
Context	system sync ptp instance instance-index number default-ds time-recovery-engine recovery-state keyword
Tree	recovery-state
Options	<ul style="list-style-type: none"> not-applicable

Not applicable to time recovery

- initial
Initializing state
- acquiring
Acquiring state
- holdover
Holdover state
- locked
Locked state

Configurable	False
Platforms	7220 IXR-D5, 7250 IXR-X3b

state-last-changed *string*

Description	Specifies the last occurrence of a ptp state change for the time recovery engine
Context	system sync ptp instance instance-index number default-ds time-recovery-engine state-last-changed <i>string</i>
Tree	state-last-changed
String Length	20 to 32
Configurable	False
Platforms	7220 IXR-D5, 7250 IXR-X3b

statistics

Description	Time recovery engine state statistics for the PTP clock
Context	system sync ptp instance instance-index number default-ds time-recovery-engine statistics
Tree	statistics
Configurable	False
Platforms	7220 IXR-D5, 7250 IXR-X3b

delay-too-much-pdv *number*

Description	The number of events with high PDV for delay request/response packets for time recovery
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Context	system sync ptp instance instance-index number default-ds time-recovery-engine statistics delay-too-much-pdv number
Tree	delay-too-much-pdv
Default	0
Configurable	False
Platforms	7220 IXR-D5, 7250 IXR-X3b

sync-too-much-pdv *number*

Description	The number of events with high PDV for sync packets for time recovery
Context	system sync ptp instance instance-index number default-ds time-recovery-engine statistics sync-too-much-pdv number
Tree	sync-too-much-pdv
Default	0
Configurable	False
Platforms	7220 IXR-D5, 7250 IXR-X3b

time-in-acquiring *number*

Description	Specifies the number of seconds while in Acquiring state
Context	system sync ptp instance instance-index number default-ds time-recovery-engine statistics time-in-acquiring number
Tree	time-in-acquiring
Units	seconds
Configurable	False
Platforms	7220 IXR-D5, 7250 IXR-X3b

time-in-holdover *number*

Description	Specifies the number of seconds while in Holdover state
Context	system sync ptp instance instance-index number default-ds time-recovery-engine statistics time-in-holdover number
Tree	time-in-holdover
Units	seconds
Configurable	False
Platforms	7220 IXR-D5, 7250 IXR-X3b

time-in-initial *number*

Description	Specifies the number of seconds while in Initializing state
Context	system sync ptp instance instance-index number default-ds time-recovery-engine statistics time-in-initial number
Tree	time-in-initial
Units	seconds
Configurable	False
Platforms	7220 IXR-D5, 7250 IXR-X3b

time-in-locked *number*

Description	Specifies the number of seconds while in Locked state
Context	system sync ptp instance instance-index number default-ds time-recovery-engine statistics time-in-locked number
Tree	time-in-locked
Units	seconds
Configurable	False
Platforms	7220 IXR-D5, 7250 IXR-X3b

two-step-flag *boolean*

Description	Indicates if the clock is operating in two-step mode
Context	system sync ptp instance instance-index number default-ds two-step-flag boolean
Tree	two-step-flag
Configurable	False
Platforms	7220 IXR-D5, 7250 IXR-X3b

parent-ds

Description	The parent data set of the clock
Context	system sync ptp instance instance-index number parent-ds
Tree	parent-ds
Configurable	False
Platforms	7220 IXR-D5, 7250 IXR-X3b

grandmaster-clock-quality

Description	The clockQuality of the grandmaster clock
Context	system sync ptp instance instance-index number parent-ds grandmaster-clock-quality
Tree	grandmaster-clock-quality
Configurable	False
Platforms	7220 IXR-D5, 7250 IXR-X3b

clock-accuracy number

Description	The clockAccuracy indicates the expected accuracy of the clock
Context	system sync ptp instance instance-index number parent-ds grandmaster-clock-quality clock-accuracy number
Tree	clock-accuracy
Configurable	False
Platforms	7220 IXR-D5, 7250 IXR-X3b

clock-class number

Description	The clockClass denotes the traceability of the time or frequency distributed by the clock
Context	system sync ptp instance instance-index number parent-ds grandmaster-clock-quality clock-class number
Tree	clock-class
Configurable	False
Platforms	7220 IXR-D5, 7250 IXR-X3b

offset-scaled-log-variance number

Description	The offsetScaledLogVariance provides an estimate of the variations of the clock
Context	system sync ptp instance instance-index number parent-ds grandmaster-clock-quality offset-scaled-log-variance number
Tree	offset-scaled-log-variance
Configurable	False
Platforms	7220 IXR-D5, 7250 IXR-X3b

grandmaster-identity *binary*

Description	The clockIdentity of the grandmaster clock
Context	system sync ptp instance instance-index number parent-ds grandmaster-identity binary
Tree	grandmaster-identity
String Length	8
Configurable	False
Platforms	7220 IXR-D5, 7250 IXR-X3b

grandmaster-priority1 *number*

Description	The priority1 attribute of the grandmaster clock
Context	system sync ptp instance instance-index number parent-ds grandmaster-priority1 number
Tree	grandmaster-priority1
Configurable	False
Platforms	7220 IXR-D5, 7250 IXR-X3b

grandmaster-priority2 *number*

Description	The priority2 attribute of the grandmaster clock
Context	system sync ptp instance instance-index number parent-ds grandmaster-priority2 number
Tree	grandmaster-priority2
Configurable	False
Platforms	7220 IXR-D5, 7250 IXR-X3b

parent-port-identity

Description	The portIdentity of the port on the master
Context	system sync ptp instance instance-index number parent-ds parent-port-identity
Tree	parent-port-identity
Configurable	False
Platforms	7220 IXR-D5, 7250 IXR-X3b

clock-identity *binary*

Description	Identity of the parent clock
Context	system sync ptp instance instance-index number parent-ds parent-port-identity clock-identity binary
Tree	clock-identity
String Length	8
Configurable	False
Platforms	7220 IXR-D5, 7250 IXR-X3b

port-number *number*

Description	Port number of the parent clock
Context	system sync ptp instance instance-index number parent-ds parent-port-identity port-number number
Tree	port-number
Configurable	False
Platforms	7220 IXR-D5, 7250 IXR-X3b

protocol-address

Description	The protocol address of the PTP Port that issues the Sync messages
Context	system sync ptp instance instance-index number parent-ds protocol-address
Tree	protocol-address
Configurable	False
Platforms	7220 IXR-D5, 7250 IXR-X3b

ip

Description	Enter the ip context
Context	system sync ptp instance instance-index number parent-ds protocol-address ip
Tree	ip
Configurable	False
Platforms	7220 IXR-D5, 7250 IXR-X3b

ip-address (*ipv4-address* | *ipv6-address*)

Description	IP address for the PTP peer
Context	system sync ptp instance instance-index number parent-ds protocol-address ip ip-address (<i>ipv4-address</i> <i>ipv6-address</i>)
Tree	ip-address
Configurable	False
Platforms	7220 IXR-D5, 7250 IXR-X3b

network-instance *reference*

Description	Network instance containing the IP address
Context	system sync ptp instance instance-index number parent-ds protocol-address ip network-instance reference
Tree	network-instance
Reference	network-instance name string
Configurable	False
Platforms	7220 IXR-D5, 7250 IXR-X3b

mac-address *string*

Description	The MAC address of the PTP port This is only valid for PTP over ethernet encapsulation.
Context	system sync ptp instance instance-index number parent-ds protocol-address mac-address string
Tree	mac-address
Configurable	False
Platforms	7220 IXR-D5, 7250 IXR-X3b

network-protocol *identityref*

Description	Protocol used by a PTP instance to transport PTP messages
Context	system sync ptp instance instance-index number parent-ds protocol-address network-protocol identityref
Tree	network-protocol
Options	<ul style="list-style-type: none"> udp-ipv4 UDP on IPv4. Numeric value is 0001 hex

- `udp-ipv6`
UDP on IPv6. Numeric value is 0002 hex
- `ieee802-3`
IEEE Std 802.3 (Ethernet). Numeric value is 0003 hex
- `devicenet`
DeviceNet. Numeric value is 0004 hex
- `controlnet`
ControlNet. Numeric value is 0005 hex
- `profinet`
PROFINET. Numeric value is 0006 hex
- `otn`
Optical Transport Network (OTN). Numeric value is 0007 hex
- `unknown`
Unknown. Numeric value is FFFE hex

Configurable	False
Platforms	7220 IXR-D5, 7250 IXR-X3b

port-ds-cfg-ip-list [port-index](#) *number*

Description	List of port data sets for configured IP peers
Context	system sync ptp instance instance-index <i>number</i> port-ds-cfg-ip-list port-index <i>number</i>
Tree	port-ds-cfg-ip-list
Configurable	True
Platforms	7220 IXR-D5, 7250 IXR-X3b

port-index *number*

Description	<p>Index into the port-ds list</p> <p>This is not the PTP port number. Configurable ports use port indices 1 through 999 but there is a limit on the overall number of these configured ports based on the platform and software release.</p> <p>The data sets (i.e., information model) of IEEE Std 1588-2008 specify a member <code>portDS.portIdentity</code>, which uses a typed struct with members <code>clockIdentity</code> and <code>portNumber</code>.</p> <p>In this YANG data model, <code>portIdentity</code> is not modeled in the <code>port-ds</code>. However, its members are provided as follows: <code>portIdentity.portNumber</code> is provided as this <code>ptp-port-number</code> leaf in <code>port-ds</code>, and <code>portIdentity.clockIdentity</code> is provided</p>
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as the clock-identity leaf in default-ds of the instance (i.e., ../default-ds/clock-identity).

Context	system sync ptp instance instance-index number port-ds-cfg-ip-list port-index number
Range	1 to 999
Configurable	True
Platforms	7220 IXR-D5, 7250 IXR-X3b

admin-state *keyword*

Description	The administrative state of the ptp port
Context	system sync ptp instance instance-index number port-ds-cfg-ip-list port-index number admin-state keyword
Tree	admin-state
Default	disable
Options	<ul style="list-style-type: none"> • enable • disable
Configurable	True
Platforms	7220 IXR-D5, 7250 IXR-X3b

announce-receipt-timeout *number*

Description	<p>Sets the time limit for missed Announce packets before the master clock is deemed down</p> <p>This command configures the announceReceiptTimeout value for all peer associations. This defines the number of Announce message intervals that must expire with no received Announce messages before declaring an ANNOUNCE_RECEIPT_TIMEOUT event. To change this setting, refer to announce-receipt-timeout in the Default data set.</p>
Context	system sync ptp instance instance-index number port-ds-cfg-ip-list port-index number announce-receipt-timeout number
Tree	announce-receipt-timeout
Range	2 to 10
Configurable	False
Platforms	7220 IXR-D5, 7250 IXR-X3b

best-master *boolean*

Description	Indicates if this peer was selected by the BMCA to be the best master
Context	system sync ptp instance instance-index number port-ds-cfg-ip-list port-index number best-master boolean
Tree	best-master
Configurable	False
Platforms	7220 IXR-D5, 7250 IXR-X3b

clock-identity *binary*

Description	Identity of the peer clock
Context	system sync ptp instance instance-index number port-ds-cfg-ip-list port-index number clock-identity binary
Tree	clock-identity
String Length	8
Configurable	False
Platforms	7220 IXR-D5, 7250 IXR-X3b

grandmaster-clock-quality

Description	The clock quality of the grandmaster clock in the last Announce message received from this peer
Context	system sync ptp instance instance-index number port-ds-cfg-ip-list port-index number grandmaster-clock-quality
Tree	grandmaster-clock-quality
Configurable	False
Platforms	7220 IXR-D5, 7250 IXR-X3b

clock-accuracy *number*

Description	The clockAccuracy indicates the expected accuracy of the clock
Context	system sync ptp instance instance-index number port-ds-cfg-ip-list port-index number grandmaster-clock-quality clock-accuracy number
Tree	clock-accuracy
Configurable	False
Platforms	7220 IXR-D5, 7250 IXR-X3b

clock-class *number*

Description	The clockClass denotes the traceability of the time or frequency distributed by the clock
Context	system sync ptp instance instance-index number port-ds-cfg-ip-list port-index number grandmaster-clock-quality clock-class number
Tree	clock-class
Configurable	False
Platforms	7220 IXR-D5, 7250 IXR-X3b

offset-scaled-log-variance *number*

Description	The offsetScaledLogVariance provides an estimate of the variations of the clock
Context	system sync ptp instance instance-index number port-ds-cfg-ip-list port-index number grandmaster-clock-quality offset-scaled-log-variance number
Tree	offset-scaled-log-variance
Configurable	False
Platforms	7220 IXR-D5, 7250 IXR-X3b

grandmaster-identity *binary*

Description	The clockIdentity of the grandmaster clock in the last Announce message received from this peer
Context	system sync ptp instance instance-index number port-ds-cfg-ip-list port-index number grandmaster-identity binary
Tree	grandmaster-identity
String Length	8
Configurable	False
Platforms	7220 IXR-D5, 7250 IXR-X3b

grandmaster-priority1 *number*

Description	The priority1 of the grandmaster clock in the last Announce message received from this peer
Context	system sync ptp instance instance-index number port-ds-cfg-ip-list port-index number grandmaster-priority1 number
Tree	grandmaster-priority1

Configurable	False
Platforms	7220 IXR-D5, 7250 IXR-X3b

grandmaster-priority2 *number*

Description	The priority2 of the grandmaster clock in the last Announce message received from this peer
Context	system sync ptp instance instance-index number port-ds-cfg-ip-list port-index number grandmaster-priority2 number
Tree	grandmaster-priority2
Configurable	False
Platforms	7220 IXR-D5, 7250 IXR-X3b

last-rx-interface *reference*

Description	Interface used for the last PTP message received from this peer
Context	system sync ptp instance instance-index number port-ds-cfg-ip-list port-index number last-rx-interface reference
Tree	last-rx-interface
Reference	interface name string
Configurable	False
Platforms	7220 IXR-D5, 7250 IXR-X3b

last-tx-interface *reference*

Description	Interface used for the last PTP message transmitted to this peer
Context	system sync ptp instance instance-index number port-ds-cfg-ip-list port-index number last-tx-interface reference
Tree	last-tx-interface
Reference	interface name string
Configurable	False
Platforms	7220 IXR-D5, 7250 IXR-X3b

local-priority *number*

Description	Specifies the local priority of the ptp port
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Context	system sync ptp instance instance-index number port-ds-cfg-ip-list port-index number local-priority number
Tree	local-priority
Range	1 to 255
Default	128
Configurable	True
Platforms	7220 IXR-D5, 7250 IXR-X3b

log-announce-interval *number*

Description	The base-2 logarithm of the mean announceInterval Mean time interval between successive Announce messages. To change this setting, refer to log-announce-interval in the Default data set.
Context	system sync ptp instance instance-index number port-ds-cfg-ip-list port-index number log-announce-interval number
Tree	log-announce-interval
Range	-3 to 4
Configurable	False
Platforms	7220 IXR-D5, 7250 IXR-X3b

log-min-delay-req-interval *number*

Description	The base-2 logarithm of the minDelayReqInterval The minimum permitted mean time interval between successive Delay_Req messages. The value is not configurable. The delay messages use the same interval as for Sync messages (log-sync-interval)
Context	system sync ptp instance instance-index number port-ds-cfg-ip-list port-index number log-min-delay-req-interval number
Tree	log-min-delay-req-interval
Range	-6 to 0
Configurable	False
Platforms	7220 IXR-D5, 7250 IXR-X3b

log-sync-interval *number*

Description	The base-2 logarithm of the mean SyncInterval for multicast messages The default log sync interval is defined by the profile. itug8275dot1: -4 (16 messages per second) itug8275dot2: -6 (64 messages per second) The
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rates for unicast transmissions are negotiated separately on a per-port basis and are not constrained by this attribute.

Context	system sync ptp instance instance-index number port-ds-cfg-ip-list port-index number log-sync-interval number
Tree	log-sync-interval
Range	-6 to 0
Configurable	True
Platforms	7220 IXR-D5, 7250 IXR-X3b

major-version-number *number*

Description	The PTP major version number in use on the port
Context	system sync ptp instance instance-index number port-ds-cfg-ip-list port-index number major-version-number number
Tree	major-version-number
Configurable	False
Platforms	7220 IXR-D5, 7250 IXR-X3b

minor-version-number *number*

Description	The PTP minor version number in use on the port
Context	system sync ptp instance instance-index number port-ds-cfg-ip-list port-index number minor-version-number number
Tree	minor-version-number
Configurable	False
Platforms	7220 IXR-D5, 7250 IXR-X3b

parent-clock *boolean*

Description	Indicates if this peer is the current parent clock of this PTP clock May differ from best-master due to use of local GNSS as time source.
Context	system sync ptp instance instance-index number port-ds-cfg-ip-list port-index number parent-clock boolean
Tree	parent-clock
Configurable	False
Platforms	7220 IXR-D5, 7250 IXR-X3b

peer

Description	Enter the peer context
Context	system sync ptp instance instance-index number port-ds-cfg-ip-list port-index number peer
Tree	peer
Configurable	True
Platforms	7220 IXR-D5, 7250 IXR-X3b

ip-address (*ipv4-address* | *ipv6-address*)

Description	IP address for the PTP peer Only Unicast addresses are supported
Context	system sync ptp instance instance-index number port-ds-cfg-ip-list port-index number peer ip-address (ipv4-address ipv6-address)
Tree	ip-address
Configurable	True
Platforms	7220 IXR-D5, 7250 IXR-X3b

network-instance *reference*

Description	Network instance used by this peer All configured peers use the same network-instance. It can be configured at the top level of the ptp tree.
Context	system sync ptp instance instance-index number port-ds-cfg-ip-list port-index number peer network-instance reference
Tree	network-instance
Reference	network-instance name string
Configurable	False
Platforms	7220 IXR-D5, 7250 IXR-X3b

port-number *number*

Description	Port number of the peer clock
Context	system sync ptp instance instance-index number port-ds-cfg-ip-list port-index number port-number number
Tree	port-number

Configurable	False
Platforms	7220 IXR-D5, 7250 IXR-X3b

port-state *keyword*

Description	Current state associated with the port
Context	system sync ptp instance instance-index number port-ds-cfg-ip-list port-index number port-state keyword
Tree	port-state
Options	<ul style="list-style-type: none"> • initializing The port is initializing its data sets, hardware, and communication facilities • faulty The port is in the fault state • disabled The port is disabled and is not communicating PTP messages • listening The port is listening for an Announce message • pre-master The port is in the pre-master state • master The port is behaving as a master port • passive The port is in the passive state • uncalibrated A master port has been selected, but the port is still in the uncalibrated state • slave The port is synchronizing to the selected master port
Configurable	False
Platforms	7220 IXR-D5, 7250 IXR-X3b

ptp-port-number *number*

Description	IEEE Std 1588 portNumber This is the port-number that will appear in messages sent for this port-index.
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Context	system sync ptp instance instance-index number port-ds-cfg-ip-list port-index number ptp-port-number number
Tree	ptp-port-number
Configurable	False
Platforms	7220 IXR-D5, 7250 IXR-X3b

statistics

Description	Total messages for a specific PTP port
Context	system sync ptp instance instance-index number port-ds-cfg-ip-list port-index number statistics
Tree	statistics
Configurable	False
Platforms	7220 IXR-D5, 7250 IXR-X3b

anno-msg-rx *number*

Description	Specifies the number of announce messages received
Context	system sync ptp instance instance-index number port-ds-cfg-ip-list port-index number statistics anno-msg-rx number
Tree	anno-msg-rx
Configurable	False
Platforms	7220 IXR-D5, 7250 IXR-X3b

anno-msg-tx *number*

Description	Specifies the number of announce messages transmitted
Context	system sync ptp instance instance-index number port-ds-cfg-ip-list port-index number statistics anno-msg-tx number
Tree	anno-msg-tx
Configurable	False
Platforms	7220 IXR-D5, 7250 IXR-X3b

del-req-msg-rx *number*

Description	Specifies the number of delay-req messages received
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Context	system sync ptp instance instance-index number port-ds-cfg-ip-list port-index number statistics del-req-msg-rx number
Tree	del-req-msg-rx
Configurable	False
Platforms	7220 IXR-D5, 7250 IXR-X3b

del-req-msg-tx number

Description	Specifies the number of delay-req messages transmitted
Context	system sync ptp instance instance-index number port-ds-cfg-ip-list port-index number statistics del-req-msg-tx number
Tree	del-req-msg-tx
Configurable	False
Platforms	7220 IXR-D5, 7250 IXR-X3b

del-resp-msg-rx number

Description	Specifies the number of delay-resp messages received
Context	system sync ptp instance instance-index number port-ds-cfg-ip-list port-index number statistics del-resp-msg-rx number
Tree	del-resp-msg-rx
Configurable	False
Platforms	7220 IXR-D5, 7250 IXR-X3b

del-resp-msg-tx number

Description	Specifies the number of delay-resp messages transmitted
Context	system sync ptp instance instance-index number port-ds-cfg-ip-list port-index number statistics del-resp-msg-tx number
Tree	del-resp-msg-tx
Configurable	False
Platforms	7220 IXR-D5, 7250 IXR-X3b

discards

Description	Aggregate discard statistics for the PTP clock
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Context	system sync ptp instance instance-index number port-ds-cfg-ip-list port-index number statistics discards
Tree	discards
Configurable	False
Platforms	7220 IXR-D5, 7250 IXR-X3b

alternate-master number

Description	Specifies the number of alternate master messages that were discarded
Context	system sync ptp instance instance-index number port-ds-cfg-ip-list port-index number statistics discards alternate-master number
Tree	alternate-master
Configurable	False
Platforms	7220 IXR-D5, 7250 IXR-X3b

bad-domain number

Description	Specifies the number of bad domain messages that were discarded
Context	system sync ptp instance instance-index number port-ds-cfg-ip-list port-index number statistics discards bad-domain number
Tree	bad-domain
Configurable	False
Platforms	7220 IXR-D5, 7250 IXR-X3b

other number

Description	Specifies the number of other messages that were discarded
Context	system sync ptp instance instance-index number port-ds-cfg-ip-list port-index number statistics discards other number
Tree	other
Configurable	False
Platforms	7220 IXR-D5, 7250 IXR-X3b

out-of-sequence number

Description	Specifies the number of out of sequence messages that were discarded
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Context	system sync ptp instance instance-index number port-ds-cfg-ip-list port-index number statistics discards out-of-sequence number
Tree	out-of-sequence
Configurable	False
Platforms	7220 IXR-D5, 7250 IXR-X3b

peer-disabled number

Description	Specifies the number of PTP messages that were discarded from disabled PTP peer Occurs when a PTP peer has been administratively disabled. This information is only available for configured and discovered peers.
Context	system sync ptp instance instance-index number port-ds-cfg-ip-list port-index number statistics discards peer-disabled number
Tree	peer-disabled
Configurable	False
Platforms	7220 IXR-D5, 7250 IXR-X3b

follow-up-msg-rx number

Description	Specifies the number of follow-up messages received
Context	system sync ptp instance instance-index number port-ds-cfg-ip-list port-index number statistics follow-up-msg-rx number
Tree	follow-up-msg-rx
Configurable	False
Platforms	7220 IXR-D5, 7250 IXR-X3b

follow-up-msg-tx number

Description	Specifies the number of follow-up messages transmitted
Context	system sync ptp instance instance-index number port-ds-cfg-ip-list port-index number statistics follow-up-msg-tx number
Tree	follow-up-msg-tx
Configurable	False
Platforms	7220 IXR-D5, 7250 IXR-X3b

other-rx number

Description	Specifies the number of other messages received
Context	system sync ptp instance instance-index number port-ds-cfg-ip-list port-index number statistics other-rx number
Tree	other-rx
Configurable	False
Platforms	7220 IXR-D5, 7250 IXR-X3b

signaling-msg-rx number

Description	Specifies the number of follow-up messages received
Context	system sync ptp instance instance-index number port-ds-cfg-ip-list port-index number statistics signaling-msg-rx number
Tree	signaling-msg-rx
Configurable	False
Platforms	7220 IXR-D5, 7250 IXR-X3b

signaling-msg-tx number

Description	Specifies the number of follow-up messages transmitted
Context	system sync ptp instance instance-index number port-ds-cfg-ip-list port-index number statistics signaling-msg-tx number
Tree	signaling-msg-tx
Configurable	False
Platforms	7220 IXR-D5, 7250 IXR-X3b

signaling-uni-neg-tlv

Description	Counts of different unicast negotiation TLVs
Context	system sync ptp instance instance-index number port-ds-cfg-ip-list port-index number statistics signaling-uni-neg-tlv
Tree	signaling-uni-neg-tlv
Configurable	False
Platforms	7220 IXR-D5, 7250 IXR-X3b

ack-cancel-anno-rx *number*

Description	Specifies the number of acknowledgements of cancels for announce messages have been received
Context	system sync ptp instance instance-index <i>number</i> port-ds-cfg-ip-list port-index <i>number</i> statistics signaling-uni-neg-tlv ack-cancel-anno-rx <i>number</i>
Tree	ack-cancel-anno-rx
Default	0
Configurable	False
Platforms	7220 IXR-D5, 7250 IXR-X3b

ack-cancel-anno-tx *number*

Description	Specifies the number of acknowledgements of cancels for announce messages have been transmitted
Context	system sync ptp instance instance-index <i>number</i> port-ds-cfg-ip-list port-index <i>number</i> statistics signaling-uni-neg-tlv ack-cancel-anno-tx <i>number</i>
Tree	ack-cancel-anno-tx
Default	0
Configurable	False
Platforms	7220 IXR-D5, 7250 IXR-X3b

ack-cancel-delay-resp-rx *number*

Description	Specifies the number of acknowledgements of cancels for delay-resp messages have been received
Context	system sync ptp instance instance-index <i>number</i> port-ds-cfg-ip-list port-index <i>number</i> statistics signaling-uni-neg-tlv ack-cancel-delay-resp-rx <i>number</i>
Tree	ack-cancel-delay-resp-rx
Default	0
Configurable	False
Platforms	7220 IXR-D5, 7250 IXR-X3b

ack-cancel-delay-resp-tx *number*

Description	Specifies the number of acknowledgements of cancels for delay-resp messages have been transmitted
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Context	system sync ptp instance instance-index number port-ds-cfg-ip-list port-index number statistics signaling-uni-neg-tlv ack-cancel-delay-resp-tx number
Tree	ack-cancel-delay-resp-tx
Default	0
Configurable	False
Platforms	7220 IXR-D5, 7250 IXR-X3b

ack-cancel-sync-rx number

Description	Specifies the number of acknowledgements of cancels for sync messages have been received
Context	system sync ptp instance instance-index number port-ds-cfg-ip-list port-index number statistics signaling-uni-neg-tlv ack-cancel-sync-rx number
Tree	ack-cancel-sync-rx
Default	0
Configurable	False
Platforms	7220 IXR-D5, 7250 IXR-X3b

ack-cancel-sync-tx number

Description	Specifies the number of acknowledgements of cancels for sync messages have been transmitted
Context	system sync ptp instance instance-index number port-ds-cfg-ip-list port-index number statistics signaling-uni-neg-tlv ack-cancel-sync-tx number
Tree	ack-cancel-sync-tx
Default	0
Configurable	False
Platforms	7220 IXR-D5, 7250 IXR-X3b

cancel-anno-rx number

Description	Specifies the number of cancels for announce messages have been received
Context	system sync ptp instance instance-index number port-ds-cfg-ip-list port-index number statistics signaling-uni-neg-tlv cancel-anno-rx number
Tree	cancel-anno-rx
Default	0
Configurable	False

Platforms 7220 IXR-D5, 7250 IXR-X3b

cancel-anno-tx *number*

Description Specifies the number of cancels for announce messages have been transmitted

Context [system sync ptp instance instance-index number port-ds-cfg-ip-list port-index number statistics signaling-uni-neg-tlv cancel-anno-tx number](#)

Tree [cancel-anno-tx](#)

Default 0

Configurable False

Platforms 7220 IXR-D5, 7250 IXR-X3b

cancel-delay-resp-rx *number*

Description Specifies the number of cancels for delay-resp messages have been received

Context [system sync ptp instance instance-index number port-ds-cfg-ip-list port-index number statistics signaling-uni-neg-tlv cancel-delay-resp-rx number](#)

Tree [cancel-delay-resp-rx](#)

Default 0

Configurable False

Platforms 7220 IXR-D5, 7250 IXR-X3b

cancel-delay-resp-tx *number*

Description Specifies the number of cancels for delay-resp messages have been transmitted

Context [system sync ptp instance instance-index number port-ds-cfg-ip-list port-index number statistics signaling-uni-neg-tlv cancel-delay-resp-tx number](#)

Tree [cancel-delay-resp-tx](#)

Default 0

Configurable False

Platforms 7220 IXR-D5, 7250 IXR-X3b

cancel-sync-rx *number*

Description Specifies the number of cancels for sync messages have been received

Context	system sync ptp instance instance-index number port-ds-cfg-ip-list port-index number statistics signaling-uni-neg-tlv cancel-sync-rx number
Tree	cancel-sync-rx
Default	0
Configurable	False
Platforms	7220 IXR-D5, 7250 IXR-X3b

cancel-sync-tx number

Description	Specifies the number of cancels for sync messages have been transmitted
Context	system sync ptp instance instance-index number port-ds-cfg-ip-list port-index number statistics signaling-uni-neg-tlv cancel-sync-tx number
Tree	cancel-sync-tx
Default	0
Configurable	False
Platforms	7220 IXR-D5, 7250 IXR-X3b

grant-anno-rx number

Description	Specifies the number of grants for announce messages have been received
Context	system sync ptp instance instance-index number port-ds-cfg-ip-list port-index number statistics signaling-uni-neg-tlv grant-anno-rx number
Tree	grant-anno-rx
Default	0
Configurable	False
Platforms	7220 IXR-D5, 7250 IXR-X3b

grant-anno-tx number

Description	Specifies the number of grants for announce messages have been transmitted
Context	system sync ptp instance instance-index number port-ds-cfg-ip-list port-index number statistics signaling-uni-neg-tlv grant-anno-tx number
Tree	grant-anno-tx
Default	0
Configurable	False
Platforms	7220 IXR-D5, 7250 IXR-X3b

grant-delay-resp-rx *number*

Description	Specifies the number of grants for delay-resp messages have been received
Context	system sync ptp instance instance-index number port-ds-cfg-ip-list port-index number statistics signaling-uni-neg-tlv grant-delay-resp-rx number
Tree	grant-delay-resp-rx
Default	0
Configurable	False
Platforms	7220 IXR-D5, 7250 IXR-X3b

grant-delay-resp-tx *number*

Description	Specifies the number of grants for delay-resp messages have been transmitted
Context	system sync ptp instance instance-index number port-ds-cfg-ip-list port-index number statistics signaling-uni-neg-tlv grant-delay-resp-tx number
Tree	grant-delay-resp-tx
Default	0
Configurable	False
Platforms	7220 IXR-D5, 7250 IXR-X3b

grant-sync-rx *number*

Description	Specifies the number of grants for sync messages have been received
Context	system sync ptp instance instance-index number port-ds-cfg-ip-list port-index number statistics signaling-uni-neg-tlv grant-sync-rx number
Tree	grant-sync-rx
Default	0
Configurable	False
Platforms	7220 IXR-D5, 7250 IXR-X3b

grant-sync-tx *number*

Description	Specifies the number of grants for sync messages have been transmitted
Context	system sync ptp instance instance-index number port-ds-cfg-ip-list port-index number statistics signaling-uni-neg-tlv grant-sync-tx number
Tree	grant-sync-tx

Default	0
Configurable	False
Platforms	7220 IXR-D5, 7250 IXR-X3b

other-tlv number

Description	The count of unsupported signaling message TLVs received.
Context	system sync ptp instance instance-index number port-ds-cfg-ip-list port-index number statistics signaling-uni-neg-tlv other-tlv number
Tree	other-tlv
Default	0
Configurable	False
Platforms	7220 IXR-D5, 7250 IXR-X3b

reject-anno-rx number

Description	Specifies the number of rejections for announce messages have been received
Context	system sync ptp instance instance-index number port-ds-cfg-ip-list port-index number statistics signaling-uni-neg-tlv reject-anno-rx number
Tree	reject-anno-rx
Default	0
Configurable	False
Platforms	7220 IXR-D5, 7250 IXR-X3b

reject-anno-tx number

Description	Specifies the number of rejections for announce messages have been transmitted
Context	system sync ptp instance instance-index number port-ds-cfg-ip-list port-index number statistics signaling-uni-neg-tlv reject-anno-tx number
Tree	reject-anno-tx
Default	0
Configurable	False
Platforms	7220 IXR-D5, 7250 IXR-X3b

reject-delay-resp-rx *number*

Description	Specifies the number of rejections for delay-resp messages have been received
Context	system sync ptp instance instance-index number port-ds-cfg-ip-list port-index number statistics signaling-uni-neg-tlv reject-delay-resp-rx number
Tree	reject-delay-resp-rx
Default	0
Configurable	False
Platforms	7220 IXR-D5, 7250 IXR-X3b

reject-delay-resp-tx *number*

Description	Specifies the number of rejections for delay-resp messages have been transmitted
Context	system sync ptp instance instance-index number port-ds-cfg-ip-list port-index number statistics signaling-uni-neg-tlv reject-delay-resp-tx number
Tree	reject-delay-resp-tx
Default	0
Configurable	False
Platforms	7220 IXR-D5, 7250 IXR-X3b

reject-sync-rx *number*

Description	Specifies the number of rejections for sync messages have been received
Context	system sync ptp instance instance-index number port-ds-cfg-ip-list port-index number statistics signaling-uni-neg-tlv reject-sync-rx number
Tree	reject-sync-rx
Default	0
Configurable	False
Platforms	7220 IXR-D5, 7250 IXR-X3b

reject-sync-tx *number*

Description	Specifies the number of rejections for sync messages have been transmitted
Context	system sync ptp instance instance-index number port-ds-cfg-ip-list port-index number statistics signaling-uni-neg-tlv reject-sync-tx number

Tree	reject-sync-tx
Default	0
Configurable	False
Platforms	7220 IXR-D5, 7250 IXR-X3b

request-anno-rx *number*

Description	Specifies the number of requests for announce messages have been received
Context	system sync ptp instance instance-index <i>number</i> port-ds-cfg-ip-list port-index <i>number</i> statistics signaling-uni-neg-tlv request-anno-rx <i>number</i>
Tree	request-anno-rx
Default	0
Configurable	False
Platforms	7220 IXR-D5, 7250 IXR-X3b

request-anno-tx *number*

Description	Specifies the number of requests for announce messages have been transmitted
Context	system sync ptp instance instance-index <i>number</i> port-ds-cfg-ip-list port-index <i>number</i> statistics signaling-uni-neg-tlv request-anno-tx <i>number</i>
Tree	request-anno-tx
Default	0
Configurable	False
Platforms	7220 IXR-D5, 7250 IXR-X3b

request-delay-resp-rx *number*

Description	Specifies the number of requests for delay-resp messages have been received
Context	system sync ptp instance instance-index <i>number</i> port-ds-cfg-ip-list port-index <i>number</i> statistics signaling-uni-neg-tlv request-delay-resp-rx <i>number</i>
Tree	request-delay-resp-rx
Default	0
Configurable	False
Platforms	7220 IXR-D5, 7250 IXR-X3b

request-delay-resp-tx *number*

Description	Specifies the number of requests for delay-resp messages have been transmitted
Context	system sync ptp instance instance-index number port-ds-cfg-ip-list port-index number statistics signaling-uni-neg-tlv request-delay-resp-tx number
Tree	request-delay-resp-tx
Default	0
Configurable	False
Platforms	7220 IXR-D5, 7250 IXR-X3b

request-sync-rx *number*

Description	Specifies the number of requests for sync messages have been received
Context	system sync ptp instance instance-index number port-ds-cfg-ip-list port-index number statistics signaling-uni-neg-tlv request-sync-rx number
Tree	request-sync-rx
Default	0
Configurable	False
Platforms	7220 IXR-D5, 7250 IXR-X3b

request-sync-tx *number*

Description	Specifies the number of requests for sync messages have been transmitted
Context	system sync ptp instance instance-index number port-ds-cfg-ip-list port-index number statistics signaling-uni-neg-tlv request-sync-tx number
Tree	request-sync-tx
Default	0
Configurable	False
Platforms	7220 IXR-D5, 7250 IXR-X3b

sync-msg-rx *number*

Description	Specifies the number of sync messages received
Context	system sync ptp instance instance-index number port-ds-cfg-ip-list port-index number statistics sync-msg-rx number
Tree	sync-msg-rx

Configurable	False
Platforms	7220 IXR-D5, 7250 IXR-X3b

sync-msg-tx *number*

Description	Specifies the number of sync messages transmitted
Context	system sync ptp instance instance-index number port-ds-cfg-ip-list port-index number statistics sync-msg-tx number
Tree	sync-msg-tx
Configurable	False
Platforms	7220 IXR-D5, 7250 IXR-X3b

steps-removed *number*

Description	The stepsRemoved in the last Announce message received from this peer
Context	system sync ptp instance instance-index number port-ds-cfg-ip-list port-index number steps-removed number
Tree	steps-removed
Configurable	False
Platforms	7220 IXR-D5, 7250 IXR-X3b

unicast-negotiation

Description	Details of each negotiation session
Context	system sync ptp instance instance-index number port-ds-cfg-ip-list port-index number unicast-negotiation
Tree	unicast-negotiation
Configurable	False
Platforms	7220 IXR-D5, 7250 IXR-X3b

rx-announce

Description	Statistics for receive announce sessions
Context	system sync ptp instance instance-index number port-ds-cfg-ip-list port-index number unicast-negotiation rx-announce
Tree	rx-announce
Configurable	False

Platforms 7220 IXR-D5, 7250 IXR-X3b

duration *number*

Description The duration, in seconds, requested/granted for unicast transmission between the PTP peers

Context [system sync ptp instance instance-index number port-ds-cfg-ip-list port-index number unicast-negotiation rx-announce duration number](#)

Tree [duration](#)

Units seconds

Configurable False

Platforms 7220 IXR-D5, 7250 IXR-X3b

log-interval *number*

Description The packet rate requested or granted for unicast transmission between the PTP peers

Context [system sync ptp instance instance-index number port-ds-cfg-ip-list port-index number unicast-negotiation rx-announce log-interval number](#)

Tree [log-interval](#)

Configurable False

Platforms 7220 IXR-D5, 7250 IXR-X3b

state *keyword*

Description Indicates the state of the negotiation

Context [system sync ptp instance instance-index number port-ds-cfg-ip-list port-index number unicast-negotiation rx-announce state keyword](#)

Tree [state](#)

Options

- pending
- granted
- denied
- expired
- canceled

Configurable False

Platforms 7220 IXR-D5, 7250 IXR-X3b

time-of-last-grant *string*

Description	The time when status last changed or the unicast session between the PTP clocks was renewed
Context	system sync ptp instance instance-index number port-ds-cfg-ip-list port-index number unicast-negotiation rx-announce time-of-last-grant string
Tree	time-of-last-grant
String Length	20 to 32
Configurable	False
Platforms	7220 IXR-D5, 7250 IXR-X3b

rx-delay-resp

Description	Statistics for receive delay-resp sessions
Context	system sync ptp instance instance-index number port-ds-cfg-ip-list port-index number unicast-negotiation rx-delay-resp
Tree	rx-delay-resp
Configurable	False
Platforms	7220 IXR-D5, 7250 IXR-X3b

duration *number*

Description	The duration, in seconds, requested/granted for unicast transmission between the PTP peers
Context	system sync ptp instance instance-index number port-ds-cfg-ip-list port-index number unicast-negotiation rx-delay-resp duration number
Tree	duration
Units	seconds
Configurable	False
Platforms	7220 IXR-D5, 7250 IXR-X3b

log-interval *number*

Description	The packet rate requested or granted for unicast transmission between the PTP peers
Context	system sync ptp instance instance-index number port-ds-cfg-ip-list port-index number unicast-negotiation rx-delay-resp log-interval number
Tree	log-interval

Configurable	False
Platforms	7220 IXR-D5, 7250 IXR-X3b

state *keyword*

Description	Indicates the state of the negotiation
Context	system sync ptp instance instance-index number port-ds-cfg-ip-list port-index number unicast-negotiation rx-delay-resp state <i>keyword</i>
Tree	state
Options	<ul style="list-style-type: none"> • pending • granted • denied • expired • canceled
Configurable	False
Platforms	7220 IXR-D5, 7250 IXR-X3b

time-of-last-grant *string*

Description	The time when status last changed or the unicast session between the PTP clocks was renewed
Context	system sync ptp instance instance-index number port-ds-cfg-ip-list port-index number unicast-negotiation rx-delay-resp time-of-last-grant <i>string</i>
Tree	time-of-last-grant
String Length	20 to 32
Configurable	False
Platforms	7220 IXR-D5, 7250 IXR-X3b

rx-sync

Description	Statistics for receive sync sessions
Context	system sync ptp instance instance-index number port-ds-cfg-ip-list port-index number unicast-negotiation rx-sync
Tree	rx-sync
Configurable	False
Platforms	7220 IXR-D5, 7250 IXR-X3b

duration *number*

Description	The duration, in seconds, requested/granted for unicast transmission between the PTP peers
Context	system sync ptp instance instance-index number port-ds-cfg-ip-list port-index number unicast-negotiation rx-sync duration number
Tree	duration
Units	seconds
Configurable	False
Platforms	7220 IXR-D5, 7250 IXR-X3b

log-interval *number*

Description	The packet rate requested or granted for unicast transmission between the PTP peers
Context	system sync ptp instance instance-index number port-ds-cfg-ip-list port-index number unicast-negotiation rx-sync log-interval number
Tree	log-interval
Configurable	False
Platforms	7220 IXR-D5, 7250 IXR-X3b

state *keyword*

Description	Indicates the state of the negotiation
Context	system sync ptp instance instance-index number port-ds-cfg-ip-list port-index number unicast-negotiation rx-sync state keyword
Tree	state
Options	<ul style="list-style-type: none"> • pending • granted • denied • expired • canceled
Configurable	False
Platforms	7220 IXR-D5, 7250 IXR-X3b

time-of-last-grant *string*

Description	The time when status last changed or the unicast session between the PTP clocks was renewed
Context	system sync ptp instance instance-index number port-ds-cfg-ip-list port-index number unicast-negotiation rx-sync time-of-last-grant string
Tree	time-of-last-grant
String Length	20 to 32
Configurable	False
Platforms	7220 IXR-D5, 7250 IXR-X3b

tx-announce

Description	Statistics for transmit announce sessions
Context	system sync ptp instance instance-index number port-ds-cfg-ip-list port-index number unicast-negotiation tx-announce
Tree	tx-announce
Configurable	False
Platforms	7220 IXR-D5, 7250 IXR-X3b

duration *number*

Description	The duration, in seconds, requested/granted for unicast transmission between the PTP peers
Context	system sync ptp instance instance-index number port-ds-cfg-ip-list port-index number unicast-negotiation tx-announce duration number
Tree	duration
Units	seconds
Configurable	False
Platforms	7220 IXR-D5, 7250 IXR-X3b

log-interval *number*

Description	The packet rate requested or granted for unicast transmission between the PTP peers
Context	system sync ptp instance instance-index number port-ds-cfg-ip-list port-index number unicast-negotiation tx-announce log-interval number
Tree	log-interval

Configurable	False
Platforms	7220 IXR-D5, 7250 IXR-X3b

state keyword

Description	Indicates the state of the negotiation
Context	system sync ptp instance instance-index number port-ds-cfg-ip-list port-index number unicast-negotiation tx-announce state keyword
Tree	state
Options	<ul style="list-style-type: none"> • pending • granted • denied • expired • canceled
Configurable	False
Platforms	7220 IXR-D5, 7250 IXR-X3b

time-of-last-grant string

Description	The time when status last changed or the unicast session between the PTP clocks was renewed
Context	system sync ptp instance instance-index number port-ds-cfg-ip-list port-index number unicast-negotiation tx-announce time-of-last-grant string
Tree	time-of-last-grant
String Length	20 to 32
Configurable	False
Platforms	7220 IXR-D5, 7250 IXR-X3b

tx-delay-resp

Description	Statistics for transmit delay-resp sessions
Context	system sync ptp instance instance-index number port-ds-cfg-ip-list port-index number unicast-negotiation tx-delay-resp
Tree	tx-delay-resp
Configurable	False
Platforms	7220 IXR-D5, 7250 IXR-X3b

duration *number*

Description	The duration, in seconds, requested/granted for unicast transmission between the PTP peers
Context	system sync ptp instance instance-index number port-ds-cfg-ip-list port-index number unicast-negotiation tx-delay-resp duration number
Tree	duration
Units	seconds
Configurable	False
Platforms	7220 IXR-D5, 7250 IXR-X3b

log-interval *number*

Description	The packet rate requested or granted for unicast transmission between the PTP peers
Context	system sync ptp instance instance-index number port-ds-cfg-ip-list port-index number unicast-negotiation tx-delay-resp log-interval number
Tree	log-interval
Configurable	False
Platforms	7220 IXR-D5, 7250 IXR-X3b

state *keyword*

Description	Indicates the state of the negotiation
Context	system sync ptp instance instance-index number port-ds-cfg-ip-list port-index number unicast-negotiation tx-delay-resp state keyword
Tree	state
Options	<ul style="list-style-type: none"> • pending • granted • denied • expired • canceled
Configurable	False
Platforms	7220 IXR-D5, 7250 IXR-X3b

time-of-last-grant *string*

Description	The time when status last changed or the unicast session between the PTP clocks was renewed
Context	system sync ptp instance instance-index number port-ds-cfg-ip-list port-index number unicast-negotiation tx-delay-resp time-of-last-grant string
Tree	time-of-last-grant
String Length	20 to 32
Configurable	False
Platforms	7220 IXR-D5, 7250 IXR-X3b

tx-sync

Description	Statistics for transmit sync sessions
Context	system sync ptp instance instance-index number port-ds-cfg-ip-list port-index number unicast-negotiation tx-sync
Tree	tx-sync
Configurable	False
Platforms	7220 IXR-D5, 7250 IXR-X3b

duration *number*

Description	The duration, in seconds, requested/granted for unicast transmission between the PTP peers
Context	system sync ptp instance instance-index number port-ds-cfg-ip-list port-index number unicast-negotiation tx-sync duration number
Tree	duration
Units	seconds
Configurable	False
Platforms	7220 IXR-D5, 7250 IXR-X3b

log-interval *number*

Description	The packet rate requested or granted for unicast transmission between the PTP peers
Context	system sync ptp instance instance-index number port-ds-cfg-ip-list port-index number unicast-negotiation tx-sync log-interval number
Tree	log-interval

Configurable	False
Platforms	7220 IXR-D5, 7250 IXR-X3b

state keyword

Description	Indicates the state of the negotiation
Context	system sync ptp instance instance-index number port-ds-cfg-ip-list port-index number unicast-negotiation tx-sync state keyword
Tree	state
Options	<ul style="list-style-type: none"> • pending • granted • denied • expired • canceled
Configurable	False
Platforms	7220 IXR-D5, 7250 IXR-X3b

time-of-last-grant string

Description	The time when status last changed or the unicast session between the PTP clocks was renewed
Context	system sync ptp instance instance-index number port-ds-cfg-ip-list port-index number unicast-negotiation tx-sync time-of-last-grant string
Tree	time-of-last-grant
String Length	20 to 32
Configurable	False
Platforms	7220 IXR-D5, 7250 IXR-X3b

port-ds-dsc-ip-list port-index number

Description	List of port data sets for discovered IP peers
Context	system sync ptp instance instance-index number port-ds-dsc-ip-list port-index number
Tree	port-ds-dsc-ip-list
Configurable	False
Platforms	7220 IXR-D5, 7250 IXR-X3b

port-index number

Description	<p>Index into the port-ds list</p> <p>This is not the PTP port number. Discovered IP peer ports are created based on Unicast negotiation.</p> <p>If an IP peer is a discovered IP peer and later that IP address is entered as a configured peer, then port DS information will move from this list to the port-ds-cfg-ip-list to cover both aspects of communication with this peer.</p> <p>The data sets (i.e., information model) of IEEE Std 1588-2008 specify a member portDS.portIdentity, which uses a typed struct with members clockIdentity and portNumber.</p> <p>In this YANG data model, portIdentity is not modeled in the port-ds. However, its members are provided as follows: portIdentity.portNumber is provided as this ptp-port-number leaf in port-ds, and portIdentity.clockIdentity is provided as the clock-identity leaf in default-ds of the instance (i.e., ../default-ds/clock-identity).</p>
Context	system sync ptp instance instance-index number port-ds-dsc-ip-list port-index number
Configurable	False
Platforms	7220 IXR-D5, 7250 IXR-X3b

last-rx-interface reference

Description	Interface used for the last PTP message received from this peer
Context	system sync ptp instance instance-index number port-ds-dsc-ip-list port-index number last-rx-interface reference
Tree	last-rx-interface
Reference	interface name string
Configurable	False
Platforms	7220 IXR-D5, 7250 IXR-X3b

last-tx-interface reference

Description	Interface used for the last PTP message transmitted to this peer
Context	system sync ptp instance instance-index number port-ds-dsc-ip-list port-index number last-tx-interface reference
Tree	last-tx-interface
Reference	interface name string
Configurable	False

Platforms 7220 IXR-D5, 7250 IXR-X3b

log-announce-interval *number*

Description The base-2 logarithm of the mean announceInterval
Mean time interval between successive Announce messages. This reports the value that was established during the unicast negotiation.

Context [system sync ptp instance instance-index number port-ds-dsc-ip-list port-index number log-announce-interval number](#)

Tree [log-announce-interval](#)

Range -3 to 4

Configurable False

Platforms 7220 IXR-D5, 7250 IXR-X3b

log-min-delay-req-interval *number*

Description The base-2 logarithm of the minDelayReqInterval
This reports the value that was established during the unicast negotiation.

Context [system sync ptp instance instance-index number port-ds-dsc-ip-list port-index number log-min-delay-req-interval number](#)

Tree [log-min-delay-req-interval](#)

Range -6 to 0

Configurable False

Platforms 7220 IXR-D5, 7250 IXR-X3b

log-sync-interval *number*

Description The base-2 logarithm of the mean SyncInterval for multicast messages
This reports the value that was established during the unicast negotiation.

Context [system sync ptp instance instance-index number port-ds-dsc-ip-list port-index number log-sync-interval number](#)

Tree [log-sync-interval](#)

Range -6 to 0

Configurable False

Platforms 7220 IXR-D5, 7250 IXR-X3b

major-version-number *number*

Description	The PTP major version number in use on the port
Context	system sync ptp instance instance-index number port-ds-dsc-ip-list port-index number major-version-number number
Tree	major-version-number
Configurable	False
Platforms	7220 IXR-D5, 7250 IXR-X3b

minor-version-number *number*

Description	The PTP minor version number in use on the port
Context	system sync ptp instance instance-index number port-ds-dsc-ip-list port-index number minor-version-number number
Tree	minor-version-number
Configurable	False
Platforms	7220 IXR-D5, 7250 IXR-X3b

peer

Description	Enter the peer context
Context	system sync ptp instance instance-index number port-ds-dsc-ip-list port-index number peer
Tree	peer
Configurable	False
Platforms	7220 IXR-D5, 7250 IXR-X3b

ip-address (*ipv4-address* | *ipv6-address*)

Description	IP address for the PTP peer Only Unicast addresses are supported
Context	system sync ptp instance instance-index number port-ds-dsc-ip-list port-index number peer ip-address (ipv4-address ipv6-address)
Tree	ip-address
Configurable	False
Platforms	7220 IXR-D5, 7250 IXR-X3b

network-instance *reference*

Description	Network instance that owns the PTP peer
Context	system sync ptp instance instance-index number port-ds-dsc-ip-list port-index number peer network-instance reference
Tree	network-instance
Reference	network-instance name string
Configurable	False
Platforms	7220 IXR-D5, 7250 IXR-X3b

port-state *keyword*

Description	Current state associated with the port
Context	system sync ptp instance instance-index number port-ds-dsc-ip-list port-index number port-state keyword
Tree	port-state
Options	<ul style="list-style-type: none"> • initializing The port is initializing its data sets, hardware, and communication facilities • faulty The port is in the fault state • disabled The port is disabled and is not communicating PTP messages • listening The port is listening for an Announce message • pre-master The port is in the pre-master state • master The port is behaving as a master port • passive The port is in the passive state • uncalibrated A master port has been selected, but the port is still in the uncalibrated state • slave The port is synchronizing to the selected master port
Configurable	False

Platforms 7220 IXR-D5, 7250 IXR-X3b

ptp-port-number *number*

Description IEEE Std 1588 portNumber
This is the port-number that will appear in messages sent for this port-index.

Context [system sync ptp instance instance-index number port-ds-dsc-ip-list port-index number ptp-port-number number](#)

Tree [ptp-port-number](#)

Configurable False

Platforms 7220 IXR-D5, 7250 IXR-X3b

statistics

Description Total messages for a specific PTP port
This container is not used with PTP special ports (gnss).

Context [system sync ptp instance instance-index number port-ds-dsc-ip-list port-index number statistics](#)

Tree [statistics](#)

Configurable False

Platforms 7220 IXR-D5, 7250 IXR-X3b

anno-msg-rx *number*

Description Specifies the number of announce messages received

Context [system sync ptp instance instance-index number port-ds-dsc-ip-list port-index number statistics anno-msg-rx number](#)

Tree [anno-msg-rx](#)

Configurable False

Platforms 7220 IXR-D5, 7250 IXR-X3b

anno-msg-tx *number*

Description Specifies the number of announce messages transmitted

Context [system sync ptp instance instance-index number port-ds-dsc-ip-list port-index number statistics anno-msg-tx number](#)

Tree [anno-msg-tx](#)

Configurable	False
Platforms	7220 IXR-D5, 7250 IXR-X3b

del-req-msg-rx *number*

Description	Specifies the number of delay-req messages received
Context	system sync ptp instance instance-index <i>number</i> port-ds-dsc-ip-list port-index <i>number</i> statistics del-req-msg-rx <i>number</i>
Tree	del-req-msg-rx
Configurable	False
Platforms	7220 IXR-D5, 7250 IXR-X3b

del-req-msg-tx *number*

Description	Specifies the number of delay-req messages transmitted
Context	system sync ptp instance instance-index <i>number</i> port-ds-dsc-ip-list port-index <i>number</i> statistics del-req-msg-tx <i>number</i>
Tree	del-req-msg-tx
Configurable	False
Platforms	7220 IXR-D5, 7250 IXR-X3b

del-resp-msg-rx *number*

Description	Specifies the number of delay-resp messages received
Context	system sync ptp instance instance-index <i>number</i> port-ds-dsc-ip-list port-index <i>number</i> statistics del-resp-msg-rx <i>number</i>
Tree	del-resp-msg-rx
Configurable	False
Platforms	7220 IXR-D5, 7250 IXR-X3b

del-resp-msg-tx *number*

Description	Specifies the number of delay-resp messages transmitted
Context	system sync ptp instance instance-index <i>number</i> port-ds-dsc-ip-list port-index <i>number</i> statistics del-resp-msg-tx <i>number</i>
Tree	del-resp-msg-tx
Configurable	False

Platforms 7220 IXR-D5, 7250 IXR-X3b

discards

Description Aggregate discard statistics for the PTP clock

Context [system sync ptp instance instance-index number port-ds-dsc-ip-list port-index number statistics discards](#)

Tree [discards](#)

Configurable False

Platforms 7220 IXR-D5, 7250 IXR-X3b

alternate-master *number*

Description Specifies the number of alternate master messages that were discarded

Context [system sync ptp instance instance-index number port-ds-dsc-ip-list port-index number statistics discards alternate-master number](#)

Tree [alternate-master](#)

Configurable False

Platforms 7220 IXR-D5, 7250 IXR-X3b

bad-domain *number*

Description Specifies the number of bad domain messages that were discarded

Context [system sync ptp instance instance-index number port-ds-dsc-ip-list port-index number statistics discards bad-domain number](#)

Tree [bad-domain](#)

Configurable False

Platforms 7220 IXR-D5, 7250 IXR-X3b

other *number*

Description Specifies the number of other messages that were discarded

Context [system sync ptp instance instance-index number port-ds-dsc-ip-list port-index number statistics discards other number](#)

Tree [other](#)

Configurable False

Platforms 7220 IXR-D5, 7250 IXR-X3b

out-of-sequence *number*

Description	Specifies the number of out of sequence messages that were discarded
Context	system sync ptp instance instance-index <i>number</i> port-ds-dsc-ip-list port-index <i>number</i> statistics discards out-of-sequence <i>number</i>
Tree	out-of-sequence
Configurable	False
Platforms	7220 IXR-D5, 7250 IXR-X3b

peer-disabled *number*

Description	Specifies the number of PTP messages that were discarded from disabled PTP peer Occurs when a PTP peer has been administratively disabled. This information is only available for configured and discovered peers.
Context	system sync ptp instance instance-index <i>number</i> port-ds-dsc-ip-list port-index <i>number</i> statistics discards peer-disabled <i>number</i>
Tree	peer-disabled
Configurable	False
Platforms	7220 IXR-D5, 7250 IXR-X3b

follow-up-msg-rx *number*

Description	Specifies the number of follow-up messages received
Context	system sync ptp instance instance-index <i>number</i> port-ds-dsc-ip-list port-index <i>number</i> statistics follow-up-msg-rx <i>number</i>
Tree	follow-up-msg-rx
Configurable	False
Platforms	7220 IXR-D5, 7250 IXR-X3b

follow-up-msg-tx *number*

Description	Specifies the number of follow-up messages transmitted
Context	system sync ptp instance instance-index <i>number</i> port-ds-dsc-ip-list port-index <i>number</i> statistics follow-up-msg-tx <i>number</i>
Tree	follow-up-msg-tx
Configurable	False

Platforms 7220 IXR-D5, 7250 IXR-X3b

other-rx number

Description Specifies the number of other messages received

Context [system sync ptp instance instance-index number port-ds-dsc-ip-list port-index number statistics other-rx number](#)

Tree [other-rx](#)

Configurable False

Platforms 7220 IXR-D5, 7250 IXR-X3b

signaling-msg-rx number

Description Specifies the number of follow-up messages received

Context [system sync ptp instance instance-index number port-ds-dsc-ip-list port-index number statistics signaling-msg-rx number](#)

Tree [signaling-msg-rx](#)

Configurable False

Platforms 7220 IXR-D5, 7250 IXR-X3b

signaling-msg-tx number

Description Specifies the number of follow-up messages transmitted

Context [system sync ptp instance instance-index number port-ds-dsc-ip-list port-index number statistics signaling-msg-tx number](#)

Tree [signaling-msg-tx](#)

Configurable False

Platforms 7220 IXR-D5, 7250 IXR-X3b

signaling-uni-neg-tlv

Description Counts of different unicast negotiation TLVs

Context [system sync ptp instance instance-index number port-ds-dsc-ip-list port-index number statistics signaling-uni-neg-tlv](#)

Tree [signaling-uni-neg-tlv](#)

Configurable False

Platforms 7220 IXR-D5, 7250 IXR-X3b

ack-cancel-anno-rx *number*

Description	Specifies the number of acknowledgements of cancels for announce messages have been received
Context	system sync ptp instance instance-index number port-ds-dsc-ip-list port-index number statistics signaling-uni-neg-tlv ack-cancel-anno-rx number
Tree	ack-cancel-anno-rx
Default	0
Configurable	False
Platforms	7220 IXR-D5, 7250 IXR-X3b

ack-cancel-anno-tx *number*

Description	Specifies the number of acknowledgements of cancels for announce messages have been transmitted
Context	system sync ptp instance instance-index number port-ds-dsc-ip-list port-index number statistics signaling-uni-neg-tlv ack-cancel-anno-tx number
Tree	ack-cancel-anno-tx
Default	0
Configurable	False
Platforms	7220 IXR-D5, 7250 IXR-X3b

ack-cancel-delay-resp-rx *number*

Description	Specifies the number of acknowledgements of cancels for delay-resp messages have been received
Context	system sync ptp instance instance-index number port-ds-dsc-ip-list port-index number statistics signaling-uni-neg-tlv ack-cancel-delay-resp-rx number
Tree	ack-cancel-delay-resp-rx
Default	0
Configurable	False
Platforms	7220 IXR-D5, 7250 IXR-X3b

ack-cancel-delay-resp-tx *number*

Description	Specifies the number of acknowledgements of cancels for delay-resp messages have been transmitted
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Context	system sync ptp instance instance-index number port-ds-dsc-ip-list port-index number statistics signaling-uni-neg-tlv ack-cancel-delay-resp-tx number
Tree	ack-cancel-delay-resp-tx
Default	0
Configurable	False
Platforms	7220 IXR-D5, 7250 IXR-X3b

ack-cancel-sync-rx number

Description	Specifies the number of acknowledgements of cancels for sync messages have been received
Context	system sync ptp instance instance-index number port-ds-dsc-ip-list port-index number statistics signaling-uni-neg-tlv ack-cancel-sync-rx number
Tree	ack-cancel-sync-rx
Default	0
Configurable	False
Platforms	7220 IXR-D5, 7250 IXR-X3b

ack-cancel-sync-tx number

Description	Specifies the number of acknowledgements of cancels for sync messages have been transmitted
Context	system sync ptp instance instance-index number port-ds-dsc-ip-list port-index number statistics signaling-uni-neg-tlv ack-cancel-sync-tx number
Tree	ack-cancel-sync-tx
Default	0
Configurable	False
Platforms	7220 IXR-D5, 7250 IXR-X3b

cancel-anno-rx number

Description	Specifies the number of cancels for announce messages have been received
Context	system sync ptp instance instance-index number port-ds-dsc-ip-list port-index number statistics signaling-uni-neg-tlv cancel-anno-rx number
Tree	cancel-anno-rx
Default	0

Configurable	False
Platforms	7220 IXR-D5, 7250 IXR-X3b

cancel-anno-tx *number*

Description	Specifies the number of cancels for announce messages have been transmitted
Context	system sync ptp instance instance-index number port-ds-dsc-ip-list port-index number statistics signaling-uni-neg-tlv cancel-anno-tx number
Tree	cancel-anno-tx
Default	0
Configurable	False
Platforms	7220 IXR-D5, 7250 IXR-X3b

cancel-delay-resp-rx *number*

Description	Specifies the number of cancels for delay-resp messages have been received
Context	system sync ptp instance instance-index number port-ds-dsc-ip-list port-index number statistics signaling-uni-neg-tlv cancel-delay-resp-rx number
Tree	cancel-delay-resp-rx
Default	0
Configurable	False
Platforms	7220 IXR-D5, 7250 IXR-X3b

cancel-delay-resp-tx *number*

Description	Specifies the number of cancels for delay-resp messages have been transmitted
Context	system sync ptp instance instance-index number port-ds-dsc-ip-list port-index number statistics signaling-uni-neg-tlv cancel-delay-resp-tx number
Tree	cancel-delay-resp-tx
Default	0
Configurable	False
Platforms	7220 IXR-D5, 7250 IXR-X3b

cancel-sync-rx *number*

Description	Specifies the number of cancels for sync messages have been received
Context	system sync ptp instance instance-index number port-ds-dsc-ip-list port-index number statistics signaling-uni-neg-tlv cancel-sync-rx number
Tree	cancel-sync-rx
Default	0
Configurable	False
Platforms	7220 IXR-D5, 7250 IXR-X3b

cancel-sync-tx *number*

Description	Specifies the number of cancels for sync messages have been transmitted
Context	system sync ptp instance instance-index number port-ds-dsc-ip-list port-index number statistics signaling-uni-neg-tlv cancel-sync-tx number
Tree	cancel-sync-tx
Default	0
Configurable	False
Platforms	7220 IXR-D5, 7250 IXR-X3b

grant-anno-rx *number*

Description	Specifies the number of grants for announce messages have been received
Context	system sync ptp instance instance-index number port-ds-dsc-ip-list port-index number statistics signaling-uni-neg-tlv grant-anno-rx number
Tree	grant-anno-rx
Default	0
Configurable	False
Platforms	7220 IXR-D5, 7250 IXR-X3b

grant-anno-tx *number*

Description	Specifies the number of grants for announce messages have been transmitted
Context	system sync ptp instance instance-index number port-ds-dsc-ip-list port-index number statistics signaling-uni-neg-tlv grant-anno-tx number
Tree	grant-anno-tx

Default	0
Configurable	False
Platforms	7220 IXR-D5, 7250 IXR-X3b

grant-delay-resp-rx *number*

Description	Specifies the number of grants for delay-resp messages have been received
Context	system sync ptp instance instance-index number port-ds-dsc-ip-list port-index number statistics signaling-uni-neg-tlv grant-delay-resp-rx number
Tree	grant-delay-resp-rx
Default	0
Configurable	False
Platforms	7220 IXR-D5, 7250 IXR-X3b

grant-delay-resp-tx *number*

Description	Specifies the number of grants for delay-resp messages have been transmitted
Context	system sync ptp instance instance-index number port-ds-dsc-ip-list port-index number statistics signaling-uni-neg-tlv grant-delay-resp-tx number
Tree	grant-delay-resp-tx
Default	0
Configurable	False
Platforms	7220 IXR-D5, 7250 IXR-X3b

grant-sync-rx *number*

Description	Specifies the number of grants for sync messages have been received
Context	system sync ptp instance instance-index number port-ds-dsc-ip-list port-index number statistics signaling-uni-neg-tlv grant-sync-rx number
Tree	grant-sync-rx
Default	0
Configurable	False
Platforms	7220 IXR-D5, 7250 IXR-X3b

grant-sync-tx *number*

Description	Specifies the number of grants for sync messages have been transmitted
Context	system sync ptp instance instance-index number port-ds-dsc-ip-list port-index number statistics signaling-uni-neg-tlv grant-sync-tx number
Tree	grant-sync-tx
Default	0
Configurable	False
Platforms	7220 IXR-D5, 7250 IXR-X3b

other-tlv *number*

Description	The count of unsupported signaling message TLVs received.
Context	system sync ptp instance instance-index number port-ds-dsc-ip-list port-index number statistics signaling-uni-neg-tlv other-tlv number
Tree	other-tlv
Default	0
Configurable	False
Platforms	7220 IXR-D5, 7250 IXR-X3b

reject-anno-rx *number*

Description	Specifies the number of rejections for announce messages have been received
Context	system sync ptp instance instance-index number port-ds-dsc-ip-list port-index number statistics signaling-uni-neg-tlv reject-anno-rx number
Tree	reject-anno-rx
Default	0
Configurable	False
Platforms	7220 IXR-D5, 7250 IXR-X3b

reject-anno-tx *number*

Description	Specifies the number of rejections for announce messages have been transmitted
Context	system sync ptp instance instance-index number port-ds-dsc-ip-list port-index number statistics signaling-uni-neg-tlv reject-anno-tx number

Tree	reject-anno-tx
Default	0
Configurable	False
Platforms	7220 IXR-D5, 7250 IXR-X3b

reject-delay-resp-rx *number*

Description	Specifies the number of rejections for delay-resp messages have been received
Context	system sync ptp instance instance-index <i>number</i> port-ds-dsc-ip-list port-index <i>number</i> statistics signaling-uni-neg-tlv reject-delay-resp-rx <i>number</i>
Tree	reject-delay-resp-rx
Default	0
Configurable	False
Platforms	7220 IXR-D5, 7250 IXR-X3b

reject-delay-resp-tx *number*

Description	Specifies the number of rejections for delay-resp messages have been transmitted
Context	system sync ptp instance instance-index <i>number</i> port-ds-dsc-ip-list port-index <i>number</i> statistics signaling-uni-neg-tlv reject-delay-resp-tx <i>number</i>
Tree	reject-delay-resp-tx
Default	0
Configurable	False
Platforms	7220 IXR-D5, 7250 IXR-X3b

reject-sync-rx *number*

Description	Specifies the number of rejections for sync messages have been received
Context	system sync ptp instance instance-index <i>number</i> port-ds-dsc-ip-list port-index <i>number</i> statistics signaling-uni-neg-tlv reject-sync-rx <i>number</i>
Tree	reject-sync-rx
Default	0
Configurable	False
Platforms	7220 IXR-D5, 7250 IXR-X3b

reject-sync-tx *number*

Description	Specifies the number of rejections for sync messages have been transmitted
Context	system sync ptp instance instance-index number port-ds-dsc-ip-list port-index number statistics signaling-uni-neg-tlv reject-sync-tx number
Tree	reject-sync-tx
Default	0
Configurable	False
Platforms	7220 IXR-D5, 7250 IXR-X3b

request-anno-rx *number*

Description	Specifies the number of requests for announce messages have been received
Context	system sync ptp instance instance-index number port-ds-dsc-ip-list port-index number statistics signaling-uni-neg-tlv request-anno-rx number
Tree	request-anno-rx
Default	0
Configurable	False
Platforms	7220 IXR-D5, 7250 IXR-X3b

request-anno-tx *number*

Description	Specifies the number of requests for announce messages have been transmitted
Context	system sync ptp instance instance-index number port-ds-dsc-ip-list port-index number statistics signaling-uni-neg-tlv request-anno-tx number
Tree	request-anno-tx
Default	0
Configurable	False
Platforms	7220 IXR-D5, 7250 IXR-X3b

request-delay-resp-rx *number*

Description	Specifies the number of requests for delay-resp messages have been received
Context	system sync ptp instance instance-index number port-ds-dsc-ip-list port-index number statistics signaling-uni-neg-tlv request-delay-resp-rx number

Tree	request-delay-resp-rx
Default	0
Configurable	False
Platforms	7220 IXR-D5, 7250 IXR-X3b

request-delay-resp-tx *number*

Description	Specifies the number of requests for delay-resp messages have been transmitted
Context	system sync ptp instance instance-index <i>number</i> port-ds-dsc-ip-list port-index <i>number</i> statistics signaling-uni-neg-tlv request-delay-resp-tx <i>number</i>
Tree	request-delay-resp-tx
Default	0
Configurable	False
Platforms	7220 IXR-D5, 7250 IXR-X3b

request-sync-rx *number*

Description	Specifies the number of requests for sync messages have been received
Context	system sync ptp instance instance-index <i>number</i> port-ds-dsc-ip-list port-index <i>number</i> statistics signaling-uni-neg-tlv request-sync-rx <i>number</i>
Tree	request-sync-rx
Default	0
Configurable	False
Platforms	7220 IXR-D5, 7250 IXR-X3b

request-sync-tx *number*

Description	Specifies the number of requests for sync messages have been transmitted
Context	system sync ptp instance instance-index <i>number</i> port-ds-dsc-ip-list port-index <i>number</i> statistics signaling-uni-neg-tlv request-sync-tx <i>number</i>
Tree	request-sync-tx
Default	0
Configurable	False
Platforms	7220 IXR-D5, 7250 IXR-X3b

sync-msg-rx *number*

Description	Specifies the number of sync messages received
Context	system sync ptp instance instance-index number port-ds-dsc-ip-list port-index number statistics sync-msg-rx number
Tree	sync-msg-rx
Configurable	False
Platforms	7220 IXR-D5, 7250 IXR-X3b

sync-msg-tx *number*

Description	Specifies the number of sync messages transmitted
Context	system sync ptp instance instance-index number port-ds-dsc-ip-list port-index number statistics sync-msg-tx number
Tree	sync-msg-tx
Configurable	False
Platforms	7220 IXR-D5, 7250 IXR-X3b

unicast-negotiation

Description	Details of each negotiation session
Context	system sync ptp instance instance-index number port-ds-dsc-ip-list port-index number unicast-negotiation
Tree	unicast-negotiation
Configurable	False
Platforms	7220 IXR-D5, 7250 IXR-X3b

rx-announce

Description	Statistics for receive announce sessions
Context	system sync ptp instance instance-index number port-ds-dsc-ip-list port-index number unicast-negotiation rx-announce
Tree	rx-announce
Configurable	False
Platforms	7220 IXR-D5, 7250 IXR-X3b

duration *number*

Description	The duration, in seconds, requested/granted for unicast transmission between the PTP peers
Context	system sync ptp instance instance-index number port-ds-dsc-ip-list port-index number unicast-negotiation rx-announce duration number
Tree	duration
Units	seconds
Configurable	False
Platforms	7220 IXR-D5, 7250 IXR-X3b

log-interval *number*

Description	The packet rate requested or granted for unicast transmission between the PTP peers
Context	system sync ptp instance instance-index number port-ds-dsc-ip-list port-index number unicast-negotiation rx-announce log-interval number
Tree	log-interval
Configurable	False
Platforms	7220 IXR-D5, 7250 IXR-X3b

state *keyword*

Description	Indicates the state of the negotiation
Context	system sync ptp instance instance-index number port-ds-dsc-ip-list port-index number unicast-negotiation rx-announce state keyword
Tree	state
Options	<ul style="list-style-type: none"> • pending • granted • denied • expired • canceled
Configurable	False
Platforms	7220 IXR-D5, 7250 IXR-X3b

time-of-last-grant *string*

Description	The time when status last changed or the unicast session between the PTP clocks was renewed
Context	system sync ptp instance instance-index number port-ds-dsc-ip-list port-index number unicast-negotiation rx-announce time-of-last-grant string
Tree	time-of-last-grant
String Length	20 to 32
Configurable	False
Platforms	7220 IXR-D5, 7250 IXR-X3b

rx-delay-resp

Description	Statistics for receive delay-resp sessions
Context	system sync ptp instance instance-index number port-ds-dsc-ip-list port-index number unicast-negotiation rx-delay-resp
Tree	rx-delay-resp
Configurable	False
Platforms	7220 IXR-D5, 7250 IXR-X3b

duration *number*

Description	The duration, in seconds, requested/granted for unicast transmission between the PTP peers
Context	system sync ptp instance instance-index number port-ds-dsc-ip-list port-index number unicast-negotiation rx-delay-resp duration number
Tree	duration
Units	seconds
Configurable	False
Platforms	7220 IXR-D5, 7250 IXR-X3b

log-interval *number*

Description	The packet rate requested or granted for unicast transmission between the PTP peers
Context	system sync ptp instance instance-index number port-ds-dsc-ip-list port-index number unicast-negotiation rx-delay-resp log-interval number
Tree	log-interval

Configurable	False
Platforms	7220 IXR-D5, 7250 IXR-X3b

state *keyword*

Description	Indicates the state of the negotiation
Context	system sync ptp instance instance-index number port-ds-dsc-ip-list port-index number unicast-negotiation rx-delay-resp state <i>keyword</i>
Tree	state
Options	<ul style="list-style-type: none"> • pending • granted • denied • expired • canceled
Configurable	False
Platforms	7220 IXR-D5, 7250 IXR-X3b

time-of-last-grant *string*

Description	The time when status last changed or the unicast session between the PTP clocks was renewed
Context	system sync ptp instance instance-index number port-ds-dsc-ip-list port-index number unicast-negotiation rx-delay-resp time-of-last-grant <i>string</i>
Tree	time-of-last-grant
String Length	20 to 32
Configurable	False
Platforms	7220 IXR-D5, 7250 IXR-X3b

rx-sync

Description	Statistics for receive sync sessions
Context	system sync ptp instance instance-index number port-ds-dsc-ip-list port-index number unicast-negotiation rx-sync
Tree	rx-sync
Configurable	False
Platforms	7220 IXR-D5, 7250 IXR-X3b

duration *number*

Description	The duration, in seconds, requested/granted for unicast transmission between the PTP peers
Context	system sync ptp instance instance-index number port-ds-dsc-ip-list port-index number unicast-negotiation rx-sync duration number
Tree	duration
Units	seconds
Configurable	False
Platforms	7220 IXR-D5, 7250 IXR-X3b

log-interval *number*

Description	The packet rate requested or granted for unicast transmission between the PTP peers
Context	system sync ptp instance instance-index number port-ds-dsc-ip-list port-index number unicast-negotiation rx-sync log-interval number
Tree	log-interval
Configurable	False
Platforms	7220 IXR-D5, 7250 IXR-X3b

state *keyword*

Description	Indicates the state of the negotiation
Context	system sync ptp instance instance-index number port-ds-dsc-ip-list port-index number unicast-negotiation rx-sync state keyword
Tree	state
Options	<ul style="list-style-type: none"> • pending • granted • denied • expired • canceled
Configurable	False
Platforms	7220 IXR-D5, 7250 IXR-X3b

time-of-last-grant *string*

Description	The time when status last changed or the unicast session between the PTP clocks was renewed
Context	system sync ptp instance instance-index number port-ds-dsc-ip-list port-index number unicast-negotiation rx-sync time-of-last-grant string
Tree	time-of-last-grant
String Length	20 to 32
Configurable	False
Platforms	7220 IXR-D5, 7250 IXR-X3b

tx-announce

Description	Statistics for transmit announce sessions
Context	system sync ptp instance instance-index number port-ds-dsc-ip-list port-index number unicast-negotiation tx-announce
Tree	tx-announce
Configurable	False
Platforms	7220 IXR-D5, 7250 IXR-X3b

duration *number*

Description	The duration, in seconds, requested/granted for unicast transmission between the PTP peers
Context	system sync ptp instance instance-index number port-ds-dsc-ip-list port-index number unicast-negotiation tx-announce duration number
Tree	duration
Units	seconds
Configurable	False
Platforms	7220 IXR-D5, 7250 IXR-X3b

log-interval *number*

Description	The packet rate requested or granted for unicast transmission between the PTP peers
Context	system sync ptp instance instance-index number port-ds-dsc-ip-list port-index number unicast-negotiation tx-announce log-interval number
Tree	log-interval

Configurable	False
Platforms	7220 IXR-D5, 7250 IXR-X3b

state keyword

Description	Indicates the state of the negotiation
Context	system sync ptp instance instance-index number port-ds-dsc-ip-list port-index number unicast-negotiation tx-announce state keyword
Tree	state
Options	<ul style="list-style-type: none"> • pending • granted • denied • expired • canceled
Configurable	False
Platforms	7220 IXR-D5, 7250 IXR-X3b

time-of-last-grant string

Description	The time when status last changed or the unicast session between the PTP clocks was renewed
Context	system sync ptp instance instance-index number port-ds-dsc-ip-list port-index number unicast-negotiation tx-announce time-of-last-grant string
Tree	time-of-last-grant
String Length	20 to 32
Configurable	False
Platforms	7220 IXR-D5, 7250 IXR-X3b

tx-delay-resp

Description	Statistics for transmit delay-resp sessions
Context	system sync ptp instance instance-index number port-ds-dsc-ip-list port-index number unicast-negotiation tx-delay-resp
Tree	tx-delay-resp
Configurable	False
Platforms	7220 IXR-D5, 7250 IXR-X3b

duration *number*

Description	The duration, in seconds, requested/granted for unicast transmission between the PTP peers
Context	system sync ptp instance instance-index number port-ds-dsc-ip-list port-index number unicast-negotiation tx-delay-resp duration number
Tree	duration
Units	seconds
Configurable	False
Platforms	7220 IXR-D5, 7250 IXR-X3b

log-interval *number*

Description	The packet rate requested or granted for unicast transmission between the PTP peers
Context	system sync ptp instance instance-index number port-ds-dsc-ip-list port-index number unicast-negotiation tx-delay-resp log-interval number
Tree	log-interval
Configurable	False
Platforms	7220 IXR-D5, 7250 IXR-X3b

state *keyword*

Description	Indicates the state of the negotiation
Context	system sync ptp instance instance-index number port-ds-dsc-ip-list port-index number unicast-negotiation tx-delay-resp state keyword
Tree	state
Options	<ul style="list-style-type: none"> • pending • granted • denied • expired • canceled
Configurable	False
Platforms	7220 IXR-D5, 7250 IXR-X3b

time-of-last-grant *string*

Description	The time when status last changed or the unicast session between the PTP clocks was renewed
Context	system sync ptp instance instance-index number port-ds-dsc-ip-list port-index number unicast-negotiation tx-delay-resp time-of-last-grant <i>string</i>
Tree	time-of-last-grant
String Length	20 to 32
Configurable	False
Platforms	7220 IXR-D5, 7250 IXR-X3b

tx-sync

Description	Statistics for transmit sync sessions
Context	system sync ptp instance instance-index number port-ds-dsc-ip-list port-index number unicast-negotiation tx-sync
Tree	tx-sync
Configurable	False
Platforms	7220 IXR-D5, 7250 IXR-X3b

duration *number*

Description	The duration, in seconds, requested/granted for unicast transmission between the PTP peers
Context	system sync ptp instance instance-index number port-ds-dsc-ip-list port-index number unicast-negotiation tx-sync duration <i>number</i>
Tree	duration
Units	seconds
Configurable	False
Platforms	7220 IXR-D5, 7250 IXR-X3b

log-interval *number*

Description	The packet rate requested or granted for unicast transmission between the PTP peers
Context	system sync ptp instance instance-index number port-ds-dsc-ip-list port-index number unicast-negotiation tx-sync log-interval <i>number</i>
Tree	log-interval

Configurable	False
Platforms	7220 IXR-D5, 7250 IXR-X3b

state keyword

Description	Indicates the state of the negotiation
Context	system sync ptp instance instance-index number port-ds-dsc-ip-list port-index number unicast-negotiation tx-sync state keyword
Tree	state
Options	<ul style="list-style-type: none"> • pending • granted • denied • expired • canceled
Configurable	False
Platforms	7220 IXR-D5, 7250 IXR-X3b

time-of-last-grant string

Description	The time when status last changed or the unicast session between the PTP clocks was renewed
Context	system sync ptp instance instance-index number port-ds-dsc-ip-list port-index number unicast-negotiation tx-sync time-of-last-grant string
Tree	time-of-last-grant
String Length	20 to 32
Configurable	False
Platforms	7220 IXR-D5, 7250 IXR-X3b

port-ds-interface-list port-index number

Description	List of port data sets for interfaces
Context	system sync ptp instance instance-index number port-ds-interface-list port-index number
Tree	port-ds-interface-list
Configurable	True
Platforms	7220 IXR-D5, 7250 IXR-X3b

port-index *number*

Description	<p>Index into the port-ds list</p> <p>This is not the PTP port number. Configurable ports use port indices 1 through 999 but there is a limit on the overall number of these configured ports based on the platform and software release.</p> <p>The data sets (i.e., information model) of IEEE Std 1588-2008 specify a member portDS.portIdentity, which uses a typed struct with members clockIdentity and portNumber.</p> <p>In this YANG data model, portIdentity is not modeled in the port-ds. However, its members are provided as follows: portIdentity.portNumber is provided as this ptp-port-number leaf in port-ds, and portIdentity.clockIdentity is provided as the clock-identity leaf in default-ds of the instance (i.e., ../default-ds/clock-identity).</p>
Context	system sync ptp instance instance-index number port-ds-interface-list port-index number
Range	1 to 999
Configurable	True
Platforms	7220 IXR-D5, 7250 IXR-X3b

admin-state *keyword*

Description	The administrative state of the ptp port
Context	system sync ptp instance instance-index number port-ds-interface-list port-index number admin-state keyword
Tree	admin-state
Default	disable
Options	<ul style="list-style-type: none"> • enable • disable
Configurable	True
Platforms	7220 IXR-D5, 7250 IXR-X3b

announce-receipt-timeout *number*

Description	<p>Sets the time limit for missed Announce packets before the master clock is deemed down</p> <p>This defines the number of Announce message intervals that must expire with no received Announce messages before declaring an ANNOUNCE_</p>
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RECEIPT_TIMEOUT event. To change this setting, refer to announce-receipt-timeout in the Default data set.

Context	system sync ptp instance instance-index number port-ds-interface-list port-index number announce-receipt-timeout number
Tree	announce-receipt-timeout
Range	2 to 10
Configurable	False
Platforms	7220 IXR-D5, 7250 IXR-X3b

best-master *boolean*

Description	Indicates if this interface was selected by the BMCA to be the best master
Context	system sync ptp instance instance-index number port-ds-interface-list port-index number best-master boolean
Tree	best-master
Configurable	False
Platforms	7220 IXR-D5, 7250 IXR-X3b

dest-mac *keyword*

Description	Configure the MAC address associated with forwardable or non-forwardable
Context	system sync ptp instance instance-index number port-ds-interface-list port-index number dest-mac keyword
Tree	dest-mac
Default	forwardable
Options	<ul style="list-style-type: none"> forwardable The clock uses the forwardable MAC address: 01-1B-19-00-00-00 non-forwardable The clock uses the non-forwardable MAC address: 01-80-C2-00-00-0E
Configurable	True
Platforms	7220 IXR-D5, 7250 IXR-X3b

local-priority *number*

Description	Specifies the local priority of the ptp port
Context	system sync ptp instance instance-index number port-ds-interface-list port-index number local-priority number

Tree	local-priority
Range	1 to 255
Default	128
Configurable	True
Platforms	7220 IXR-D5, 7250 IXR-X3b

log-announce-interval *number*

Description	The base-2 logarithm of the mean announceInterval Mean time interval between successive Announce messages. To change this setting, refer to log-announce-interval in the Default data set.
Context	system sync ptp instance instance-index number port-ds-interface-list port-index number log-announce-interval number
Tree	log-announce-interval
Range	-3 to 4
Configurable	False
Platforms	7220 IXR-D5, 7250 IXR-X3b

log-min-delay-req-interval *number*

Description	The base-2 logarithm of the minDelayReqInterval The minimum permitted mean time interval between successive Delay_Req messages. The default log-min-delay-req-interval is defined by the profile. itug8275dot1: -4 (16 messages per second) itug8275dot2: -6 (64 messages per second)
Context	system sync ptp instance instance-index number port-ds-interface-list port-index number log-min-delay-req-interval number
Tree	log-min-delay-req-interval
Range	-6 to 0
Configurable	True
Platforms	7220 IXR-D5, 7250 IXR-X3b

log-sync-interval *number*

Description	The base-2 logarithm of the mean SyncInterval for multicast messages The default log sync interval is defined by the profile. itug8275dot1: -4 (16 messages per second) itug8275dot2: -6 (64 messages per second)
--------------------	--

Context	system sync ptp instance instance-index number port-ds-interface-list port-index number log-sync-interval number
Tree	log-sync-interval
Range	-6 to 0
Configurable	True
Platforms	7220 IXR-D5, 7250 IXR-X3b

major-version-number *number*

Description	The PTP major version number in use on the port
Context	system sync ptp instance instance-index number port-ds-interface-list port-index number major-version-number number
Tree	major-version-number
Configurable	False
Platforms	7220 IXR-D5, 7250 IXR-X3b

master-only *boolean*

Description	Specifies the masterOnly attribute of the ptp port
Context	system sync ptp instance instance-index number port-ds-interface-list port-index number master-only boolean
Tree	master-only
Default	true
Configurable	True
Platforms	7220 IXR-D5, 7250 IXR-X3b

minor-version-number *number*

Description	The PTP minor version number in use on the port
Context	system sync ptp instance instance-index number port-ds-interface-list port-index number minor-version-number number
Tree	minor-version-number
Configurable	False
Platforms	7220 IXR-D5, 7250 IXR-X3b

neighbor-count *number*

Description	The number of neighbors for the port
Context	system sync ptp instance instance-index number port-ds-interface-list port-index number neighbor-count number
Tree	neighbor-count
Configurable	False
Platforms	7220 IXR-D5, 7250 IXR-X3b

neighbor-list [clock-identity binary port-number number](#)

Description	List of MAC address of all the neighbors of this port
Context	system sync ptp instance instance-index number port-ds-interface-list port-index number neighbor-list clock-identity binary port-number number
Tree	neighbor-list
Configurable	False
Platforms	7220 IXR-D5, 7250 IXR-X3b

clock-identity *binary*

Description	The clockIdentity of this neighbor clock
Context	system sync ptp instance instance-index number port-ds-interface-list port-index number neighbor-list clock-identity binary port-number number
String Length	8
Configurable	False
Platforms	7220 IXR-D5, 7250 IXR-X3b

port-number *number*

Description	The port number of this neighbor clock
Context	system sync ptp instance instance-index number port-ds-interface-list port-index number neighbor-list clock-identity binary port-number number
Configurable	False
Platforms	7220 IXR-D5, 7250 IXR-X3b

mac-address *string*

Description	Specifies the MAC address of this neighbor
Context	system sync ptp instance instance-index number port-ds-interface-list port-index number neighbor-list clock-identity binary port-number number mac-address string
Tree	mac-address
Configurable	False
Platforms	7220 IXR-D5, 7250 IXR-X3b

parent-clock *boolean*

Description	Indicates if this neighbor is the current parent clock of this PTP clock
Context	system sync ptp instance instance-index number port-ds-interface-list port-index number neighbor-list clock-identity binary port-number number parent-clock boolean
Tree	parent-clock
Configurable	False
Platforms	7220 IXR-D5, 7250 IXR-X3b

rx-message-rate *decimal-number*

Description	The receive message rate from this neighbor clock
Context	system sync ptp instance instance-index number port-ds-interface-list port-index number neighbor-list clock-identity binary port-number number rx-message-rate decimal-number
Tree	rx-message-rate
Units	messages-per-second
Configurable	False
Platforms	7220 IXR-D5, 7250 IXR-X3b

parent-clock *boolean*

Description	Indicates if this interface is the current parent clock of this PTP clock May differ from best-master due to use of local GNSS as time source.
Context	system sync ptp instance instance-index number port-ds-interface-list port-index number parent-clock boolean
Tree	parent-clock

Configurable	False
Platforms	7220 IXR-D5, 7250 IXR-X3b

port-state *keyword*

Description	Current state associated with the port
Context	system sync ptp instance instance-index number port-ds-interface-list port-index number port-state keyword
Tree	port-state
Options	<ul style="list-style-type: none"> • initializing The port is initializing its data sets, hardware, and communication facilities • faulty The port is in the fault state • disabled The port is disabled and is not communicating PTP messages • listening The port is listening for an Announce message • pre-master The port is in the pre-master state • master The port is behaving as a master port • passive The port is in the passive state • uncalibrated A master port has been selected, but the port is still in the uncalibrated state • slave The port is synchronizing to the selected master port
Configurable	False
Platforms	7220 IXR-D5, 7250 IXR-X3b

ptp-port-number *number*

Description	IEEE Std 1588 portNumber This is the port-number that will appear in messages sent for this port-index.
--------------------	--

Context	system sync ptp instance instance-index number port-ds-interface-list port-index number ptp-port-number number
Tree	ptp-port-number
Configurable	False
Platforms	7220 IXR-D5, 7250 IXR-X3b

source

Description	Source interface used by this PTP port
Context	system sync ptp instance instance-index number port-ds-interface-list port-index number source
Tree	source
Configurable	True
Platforms	7220 IXR-D5, 7250 IXR-X3b

interface *reference*

Description	Enter the interface context
Context	system sync ptp instance instance-index number port-ds-interface-list port-index number source interface reference
Tree	interface
Reference	interface name string
Configurable	True
Platforms	7220 IXR-D5, 7250 IXR-X3b

sync0

Description	Enable the sync0 context
Context	system sync ptp instance instance-index number port-ds-interface-list port-index number source sync0
Tree	sync0
Configurable	True
Platforms	Supported on 7220 IXR-D5, 7250 IXR-X3b

statistics

Description	Total messages for a specific PTP port
--------------------	--

Context	system sync ptp instance instance-index number port-ds-interface-list port-index number statistics
Tree	statistics
Configurable	False
Platforms	7220 IXR-D5, 7250 IXR-X3b

anno-msg-rx number

Description	Specifies the number of announce messages received
Context	system sync ptp instance instance-index number port-ds-interface-list port-index number statistics anno-msg-rx number
Tree	anno-msg-rx
Configurable	False
Platforms	7220 IXR-D5, 7250 IXR-X3b

anno-msg-tx number

Description	Specifies the number of announce messages transmitted
Context	system sync ptp instance instance-index number port-ds-interface-list port-index number statistics anno-msg-tx number
Tree	anno-msg-tx
Configurable	False
Platforms	7220 IXR-D5, 7250 IXR-X3b

del-req-msg-rx number

Description	Specifies the number of delay-req messages received
Context	system sync ptp instance instance-index number port-ds-interface-list port-index number statistics del-req-msg-rx number
Tree	del-req-msg-rx
Configurable	False
Platforms	7220 IXR-D5, 7250 IXR-X3b

del-req-msg-tx number

Description	Specifies the number of delay-req messages transmitted
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Context	system sync ptp instance instance-index number port-ds-interface-list port-index number statistics del-req-msg-tx number
Tree	del-req-msg-tx
Configurable	False
Platforms	7220 IXR-D5, 7250 IXR-X3b

del-req-msg-rx number

Description	Specifies the number of delay-req messages received
Context	system sync ptp instance instance-index number port-ds-interface-list port-index number statistics del-req-msg-rx number
Tree	del-req-msg-rx
Configurable	False
Platforms	7220 IXR-D5, 7250 IXR-X3b

del-req-msg-tx number

Description	Specifies the number of delay-req messages transmitted
Context	system sync ptp instance instance-index number port-ds-interface-list port-index number statistics del-req-msg-tx number
Tree	del-req-msg-tx
Configurable	False
Platforms	7220 IXR-D5, 7250 IXR-X3b

discards

Description	Aggregate discard statistics for the PTP clock
Context	system sync ptp instance instance-index number port-ds-interface-list port-index number statistics discards
Tree	discards
Configurable	False
Platforms	7220 IXR-D5, 7250 IXR-X3b

alternate-master number

Description	Specifies the number of alternate master messages that were discarded
--------------------	---

Context	system sync ptp instance instance-index number port-ds-interface-list port-index number statistics discards alternate-master number
Tree	alternate-master
Configurable	False
Platforms	7220 IXR-D5, 7250 IXR-X3b

bad-domain number

Description	Specifies the number of bad domain messages that were discarded
Context	system sync ptp instance instance-index number port-ds-interface-list port-index number statistics discards bad-domain number
Tree	bad-domain
Configurable	False
Platforms	7220 IXR-D5, 7250 IXR-X3b

other number

Description	Specifies the number of other messages that were discarded
Context	system sync ptp instance instance-index number port-ds-interface-list port-index number statistics discards other number
Tree	other
Configurable	False
Platforms	7220 IXR-D5, 7250 IXR-X3b

out-of-sequence number

Description	Specifies the number of out of sequence messages that were discarded
Context	system sync ptp instance instance-index number port-ds-interface-list port-index number statistics discards out-of-sequence number
Tree	out-of-sequence
Configurable	False
Platforms	7220 IXR-D5, 7250 IXR-X3b

peer-disabled number

Description	Specifies the number of PTP messages that were discarded from disabled PTP peer
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Occurs when a PTP peer has been administratively disabled. This information is only available for configured and discovered peers.

Context	system sync ptp instance instance-index number port-ds-interface-list port-index number statistics discards peer-disabled number
Tree	peer-disabled
Configurable	False
Platforms	7220 IXR-D5, 7250 IXR-X3b

follow-up-msg-rx number

Description	Specifies the number of follow-up messages received
Context	system sync ptp instance instance-index number port-ds-interface-list port-index number statistics follow-up-msg-rx number
Tree	follow-up-msg-rx
Configurable	False
Platforms	7220 IXR-D5, 7250 IXR-X3b

follow-up-msg-tx number

Description	Specifies the number of follow-up messages transmitted
Context	system sync ptp instance instance-index number port-ds-interface-list port-index number statistics follow-up-msg-tx number
Tree	follow-up-msg-tx
Configurable	False
Platforms	7220 IXR-D5, 7250 IXR-X3b

other-rx number

Description	Specifies the number of other messages received
Context	system sync ptp instance instance-index number port-ds-interface-list port-index number statistics other-rx number
Tree	other-rx
Configurable	False
Platforms	7220 IXR-D5, 7250 IXR-X3b

signaling-msg-rx number

Description	Specifies the number of follow-up messages received
Context	system sync ptp instance instance-index number port-ds-interface-list port-index number statistics signaling-msg-rx number
Tree	signaling-msg-rx
Configurable	False
Platforms	7220 IXR-D5, 7250 IXR-X3b

signaling-msg-tx number

Description	Specifies the number of follow-up messages transmitted
Context	system sync ptp instance instance-index number port-ds-interface-list port-index number statistics signaling-msg-tx number
Tree	signaling-msg-tx
Configurable	False
Platforms	7220 IXR-D5, 7250 IXR-X3b

sync-msg-rx number

Description	Specifies the number of sync messages received
Context	system sync ptp instance instance-index number port-ds-interface-list port-index number statistics sync-msg-rx number
Tree	sync-msg-rx
Configurable	False
Platforms	7220 IXR-D5, 7250 IXR-X3b

sync-msg-tx number

Description	Specifies the number of sync messages transmitted
Context	system sync ptp instance instance-index number port-ds-interface-list port-index number statistics sync-msg-tx number
Tree	sync-msg-tx
Configurable	False
Platforms	7220 IXR-D5, 7250 IXR-X3b

time-properties-ds

Description	The timeProperties data set of the clock
Context	system sync ptp instance instance-index number time-properties-ds
Tree	time-properties-ds
Configurable	False
Platforms	7220 IXR-D5, 7250 IXR-X3b

current-utc-offset *number*

Description	The offset between TAI and UTC Only applies when the epoch of the PTP system is the PTP epoch in units of seconds (i.e. when ptp-timescale is TRUE). Otherwise, the value has no meaning.
Context	system sync ptp instance instance-index number time-properties-ds current-utc-offset number
Tree	current-utc-offset
Configurable	False
Platforms	7220 IXR-D5, 7250 IXR-X3b

current-utc-offset-valid *boolean*

Description	When set to true, the current UTC offset is valid
Context	system sync ptp instance instance-index number time-properties-ds current-utc-offset-valid boolean
Tree	current-utc-offset-valid
Configurable	False
Platforms	7220 IXR-D5, 7250 IXR-X3b

frequency-traceable *boolean*

Description	If true, the frequency determining the timescale is traceable to a primary reference
Context	system sync ptp instance instance-index number time-properties-ds frequency-traceable boolean
Tree	frequency-traceable
Configurable	False

Platforms 7220 IXR-D5, 7250 IXR-X3b

leap59 *boolean*

Description If true, the last minute of the current UTC day contains 59 seconds

Context [system sync ptp instance instance-index number time-properties-ds leap59](#)
boolean

Tree [leap59](#)

Configurable False

Platforms 7220 IXR-D5, 7250 IXR-X3b

leap61 *boolean*

Description If true, the last minute of the current UTC day contains 61 seconds

Context [system sync ptp instance instance-index number time-properties-ds leap61](#)
boolean

Tree [leap61](#)

Configurable False

Platforms 7220 IXR-D5, 7250 IXR-X3b

ptp-timescale *boolean*

Description If true clock timescale of the grandmaster is PTP; false it is ARB (arbitrary)

Context [system sync ptp instance instance-index number time-properties-ds ptp-timescale](#)
boolean

Tree [ptp-timescale](#)

Configurable False

Platforms 7220 IXR-D5, 7250 IXR-X3b

time-source *keyword*

Description The source of time used by the grandmaster clock
If a value is received that does not map to one of the enumerations, then the reserved value is used

Context [system sync ptp instance instance-index number time-properties-ds time-source](#)
keyword

Tree [time-source](#)

Options	<ul style="list-style-type: none"> • atomic-clock • gps • terrestrial-radio • ptp • ntp • hand-set • other • internal-oscillator • reserved
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Configurable	False
Platforms	7220 IXR-D5, 7250 IXR-X3b

time-traceable *boolean*

Description	If true, the timescale and the currentUtcOffset are traceable to a primary reference
Context	system sync ptp instance instance-index number time-properties-ds time-traceable <i>boolean</i>
Tree	time-traceable
Configurable	False
Platforms	7220 IXR-D5, 7250 IXR-X3b

ptp-profile *keyword*

Description	Specifies the PTP profile mode for the PTP clock
Context	system sync ptp ptp-profile <i>keyword</i>
Tree	ptp-profile
Default	itug8275dot1
Options	<ul style="list-style-type: none"> • itug8275dot1 ITU-T G.8275.1 (2014) Profile • itug8275dot2 ITU-T G.8275.2 Profile
Configurable	True
Platforms	7220 IXR-D5, 7250 IXR-X3b

timing-source-net-inst *reference*

Description	Network instance to be used for configured peers This is the network instance that will be used to provide timing into the local clock via PTP over IP.
Context	system sync ptp timing-source-net-inst <i>reference</i>
Tree	timing-source-net-inst
Reference	network-instance name <i>string</i>
Configurable	True
Platforms	7220 IXR-D5, 7250 IXR-X3b

tls

Description	Top-level container for TLS configuration and state
Context	system tls
Tree	tls
Configurable	True
Platforms	Supported on all platforms

server-profile [name](#) *string*

Description	List of configured TLS server profiles
Context	system tls server-profile name <i>string</i>
Tree	server-profile
Configurable	True
Platforms	Supported on all platforms

name *string*

Description	Name of the TLS server-profile
Context	system tls server-profile name <i>string</i>
String Length	1 to 247
Configurable	True
Platforms	Supported on all platforms

authenticate-client *boolean*

Description	Defines if the server should authenticate the identity of connecting clients using the trust anchor
Context	system tls server-profile name <i>string</i> authenticate-client <i>boolean</i>
Tree	authenticate-client
Default	false
Configurable	True
Platforms	Supported on all platforms

certificate *string*

Description	Base64 encoded certificate to use with the private key This includes the '-----BEGIN CERTIFICATE-----' and '-----END CERTIFICATE-----' header and footer
Context	system tls server-profile name <i>string</i> certificate <i>string</i>
Tree	certificate
Configurable	True
Platforms	Supported on all platforms

certificate-revocation-list *string*

Description	Base64 encoded certificate revocation list This includes the '-----BEGIN X509 CRL' and '-----END X509 CRL' header and footer
Context	system tls server-profile name <i>string</i> certificate-revocation-list <i>string</i>
Tree	certificate-revocation-list
Configurable	True
Platforms	Supported on all platforms

certz

Description	Information relating to the active certificate and bundle/s as provided via Certz State is provided by the gNSI Certz service, and can be changed using the gNSI.Certz.Rotate RPC
Context	system tls server-profile name <i>string</i> certz

Tree	certz
Configurable	False
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

certificate

Description	State relating to the active certificate provided via Certz
Context	system tls server-profile name string certz certificate
Tree	certificate
Configurable	False
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

created-on *string*

Description	The created on timestamp as provided by the gNSI client at the time of uploading the policy The maps to the created_on field within a Entity message in the Certz protobuf.
Context	system tls server-profile name string certz certificate created-on string
Tree	created-on
String Length	20 to 32
Configurable	False
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

version *string*

Description	The version string as provided by the gNSI client at the time of uploading the certificate or bundle/s The maps to the version field within a Entity message in the Certz protobuf.
Context	system tls server-profile name string certz certificate version string
Tree	version
Configurable	False

Platforms 7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

crl

Description State relating to the active certificate revocation list provided via Certz
The list of certificates provided will not be used to validate mTLS or servers, even if those certificates exist within the trust anchor.

Context [system tls server-profile name string certz crl](#)

Tree [crl](#)

Configurable False

Platforms 7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

created-on *string*

Description The created on timestamp as provided by the gNSI client at the time of uploading the policy
The maps to the created_on field within a Entity message in the Certz protobuf.

Context [system tls server-profile name string certz crl created-on string](#)

Tree [created-on](#)

String Length 20 to 32

Configurable False

Platforms 7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

version *string*

Description The version string as provided by the gNSI client at the time of uploading the certificate or bundle/s
The maps to the version field within a Entity message in the Certz protobuf.

Context [system tls server-profile name string certz crl version string](#)

Tree [version](#)

Configurable False

Platforms 7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

ssl-profile-id *string*

Description The ID of this gRPC server's SSL profile as used by the gNSI Certz service

Context [system tls server-profile name](#) *string* [certz ssl-profile-id](#) *string*

Tree [ssl-profile-id](#)

Configurable False

Platforms 7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

trust-anchor

Description State relating to the active trust anchor provided via Certz

This is equivalent to the certificate authority bundle, and is the list of certificates used to validate clients in mTLS, and to validate servers in outbound TLS.

Context [system tls server-profile name](#) *string* [certz trust-anchor](#)

Tree [trust-anchor](#)

Configurable False

Platforms 7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

created-on *string*

Description The created on timestamp as provided by the gNSI client at the time of uploading the policy

The maps to the created_on field within a Entity message in the Certz protobuf.

Context [system tls server-profile name](#) *string* [certz trust-anchor created-on](#) *string*

Tree [created-on](#)

String Length 20 to 32

Configurable False

Platforms 7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

version string

Description The version string as provided by the gNSI client at the time of uploading the certificate or bundle/s
The maps to the version field within a Entity message in the Certz protobuf.

Context [system tls server-profile name string certz trust-anchor version string](#)

Tree [version](#)

Configurable False

Platforms 7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

cipher-list identityref

Description List of ciphers to use when negotiating TLS 1.2 with clients
TLS 1.3 cipher suites are always enabled: `tls_aes_256_gcm_sha384`, `tls_aes_128_gcm_sha256`, `tls_chacha20_poly1305_sha256`

Context [system tls server-profile name string cipher-list identityref](#)

Tree [cipher-list](#)

Default `ecdhe-ecdsa-aes256-gcm-sha384`

Options

- `ecdhe-rsa-aes256-gcm-sha384`
- `ecdhe-ecdsa-aes256-gcm-sha384`
- `ecdhe-rsa-aes256-sha384`
- `ecdhe-ecdsa-aes256-sha384`
- `ecdhe-rsa-aes256-sha`
- `ecdhe-ecdsa-aes256-sha`
- `dhe-dss-aes256-gcm-sha384`
- `dhe-rsa-aes256-gcm-sha384`
- `dhe-rsa-aes256-sha256`
- `dhe-dss-aes256-sha256`
- `dhe-rsa-aes256-sha`
- `dhe-dss-aes256-sha`
- `dhe-rsa-camellia256-sha`
- `dhe-dss-camellia256-sha`

- aes256-gcm-sha384
- aes256-sha256
- aes256-sha
- camellia256-sha
- psk-aes256-cbc-sha
- ecdhe-rsa-aes128-gcm-sha256
- ecdhe-ecdsa-aes128-gcm-sha256
- ecdhe-rsa-aes128-sha256
- ecdhe-ecdsa-aes128-sha256
- ecdhe-rsa-aes128-sha
- ecdhe-ecdsa-aes128-sha
- dhe-dss-aes128-gcm-sha256
- dhe-rsa-aes128-gcm-sha256
- dhe-rsa-aes128-sha256
- dhe-dss-aes128-sha256
- dhe-rsa-aes128-sha
- dhe-dss-aes128-sha
- dhe-rsa-seed-sha
- dhe-dss-seed-sha
- dhe-rsa-camellia128-sha
- dhe-dss-camellia128-sha
- aes128-gcm-sha256
- aes128-sha256
- aes128-sha
- seed-sha
- camellia128-sha
- psk-aes128-cbc-sha
- ecdhe-rsa-des-cbc3-sha
- ecdhe-ecdsa-des-cbc3-sha
- edh-rsa-des-cbc3-sha
- edh-dss-des-cbc3-sha
- des-cbc3-sha
- idea-cbc-sha
- psk-3des-ede-cbc-sha
- ecdhe-rsa-rc4-sha
- ecdhe-ecdsa-rc4-sha

	<ul style="list-style-type: none"> rc4-sha psk-rc4-sha
Configurable	True
Platforms	Supported on all platforms

dynamic *boolean*

Description	Defines if the profile was dynamically created by service (for example gNSI Authz/Certz)
Context	system tls server-profile name <i>string</i> dynamic <i>boolean</i>
Tree	dynamic
Configurable	False
Platforms	Supported on all platforms

key *string*

Description	Base64 encoded key to use with the server certificate This includes the '-----BEGIN PRIVATE KEY-----', and '-----END PRIVATE KEY-----' header and footer The value is hashed, and only the hashed value is kept
Context	system tls server-profile name <i>string</i> key <i>string</i>
Tree	key
Configurable	True
Platforms	Supported on all platforms

trust-anchor *string*

Description	Base64 encoded certificate to use as a trust anchor This includes the '-----BEGIN CERTIFICATE-----' and '-----END CERTIFICATE-----' header and footer
Context	system tls server-profile name <i>string</i> trust-anchor <i>string</i>
Tree	trust-anchor
Configurable	True
Platforms	Supported on all platforms

use-tpm-devid *keyword*

Description	Defines if the server profile key and certificate uses the TPM idevid or oidevid
Context	system tls server-profile name <i>string</i> use-tpm-devid <i>keyword</i>
Tree	use-tpm-devid
Options	<ul style="list-style-type: none">• idevid The TPM iDevID key and certificate is used• oidevid The TPM iDevID key and oIDevID certificate is used
Configurable	True
Platforms	7250 IXR-10e, 7250 IXR-6e, 7250 IXR-X3b

trace-options *keyword*

Description	Management server trace options
Context	system trace-options <i>keyword</i>
Tree	trace-options
Options	<ul style="list-style-type: none">• request• response• common
Configurable	True
Platforms	Supported on all platforms

12 tools acl

```
acl
+ acl-filter name string type keyword
+ entry sequence-id number
+ statistics
+ clear
+ statistics
+ clear
+ interface interface-id string
+ input
+ acl-filter name string type keyword
+ entry sequence-id number
+ statistics
+ clear
+ statistics
+ clear
+ statistics
+ clear
+ output
+ acl-filter name string type keyword
+ entry sequence-id number
+ statistics
+ clear
+ statistics
+ clear
+ statistics
+ clear
+ policers
+ policer name string
+ statistics
+ clear
+ system-cpu-policer name string
+ statistics
+ clear
```

12.1 acl Descriptions

acl

Description	Top level enclosing container for ACL operational tools
Context	acl
Tree	acl
Configurable	True
Platforms	Supported on all platforms

acl-filter *name string type keyword*

Description	List MAC, IPv4, IPv6 ACL filter policies
Context	acl acl-filter <i>name string type keyword</i>
Tree	acl-filter
Configurable	True
Platforms	Supported on all platforms

name string

Description	Reference to the ACL filter policy name
Context	acl acl-filter <i>name string type keyword</i>
Configurable	True
Platforms	Supported on all platforms

type keyword

Description	Defines the type of ACL filter: ipv4: IPv4 ACL filter ipv6: IPv6 ACL filter mac: MAC ACL filter
Context	acl acl-filter <i>name string type keyword</i>
Options	<ul style="list-style-type: none"> • ipv4 • ipv6 • mac
Configurable	True
Platforms	Supported on all platforms

entry *sequence-id number*

Description	List of filter rules.
Context	acl acl-filter name <i>string type keyword</i> entry sequence-id <i>number</i>
Tree	entry
Configurable	True
Platforms	Supported on all platforms

sequence-id *number*

Description	A number to indicate the relative evaluation order of the different entries; lower numbered entries are evaluated before higher numbered entries
Context	acl acl-filter name <i>string type keyword</i> entry sequence-id <i>number</i>
Configurable	True
Platforms	Supported on all platforms

statistics

Description	Enter the statistics context
Context	acl acl-filter name <i>string type keyword</i> entry sequence-id <i>number</i> statistics
Tree	statistics
Configurable	True
Platforms	Supported on all platforms

clear

Description	Reset all aggregate and per-interface statistics associated with this particular entry to zero
Context	acl acl-filter name <i>string type keyword</i> entry sequence-id <i>number</i> statistics clear
Tree	clear
Configurable	True
Platforms	Supported on all platforms

statistics

Description	Enter the statistics context
--------------------	------------------------------

Context	acl acl-filter name string type keyword statistics
Tree	statistics
Configurable	True
Platforms	Supported on all platforms

clear

Description	Reset all statistics of all entries of the filter to zero
Context	acl acl-filter name string type keyword statistics clear
Tree	clear
Configurable	True
Platforms	Supported on all platforms

interface [interface-id string](#)

Description	List of interfaces and subinterfaces referencing ACL filters
Context	acl interface interface-id string
Tree	interface
Configurable	True
Platforms	Supported on all platforms

interface-id [string](#)

Description	Identifier for the interface or subinterface
Context	acl interface interface-id string
Configurable	True
Platforms	Supported on all platforms

input

Description	Enter the input context
Context	acl interface interface-id string input
Tree	input
Configurable	True
Platforms	Supported on all platforms

acl-filter *name string type keyword*

Description	List MAC, IPv4, IPv6 ACL filter policies
Context	acl interface interface-id string input acl-filter name string type keyword
Tree	acl-filter
Configurable	True
Platforms	Supported on all platforms

name *string*

Description	Reference to the ACL filter policy name
Context	acl interface interface-id string input acl-filter name string type keyword
Configurable	True
Platforms	Supported on all platforms

type *keyword*

Description	Defines the type of ACL filter: ipv4: IPv4 ACL filter ipv6: IPv6 ACL filter mac: MAC ACL filter
Context	acl interface interface-id string input acl-filter name string type keyword
Options	<ul style="list-style-type: none"> • ipv4 • ipv6 • mac
Configurable	True
Platforms	Supported on all platforms

entry *sequence-id number*

Description	List of filter rules.
Context	acl interface interface-id string input acl-filter name string type keyword entry sequence-id number
Tree	entry
Configurable	True
Platforms	Supported on all platforms

sequence-id *number*

Description	A number to indicate the relative evaluation order of the different entries; lower numbered entries are evaluated before higher numbered entries
Context	acl interface interface-id string input acl-filter name string type keyword entry sequence-id number
Configurable	True
Platforms	Supported on all platforms

statistics

Description	Enter the statistics context
Context	acl interface interface-id string input acl-filter name string type keyword entry sequence-id number statistics
Tree	statistics
Configurable	True
Platforms	Supported on all platforms

clear

Description	Reset all aggregate and per-interface statistics associated with this particular entry to zero
Context	acl interface interface-id string input acl-filter name string type keyword entry sequence-id number statistics clear
Tree	clear
Configurable	True
Platforms	Supported on all platforms

statistics

Description	Enter the statistics context
Context	acl interface interface-id string input acl-filter name string type keyword statistics
Tree	statistics
Configurable	True
Platforms	Supported on all platforms

clear

Description	Reset all statistics of all entries of the filter to zero
Context	acl interface interface-id <i>string</i> input acl-filter name <i>string</i> type keyword statistics clear
Tree	clear
Configurable	True
Platforms	Supported on all platforms

statistics

Description	Enter the statistics context
Context	acl interface interface-id <i>string</i> input statistics
Tree	statistics
Configurable	True
Platforms	Supported on all platforms

clear

Description	Enter the clear context
Context	acl interface interface-id <i>string</i> input statistics clear
Tree	clear
Configurable	True
Platforms	Supported on all platforms

output

Description	Enter the output context
Context	acl interface interface-id <i>string</i> output
Tree	output
Configurable	True
Platforms	Supported on all platforms

acl-filter [name](#) *string* [type](#) *keyword*

Description	List MAC, IPv4, IPv6 ACL filter policies
--------------------	--

Context	acl interface interface-id string output acl-filter name string type keyword
Tree	acl-filter
Configurable	True
Platforms	Supported on all platforms

name string

Description	Reference to the ACL filter policy name
Context	acl interface interface-id string output acl-filter name string type keyword
Configurable	True
Platforms	Supported on all platforms

type keyword

Description	Defines the type of ACL filter: ipv4: IPv4 ACL filter ipv6: IPv6 ACL filter mac: MAC ACL filter
Context	acl interface interface-id string output acl-filter name string type keyword
Options	<ul style="list-style-type: none"> • ipv4 • ipv6 • mac
Configurable	True
Platforms	Supported on all platforms

entry sequence-id number

Description	List of filter rules.
Context	acl interface interface-id string output acl-filter name string type keyword entry sequence-id number
Tree	entry
Configurable	True
Platforms	Supported on all platforms

sequence-id number

Description	A number to indicate the relative evaluation order of the different entries; lower numbered entries are evaluated before higher numbered entries
--------------------	--

Context	acl interface interface-id <i>string</i> output acl-filter name <i>string type keyword</i> entry sequence-id <i>number</i>
Configurable	True
Platforms	Supported on all platforms

statistics

Description	Enter the statistics context
Context	acl interface interface-id <i>string</i> output acl-filter name <i>string type keyword</i> entry sequence-id <i>number</i> statistics
Tree	statistics
Configurable	True
Platforms	Supported on all platforms

clear

Description	Reset all aggregate and per-interface statistics associated with this particular entry to zero
Context	acl interface interface-id <i>string</i> output acl-filter name <i>string type keyword</i> entry sequence-id <i>number</i> statistics clear
Tree	clear
Configurable	True
Platforms	Supported on all platforms

statistics

Description	Enter the statistics context
Context	acl interface interface-id <i>string</i> output acl-filter name <i>string type keyword</i> statistics
Tree	statistics
Configurable	True
Platforms	Supported on all platforms

clear

Description	Reset all statistics of all entries of the filter to zero
Context	acl interface interface-id <i>string</i> output acl-filter name <i>string type keyword</i> statistics clear

Tree	clear
Configurable	True
Platforms	Supported on all platforms

statistics

Description	Enter the statistics context
Context	acl interface interface-id <i>string</i> output statistics
Tree	statistics
Configurable	True
Platforms	Supported on all platforms

clear

Description	Enter the clear context
Context	acl interface interface-id <i>string</i> output statistics clear
Tree	clear
Configurable	True
Platforms	Supported on all platforms

policers

Description	List of policers used by ACL entries
Context	acl policers
Tree	policers
Configurable	True
Platforms	Supported on all platforms

policer *name string*

Description	List of hardware policers
Context	acl policers policer name <i>string</i>
Tree	policer
Configurable	True
Platforms	Supported on all platforms

name *string*

Description	Name of the hardware policer
Context	acl policers policer name <i>string</i>
String Length	1 to 255
Configurable	True
Platforms	Supported on all platforms

statistics

Description	Enter the statistics context
Context	acl policers policer name <i>string</i> statistics
Tree	statistics
Configurable	True
Platforms	Supported on all platforms

clear

Description	Reset all statistics associated with this particular policer to zero
Context	acl policers policer name <i>string</i> statistics clear
Tree	clear
Configurable	True
Platforms	Supported on all platforms

system-cpu-policer [name](#) *string*

Description	List of system CPU policers
Context	acl policers system-cpu-policer name <i>string</i>
Tree	system-cpu-policer
Configurable	True
Platforms	Supported on all platforms

name *string*

Description	Name of the system cpu policer
Context	acl policers system-cpu-policer name <i>string</i>

String Length	1 to 255
Configurable	True
Platforms	Supported on all platforms

statistics

Description	Enter the statistics context
Context	acl policers system-cpu-policer name <i>string</i> statistics
Tree	statistics
Configurable	True
Platforms	Supported on all platforms

clear

Description	Reset all statistics associated with this particular policer to zero
Context	acl policers system-cpu-policer name <i>string</i> statistics clear
Tree	clear
Configurable	True
Platforms	Supported on all platforms

13 tools bfd

```
bfd
+ micro-bfd-sessions
+ lag-interface name string
+ member-interface name string
+ clear
+ statistics
+ lag-interface name string
+ member-interface name string
+ clear
+ peer local-discriminator number
+ clear
+ statistics
+ peer local-discriminator number
+ clear
```

13.1 bfd Descriptions

bfd

Description	Top-level grouping for bfd operational commands
Context	bfd
Tree	bfd
Configurable	True
Platforms	Supported on all platforms

micro-bfd-sessions

Description	Enter the micro-bfd-sessions context
Context	bfd micro-bfd-sessions
Tree	micro-bfd-sessions
Configurable	True
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

lag-interface *name string*

Description	Lag interface against which the clear command is to be executed
Context	bfd micro-bfd-sessions lag-interface name string
Tree	lag-interface
Configurable	True
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

name *string*

Description	Reference ID for associated lag interface Example: lag1 (Reference Interface lag1).
Context	bfd micro-bfd-sessions lag-interface name string
String Length	3 to 20

Configurable	True
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

member-interface *name string*

Description	List of member-interfaces to be cleared
Context	bfd micro-bfd-sessions lag-interface name string member-interface name string
Tree	member-interface
Configurable	True
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

name *string*

Description	Reference ID for associated interface Example: ethernet-2/1 (Reference Interface ethernet-2/1).
Context	bfd micro-bfd-sessions lag-interface name string member-interface name string
String Length	3 to 20
Configurable	True
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

clear

Description	Clear the associated micro-BFD sessions Clearing a micro-BFD sessions causes the associated sessions to transition to a Down state
Context	bfd micro-bfd-sessions lag-interface name string member-interface name string clear
Tree	clear
Configurable	True
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

statistics

Description	Enter the statistics context
Context	bfd micro-bfd-sessions statistics
Tree	statistics
Configurable	True
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

lag-interface *name string*

Description	Lag interface against which the clear command is to be executed
Context	bfd micro-bfd-sessions statistics lag-interface name string
Tree	lag-interface
Configurable	True
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

name *string*

Description	Reference ID for associated lag interface Example: lag1 (Reference Interface lag1).
Context	bfd micro-bfd-sessions statistics lag-interface name string
String Length	3 to 20
Configurable	True
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

member-interface *name string*

Description	List of member-interfaces to be cleared
Context	bfd micro-bfd-sessions statistics lag-interface name string member-interface name string
Tree	member-interface
Configurable	True

Platforms 7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

name *string*

Description Reference ID for associated interface Example: ethernet-2/1 (Reference Interface ethernet-2/1).

Context [bfd micro-bfd-sessions statistics lag-interface name](#) *string* [member-interface name](#) *string*

String Length 3 to 20

Configurable True

Platforms 7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

clear

Description Clear the BFD statistics associated with the micro-BFD sessions

Context [bfd micro-bfd-sessions statistics lag-interface name](#) *string* [member-interface name](#) *string* **clear**

Tree [clear](#)

Configurable True

Platforms 7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

peer local-discriminator *number*

Description The list of local-discriminators associated with BFD

Context [bfd peer local-discriminator](#) *number*

Tree [peer](#)

Configurable True

Platforms Supported on all platforms

local-discriminator *number*

Description BFD session local discriminator

Context [bfd peer local-discriminator](#) *number*

Configurable	True
Platforms	Supported on all platforms

clear

Description	Clear the associated BFD sessions Clearing a BFD sessions causes the associated BFD sessions ot transition to a Down state
Context	bfd peer local-discriminator <i>number clear</i>
Tree	clear
Configurable	True
Platforms	Supported on all platforms

statistics

Description	Enter the statistics context
Context	bfd statistics
Tree	statistics
Configurable	True
Platforms	Supported on all platforms

peer [local-discriminator](#) *number*

Description	The list of local-discriminators associated with BFD
Context	bfd statistics peer local-discriminator <i>number</i>
Tree	peer
Configurable	True
Platforms	Supported on all platforms

local-discriminator *number*

Description	BFD session local discriminator
Context	bfd statistics peer local-discriminator <i>number</i>
Configurable	True
Platforms	Supported on all platforms

clear

Description	Clear the BFD statistics associated with the BFD sessions
Context	bfd statistics peer local-discriminator <i>number clear</i>
Tree	clear
Configurable	True
Platforms	Supported on all platforms

14 tools interface

```

interface name string
+ ethernet
+   statistics
+     clear
+     include-members
+ packet-link-qualification
+   cancel
+   id string
+   start
+   id string
+   qualification-profile string
+ resource
+ retry
+ statistics
+ clear
+   include-members
+ subinterface index number
+   bridge-table
+     mac-duplication
+       delete-all-macs
+       duplicate-entries
+         mac address string
+         delete-mac
+     mac-learning
+       delete-all-macs
+       learnt-entries
+         mac address string
+         delete-mac
+   ipv4
+     address ip-prefix string
+     vrrp-group virtual-router-id number
+     statistics
+     clear
+     arp
+     delete-dynamic
+     neighbor ipv4-address string
+     delete-dynamic
+     virtual-ipv4-discovery
+     address ipv4-address string
+     statistics
+     clear
+     statistics
+     clear
+     dhcp-relay
+     statistics
+     clear
+   ipv6
+     address ip-prefix string
+     vrrp-group virtual-router-id number
+     statistics
+     clear
+     dhcp-relay
+     statistics
+     clear
+     neighbor-discovery
+     delete-dynamic

```



```
+ neighbor ipv6-address string
  + delete-dynamic
+ virtual-ipv6-discovery
  + address ipv6-address string
    + statistics
      + clear
  + statistics
    + clear
+ statistics
+ clear
```

14.1 interface Descriptions

interface *name string*

Description	The list of named interfaces on the device.
Context	interface name string
Tree	interface
Configurable	True
Platforms	Supported on all platforms

name *string*

Description	References the configured name of the interface
Context	interface name string
Configurable	True
Platforms	Supported on all platforms

ethernet

Description	Enter the ethernet context
Context	interface name string ethernet
Tree	ethernet
Configurable	True
Platforms	Supported on all platforms

statistics

Description	Enter the statistics context
Context	interface name string ethernet statistics
Tree	statistics
Configurable	True
Platforms	Supported on all platforms

clear

Description	Clear interface ethernet statistics
Context	interface name <i>string</i> ethernet statistics clear
Tree	clear
Configurable	True
Platforms	Supported on all platforms

include-members

Description	Causes the member link ethernet statistics to also be cleared
Context	interface name <i>string</i> ethernet statistics clear include-members
Tree	include-members
Configurable	True
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

packet-link-qualification

Description	Enter the packet-link-qualification context
Context	interface name <i>string</i> packet-link-qualification
Tree	packet-link-qualification
Configurable	True
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

cancel

Description	Cancel the packet link qualification and delete the results
Context	interface name <i>string</i> packet-link-qualification cancel
Tree	cancel
Configurable	True
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

id string

Description	Packet link qualification test ID
Context	interface name <i>string</i> packet-link-qualification cancel id string
Tree	id
String Length	1 to 255
Configurable	True
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

start

Description	Start packet link qualification
Context	interface name <i>string</i> packet-link-qualification start
Tree	start
Configurable	True
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

id string

Description	Packet link qualification test ID
Context	interface name <i>string</i> packet-link-qualification start id string
Tree	id
String Length	1 to 255
Configurable	True
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

qualification-profile string

Description	Packet link qualification profile name
Context	interface name <i>string</i> packet-link-qualification start qualification-profile string
Tree	qualification-profile

String Length	1 to 255
Configurable	True
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

resource

Description	Enable the resource context
Context	interface name <i>string</i> resource
Tree	resource
Configurable	True
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

retry

Description	Causes the specified lag to be reevaluate for missing system resources
Context	interface name <i>string</i> resource retry
Tree	retry
Configurable	True
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

statistics

Description	Enter the statistics context
Context	interface name <i>string</i> statistics
Tree	statistics
Configurable	True
Platforms	Supported on all platforms

clear

Description	Clear interface statistics
--------------------	----------------------------

Context	interface name <i>string</i> statistics clear
Tree	clear
Configurable	True
Platforms	Supported on all platforms

include-members

Description	Causes the member link statistics to also be cleared
Context	interface name <i>string</i> statistics clear include-members
Tree	include-members
Configurable	True
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

subinterface [index number](#)

Description	The list of subinterfaces (logical interfaces) associated with a physical interface
Context	interface name <i>string</i> subinterface index number
Tree	subinterface
Configurable	True
Platforms	Supported on all platforms

[index number](#)

Description	The index of the subinterface, or logical interface number
Context	interface name <i>string</i> subinterface index number
Configurable	True
Platforms	Supported on all platforms

bridge-table

Description	Enter the bridge-table context
Context	interface name <i>string</i> subinterface index number bridge-table
Tree	bridge-table
Configurable	True

Platforms Supported on all platforms

mac-duplication

Description Enable the mac-duplication context

Context [interface name](#) *string* [subinterface](#) [index](#) *number* [bridge-table](#) [mac-duplication](#)

Tree [mac-duplication](#)

Configurable True

Platforms Supported on all platforms

delete-all-macs

Description Delete all learnt mac entries.

Context [interface name](#) *string* [subinterface](#) [index](#) *number* [bridge-table](#) [mac-duplication](#) [delete-all-macs](#)

Tree [delete-all-macs](#)

Configurable True

Platforms Supported on all platforms

duplicate-entries

Description Enter the duplicate-entries context

Context [interface name](#) *string* [subinterface](#) [index](#) *number* [bridge-table](#) [mac-duplication](#) [duplicate-entries](#)

Tree [duplicate-entries](#)

Configurable True

Platforms Supported on all platforms

mac [address](#) *string*

Description macs learnt on the bridging instance

Context [interface name](#) *string* [subinterface](#) [index](#) *number* [bridge-table](#) [mac-duplication](#) [duplicate-entries](#) [mac](#) [address](#) *string*

Tree [mac](#)

Configurable True

Platforms Supported on all platforms

address *string*

Description	Enter the address context
Context	interface name <i>string</i> subinterface index <i>number</i> bridge-table mac-duplication duplicate-entries mac address <i>string</i>
Configurable	True
Platforms	Supported on all platforms

delete-mac

Description	delete the duplicate mac address.
Context	interface name <i>string</i> subinterface index <i>number</i> bridge-table mac-duplication duplicate-entries mac address <i>string</i> delete-mac
Tree	delete-mac
Configurable	True
Platforms	Supported on all platforms

mac-learning

Description	Enable the mac-learning context
Context	interface name <i>string</i> subinterface index <i>number</i> bridge-table mac-learning
Tree	mac-learning
Configurable	True
Platforms	Supported on all platforms

delete-all-macs

Description	Delete all learnt mac entries.
Context	interface name <i>string</i> subinterface index <i>number</i> bridge-table mac-learning delete-all-macs
Tree	delete-all-macs
Configurable	True
Platforms	Supported on all platforms

learnt-entries

Description	Enter the learnt-entries context
--------------------	----------------------------------

Context	interface name <i>string</i> subinterface <i>index</i> <i>number</i> bridge-table mac-learning learnt-entries
Tree	learnt-entries
Configurable	True
Platforms	Supported on all platforms

mac [address](#) *string*

Description	macs learnt on the bridging instance
Context	interface name <i>string</i> subinterface <i>index</i> <i>number</i> bridge-table mac-learning learnt-entries mac address <i>string</i>
Tree	mac
Configurable	True
Platforms	Supported on all platforms

address *string*

Description	Enter the address context
Context	interface name <i>string</i> subinterface <i>index</i> <i>number</i> bridge-table mac-learning learnt-entries mac address <i>string</i>
Configurable	True
Platforms	Supported on all platforms

delete-mac

Description	delete the learnt mac address.
Context	interface name <i>string</i> subinterface <i>index</i> <i>number</i> bridge-table mac-learning learnt-entries mac address <i>string</i> delete-mac
Tree	delete-mac
Configurable	True
Platforms	Supported on all platforms

ipv4

Description	Enter the ipv4 context
Context	interface name <i>string</i> subinterface <i>index</i> <i>number</i> ipv4
Tree	ipv4

Configurable	True
Platforms	Supported on all platforms

address *ip-prefix string*

Description	Enter the address list instance
Context	interface name string subinterface index number ipv4 address ip-prefix string
Tree	address
Configurable	True
Platforms	Supported on all platforms

ip-prefix *string*

Description	Enter the ip-prefix context
Context	interface name string subinterface index number ipv4 address ip-prefix string
Configurable	True
Platforms	Supported on all platforms

vrrp-group *virtual-router-id number*

Description	VRRP Group Specific Configuration under IPv4 context
Context	interface name string subinterface index number ipv4 address ip-prefix string vrrp-group virtual-router-id number
Tree	vrrp-group
Configurable	True
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

virtual-router-id *number*

Description	VRRP Group Index
Context	interface name string subinterface index number ipv4 address ip-prefix string vrrp-group virtual-router-id number
Configurable	True
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

statistics

Description	Enter the statistics context
Context	interface name <i>string</i> subinterface <i>index</i> <i>number</i> ipv4 address ip-prefix <i>string</i> vrrp-group virtual-router-id <i>number</i> statistics
Tree	statistics
Configurable	True
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

clear

Description	Enter the clear context
Context	interface name <i>string</i> subinterface <i>index</i> <i>number</i> ipv4 address ip-prefix <i>string</i> vrrp-group virtual-router-id <i>number</i> statistics clear
Tree	clear
Configurable	True
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

arp

Description	Enable the arp context
Context	interface name <i>string</i> subinterface <i>index</i> <i>number</i> ipv4 arp
Tree	arp
Configurable	True
Platforms	Supported on all platforms

delete-dynamic

Description	Delete all dynamic ARP entries
Context	interface name <i>string</i> subinterface <i>index</i> <i>number</i> ipv4 arp delete-dynamic
Tree	delete-dynamic
Configurable	True
Platforms	Supported on all platforms

neighbor ipv4-address *string*

Description	Enter the neighbor list instance
Context	interface name <i>string</i> subinterface index <i>number</i> ipv4 arp neighbor ipv4-address <i>string</i>
Tree	neighbor
Configurable	True
Platforms	Supported on all platforms

ipv4-address *string*

Description	IPv4 address resolved by the ARP entry
Context	interface name <i>string</i> subinterface index <i>number</i> ipv4 arp neighbor ipv4-address <i>string</i>
Configurable	True
Platforms	Supported on all platforms

delete-dynamic

Description	Delete one specific dynamic ARP entry
Context	interface name <i>string</i> subinterface index <i>number</i> ipv4 arp neighbor ipv4-address <i>string</i> delete-dynamic
Tree	delete-dynamic
Configurable	True
Platforms	Supported on all platforms

virtual-ipv4-discovery

Description	Enter the virtual-ipv4-discovery context
Context	interface name <i>string</i> subinterface index <i>number</i> ipv4 arp virtual-ipv4-discovery
Tree	virtual-ipv4-discovery
Configurable	True
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

address `ipv4-address` *string*

Description	The list of Virtual IP addresses
Context	<code>interface name</code> <i>string</i> <code>subinterface</code> <i>index</i> <i>number</i> <code>ipv4</code> <code>arp</code> <code>virtual-ipv4-discovery</code> <code>address</code> <code>ipv4-address</code> <i>string</i>
Tree	<code>address</code>
Configurable	True
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

ipv4-address *string*

Description	The virtual IPv4 address.
Context	<code>interface name</code> <i>string</i> <code>subinterface</code> <i>index</i> <i>number</i> <code>ipv4</code> <code>arp</code> <code>virtual-ipv4-discovery</code> <code>address</code> <code>ipv4-address</code> <i>string</i>
Configurable	True
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

statistics

Description	Enter the statistics context
Context	<code>interface name</code> <i>string</i> <code>subinterface</code> <i>index</i> <i>number</i> <code>ipv4</code> <code>arp</code> <code>virtual-ipv4-discovery</code> <code>address</code> <code>ipv4-address</code> <i>string</i> <code>statistics</code>
Tree	<code>statistics</code>
Configurable	True
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

clear

Description	Clears the statistics for the Virtual IP addresses
Context	<code>interface name</code> <i>string</i> <code>subinterface</code> <i>index</i> <i>number</i> <code>ipv4</code> <code>arp</code> <code>virtual-ipv4-discovery</code> <code>address</code> <code>ipv4-address</code> <i>string</i> <code>statistics</code> <code>clear</code>
Tree	<code>clear</code>
Configurable	True

Platforms 7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

statistics

Description Enter the statistics context

Context [interface name](#) *string* [subinterface](#) *index* *number* [ipv4 arp virtual-ipv4-discovery](#) [statistics](#)

Tree [statistics](#)

Configurable True

Platforms 7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

clear

Description Clears the global statistics for all the Virtual IP addresses

Context [interface name](#) *string* [subinterface](#) *index* *number* [ipv4 arp virtual-ipv4-discovery](#) [statistics](#) [clear](#)

Tree [clear](#)

Configurable True

Platforms 7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

dhcp-relay

Description Enable the dhcp-relay context

Context [interface name](#) *string* [subinterface](#) *index* *number* [ipv4 dhcp-relay](#)

Tree [dhcp-relay](#)

Configurable True

Platforms Supported on all platforms

statistics

Description Enter the statistics context

Context [interface name](#) *string* [subinterface](#) *index* *number* [ipv4 dhcp-relay](#) [statistics](#)

Tree	statistics
Configurable	True
Platforms	Supported on all platforms

clear

Description	Enter the clear context
Context	interface name string subinterface index number ipv4 dhcp-relay statistics clear
Tree	clear
Configurable	True
Platforms	Supported on all platforms

ipv6

Description	Enter the ipv6 context
Context	interface name string subinterface index number ipv6
Tree	ipv6
Configurable	True
Platforms	Supported on all platforms

address [ip-prefix string](#)

Description	Enter the address list instance
Context	interface name string subinterface index number ipv6 address ip-prefix string
Tree	address
Configurable	True
Platforms	Supported on all platforms

[ip-prefix string](#)

Description	Enter the ip-prefix context
Context	interface name string subinterface index number ipv6 address ip-prefix string
Configurable	True
Platforms	Supported on all platforms

vrrp-group virtual-router-id number

Description	VRRP Group Specific Configuration under IPv4 context
Context	interface name <i>string</i> subinterface index <i>number</i> ipv6 address ip-prefix <i>string</i> vrrp-group virtual-router-id <i>number</i>
Tree	vrrp-group
Configurable	True
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

virtual-router-id number

Description	VRRP Group Index
Context	interface name <i>string</i> subinterface index <i>number</i> ipv6 address ip-prefix <i>string</i> vrrp-group virtual-router-id <i>number</i>
Configurable	True
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

statistics

Description	Enter the statistics context
Context	interface name <i>string</i> subinterface index <i>number</i> ipv6 address ip-prefix <i>string</i> vrrp-group virtual-router-id <i>number</i> statistics
Tree	statistics
Configurable	True
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

clear

Description	Enter the clear context
Context	interface name <i>string</i> subinterface index <i>number</i> ipv6 address ip-prefix <i>string</i> vrrp-group virtual-router-id <i>number</i> statistics clear
Tree	clear
Configurable	True
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

dhcp-relay

Description	Enable the dhcp-relay context
Context	interface name <i>string</i> subinterface <i>index</i> <i>number</i> ipv6 dhcp-relay
Tree	dhcp-relay
Configurable	True
Platforms	Supported on all platforms

statistics

Description	Enter the statistics context
Context	interface name <i>string</i> subinterface <i>index</i> <i>number</i> ipv6 dhcp-relay statistics
Tree	statistics
Configurable	True
Platforms	Supported on all platforms

clear

Description	Enter the clear context
Context	interface name <i>string</i> subinterface <i>index</i> <i>number</i> ipv6 dhcp-relay statistics clear
Tree	clear
Configurable	True
Platforms	Supported on all platforms

neighbor-discovery

Description	Enable the neighbor-discovery context
Context	interface name <i>string</i> subinterface <i>index</i> <i>number</i> ipv6 neighbor-discovery
Tree	neighbor-discovery
Configurable	True
Platforms	Supported on all platforms

delete-dynamic

Description	Delete all dynamic neighbor cache entries
--------------------	---

Context	interface name <i>string</i> subinterface <i>index</i> <i>number</i> ipv6 neighbor-discovery delete-dynamic
Tree	delete-dynamic
Configurable	True
Platforms	Supported on all platforms

neighbor [ipv6-address](#) *string*

Description	Enter the neighbor list instance
Context	interface name <i>string</i> subinterface <i>index</i> <i>number</i> ipv6 neighbor-discovery neighbor ipv6-address <i>string</i>
Tree	neighbor
Configurable	True
Platforms	Supported on all platforms

ipv6-address *string*

Description	IPv6 address resolved by the ND cache entry
Context	interface name <i>string</i> subinterface <i>index</i> <i>number</i> ipv6 neighbor-discovery neighbor ipv6-address <i>string</i>
Configurable	True
Platforms	Supported on all platforms

delete-dynamic

Description	Delete one specific dynamic neighbor cache entry
Context	interface name <i>string</i> subinterface <i>index</i> <i>number</i> ipv6 neighbor-discovery neighbor ipv6-address <i>string</i> delete-dynamic
Tree	delete-dynamic
Configurable	True
Platforms	Supported on all platforms

virtual-ipv6-discovery

Description	Enter the virtual-ipv6-discovery context
Context	interface name <i>string</i> subinterface <i>index</i> <i>number</i> ipv6 neighbor-discovery virtual-ipv6-discovery

Tree	virtual-ipv6-discovery
Configurable	True
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

address [ipv6-address](#) *string*

Description	The list of Virtual IP addresses
Context	interface name <i>string</i> subinterface <i>index</i> <i>number</i> ipv6 neighbor-discovery virtual-ipv6-discovery address ipv6-address <i>string</i>
Tree	address
Configurable	True
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

[ipv6-address](#) *string*

Description	The virtual IPv6 address.
Context	interface name <i>string</i> subinterface <i>index</i> <i>number</i> ipv6 neighbor-discovery virtual-ipv6-discovery address ipv6-address <i>string</i>
Configurable	True
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

statistics

Description	Enter the statistics context
Context	interface name <i>string</i> subinterface <i>index</i> <i>number</i> ipv6 neighbor-discovery virtual-ipv6-discovery address ipv6-address <i>string</i> statistics
Tree	statistics
Configurable	True
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

clear

Description	Clears the statistics for the Virtual IP addresses
Context	interface name <i>string</i> subinterface <i>index</i> <i>number</i> ipv6 neighbor-discovery virtual-ipv6-discovery address ipv6-address <i>string</i> statistics clear
Tree	clear
Configurable	True
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

statistics

Description	Enter the statistics context
Context	interface name <i>string</i> subinterface <i>index</i> <i>number</i> ipv6 neighbor-discovery virtual-ipv6-discovery statistics
Tree	statistics
Configurable	True
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

clear

Description	Clears the global statistics for all the Virtual IP addresses
Context	interface name <i>string</i> subinterface <i>index</i> <i>number</i> ipv6 neighbor-discovery virtual-ipv6-discovery statistics clear
Tree	clear
Configurable	True
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

statistics

Description	Enter the statistics context
Context	interface name <i>string</i> subinterface <i>index</i> <i>number</i> statistics
Tree	statistics

Configurable	True
Platforms	Supported on all platforms

clear

Description	Enter the clear context
Context	interface name <i>string</i> subinterface <i>index</i> <i>number</i> statistics clear
Tree	clear
Configurable	True
Platforms	Supported on all platforms

15 tools network-instance

```

network-instance name string
+ bridge-table
+ mac-duplication
+   delete-macs-type keyword
+   duplicate-entries
+     mac address string
+     delete-mac
+ mac-learning
+   delete-all-macs
+   learnt-entries
+     mac address string
+     delete-mac
+ proxy-arp
+   duplicate
+     delete-all
+     entry address string
+     delete-ip
+   dynamic
+     delete-all
+     entry address string
+     delete-ip
+ proxy-nd
+   duplicate
+     delete-all
+     entry address string
+     delete-ip
+   dynamic
+     delete-all
+     entry address string
+     delete-ip
+ icmp
+   statistics
+   clear
+ icmp6
+   statistics
+   clear
+ protocols
+   bgp
+     group group-name string
+     reset-peer
+       peer-as number
+     soft-clear
+       peer-as number
+       route-refresh identityref
+   neighbor peer-address (ipv4-address-with-zone | ipv6-address-with-zone)
+     reset-peer
+     soft-clear
+     route-refresh identityref
+   reset-peer
+     peer-as number
+   soft-clear
+     peer-as number
+     route-refresh identityref
+   igmp-snooping
+     interface interface-name string
+     membership-groups

```

```

    + clear
    + group group string
      + clear
      + source source string
        + clear
    + statistics
      + clear
+ membership-groups
+ clear
+ group group string
  + clear
  + source source string
    + clear
+ querier
+ clear
+ statistics
+ clear
+ isis
+ instance name string
+ interface interface-name string
  + adjacencies
  + clear
  + ldp-synchronization
  + exit
  + link-state-database
  + clear
  + statistics
  + clear
+ ldp
+ discovery
+ interfaces
+ interface name string
  + ipv4
  + statistics
  + clear
  + ipv6
  + statistics
  + clear
+ peers
+ peer lsr-id (ipv4-address | ipv6-address) label-space-id number
+ reset
+ statistics
+ clear
+ reset-overload
+ statistics
+ clear
+ mld-snooping
+ interface interface-name string
+ membership-groups
  + clear
  + group group string
  + clear
  + source source string
  + clear
+ statistics
+ clear
+ membership-groups
+ clear
+ group group string
  + clear
  + source source string
  + clear
+ querier
+ clear

```

```
+ statistics
+ clear
+ ospf
+ instance name string
+ area area-id
+ interface interface-name string
+ neighbors
+ clear
+ ldp-synchronization
+ exit
+ link-state-database
+ clear
+ manual-spf
+ run
+ neighbors
+ clear
+ neighbor neighbor-id
+ clear
+ overload
+ clear
+ statistics
+ clear
+ route-table
+ ipv4-unicast
+ longest-prefix-match
+ ipv4-address string
+ ipv6-unicast
+ longest-prefix-match
+ ipv6-address string
+ traffic-engineering-policies
+ policy policy-name string
+ segment-list segment-list-index number
+ clear
+ resignal
```


15.1 network-instance Descriptions

network-instance *name string*

Description	Enter the network-instance list instance
Context	network-instance name string
Tree	network-instance
Configurable	True
Platforms	Supported on all platforms

name *string*

Description	A unique name identifying the network instance
Context	network-instance name string
Configurable	True
Platforms	Supported on all platforms

bridge-table

Description	bridge-table
Context	network-instance name string bridge-table
Tree	bridge-table
Configurable	True
Platforms	Supported on all platforms

mac-duplication

Description	Enable the mac-duplication context
Context	network-instance name string bridge-table mac-duplication
Tree	mac-duplication
Configurable	True
Platforms	Supported on all platforms

delete-macs-type *keyword*

Description	Type of duplicate mac entries to delete.
Context	network-instance name <i>string</i> bridge-table mac-duplication delete-macs-type <i>keyword</i>
Tree	delete-macs-type
Options	<ul style="list-style-type: none"> • all • blackhole-only
Configurable	True
Platforms	Supported on all platforms

duplicate-entries

Description	Enter the duplicate-entries context
Context	network-instance name <i>string</i> bridge-table mac-duplication duplicate-entries
Tree	duplicate-entries
Configurable	True
Platforms	Supported on all platforms

mac [address](#) *string*

Description	macs learnt on the bridging instance
Context	network-instance name <i>string</i> bridge-table mac-duplication duplicate-entries mac address <i>string</i>
Tree	mac
Configurable	True
Platforms	Supported on all platforms

address *string*

Description	Enter the address context
Context	network-instance name <i>string</i> bridge-table mac-duplication duplicate-entries mac address <i>string</i>
Configurable	True
Platforms	Supported on all platforms

delete-mac

Description	delete the duplicate mac address.
Context	network-instance name <i>string</i> bridge-table mac-duplication duplicate-entries mac address <i>string</i> delete-mac
Tree	delete-mac
Configurable	True
Platforms	Supported on all platforms

mac-learning

Description	Enable the mac-learning context
Context	network-instance name <i>string</i> bridge-table mac-learning
Tree	mac-learning
Configurable	True
Platforms	Supported on all platforms

delete-all-macs

Description	Delete all learnt mac entries.
Context	network-instance name <i>string</i> bridge-table mac-learning delete-all-macs
Tree	delete-all-macs
Configurable	True
Platforms	Supported on all platforms

learnt-entries

Description	Enter the learnt-entries context
Context	network-instance name <i>string</i> bridge-table mac-learning learnt-entries
Tree	learnt-entries
Configurable	True
Platforms	Supported on all platforms

mac *address string*

Description	macs learnt on the bridging instance
--------------------	--------------------------------------

Context	network-instance name <i>string</i> bridge-table mac-learning learnt-entries mac address <i>string</i>
Tree	mac
Configurable	True
Platforms	Supported on all platforms

address *string*

Description	Enter the address context
Context	network-instance name <i>string</i> bridge-table mac-learning learnt-entries mac address <i>string</i>
Configurable	True
Platforms	Supported on all platforms

delete-mac

Description	delete the learnt mac address.
Context	network-instance name <i>string</i> bridge-table mac-learning learnt-entries mac address <i>string</i> delete-mac
Tree	delete-mac
Configurable	True
Platforms	Supported on all platforms

proxy-arp

Description	Enable the proxy-arp context
Context	network-instance name <i>string</i> bridge-table proxy-arp
Tree	proxy-arp
Configurable	True
Platforms	7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5

duplicate

Description	Enable the duplicate context
Context	network-instance name <i>string</i> bridge-table proxy-arp duplicate
Tree	duplicate

Configurable	True
Platforms	7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5

delete-all

Description	Delete all entries.
Context	network-instance name <i>string</i> bridge-table proxy-arp duplicate delete-all
Tree	delete-all
Configurable	True
Platforms	7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5

entry *address string*

Description	proxy-arp entry to delete
Context	network-instance name <i>string</i> bridge-table proxy-arp duplicate entry address <i>string</i>
Tree	entry
Configurable	True
Platforms	7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5

address *string*

Description	Enter the address context
Context	network-instance name <i>string</i> bridge-table proxy-arp duplicate entry address <i>string</i>
Configurable	True
Platforms	7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5

delete-ip

Description	delete the proxy entry.
Context	network-instance name <i>string</i> bridge-table proxy-arp duplicate entry address <i>string</i> delete-ip
Tree	delete-ip

Configurable	True
Platforms	7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5

dynamic

Description	Enable the dynamic context
Context	network-instance name <i>string</i> bridge-table proxy-arp dynamic
Tree	dynamic
Configurable	True
Platforms	7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5

delete-all

Description	Delete all entries.
Context	network-instance name <i>string</i> bridge-table proxy-arp dynamic delete-all
Tree	delete-all
Configurable	True
Platforms	7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5

entry [address](#) *string*

Description	proxy-arp entry to delete
Context	network-instance name <i>string</i> bridge-table proxy-arp dynamic entry address <i>string</i>
Tree	entry
Configurable	True
Platforms	7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5

[address](#) *string*

Description	Enter the address context
Context	network-instance name <i>string</i> bridge-table proxy-arp dynamic entry address <i>string</i>
Configurable	True

Platforms 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5

delete-ip

Description delete the proxy entry.

Context [network-instance name](#) *string* [bridge-table](#) [proxy-arp](#) [dynamic](#) [entry](#) [address](#) *string* [delete-ip](#)

Tree [delete-ip](#)

Configurable True

Platforms 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5

proxy-nd

Description Enable the proxy-nd context

Context [network-instance name](#) *string* [bridge-table](#) [proxy-nd](#)

Tree [proxy-nd](#)

Configurable True

Platforms 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5

duplicate

Description Enable the duplicate context

Context [network-instance name](#) *string* [bridge-table](#) [proxy-nd](#) [duplicate](#)

Tree [duplicate](#)

Configurable True

Platforms 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5

delete-all

Description Delete all entries.

Context [network-instance name](#) *string* [bridge-table](#) [proxy-nd](#) [duplicate](#) [delete-all](#)

Tree [delete-all](#)

Configurable True

Platforms 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5

entry *address string*

Description proxy-nd entry to delete

Context [network-instance name string](#) [bridge-table proxy-nd duplicate entry address string](#)

Tree [entry](#)

Configurable True

Platforms 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5

address *string*

Description Enter the address context

Context [network-instance name string](#) [bridge-table proxy-nd duplicate entry address string](#)

Configurable True

Platforms 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5

delete-ip

Description delete the proxy entry.

Context [network-instance name string](#) [bridge-table proxy-nd duplicate entry address string delete-ip](#)

Tree [delete-ip](#)

Configurable True

Platforms 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5

dynamic

Description Enable the dynamic context

Context [network-instance name string](#) [bridge-table proxy-nd dynamic](#)

Tree [dynamic](#)

Configurable True

Platforms 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5

delete-all

Description Delete all entries.

Context [network-instance name](#) *string* [bridge-table](#) [proxy-nd](#) [dynamic](#) [delete-all](#)

Tree [delete-all](#)

Configurable True

Platforms 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5

entry [address](#) *string*

Description proxy-nd entry to delete

Context [network-instance name](#) *string* [bridge-table](#) [proxy-nd](#) [dynamic](#) [entry](#) [address](#) *string*

Tree [entry](#)

Configurable True

Platforms 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5

address *string*

Description Enter the address context

Context [network-instance name](#) *string* [bridge-table](#) [proxy-nd](#) [dynamic](#) [entry](#) [address](#) *string*

Configurable True

Platforms 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5

delete-ip

Description delete the proxy entry.

Context [network-instance name](#) *string* [bridge-table](#) [proxy-nd](#) [dynamic](#) [entry](#) [address](#) *string* [delete-ip](#)

Tree [delete-ip](#)

Configurable True

Platforms 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5

icmp

Description Enter the icmp context
Context [network-instance name](#) *string* [icmp](#)
Tree [icmp](#)
Configurable True
Platforms Supported on all platforms

statistics

Description ICMP version 4 statistics
Context [network-instance name](#) *string* [icmp](#) [statistics](#)
Tree [statistics](#)
Configurable True
Platforms Supported on all platforms

clear

Description Resets all the YANG state counters under network-instance/icmp/statistics to zero
Context [network-instance name](#) *string* [icmp](#) [statistics](#) [clear](#)
Tree [clear](#)
Configurable True
Platforms Supported on all platforms

icmp6

Description Enter the icmp6 context
Context [network-instance name](#) *string* [icmp6](#)
Tree [icmp6](#)
Configurable True
Platforms Supported on all platforms

statistics

Description	ICMP version 6 statistics
Context	network-instance name <i>string</i> icmp6 statistics
Tree	statistics
Configurable	True
Platforms	Supported on all platforms

clear

Description	Resets all the YANG state counters under network-instance/icmp6/statistics to zero
Context	network-instance name <i>string</i> icmp6 statistics clear
Tree	clear
Configurable	True
Platforms	Supported on all platforms

protocols

Description	The routing protocols that are enabled for this network-instance.
Context	network-instance name <i>string</i> protocols
Tree	protocols
Configurable	True
Platforms	Supported on all platforms

bgp

Description	Enable the bgp context
Context	network-instance name <i>string</i> protocols bgp
Tree	bgp
Configurable	True
Platforms	Supported on all platforms

group [group-name](#) *string*

Description	Enter the group list instance
--------------------	-------------------------------

Context	network-instance name <i>string</i> protocols bgp group group-name <i>string</i>
Tree	group
Configurable	True
Platforms	Supported on all platforms

group-name *string*

Description	The configured name of the peer group
Context	network-instance name <i>string</i> protocols bgp group group-name <i>string</i>
String Length	1 to 255
Configurable	True
Platforms	Supported on all platforms

reset-peer

Description	Enable the reset-peer context
Context	network-instance name <i>string</i> protocols bgp group group-name <i>string</i> reset-peer
Tree	reset-peer
Configurable	True
Platforms	Supported on all platforms

peer-as *number*

Description	Hard reset only BGP peers in the peer-group that have the specified peer-AS number, whether they are configured peers or dynamic peers
Context	network-instance name <i>string</i> protocols bgp group group-name <i>string</i> reset-peer peer-as <i>number</i>
Tree	peer-as
Range	1 to 4294967295
Configurable	True
Platforms	Supported on all platforms

soft-clear

Description	Enable the soft-clear context
--------------------	-------------------------------

Context	network-instance name <i>string</i> protocols bgp group group-name <i>string</i> soft-clear
Tree	soft-clear
Configurable	True
Platforms	Supported on all platforms

peer-as *number*

Description	Soft reset only BGP peers in the peer-group that have the specified peer-AS number, whether they are configured peers or dynamic peers
Context	network-instance name <i>string</i> protocols bgp group group-name <i>string</i> soft-clear peer-as <i>number</i>
Tree	peer-as
Range	1 to 4294967295
Configurable	True
Platforms	Supported on all platforms

route-refresh *identityref*

Description	The address family to refresh This is encoded in the ROUTE_REFRESH message. By default all families are refreshed.
Context	network-instance name <i>string</i> protocols bgp group group-name <i>string</i> soft-clear route-refresh <i>identityref</i>
Tree	route-refresh
Options	<ul style="list-style-type: none"> • ipv4-unicast Unlabeled IPv4 unicast routes (AFI = 1, SAFI = 1) • ipv6-unicast Unlabeled IPv6 unicast routes (AFI = 2, SAFI = 1) • l3vpn-ipv4-unicast VPN-IPv4 unicast address family (AFI = 1, SAFI = 128) • l3vpn-ipv6-unicast VPN-IPv6 unicast address family (AFI = 2, SAFI = 128) • ipv4-labeled-unicast Labeled IPv4 unicast routes (AFI 1, SAFI 4) • ipv6-labeled-unicast Labeled IPv6 unicast routes (AFI 2, SAFI 4)

- evpn
EVPN routes (AFI = 25, SAFI = 70)
- route-target
Route target constraint routes (AFI 1, SAFI 132)
- sr-policy-ipv4
SR-TE Policy (AFI 1, SAFI 73)
- sr-policy-ipv6
SR-TE Policy (AFI 2, SAFI 73)

Configurable	True
Platforms	Supported on all platforms

neighbor **peer-address** (*ipv4-address-with-zone | ipv6-address-with-zone*)

Description	Enter the neighbor list instance
Context	network-instance name <i>string protocols bgp neighbor peer-address</i> (<i>ipv4-address-with-zone ipv6-address-with-zone</i>)
Tree	neighbor
Configurable	True
Platforms	Supported on all platforms

peer-address (*ipv4-address-with-zone | ipv6-address-with-zone*)

Description	The transport address of the BGP peer The peer-address must be a valid IPv4 unicast address or a valid IPv6 global unicast address. Sessions to a link-local IPv6 address are not supported.
Context	network-instance name <i>string protocols bgp neighbor peer-address</i> (<i>ipv4-address-with-zone ipv6-address-with-zone</i>)
Configurable	True
Platforms	Supported on all platforms

reset-peer

Description	Hard reset the peer
Context	network-instance name <i>string protocols bgp neighbor peer-address</i> (<i>ipv4-address-with-zone ipv6-address-with-zone</i>) reset-peer
Tree	reset-peer
Configurable	True

Platforms Supported on all platforms

soft-clear

Description Enable the soft-clear context

Context [network-instance name string protocols bgp neighbor peer-address \(ipv4-address-with-zone | ipv6-address-with-zone\) soft-clear](#)

Tree [soft-clear](#)

Configurable True

Platforms Supported on all platforms

route-refresh *identityref*

Description The address family to refresh

This is encoded in the ROUTE_REFRESH message. By default all families are refreshed.

Context [network-instance name string protocols bgp neighbor peer-address \(ipv4-address-with-zone | ipv6-address-with-zone\) soft-clear route-refresh identityref](#)

Tree [route-refresh](#)

Options

- `ipv4-unicast`
Unlabeled IPv4 unicast routes (AFI = 1, SAFI = 1)
- `ipv6-unicast`
Unlabeled IPv6 unicast routes (AFI = 2, SAFI = 1)
- `l3vpn-ipv4-unicast`
VPN-IPv4 unicast address family (AFI = 1, SAFI = 128)
- `l3vpn-ipv6-unicast`
VPN-IPv6 unicast address family (AFI = 2, SAFI = 128)
- `ipv4-labeled-unicast`
Labeled IPv4 unicast routes (AFI 1, SAFI 4)
- `ipv6-labeled-unicast`
Labeled IPv6 unicast routes (AFI 2, SAFI 4)
- `evpn`
EVPN routes (AFI = 25, SAFI = 70)
- `route-target`
Route target constraint routes (AFI 1, SAFI 132)
- `sr-policy-ipv4`

- SR-TE Policy (AFI 1, SAFI 73)
- sr-policy-ipv6
- SR-TE Policy (AFI 2, SAFI 73)

Configurable	True
Platforms	Supported on all platforms

reset-peer

Description	Enable the reset-peer context
Context	network-instance name <i>string</i> protocols bgp reset-peer
Tree	reset-peer
Configurable	True
Platforms	Supported on all platforms

peer-as *number*

Description	Hard reset only BGP peers that have the specified peer-AS number, whether they are configured peers or dynamic peers
Context	network-instance name <i>string</i> protocols bgp reset-peer peer-as <i>number</i>
Tree	peer-as
Range	1 to 4294967295
Configurable	True
Platforms	Supported on all platforms

soft-clear

Description	Enable the soft-clear context
Context	network-instance name <i>string</i> protocols bgp soft-clear
Tree	soft-clear
Configurable	True
Platforms	Supported on all platforms

peer-as *number*

Description	Soft reset only BGP peers that have the specified peer-AS number, whether they are configured peers or dynamic peers
--------------------	--

Context	network-instance name <i>string</i> protocols bgp soft-clear peer-as <i>number</i>
Tree	peer-as
Range	1 to 4294967295
Configurable	True
Platforms	Supported on all platforms

route-refresh *identityref*

Description	<p>The address family to refresh</p> <p>This is encoded in the ROUTE_REFRESH message. By default all families are refreshed.</p>
Context	network-instance name <i>string</i> protocols bgp soft-clear route-refresh identityref
Tree	route-refresh
Options	<ul style="list-style-type: none"> • ipv4-unicast Unlabeled IPv4 unicast routes (AFI = 1, SAFI = 1) • ipv6-unicast Unlabeled IPv6 unicast routes (AFI = 2, SAFI = 1) • l3vpn-ipv4-unicast VPN-IPv4 unicast address family (AFI = 1, SAFI = 128) • l3vpn-ipv6-unicast VPN-IPv6 unicast address family (AFI = 2, SAFI = 128) • ipv4-labeled-unicast Labeled IPv4 unicast routes (AFI 1, SAFI 4) • ipv6-labeled-unicast Labeled IPv6 unicast routes (AFI 2, SAFI 4) • evpn EVPN routes (AFI = 25, SAFI = 70) • route-target Route target constraint routes (AFI 1, SAFI 132) • sr-policy-ipv4 SR-TE Policy (AFI 1, SAFI 73) • sr-policy-ipv6 SR-TE Policy (AFI 2, SAFI 73)
Configurable	True
Platforms	Supported on all platforms

igmp-snooping

Description	Enable the igmp-snooping context
Context	network-instance name <i>string</i> protocols igmp-snooping
Tree	igmp-snooping
Configurable	True
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5

interface [interface-name](#) *string*

Description	List of IGMP SNOOPING interfaces
Context	network-instance name <i>string</i> protocols igmp-snooping interface interface-name <i>string</i>
Tree	interface
Configurable	True
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5

[interface-name](#) *string*

Description	Reference to a specific subinterface of the form <interface-name>.<subinterface-index>
Context	network-instance name <i>string</i> protocols igmp-snooping interface interface-name <i>string</i>
String Length	5 to 25
Configurable	True
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5

membership-groups

Description	Enter the membership-groups context
Context	network-instance name <i>string</i> protocols igmp-snooping interface interface-name <i>string</i> membership-groups
Tree	membership-groups
Configurable	True

Platforms 7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5

clear

Description Clear all IGMP SNOOPING memberships for this interface

Context [network-instance name string protocols igmp-snooping interface interface-name string membership-groups clear](#)

Tree [clear](#)

Configurable True

Platforms 7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5

group [group string](#)

Description Multicast group membership

Context [network-instance name string protocols igmp-snooping interface interface-name string membership-groups group group string](#)

Tree [group](#)

Configurable True

Platforms 7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5

group [string](#)

Description Multicast address

Context [network-instance name string protocols igmp-snooping interface interface-name string membership-groups group group string](#)

Configurable True

Platforms 7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5

clear

Description Clear all IGMP SNOOPING memberships for this group on this interface

Context [network-instance name string protocols igmp-snooping interface interface-name string membership-groups group group string clear](#)

Tree [clear](#)

Configurable	True
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5

source *source string*

Description	Source addresses of multicast
Context	network-instance name string protocols igmp-snooping interface interface-name string membership-groups group group string source source string
Tree	source
Configurable	True
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5

source *string*

Description	Source address of multicast
Context	network-instance name string protocols igmp-snooping interface interface-name string membership-groups group group string source source string
Configurable	True
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5

clear

Description	Clear all IGMP SNOOPING memberships for this source on this interface
Context	network-instance name string protocols igmp-snooping interface interface-name string membership-groups group group string source source string clear
Tree	clear
Configurable	True
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5

statistics

Description	Enter the statistics context
Context	network-instance name string protocols igmp-snooping interface interface-name string statistics

Tree	statistics
Configurable	True
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5

clear

Description	Reset IGMP SNOOPING statistics for this interface
Context	network-instance name <i>string</i> protocols igmp-snooping interface interface-name <i>string</i> statistics clear
Tree	clear
Configurable	True
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5

membership-groups

Description	Enter the membership-groups context
Context	network-instance name <i>string</i> protocols igmp-snooping membership-groups
Tree	membership-groups
Configurable	True
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5

clear

Description	Clear all IGMP SNOOPING memberships for all interfaces
Context	network-instance name <i>string</i> protocols igmp-snooping membership-groups clear
Tree	clear
Configurable	True
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5

group [group](#) *string*

Description	Multicast group membership
--------------------	----------------------------

Context	network-instance name <i>string</i> protocols igmp-snooping membership-groups group group <i>string</i>
Tree	group
Configurable	True
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5

group *string*

Description	Multicast address
Context	network-instance name <i>string</i> protocols igmp-snooping membership-groups group group <i>string</i>
Configurable	True
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5

clear

Description	Clear all IGMP SNOOPING memberships for this group on all interfaces
Context	network-instance name <i>string</i> protocols igmp-snooping membership-groups group group <i>string</i> clear
Tree	clear
Configurable	True
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5

source [source](#) *string*

Description	Source addresses of multicast
Context	network-instance name <i>string</i> protocols igmp-snooping membership-groups group group <i>string</i> source source <i>string</i>
Tree	source
Configurable	True
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5

source *string*

Description	Source address of multicast
Context	network-instance name <i>string</i> protocols igmp-snooping membership-groups group group <i>string</i> source source <i>string</i>
Configurable	True
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5

clear

Description	Clear all IGMP SNOOPING memberships for this source on all interfaces
Context	network-instance name <i>string</i> protocols igmp-snooping membership-groups group group <i>string</i> source source <i>string</i> clear
Tree	clear
Configurable	True
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5

querier

Description	Enter the querier context
Context	network-instance name <i>string</i> protocols igmp-snooping querier
Tree	querier
Configurable	True
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5

clear

Description	Clear all IGMP SNOOPING querier info on all interfaces
Context	network-instance name <i>string</i> protocols igmp-snooping querier clear
Tree	clear
Configurable	True
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5

statistics

Description	Enter the statistics context
Context	network-instance name <i>string</i> protocols igmp-snooping statistics
Tree	statistics
Configurable	True
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5

clear

Description	Reset IGMP SNOOPING statistics for all interfaces
Context	network-instance name <i>string</i> protocols igmp-snooping statistics clear
Tree	clear
Configurable	True
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5

isis

Description	Enable the isis context
Context	network-instance name <i>string</i> protocols isis
Tree	isis
Configurable	True
Platforms	Supported on all platforms

instance [name](#) *string*

Description	List of IS-IS protocol instances associated with this network-instance. Only a single instance is supported for now
Context	network-instance name <i>string</i> protocols isis instance name <i>string</i>
Tree	instance
Configurable	True
Platforms	Supported on all platforms
Max. Elements	1

name *string*

Description	The name of the IS-IS instance
Context	network-instance name <i>string</i> protocols isis instance name <i>string</i>
String Length	1 to 255
Configurable	True
Platforms	Supported on all platforms

interface [interface-name](#) *string*

Description	List of IS-IS interfaces
Context	network-instance name <i>string</i> protocols isis instance name <i>string</i> interface interface-name <i>string</i>
Tree	interface
Configurable	True
Platforms	Supported on all platforms

interface-name *string*

Description	Reference to a specific subinterface of the form <interface-name>.<subinterface-index>
Context	network-instance name <i>string</i> protocols isis instance name <i>string</i> interface interface-name <i>string</i>
String Length	1 to 255
Configurable	True
Platforms	Supported on all platforms

adjacencies

Description	Enter the adjacencies context
Context	network-instance name <i>string</i> protocols isis instance name <i>string</i> interface interface-name <i>string</i> adjacencies
Tree	adjacencies
Configurable	True
Platforms	Supported on all platforms

clear

Description	Reset all of the adjacencies on this interface
Context	network-instance name string protocols isis instance name string interface interface-name string adjacencies clear
Tree	clear
Configurable	True
Platforms	Supported on all platforms

ldp-synchronization

Description	IS-IS LDP-IGP synchronisation
Context	network-instance name string protocols isis instance name string ldp-synchronization
Tree	ldp-synchronization
Configurable	True
Platforms	Supported on all platforms

exit

Description	Advertise the normal metric for all IS-IS interfaces, even if some are configured for LDP synchronization and ISIS is not in sync with LDP on these interfaces
Context	network-instance name string protocols isis instance name string ldp-synchronization exit
Tree	exit
Configurable	True
Platforms	Supported on all platforms

link-state-database

Description	The ISIS link state database
Context	network-instance name string protocols isis instance name string link-state-database
Tree	link-state-database
Configurable	True
Platforms	Supported on all platforms

clear

Description	Clear the contents of the LSDB.
Context	network-instance name <i>string</i> protocols isis instance name <i>string</i> link-state-database clear
Tree	clear
Configurable	True
Platforms	Supported on all platforms

statistics

Description	Enter the statistics context
Context	network-instance name <i>string</i> protocols isis instance name <i>string</i> statistics
Tree	statistics
Configurable	True
Platforms	Supported on all platforms

clear

Description	Reset all of the IS-IS instance statistics to zero.
Context	network-instance name <i>string</i> protocols isis instance name <i>string</i> statistics clear
Tree	clear
Configurable	True
Platforms	Supported on all platforms

ldp

Description	Operational tools commands for LDP.
Context	network-instance name <i>string</i> protocols ldp
Tree	ldp
Configurable	True
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

discovery

Description	Enter the discovery context
Context	network-instance name <i>string</i> protocols ldp discovery
Tree	discovery
Configurable	True
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

interfaces

Description	Enter the interfaces context
Context	network-instance name <i>string</i> protocols ldp discovery interfaces
Tree	interfaces
Configurable	True
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

interface *name string*

Description	Enter the interface list instance
Context	network-instance name <i>string</i> protocols ldp discovery interfaces interface name <i>string</i>
Tree	interface
Configurable	True
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

name *string*

Description	Reference type to a specific subinterface of the form <interface-name>.<subinterface-index>
Context	network-instance name <i>string</i> protocols ldp discovery interfaces interface name <i>string</i>
String Length	5 to 25
Configurable	True
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

ipv4

Description	Enter the ipv4 context
Context	network-instance name <i>string</i> protocols ldp discovery interfaces interface name <i>string</i> ipv4
Tree	ipv4
Configurable	True
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

statistics

Description	Enter the statistics context
Context	network-instance name <i>string</i> protocols ldp discovery interfaces interface name <i>string</i> ipv4 statistics
Tree	statistics
Configurable	True
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

clear

Description	Resets all the LDP instance state counters to zero
Context	network-instance name <i>string</i> protocols ldp discovery interfaces interface name <i>string</i> ipv4 statistics clear
Tree	clear
Configurable	True
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

ipv6

Description	Enter the ipv6 context
Context	network-instance name <i>string</i> protocols ldp discovery interfaces interface name <i>string</i> ipv6
Tree	ipv6
Configurable	True
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

statistics

Description	Enter the statistics context
Context	network-instance name <i>string</i> protocols ldp discovery interfaces interface name <i>string</i> ipv6 statistics
Tree	statistics
Configurable	True
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

clear

Description	Resets all the LDP instance state counters to zero
Context	network-instance name <i>string</i> protocols ldp discovery interfaces interface name <i>string</i> ipv6 statistics clear
Tree	clear
Configurable	True
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

peers

Description	Enter the peers context
Context	network-instance name <i>string</i> protocols ldp peers
Tree	peers
Configurable	True
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

peer [lsr-id](#) (*ipv4-address* | *ipv6-address*) [label-space-id](#) *number*

Description	List of peers.
Context	network-instance name <i>string</i> protocols ldp peers peer lsr-id (<i>ipv4-address</i> <i>ipv6-address</i>) label-space-id <i>number</i>
Tree	peer
Configurable	True
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

lsr-id (*ipv4-address* | *ipv6-address*)

Description	The LSR ID of the peer, to identify the globally unique LSR. This leaf is used together with the leaf 'label-space-id' to form the LDP ID.
Context	network-instance name <i>string</i> protocols ldp peers peer lsr-id (<i>ipv4-address</i> <i>ipv6-address</i>) label-space-id <i>number</i>
Configurable	True
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

label-space-id *number*

Description	The Label Space ID of the peer, to identify a specific label space within the LSR. This is the last two octets of the LDP ID. This leaf is used together with the leaf 'lsr-id' to form the LDP ID.
Context	network-instance name <i>string</i> protocols ldp peers peer lsr-id (<i>ipv4-address</i> <i>ipv6-address</i>) label-space-id <i>number</i>
Configurable	True
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

reset

Description	Reset the LDP session by closing the TCP connection and establishing a new one.
Context	network-instance name <i>string</i> protocols ldp peers peer lsr-id (<i>ipv4-address</i> <i>ipv6-address</i>) label-space-id <i>number</i> reset
Tree	reset
Configurable	True
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

statistics

Description	Enter the statistics context
Context	network-instance name <i>string</i> protocols ldp peers peer lsr-id (<i>ipv4-address</i> <i>ipv6-address</i>) label-space-id <i>number</i> statistics
Tree	statistics
Configurable	True
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

clear

Description	Resets all the LDP instance state counters to zero
Context	network-instance name <i>string</i> protocols ldp peers peer lsr-id (<i>ipv4-address</i> <i>ipv6-address</i>) label-space-id <i>number</i> statistics clear
Tree	clear
Configurable	True
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

reset-overload

Description	Enable the reset-overload context
Context	network-instance name <i>string</i> protocols ldp reset-overload
Tree	reset-overload
Configurable	True
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

statistics

Description	Enter the statistics context
Context	network-instance name <i>string</i> protocols ldp statistics
Tree	statistics
Configurable	True
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

clear

Description	Resets all the LDP instance state counters to zero
Context	network-instance name <i>string</i> protocols ldp statistics clear
Tree	clear
Configurable	True
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

mld-snooping

Description	Enable the mld-snooping context
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Context	network-instance name <i>string</i> protocols mld-snooping
Tree	mld-snooping
Configurable	True
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5

interface [interface-name](#) *string*

Description	List of MLD SNOOPING interfaces
Context	network-instance name <i>string</i> protocols mld-snooping interface interface-name <i>string</i>
Tree	interface
Configurable	True
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5

interface-name *string*

Description	Reference to a specific subinterface of the form <interface-name>.<subinterface-index>
Context	network-instance name <i>string</i> protocols mld-snooping interface interface-name <i>string</i>
String Length	5 to 25
Configurable	True
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5

membership-groups

Description	Enter the membership-groups context
Context	network-instance name <i>string</i> protocols mld-snooping interface interface-name <i>string</i> membership-groups
Tree	membership-groups
Configurable	True
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5

clear

Description	Clear all MLD SNOOPING memberships for this interface
Context	network-instance name <i>string</i> protocols mld-snooping interface interface-name <i>string</i> membership-groups clear
Tree	clear
Configurable	True
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5

group [group](#) *string*

Description	Multicast group membership
Context	network-instance name <i>string</i> protocols mld-snooping interface interface-name <i>string</i> membership-groups group group <i>string</i>
Tree	group
Configurable	True
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5

group *string*

Description	Multicast address
Context	network-instance name <i>string</i> protocols mld-snooping interface interface-name <i>string</i> membership-groups group group <i>string</i>
Configurable	True
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5

clear

Description	Clear all MLD SNOOPING memberships for this group on this interface
Context	network-instance name <i>string</i> protocols mld-snooping interface interface-name <i>string</i> membership-groups group group <i>string</i> clear
Tree	clear
Configurable	True
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5

source *source string*

Description	Source addresses of multicast
Context	network-instance name string protocols mld-snooping interface interface-name string membership-groups group group string source source string
Tree	source
Configurable	True
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5

source *string*

Description	Source address of multicast
Context	network-instance name string protocols mld-snooping interface interface-name string membership-groups group group string source source string
Configurable	True
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5

clear

Description	Clear all MLD SNOOPING memberships for this source on this interface
Context	network-instance name string protocols mld-snooping interface interface-name string membership-groups group group string source source string clear
Tree	clear
Configurable	True
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5

statistics

Description	Enter the statistics context
Context	network-instance name string protocols mld-snooping interface interface-name string statistics
Tree	statistics
Configurable	True

Platforms 7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5

clear

Description Reset MLD SNOOPING statistics for this interface

Context [network-instance name](#) *string* [protocols mld-snooping interface interface-name](#) *string* [statistics clear](#)

Tree [clear](#)

Configurable True

Platforms 7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5

membership-groups

Description Enter the membership-groups context

Context [network-instance name](#) *string* [protocols mld-snooping membership-groups](#)

Tree [membership-groups](#)

Configurable True

Platforms 7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5

clear

Description Clear all MLD SNOOPING memberships for all interfaces

Context [network-instance name](#) *string* [protocols mld-snooping membership-groups clear](#)

Tree [clear](#)

Configurable True

Platforms 7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5

group [group](#) *string*

Description Multicast group membership

Context [network-instance name](#) *string* [protocols mld-snooping membership-groups group](#) [group](#) *string*

Tree [group](#)

Configurable	True
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5

group *string*

Description	Multicast address
Context	network-instance name <i>string</i> protocols mld-snooping membership-groups group <i>group</i> <i>string</i>
Configurable	True
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5

clear

Description	Clear all MLD SNOOPING memberships for this group on all interfaces
Context	network-instance name <i>string</i> protocols mld-snooping membership-groups group <i>group</i> <i>string</i> <i>clear</i>
Tree	clear
Configurable	True
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5

source [source](#) *string*

Description	Source addresses of multicast
Context	network-instance name <i>string</i> protocols mld-snooping membership-groups group <i>group</i> <i>string</i> source <i>source</i> <i>string</i>
Tree	source
Configurable	True
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5

source *string*

Description	Source address of multicast
Context	network-instance name <i>string</i> protocols mld-snooping membership-groups group <i>group</i> <i>string</i> source <i>source</i> <i>string</i>

Configurable	True
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5

clear

Description	Clear all MLD SNOOPING memberships for this source on all interfaces
Context	network-instance name <i>string</i> protocols mld-snooping membership-groups group group <i>string</i> source source <i>string</i> clear
Tree	clear
Configurable	True
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5

querier

Description	Enter the querier context
Context	network-instance name <i>string</i> protocols mld-snooping querier
Tree	querier
Configurable	True
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5

clear

Description	Clear all MLD SNOOPING querier info on all interfaces
Context	network-instance name <i>string</i> protocols mld-snooping querier clear
Tree	clear
Configurable	True
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5

statistics

Description	Enter the statistics context
Context	network-instance name <i>string</i> protocols mld-snooping statistics
Tree	statistics

Configurable	True
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5

clear

Description	Reset MLD SNOOPING statistics for all interfaces
Context	network-instance name <i>string</i> protocols mld-snooping statistics clear
Tree	clear
Configurable	True
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5

ospf

Description	Enable the ospf context
Context	network-instance name <i>string</i> protocols ospf
Tree	ospf
Configurable	True
Platforms	Supported on all platforms

instance [name](#) *string*

Description	List of OSPF protocol instances associated with this network-instance. Only a single instance is supported for now
Context	network-instance name <i>string</i> protocols ospf instance name <i>string</i>
Tree	instance
Configurable	True
Platforms	Supported on all platforms
Max. Elements	1

name *string*

Description	The name of the OSPF instance
Context	network-instance name <i>string</i> protocols ospf instance name <i>string</i>
String Length	1 to 255
Configurable	True

Platforms Supported on all platforms

area [area-id](#)

Description List of OSPF area

Context [network-instance name](#) *string* [protocols ospf instance name](#) *string* [area area-id](#)

Tree [area](#)

Configurable True

Platforms Supported on all platforms

area-id

Description Enter the area-id context

Context [network-instance name](#) *string* [protocols ospf instance name](#) *string* [area area-id](#)

Configurable True

Platforms Supported on all platforms

interface [interface-name](#) *string*

Description List of OSPF interfaces

Context [network-instance name](#) *string* [protocols ospf instance name](#) *string* [area area-id](#) [interface interface-name](#) *string*

Tree [interface](#)

Configurable True

Platforms Supported on all platforms

interface-name *string*

Description Reference to a specific subinterface of the form <interface-name>.<subinterface-index>

Context [network-instance name](#) *string* [protocols ospf instance name](#) *string* [area area-id](#) [interface interface-name](#) *string*

String Length 5 to 25

Configurable True

Platforms Supported on all platforms

neighbors

Description	Enter the neighbors context
Context	network-instance name <i>string</i> protocols ospf instance name <i>string</i> area area-id interface interface-name <i>string</i> neighbors
Tree	neighbors
Configurable	True
Platforms	Supported on all platforms

clear

Description	Reset all of the adjacencies on this interface
Context	network-instance name <i>string</i> protocols ospf instance name <i>string</i> area area-id interface interface-name <i>string</i> neighbors clear
Tree	clear
Configurable	True
Platforms	Supported on all platforms

ldp-synchronization

Description	Enter the ldp-synchronization context
Context	network-instance name <i>string</i> protocols ospf instance name <i>string</i> ldp-synchronization
Tree	ldp-synchronization
Configurable	True
Platforms	Supported on all platforms

exit

Description	Advertise the normal metric for all OSPF interfaces, even if some are configured for LDP synchronization and OSPF is not in sync with LDP on these interfaces
Context	network-instance name <i>string</i> protocols ospf instance name <i>string</i> ldp-synchronization exit
Tree	exit
Configurable	True
Platforms	Supported on all platforms

link-state-database

Description	The OSPF link state database
Context	network-instance name <i>string</i> protocols ospf instance name <i>string</i> link-state-database
Tree	link-state-database
Configurable	True
Platforms	Supported on all platforms

clear

Description	Clear the contents of the LSDB.
Context	network-instance name <i>string</i> protocols ospf instance name <i>string</i> link-state-database clear
Tree	clear
Configurable	True
Platforms	Supported on all platforms

manual-spf

Description	Enter the manual-spf context
Context	network-instance name <i>string</i> protocols ospf instance name <i>string</i> manual-spf
Tree	manual-spf
Configurable	True
Platforms	Supported on all platforms

run

Description	Run a SPF calculation.
Context	network-instance name <i>string</i> protocols ospf instance name <i>string</i> manual-spf run
Tree	run
Configurable	True
Platforms	Supported on all platforms

neighbors

Description	Container for OSPF neighbors tools
Context	network-instance name <i>string</i> protocols ospf instance name <i>string</i> neighbors
Tree	neighbors
Configurable	True
Platforms	Supported on all platforms

clear

Description	Clear all OSPF neighbors
Context	network-instance name <i>string</i> protocols ospf instance name <i>string</i> neighbors clear
Tree	clear
Configurable	True
Platforms	Supported on all platforms

neighbor [neighbor-id](#)

Description	Enter the neighbor list instance
Context	network-instance name <i>string</i> protocols ospf instance name <i>string</i> neighbors neighbor neighbor-id
Tree	neighbor
Configurable	True
Platforms	Supported on all platforms

neighbor-id

Description	The neighbor's ip-address in case of OSPFv2, the router-id otherwise
Context	network-instance name <i>string</i> protocols ospf instance name <i>string</i> neighbors neighbor neighbor-id
Configurable	True
Platforms	Supported on all platforms

clear

Description	Reset this neighbor in the OSPF instance
--------------------	--

Context	network-instance name <i>string</i> protocols ospf instance name <i>string</i> neighbors neighbor neighbor-id clear
Tree	clear
Configurable	True
Platforms	Supported on all platforms

overload

Description	Enter the overload context
Context	network-instance name <i>string</i> protocols ospf instance name <i>string</i> overload
Tree	overload
Configurable	True
Platforms	Supported on all platforms

clear

Description	Reset OSPF instance overload status.
Context	network-instance name <i>string</i> protocols ospf instance name <i>string</i> overload clear
Tree	clear
Configurable	True
Platforms	Supported on all platforms

statistics

Description	Enter the statistics context
Context	network-instance name <i>string</i> protocols ospf instance name <i>string</i> statistics
Tree	statistics
Configurable	True
Platforms	Supported on all platforms

clear

Description	Reset all of the OSPF instance statistics to zero.
Context	network-instance name <i>string</i> protocols ospf instance name <i>string</i> statistics clear
Tree	clear

Configurable	True
Platforms	Supported on all platforms

route-table

Description	Enable the route-table context
Context	network-instance name <i>string</i> route-table
Tree	route-table
Configurable	True
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

ipv4-unicast

Description	The container for the IPv4 unicast routing table of the network instance.
Context	network-instance name <i>string</i> route-table ipv4-unicast
Tree	ipv4-unicast
Configurable	True
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

longest-prefix-match

Description	Enter the longest-prefix-match context
Context	network-instance name <i>string</i> route-table ipv4-unicast longest-prefix-match
Tree	longest-prefix-match
Configurable	True
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

ipv4-address *string*

Description	The IPv4 address for which the longest prefix match route should be returned
--------------------	--

Context	network-instance name <i>string</i> route-table ipv4-unicast longest-prefix-match ipv4-address <i>string</i>
Tree	ipv4-address
Configurable	True
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

ipv6-unicast

Description	The container for the IPv6 unicast routing table of the network instance.
Context	network-instance name <i>string</i> route-table ipv6-unicast
Tree	ipv6-unicast
Configurable	True
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

longest-prefix-match

Description	Enter the longest-prefix-match context
Context	network-instance name <i>string</i> route-table ipv6-unicast longest-prefix-match
Tree	longest-prefix-match
Configurable	True
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

ipv6-address *string*

Description	The IPv6 address for which the longest prefix match route should be returned
Context	network-instance name <i>string</i> route-table ipv6-unicast longest-prefix-match ipv6-address <i>string</i>
Tree	ipv6-address
Configurable	True
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

traffic-engineering-policies

Description	Enter the traffic-engineering-policies context
Context	network-instance name <i>string</i> traffic-engineering-policies
Tree	traffic-engineering-policies
Configurable	True
Platforms	Supported on all platforms

policy [policy-name](#) *string*

Description	List of traffic engineering policies
Context	network-instance name <i>string</i> traffic-engineering-policies policy policy-name <i>string</i>
Tree	policy
Configurable	True
Platforms	Supported on all platforms

policy-name *string*

Description	The name of the traffic engineering policy
Context	network-instance name <i>string</i> traffic-engineering-policies policy policy-name <i>string</i>
String Length	1 to 255
Configurable	True
Platforms	Supported on all platforms

segment-list [segment-list-index](#) *number*

Description	Enter the segment-list list instance
Context	network-instance name <i>string</i> traffic-engineering-policies policy policy-name <i>string</i> segment-list segment-list-index <i>number</i>
Tree	segment-list
Configurable	True
Platforms	Supported on all platforms

segment-list-index *number*

Description	Index to enumerate the different segment lists of a TE policy.
Context	network-instance name <i>string</i> traffic-engineering-policies policy policy-name <i>string</i> segment-list segment-list-index <i>number</i>
Range	1 to 32
Configurable	True
Platforms	Supported on all platforms

clear

Description	Clear segment-list
Context	network-instance name <i>string</i> traffic-engineering-policies policy policy-name <i>string</i> segment-list segment-list-index <i>number</i> clear
Tree	clear
Configurable	True
Platforms	Supported on all platforms

resignal

Description	Trigger resignal for segment-list
Context	network-instance name <i>string</i> traffic-engineering-policies policy policy-name <i>string</i> segment-list segment-list-index <i>number</i> resignal
Tree	resignal
Configurable	True
Platforms	Supported on all platforms

16 tools oam

```

oam
+ ethcfm
+ clear-cfm-statistics
+ delete-auto-discovered-meps
+ delete-learned-remote-macs
+ domain domain-id string
+ association association-id string
+ delete-auto-discovered-meps
+ delete-learned-remote-macs
+ mep mep-id number
+ clear-cfm-statistics
+ delete-learned-remote-macs
+ on-demand
+ linktrace
+ target (unicast-mac-address | number)
+ ttl number
+ loopback
+ data-tlv-size number
+ priority number
+ target (unicast-mac-address | number | keyword)
+ remote-mep remote-mep-id number
+ delete-auto-discovered-meps
+ delete-learned-remote-macs
+ terminate-active-test keyword
+ delete-auto-discovered-meps
+ delete-learned-remote-macs
+ lsp-ping
+ ldp
+ clear
+ fec prefix (ipv4-prefix | ipv6-prefix)
+ destination-ip (ipv4-address | ipv6-address)
+ ecmp-interface-select string
+ ecmp-next-hop-select (ipv4-address | ipv6-address)
+ interval number
+ mpls-ttl number
+ probe-size number
+ send-count number
+ source-ip (ipv4-address | ipv6-address)
+ timeout number
+ traffic-class number
+ sr-isis
+ clear
+ prefix-sid prefix (ipv4-prefix | ipv6-prefix)
+ destination-ip (ipv4-address | ipv6-address)
+ ecmp-interface-select string
+ ecmp-next-hop-select (ipv4-address | ipv6-address)
+ igp-instance number
+ interval number
+ mpls-ttl number
+ probe-size number
+ send-count number
+ source-ip (ipv4-address | ipv6-address)
+ timeout number
+ traffic-class number
+ te-policy
+ sr-uncolored

```

```

+ clear
+ policy policy-name string protocol-origin keyword
+ destination-ip (ipv4-address | ipv6-address)
+ ecmp-interface-select string
+ ecmp-next-hop-select (ipv4-address | ipv6-address)
+ interval number
+ mpls-ttl number
+ probe-size number
+ segment-list-index number
+ send-count number
+ source-ip (ipv4-address | ipv6-address)
+ timeout number
+ traffic-class number
+ lsp-trace
+ ldp
+ clear
+ fec prefix (ipv4-prefix | ipv6-prefix)
+ destination-ip (ipv4-address | ipv6-address)
+ ecmp-interface-select string
+ ecmp-next-hop-select (ipv4-address | ipv6-address)
+ interval number
+ maximum-failures number
+ maximum-mpls-ttl number
+ minimum-mpls-ttl number
+ probe-count number
+ probe-size number
+ source-ip (ipv4-address | ipv6-address)
+ timeout number
+ traffic-class number
+ sr-isis
+ clear
+ prefix-sid prefix (ipv4-prefix | ipv6-prefix)
+ destination-ip (ipv4-address | ipv6-address)
+ ecmp-interface-select string
+ ecmp-next-hop-select (ipv4-address | ipv6-address)
+ igp-instance number
+ interval number
+ maximum-failures number
+ maximum-mpls-ttl number
+ minimum-mpls-ttl number
+ probe-count number
+ probe-size number
+ source-ip (ipv4-address | ipv6-address)
+ timeout number
+ traffic-class number
+ te-policy
+ sr-uncolored
+ clear
+ policy policy-name string protocol-origin keyword
+ destination-ip (ipv4-address | ipv6-address)
+ ecmp-interface-select string
+ ecmp-next-hop-select (ipv4-address | ipv6-address)
+ interval number
+ maximum-failures number
+ maximum-mpls-ttl number
+ minimum-mpls-ttl number
+ probe-count number
+ probe-size number
+ segment-list-index number
+ source-ip (ipv4-address | ipv6-address)
+ timeout number
+ traffic-class number
+ twamp
+ server

```

```
+ network-instance name string  
+ clear
```

16.1 oam Descriptions

oam

Description	Enclosing container for OAM management.
Context	oam
Tree	oam
Configurable	True
Platforms	Supported on all platforms

ethcfm

Description	Enter ETH-CFM on-demand tools
Context	oam ethcfm
Tree	ethcfm
Configurable	True
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

clear-cfm-statistics

Description	<p>Clears ETH-CFM statistics</p> <p>This clears the statistics at the relative hierarchy to the command instance. For example, if the command is issued directly under ethcfm all ETH-CFM system statistics are cleared. If the command is issued at the ethcfm domain association local-mep those individual mep OpCode statistics will be cleared.</p>
Context	oam ethcfm clear-cfm-statistics
Tree	clear-cfm-statistics
Configurable	True
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

delete-auto-discovered-meps

Description	<p>Delete discovered meps from the remote mep database</p> <p>This deletes the entries at the relative hierarchy to the command instance. For example, if the command is issued directly under ethcfm all entries are</p>
--------------------	---

deleted. If the command is issued at the ethcfm domain association local-mep remote-mep that specific entry will be deleted.

Context	oam ethcfm delete-auto-discovered-meps
Tree	delete-auto-discovered-meps
Configurable	True
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

delete-learned-remote-macs

Description	Delete learned remote macs from the mep mac table This deletes the entries at the relative hierarchy to the command instance. For example, if the command is issued directly under ethcfm all entries are deleted. If the command is issued at the ethcfm domain association local-mep remote-mep that specific entry will be delete.
Context	oam ethcfm delete-learned-remote-macs
Tree	delete-learned-remote-macs
Configurable	True
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

domain [domain-id string](#)

Description	Enter the domain list instance
Context	oam ethcfm domain domain-id string
Tree	domain
Configurable	True
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

domain-id [string](#)

Description	Enter the domain-id context
Context	oam ethcfm domain domain-id string
Configurable	True
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

association [association-id string](#)

Description	Enter the association list instance
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Context	oam ethcfm domain domain-id string association association-id string
Tree	association
Configurable	True
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

association-id *string*

Description	Enter the association-id context
Context	oam ethcfm domain domain-id string association association-id string
Configurable	True
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

delete-auto-discovered-meps

Description	Delete discovered meps from the remote mep database This deletes the entries at the relative hierarchy to the command instance. For example, if the command is issued directly under ethcfm all entries are deleted. If the command is issued at the ethcfm domain association local-mep remote-mep that specific entry will be deleted.
Context	oam ethcfm domain domain-id string association association-id string delete-auto-discovered-meps
Tree	delete-auto-discovered-meps
Configurable	True
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

delete-learned-remote-macs

Description	Delete learned remote macs from the mep mac table This deletes the entries at the relative hierarchy to the command instance. For example, if the command is issued directly under ethcfm all entries are deleted. If the command is issued at the ethcfm domain association local-mep remote-mep that specific entry will be delete.
Context	oam ethcfm domain domain-id string association association-id string delete-learned-remote-macs
Tree	delete-learned-remote-macs
Configurable	True
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

mep mep-id number

Description	Enter the mep list instance
Context	oam ethcfm domain domain-id string association association-id string mep mep-id number
Tree	mep
Configurable	True
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

mep-id number

Description	Enter the mep-id context
Context	oam ethcfm domain domain-id string association association-id string mep mep-id number
Configurable	True
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

clear-cfm-statistics

Description	<p>Clears ETH-CFM statistics</p> <p>This clears the statistics at the relative hierarchy to the command instance. For example, if the command is issued directly under ethcfm all ETH-CFM system statistics are cleared. If the command is issued at the ethcfm domain association local-mep those individual mep OpCode statistics will be cleared.</p>
Context	oam ethcfm domain domain-id string association association-id string mep mep-id number clear-cfm-statistics
Tree	clear-cfm-statistics
Configurable	True
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

delete-learned-remote-macs

Description	<p>Delete learned remote macs from the mep mac table</p> <p>This deletes the entries at the relative hierarchy to the command instance. For example, if the command is issued directly under ethcfm all entries are deleted. If the command is issued at the ethcfm domain association local-mep remote-mep that specific entry will be delete.</p>
Context	oam ethcfm domain domain-id string association association-id string mep mep-id number delete-learned-remote-macs

Tree	delete-learned-remote-macs
Configurable	True
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

on-demand

Description	Enter Eth-CFM tests context
Context	oam ethcfm domain domain-id string association association-id string mep mep-id number on-demand
Tree	on-demand
Configurable	True
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

linktrace

Description	Perform an Eth-CFM linktrace test
Context	oam ethcfm domain domain-id string association association-id string mep mep-id number on-demand linktrace
Tree	linktrace
Configurable	True
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

target (*unicast-mac-address* | *number*)

Description	Target MAC address or MEP ID for the test.
Context	oam ethcfm domain domain-id string association association-id string mep mep-id number on-demand linktrace target (<i>unicast-mac-address</i> <i>number</i>)
Tree	target
Range	1 to 8191
Configurable	True
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

ttl *number*

Description	Time to live value encoded into the CFM PDU
Context	oam ethcfm domain domain-id string association association-id string mep mep-id number on-demand linktrace ttl <i>number</i>

Tree	ttl
Range	0 to 255
Default	64
Configurable	True
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

loopback

Description	Perform an Eth-CFM loopback test
Context	oam ethcfm domain domain-id string association association-id string mep mep-id number on-demand loopback
Tree	loopback
Configurable	True
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

data-tlv-size *number*

Description	The Data TLV byte count for a LBM test
Context	oam ethcfm domain domain-id string association association-id string mep mep-id number on-demand loopback data-tlv-size number
Tree	data-tlv-size
Range	0 3 to 9502
Default	0
Units	bytes
Configurable	True
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

priority *number*

Description	The dot1p priority to be used in the transmitted LBM test packet
Context	oam ethcfm domain domain-id string association association-id string mep mep-id number on-demand loopback priority number
Tree	priority
Range	0 to 7
Default	7
Configurable	True

Platforms 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

target (*unicast-mac-address* | *number* | *keyword*)

Description Target MAC address or MEP ID or multicast keyword for the test
The multicast enumeration will be replaced with a Class 1 MAC address in the form 01:80:c2:00:00:3x. Where x = the domain level.

Context [oam ethcfm domain domain-id string association association-id string mep mep-id number on-demand loopback target \(unicast-mac-address | number | keyword\)](#)

Tree [target](#)

Range 1 to 8191

Options

- multicast

Configurable True

Platforms 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

remote-mep [remote-mep-id number](#)

Description Remote MEP ID from the remote MEP database

Context [oam ethcfm domain domain-id string association association-id string mep mep-id number remote-mep remote-mep-id number](#)

Tree [remote-mep](#)

Configurable True

Platforms 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

remote-mep-id *number*

Description Enter the remote-mep-id context

Context [oam ethcfm domain domain-id string association association-id string mep mep-id number remote-mep remote-mep-id number](#)

Configurable True

Platforms 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

delete-auto-discovered-meps

Description Delete discovered meps from the remote mep database
This deletes the entries at the relative hierarchy to the command instance. For example, if the command is issued directly under ethcfm all entries are

deleted. If the command is issued at the ethcfm domain association local-mep remote-mep that specific entry will be deleted.

Context	oam ethcfm domain domain-id string association association-id string mep mep-id number remote-mep remote-mep-id number delete-auto-discovered-meps
Tree	delete-auto-discovered-meps
Configurable	True
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

delete-learned-remote-macs

Description	Delete learned remote macs from the mep mac table This deletes the entries at the relative hierarchy to the command instance. For example, if the command is issued directly under ethcfm all entries are deleted. If the command is issued at the ethcfm domain association local-mep remote-mep that specific entry will be delete.
Context	oam ethcfm domain domain-id string association association-id string mep mep-id number remote-mep remote-mep-id number delete-learned-remote-macs
Tree	delete-learned-remote-macs
Configurable	True
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

terminate-active-test *keyword*

Description	Enter the terminate-active-test context
Context	oam ethcfm domain domain-id string association association-id string mep mep-id number terminate-active-test keyword
Tree	terminate-active-test
Options	<ul style="list-style-type: none"> • loopback • linktrace
Configurable	True
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

delete-auto-discovered-meps

Description	Delete discovered meps from the remote mep database This deletes the entries at the relative hierarchy to the command instance. For example, if the command is issued directly under ethcfm all entries are
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deleted. If the command is issued at the ethcfm domain association local-mep remote-mep that specific entry will be deleted.

Context	oam ethcfm domain domain-id string delete-auto-discovered-meps
Tree	delete-auto-discovered-meps
Configurable	True
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

delete-learned-remote-macs

Description	<p>Delete learned remote macs from the mep mac table</p> <p>This deletes the entries at the relative hierarchy to the command instance. For example, if the command is issued directly under ethcfm all entries are deleted. If the command is issued at the ethcfm domain association local-mep remote-mep that specific entry will be delete.</p>
Context	oam ethcfm domain domain-id string delete-learned-remote-macs
Tree	delete-learned-remote-macs
Configurable	True
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

Isp-ping

Description	Initiate LSP ping of the remote endpoint of an MPLS or segment routing tunnel
Context	oam lsp-ping
Tree	lsp-ping
Configurable	True
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

ldp

Description	Parameters required to ping the endpoint of an LDP tunnel
Context	oam lsp-ping ldp
Tree	ldp
Configurable	True
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

clear

Description	Clear all LDP ping session transmit and receive packet counts and all error counts
Context	oam lsp-ping ldp clear
Tree	clear
Configurable	True
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

fec prefix (*ipv4-prefix* | *ipv6-prefix*)

Description	Enter the fec list instance
Context	oam lsp-ping ldp fec prefix (<i>ipv4-prefix</i> <i>ipv6-prefix</i>)
Tree	fec
Configurable	True
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

prefix (*ipv4-prefix* | *ipv6-prefix*)

Description	The IPv4 or IPv6 prefix associated with the FEC This is the destination that is being pinged.
Context	oam lsp-ping ldp fec prefix (<i>ipv4-prefix</i> <i>ipv6-prefix</i>)
Configurable	True
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

destination-ip (*ipv4-address* | *ipv6-address*)

Description	The destination IP address of the UDP/IP MPLS echo request message This should be a non-forwardable address in the 127/8 address block (or the 0:0:0:0:FFFF:7F00:0/104 IPv6 address block). Varying this address can help to exercise different ECMP paths towards the destination. By default, the destination address is selected randomly from these address blocks.
Context	oam lsp-ping ldp fec prefix (<i>ipv4-prefix</i> <i>ipv6-prefix</i>) destination-ip (<i>ipv4-address</i> <i>ipv6-address</i>)
Tree	destination-ip
Configurable	True
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

ecmp-interface-select *string*

Description	Send the LSP ping messages out the specified subinterface If this router has multiple ECMP next-hops to the endpoint of the MPLS tunnel this can select one of those subinterfaces specifically
Context	oam lsp-ping ldp fec prefix (ipv4-prefix ipv6-prefix) ecmp-interface-select string
Tree	ecmp-interface-select
Configurable	True
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

ecmp-next-hop-select (*ipv4-address | ipv6-address*)

Description	Send the LSP ping messages to the specified next-hop If this router has multiple ECMP next-hops to the endpoint of the MPLS tunnel this can select one of those next-hops specifically
Context	oam lsp-ping ldp fec prefix (ipv4-prefix ipv6-prefix) ecmp-next-hop-select (ipv4-address ipv6-address)
Tree	ecmp-next-hop-select
Configurable	True
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

interval *number*

Description	The time interval between successive MPLS echo-request messages in case of send-count > 1
Context	oam lsp-ping ldp fec prefix (ipv4-prefix ipv6-prefix) interval number
Tree	interval
Range	1 to 10
Default	1
Units	seconds
Configurable	True
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

mpls-ttl *number*

Description	The TTL value written into the topmost label stack entry of the MPLS echo-request message This TTL is expected to be decremented at each hop along the path to the destination. If TTL reaches 1 the segment routing packet will be discarded due to TTL expiry and the ping will fail if the destination has not been reached yet.
Context	oam lsp-ping ldp fec prefix (ipv4-prefix ipv6-prefix) mpls-ttl <i>number</i>
Tree	mpls-ttl
Range	1 to 255
Default	255
Configurable	True
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

probe-size *number*

Description	The size of the IP packet MPLS echo-request message. Probe size does not include MPLS headers, if any
Context	oam lsp-ping ldp fec prefix (ipv4-prefix ipv6-prefix) probe-size <i>number</i>
Tree	probe-size
Range	1 to 9500
Default	1
Units	bytes
Configurable	True
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

send-count *number*

Description	The number of MPLS echo-request messages to be sent in sequence
Context	oam lsp-ping ldp fec prefix (ipv4-prefix ipv6-prefix) send-count <i>number</i>
Tree	send-count
Range	1 to 100
Default	1
Configurable	True
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

source-ip (*ipv4-address* | *ipv6-address*)

Description	The source IP address of the UDP/IP MPLS echo request message This should be a routable address of the router. This will be destination of the MPLS echo reply message sent back to the sender. By default this is the system address of the default network-instance; if the default network-instance does not have system interface then it will be primary address of the lowest numbered loopback subinterface of the default network-instance.
Context	oam lsp-ping ldp fec prefix (<i>ipv4-prefix</i> <i>ipv6-prefix</i>) source-ip (<i>ipv4-address</i> <i>ipv6-address</i>)
Tree	source-ip
Configurable	True
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

timeout *number*

Description	The maximum time the sender waits to receive an MPLS echo-reply message before considering that the ping failed
Context	oam lsp-ping ldp fec prefix (<i>ipv4-prefix</i> <i>ipv6-prefix</i>) timeout <i>number</i>
Tree	timeout
Range	1 to 60
Default	3
Units	seconds
Configurable	True
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

traffic-class *number*

Description	MPLS Header Traffic Class/Exp value
Context	oam lsp-ping ldp fec prefix (<i>ipv4-prefix</i> <i>ipv6-prefix</i>) traffic-class <i>number</i>
Tree	traffic-class
Range	0 to 7
Default	7
Configurable	True
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

sr-isis

Description	Parameters required to ping the endpoint of an SR-ISIS tunnel
Context	oam lsp-ping sr-isis
Tree	sr-isis
Configurable	True
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

clear

Description	Clear all SR-ISIS ping session transmit and receive packet counts and all error counts
Context	oam lsp-ping sr-isis clear
Tree	clear
Configurable	True
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

prefix-sid [prefix](#) (*ipv4-prefix* | *ipv6-prefix*)

Description	Enter the prefix-sid list instance
Context	oam lsp-ping sr-isis prefix-sid prefix (<i>ipv4-prefix</i> <i>ipv6-prefix</i>)
Tree	prefix-sid
Configurable	True
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

prefix (*ipv4-prefix* | *ipv6-prefix*)

Description	The IPv4 or IPv6 prefix associated with the SID This is the destination that is being pinged.
Context	oam lsp-ping sr-isis prefix-sid prefix (<i>ipv4-prefix</i> <i>ipv6-prefix</i>)
Configurable	True
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

destination-ip (*ipv4-address* | *ipv6-address*)

Description	The destination IP address of the UDP/IP MPLS echo request message
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This should be a non-forwardable address in the 127/8 address block (or the 0:0:0:0:FFFF:7F00:0/104 IPv6 address block). Varying this address can help to exercise different ECMP paths towards the destination. By default, the destination address is selected randomly from these address blocks.

Context	oam lsp-ping sr-isis prefix-sid prefix (ipv4-prefix ipv6-prefix) destination-ip (ipv4-address ipv6-address)
Tree	destination-ip
Configurable	True
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

ecmp-interface-select *string*

Description	Send the LSP ping messages out the specified subinterface If this router has multiple ECMP next-hops to the endpoint of the MPLS tunnel this can select one of those subinterfaces specifically
Context	oam lsp-ping sr-isis prefix-sid prefix (ipv4-prefix ipv6-prefix) ecmp-interface-select string
Tree	ecmp-interface-select
Configurable	True
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

ecmp-next-hop-select (*ipv4-address | ipv6-address*)

Description	Send the LSP ping messages to the specified next-hop If this router has multiple ECMP next-hops to the endpoint of the MPLS tunnel this can select one of those next-hops specifically
Context	oam lsp-ping sr-isis prefix-sid prefix (ipv4-prefix ipv6-prefix) ecmp-next-hop-select (ipv4-address ipv6-address)
Tree	ecmp-next-hop-select
Configurable	True
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

igp-instance *number*

Description	ISIS instance id
Context	oam lsp-ping sr-isis prefix-sid prefix (ipv4-prefix ipv6-prefix) igp-instance number
Tree	igp-instance

Range	0 to 255
Default	0
Configurable	True
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

interval *number*

Description	The time interval between successive MPLS echo-request messages in case of send-count > 1
Context	oam lsp-ping sr-isis prefix-sid prefix (ipv4-prefix ipv6-prefix) interval number
Tree	interval
Range	1 to 10
Default	1
Units	seconds
Configurable	True
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

mpls-ttl *number*

Description	The TTL value written into the topmost label stack entry of the MPLS echo-request message This TTL is expected to be decremented at each hop along the path to the destination. If TTL reaches 1 the segment routing packet will be discarded due to TTL expiry and the ping will fail if the destination has not been reached yet.
Context	oam lsp-ping sr-isis prefix-sid prefix (ipv4-prefix ipv6-prefix) mpls-ttl number
Tree	mpls-ttl
Range	1 to 255
Default	255
Configurable	True
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

probe-size *number*

Description	The size of the IP packet MPLS echo-request message. Probe size does not include MPLS headers, if any
Context	oam lsp-ping sr-isis prefix-sid prefix (ipv4-prefix ipv6-prefix) probe-size number

Tree	probe-size
Range	1 to 9500
Default	1
Units	bytes
Configurable	True
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

send-count *number*

Description	The number of MPLS echo-request messages to be sent in sequence
Context	oam lsp-ping sr-isis prefix-sid prefix (ipv4-prefix ipv6-prefix) send-count number
Tree	send-count
Range	1 to 100
Default	1
Configurable	True
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

source-ip (*ipv4-address | ipv6-address*)

Description	The source IP address of the UDP/IP MPLS echo request message This should be a routable address of the router. This will be destination of the MPLS echo reply message sent back to the sender. By default this is the system address of the default network-instance; if the default network-instance does not have system interface then it will be primary address of the lowest numbered loopback subinterface of the default network-instance.
Context	oam lsp-ping sr-isis prefix-sid prefix (ipv4-prefix ipv6-prefix) source-ip (ipv4-address ipv6-address)
Tree	source-ip
Configurable	True
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

timeout *number*

Description	The maximum time the sender waits to receive an MPLS echo-reply message before considering that the ping failed
Context	oam lsp-ping sr-isis prefix-sid prefix (ipv4-prefix ipv6-prefix) timeout number
Tree	timeout

Range	1 to 60
Default	3
Units	seconds
Configurable	True
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

traffic-class *number*

Description	MPLS Header Traffic Class/Exp value
Context	oam lsp-ping sr-isis prefix-sid prefix (ipv4-prefix ipv6-prefix) traffic-class number
Tree	traffic-class
Range	0 to 7
Default	7
Configurable	True
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

te-policy

Description	Parameters required to ping the endpoint of a TE-Policy tunnel
Context	oam lsp-ping te-policy
Tree	te-policy
Configurable	True
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

sr-uncolored

Description	Enter the sr-uncolored context
Context	oam lsp-ping te-policy sr-uncolored
Tree	sr-uncolored
Configurable	True
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

clear

Description	Clear all uncolored MPLS TE-Policy ping session transmit and receive packet counts and all error counts
Context	oam lsp-ping te-policy sr-uncolored clear
Tree	clear
Configurable	True
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

policy [policy-name string protocol-origin keyword](#)

Description	Enter the policy list instance
Context	oam lsp-ping te-policy sr-uncolored policy policy-name string protocol-origin keyword
Tree	policy
Configurable	True
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

policy-name string

Description	Name of Uncolored Traffic Engineering Policy to be tested. ny available primary or standby or active secondaty candidate-path can be probed.
Context	oam lsp-ping te-policy sr-uncolored policy policy-name string protocol-origin keyword
String Length	1 to 255
Configurable	True
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

protocol-origin keyword

Description	Uncolored Traffic Engineering Policy, origination source. The method Policy path is computed. This list includes Path Computation Engine, explicitly configured paths, etc.
Context	oam lsp-ping te-policy sr-uncolored policy policy-name string protocol-origin keyword
Options	<ul style="list-style-type: none"> • pcep PCEP used as signalling mechanism for the candidate path • bgp

- BGP used as signalling mechanism for the candidate path
- local
- Management interface used for candidate path instantiation

Configurable	True
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

destination-ip (*ipv4-address* | *ipv6-address*)

Description	The destination IP address of the UDP/IP MPLS echo request message This should be a non-forwardable address in the 127/8 address block (or the 0:0:0:0:FFFF:7F00:0/104 IPv6 address block). Varying this address can help to exercise different ECMP paths towards the destination. By default, the destination address is selected randomly from these address blocks.
Context	oam lsp-ping te-policy sr-uncolored policy policy-name string protocol-origin keyword destination-ip (<i>ipv4-address</i> <i>ipv6-address</i>)
Tree	destination-ip
Configurable	True
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

ecmp-interface-select *string*

Description	Send the LSP ping messages out the specified subinterface If this router has multiple ECMP next-hops to the endpoint of the MPLS tunnel this can select one of those subinterfaces specifically
Context	oam lsp-ping te-policy sr-uncolored policy policy-name string protocol-origin keyword ecmp-interface-select <i>string</i>
Tree	ecmp-interface-select
Configurable	True
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

ecmp-next-hop-select (*ipv4-address* | *ipv6-address*)

Description	Send the LSP ping messages to the specified next-hop If this router has multiple ECMP next-hops to the endpoint of the MPLS tunnel this can select one of those next-hops specifically
Context	oam lsp-ping te-policy sr-uncolored policy policy-name string protocol-origin keyword ecmp-next-hop-select (<i>ipv4-address</i> <i>ipv6-address</i>)
Tree	ecmp-next-hop-select

Configurable	True
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

interval *number*

Description	The time interval between successive MPLS echo-request messages in case of send-count > 1
Context	oam lsp-ping te-policy sr-uncolored policy policy-name <i>string</i> protocol-origin keyword interval <i>number</i>
Tree	interval
Range	1 to 10
Default	1
Units	seconds
Configurable	True
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

mpls-ttl *number*

Description	The TTL value written into the topmost label stack entry of the MPLS echo-request message This TTL is expected to be decremented at each hop along the path to the destination. If TTL reaches 1 the segment routing packet will be discarded due to TTL expiry and the ping will fail if the destination has not been reached yet.
Context	oam lsp-ping te-policy sr-uncolored policy policy-name <i>string</i> protocol-origin keyword mpls-ttl <i>number</i>
Tree	mpls-ttl
Range	1 to 255
Default	255
Configurable	True
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

probe-size *number*

Description	The size of the IP packet MPLS echo-request message. Probe size does not include MPLS headers, if any
Context	oam lsp-ping te-policy sr-uncolored policy policy-name <i>string</i> protocol-origin keyword probe-size <i>number</i>

Tree	probe-size
Range	1 to 9500
Default	1
Units	bytes
Configurable	True
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

segment-list-index *number*

Description	Uncolored Traffic Engineering Policy active segment-list index
Context	oam lsp-ping te-policy sr-uncolored policy policy-name string protocol-origin keyword segment-list-index number
Tree	segment-list-index
Configurable	True
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

send-count *number*

Description	The number of MPLS echo-request messages to be sent in sequence
Context	oam lsp-ping te-policy sr-uncolored policy policy-name string protocol-origin keyword send-count number
Tree	send-count
Range	1 to 100
Default	1
Configurable	True
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

source-ip (*ipv4-address* | *ipv6-address*)

Description	The source IP address of the UDP/IP MPLS echo request message This should be a routable address of the router. This will be destination of the MPLS echo reply message sent back to the sender. By default this is the system address of the default network-instance; if the default network-instance does not have system interface then it will be primary address of the lowest numbered loopback subinterface of the default network-instance.
Context	oam lsp-ping te-policy sr-uncolored policy policy-name string protocol-origin keyword source-ip (ipv4-address ipv6-address)
Tree	source-ip

Configurable	True
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

timeout *number*

Description	The maximum time the sender waits to receive an MPLS echo-reply message before considering that the ping failed
Context	oam lsp-ping te-policy sr-uncolored policy policy-name string protocol-origin keyword timeout number
Tree	timeout
Range	1 to 60
Default	3
Units	seconds
Configurable	True
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

traffic-class *number*

Description	MPLS Header Traffic Class/Exp value
Context	oam lsp-ping te-policy sr-uncolored policy policy-name string protocol-origin keyword traffic-class number
Tree	traffic-class
Range	0 to 7
Default	7
Configurable	True
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

lsp-trace

Description	Perform LSP trace of the path towards the remote endpoint of an MPLS or segment routing tunnel
Context	oam lsp-trace
Tree	lsp-trace
Configurable	True
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

ldp

Description	Parameters required to trace a path towards the endpoint of an LDP tunnel
Context	oam lsp-trace ldp
Tree	ldp
Configurable	True
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

clear

Description	Clear all LDP trace session transmit and receive packet counts and all error counts
Context	oam lsp-trace ldp clear
Tree	clear
Configurable	True
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

fec prefix (*ipv4-prefix* | *ipv6-prefix*)

Description	Enter the fec list instance
Context	oam lsp-trace ldp fec prefix (<i>ipv4-prefix</i> <i>ipv6-prefix</i>)
Tree	fec
Configurable	True
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

prefix (*ipv4-prefix* | *ipv6-prefix*)

Description	The IPv4 or IPv6 prefix associated with the FEC This is the destination that is being traced.
Context	oam lsp-trace ldp fec prefix (<i>ipv4-prefix</i> <i>ipv6-prefix</i>)
Configurable	True
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

destination-ip (*ipv4-address* | *ipv6-address*)

Description	The destination IP address of the UDP/IP MPLS trace message
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This should be a non-forwardable address in the 127/8 address block (or the 0:0:0:0:FFFF:7F00:0/104 IPv6 address block). Varying this address can help to exercise different ECMP paths towards the destination. By default, the destination address is selected randomly from these address blocks.

Context	oam lsp-trace ldp fec prefix (ipv4-prefix ipv6-prefix) destination-ip (ipv4-address ipv6-address)
Tree	destination-ip
Configurable	True
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

ecmp-interface-select *string*

Description	Send the LSP trace messages out the specified subinterface If this router has multiple ECMP next-hops to the endpoint of the MPLS tunnel this can select one of those subinterfaces specifically
Context	oam lsp-trace ldp fec prefix (ipv4-prefix ipv6-prefix) ecmp-interface-select string
Tree	ecmp-interface-select
Configurable	True
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

ecmp-next-hop-select (*ipv4-address | ipv6-address*)

Description	Send the LSP trace messages to the specified next-hop If this router has multiple ECMP next-hops to the endpoint of the MPLS tunnel this can select one of those next-hops specifically
Context	oam lsp-trace ldp fec prefix (ipv4-prefix ipv6-prefix) ecmp-next-hop-select (ipv4-address ipv6-address)
Tree	ecmp-next-hop-select
Configurable	True
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

interval *number*

Description	The time interval between successive MPLS trace messages while incrementing the TTL
Context	oam lsp-trace ldp fec prefix (ipv4-prefix ipv6-prefix) interval number
Tree	interval

Range	1 to 10
Default	1
Units	seconds
Configurable	True
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

maximum-failures *number*

Description	The maximum number of consecutive MPLS trace requests that do not receive a reply before the trace operation fails for a given TTL
Context	oam lsp-trace ldp fec prefix (ipv4-prefix ipv6-prefix) maximum-failures number
Tree	maximum-failures
Range	1 to 255
Default	5
Configurable	True
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

maximum-mpls-ttl *number*

Description	The maximum or final TTL value of the MPLS trace messages
Context	oam lsp-trace ldp fec prefix (ipv4-prefix ipv6-prefix) maximum-mpls-ttl number
Tree	maximum-mpls-ttl
Range	1 to 255
Default	30
Configurable	True
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

minimum-mpls-ttl *number*

Description	The minimum or starting TTL value of the MPLS trace messages
Context	oam lsp-trace ldp fec prefix (ipv4-prefix ipv6-prefix) minimum-mpls-ttl number
Tree	minimum-mpls-ttl
Range	1 to 255
Default	1

Configurable	True
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

probe-count *number*

Description	The maximum number of MPLS trace messages sent per hop
Context	oam lsp-trace ldp fec prefix (ipv4-prefix ipv6-prefix) probe-count <i>number</i>
Tree	probe-count
Range	1 to 10
Default	1
Configurable	True
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

probe-size *number*

Description	The size of the IP packet MPLS trace message. Probe size does not include MPLS headers, if any
Context	oam lsp-trace ldp fec prefix (ipv4-prefix ipv6-prefix) probe-size <i>number</i>
Tree	probe-size
Range	1 to 9500
Default	1
Units	bytes
Configurable	True
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

source-ip (*ipv4-address* | *ipv6-address*)

Description	The source IP address of the UDP/IP MPLS trace message This should be a routable address of the router. This will be destination of the MPLS echo reply message sent back to the sender. By default this is the system address of the default network-instance; if the default network-instance does not have system interface then it will be primary address of the lowest numbered loopback subinterface of the default network-instance.
Context	oam lsp-trace ldp fec prefix (ipv4-prefix ipv6-prefix) source-ip (<i>ipv4-address</i> <i>ipv6-address</i>)
Tree	source-ip
Configurable	True

Platforms 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

timeout *number*

Description The maximum time the sender waits to receive an MPLS trace message before considering that the ping failed

Context [oam lsp-trace ldp fec prefix \(ipv4-prefix | ipv6-prefix\) timeout number](#)

Tree [timeout](#)

Range 1 to 60

Default 3

Units seconds

Configurable True

Platforms 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

traffic-class *number*

Description MPLS Header Traffic Class/Exp value

Context [oam lsp-trace ldp fec prefix \(ipv4-prefix | ipv6-prefix\) traffic-class number](#)

Tree [traffic-class](#)

Range 0 to 7

Default 7

Configurable True

Platforms 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

sr-isis

Description Parameters required to trace a path towards the endpoint of an SR-ISIS tunnel

Context [oam lsp-trace sr-isis](#)

Tree [sr-isis](#)

Configurable True

Platforms 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

clear

Description Clear all SR-ISIS trace session transmit and receive packet counts and all error counts

Context	oam lsp-trace sr-isis clear
Tree	clear
Configurable	True
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

prefix-sid [prefix](#) (*ipv4-prefix* | *ipv6-prefix*)

Description	Enter the prefix-sid list instance
Context	oam lsp-trace sr-isis prefix-sid prefix (<i>ipv4-prefix</i> <i>ipv6-prefix</i>)
Tree	prefix-sid
Configurable	True
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

prefix (*ipv4-prefix* | *ipv6-prefix*)

Description	The IPv4 or IPv6 prefix associated with the SID This is the destination that is being traced.
Context	oam lsp-trace sr-isis prefix-sid prefix (<i>ipv4-prefix</i> <i>ipv6-prefix</i>)
Configurable	True
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

destination-ip (*ipv4-address* | *ipv6-address*)

Description	The destination IP address of the UDP/IP MPLS trace message This should be a non-forwardable address in the 127/8 address block (or the 0:0:0:0:FFFF:7F00:0/104 IPv6 address block). Varying this address can help to exercise different ECMP paths towards the destination. By default, the destination address is selected randomly from these address blocks.
Context	oam lsp-trace sr-isis prefix-sid prefix (<i>ipv4-prefix</i> <i>ipv6-prefix</i>) destination-ip (<i>ipv4-address</i> <i>ipv6-address</i>)
Tree	destination-ip
Configurable	True
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

ecmp-interface-select *string*

Description	Send the LSP trace messages out the specified subinterface
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If this router has multiple ECMP next-hops to the endpoint of the MPLS tunnel this can select one of those subinterfaces specifically

Context	oam lsp-trace sr-isis prefix-sid prefix (ipv4-prefix ipv6-prefix) ecmp-interface-select string
Tree	ecmp-interface-select
Configurable	True
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

ecmp-next-hop-select (*ipv4-address | ipv6-address*)

Description	Send the LSP trace messages to the specified next-hop If this router has multiple ECMP next-hops to the endpoint of the MPLS tunnel this can select one of those next-hops specifically
Context	oam lsp-trace sr-isis prefix-sid prefix (ipv4-prefix ipv6-prefix) ecmp-next-hop-select (ipv4-address ipv6-address)
Tree	ecmp-next-hop-select
Configurable	True
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

igp-instance *number*

Description	ISIS instance id
Context	oam lsp-trace sr-isis prefix-sid prefix (ipv4-prefix ipv6-prefix) igp-instance number
Tree	igp-instance
Range	0 to 255
Default	0
Configurable	True
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

interval *number*

Description	The time interval between successive MPLS trace messages while incrementing the TTL
Context	oam lsp-trace sr-isis prefix-sid prefix (ipv4-prefix ipv6-prefix) interval number
Tree	interval
Range	1 to 10

Default	1
Units	seconds
Configurable	True
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

maximum-failures *number*

Description	The maximum number of consecutive MPLS trace requests that do not receive a reply before the trace operation fails for a given TTL
Context	oam lsp-trace sr-isis prefix-sid prefix (ipv4-prefix ipv6-prefix) maximum-failures number
Tree	maximum-failures
Range	1 to 255
Default	5
Configurable	True
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

maximum-mpls-ttl *number*

Description	The maximum or final TTL value of the MPLS trace messages
Context	oam lsp-trace sr-isis prefix-sid prefix (ipv4-prefix ipv6-prefix) maximum-mpls-ttl number
Tree	maximum-mpls-ttl
Range	1 to 255
Default	30
Configurable	True
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

minimum-mpls-ttl *number*

Description	The minimum or starting TTL value of the MPLS trace messages
Context	oam lsp-trace sr-isis prefix-sid prefix (ipv4-prefix ipv6-prefix) minimum-mpls-ttl number
Tree	minimum-mpls-ttl
Range	1 to 255
Default	1
Configurable	True

Platforms 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

probe-count *number*

Description The maximum number of MPLS trace messages sent per hop

Context [oam lsp-trace sr-isis prefix-sid prefix \(ipv4-prefix | ipv6-prefix\) probe-count number](#)

Tree [probe-count](#)

Range 1 to 10

Default 1

Configurable True

Platforms 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

probe-size *number*

Description The size of the IP packet MPLS trace message. Probe size does not include MPLS headers, if any

Context [oam lsp-trace sr-isis prefix-sid prefix \(ipv4-prefix | ipv6-prefix\) probe-size number](#)

Tree [probe-size](#)

Range 1 to 9500

Default 1

Units bytes

Configurable True

Platforms 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

source-ip (*ipv4-address* | *ipv6-address*)

Description The source IP address of the UDP/IP MPLS trace message

This should be a routable address of the router. This will be destination of the MPLS echo reply message sent back to the sender. By default this is the system address of the default network-instance; if the default network-instance does not have system interface then it will be primary address of the lowest numbered loopback subinterface of the default network-instance.

Context [oam lsp-trace sr-isis prefix-sid prefix \(ipv4-prefix | ipv6-prefix\) source-ip \(ipv4-address | ipv6-address\)](#)

Tree [source-ip](#)

Configurable True

Platforms 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

timeout *number*

Description The maximum time the sender waits to receive an MPLS trace message before considering that the ping failed

Context [oam lsp-trace sr-isis prefix-sid prefix \(ipv4-prefix | ipv6-prefix\) timeout number](#)

Tree [timeout](#)

Range 1 to 60

Default 3

Units seconds

Configurable True

Platforms 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

traffic-class *number*

Description MPLS Header Traffic Class/Exp value

Context [oam lsp-trace sr-isis prefix-sid prefix \(ipv4-prefix | ipv6-prefix\) traffic-class number](#)

Tree [traffic-class](#)

Range 0 to 7

Default 7

Configurable True

Platforms 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

te-policy

Description Parameters required to trace the endpoint of a TE-Policy tunnel

Context [oam lsp-trace te-policy](#)

Tree [te-policy](#)

Configurable True

Platforms 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

sr-uncolored

Description Enter the sr-uncolored context

Context	oam lsp-trace te-policy sr-uncolored
Tree	sr-uncolored
Configurable	True
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

clear

Description	Clear all uncolored MPLS TE-Policy trace session transmit and receive packet counts and all error counts
Context	oam lsp-trace te-policy sr-uncolored clear
Tree	clear
Configurable	True
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

policy [policy-name](#) *string* [protocol-origin](#) *keyword*

Description	Enter the policy list instance
Context	oam lsp-trace te-policy sr-uncolored policy policy-name <i>string</i> protocol-origin <i>keyword</i>
Tree	policy
Configurable	True
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

policy-name *string*

Description	Name of Uncolored Traffic Engineering Policy which is to be traced. Any available primary or standby or active secondary candidate-path can be traced.
Context	oam lsp-trace te-policy sr-uncolored policy policy-name <i>string</i> protocol-origin <i>keyword</i>
String Length	1 to 255
Configurable	True
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

protocol-origin *keyword*

Description	Uncolored Traffic Engineering Policy, origination source. The method Policy path is computed. This list includes Path Computation Engine, explicitly configured paths, etc.
Context	oam lsp-trace te-policy sr-uncolored policy policy-name <i>string</i> protocol-origin <i>keyword</i>
Options	<ul style="list-style-type: none"> • pcep PCEP used as signalling mechanism for the candidate path • bgp BGP used as signalling mechanism for the candidate path • local Management interface used for candidate path instantiation
Configurable	True
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

destination-ip (*ipv4-address* | *ipv6-address*)

Description	The destination IP address of the UDP/IP MPLS trace message This should be a non-forwardable address in the 127/8 address block (or the 0:0:0:0:FFFF:7F00:0/104 IPv6 address block). Varying this address can help to exercise different ECMP paths towards the destination. By default, the destination address is selected randomly from these address blocks.
Context	oam lsp-trace te-policy sr-uncolored policy policy-name <i>string</i> protocol-origin <i>keyword</i> destination-ip (<i>ipv4-address</i> <i>ipv6-address</i>)
Tree	destination-ip
Configurable	True
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

ecmp-interface-select *string*

Description	Send the LSP trace messages out the specified subinterface If this router has multiple ECMP next-hops to the endpoint of the MPLS tunnel this can select one of those subinterfaces specifically
Context	oam lsp-trace te-policy sr-uncolored policy policy-name <i>string</i> protocol-origin <i>keyword</i> ecmp-interface-select <i>string</i>
Tree	ecmp-interface-select
Configurable	True

Platforms 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

ecmp-next-hop-select (*ipv4-address* | *ipv6-address*)

Description Send the LSP trace messages to the specified next-hop
If this router has multiple ECMP next-hops to the endpoint of the MPLS tunnel this can select one of those next-hops specifically

Context [oam lsp-trace te-policy sr-uncolored policy policy-name](#) *string* [protocol-origin keyword ecmp-next-hop-select](#) (*ipv4-address* | *ipv6-address*)

Tree [ecmp-next-hop-select](#)

Configurable True

Platforms 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

interval *number*

Description The time interval between successive MPLS trace messages while incrementing the TTL

Context [oam lsp-trace te-policy sr-uncolored policy policy-name](#) *string* [protocol-origin keyword interval](#) *number*

Tree [interval](#)

Range 1 to 10

Default 1

Units seconds

Configurable True

Platforms 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

maximum-failures *number*

Description The maximum number of consecutive MPLS trace requests that do not receive a reply before the trace operation fails for a given TTL

Context [oam lsp-trace te-policy sr-uncolored policy policy-name](#) *string* [protocol-origin keyword maximum-failures](#) *number*

Tree [maximum-failures](#)

Range 1 to 255

Default 5

Configurable True

Platforms 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

maximum-mpls-ttl *number*

Description	The maximum or final TTL value of the MPLS trace messages
Context	oam lsp-trace te-policy sr-uncolored policy policy-name <i>string</i> protocol-origin <i>keyword</i> maximum-mpls-ttl <i>number</i>
Tree	maximum-mpls-ttl
Range	1 to 255
Default	30
Configurable	True
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

minimum-mpls-ttl *number*

Description	The minimum or starting TTL value of the MPLS trace messages
Context	oam lsp-trace te-policy sr-uncolored policy policy-name <i>string</i> protocol-origin <i>keyword</i> minimum-mpls-ttl <i>number</i>
Tree	minimum-mpls-ttl
Range	1 to 255
Default	1
Configurable	True
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

probe-count *number*

Description	The maximum number of MPLS trace messages sent per hop
Context	oam lsp-trace te-policy sr-uncolored policy policy-name <i>string</i> protocol-origin <i>keyword</i> probe-count <i>number</i>
Tree	probe-count
Range	1 to 10
Default	1
Configurable	True
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

probe-size *number*

Description	The size of the IP packet MPLS trace message. Probe size does not include MPLS headers, if any
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Context	oam lsp-trace te-policy sr-uncolored policy policy-name <i>string</i> protocol-origin <i>keyword</i> probe-size <i>number</i>
Tree	probe-size
Range	1 to 9500
Default	1
Units	bytes
Configurable	True
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

segment-list-index *number*

Description	Uncolored Traffic Engineering Policy active segment-list index
Context	oam lsp-trace te-policy sr-uncolored policy policy-name <i>string</i> protocol-origin <i>keyword</i> segment-list-index <i>number</i>
Tree	segment-list-index
Configurable	True
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

source-ip (*ipv4-address* | *ipv6-address*)

Description	The source IP address of the UDP/IP MPLS trace message This should be a routable address of the router. This will be destination of the MPLS echo reply message sent back to the sender. By default this is the system address of the default network-instance; if the default network-instance does not have system interface then it will be primary address of the lowest numbered loopback subinterface of the default network-instance.
Context	oam lsp-trace te-policy sr-uncolored policy policy-name <i>string</i> protocol-origin <i>keyword</i> source-ip (<i>ipv4-address</i> <i>ipv6-address</i>)
Tree	source-ip
Configurable	True
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

timeout *number*

Description	The maximum time the sender waits to receive an MPLS trace message before considering that the ping failed
Context	oam lsp-trace te-policy sr-uncolored policy policy-name <i>string</i> protocol-origin <i>keyword</i> timeout <i>number</i>

Tree	timeout
Range	1 to 60
Default	3
Units	seconds
Configurable	True
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

traffic-class *number*

Description	MPLS Header Traffic Class/Exp value
Context	oam lsp-trace te-policy sr-uncolored policy policy-name <i>string</i> protocol-origin <i>keyword</i> traffic-class <i>number</i>
Tree	traffic-class
Range	0 to 7
Default	7
Configurable	True
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

twamp

Description	Enable the twamp context
Context	oam twamp
Tree	twamp
Configurable	True
Platforms	7250 IXR-10e, 7250 IXR-6e, 7250 IXR-X3b

server

Description	Enter the server context
Context	oam twamp server
Tree	server
Configurable	True
Platforms	7250 IXR-10e, 7250 IXR-6e, 7250 IXR-X3b

network-instance *name string*

Description	Enter the network-instance list instance
Context	oam twamp server network-instance name string
Tree	network-instance
Configurable	True
Platforms	7250 IXR-10e, 7250 IXR-6e, 7250 IXR-X3b

name *string*

Description	Enter the name context
Context	oam twamp server network-instance name string
Configurable	True
Platforms	7250 IXR-10e, 7250 IXR-6e, 7250 IXR-X3b

clear

Description	Clear all TWAMP test session transmit and receive packet counts and all error counts
Context	oam twamp server network-instance name string clear
Tree	clear
Configurable	True
Platforms	7250 IXR-10e, 7250 IXR-6e, 7250 IXR-X3b

17 tools platform

```
platform
+ chassis
  + reboot
    + cancel
    + delay number
    + force
    + message string
    + warm
      + force
      + validate
  + control slot string
    + locator
      + disable
      + enable
        + duration number
    + reboot
      + cancel
      + delay number
      + force
      + message string
  + fabric slot number
    + locator
      + disable
      + enable
        + duration number
    + reboot
      + cancel
      + delay number
      + message string
  + fan-tray id number
    + locator
      + disable
      + enable
        + duration number
  + linecard slot number
    + locator
      + disable
      + enable
        + duration number
    + reboot
      + cancel
      + delay number
      + message string
  + redundancy
    + switchover
    + synchronize
      + overlay
      + system
  + show-fabric-bandwidth
  + trust
    + attestation
      + control slot string
        + log-retrieval
          + bios
            + display
              + from number
```

```
        + pcr number
        + to number
    + summary
+ ima
  + display
    + from number
    + pcr number
    + to number
    + summary
+ pcr-quote
  + nonce binary
  + pcr-selection string
+ secure-boot
+ control slot string
  + activate
    + confirmation-code string
    + serial-number string
  + revoke
    + confirmation-code string
    + serial-number string
  + update
    + confirmation-code string
    + serial-number string
```

17.1 platform Descriptions

platform

Description	Top-level container for platform operational commands
Context	platform
Tree	platform
Configurable	True
Platforms	Supported on all platforms

chassis

Description	Operational commands related to the chassis
Context	platform chassis
Tree	chassis
Configurable	True
Platforms	Supported on all platforms

reboot

Description	Trigger a reboot of the chassis
Context	platform chassis reboot
Tree	reboot
Configurable	True
Platforms	Supported on all platforms

cancel

Description	Cancels a pending reboot on this component
Context	platform chassis reboot cancel
Tree	cancel
Configurable	True
Platforms	Supported on all platforms

delay *number*

Description	The amount of time to delay the reboot During this period, the reboot can be cancelled.
Context	platform chassis reboot delay <i>number</i>
Tree	delay
Units	seconds
Configurable	True
Platforms	Supported on all platforms

force

Description	Force a reboot of this component, overriding any synchronizations or other activities in progress This option can be dangerous, and may result in a module booting on an older image if used after an image change
Context	platform chassis reboot force
Tree	force
Configurable	True
Platforms	Supported on all platforms

message *string*

Description	A user-defined message to broadcast to other users of the system
Context	platform chassis reboot message <i>string</i>
Tree	message
Configurable	True
Platforms	Supported on all platforms

warm

Description	Perform a warm reboot of the system This option will perform checks against the current configuration, before prompting to confirm the reboot, and then rebooting the system without impacting the datapath - if a new image has been configured, this will upgrade the system.
Context	platform chassis reboot warm

Tree	warm
Configurable	True
Platforms	7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L

force

Description	Force a warm reboot of the system, overriding any validation, synchronizations or other activities in progress This option can be dangerous, and may result in an outage - but can be used to support a fast reboot of the system.
Context	platform chassis reboot warm force
Tree	force
Configurable	True
Platforms	7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L

validate

Description	Validate that the system's current configuration and state supports a warm reboot operation
Context	platform chassis reboot warm validate
Tree	validate
Configurable	True
Platforms	7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L

control *slot string*

Description	Operational commands related to control modules
Context	platform control slot <i>string</i>
Tree	control
Configurable	True
Platforms	Supported on all platforms

slot *string*

Description	Slot identifier for the control module
Context	platform control slot <i>string</i>

Configurable	True
Platforms	Supported on all platforms

locator

Description	Operational commands for the locator LED
Context	platform control slot <i>string</i> locator
Tree	locator
Configurable	True
Platforms	Supported on all platforms

disable

Description	Deactivates the locator LED for this component
Context	platform control slot <i>string</i> locator disable
Tree	disable
Configurable	True
Platforms	Supported on all platforms

enable

Description	Activate the locator LED for this component
Context	platform control slot <i>string</i> locator enable
Tree	enable
Configurable	True
Platforms	Supported on all platforms

duration *number*

Description	Sets the duration to activate the locator LED, after which it will disable automatically
Context	platform control slot <i>string</i> locator enable duration <i>number</i>
Tree	duration
Range	10 to 3600
Units	seconds
Configurable	True

Platforms Supported on all platforms

reboot

Description Trigger or a reboot of this component

Context [platform control slot](#) *string* [reboot](#)

Tree [reboot](#)

Configurable True

Platforms 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e

cancel

Description Cancels a pending reboot on this component

Context [platform control slot](#) *string* [reboot](#) [cancel](#)

Tree [cancel](#)

Configurable True

Platforms 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e

delay *number*

Description The amount of time to delay the reboot
During this period, the reboot can be cancelled.

Context [platform control slot](#) *string* [reboot](#) [delay](#) *number*

Tree [delay](#)

Units seconds

Configurable True

Platforms 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e

force

Description Force a reboot of this component, overriding any synchronizations or other activities in progress
This option can be dangerous, and may result in a module booting on an older image if used after an image change

Context [platform control slot](#) *string* [reboot](#) [force](#)

Tree [force](#)

Configurable	True
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e

message *string*

Description	A user-defined message to broadcast to other users of the system
Context	platform control slot <i>string</i> reboot message <i>string</i>
Tree	message
Configurable	True
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e

fabric slot *number*

Description	Operational commands related to fabric modules
Context	platform fabric slot <i>number</i>
Tree	fabric
Configurable	True
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e

slot *number*

Description	Numeric identifier for the fabric module
Context	platform fabric slot <i>number</i>
Configurable	True
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e

locator

Description	Operational commands for the locator LED
Context	platform fabric slot <i>number</i> locator
Tree	locator
Configurable	True
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e

disable

Description	Deactivates the locator LED for this component
Context	platform fabric slot number locator disable
Tree	disable
Configurable	True
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e

enable

Description	Activate the locator LED for this component
Context	platform fabric slot number locator enable
Tree	enable
Configurable	True
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e

duration *number*

Description	Sets the duration to activate the locator LED, after which it will disable automatically
Context	platform fabric slot number locator enable duration number
Tree	duration
Range	10 to 3600
Units	seconds
Configurable	True
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e

reboot

Description	Trigger or a reboot of this component
Context	platform fabric slot number reboot
Tree	reboot
Configurable	True
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e

cancel

Description	Cancels a pending reboot on this component
Context	platform fabric slot number reboot cancel
Tree	cancel
Configurable	True
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e

delay *number*

Description	The amount of time to delay the reboot During this period, the reboot can be cancelled.
Context	platform fabric slot number reboot delay number
Tree	delay
Units	seconds
Configurable	True
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e

message *string*

Description	A user-defined message to broadcast to other users of the system
Context	platform fabric slot number reboot message string
Tree	message
Configurable	True
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e

fan-tray *id number*

Description	Operational commands related to fan modules
Context	platform fan-tray id number
Tree	fan-tray
Configurable	True
Platforms	Supported on all platforms

id number

Description	Numeric identifier for the fan module
Context	platform fan-tray id number
Configurable	True
Platforms	Supported on all platforms

locator

Description	Operational commands for the locator LED
Context	platform fan-tray id number locator
Tree	locator
Configurable	True
Platforms	Supported on all platforms

disable

Description	Deactivates the locator LED for this component
Context	platform fan-tray id number locator disable
Tree	disable
Configurable	True
Platforms	Supported on all platforms

enable

Description	Activate the locator LED for this component
Context	platform fan-tray id number locator enable
Tree	enable
Configurable	True
Platforms	Supported on all platforms

duration number

Description	Sets the duration to activate the locator LED, after which it will disable automatically
Context	platform fan-tray id number locator enable duration number

Tree	duration
Range	10 to 3600
Units	seconds
Configurable	True
Platforms	Supported on all platforms

linecard [slot number](#)

Description	Operational commands related to line cards
Context	platform linecard slot number
Tree	linecard
Configurable	True
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e

slot number

Description	Numeric identifier for the line card
Context	platform linecard slot number
Configurable	True
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e

locator

Description	Operational commands for the locator LED
Context	platform linecard slot number locator
Tree	locator
Configurable	True
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e

disable

Description	Deactivates the locator LED for this component
Context	platform linecard slot number locator disable
Tree	disable
Configurable	True
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e

enable

Description	Activate the locator LED for this component
Context	platform linecard slot number locator enable
Tree	enable
Configurable	True
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e

duration *number*

Description	Sets the duration to activate the locator LED, after which it will disable automatically
Context	platform linecard slot number locator enable duration number
Tree	duration
Range	10 to 3600
Units	seconds
Configurable	True
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e

reboot

Description	Trigger or a reboot of this component
Context	platform linecard slot number reboot
Tree	reboot
Configurable	True
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e

cancel

Description	Cancels a pending reboot on this component
Context	platform linecard slot number reboot cancel
Tree	cancel
Configurable	True
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e

delay *number*

Description	The amount of time to delay the reboot During this period, the reboot can be cancelled.
Context	platform linecard slot number reboot delay number
Tree	delay
Units	seconds
Configurable	True
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e

message *string*

Description	A user-defined message to broadcast to other users of the system
Context	platform linecard slot number reboot message string
Tree	message
Configurable	True
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e

redundancy

Description	Top-level container for redundancy operational commands
Context	platform redundancy
Tree	redundancy
Configurable	True
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e

switchover

Description	Trigger a redundancy switchover to the other control module
Context	platform redundancy switchover
Tree	switchover
Configurable	True
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e

synchronize

Description	Top-level container for manual synchronization activities
Context	platform redundancy synchronize
Tree	synchronize
Configurable	True
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e

overlay

Description	Force a synchronization of the overlay filesystem between the active control module and the standby This synchronizes all non-excluded directories in the overlay filesystem
Context	platform redundancy synchronize overlay
Tree	overlay
Configurable	True
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e

system

Description	Force a synchronization of the system-required data between the active control module and the standby This synchronizes images, configuration, checkpoints, and other system-required data
Context	platform redundancy synchronize system
Tree	system
Configurable	True
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e

show-fabric-bandwidth

Description	Show fabric bandwidth
Context	platform show-fabric-bandwidth
Tree	show-fabric-bandwidth
Configurable	True
Platforms	7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e

trust

Description	Operational commands related to Platform Trust
Context	platform trust
Tree	trust
Configurable	True
Platforms	7250 IXR-10e, 7250 IXR-6e, 7250 IXR-X3b

attestation

Description	Tools commands input parameter for attestation to retrieve TCG BIOS Logs, IMA Logs
Context	platform trust attestation
Tree	attestation
Configurable	True
Platforms	7250 IXR-10e, 7250 IXR-6e, 7250 IXR-X3b

control [slot string](#)

Description	Operational commands related to log retrieval for control modules
Context	platform trust attestation control slot string
Tree	control
Configurable	True
Platforms	7250 IXR-10e, 7250 IXR-6e, 7250 IXR-X3b

slot *string*

Description	Slot identifier for the control module
Context	platform trust attestation control slot string
Configurable	True
Platforms	7250 IXR-10e, 7250 IXR-6e, 7250 IXR-X3b

log-retrieval

Description	Tools commands to retrieve BIOS and IMA Log
Context	platform trust attestation control slot string log-retrieval

Tree	log-retrieval
Configurable	True
Platforms	7250 IXR-10e, 7250 IXR-6e, 7250 IXR-X3b

bios

Description	TCG BIOS log retrieval commands
Context	platform trust attestation control slot <i>string</i> log-retrieval bios
Tree	bios
Configurable	True
Platforms	7250 IXR-10e, 7250 IXR-6e, 7250 IXR-X3b

display

Description	Enter the display context
Context	platform trust attestation control slot <i>string</i> log-retrieval bios display
Tree	display
Configurable	True
Platforms	7250 IXR-10e, 7250 IXR-6e, 7250 IXR-X3b

from *number*

Description	1-based log display starting index.
Context	platform trust attestation control slot <i>string</i> log-retrieval bios display from <i>number</i>
Tree	from
Default	1
Configurable	True
Platforms	7250 IXR-10e, 7250 IXR-6e, 7250 IXR-X3b

pcr *number*

Description	limit display to entries associated with a specific PCR. A value of -1 shows all PCRs
Context	platform trust attestation control slot <i>string</i> log-retrieval bios display pcr <i>number</i>
Tree	pcr

Default	-1
Configurable	True
Platforms	7250 IXR-10e, 7250 IXR-6e, 7250 IXR-X3b

to number

Description	1-based log display terminal index. 0 indicates use maximum index in log.
Context	platform trust attestation control slot <i>string</i> log-retrieval bios display to number
Tree	to
Default	0
Configurable	True
Platforms	7250 IXR-10e, 7250 IXR-6e, 7250 IXR-X3b

summary

Description	retrieve a summary of the log
Context	platform trust attestation control slot <i>string</i> log-retrieval bios summary
Tree	summary
Configurable	True
Platforms	7250 IXR-10e, 7250 IXR-6e, 7250 IXR-X3b

ima

Description	IMA log retrieval commands
Context	platform trust attestation control slot <i>string</i> log-retrieval ima
Tree	ima
Configurable	True
Platforms	7250 IXR-10e, 7250 IXR-6e, 7250 IXR-X3b

display

Description	Enter the display context
Context	platform trust attestation control slot <i>string</i> log-retrieval ima display
Tree	display
Configurable	True

Platforms 7250 IXR-10e, 7250 IXR-6e, 7250 IXR-X3b

from *number*

Description 1-based log display starting index.

Context [platform trust attestation control slot](#) *string* [log-retrieval ima display from number](#)

Tree [from](#)

Default 1

Configurable True

Platforms 7250 IXR-10e, 7250 IXR-6e, 7250 IXR-X3b

pcr *number*

Description limit display to entries associated with a specific PCR. A value of -1 shows all PCRs

Context [platform trust attestation control slot](#) *string* [log-retrieval ima display pcr number](#)

Tree [pcr](#)

Default -1

Configurable True

Platforms 7250 IXR-10e, 7250 IXR-6e, 7250 IXR-X3b

to *number*

Description 1-based log display terminal index. 0 indicates use maximum index in log.

Context [platform trust attestation control slot](#) *string* [log-retrieval ima display to number](#)

Tree [to](#)

Default 0

Configurable True

Platforms 7250 IXR-10e, 7250 IXR-6e, 7250 IXR-X3b

summary

Description retrieve a summary of the log

Context [platform trust attestation control slot](#) *string* [log-retrieval ima summary](#)

Tree	summary
Configurable	True
Platforms	7250 IXR-10e, 7250 IXR-6e, 7250 IXR-X3b

pcr-quote

Description	Tools commands input parameter to retrieve TPM PCR Quote This container includes every information element defined in the reference challenge-response interaction model for remote attestation. Corresponding values are based on TPM 2.0 structure definitions
Context	platform trust attestation control slot string pcr-quote
Tree	pcr-quote
Configurable	True
Platforms	7250 IXR-10e, 7250 IXR-6e, 7250 IXR-X3b

nonce *binary*

Description	A random number intended to guarantee freshness and for use as part of a replay-detection mechanism Note that a nonce sent into a TPM will typically be 160 or 256 binary digits long (20 or 32 bytes) If fewer binary digits are sent, this nonce object will be padded with leading zeros within Quotes returned from the TPM. Additionally if more bytes are sent, the nonce will be trimmed to the most significant binary digits
Context	platform trust attestation control slot string pcr-quote nonce binary
Tree	nonce
Configurable	True
Platforms	7250 IXR-10e, 7250 IXR-6e, 7250 IXR-X3b

pcr-selection *string*

Description	A tpm2-tools compliant pcr selection string
Context	platform trust attestation control slot string pcr-quote pcr-selection string
Tree	pcr-selection
Configurable	True
Platforms	7250 IXR-10e, 7250 IXR-6e, 7250 IXR-X3b

secure-boot

Description	Secure Boot operational commands
Context	platform trust secure-boot
Tree	secure-boot
Configurable	True
Platforms	7250 IXR-10e, 7250 IXR-6e, 7250 IXR-X3b

control [slot string](#)

Description	Operational commands related Secure Boot for control modules
Context	platform trust secure-boot control slot string
Tree	control
Configurable	True
Platforms	7250 IXR-10e, 7250 IXR-6e, 7250 IXR-X3b

slot [string](#)

Description	Slot identifier for the control module
Context	platform trust secure-boot control slot string
Configurable	True
Platforms	7250 IXR-10e, 7250 IXR-6e, 7250 IXR-X3b

activate

Description	Activate Secure Boot
Context	platform trust secure-boot control slot string activate
Tree	activate
Configurable	True
Platforms	7250 IXR-10e, 7250 IXR-6e, 7250 IXR-X3b

confirmation-code [string](#)

Description	Indicates the secure-boot command confirmation-code
Context	platform trust secure-boot control slot string activate confirmation-code string
Tree	confirmation-code

Configurable	True
Platforms	7250 IXR-10e, 7250 IXR-6e, 7250 IXR-X3b

serial-number *string*

Description	Indicates the serial-number of the control module
Context	platform trust secure-boot control slot <i>string</i> activate serial-number <i>string</i>
Tree	serial-number
Configurable	True
Platforms	7250 IXR-10e, 7250 IXR-6e, 7250 IXR-X3b

revoke

Description	Update UEFI Secure Boot forbidden database (dbx), Key Exchange Key (KEK), Platform Key (PK)
Context	platform trust secure-boot control slot <i>string</i> revoke
Tree	revoke
Configurable	True
Platforms	7250 IXR-10e, 7250 IXR-6e, 7250 IXR-X3b

confirmation-code *string*

Description	Indicates the secure-boot command confirmation-code
Context	platform trust secure-boot control slot <i>string</i> revoke confirmation-code <i>string</i>
Tree	confirmation-code
Configurable	True
Platforms	7250 IXR-10e, 7250 IXR-6e, 7250 IXR-X3b

serial-number *string*

Description	Indicates the serial-number of the control module
Context	platform trust secure-boot control slot <i>string</i> revoke serial-number <i>string</i>
Tree	serial-number
Configurable	True
Platforms	7250 IXR-10e, 7250 IXR-6e, 7250 IXR-X3b

update

Description	Update UEFI Secure Boot authorized database (db), Key Exchange Key (KEK), Platform Key (PK)
Context	platform trust secure-boot control slot string update
Tree	update
Configurable	True
Platforms	7250 IXR-10e, 7250 IXR-6e, 7250 IXR-X3b

confirmation-code *string*

Description	Indicates the secure-boot command confirmation-code
Context	platform trust secure-boot control slot string update confirmation-code string
Tree	confirmation-code
Configurable	True
Platforms	7250 IXR-10e, 7250 IXR-6e, 7250 IXR-X3b

serial-number *string*

Description	Indicates the serial-number of the control module
Context	platform trust secure-boot control slot string update serial-number string
Tree	serial-number
Configurable	True
Platforms	7250 IXR-10e, 7250 IXR-6e, 7250 IXR-X3b

18 tools qos

```
qos
+ classifiers
+   multifield-classifier name string
+ interfaces
+   interface interface-id string
+     output
+       queues
+         clear-statistics
+         queue queue-name string
+         queue-statistics
+           clear
+     pfc
+       clear-statistics
```

18.1 qos Descriptions

qos

Description	Enter the qos context
Context	qos
Tree	qos
Configurable	True
Platforms	7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

classifiers

Description	Top level enclosing container for qos classifiers operational tools
Context	qos classifiers
Tree	classifiers
Configurable	True
Platforms	7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

multifield-classifier *name string*

Description	List of multifield-classifier QoS policies
Context	qos classifiers multifield-classifier name string
Tree	multifield-classifier
Configurable	True
Platforms	7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

name *string*

Description	The name of multifield-classifier QoS policy
Context	qos classifiers multifield-classifier name string
String Length	1 to 255

Configurable	True
Platforms	7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

interfaces

Description	Interfaces and subinterfaces with QoS configuration and state
Context	qos interfaces
Tree	interfaces
Configurable	True
Platforms	7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

interface [interface-id](#) *string*

Description	List of interfaces and subinterfaces referenced by QoS policies
Context	qos interfaces interface interface-id <i>string</i>
Tree	interface
Configurable	True
Platforms	7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

interface-id *string*

Description	Identifier for the interface or subinterface
Context	qos interfaces interface interface-id <i>string</i>
Configurable	True
Platforms	7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

output

Description	Enter the output context
Context	qos interfaces interface interface-id <i>string</i> output

Tree	output
Configurable	True
Platforms	7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

queues

Description	Enter the queues context
Context	qos interfaces interface interface-id <i>string</i> output queues
Tree	queues
Configurable	True
Platforms	7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

clear-statistics

Description	Enter the clear-statistics context
Context	qos interfaces interface interface-id <i>string</i> output queues clear-statistics
Tree	clear-statistics
Configurable	True
Platforms	7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

queue [queue-name](#) *string*

Description	Enter the queue list instance
Context	qos interfaces interface interface-id <i>string</i> output queues queue queue-name <i>string</i>
Tree	queue
Configurable	True
Platforms	7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

queue-name *string*

Description	The queue name
Context	qos interfaces interface interface-id <i>string</i> output queues queue queue-name <i>string</i>
Configurable	True
Platforms	7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

queue-statistics

Description	Enter the queue-statistics context
Context	qos interfaces interface interface-id <i>string</i> output queues queue queue-name <i>string</i> queue-statistics
Tree	queue-statistics
Configurable	True
Platforms	7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

clear

Description	Enter the clear context
Context	qos interfaces interface interface-id <i>string</i> output queues queue queue-name <i>string</i> queue-statistics clear
Tree	clear
Configurable	True
Platforms	7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

pfc

Description	Clearing PFC statistics on per interface basis
Context	qos interfaces interface interface-id <i>string</i> pfc
Tree	pfc
Configurable	True

Platforms	7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H4, 7250 IXR-10e, 7250 IXR-6e, 7250 IXR-X3b
------------------	--

clear-statistics

Description	Enter the clear-statistics context
Context	qos interfaces interface interface-id <i>string</i> pfc clear-statistics
Tree	clear-statistics
Configurable	True
Platforms	7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H4, 7250 IXR-10e, 7250 IXR-6e, 7250 IXR-X3b

19 tools system

```

system
+ aaa
  + authentication
  + force-all-user-password-change
  + session id number
    + disconnect
  + user username string
    + force-password-change
    + unlock
  + authorization
  + authz-policy
    + clear
    + probe
      + rpc string
      + user string
    + remove
    + rotate
      + created-on number
      + policy string
      + version string
+ app-management
  + application name string
  + kill
  + quit
  + reload
  + restart
    + cold
    + warm
  + start
  + statistics
  + clear
  + stop
+ boot
  + golden-image
  + clear
  + image string
+ cgroup
+ configuration
  + candidate name string
  + clear
  + checkpoint id (number | checkpoint-name)
  + clear
  + load
  + revert
  + confirmed-accept
  + persist-id string
  + confirmed-reject
  + persist-id string
  + generate-checkpoint
  + comment string
  + name string
  + rescue-clear
  + rescue-save
  + save
  + session id number
  + clear

```

```

+ upgrade
+ checkpoint id (number | checkpoint-name)
+ file string
+ rescue
+ startup
+ validation-check keyword
+ dhcp-relay
+ update-dns-entries
+ dhcp-server
+ network-instance name string
+ dhcpv4
+ statistics
+ clear
+ dhcpv6
+ statistics
+ clear
+ event-handler
+ instance name string
+ reload
+ statistics
+ clear
+ grpc-server name string
+ client id number
+ disconnect
+ gnoi
+ healthz
+ chassis
+ clear
+ clear
+ control
+ clear
+ slot string
+ fabric
+ clear
+ slot number
+ fan-tray
+ clear
+ id number
+ linecard
+ clear
+ slot number
+ power-supply
+ clear
+ id number
+ transceiver
+ clear
+ interface string
+ statistics
+ clear
+ l2cp-transparency
+ dot1x
+ clear
+ l2cp-total-statistics
+ clear
+ lacp
+ clear
+ lldp
+ clear
+ ptp
+ clear
+ xstp
+ clear
+ lldp
+ interface name string

```

```

+   statistics
+     + clear
+ statistics
+   clear
+ mirroring
+   mirroring-instance name string
+   mirror-destination
+     + statistics
+     + clear
+ netconf-server name string
+   session session-id number
+   clear
+   statistics
+     + clear
+   statistics
+     + clear
+ packet-trace-base64
+   interface string
+   packet binary
+ sync
+   ptp
+     + instance instance-index number
+     + clear-statistics
+     + default-ds
+       + statistics
+       + clear
+     + time-recovery-engine
+       + statistics
+       + clear
+     + inactive-peers
+     + clear
+     + port-ds-configured-peer port-index number
+     + statistics
+     + clear
+     + port-ds-discovered-peer port-index number
+     + statistics
+     + clear
+     + port-ds-interface port-index number
+     + statistics
+     + clear
+ tls
+   generate-csr
+     + common-name string
+     + country string
+     + domain-names string
+     + email string
+     + ip-addresses (ipv4-address | ipv6-address)
+     + key-size number
+     + key-type keyword
+     + locality string
+     + organization string
+     + organization-unit string
+     + spiffe-id string
+     + state string
+     + type keyword
+   generate-self-signed
+     + common-name string
+     + country string
+     + domain-names string
+     + duration number
+     + email string
+     + ip-addresses (ipv4-address | ipv6-address)
+     + key-size number
+     + key-type keyword

```

```
+ locality string
+ organization string
+ organization-unit string
+ spiffe-id string
+ state string
+ type keyword
+ server-profile name string
+ certz
  + remove
  + rotate
    + certificate string
    + created-on number
    + crl string
    + key string
    + trust-anchor string
    + version string
```

19.1 system Descriptions

system

Description	Enclosing container for system management.
Context	system
Tree	system
Configurable	True
Platforms	Supported on all platforms

aaa

Description	Top-level container for operational commands related to AAA
Context	system aaa
Tree	aaa
Configurable	True
Platforms	Supported on all platforms

authentication

Description	Operational commands related to authentication
Context	system aaa authentication
Tree	authentication
Configurable	True
Platforms	Supported on all platforms

force-all-user-password-change

Description	Set change-on-first-login to true for all users This command will only take effect if the feature change-on-first-login is currently set to true.
Context	system aaa authentication force-all-user-password-change
Tree	force-all-user-password-change
Configurable	True

Platforms 7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

session id number

Description List of active sessions in the system
Context [system aaa authentication session id number](#)
Tree [session](#)
Configurable True
Platforms Supported on all platforms

id number

Description System generated session ID
Context [system aaa authentication session id number](#)
Configurable True
Platforms Supported on all platforms

disconnect

Description Disconnect the cli session, requesting the cli to terminate
Context [system aaa authentication session id number disconnect](#)
Tree [disconnect](#)
Configurable True
Platforms Supported on all platforms

user username string

Description List of local users including admin and linuxadmin
Context [system aaa authentication user username string](#)
Tree [user](#)
Configurable True
Platforms Supported on all platforms

username *string*

Description	Enter the username context
Context	system aaa authentication user username <i>string</i>
Configurable	True
Platforms	Supported on all platforms

force-password-change

Description	Set change-on-first-login to true for this user This command will only take effect if the feature change-on-first-login is currently set to true.
Context	system aaa authentication user username <i>string</i> force-password-change
Tree	force-password-change
Configurable	True
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

unlock

Description	Unlock the user, This will change its lockout state into false
Context	system aaa authentication user username <i>string</i> unlock
Tree	unlock
Configurable	True
Platforms	Supported on all platforms

authorization

Description	Operational commands relating to authorization
Context	system aaa authorization
Tree	authorization
Configurable	True
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

authz-policy

Description	Top-level container for operational commands relating to Authz gRPC policies
Context	system aaa authorization authz-policy
Tree	authz-policy
Configurable	True
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

clear

Description	Clear Authz authorization policy counters
Context	system aaa authorization authz-policy clear
Tree	clear
Configurable	True
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

probe

Description	Perform a test against the current policy Both a user and rpc must be provided.
Context	system aaa authorization authz-policy probe
Tree	probe
Configurable	True
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

rpc string

Description	The RPC to test access to as the provided user This follows the gNSI gRPC path format, in that it is /<pkg>.<service>/<rpc>, for example /gnmi.gNMI/Get.
Context	system aaa authorization authz-policy probe rpc string

Tree	rpc
Configurable	True
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

user string

Description	The user to test the current policy with This can be either a SPIFFE URI or username.
Context	system aaa authorization authz-policy probe user string
Tree	user
Configurable	True
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

remove

Description	Remove Authz authorization policy from the system Since there is only a single system-wide gRPC authorization policy, it will revert its contents to the factory default authorization policy which authorizes any gRPC calls for every user.
Context	system aaa authorization authz-policy remove
Tree	remove
Configurable	True
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

rotate

Description	Perform a rotation of the Authz gRPC policy
Context	system aaa authorization authz-policy rotate
Tree	rotate
Configurable	True

Platforms 7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

created-on *number*

Description Sets the created on value for the new policy
Value is the number of seconds since the epoch. For reference the current time from the epoch in most Linux distributions can be retrieved via 'date +%s'. You can also select a specific date via 'date -d "2023-03-31" +%s'.
If no value is provided the systems current date and time is used.

Context [system aaa authorization authz-policy rotate created-on number](#)

Tree [created-on](#)

Units seconds

Configurable True

Platforms 7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

policy *string*

Description Contains the gRPC authorization policy as a JSON-formatted string
For example: { "name": "Default policy", "allow_rules": [{ "name": "admin-access", "source": { "principals": ["admin"] }, "request": { "paths": ["/"] } }] }

Context [system aaa authorization authz-policy rotate policy string](#)

Tree [policy](#)

Configurable True

Platforms 7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

version *string*

Description A version string to store with the policy
No constraints are applied other than the value must be a string.
If no value is provided no default is used.

Context [system aaa authorization authz-policy rotate version string](#)

Tree [version](#)

Configurable	True
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

app-management

Description	Operational commands related to app-management
Context	system app-management
Tree	app-management
Configurable	True
Platforms	Supported on all platforms

application *name string*

Description	List of all applications managed by the application manager
Context	system app-management application name string
Tree	application
Configurable	True
Platforms	Supported on all platforms

name *string*

Description	Unique name of this application instance
Context	system app-management application name string
Configurable	True
Platforms	Supported on all platforms

kill

Description	Terminate the application instance ungracefully
Context	system app-management application name string kill
Tree	kill
Configurable	True
Platforms	Supported on all platforms

quit

Description	Terminate the application instance, requesting it to core dump
Context	system app-management application name <i>string</i> quit
Tree	quit
Configurable	True
Platforms	Supported on all platforms

reload

Description	Reload the configuration of the application instance
Context	system app-management application name <i>string</i> reload
Tree	reload
Configurable	True
Platforms	Supported on all platforms

restart

Description	<p>Restart the application instance</p> <p>The best restart that is supported by the application is used if neither 'warm' or 'cold' is specified. If 'warm' restart is supported that will be used, or 'cold' if 'warm' is unavailable.</p> <p>A 'warm' restart will result in the application leaving its state in IDB during the restart, and recovering it post restart. This restart type results in less disruption to surrounding applications that would depend on the restarting applications state.</p> <p>A 'cold' restart will result in a normal stop/start of the application, including the purging of its state in IDB.</p>
Context	system app-management application name <i>string</i> restart
Tree	restart
Configurable	True
Platforms	Supported on all platforms

cold

Description	Perform a cold restart of the application instance
Context	system app-management application name <i>string</i> restart cold

Tree	cold
Configurable	True
Platforms	Supported on all platforms

warm

Description	Perform a warm restart of the application instance
Context	system app-management application name <i>string</i> restart warm
Tree	warm
Configurable	True
Platforms	Supported on all platforms

start

Description	Start the application instance
Context	system app-management application name <i>string</i> start
Tree	start
Configurable	True
Platforms	Supported on all platforms

statistics

Description	Top-level grouping of operational commands related to application statistics
Context	system app-management application name <i>string</i> statistics
Tree	statistics
Configurable	True
Platforms	Supported on all platforms

clear

Description	Clear statistics for this application instance
Context	system app-management application name <i>string</i> statistics clear
Tree	clear
Configurable	True
Platforms	Supported on all platforms

stop

Description	Terminate the application instance gracefully
Context	system app-management application name <i>string</i> stop
Tree	stop
Configurable	True
Platforms	Supported on all platforms

boot

Description	Top-level container for operational commands related to booting the system
Context	system boot
Tree	boot
Configurable	True
Platforms	Supported on all platforms

golden-image

Description	Container for operational commands related to golden image
Context	system boot golden-image
Tree	golden-image
Configurable	True
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

clear

Description	Unset the golden-image
Context	system boot golden-image clear
Tree	clear
Configurable	True
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

image string

Description	Sets the golden image the system uses This command selects an image to act as a golden-image to which the system reverts when a factory reset operation is requested.
Context	system boot golden-image image string
Tree	image
String Length	1 to 255
Configurable	True
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

cgroup

Description	Top-level container for query commands related to cgroup in the system
Context	system cgroup
Tree	cgroup
Configurable	True
Platforms	Supported on all platforms

configuration

Description	Top-level container for operational commands related to the system configuration
Context	system configuration
Tree	configuration
Configurable	True
Platforms	Supported on all platforms

candidate name string

Description	List of configuration candidates currently active
Context	system configuration candidate name string
Tree	candidate
Configurable	True

Platforms Supported on all platforms

name *string*

Description The name of the candidate

Context [system configuration candidate name](#) *string*

String Length 1 to 255

Configurable True

Platforms Supported on all platforms

clear

Description Clear the candidate from the system, discarding any changes
This results in any users currently in the candidate being dropped back to running mode.

Context [system configuration candidate name](#) *string* **clear**

Tree [clear](#)

Configurable True

Platforms Supported on all platforms

checkpoint id (*number* | *checkpoint-name*)

Description List of current checkpoints present in the system

Context [system configuration checkpoint id](#) (*number* | *checkpoint-name*)

Tree [checkpoint](#)

Configurable True

Platforms Supported on all platforms

id (*number* | *checkpoint-name*)

Description System generated ID, or operator defined name for the checkpoint

Context [system configuration checkpoint id](#) (*number* | *checkpoint-name*)

Configurable True

Platforms Supported on all platforms

clear

Description	Clear the checkpoint from the system
Context	system configuration checkpoint id (number checkpoint-name) clear
Tree	clear
Configurable	True
Platforms	Supported on all platforms

load

Description	Load candidate from saved checkpoint configuration
Context	system configuration checkpoint id (number checkpoint-name) load
Tree	load
Configurable	True
Platforms	Supported on all platforms

revert

Description	Revert running system configuration to the saved checkpoint configuration This functions as a load and commit action.
Context	system configuration checkpoint id (number checkpoint-name) revert
Tree	revert
Configurable	True
Platforms	Supported on all platforms

confirmed-accept

Description	Accepts an in progress commit and stops the confirmation timer
Context	system configuration confirmed-accept
Tree	confirmed-accept
Configurable	True
Platforms	Supported on all platforms

persist-id *string*

Description	Specifies the persist-id to which the commit confirmed accept applies
--------------------	---

Context	system configuration confirmed-accept persist-id <i>string</i>
Tree	persist-id
Configurable	True
Platforms	Supported on all platforms

confirmed-reject

Description	Rejects an in progress commit and stops the confirmation timer
Context	system configuration confirmed-reject
Tree	confirmed-reject
Configurable	True
Platforms	Supported on all platforms

persist-id *string*

Description	Specifies the persist-id to which the commit confirmed reject applies
Context	system configuration confirmed-reject persist-id <i>string</i>
Tree	persist-id
Configurable	True
Platforms	Supported on all platforms

generate-checkpoint

Description	Generate a checkpoint point based on the current running configuration
Context	system configuration generate-checkpoint
Tree	generate-checkpoint
Configurable	True
Platforms	Supported on all platforms

comment *string*

Description	User provided comment to associate with the checkpoint
Context	system configuration generate-checkpoint comment <i>string</i>
Tree	comment
Configurable	True
Platforms	Supported on all platforms

name *string*

Description	User provided name of the checkpoint
Context	system configuration generate-checkpoint name <i>string</i>
Tree	name
Configurable	True
Platforms	Supported on all platforms

rescue-clear

Description	Remove rescue configuration
Context	system configuration rescue-clear
Tree	rescue-clear
Configurable	True
Platforms	Supported on all platforms

rescue-save

Description	Save current running configuration as rescue configuration - rescue-config.json
Context	system configuration rescue-save
Tree	rescue-save
Configurable	True
Platforms	Supported on all platforms

save

Description	Save current running configuration as initial (startup) configuration - config.json
Context	system configuration save
Tree	save
Configurable	True
Platforms	Supported on all platforms

session id *number*

Description	List of configuration sessions currently active
Context	system configuration session id number
Tree	session
Configurable	True
Platforms	Supported on all platforms

id *number*

Description	System generated ID for the configuration session
Context	system configuration session id number
Configurable	True
Platforms	Supported on all platforms

clear

Description	Clear the session from the system, discarding any changes
Context	system configuration session id number clear
Tree	clear
Configurable	True
Platforms	Supported on all platforms

upgrade

Description	Operational commands related to configuration upgrade
Context	system configuration upgrade
Tree	upgrade
Configurable	True
Platforms	Supported on all platforms

checkpoint id (*number* | *checkpoint-name*)

Description	List of configuration checkpoints
Context	system configuration upgrade checkpoint id (number checkpoint-name)
Tree	checkpoint

Configurable	True
Platforms	Supported on all platforms

id (*number | checkpoint-name*)

Description	System generated ID, or operator defined name for the checkpoint
Context	system configuration upgrade checkpoint id (<i>number checkpoint-name</i>)
Configurable	True
Platforms	Supported on all platforms

file *string*

Description	System file path to a json configuration file
Context	system configuration upgrade file <i>string</i>
Tree	file
Configurable	True
Platforms	Supported on all platforms

rescue

Description	Rescue configuration
Context	system configuration upgrade rescue
Tree	rescue
Configurable	True
Platforms	Supported on all platforms

startup

Description	Startup (initial) configuration
Context	system configuration upgrade startup
Tree	startup
Configurable	True
Platforms	Supported on all platforms

validation-check *keyword*

Description	Specifies the kind of validation that will be executed after the content is upgraded If the validation fails the upgraded content will not be persisted.
Context	system configuration upgrade validation-check keyword
Tree	validation-check
Default	replace
Options	<ul style="list-style-type: none">• skip Skip validation of the upgraded content• merge Validation is done as if the content was used in a load merge operation• replace Validation is done as if the content was used in a full config replace operation
Configurable	True
Platforms	Supported on all platforms

dhcp-relay

Description	Enable the dhcp-relay context
Context	system dhcp-relay
Tree	dhcp-relay
Configurable	True
Platforms	Supported on all platforms

update-dns-entries

Description	Update all dhcp-relay server domain name resolutions A server host entry that cannot be resolved will be unavailable until it can be successfully resolved.
Context	system dhcp-relay update-dns-entries
Tree	update-dns-entries
Configurable	True
Platforms	Supported on all platforms

dhcp-server

Description	Enable the dhcp-server context
Context	system dhcp-server
Tree	dhcp-server
Configurable	True
Platforms	Supported on all platforms

network-instance *name string*

Description	List of network instances to run a dhcp server in
Context	system dhcp-server network-instance name string
Tree	network-instance
Configurable	True
Platforms	Supported on all platforms

name *string*

Description	Network Instance
Context	system dhcp-server network-instance name string
String Length	1 to 255
Configurable	True
Platforms	Supported on all platforms

dhcpv4

Description	Enter the dhcpv4 context
Context	system dhcp-server network-instance name string dhcpv4
Tree	dhcpv4
Configurable	True
Platforms	Supported on all platforms

statistics

Description	Enter the statistics context
Context	system dhcp-server network-instance name string dhcpv4 statistics

Tree	statistics
Configurable	True
Platforms	Supported on all platforms

clear

Description	Enter the clear context
Context	system dhcp-server network-instance name <i>string</i> dhcpv4 statistics clear
Tree	clear
Configurable	True
Platforms	Supported on all platforms

dhcpv6

Description	Enter the dhcpv6 context
Context	system dhcp-server network-instance name <i>string</i> dhcpv6
Tree	dhcpv6
Configurable	True
Platforms	Supported on all platforms

statistics

Description	Enter the statistics context
Context	system dhcp-server network-instance name <i>string</i> dhcpv6 statistics
Tree	statistics
Configurable	True
Platforms	Supported on all platforms

clear

Description	Enter the clear context
Context	system dhcp-server network-instance name <i>string</i> dhcpv6 statistics clear
Tree	clear
Configurable	True
Platforms	Supported on all platforms

event-handler

Description	Top-level container for operational commands on event handler and event handling instances
Context	system event-handler
Tree	event-handler
Configurable	True
Platforms	Supported on all platforms

instance [name string](#)

Description	List of all event handler instances
Context	system event-handler instance name string
Tree	instance
Configurable	True
Platforms	Supported on all platforms
Max. Elements	20

name [string](#)

Description	A user-defined name for this event handler instance
Context	system event-handler instance name string
String Length	1 to 255
Configurable	True
Platforms	Supported on all platforms

reload

Description	Reload the Python script for this event handler instance
Context	system event-handler instance name string reload
Tree	reload
Configurable	True
Platforms	Supported on all platforms

statistics

Description	Top-level container for operational commands on event handler statistics
Context	system event-handler instance name <i>string</i> statistics
Tree	statistics
Configurable	True
Platforms	Supported on all platforms

clear

Description	Clear statistics for this event handler instance
Context	system event-handler instance name <i>string</i> statistics clear
Tree	clear
Configurable	True
Platforms	Supported on all platforms

grpc-server *name string*

Description	List of configured gRPC server instances
Context	system grpc-server name <i>string</i>
Tree	grpc-server
Configurable	True
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

name *string*

Description	User-provided name of this server instance
Context	system grpc-server name <i>string</i>
String Length	1 to 255
Configurable	True
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

client id number

Description	List of active gRIBI client sessions
Context	system grpc-server name <i>string</i> client id number
Tree	client
Configurable	True
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

id number

Description	System generated ID for for the client
Context	system grpc-server name <i>string</i> client id number
Range	0 to 4294967295
Configurable	True
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

disconnect

Description	Disconnect this client from the server
Context	system grpc-server name <i>string</i> client id number disconnect
Tree	disconnect
Configurable	True
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

gnoi

Description	Top-level container for operational commands related to gNOI
Context	system grpc-server name <i>string</i> gnoi
Tree	gnoi
Configurable	True

Platforms 7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

healthz

Description gNOI Healthz tools commands

Context [system grpc-server name](#) *string* [gnoi healthz](#)

Tree [healthz](#)

Configurable True

Platforms 7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

chassis

Description Chassis component

Context [system grpc-server name](#) *string* [gnoi healthz chassis](#)

Tree [chassis](#)

Configurable True

Platforms 7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

clear

Description Clear healthz events for this component

Context [system grpc-server name](#) *string* [gnoi healthz chassis clear](#)

Tree [clear](#)

Configurable True

Platforms 7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

clear

Description Clear all healthz events

Context [system grpc-server name](#) *string* [gnoi healthz clear](#)

Tree	clear
Configurable	True
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

control

Description	Control module component
Context	system grpc-server name <i>string</i> gnoi healthz control
Tree	control
Configurable	True
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

clear

Description	Clear healthz events for this component
Context	system grpc-server name <i>string</i> gnoi healthz control clear
Tree	clear
Configurable	True
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

slot *string*

Description	Slot identifier for the control module
Context	system grpc-server name <i>string</i> gnoi healthz control slot <i>string</i>
Tree	slot
Configurable	True
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

fabric

Description	Fabric module component
Context	system grpc-server name <i>string</i> gnoi healthz fabric
Tree	fabric
Configurable	True
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

clear

Description	Clear healthz events for this component
Context	system grpc-server name <i>string</i> gnoi healthz fabric clear
Tree	clear
Configurable	True
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

slot number

Description	Numeric identifier for the fabric module
Context	system grpc-server name <i>string</i> gnoi healthz fabric slot number
Tree	slot
Configurable	True
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

fan-tray

Description	Fan component
Context	system grpc-server name <i>string</i> gnoi healthz fan-tray
Tree	fan-tray
Configurable	True

Platforms 7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

clear

Description Clear healthz events for this component

Context [system grpc-server name](#) *string* [gnoi healthz fan-tray clear](#)

Tree [clear](#)

Configurable True

Platforms 7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

id number

Description Numeric identifier for the fan module

Context [system grpc-server name](#) *string* [gnoi healthz fan-tray id number](#)

Tree [id](#)

Configurable True

Platforms 7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

linecard

Description Line card component

Context [system grpc-server name](#) *string* [gnoi healthz linecard](#)

Tree [linecard](#)

Configurable True

Platforms 7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

clear

Description Clear healthz events for this component

Context [system grpc-server name](#) *string* [gnoi healthz linecard clear](#)

Tree	clear
Configurable	True
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

slot number

Description	Numeric identifier for the line card
Context	system grpc-server name <i>string</i> gnoi healthz linecard slot number
Tree	slot
Configurable	True
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

power-supply

Description	Power supply component
Context	system grpc-server name <i>string</i> gnoi healthz power-supply
Tree	power-supply
Configurable	True
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

clear

Description	Clear healthz events for this component
Context	system grpc-server name <i>string</i> gnoi healthz power-supply clear
Tree	clear
Configurable	True
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

id number

Description	Numeric identifier for the power supply module
Context	system grpc-server name <i>string</i> gnoi healthz power-supply id number
Tree	id
Configurable	True
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

transceiver

Description	Transceiver component
Context	system grpc-server name <i>string</i> gnoi healthz transceiver
Tree	transceiver
Configurable	True
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

clear

Description	Clear healthz events for this component
Context	system grpc-server name <i>string</i> gnoi healthz transceiver clear
Tree	clear
Configurable	True
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

interface *string*

Description	Interface name for the transceiver module
Context	system grpc-server name <i>string</i> gnoi healthz transceiver interface <i>string</i>
Tree	interface
String Length	1 to 255
Configurable	True

Platforms 7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

statistics

Description A collection of counters that were collected by the gRPC during the authentication process.

Context [system grpc-server name string statistics](#)

Tree [statistics](#)

Configurable True

Platforms 7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

clear

Description Clear gNMI network instance authentication counters

Context [system grpc-server name string statistics clear](#)

Tree [clear](#)

Configurable True

Platforms 7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

l2cp-transparency

Description Enable the l2cp-transparency context

Context [system l2cp-transparency](#)

Tree [l2cp-transparency](#)

Configurable True

Platforms 7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

dot1x

Description Enter the dot1x context

Context [system l2cp-transparency dot1x](#)

Tree	dot1x
Configurable	True
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

clear

Description	Clears the statistics for the 802.1x Port based Network Access Control protocol.
Context	system l2cp-transparency dot1x clear
Tree	clear
Configurable	True
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

l2cp-total-statistics

Description	Enter the l2cp-total-statistics context
Context	system l2cp-transparency l2cp-total-statistics
Tree	l2cp-total-statistics
Configurable	True
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

clear

Description	Clears the global statistics for the L2CP protocols.
Context	system l2cp-transparency l2cp-total-statistics clear
Tree	clear
Configurable	True
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

lACP

Description	Enter the lACP context
Context	system l2cp-transparency lACP
Tree	lACP
Configurable	True
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

clear

Description	Clears the statistics for Link Aggregation Control Protocol.
Context	system l2cp-transparency lACP clear
Tree	clear
Configurable	True
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

lLDP

Description	Enter the lLDP context
Context	system l2cp-transparency lLDP
Tree	lLDP
Configurable	True
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

clear

Description	Clears the statistics for Link Layer Discovery Protocol.
Context	system l2cp-transparency lLDP clear
Tree	clear
Configurable	True

Platforms 7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

ptp

Description Enter the ptp context

Context [system l2cp-transparency ptp](#)

Tree [ptp](#)

Configurable True

Platforms 7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

clear

Description Clears the statistics for the Precision Time Protocol .

Context [system l2cp-transparency ptp clear](#)

Tree [clear](#)

Configurable True

Platforms 7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

xstp

Description Enter the xstp context

Context [system l2cp-transparency xstp](#)

Tree [xstp](#)

Configurable True

Platforms 7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

clear

Description Clears the statistics for all the Spanning Tree Protocols.

Context [system l2cp-transparency xstp clear](#)

Tree	clear
Configurable	True
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

lldp

Description	Top-level container for LLDP tools
Context	system lldp
Tree	lldp
Configurable	True
Platforms	Supported on all platforms

interface [name string](#)

Description	List of interfaces on which LLDP is enabled
Context	system lldp interface name string
Tree	interface
Configurable	True
Platforms	Supported on all platforms

name [string](#)

Description	Reference to a LLDP Ethernet interface
Context	system lldp interface name string
Configurable	True
Platforms	Supported on all platforms

statistics

Description	LLDP interface statistics tools commands
Context	system lldp interface name string statistics
Tree	statistics
Configurable	True
Platforms	Supported on all platforms

clear

Description	Clear interface LLDP statistics
Context	system lldp interface name <i>string</i> statistics clear
Tree	clear
Configurable	True
Platforms	Supported on all platforms

statistics

Description	LLDP global statistics tools commands
Context	system lldp statistics
Tree	statistics
Configurable	True
Platforms	Supported on all platforms

clear

Description	Clear global LLDP statistics
Context	system lldp statistics clear
Tree	clear
Configurable	True
Platforms	Supported on all platforms

mirroring

Description	Enable the mirroring context
Context	system mirroring
Tree	mirroring
Configurable	True
Platforms	7220 IXR-D4, 7220 IXR-D5, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

mirroring-instance [name](#) *string*

Description	Enter the mirroring-instance list instance
--------------------	--

Context	system mirroring mirroring-instance name <i>string</i>
Tree	mirroring-instance
Configurable	True
Platforms	7220 IXR-D4, 7220 IXR-D5, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

name *string*

Description	A unique name identifying the mirroring instance
Context	system mirroring mirroring-instance name <i>string</i>
Configurable	True
Platforms	7220 IXR-D4, 7220 IXR-D5, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

mirror-destination

Description	tools mirror destination
Context	system mirroring mirroring-instance name <i>string</i> mirror-destination
Tree	mirror-destination
Configurable	True
Platforms	7220 IXR-D4, 7220 IXR-D5, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

statistics

Description	Enter the statistics context
Context	system mirroring mirroring-instance name <i>string</i> mirror-destination statistics
Tree	statistics
Configurable	True
Platforms	7220 IXR-D4, 7220 IXR-D5, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

clear

Description	Enter the clear context
Context	system mirroring mirroring-instance name <i>string</i> mirror-destination statistics clear

Tree	clear
Configurable	True
Platforms	7220 IXR-D4, 7220 IXR-D5, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

netconf-server [name string](#)

Description	Enter the netconf-server list instance
Context	system netconf-server name string
Tree	netconf-server
Configurable	True
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

name [string](#)

Description	NETCONF server instance name
Context	system netconf-server name string
String Length	1 to 247
Configurable	True
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

session [session-id number](#)

Description	Enter the session list instance
Context	system netconf-server name string session session-id number
Tree	session
Configurable	True
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

session-id [number](#)

Description	Enter the session-id context
--------------------	------------------------------

Context	system netconf-server name <i>string</i> session session-id <i>number</i>
Range	1 to 4294967295
Configurable	True
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

clear

Description	Clear the NETCONF server instance session
Context	system netconf-server name <i>string</i> session session-id <i>number</i> clear
Tree	clear
Configurable	True
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

statistics

Description	Enter the statistics context
Context	system netconf-server name <i>string</i> session session-id <i>number</i> statistics
Tree	statistics
Configurable	True
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

clear

Description	Clear statistics information for the NETCONF session
Context	system netconf-server name <i>string</i> session session-id <i>number</i> statistics clear
Tree	clear
Configurable	True
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

statistics

Description	Enter the statistics context
Context	system netconf-server name <i>string</i> statistics
Tree	statistics
Configurable	True
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

clear

Description	Clear statistics information for the NETCONF server instance
Context	system netconf-server name <i>string</i> statistics clear
Tree	clear
Configurable	True
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

packet-trace-base64

Description	Tools command to report the forwarding behavior for a specified test packet (packet specified in base64 format)
Context	system packet-trace-base64
Tree	packet-trace-base64
Configurable	True
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

interface *string*

Description	References the configured name of the interface in which to inject the probe packet
Context	system packet-trace-base64 interface <i>string</i>
Tree	interface
Configurable	True

Platforms 7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

packet *binary*

Description Packet content encoded in base64 string format

Context [system packet-trace-base64 packet binary](#)

Tree [packet](#)

Configurable True

Platforms 7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

sync

Description Top-level grouping for sync operational commands

Context [system sync](#)

Tree [sync](#)

Configurable True

Platforms 7220 IXR-D5, 7250 IXR-X3b

ptp

Description Grouping for ptp operational commands

Context [system sync ptp](#)

Tree [ptp](#)

Configurable True

Platforms 7220 IXR-D5, 7250 IXR-X3b

instance [instance-index](#) *number*

Description Grouping for PTP instance operational commands

Context [system sync ptp instance instance-index number](#)

Tree [instance](#)

Configurable True

Platforms 7220 IXR-D5, 7250 IXR-X3b

instance-index *number*

Description	Enter the instance-index context
Context	system sync ptp instance instance-index <i>number</i>
Range	1 to 10
Configurable	True
Platforms	7220 IXR-D5, 7250 IXR-X3b

clear-statistics

Description	Clears all PTP statistics for PTP
Context	system sync ptp instance instance-index <i>number</i> clear-statistics
Tree	clear-statistics
Configurable	True
Platforms	7220 IXR-D5, 7250 IXR-X3b

default-ds

Description	The default data set of the PTP Instance In the context of the protocol, this data set is required for an Ordinary Clock or Boundary Clock
Context	system sync ptp instance instance-index <i>number</i> default-ds
Tree	default-ds
Configurable	True
Platforms	7220 IXR-D5, 7250 IXR-X3b

statistics

Description	Enter the statistics context
Context	system sync ptp instance instance-index <i>number</i> default-ds statistics
Tree	statistics
Configurable	True
Platforms	7220 IXR-D5, 7250 IXR-X3b

clear

Description	Clears PTP statistics and event counters in the default-ds
--------------------	--

Context	system sync ptp instance instance-index number default-ds statistics clear
Tree	clear
Configurable	True
Platforms	7220 IXR-D5, 7250 IXR-X3b

time-recovery-engine

Description	Enter the time-recovery-engine context
Context	system sync ptp instance instance-index number default-ds time-recovery-engine
Tree	time-recovery-engine
Configurable	True
Platforms	7220 IXR-D5, 7250 IXR-X3b

statistics

Description	Enter the statistics context
Context	system sync ptp instance instance-index number default-ds time-recovery-engine statistics
Tree	statistics
Configurable	True
Platforms	7220 IXR-D5, 7250 IXR-X3b

clear

Description	Clears all PTP statistics for PTP time recovery engine
Context	system sync ptp instance instance-index number default-ds time-recovery-engine statistics clear
Tree	clear
Configurable	True
Platforms	7220 IXR-D5, 7250 IXR-X3b

inactive-peers

Description	Enter the inactive-peers context
Context	system sync ptp instance instance-index number inactive-peers
Tree	inactive-peers

Configurable	True
Platforms	7220 IXR-D5, 7250 IXR-X3b

clear

Description	Clears information related to inactive PTP peers
Context	system sync ptp instance instance-index number inactive-peers clear
Tree	clear
Configurable	True
Platforms	7220 IXR-D5, 7250 IXR-X3b

port-ds-configured-peer [port-index number](#)

Description	Grouping for PTP Port DS for configured IP peers operational commands
Context	system sync ptp instance instance-index number port-ds-configured-peer port-index number
Tree	port-ds-configured-peer
Configurable	True
Platforms	7220 IXR-D5, 7250 IXR-X3b

port-index *number*

Description	Enter the port-index context
Context	system sync ptp instance instance-index number port-ds-configured-peer port-index number
Configurable	True
Platforms	7220 IXR-D5, 7250 IXR-X3b

statistics

Description	Enter the statistics context
Context	system sync ptp instance instance-index number port-ds-configured-peer port-index number statistics
Tree	statistics
Configurable	True
Platforms	7220 IXR-D5, 7250 IXR-X3b

clear

Description	Clears all PTP statistics for this PTP Port DS
Context	system sync ptp instance instance-index number port-ds-configured-peer port-index number statistics clear
Tree	clear
Configurable	True
Platforms	7220 IXR-D5, 7250 IXR-X3b

port-ds-discovered-peer [port-index number](#)

Description	Grouping for PTP Port DS for discovered IP peers operational commands
Context	system sync ptp instance instance-index number port-ds-discovered-peer port-index number
Tree	port-ds-discovered-peer
Configurable	True
Platforms	7220 IXR-D5, 7250 IXR-X3b

port-index *number*

Description	Enter the port-index context
Context	system sync ptp instance instance-index number port-ds-discovered-peer port-index number
Configurable	True
Platforms	7220 IXR-D5, 7250 IXR-X3b

statistics

Description	Enter the statistics context
Context	system sync ptp instance instance-index number port-ds-discovered-peer port-index number statistics
Tree	statistics
Configurable	True
Platforms	7220 IXR-D5, 7250 IXR-X3b

clear

Description	Clears all PTP statistics for this PTP Port DS
Context	system sync ptp instance instance-index number port-ds-discovered-peer port-index number statistics clear
Tree	clear
Configurable	True
Platforms	7220 IXR-D5, 7250 IXR-X3b

port-ds-interface [port-index number](#)

Description	Grouping for PTP Port DS for interfaces operational commands
Context	system sync ptp instance instance-index number port-ds-interface port-index number
Tree	port-ds-interface
Configurable	True
Platforms	7220 IXR-D5, 7250 IXR-X3b

port-index [number](#)

Description	Enter the port-index context
Context	system sync ptp instance instance-index number port-ds-interface port-index number
Configurable	True
Platforms	7220 IXR-D5, 7250 IXR-X3b

statistics

Description	Enter the statistics context
Context	system sync ptp instance instance-index number port-ds-interface port-index number statistics
Tree	statistics
Configurable	True
Platforms	7220 IXR-D5, 7250 IXR-X3b

clear

Description	Clears all PTP statistics for this PTP Port DS
Context	system sync ptp instance instance-index number port-ds-interface port-index number statistics clear
Tree	clear
Configurable	True
Platforms	7220 IXR-D5, 7250 IXR-X3b

tls

Description	Top-level container for operational commands related to TLS
Context	system tls
Tree	tls
Configurable	True
Platforms	Supported on all platforms

generate-csr

Description	Generates a certificate signing request and key pair Fields for the certificate are taken from OpenSSL defaults, with the exception of the common name, which is taken from the system host name and domain name combination.
Context	system tls generate-csr
Tree	generate-csr
Configurable	True
Platforms	Supported on all platforms

common-name *string*

Description	The common name to use for the certificate signing request By default the common name is set to the system host name and domain name combination.
Context	system tls generate-csr common-name string
Tree	common-name
String Length	1 to 64

Configurable	True
Platforms	Supported on all platforms

country *string*

Description	The country name to use for the certificate signing request The expected format is two characters long, e.g. 'US'.
Context	system tls generate-csr country string
Tree	country
String Length	2
Default	US
Configurable	True
Platforms	Supported on all platforms

domain-names *string*

Description	Domain names to add to the SubjectAlternativeName field within the certificate signing request These names are encoded as DNS:<name> within the certificate SAN.
Context	system tls generate-csr domain-names string
Tree	domain-names
String Length	1 to 253
Configurable	True
Platforms	Supported on all platforms
Max. Elements	32

email *string*

Description	The email address to use for the certificate signing request
Context	system tls generate-csr email string
Tree	email
String Length	1 to 255
Configurable	True
Platforms	Supported on all platforms

ip-addresses (*ipv4-address* | *ipv6-address*)

Description	IP addresses to add to the SubjectAlternativeName field within the certificate signing request These addresses are encoded as IP:<ip> within the certificate SAN.
Context	system tls generate-csr ip-addresses (<i>ipv4-address</i> <i>ipv6-address</i>)
Tree	ip-addresses
Configurable	True
Platforms	Supported on all platforms
Max. Elements	32

key-size *number*

Description	The size of the private key to generate for the certificate signing request
Context	system tls generate-csr key-size <i>number</i>
Tree	key-size
Range	1024 to 16384
Default	4096
Configurable	True
Platforms	Supported on all platforms

key-type *keyword*

Description	The type of private key to generate for the certificate signing request
Context	system tls generate-csr key-type <i>keyword</i>
Tree	key-type
Default	rsa
Options	<ul style="list-style-type: none"> rsa
Configurable	True
Platforms	Supported on all platforms

locality *string*

Description	The city or locality to use for the certificate signing request
Context	system tls generate-csr locality <i>string</i>

Tree	locality
String Length	1 to 255
Configurable	True
Platforms	Supported on all platforms

organization *string*

Description	The organization to use for the certificate signing request
Context	system tls generate-csr organization <i>string</i>
Tree	organization
String Length	1 to 255
Configurable	True
Platforms	Supported on all platforms

organization-unit *string*

Description	The organization unit to use for the certificate signing request
Context	system tls generate-csr organization-unit <i>string</i>
Tree	organization-unit
String Length	1 to 255
Configurable	True
Platforms	Supported on all platforms

spiffe-id *string*

Description	A SPIFFE ID to use for the certificate signing request This ID is in URI form, including the leading 'spiffe://', for example 'spiffe://srlinux.dev/sa/user'.
Context	system tls generate-csr spiffe-id <i>string</i>
Tree	spiffe-id
Configurable	True
Platforms	Supported on all platforms

state *string*

Description	The state or province to use for the certificate signing request
--------------------	--

Context	system tls generate-csr state <i>string</i>
Tree	state
String Length	1 to 255
Configurable	True
Platforms	Supported on all platforms

type *keyword*

Description	The type of certificate to use for the certificate signing request
Context	system tls generate-csr type <i>keyword</i>
Tree	type
Default	x509
Options	<ul style="list-style-type: none"> • x509
Configurable	True
Platforms	Supported on all platforms

generate-self-signed

Description	<p>Generates a self signed certificate and key pair</p> <p>Fields for the self signed certificate are taken from OpenSSL defaults, with the exception of the common name, which is taken from the system host name and domain name combination.</p>
Context	system tls generate-self-signed
Tree	generate-self-signed
Configurable	True
Platforms	Supported on all platforms

common-name *string*

Description	<p>The common name to use for the certificate signing request</p> <p>By default the common name is set to the system host name and domain name combination.</p>
Context	system tls generate-self-signed common-name <i>string</i>
Tree	common-name
String Length	1 to 64
Configurable	True

Platforms Supported on all platforms

country *string*

Description The country name to use for the certificate signing request
The expected format is two characters long, e.g. 'US'.

Context [system tls generate-self-signed country string](#)

Tree [country](#)

String Length 2

Default US

Configurable True

Platforms Supported on all platforms

domain-names *string*

Description Domain names to add to the SubjectAlternativeName field within the certificate signing request
These names are encoded as DNS:<name> within the certificate SAN.

Context [system tls generate-self-signed domain-names string](#)

Tree [domain-names](#)

String Length 1 to 253

Configurable True

Platforms Supported on all platforms

Max. Elements 32

duration *number*

Description The time in which the certificate is valid

Context [system tls generate-self-signed duration number](#)

Tree [duration](#)

Range 1 to 3650

Default 365

Units days

Configurable True

Platforms Supported on all platforms

email string

Description	The email address to use for the certificate signing request
Context	system tls generate-self-signed email string
Tree	email
String Length	1 to 255
Configurable	True
Platforms	Supported on all platforms

ip-addresses (*ipv4-address* | *ipv6-address*)

Description	IP addresses to add to the SubjectAlternativeName field within the certificate signing request These addresses are encoded as IP:<ip> within the certificate SAN.
Context	system tls generate-self-signed ip-addresses (<i>ipv4-address</i> <i>ipv6-address</i>)
Tree	ip-addresses
Configurable	True
Platforms	Supported on all platforms
Max. Elements	32

key-size number

Description	The size of the private key to generate for the certificate signing request
Context	system tls generate-self-signed key-size number
Tree	key-size
Range	1024 to 16384
Default	4096
Configurable	True
Platforms	Supported on all platforms

key-type keyword

Description	The type of private key to generate for the certificate signing request
Context	system tls generate-self-signed key-type keyword
Tree	key-type
Default	rsa

Options	• <code>rsa</code>
Configurable	True
Platforms	Supported on all platforms

locality string

Description	The city or locality to use for the certificate signing request
Context	system tls generate-self-signed locality string
Tree	locality
String Length	1 to 255
Configurable	True
Platforms	Supported on all platforms

organization string

Description	The organization to use for the certificate signing request
Context	system tls generate-self-signed organization string
Tree	organization
String Length	1 to 255
Configurable	True
Platforms	Supported on all platforms

organization-unit string

Description	The organization unit to use for the certificate signing request
Context	system tls generate-self-signed organization-unit string
Tree	organization-unit
String Length	1 to 255
Configurable	True
Platforms	Supported on all platforms

spiffe-id string

Description	A SPIFFE ID to use for the certificate signing request This ID is in URI form, including the leading 'spiffe://', for example 'spiffe://srlinux.dev/sa/user'.
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Context	system tls generate-self-signed spiffe-id <i>string</i>
Tree	spiffe-id
Configurable	True
Platforms	Supported on all platforms

state *string*

Description	The state or province to use for the certificate signing request
Context	system tls generate-self-signed state <i>string</i>
Tree	state
String Length	1 to 255
Configurable	True
Platforms	Supported on all platforms

type *keyword*

Description	The type of certificate to use for the certificate signing request
Context	system tls generate-self-signed type <i>keyword</i>
Tree	type
Default	x509
Options	<ul style="list-style-type: none"> • x509
Configurable	True
Platforms	Supported on all platforms

server-profile [name](#) *string*

Description	Enter the server-profile list instance
Context	system tls server-profile name <i>string</i>
Tree	server-profile
Configurable	True
Platforms	Supported on all platforms

name *string*

Description	Name of the TLS server-profile
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Context	system tls server-profile name string
String Length	1 to 247
Configurable	True
Platforms	Supported on all platforms

certz

Description	Information relating to the active certificates and bundles as provided via Certz State is provided by the gNSI Certz service, and can be changed using the gNSI.Certz.Rotate RPC
Context	system tls server-profile name string certz
Tree	certz
Configurable	True
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

remove

Description	Remove Certz SSL profile from the system.
Context	system tls server-profile name string certz remove
Tree	remove
Configurable	True
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

rotate

Description	Perform a rotation of a certificate, trust anchor, or certificate revocation list within Certz SSL profile.
Context	system tls server-profile name string certz rotate
Tree	rotate
Configurable	True
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

certificate string

Description	Base64 encoded certificate to use with the provided or existing private key This includes the '-----BEGIN CERTIFICATE-----' and '-----END CERTIFICATE-----' header and footer
Context	system tls server-profile name string certz rotate certificate string
Tree	certificate
Configurable	True
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

created-on number

Description	Sets the created on value for the new policy Value is the number of seconds since the epoch. For reference the current time from the epoch in most Linux distributions can be retrieved via 'date +%s'. You can also select a specific date via 'date -d "2023-03-31" +%s'. If no value is provided the systems current date and time is used.
Context	system tls server-profile name string certz rotate created-on number
Tree	created-on
Units	seconds
Configurable	True
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

crl string

Description	Base64 encoded bundle of certificates to add to the certificate revocation list
Context	system tls server-profile name string certz rotate crl string
Tree	crl
Configurable	True
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

key string

Description	Base64 encoded key to use with the server certificate This includes the '-----BEGIN PRIVATE KEY-----', and '-----END PRIVATE KEY-----' header and footer The value is hashed, and only the hashed value is kept
Context	system tls server-profile name string certz rotate key string
Tree	key
Configurable	True
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

trust-anchor string

Description	Base64 encoded certificate chain to use as a trust anchor
Context	system tls server-profile name string certz rotate trust-anchor string
Tree	trust-anchor
Configurable	True
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

version string

Description	A version string to store with the policy No constraints are applied other than the value must be a string. If no value is provided no default is used.
Context	system tls server-profile name string certz rotate version string
Tree	version
Configurable	True
Platforms	7220 IXR-D1, 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5, 7220 IXR-H2, 7220 IXR-H3, 7220 IXR-H4, 7250 IXR-10, 7250 IXR-10e, 7250 IXR-6, 7250 IXR-6e, 7250 IXR-X3b

20 tools tunnel

```
tunnel
+ vxlan-tunnel
  + statistics
    + clear
  + vtep address (ipv4-address | ipv6-address)
    + statistics
      + clear
```

20.1 tunnel Descriptions

tunnel

Description	Top-level container for the tunnel table.
Context	tunnel
Tree	tunnel
Configurable	True
Platforms	7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5

vxlan-tunnel

Description	Enter the vxlan-tunnel context
Context	tunnel vxlan-tunnel
Tree	vxlan-tunnel
Configurable	True
Platforms	7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5

statistics

Description	Enter the statistics context
Context	tunnel vxlan-tunnel statistics
Tree	statistics
Configurable	True
Platforms	7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5

clear

Description	Enter the clear context
Context	tunnel vxlan-tunnel statistics clear
Tree	clear
Configurable	True

Platforms 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5

vtep address (*ipv4-address* | *ipv6-address*)

Description The IP address that identifies the remote VXLAN Termination Endpoint (VTEP).

Context [tunnel vxlan-tunnel vtep address](#) (*ipv4-address* | *ipv6-address*)

Tree [vtep](#)

Configurable True

Platforms 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5

address (*ipv4-address* | *ipv6-address*)

Description The IP address that identifies the remote VXLAN Termination Endpoint (VTEP).

Context [tunnel vxlan-tunnel vtep address](#) (*ipv4-address* | *ipv6-address*)

Configurable True

Platforms 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5

statistics

Description Enter the statistics context

Context [tunnel vxlan-tunnel vtep address](#) (*ipv4-address* | *ipv6-address*) [statistics](#)

Tree [statistics](#)

Configurable True

Platforms 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5

clear

Description Enter the clear context

Context [tunnel vxlan-tunnel vtep address](#) (*ipv4-address* | *ipv6-address*) [statistics](#) [clear](#)

Tree [clear](#)

Configurable True

Platforms

7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4,
7220 IXR-D5

21 tunnel-interface

```

tunnel-interface name string
+ vxlan-interface index number
+ bridge-table
- multicast-destinations
  - destination vtep (ipv4-address | ipv6-address) vni number
  - destination-index number
  - multicast-forwarding keyword
  - not-programmed-reason keyword
  - multicast-limit
    - current-usage number
    - maximum-entries number
- statistics
  - active-entries number
  - failed-entries number
  - mac-type type keyword
    - active-entries number
    - failed-entries number
    - total-entries number
  - total-entries number
- unicast-destinations
  - destination vtep (ipv4-address | ipv6-address) vni number
  - destination-index number
  - mac-table
    - mac address string
    - failed-slots number
    - last-update string
    - not-programmed-reason keyword
    - type keyword
  - statistics
    - active-entries number
    - failed-entries number
    - mac-type type keyword
      - active-entries number
      - failed-entries number
      - total-entries number
    - total-entries number
  - es-destination esi string
  - destination-index number
  - mac-table
    - mac address string
    - failed-slots number
    - last-update string
    - not-programmed-reason keyword
    - type keyword
  - statistics
    - active-entries number
    - failed-entries number
    - mac-type type keyword
      - active-entries number
      - failed-entries number
      - total-entries number
    - total-entries number
  - vtep address (ipv4-address | ipv6-address) vni number
+ egress
+ inner-ethernet-header
  + source-mac keyword

```

```
- used-source-mac string
+ source-ip keyword
+ ingress
+ vni number
- oper-down-reason keyword
- oper-state keyword
+ type identityref
```

21.1 tunnel-interface Descriptions

tunnel-interface *name string*

Description	In the case that the interface is logical tunnel interface, the parameters for the tunnel are specified within this subtree. Tunnel interfaces have only a single logical subinterface associated with them.
Context	tunnel-interface name string
Tree	tunnel-interface
Configurable	True
Platforms	7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5

name string

Description	The name of the tunnel-interface. Valid options are: vxlan<N>, N=0..255
Context	tunnel-interface name string
String Length	6 to 8
Configurable	True
Platforms	7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5

vxlan-interface *index number*

Description	The list of vxlan-interfaces.
Context	tunnel-interface name string vxlan-interface index number
Tree	vxlan-interface
Configurable	True
Platforms	7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5
Max. Elements	16384

index number

Description	The index of the vxlan-tunnel.
--------------------	--------------------------------

Context	tunnel-interface name <i>string</i> vxlan-interface index <i>number</i>
Range	0 to 999999999
Configurable	True
Platforms	7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5

bridge-table

Description	Enable the bridge-table context
Context	tunnel-interface name <i>string</i> vxlan-interface index <i>number</i> bridge-table
Tree	bridge-table
Configurable	True
Platforms	7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5

multicast-destinations

Description	Enter the multicast-destinations context
Context	tunnel-interface name <i>string</i> vxlan-interface index <i>number</i> bridge-table multicast-destinations
Tree	multicast-destinations
Configurable	False
Platforms	7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5

destination [vtep](#) ([ipv4-address](#) | [ipv6-address](#)) [vni](#) *number*

Description	Enter the destination list instance
Context	tunnel-interface name <i>string</i> vxlan-interface index <i>number</i> bridge-table multicast-destinations destination vtep (ipv4-address ipv6-address) vni <i>number</i>
Tree	destination
Configurable	False
Platforms	7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5

vtep (*ipv4-address* | *ipv6-address*)

Description	The IP address that identifies the remote VXLAN Termination Endpoint (VTEP).
Context	tunnel-interface name <i>string</i> vxlan-interface index number bridge-table multicast-destinations destination vtep (<i>ipv4-address</i> <i>ipv6-address</i>) vni number
Configurable	False
Platforms	7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5

vni number

Description	VXLAN Network Identifier of the destination.
Context	tunnel-interface name <i>string</i> vxlan-interface index number bridge-table multicast-destinations destination vtep (<i>ipv4-address</i> <i>ipv6-address</i>) vni number
Range	1 to 16777215
Configurable	False
Platforms	7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5

destination-index number

Description	A system-wide unique identifier of this vxlan destination object (system allocated).
Context	tunnel-interface name <i>string</i> vxlan-interface index number bridge-table multicast-destinations destination vtep (<i>ipv4-address</i> <i>ipv6-address</i>) vni number destination-index number
Tree	destination-index
Configurable	False
Platforms	7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5

multicast-forwarding keyword

Description	The type of multicast data forwarded by this vxlan destination.
Context	tunnel-interface name <i>string</i> vxlan-interface index number bridge-table multicast-destinations destination vtep (<i>ipv4-address</i> <i>ipv6-address</i>) vni number multicast-forwarding keyword

Tree	multicast-forwarding
Options	<ul style="list-style-type: none"> • none • BUM • unknown-unicast • broadcast-mcast
Configurable	False
Platforms	7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5

not-programmed-reason *keyword*

Description	The reason why the destination is not programmed in the floodlist
Context	tunnel-interface name <i>string</i> vxlan-interface index <i>number</i> bridge-table multicast-destinations destination vtep (<i>ipv4-address</i> <i>ipv6-address</i>) vni number not-programmed-reason <i>keyword</i>
Tree	not-programmed-reason
Options	<ul style="list-style-type: none"> • no-destination-index • multicast-limit
Configurable	False
Platforms	7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5

multicast-limit

Description	Multicast limits per vxlan interface.
Context	tunnel-interface name <i>string</i> vxlan-interface index <i>number</i> bridge-table multicast-destinations multicast-limit
Tree	multicast-limit
Configurable	False
Platforms	7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5

current-usage *number*

Description	Maximum number of multicast vxlan-destinations in use on this vxlan-interface.
Context	tunnel-interface name <i>string</i> vxlan-interface index <i>number</i> bridge-table multicast-destinations multicast-limit current-usage <i>number</i>

Tree	current-usage
Configurable	False
Platforms	7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5

maximum-entries *number*

Description	Maximum number of multicast vxlan-destinations allowed on a vxlan-interface.
Context	tunnel-interface name <i>string</i> vxlan-interface index <i>number</i> bridge-table multicast-destinations multicast-limit maximum-entries <i>number</i>
Tree	maximum-entries
Configurable	False
Platforms	7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5

statistics

Description	Enter the statistics context
Context	tunnel-interface name <i>string</i> vxlan-interface index <i>number</i> bridge-table statistics
Tree	statistics
Configurable	False
Platforms	7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5

active-entries *number*

Description	The total number of entries that are active on the sub-interface.
Context	tunnel-interface name <i>string</i> vxlan-interface index <i>number</i> bridge-table statistics active-entries <i>number</i>
Tree	active-entries
Default	0
Configurable	False
Platforms	7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5

failed-entries *number*

Description	The total number of macs, which have not been programmed on at least one slot
Context	tunnel-interface name <i>string</i> vxlan-interface index <i>number</i> bridge-table statistics failed-entries <i>number</i>
Tree	failed-entries
Default	0
Configurable	False
Platforms	7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5

mac-type *type keyword*

Description	The type of the mac on the sub-interface.
Context	tunnel-interface name <i>string</i> vxlan-interface index <i>number</i> bridge-table statistics mac-type type <i>keyword</i>
Tree	mac-type
Configurable	False
Platforms	7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5

type *keyword*

Description	Enter the type context
Context	tunnel-interface name <i>string</i> vxlan-interface index <i>number</i> bridge-table statistics mac-type type <i>keyword</i>
Options	<ul style="list-style-type: none"> • static • duplicate • learnt • irb-interface • evpn • evpn-static • irb-interface-anycast • proxy-anti-spoof • reserved • eth-cfm

- irb-interface-vrrp

Configurable	False
Platforms	7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5

active-entries *number*

Description	The total number of entries of this type on the sub-interface
Context	tunnel-interface name <i>string</i> vxlan-interface index <i>number</i> bridge-table statistics mac-type type <i>keyword</i> active-entries <i>number</i>
Tree	active-entries
Default	0
Configurable	False
Platforms	7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5

failed-entries *number*

Description	The total number of macs of this type, which have not been programmed on at least one slot
Context	tunnel-interface name <i>string</i> vxlan-interface index <i>number</i> bridge-table statistics mac-type type <i>keyword</i> failed-entries <i>number</i>
Tree	failed-entries
Default	0
Configurable	False
Platforms	7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5

total-entries *number*

Description	The total number of macs of this type, active and inactive, on the sub-interface.
Context	tunnel-interface name <i>string</i> vxlan-interface index <i>number</i> bridge-table statistics mac-type type <i>keyword</i> total-entries <i>number</i>
Tree	total-entries
Default	0
Configurable	False

Platforms 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5

total-entries *number*

Description The total number of macs, active and inactive, on the sub-interface.

Context [tunnel-interface name](#) *string* [vxlan-interface index](#) *number* [bridge-table statistics total-entries](#) *number*

Tree [total-entries](#)

Default 0

Configurable False

Platforms 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5

unicast-destinations

Description Enter the unicast-destinations context

Context [tunnel-interface name](#) *string* [vxlan-interface index](#) *number* [bridge-table unicast-destinations](#)

Tree [unicast-destinations](#)

Configurable False

Platforms 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5

destination [vtep](#) (*ipv4-address* | *ipv6-address*) [vni](#) *number*

Description Enter the destination list instance

Context [tunnel-interface name](#) *string* [vxlan-interface index](#) *number* [bridge-table unicast-destinations destination vtep](#) (*ipv4-address* | *ipv6-address*) [vni](#) *number*

Tree [destination](#)

Configurable False

Platforms 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5

vtep (*ipv4-address* | *ipv6-address*)

Description The IP address that identifies the remote VXLAN Termination Endpoint (VTEP).

Context	tunnel-interface name <i>string</i> vxlan-interface index number bridge-table unicast-destinations destination vtep (ipv4-address ipv6-address) vni number
Configurable	False
Platforms	7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5

vni number

Description	VXLAN Network Identifier of the destination.
Context	tunnel-interface name <i>string</i> vxlan-interface index number bridge-table unicast-destinations destination vtep (ipv4-address ipv6-address) vni number
Range	1 to 16777215
Configurable	False
Platforms	7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5

destination-index number

Description	A system-wide unique identifier of this vxlan destination object (system allocated).
Context	tunnel-interface name <i>string</i> vxlan-interface index number bridge-table unicast-destinations destination vtep (ipv4-address ipv6-address) vni number destination-index number
Tree	destination-index
Configurable	False
Platforms	7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5

mac-table

Description	Enter the mac-table context
Context	tunnel-interface name <i>string</i> vxlan-interface index number bridge-table unicast-destinations destination vtep (ipv4-address ipv6-address) vni number mac-table
Tree	mac-table
Configurable	False
Platforms	7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5

mac address string

Description	macs learnt on the bridging instance
Context	tunnel-interface name string vxlan-interface index number bridge-table unicast-destinations destination vtep (ipv4-address ipv6-address) vni number mac-table mac address string
Tree	mac
Configurable	False
Platforms	7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5

address string

Description	Enter the address context
Context	tunnel-interface name string vxlan-interface index number bridge-table unicast-destinations destination vtep (ipv4-address ipv6-address) vni number mac-table mac address string
Configurable	False
Platforms	7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5

failed-slots number

Description	The list of slot IDs corresponding to the linecards that did not successfully program the mac
Context	tunnel-interface name string vxlan-interface index number bridge-table unicast-destinations destination vtep (ipv4-address ipv6-address) vni number mac-table mac address string failed-slots number
Tree	failed-slots
Range	1 to 8
Configurable	False
Platforms	7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5

last-update string

Description	The date and time of the last update of this mac
--------------------	--

Context	tunnel-interface name <i>string</i> vxlan-interface index <i>number</i> bridge-table unicast-destinations destination vtep (ipv4-address ipv6-address) vni number mac-table mac address <i>string</i> last-update <i>string</i>
Tree	last-update
String Length	20 to 32
Configurable	False
Platforms	7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5

not-programmed-reason *keyword*

Description	The reason why the mac is not programmed
Context	tunnel-interface name <i>string</i> vxlan-interface index <i>number</i> bridge-table unicast-destinations destination vtep (ipv4-address ipv6-address) vni number mac-table mac address <i>string</i> not-programmed-reason <i>keyword</i>
Tree	not-programmed-reason
Options	<ul style="list-style-type: none"> • mac-limit • failed-on-slots • no-destination-index • reserved
Configurable	False
Platforms	7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5

type *keyword*

Description	the type of the mac installed in the fib.
Context	tunnel-interface name <i>string</i> vxlan-interface index <i>number</i> bridge-table unicast-destinations destination vtep (ipv4-address ipv6-address) vni number mac-table mac address <i>string</i> type <i>keyword</i>
Tree	type
Options	<ul style="list-style-type: none"> • static • duplicate • learnt • irb-interface • evpn • evpn-static • irb-interface-anycast

- proxy-anti-spoof
- reserved
- eth-cfm
- irb-interface-vrrp

Configurable

False

Platforms

7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5

statistics**Description**

Enter the statistics context

Context

[tunnel-interface name](#) *string* [vxlan-interface index](#) *number* [bridge-table unicast-destinations destination vtep](#) (*ipv4-address* | *ipv6-address*) [vni number](#) [statistics](#)

Tree[statistics](#)**Configurable**

False

Platforms

7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5

active-entries *number***Description**

The total number of entries that are active on the sub-interface.

Context

[tunnel-interface name](#) *string* [vxlan-interface index](#) *number* [bridge-table unicast-destinations destination vtep](#) (*ipv4-address* | *ipv6-address*) [vni number](#) [statistics active-entries](#) *number*

Tree[active-entries](#)**Default**

0

Configurable

False

Platforms

7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5

failed-entries *number***Description**

The total number of macs, which have not been programmed on atleast one slot

Context

[tunnel-interface name](#) *string* [vxlan-interface index](#) *number* [bridge-table unicast-destinations destination vtep](#) (*ipv4-address* | *ipv6-address*) [vni number](#) [statistics failed-entries](#) *number*

Tree[failed-entries](#)

Default	0
Configurable	False
Platforms	7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5

mac-type [type](#) keyword

Description	the type of the mac on the sub-interface.
Context	tunnel-interface name <i>string</i> vxlan-interface index <i>number</i> bridge-table unicast-destinations destination vtep (<i>ipv4-address</i> <i>ipv6-address</i>) vni number statistics mac-type type <i>keyword</i>
Tree	mac-type
Configurable	False
Platforms	7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5

type *keyword*

Description	Enter the type context
Context	tunnel-interface name <i>string</i> vxlan-interface index <i>number</i> bridge-table unicast-destinations destination vtep (<i>ipv4-address</i> <i>ipv6-address</i>) vni number statistics mac-type type <i>keyword</i>
Options	<ul style="list-style-type: none"> • static • duplicate • learnt • irb-interface • evpn • evpn-static • irb-interface-anycast • proxy-anti-spoof • reserved • eth-cfm • irb-interface-vrrp
Configurable	False
Platforms	7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5

active-entries *number*

Description	The total number of entries of this type on the sub-interface
Context	tunnel-interface name <i>string</i> vxlan-interface index <i>number</i> bridge-table unicast-destinations destination vtep (<i>ipv4-address</i> <i>ipv6-address</i>) vni number statistics mac-type type <i>keyword</i> active-entries <i>number</i>
Tree	active-entries
Default	0
Configurable	False
Platforms	7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5

failed-entries *number*

Description	The total number of macs of this type, which have not been programmed on atleast one slot
Context	tunnel-interface name <i>string</i> vxlan-interface index <i>number</i> bridge-table unicast-destinations destination vtep (<i>ipv4-address</i> <i>ipv6-address</i>) vni number statistics mac-type type <i>keyword</i> failed-entries <i>number</i>
Tree	failed-entries
Default	0
Configurable	False
Platforms	7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5

total-entries *number*

Description	The total number of macs of this type , active and inactive, on the sub-interface.
Context	tunnel-interface name <i>string</i> vxlan-interface index <i>number</i> bridge-table unicast-destinations destination vtep (<i>ipv4-address</i> <i>ipv6-address</i>) vni number statistics mac-type type <i>keyword</i> total-entries <i>number</i>
Tree	total-entries
Default	0
Configurable	False
Platforms	7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5

total-entries *number*

Description	The total number of macs, active and inactive, on the sub-interface.
Context	tunnel-interface name <i>string</i> vxlan-interface index <i>number</i> bridge-table unicast-destinations destination vtep (<i>ipv4-address</i> <i>ipv6-address</i>) vni number statistics total-entries <i>number</i>
Tree	total-entries
Default	0
Configurable	False
Platforms	7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5

es-destination *esi string*

Description	Enter the es-destination list instance
Context	tunnel-interface name <i>string</i> vxlan-interface index <i>number</i> bridge-table unicast-destinations es-destination <i>esi string</i>
Tree	es-destination
Configurable	False
Platforms	7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5

esi *string*

Description	The 10-byte Ethernet Segment Identifier of the ethernet segment. ESI-0 or MAX-ESI values are not allowed.
Context	tunnel-interface name <i>string</i> vxlan-interface index <i>number</i> bridge-table unicast-destinations es-destination <i>esi string</i>
Configurable	False
Platforms	7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5

destination-index *number*

Description	A system-wide unique identifier of this vxlan destination object (system allocated).
Context	tunnel-interface name <i>string</i> vxlan-interface index <i>number</i> bridge-table unicast-destinations es-destination <i>esi string</i> destination-index <i>number</i>
Tree	destination-index

Configurable	False
Platforms	7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5

mac-table

Description	Enter the mac-table context
Context	tunnel-interface name <i>string</i> vxlان-interface index <i>number</i> bridge-table unicast-destinations es-destination esi <i>string</i> mac-table
Tree	mac-table
Configurable	False
Platforms	7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5

mac [address](#) *string*

Description	macs learnt on the bridging instance
Context	tunnel-interface name <i>string</i> vxlان-interface index <i>number</i> bridge-table unicast-destinations es-destination esi <i>string</i> mac-table mac address <i>string</i>
Tree	mac
Configurable	False
Platforms	7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5

[address](#) *string*

Description	Enter the address context
Context	tunnel-interface name <i>string</i> vxlان-interface index <i>number</i> bridge-table unicast-destinations es-destination esi <i>string</i> mac-table mac address <i>string</i>
Configurable	False
Platforms	7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5

failed-slots *number*

Description	The list of slot IDs corresponding to the linecards that did not successfully program the mac
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Context	tunnel-interface name <i>string</i> vxlan-interface index <i>number</i> bridge-table unicast-destinations es-destination esi <i>string</i> mac-table mac address <i>string</i> failed-slots <i>number</i>
Tree	failed-slots
Range	1 to 8
Configurable	False
Platforms	7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5

last-update *string*

Description	The date and time of the last update of this mac
Context	tunnel-interface name <i>string</i> vxlan-interface index <i>number</i> bridge-table unicast-destinations es-destination esi <i>string</i> mac-table mac address <i>string</i> last-update <i>string</i>
Tree	last-update
String Length	20 to 32
Configurable	False
Platforms	7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5

not-programmed-reason *keyword*

Description	The reason why the mac is not programmed
Context	tunnel-interface name <i>string</i> vxlan-interface index <i>number</i> bridge-table unicast-destinations es-destination esi <i>string</i> mac-table mac address <i>string</i> not-programmed-reason <i>keyword</i>
Tree	not-programmed-reason
Options	<ul style="list-style-type: none"> • mac-limit • failed-on-slots • no-destination-index • reserved
Configurable	False
Platforms	7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5

type *keyword*

Description	the type of the mac installed in the fib.
Context	tunnel-interface name <i>string</i> vxlan-interface index <i>number</i> bridge-table unicast-destinations es-destination esi <i>string</i> mac-table mac address <i>string</i> <i>type</i> <i>keyword</i>
Tree	type
Options	<ul style="list-style-type: none"> • static • duplicate • learnt • irb-interface • evpn • evpn-static • irb-interface-anycast • proxy-anti-spoof • reserved • eth-cfm • irb-interface-vrrp
Configurable	False
Platforms	7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5

statistics

Description	Enter the statistics context
Context	tunnel-interface name <i>string</i> vxlan-interface index <i>number</i> bridge-table unicast-destinations es-destination esi <i>string</i> statistics
Tree	statistics
Configurable	False
Platforms	7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5

active-entries *number*

Description	The total number of entries that are active on the sub-interface.
Context	tunnel-interface name <i>string</i> vxlan-interface index <i>number</i> bridge-table unicast-destinations es-destination esi <i>string</i> statistics active-entries <i>number</i>

Tree	active-entries
Default	0
Configurable	False
Platforms	7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5

failed-entries *number*

Description	The total number of macs, which have not been programmed on atleast one slot
Context	tunnel-interface name <i>string</i> vxlan-interface index <i>number</i> bridge-table unicast-destinations es-destination esi <i>string</i> statistics failed-entries <i>number</i>
Tree	failed-entries
Default	0
Configurable	False
Platforms	7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5

mac-type *type keyword*

Description	the type of the mac on the sub-interface.
Context	tunnel-interface name <i>string</i> vxlan-interface index <i>number</i> bridge-table unicast-destinations es-destination esi <i>string</i> statistics mac-type type <i>keyword</i>
Tree	mac-type
Configurable	False
Platforms	7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5

type *keyword*

Description	Enter the type context
Context	tunnel-interface name <i>string</i> vxlan-interface index <i>number</i> bridge-table unicast-destinations es-destination esi <i>string</i> statistics mac-type type <i>keyword</i>
Options	<ul style="list-style-type: none"> • static • duplicate • learnt

- irb-interface
- evpn
- evpn-static
- irb-interface-anycast
- proxy-anti-spoof
- reserved
- eth-cfm
- irb-interface-vrrp

Configurable	False
Platforms	7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5

active-entries *number*

Description	The total number of entries of this type on the sub-interface
Context	tunnel-interface name <i>string</i> vxlan-interface index number <i>bridge-table unicast-destinations es-destination esi <i>string</i> statistics mac-type type keyword active-entries <i>number</i></i>
Tree	active-entries
Default	0
Configurable	False
Platforms	7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5

failed-entries *number*

Description	The total number of macs of this type, which have not been programmed on at least one slot
Context	tunnel-interface name <i>string</i> vxlan-interface index number <i>bridge-table unicast-destinations es-destination esi <i>string</i> statistics mac-type type keyword failed-entries <i>number</i></i>
Tree	failed-entries
Default	0
Configurable	False
Platforms	7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5

total-entries *number*

Description	The total number of macs of this type , active and inactive, on the sub-interface.
Context	tunnel-interface name <i>string</i> vxlan-interface index <i>number</i> bridge-table unicast-destinations es-destination esi <i>string</i> statistics mac-type type keyword total-entries <i>number</i>
Tree	total-entries
Default	0
Configurable	False
Platforms	7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5

total-entries *number*

Description	The total number of macs, active and inactive, on the sub-interface.
Context	tunnel-interface name <i>string</i> vxlan-interface index <i>number</i> bridge-table unicast-destinations es-destination esi <i>string</i> statistics total-entries <i>number</i>
Tree	total-entries
Default	0
Configurable	False
Platforms	7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5

vtep [address](#) (*ipv4-address* | *ipv6-address*) **vni** *number*

Description	Add a list entry for vtep
Context	tunnel-interface name <i>string</i> vxlan-interface index <i>number</i> bridge-table unicast-destinations es-destination esi <i>string</i> vtep address (<i>ipv4-address</i> <i>ipv6-address</i>) vni <i>number</i>
Tree	vtep
Configurable	False
Platforms	7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5

address (*ipv4-address* | *ipv6-address*)

Description	The IP address that identifies the remote VXLAN Termination Endpoint (VTEP).
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Context	tunnel-interface name <i>string</i> vxlan-interface index number bridge-table unicast-destinations es-destination esi <i>string</i> vtep address (ipv4-address ipv6-address) vni number
Configurable	False
Platforms	7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5

vni number

Description	VXLAN Network Identifier of the destination.
Context	tunnel-interface name <i>string</i> vxlan-interface index number bridge-table unicast-destinations es-destination esi <i>string</i> vtep address (ipv4-address ipv6-address) vni number
Range	1 to 16777215
Configurable	False
Platforms	7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5

egress

Description	Enter the egress context
Context	tunnel-interface name <i>string</i> vxlan-interface index number egress
Tree	egress
Configurable	True
Platforms	7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5

inner-ethernet-header

Description	Parameters of the inner VXLAN ethernet payload when the VXLAN tunnel is used in an ip-vrf.
Context	tunnel-interface name <i>string</i> vxlan-interface index number egress inner-ethernet-header
Tree	inner-ethernet-header
Configurable	True
Platforms	7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5

source-mac *keyword*

Description	VXLAN inner ethernet source mac-address. Present when the VXLAN tunnel is associated with a ip-vrf network-instance.
Context	tunnel-interface name <i>string</i> vxlan-interface index <i>number</i> egress inner-ethernet-header source-mac <i>keyword</i>
Tree	source-mac
Default	use-system-mac
Options	<ul style="list-style-type: none"> • use-system-mac
Configurable	True
Platforms	7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5

used-source-mac *string*

Description	VXLAN inner ethernet source mac-address in use. Present when the VXLAN tunnel is associated with a ip-vrf network-instance.
Context	tunnel-interface name <i>string</i> vxlan-interface index <i>number</i> egress inner-ethernet-header used-source-mac <i>string</i>
Tree	used-source-mac
Configurable	False
Platforms	7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5

source-ip *keyword*

Description	The ip-address that will be used as the source-ip for all vxlan traffic egressing this vxlan-interface.
Context	tunnel-interface name <i>string</i> vxlan-interface index <i>number</i> egress source-ip <i>keyword</i>
Tree	source-ip
Default	use-system-ipv4-address
Options	<ul style="list-style-type: none"> • use-system-ipv4-address
Configurable	True
Platforms	7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5

ingress

Description	Enter the ingress context
Context	tunnel-interface name <i>string</i> vxlan-interface index number ingress
Tree	ingress
Configurable	True
Platforms	7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5

vni number

Description	Ingress VXLAN Network Identifier of the VXLAN subinterface. The egress VNI is determined by the static egress-vni configured in the associated destination or by the dynamic egress-vni learned from the control plane.
Context	tunnel-interface name <i>string</i> vxlan-interface index number ingress vni number
Tree	vni
Range	1 to 16777215
Configurable	True
Platforms	7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5

oper-down-reason *keyword*

Description	The reason why the vxlan-interface is oper-down
Context	tunnel-interface name <i>string</i> vxlan-interface index number oper-down-reason keyword
Tree	oper-down-reason
Options	<ul style="list-style-type: none"> • mac-failed • ingress-hash-failed • egress-hash-failed • other
Configurable	False
Platforms	7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5

oper-state *keyword*

Description	The operational state of the vxlan-interface
Context	tunnel-interface name <i>string</i> vxlan-interface index number oper-state keyword
Tree	oper-state
Options	<ul style="list-style-type: none"> • up • down
Configurable	False
Platforms	7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5

type *identityref*

Description	The value of this leaf indicates the context in which the vxlan-interface will be used in.
Context	tunnel-interface name <i>string</i> vxlan-interface index number type identityref
Tree	type
Options	<ul style="list-style-type: none"> • routed Indicates subinterface is used in a routed context • bridged Indicates subinterface is used in a bridged context • local-mirror-dest Indicates subinterface is used in a mirroring destination SPAN context
Configurable	True
Platforms	7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5

22 tunnel

```
tunnel
+ pseudowire-tunnel
+ tunnel name string
+ allowed-tunnel-types identityref
- index number
- last-change string
- operational-tunnel-id number
- operational-tunnel-type identityref
+ remote-system (ipv4-address-unicast | ipv6-address-unicast-without-local)
+ vxlan-tunnel
+ statistics
+ admin-state keyword
- in-discarded-packets number
- in-octets number
- in-packets number
- last-clear string
- out-octets number
- out-packets number
- vtep address (ipv4-address | ipv6-address)
- index number
- last-change string
- statistics
- in-discarded-packets number
- in-octets number
- in-packets number
- last-clear string
- out-discarded-packets number
- out-octets number
- out-packets number
```

22.1 tunnel Descriptions

tunnel

Description	This model collects all config and state aspects of the tunnel table in SRLinux.
Context	tunnel
Tree	tunnel
Configurable	True
Platforms	7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5

pseudowire-tunnel

Description	Enter the pseudowire-tunnel context
Context	tunnel pseudowire-tunnel
Tree	pseudowire-tunnel
Configurable	True
Platforms	7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5

tunnel *name string*

Description	The name that identifies the remote system of the tunnel
Context	tunnel pseudowire-tunnel tunnel name string
Tree	tunnel
Configurable	True
Platforms	7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5
Max. Elements	4096

name string

Description	The name that identifies the remote system
Context	tunnel pseudowire-tunnel tunnel name string
String Length	1 to 255

Configurable	True
Platforms	7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5

allowed-tunnel-types *identityref*

Description	List of allowed transport tunnel types for the pseudowire If multiple tunnel types are allowed and there are multiple tunnel types available to the remote system, the router selects the lowest preference tunnel in the tunnel-table.
Context	tunnel pseudowire-tunnel tunnel name string allowed-tunnel-types identityref
Tree	allowed-tunnel-types
Options	<ul style="list-style-type: none"> • ip-in-ip Tunnels with IP-in-IP encapsulation • gre Tunnels with GRE encapsulation • sr-isis Segment routing using MPLS dataplane, programmed by IS-IS • sr-ospfv2 Segment routing using MPLS dataplane, programmed by OSPFv2 • sr-ospfv3 Segment routing using MPLS dataplane, programmed by OSPFv3 • te-policy-sr-mpls-colored Tunnel setup with sr-mpls-colored type TE-Policy. Labeled Traffic Engineering Policy with color • te-policy-sr-mpls-uncolored Tunnel setup with sr-mpls-uncolored type TE-Policy. Labeled Traffic Engineering Policy with primary and secondary segment-lists. • vxlan Tunnels based on VXLAN encapsulation
Configurable	True
Platforms	7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5
Min. Elements	1

index number

Description	The system allocated ID of the pw tunnel
Context	tunnel pseudowire-tunnel tunnel name string index number
Tree	index
Configurable	False
Platforms	7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5

last-change string

Description	The date and time of the most recent change to the tunnel state
Context	tunnel pseudowire-tunnel tunnel name string last-change string
Tree	last-change
String Length	20 to 32
Configurable	False
Platforms	7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5

operational-tunnel-id number

Description	The owner-assigned tunnel table index value that identifies the tunnel used by the pseudowire .
Context	tunnel pseudowire-tunnel tunnel name string operational-tunnel-id number
Tree	operational-tunnel-id
Configurable	False
Platforms	7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5

operational-tunnel-type identityref

Description	Enter the operational-tunnel-type context
Context	tunnel pseudowire-tunnel tunnel name string operational-tunnel-type identityref
Tree	operational-tunnel-type
Options	<ul style="list-style-type: none"> ip-in-ip Tunnels with IP-in-IP encapsulation

- gre
Tunnels with GRE encapsulation
- sr-isis
Segment routing using MPLS dataplane, programmed by IS-IS
- sr-ospfv2
Segment routing using MPLS dataplane, programmed by OSPFv2
- sr-ospfv3
Segment routing using MPLS dataplane, programmed by OSPFv3
- te-policy-sr-mpls-colored
Tunnel setup with sr-mpls-colored type TE-Policy. Labeled Traffic Engineering Policy with color
- te-policy-sr-mpls-uncolored
Tunnel setup with sr-mpls-uncolored type TE-Policy. Labeled Traffic Engineering Policy with primary and secondary segment-lists.
- vxlan
Tunnels based on VXLAN encapsulation

Configurable

False

Platforms

7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5

remote-system (*ipv4-address-unicast | ipv6-address-unicast-without-local*)**Description**

The ip-address of the remote system that hosts the remote pseudowire-tunnel

Context[tunnel pseudowire-tunnel tunnel name string remote-system](#) (*ipv4-address-unicast | ipv6-address-unicast-without-local*)**Tree**[remote-system](#)**Configurable**

True

Platforms

7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5

vxlan-tunnel**Description**

Enter the vxlan-tunnel context

Context[tunnel vxlan-tunnel](#)**Tree**[vxlan-tunnel](#)**Configurable**

True

Platforms 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5

statistics

Description Container for vxlan-tunnel global statistics.

Context [tunnel vxlan-tunnel statistics](#)

Tree [statistics](#)

Configurable True

Platforms 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L

admin-state *keyword*

Description The configured state of the VXLAN statistics on the router

The default value is disable. No statistics are collected on VXLAN when the admin-state is disable. When enabled, the router starts collecting VXLAN statistics at both, global and VTEP level, however, the total number of layer-2 subinterfaces is decreased. A change in the configuration of this command also resets the statistic counters on layer-2 subinterfaces as a side effect, before resuming the collection of statistics (on these layer-2 subinterfaces).

Context [tunnel vxlan-tunnel statistics admin-state keyword](#)

Tree [admin-state](#)

Default disable

Options

- enable
- disable

Configurable True

Platforms 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L

in-discarded-packets *number*

Description The total number of discarded ingress VXLAN packets.

Ingress VXLAN packets can be discarded due to one of the following reasons:

Context [tunnel vxlan-tunnel statistics in-discarded-packets number](#)

Tree [in-discarded-packets](#)

Default 0

Configurable False

Platforms 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L

in-octets *number*

Description The total sum of ingress VXLAN octets.

Context [tunnel vxlan-tunnel statistics in-octets number](#)

Tree [in-octets](#)

Default 0

Configurable False

Platforms 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L

in-packets *number*

Description The total sum of ingress VXLAN packets.
A packet in this context is an inner frame.

Context [tunnel vxlan-tunnel statistics in-packets number](#)

Tree [in-packets](#)

Default 0

Configurable False

Platforms 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L

last-clear *string*

Description Timestamp of the last time the vxlan tunnel counters were cleared.

Context [tunnel vxlan-tunnel statistics last-clear string](#)

Tree [last-clear](#)

String Length 20 to 32

Configurable False

Platforms 7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L

out-octets *number*

Description The total sum of egress VXLAN octets

Context [tunnel vxlan-tunnel statistics out-octets number](#)

Tree [out-octets](#)

Default 0

Configurable	False
Platforms	7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L

out-packets *number*

Description	The total sum of egress VXLAN packets. . A packet in this context is an inner frame.
Context	tunnel vxlan-tunnel statistics out-packets number
Tree	out-packets
Default	0
Configurable	False
Platforms	7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L

vtep address (*ipv4-address* | *ipv6-address*)

Description	The IP address that identifies the remote VXLAN Termination Endpoint (VTEP).
Context	tunnel vxlan-tunnel vtep address (ipv4-address ipv6-address)
Tree	vtep
Configurable	False
Platforms	7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5

address (*ipv4-address* | *ipv6-address*)

Description	The IP address that identifies the remote VXLAN Termination Endpoint (VTEP).
Context	tunnel vxlan-tunnel vtep address (ipv4-address ipv6-address)
Configurable	False
Platforms	7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5

index *number*

Description	the next-hop-group-id (system allocated) for resolving the VXLAN termination endpoint
Context	tunnel vxlan-tunnel vtep address (ipv4-address ipv6-address) index number

Tree	index
Configurable	False
Platforms	7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5

last-change *string*

Description	The date and time of the most recent change to the tunnel state
Context	tunnel vxlan-tunnel vtep address (ipv4-address ipv6-address) last-change string
Tree	last-change
String Length	20 to 32
Configurable	False
Platforms	7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L, 7220 IXR-D4, 7220 IXR-D5

statistics

Description	Container for vxlan-tunnel per VTEP (Vxlan Termination EndPoint) statistics.
Context	tunnel vxlan-tunnel vtep address (ipv4-address ipv6-address) statistics
Tree	statistics
Configurable	False
Platforms	7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L

in-discarded-packets *number*

Description	The number of discarded ingress VXLAN packets. Ingress VXLAN packets can be discarded due to one of the following reasons:
Context	tunnel vxlan-tunnel vtep address (ipv4-address ipv6-address) statistics in-discarded-packets number
Tree	in-discarded-packets
Default	0
Configurable	False
Platforms	7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L

in-octets *number*

Description	The number of octets encapsulated in ingress VXLAN packets.
Context	tunnel vxlan-tunnel vtep address (ipv4-address ipv6-address) statistics in-octets number
Tree	in-octets
Default	0
Configurable	False
Platforms	7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L

in-packets *number*

Description	The number of packets encapsulated in ingress VXLAN packets. A packet in this context is an inner frame.
Context	tunnel vxlan-tunnel vtep address (ipv4-address ipv6-address) statistics in-packets number
Tree	in-packets
Default	0
Configurable	False
Platforms	7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L

last-clear *string*

Description	Timestamp of the last time the vxlan tunnel counters were cleared.
Context	tunnel vxlan-tunnel vtep address (ipv4-address ipv6-address) statistics last-clear string
Tree	last-clear
String Length	20 to 32
Configurable	False
Platforms	7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L

out-discarded-packets *number*

Description	The number of discarded egress VXLAN packets. Egress VXLAN packets can be discarded due to one of the following reasons:
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Context	tunnel vxlan-tunnel vtep address (ipv4-address ipv6-address) statistics out-discarded-packets number
Tree	out-discarded-packets
Default	0
Configurable	False
Platforms	7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L

out-octets *number*

Description	The number of octets encapsulated in egress VXLAN packets.
Context	tunnel vxlan-tunnel vtep address (ipv4-address ipv6-address) statistics out-octets number
Tree	out-octets
Default	0
Configurable	False
Platforms	7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L

out-packets *number*

Description	The number of packets encapsulated in egress VXLAN packets. A packet in this context is an inner frame.
Context	tunnel vxlan-tunnel vtep address (ipv4-address ipv6-address) statistics out-packets number
Tree	out-packets
Default	0
Configurable	False
Platforms	7220 IXR-D2, 7220 IXR-D2L, 7220 IXR-D3, 7220 IXR-D3L

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