



## **Nokia Service Router Linux**

# **DATA MODEL REFERENCE RELEASE 21.11**

**3HE 17911 AAAA TQZZA  
Issue 1**

**December 2021**

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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.

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.

```

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

```

*Figure 1: Tree hierarchy example*

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](#).

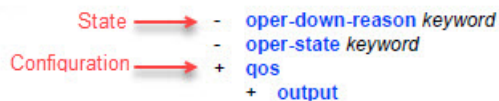


Figure 2: Configuration/state in tree hierarchy

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

Transactions are valid on all platforms except where noted. For example, if a command is only valid on a specific platform, it will have a note like the following:

**Note:**

This command is available on the following platforms:

- 7250 IXR-10
- 7250 IXR-6

## 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)
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

## 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
+ capture-filter
+   ipv4-filter
+     entry sequence-id number
+     action
+     + accept
+     + copy
+     description string
+     match
+     + destination-ip
+     +   address string
+     +   mask string
+     +   prefix string
+     + destination-port
+     +   operator keyword
+     +   range
+     +     end (number | keyword)
+     +     start (number | keyword)
+     +   value (number | keyword)
+     + first-fragment boolean
+     + fragment boolean
+     + icmp
+     +   code number
+     +   type (number | keyword)
+     + protocol (number | keyword)
+     + source-ip
+     +   address string
+     +   mask string
+     +   prefix string
+     + source-port
+     +   operator keyword
+     +   range
+     +     end (number | keyword)
+     +     start (number | keyword)
+     +   value (number | keyword)
+     + tcp-flags string
+     - tcam-entries number
+   ipv6-filter
+     entry sequence-id number
+     action
+     + accept
+     + copy
+     description string
+     match
+     + destination-ip
+     +   address string
+     +   mask string
+     +   prefix string
+     + destination-port
+     +   operator keyword
+     +   range
+     +     end (number | keyword)
+     +     start (number | keyword)
+     +   value (number | keyword)
+     + icmp6
+     +   code number
+     +   type (number | keyword)
+     + next-header (number | keyword)

```

```

+ source-ip
+ address string
+ mask string
+ prefix string
+ source-port
+ operator keyword
+ range
+ end (number | keyword)
+ start (number | keyword)
+ value (number | keyword)
+ tcp-flags string
- tcam-entries number
+ cpm-filter
+ ipv4-filter
+ entry sequence-id number
+ action
+ accept
+ log boolean
+ rate-limit
+ distributed-policer reference
+ system-cpu-policer reference
+ drop
+ log boolean
+ description string
+ match
+ destination-ip
+ address string
+ mask string
+ prefix string
+ destination-port
+ operator keyword
+ range
+ end (number | keyword)
+ start (number | keyword)
+ value (number | keyword)
+ first-fragment boolean
+ fragment boolean
+ icmp
+ code number
+ type (number | keyword)
+ protocol (number | keyword)
+ source-ip
+ address string
+ mask string
+ prefix string
+ source-port
+ operator keyword
+ range
+ end (number | keyword)
+ start (number | keyword)
+ value (number | keyword)
+ tcp-flags string
- statistics
- distributed-policer
- conforming-octets number
- conforming-packets number
- exceeding-octets number
- exceeding-packets number
- last-clear string
- last-match string
- matched-packets number
- system-cpu-policer
- conforming-octets number
- conforming-packets number
- exceeding-octets number
- exceeding-packets number

```

```

- tcam-entries number
- last-clear string
+ statistics-per-entry boolean
+ ipv6-filter
+ entry sequence-id number
+ action
+ accept
+ log boolean
+ rate-limit
+ distributed-policer reference
+ system-cpu-policer reference
+ drop
+ log boolean
+ description string
+ match
+ destination-ip
+ address string
+ mask string
+ prefix string
+ destination-port
+ operator keyword
+ range
+ end (number | keyword)
+ start (number | keyword)
+ value (number | keyword)
+ icmp6
+ code number
+ type (number | keyword)
+ next-header (number | keyword)
+ source-ip
+ address string
+ mask string
+ prefix string
+ source-port
+ operator keyword
+ range
+ end (number | keyword)
+ start (number | keyword)
+ value (number | keyword)
+ tcp-flags string
- statistics
- distributed-policer
- conforming-octets number
- conforming-packets number
- exceeding-octets number
- exceeding-packets number
- last-clear string
- last-match string
- matched-packets number
- system-cpu-policer
- conforming-octets number
- conforming-packets number
- exceeding-octets number
- exceeding-packets number
- tcam-entries number
- last-clear string
+ statistics-per-entry boolean
+ ipv4-filter name string
+ description string
+ entry sequence-id number
+ action
+ accept
+ log boolean
+ drop
+ log boolean
+ description string

```

```

+ match
+ destination-ip
+ address string
+ mask string
+ prefix string
+ destination-port
+ operator keyword
+ range
+ end (number | keyword)
+ start (number | keyword)
+ value (number | keyword)
+ first-fragment boolean
+ fragment boolean
+ icmp
+ code number
+ type (number | keyword)
+ protocol (number | keyword)
+ source-ip
+ address string
+ mask string
+ prefix string
+ source-port
+ operator keyword
+ range
+ end (number | keyword)
+ start (number | keyword)
+ value (number | keyword)
+ tcp-flags string
- statistics
- aggregate
- in-last-match string
- in-matched-packets number
- out-last-match string
- out-matched-packets number
- last-clear string
- per-interface
- subinterface name string
- in-last-match string
- in-matched-packets number
- last-clear string
- out-last-match string
- out-matched-packets number
- tcam-entries
- linecard slot number
- input-total number
- output-total number
- single-instance number
- last-clear string
- statistics
+ statistics-per-entry boolean
+ subinterface-specific keyword
+ ipv6-filter name string
+ description string
+ entry sequence-id number
+ action
+ accept
+ log boolean
+ drop
+ log boolean
+ description string
+ match
+ destination-ip
+ address string
+ mask string
+ prefix string
+ destination-port

```

```

+ operator keyword
+ range
+ end (number | keyword)
+ start (number | keyword)
+ value (number | keyword)
+ icmp6
+ code number
+ type (number | keyword)
+ next-header (number | keyword)
+ source-ip
+ address string
+ mask string
+ prefix string
+ source-port
+ operator keyword
+ range
+ end (number | keyword)
+ start (number | keyword)
+ value (number | keyword)
+ tcp-flags string
- statistics
- aggregate
- in-last-match string
- in-matched-packets number
- out-last-match string
- out-matched-packets number
- last-clear string
- per-interface
- subinterface name string
- in-last-match string
- in-matched-packets number
- last-clear string
- out-last-match string
- out-matched-packets number
- tcam-entries
- linecard slot number
- input-total number
- output-total number
- single-instance number
- last-clear string
- statistics
+ statistics-per-entry boolean
+ subinterface-specific keyword
+ policers
+ policer name string
+ entry-specific boolean
+ max-burst number
+ peak-rate number
- statistics
- 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
+ system-filter
+ ipv4-filter

```

```

+ entry sequence-id number
+ action
+   accept
+   drop
+   log boolean
+ description string
+ match
+   destination-ip
+     address string
+     mask string
+     prefix string
+   destination-port
+     operator keyword
+     range
+       end (number | keyword)
+       start (number | keyword)
+     value (number | keyword)
+   first-fragment boolean
+   fragment boolean
+   icmp
+     code number
+     type (number | keyword)
+   protocol (number | keyword)
+   source-ip
+     address string
+     mask string
+     prefix string
+   source-port
+     operator keyword
+     range
+       end (number | keyword)
+       start (number | keyword)
+     value (number | keyword)
+   tcp-flags string
- statistics
-   last-clear string
-   last-match string
-   matched-packets number
-   tcam-entries number
- last-clear string
+ ipv6-filter
+ entry sequence-id number
+ action
+   accept
+   drop
+   log boolean
+ description string
+ match
+   destination-ip
+     address string
+     mask string
+     prefix string
+   destination-port
+     operator keyword
+     range
+       end (number | keyword)
+       start (number | keyword)
+     value (number | keyword)
+   icmp6
+     code number
+     type (number | keyword)
+   next-header (number | keyword)
+   source-ip
+     address string
+     mask string
+     prefix string

```

```

+ source-port
+ operator keyword
+ range
+ end (number | keyword)
+ start (number | keyword)
+ value (number | keyword)
+ tcp-flags string
- statistics
- last-clear string
- last-match string
- matched-packets number
- tcam-entries number
- last-clear string
+ tcam-profile keyword

```

## 3.1 acl Descriptions

### acl

<b>Description</b>	Top level container for configuration and operational state related to access control lists (ACLs)
<b>Context</b>	<a href="#">acl</a>
<b>Tree</b>	<a href="#">acl</a>
<b>Configurable</b>	True

### capture-filter

<b>Description</b>	Top level container for capture filters
<b>Context</b>	<a href="#">acl capture-filter</a>
<b>Tree</b>	<a href="#">capture-filter</a>
<b>Configurable</b>	True

### ipv4-filter

<b>Description</b>	Top level container for capture IPv4 filters
<b>Context</b>	<a href="#">acl capture-filter ipv4-filter</a>
<b>Tree</b>	<a href="#">ipv4-filter</a>
<b>Configurable</b>	True

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

<b>Description</b>	List of filter rules.
--------------------	-----------------------

---

<b>Context</b>	<a href="#">acl capture-filter ipv4-filter entry sequence-id number</a>
<b>Tree</b>	<a href="#">entry</a>
<b>Configurable</b>	True

### **sequence-id *number***

<b>Description</b>	A number to indicate the relative evaluation order of the different entries; lower numbered entries are evaluated before higher numbered entries
<b>Context</b>	<a href="#">acl capture-filter ipv4-filter entry sequence-id number</a>
<b>Range</b>	1 to 65535
<b>Configurable</b>	True

### **action**

<b>Description</b>	Container for the actions to be applied to packets matching the capture filter entry.
<b>Context</b>	<a href="#">acl capture-filter ipv4-filter entry sequence-id number action</a>
<b>Tree</b>	<a href="#">action</a>
<b>Configurable</b>	True

### **accept**

<b>Description</b>	Accept matching packets and forward them towards their normal destination
<b>Context</b>	<a href="#">acl capture-filter ipv4-filter entry sequence-id number action accept</a>
<b>Tree</b>	<a href="#">accept</a>
<b>Configurable</b>	True

### **copy**

<b>Description</b>	Create a copy of matching packets extract them to the CPM and deliver them to the designated veth interface
<b>Context</b>	<a href="#">acl capture-filter ipv4-filter entry sequence-id number action copy</a>
<b>Tree</b>	<a href="#">copy</a>
<b>Configurable</b>	True



**description *string***

<b>Description</b>	Description string for the filter entry
<b>Context</b>	<a href="#">acl capture-filter ipv4-filter entry sequence-id number description string</a>
<b>Tree</b>	<a href="#">description</a>
<b>String Length</b>	1 to 255
<b>Configurable</b>	True

**match**

<b>Description</b>	Container for the conditions that determine whether a packet matches this entry
<b>Context</b>	<a href="#">acl capture-filter ipv4-filter entry sequence-id number match</a>
<b>Tree</b>	<a href="#">match</a>
<b>Configurable</b>	True

**destination-ip**

<b>Description</b>	Packet matching criteria based on destination IPv4 address
<b>Context</b>	<a href="#">acl capture-filter ipv4-filter entry sequence-id number match destination-ip</a>
<b>Tree</b>	<a href="#">destination-ip</a>
<b>Configurable</b>	True

**address *string***

<b>Description</b>	Match a packet if its destination IP address logically anded with the inverse of the mask equals this IP address.
<b>Context</b>	<a href="#">acl capture-filter ipv4-filter entry sequence-id number match destination-ip address string</a>
<b>Tree</b>	<a href="#">address</a>
<b>Configurable</b>	True

**mask *string***

<b>Description</b>	Match a packet if its destination IP address logically anded with the inverse of this mask equals the configured IP address.
<b>Context</b>	<a href="#">acl capture-filter ipv4-filter entry sequence-id number match destination-ip mask string</a>

<b>Tree</b>	<a href="#">mask</a>
<b>Configurable</b>	True

### **prefix string**

<b>Description</b>	Match a packet if its destination IP address is within the specified IPv4 prefix.
<b>Context</b>	<a href="#">acl capture-filter ipv4-filter entry sequence-id number match destination-ip prefix string</a>
<b>Tree</b>	<a href="#">prefix</a>
<b>Configurable</b>	True

### **destination-port**

<b>Description</b>	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.
<b>Context</b>	<a href="#">acl capture-filter ipv4-filter entry sequence-id number match destination-port destination-port</a>
<b>Tree</b>	<a href="#">destination-port</a>
<b>Configurable</b>	True

### **operator keyword**

<b>Description</b>	Comparison operator  eq = equal ge = greater than or equal to le = less than or equal to
<b>Context</b>	<a href="#">acl capture-filter ipv4-filter entry sequence-id number match destination-port operator keyword</a>
<b>Tree</b>	<a href="#">operator</a>
<b>Options</b>	<ul style="list-style-type: none"> <li>• le Less than or equal.</li> <li>• ge Greater than or equal.</li> <li>• eq Equal to.</li> </ul>
<b>Configurable</b>	True

**range**

<b>Description</b>	Container used to specify a contiguous range of TCP/UDP port numbers
<b>Context</b>	<a href="#">acl</a> <a href="#">capture-filter</a> <a href="#">ipv4-filter</a> <a href="#">entry</a> <a href="#">sequence-id</a> <i>number</i> <a href="#">match</a> <a href="#">destination-port</a> <a href="#">range</a>
<b>Tree</b>	<a href="#">range</a>
<b>Configurable</b>	True

**end (*number* | *keyword*)**

<b>Description</b>	The ending port number to include in the range
<b>Context</b>	<a href="#">acl</a> <a href="#">capture-filter</a> <a href="#">ipv4-filter</a> <a href="#">entry</a> <a href="#">sequence-id</a> <i>number</i> <a href="#">match</a> <a href="#">destination-port</a> <a href="#">range</a> <a href="#">end</a> ( <i>number</i>   <i>keyword</i> )
<b>Tree</b>	<a href="#">end</a>
<b>Range</b>	0 to 65535
<b>Options</b>	<ul style="list-style-type: none"> <li>• <a href="#">acap</a> Application Configuration Access Protocol</li> <li>• <a href="#">afp-tcp</a> Apple Filing Protocol over TCP</li> <li>• <a href="#">arns</a> A Remote Network Server System</li> <li>• <a href="#">asf-rmcp</a> ASF Remote Management and Control Protocol &amp; IPMI Remote Management Protocol</li> <li>• <a href="#">ashare</a> AppleShare IP Web Administration</li> <li>• <a href="#">atalk-rm</a> AppleTalk Routing Maintenance</li> <li>• <a href="#">aurp</a> AppleTalk Update-Based Routing Protocol</li> <li>• <a href="#">auth</a> Authentication Service</li> <li>• <a href="#">bfd</a> Bidirectional Forwarding Detection Single Hop</li> <li>• <a href="#">bfd-echo</a> BFD Echo</li> <li>• <a href="#">bftp</a> Background File Transfer Program</li> </ul>

- 
- 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

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- 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
  - 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
  - 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

### **start (*number* | *keyword*)**

**Description** The starting port number to include in the range

**Context** [acl capture-filter ipv4-filter entry sequence-id number match 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
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Kerberos login
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Kerberos Change/Set password
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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
  - rmc  
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  - rmonitor  
rmonitor, Remote Monitor
  - rpc2portmap  
Rpc2portmap
  - rsync  
rsync file synchronization protocol
  - rtelnet  
Remote User Telnet Service (RTelnet)
  - rtsp  
Real Time Streaming Protocol (RTSP)
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SNMP Traps
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Structured Query Language (SQL) Services
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- ssh  
Secure Shell Protocol
- submission  
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- sunrpc  
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tcpnethaspsrv, Aladdin Knowledge Systems Hasp services
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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

### value (*number* | *keyword*)

<b>Description</b>	A destination port number
<b>Context</b>	<a href="#">acl capture-filter ipv4-filter entry sequence-id</a> <i>number</i> <a href="#">match destination-port value</a> ( <i>number</i>   <i>keyword</i> )
<b>Tree</b>	<a href="#">value</a>
<b>Range</b>	0 to 65535
<b>Options</b>	<ul style="list-style-type: none"> <li>• acap Application Configuration Access Protocol</li> <li>• afp-tcp Apple Filing Protocol over TCP</li> <li>• arns A Remote Network Server System</li> <li>• asf-rmcp ASF Remote Management and Control Protocol &amp; IPMI Remote Management Protocol</li> <li>• ashare AppleShare IP Web Administration</li> <li>• atalk-rm AppleTalk Routing Maintenance</li> <li>• aurp AppleTalk Update-Based Routing Protocol</li> <li>• auth Authentication Service</li> <li>• bfd Bidirectional Forwarding Detection Single Hop</li> <li>• bfd-echo BFD Echo</li> </ul>

- 
- 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
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File Transfer Protocol data
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FTPS (FTP over SSL/TLS) control
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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
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HP data alarm manager
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Hypertext Transfer Protocol
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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
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Internet Relay Chat (IRC)
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MS Exchange Routing
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- netrjs-2  
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NETRJS protocol
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PIM Auto-RP
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Post Office Protocol, version 3 (POP3)
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Remote Mail Checking Protocol
  - remotefs  
Remotefs, RFS Server
  - remotecmd  
SupportSoft Nexus Remote Command
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Routing Information Protocol
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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)
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- snmp-trap  
SNMP Traps
- snpp  
Simple Network Paging Protocol (SNPP)
- smtp  
Simple Mail Transfer Protocol (SMTP)
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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)
- tcpnethaspsrv  
tcpnethaspsrv, Aladdin Knowledge Systems Hasp services
- tftp  
Trivial File Transfer Protocol (TFTP)
- time  
Time Protocol
- timed  
Timeserver
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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

### **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** [acl capture-filter ipv4-filter entry sequence-id number match first-fragment boolean](#)

**Tree** [first-fragment](#)

**Configurable** True

### **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** [acl capture-filter ipv4-filter entry sequence-id number match fragment boolean](#)

**Tree** [fragment](#)

**Configurable** True

### **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 capture-filter ipv4-filter entry sequence-id number match icmp](#)

**Tree** [icmp](#)

**Configurable** True

### **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 capture-filter ipv4-filter entry sequence-id number match icmp code number](#)

**Tree** [code](#)

**Configurable** True

### **type (*number* | *keyword*)**

**Description** Match a single ICMP type value.

**Context** [acl capture-filter ipv4-filter entry sequence-id number match icmp type \(number | keyword\)](#)



<b>Tree</b>	<a href="#">type</a>
<b>Range</b>	0 to 255
<b>Options</b>	<ul style="list-style-type: none"> <li>• echo-reply ICMP Echo Reply</li> <li>• dest-unreachable ICMP Destination Unreachable</li> <li>• source-quench ICMP Source Quench</li> <li>• redirect ICMP Redirect</li> <li>• echo ICMP Echo</li> <li>• router-advertise ICMP Router Advertisement</li> <li>• router-solicit ICMP Router Solicitation</li> <li>• time-exceeded ICMP Time Exceeded</li> <li>• param-problem ICMP Parameter Problem</li> <li>• timestamp ICMP Timestamp</li> <li>• timestamp-reply ICMP Timestamp Reply</li> </ul>
<b>Configurable</b>	True

### **protocol (*number* | *keyword*)**

<b>Description</b>	An IPv4 packet matches this condition if its IP protocol type field matches the specified value
<b>Context</b>	<a href="#">acl capture-filter ipv4-filter entry sequence-id</a> <i>number</i> <a href="#">match protocol</a> ( <i>number</i>   <i>keyword</i> )
<b>Tree</b>	<a href="#">protocol</a>
<b>Range</b>	0 to 255
<b>Options</b>	<ul style="list-style-type: none"> <li>• ipv6-hop IPv6 hop-by-hop option</li> </ul>

- 
- 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
- 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

### source-ip

**Description** Packet matching criteria based on source IPv4 address

**Context** [acl capture-filter ipv4-filter entry sequence-id number match source-ip](#)

**Tree** [source-ip](#)

**Configurable** True

### 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 capture-filter ipv4-filter entry sequence-id number match source-ip address string](#)

**Tree** [address](#)

**Configurable** True

### 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 capture-filter ipv4-filter entry sequence-id number match source-ip mask string](#)

<b>Tree</b>	<a href="#">mask</a>
<b>Configurable</b>	True

### **prefix string**

<b>Description</b>	Match a packet if its source IP address is within the specified IPv4 prefix.
<b>Context</b>	<a href="#">acl capture-filter ipv4-filter entry sequence-id number match source-ip prefix string</a>
<b>Tree</b>	<a href="#">prefix</a>
<b>Configurable</b>	True

### **source-port**

<b>Description</b>	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.
<b>Context</b>	<a href="#">acl capture-filter ipv4-filter entry sequence-id number match source-port</a>
<b>Tree</b>	<a href="#">source-port</a>
<b>Configurable</b>	True

### **operator keyword**

<b>Description</b>	Comparison operator  eq = equal ge = greater than or equal to le = less than or equal to
<b>Context</b>	<a href="#">acl capture-filter ipv4-filter entry sequence-id number match source-port operator keyword</a>
<b>Tree</b>	<a href="#">operator</a>
<b>Options</b>	<ul style="list-style-type: none"> <li>• le Less than or equal.</li> <li>• ge Greater than or equal.</li> <li>• eq Equal to.</li> </ul>
<b>Configurable</b>	True

**range**

<b>Description</b>	Container used to specify a contiguous range of TCP/UDP port numbers
<b>Context</b>	<a href="#">acl</a> <a href="#">capture-filter</a> <a href="#">ipv4-filter</a> <a href="#">entry</a> <a href="#">sequence-id</a> <i>number</i> <a href="#">match</a> <a href="#">source-port</a> <a href="#">range</a>
<b>Tree</b>	<a href="#">range</a>
<b>Configurable</b>	True

**end (*number* | *keyword*)**

<b>Description</b>	The ending port number to include in the range
<b>Context</b>	<a href="#">acl</a> <a href="#">capture-filter</a> <a href="#">ipv4-filter</a> <a href="#">entry</a> <a href="#">sequence-id</a> <i>number</i> <a href="#">match</a> <a href="#">source-port</a> <a href="#">range</a> <a href="#">end</a> ( <i>number</i>   <i>keyword</i> )
<b>Tree</b>	<a href="#">end</a>
<b>Range</b>	0 to 65535
<b>Options</b>	<ul style="list-style-type: none"> <li>• <a href="#">acap</a> Application Configuration Access Protocol</li> <li>• <a href="#">afp-tcp</a> Apple Filing Protocol over TCP</li> <li>• <a href="#">arns</a> A Remote Network Server System</li> <li>• <a href="#">asf-rmcp</a> ASF Remote Management and Control Protocol &amp; IPMI Remote Management Protocol</li> <li>• <a href="#">ashare</a> AppleShare IP Web Administration</li> <li>• <a href="#">atalk-rm</a> AppleTalk Routing Maintenance</li> <li>• <a href="#">aurp</a> AppleTalk Update-Based Routing Protocol</li> <li>• <a href="#">auth</a> Authentication Service</li> <li>• <a href="#">bfd</a> Bidirectional Forwarding Detection Single Hop</li> <li>• <a href="#">bfd-echo</a> BFD Echo</li> <li>• <a href="#">bftp</a> Background File Transfer Program</li> </ul>

- 
- 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
  - 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

### **start (*number* | *keyword*)**

**Description** The starting port number to include in the range

**Context** [acl capture-filter ipv4-filter entry sequence-id number match 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
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Daytime Protocol
- dhcpv6-client  
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DHCPv6 Server
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- discard  
Discard Protocol. Also Wake-on-LAN.
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DNSIX security protocol auditing
- domain  
Domain Name System
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Extensible Provisioning Protocol
- esro  
Efficient Short Remote Operations (ESRO)
- exec  
Remote Process Execution (Rexec)
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Finger protocol
- ftp  
File Transfer Protocol control
- ftp-data  
File Transfer Protocol data



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FTPS (FTP over SSL/TLS) control
- ftps-data  
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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  
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Kerberos administration
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  - 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
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NETRJS protocol
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NETRJS protocol
  - netrjs-4  
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  - netbios-ns  
NetBIOS Name Service
  - netbios-ss  
NetBIOS Session Service
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  - netwall  
netwall, for Emergency Broadcasts
  - new-rwho  
new-rwho, new-who
  - nfs  
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- olsr  
Optimized Link State Routing (OLSR)
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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  
rmonitor, Remote Monitor
- rpc2portmap  
Rpc2portmap
- rsync  
rsync file synchronization protocol
- rtelnet  
Remote User Telnet Service (RTelnet)
- rtsp  
Real Time Streaming Protocol (RTSP)
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Simple Gateway Monitoring Protocol (SGMP)
- silc  
Secure Internet Live Conferencing (SILC)
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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)
- 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

### value (*number* | *keyword*)

<b>Description</b>	A source port number
<b>Context</b>	<a href="#">acl capture-filter ipv4-filter entry sequence-id</a> <i>number</i> <a href="#">match source-port value</a> ( <i>number</i>   <i>keyword</i> )
<b>Tree</b>	<a href="#">value</a>
<b>Range</b>	0 to 65535
<b>Options</b>	<ul style="list-style-type: none"> <li>• acap Application Configuration Access Protocol</li> <li>• afp-tcp Apple Filing Protocol over TCP</li> <li>• arns A Remote Network Server System</li> <li>• asf-rmcp ASF Remote Management and Control Protocol &amp; IPMI Remote Management Protocol</li> <li>• ashare AppleShare IP Web Administration</li> <li>• atalk-rm AppleTalk Routing Maintenance</li> <li>• aurp AppleTalk Update-Based Routing Protocol</li> <li>• auth Authentication Service</li> <li>• bfd Bidirectional Forwarding Detection Single Hop</li> <li>• bfd-echo BFD Echo</li> </ul>



- 
- 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
- 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

### **tcp-flags *string***

**Description** A logical expression using the &, | and ! logical operators and the TCP flag names: rst, syn and ack.

**Context** [acl capture-filter ipv4-filter entry sequence-id number match tcp-flags string](#)

**Tree** [tcp-flags](#)

**Configurable** True

**tcam-entries *number***

<b>Description</b>	The number of TCAM entries required to implement a single instance of this filter rule.
<b>Context</b>	<a href="#">acl capture-filter ipv4-filter entry sequence-id <i>number</i> tcam-entries <i>number</i></a>
<b>Tree</b>	<a href="#">tcam-entries</a>
<b>Configurable</b>	False

**ipv6-filter**

<b>Description</b>	Top level container for capture IPv6 filters
<b>Context</b>	<a href="#">acl capture-filter ipv6-filter</a>
<b>Tree</b>	<a href="#">ipv6-filter</a>
<b>Configurable</b>	True

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

<b>Description</b>	List of filter rules.
<b>Context</b>	<a href="#">acl capture-filter ipv6-filter entry sequence-id <i>number</i></a>
<b>Tree</b>	<a href="#">entry</a>
<b>Configurable</b>	True

**sequence-id *number***

<b>Description</b>	A number to indicate the relative evaluation order of the different entries; lower numbered entries are evaluated before higher numbered entries
<b>Context</b>	<a href="#">acl capture-filter ipv6-filter entry sequence-id <i>number</i></a>
<b>Range</b>	1 to 65535
<b>Configurable</b>	True

**action**

<b>Description</b>	Container for the actions to be applied to packets matching the capture filter entry.
<b>Context</b>	<a href="#">acl capture-filter ipv6-filter entry sequence-id <i>number</i> action</a>
<b>Tree</b>	<a href="#">action</a>
<b>Configurable</b>	True

**accept**

<b>Description</b>	Accept matching packets and forward them towards their normal destination
<b>Context</b>	<a href="#">acl capture-filter ipv6-filter entry sequence-id number action accept</a>
<b>Tree</b>	<a href="#">accept</a>
<b>Configurable</b>	True

**copy**

<b>Description</b>	Create a copy of matching packets extract them to the CPM and deliver them to the designated veth interface
<b>Context</b>	<a href="#">acl capture-filter ipv6-filter entry sequence-id number action copy</a>
<b>Tree</b>	<a href="#">copy</a>
<b>Configurable</b>	True

**description *string***

<b>Description</b>	Description string for the filter entry
<b>Context</b>	<a href="#">acl capture-filter ipv6-filter entry sequence-id number description string</a>
<b>Tree</b>	<a href="#">description</a>
<b>String Length</b>	1 to 255
<b>Configurable</b>	True

**match**

<b>Description</b>	Container for the conditions that determine whether a packet matches this entry
<b>Context</b>	<a href="#">acl capture-filter ipv6-filter entry sequence-id number match</a>
<b>Tree</b>	<a href="#">match</a>
<b>Configurable</b>	True

**destination-ip**

<b>Description</b>	Packet matching criteria based on destination IPv6 address
<b>Context</b>	<a href="#">acl capture-filter ipv6-filter entry sequence-id number match destination-ip</a>
<b>Tree</b>	<a href="#">destination-ip</a>
<b>Configurable</b>	True

**address string**

<b>Description</b>	Match a packet if its destination IP address logically anded with the inverse of the mask equals this IP address.
<b>Context</b>	<a href="#">acl capture-filter ipv6-filter entry sequence-id number match destination-ip address string</a>
<b>Tree</b>	<a href="#">address</a>
<b>Configurable</b>	True

**mask string**

<b>Description</b>	Match a packet if its destination IP address logically anded with the inverse of this mask equals the configured IP address.
<b>Context</b>	<a href="#">acl capture-filter ipv6-filter entry sequence-id number match destination-ip mask string</a>
<b>Tree</b>	<a href="#">mask</a>
<b>Configurable</b>	True

**prefix string**

<b>Description</b>	Match a packet if its destination IP address is within the specified IPv6 prefix.
<b>Context</b>	<a href="#">acl capture-filter ipv6-filter entry sequence-id number match destination-ip prefix string</a>
<b>Tree</b>	<a href="#">prefix</a>
<b>Configurable</b>	True

**destination-port**

<b>Description</b>	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.
<b>Context</b>	<a href="#">acl capture-filter ipv6-filter entry sequence-id number match destination-port destination-port</a>
<b>Tree</b>	<a href="#">destination-port</a>
<b>Configurable</b>	True

**operator *keyword***

<b>Description</b>	Comparison operator eq = equal ge = greater than or equal to le = less than or equal to
<b>Context</b>	<a href="#">acl capture-filter ipv6-filter entry sequence-id number match destination-port operator keyword</a>
<b>Tree</b>	<a href="#">operator</a>
<b>Options</b>	<ul style="list-style-type: none"> <li>• le Less than or equal.</li> <li>• ge Greater than or equal.</li> <li>• eq Equal to.</li> </ul>
<b>Configurable</b>	True

**range**

<b>Description</b>	Container used to specify a contiguous range of TCP/UDP port numbers
<b>Context</b>	<a href="#">acl capture-filter ipv6-filter entry sequence-id number match destination-port range</a>
<b>Tree</b>	<a href="#">range</a>
<b>Configurable</b>	True

**end (*number* | *keyword*)**

<b>Description</b>	The ending port number to include in the range
<b>Context</b>	<a href="#">acl capture-filter ipv6-filter entry sequence-id number match destination-port range end (number   keyword)</a>
<b>Tree</b>	<a href="#">end</a>
<b>Range</b>	0 to 65535
<b>Options</b>	<ul style="list-style-type: none"> <li>• acap Application Configuration Access Protocol</li> <li>• afp-tcp Apple Filing Protocol over TCP</li> <li>• arns A Remote Network Server System</li> </ul>

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- 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
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File Transfer Protocol data
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  - monitor  
Monitor
  - mpp  
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Netnews Administration System (NAS)
  - ncp  
NetWare Core Protocol
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NETRJS protocol
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NETRJS protocol
  - netrjs-3  
NETRJS protocol
  - netrjs-4  
NETRJS protocol
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NetBIOS Datagram Service
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NetBIOS Name Service
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new-rwho, new-who
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  - nntps  
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  - olsr  
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  - 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
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- snpp  
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- 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

	<ul style="list-style-type: none"> <li>xns-time Xerox Network Systems (XNS) Time Protocol</li> <li>z3950 ANSI Z39.50</li> </ul>
<b>Configurable</b>	True

### **start (*number* | *keyword*)**

<b>Description</b>	The starting port number to include in the range
<b>Context</b>	<a href="#">acl capture-filter ipv6-filter entry sequence-id</a> <i>number</i> <a href="#">match destination-port range start</a> ( <i>number</i>   <i>keyword</i> )
<b>Tree</b>	<a href="#">start</a>
<b>Range</b>	0 to 65535
<b>Options</b>	<ul style="list-style-type: none"> <li>acap Application Configuration Access Protocol</li> <li>afp-tcp Apple Filing Protocol over TCP</li> <li>arns A Remote Network Server System</li> <li>asf-rmcp ASF Remote Management and Control Protocol &amp; IPMI Remote Management Protocol</li> <li>ashare AppleShare IP Web Administration</li> <li>atalk-rm AppleTalk Routing Maintenance</li> <li>aurp AppleTalk Update-Based Routing Protocol</li> <li>auth Authentication Service</li> <li>bfd Bidirectional Forwarding Detection Single Hop</li> <li>bfd-echo BFD Echo</li> <li>bftp Background File Transfer Program</li> </ul>

- 
- 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
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Extensible Provisioning Protocol
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ISO Transport Service Access Point (TSAP) Class 0 protocol
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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
- 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

### value (*number* | *keyword*)

**Description** A destination port number

**Context** [acl capture-filter ipv6-filter entry sequence-id](#) *number* [match destination-port value](#) (*number* | *keyword*)

**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
- 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
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SupportSoft Nexus Remote Command

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Remote Job Entry
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  - rlzdb  
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rmonitor, Remote Monitor
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Rpc2portmap
  - rsync  
rsync file synchronization protocol
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  - rtsp  
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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
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- tcpnethaspsrv  
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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"> <li>xns-mail Xerox Network Systems (XNS) Mail</li> <li>xns-time Xerox Network Systems (XNS) Time Protocol</li> <li>z3950 ANSI Z39.50</li> </ul>
<b>Configurable</b>	True

## icmp6

<b>Description</b>	<p>A packet matches this condition if its ICMPv6 type and code matches one of the specified combinations</p> <p>The rule should also have a condition that the next-header value equals 58 (ICMPv6) in order for this to be interpreted correctly.</p>
<b>Context</b>	<a href="#">acl capture-filter ipv6-filter entry sequence-id number match icmp6</a>
<b>Tree</b>	<a href="#">icmp6</a>
<b>Configurable</b>	True

## code number

<b>Description</b>	<p>Match if the ICMPv6 code value is any value in the list</p> <p>Requires ICMPv6 type to be specified because codes are type dependent.</p>
<b>Context</b>	<a href="#">acl capture-filter ipv6-filter entry sequence-id number match icmp6 code number</a>
<b>Tree</b>	<a href="#">code</a>
<b>Configurable</b>	True

## type (*number* | *keyword*)

<b>Description</b>	Match a single ICMPv6 type value
<b>Context</b>	<a href="#">acl capture-filter ipv6-filter entry sequence-id number match icmp6 type (<i>number</i>   <i>keyword</i>)</a>
<b>Tree</b>	<a href="#">type</a>
<b>Range</b>	0 to 255
<b>Options</b>	<ul style="list-style-type: none"> <li>dest-unreachable ICMPv6 Destination Unreachable</li> </ul>

- 
- 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

	<ul style="list-style-type: none"> <li>• mcast-rtr-solicit Multicast Router Solicitation</li> <li>• mcast-rtr-term Multicast Router Termination</li> </ul>
<b>Configurable</b>	True

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

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

- 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
- 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

**source-ip****Description**

Packet matching criteria based on source IPv6 address

**Context**[acl](#) [capture-filter](#) [ipv6-filter](#) [entry](#) [sequence-id](#) [number](#) [match](#) [source-ip](#)**Tree**[source-ip](#)

**Configurable** True

### 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 capture-filter ipv6-filter entry sequence-id number match source-ip address string](#)

**Tree** [address](#)

**Configurable** True

### 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 capture-filter ipv6-filter entry sequence-id number match source-ip mask string](#)

**Tree** [mask](#)

**Configurable** True

### prefix *string*

**Description** Match a packet if its source IP address is within the specified IPv6 prefix.

**Context** [acl capture-filter ipv6-filter entry sequence-id number match source-ip prefix string](#)

**Tree** [prefix](#)

**Configurable** True

### 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 capture-filter ipv6-filter entry sequence-id number match source-port](#)

**Tree** [source-port](#)

**Configurable** True

**operator *keyword***

<b>Description</b>	Comparison operator eq = equal ge = greater than or equal to le = less than or equal to
<b>Context</b>	<a href="#">acl capture-filter ipv6-filter entry sequence-id number match source-port operator keyword</a>
<b>Tree</b>	<a href="#">operator</a>
<b>Options</b>	<ul style="list-style-type: none"> <li>le Less than or equal.</li> <li>ge Greater than or equal.</li> <li>eq Equal to.</li> </ul>
<b>Configurable</b>	True

**range**

<b>Description</b>	Container used to specify a contiguous range of TCP/UDP port numbers
<b>Context</b>	<a href="#">acl capture-filter ipv6-filter entry sequence-id number match source-port range</a>
<b>Tree</b>	<a href="#">range</a>
<b>Configurable</b>	True

**end (*number* | *keyword*)**

<b>Description</b>	The ending port number to include in the range
<b>Context</b>	<a href="#">acl capture-filter ipv6-filter entry sequence-id number match source-port range end (number   keyword)</a>
<b>Tree</b>	<a href="#">end</a>
<b>Range</b>	0 to 65535
<b>Options</b>	<ul style="list-style-type: none"> <li>acap Application Configuration Access Protocol</li> <li>afp-tcp Apple Filing Protocol over TCP</li> <li>arns A Remote Network Server System</li> </ul>

- 
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ASF Remote Management and Control Protocol & IPMI Remote Management Protocol
  - ashare  
AppleShare IP Web Administration
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AppleTalk Routing Maintenance
  - aurp  
AppleTalk Update-Based Routing Protocol
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Authentication Service
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Bootstrap Protocol (BOOTP) Client and DHCP Client
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  - 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
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Display Support Protocol
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  - 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
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IEEE Media Management System over SSL
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- isakmp-nat  
IPSec NAT Traversal
- iscsi  
iSCSI
- iso-tsap  
ISO Transport Service Access Point (TSAP) Class 0 protocol
- kerberos  
Kerberos authentication system
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Message posting protocol (MPP)
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Microsoft SQL Server database management system (MSSQL) monitor
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  - 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  
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  - 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
- 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



	<ul style="list-style-type: none"> <li>xns-time Xerox Network Systems (XNS) Time Protocol</li> <li>z3950 ANSI Z39.50</li> </ul>
<b>Configurable</b>	True

### **start (*number* | *keyword*)**

<b>Description</b>	The starting port number to include in the range
<b>Context</b>	<a href="#">acl capture-filter ipv6-filter entry sequence-id</a> <i>number</i> <a href="#">match source-port range start</a> ( <i>number</i>   <i>keyword</i> )
<b>Tree</b>	<a href="#">start</a>
<b>Range</b>	0 to 65535
<b>Options</b>	<ul style="list-style-type: none"> <li>acap Application Configuration Access Protocol</li> <li>afp-tcp Apple Filing Protocol over TCP</li> <li>arns A Remote Network Server System</li> <li>asf-rmcp ASF Remote Management and Control Protocol &amp; IPMI Remote Management Protocol</li> <li>ashare AppleShare IP Web Administration</li> <li>atalk-rm AppleTalk Routing Maintenance</li> <li>aurp AppleTalk Update-Based Routing Protocol</li> <li>auth Authentication Service</li> <li>bfd Bidirectional Forwarding Detection Single Hop</li> <li>bfd-echo BFD Echo</li> <li>bftp Background File Transfer Program</li> </ul>

- 
- 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  
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  - nas  
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NETRJS protocol
  - netrjs-3  
NETRJS protocol
  - netrjs-4  
NETRJS protocol
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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  
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  - 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)
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SNMP Traps
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Simple Network Paging Protocol (SNPP)
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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
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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

### value (*number* | *keyword*)

**Description** A source port number

**Context** [acl capture-filter ipv6-filter entry sequence-id number match source-port value \(number | keyword\)](#)

**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
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Remote Procedure Call
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Daytime Protocol
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DHCPv6 Server
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Finger protocol
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- ftps  
FTPS (FTP over SSL/TLS) control
- ftps-data  
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- 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)
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Resource Location Protocol
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RLZ DBase
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rmonitor, Remote Monitor
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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)
- sgmp  
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Simple Network Management Protocol (SNMP)
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Simple Network Paging Protocol (SNPP)
- smtp  
Simple Mail Transfer Protocol (SMTP)

- sql-svcs  
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- 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
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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

### **tcp-flags *string***

**Description** A logical expression using the &, | and ! logical operators and the TCP flag names: rst, syn and ack.

**Context** [acl capture-filter ipv6-filter entry sequence-id number match tcp-flags string](#)

**Tree** [tcp-flags](#)

**Configurable** True

### **tcam-entries *number***

**Description** The number of TCAM entries required to implement a single instance of this filter rule.

**Context** [acl capture-filter ipv6-filter entry sequence-id number tcam-entries number](#)

**Tree** [tcam-entries](#)

**Configurable** False

### **cpm-filter**

**Description** Top level container for CPM filters

**Context** [acl cpm-filter](#)

**Tree** [cpm-filter](#)

**Configurable** True

### **ipv4-filter**

**Description** Top level container for CPM IPv4 filters

**Context** [acl cpm-filter ipv4-filter](#)

**Tree** [ipv4-filter](#)

**Configurable** True

**entry sequence-id number**

<b>Description</b>	List of filter rules.
<b>Context</b>	<a href="#">acl cpm-filter ipv4-filter entry sequence-id number</a>
<b>Tree</b>	<a href="#">entry</a>
<b>Configurable</b>	True

**sequence-id number**

<b>Description</b>	A number to indicate the relative evaluation order of the different entries; lower numbered entries are evaluated before higher numbered entries
<b>Context</b>	<a href="#">acl cpm-filter ipv4-filter entry sequence-id number</a>
<b>Range</b>	1 to 65535
<b>Configurable</b>	True

**action**

<b>Description</b>	Container for the actions to be applied to packets matching the CPM filter entry.
<b>Context</b>	<a href="#">acl cpm-filter ipv4-filter entry sequence-id number action</a>
<b>Tree</b>	<a href="#">action</a>
<b>Configurable</b>	True

**accept**

<b>Description</b>	Accept matching packets and forward them towards their normal destination
<b>Context</b>	<a href="#">acl cpm-filter ipv4-filter entry sequence-id number action accept</a>
<b>Tree</b>	<a href="#">accept</a>
<b>Configurable</b>	True

**log boolean****Note:**

This command is available for the following platforms:

- 7250 IXR-6
- 7250 IXR-10

<b>Description</b>	When this is true, a log is created for each packet matching the entry The log entry contains the following information: ['timestamp', 'filter name', 'filter entry sequence-id', 'incoming linecard', 'action: accept', 'IP protocol', 'packet-length', 'source-IP', 'source-port (TCP/UDP packets)', 'dest-IP', 'dest-port (TCP/UDP packets)', 'icmp-type (ICMP packets)', 'icmp-code (ICMP packets)']
<b>Context</b>	<a href="#">acl cpm-filter ipv4-filter entry sequence-id number action accept log boolean</a>
<b>Tree</b>	<a href="#">log</a>
<b>Default</b>	false
<b>Configurable</b>	True

## rate-limit

<b>Description</b>	Rate-limit accepted packets
<b>Context</b>	<a href="#">acl cpm-filter ipv4-filter entry sequence-id number action accept rate-limit</a>
<b>Tree</b>	<a href="#">rate-limit</a>
<b>Configurable</b>	True

## distributed-policer *reference*



### Note:

This command is available for the following platforms:

- 7220 IXR-D2
- 7250 IXR-10
- 7220 IXR-D3L
- 7220 IXR-D2L
- 7220 IXR-D3
- 7250 IXR-6
- 7220 IXR-D1

<b>Description</b>	Reference to a policer
<b>Context</b>	<a href="#">acl cpm-filter ipv4-filter entry sequence-id number action accept rate-limit distributed-policer reference</a>
<b>Tree</b>	<a href="#">distributed-policer</a>
<b>Reference</b>	<a href="#">acl policers policer name string</a>
<b>Configurable</b>	True

**system-cpu-policer *reference***

<b>Description</b>	Reference to a system-cpu-policer.
<b>Context</b>	<a href="#">acl cpm-filter ipv4-filter entry sequence-id number action accept rate-limit system-cpu-policer reference</a>
<b>Tree</b>	<a href="#">system-cpu-policer</a>
<b>Reference</b>	<a href="#">acl policers system-cpu-policer name string</a>
<b>Configurable</b>	True

**drop**

<b>Description</b>	Drop matching packets without sending any ICMP messages back to the source
<b>Context</b>	<a href="#">acl cpm-filter ipv4-filter entry sequence-id number action drop</a>
<b>Tree</b>	<a href="#">drop</a>
<b>Configurable</b>	True

**log *boolean***

<b>Description</b>	When this is true, a log is created for each packet matching the entry The log entry contains the following information: [ <i>timestamp</i> , <i>filter name</i> , <i>filter entry sequence-id</i> , <i>incoming linecard</i> , <i>action: drop</i> , <i>IP protocol</i> , <i>packet-length</i> , <i>source-IP</i> , <i>source-port</i> (TCP/UDP packets), <i>dest-IP</i> , <i>dest-port</i> (TCP/UDP packets), <i>icmp-type</i> (ICMP packets), <i>icmp-code</i> (ICMP packets)]
<b>Context</b>	<a href="#">acl cpm-filter ipv4-filter entry sequence-id number action drop log boolean</a>
<b>Tree</b>	<a href="#">log</a>
<b>Default</b>	false
<b>Configurable</b>	True

**description *string***

<b>Description</b>	Description string for the filter entry
<b>Context</b>	<a href="#">acl cpm-filter ipv4-filter entry sequence-id number description string</a>
<b>Tree</b>	<a href="#">description</a>
<b>String Length</b>	1 to 255
<b>Configurable</b>	True

**match**

<b>Description</b>	Container for the conditions that determine whether a packet matches this entry
<b>Context</b>	<a href="#">acl</a> <a href="#">cpm-filter</a> <a href="#">ipv4-filter</a> <a href="#">entry</a> <a href="#">sequence-id</a> <a href="#">number</a> <a href="#">match</a>
<b>Tree</b>	<a href="#">match</a>
<b>Configurable</b>	True

**destination-ip**

<b>Description</b>	Packet matching criteria based on destination IPv4 address
<b>Context</b>	<a href="#">acl</a> <a href="#">cpm-filter</a> <a href="#">ipv4-filter</a> <a href="#">entry</a> <a href="#">sequence-id</a> <a href="#">number</a> <a href="#">match</a> <a href="#">destination-ip</a>
<b>Tree</b>	<a href="#">destination-ip</a>
<b>Configurable</b>	True

**address string**

<b>Description</b>	Match a packet if its destination IP address logically anded with the inverse of the mask equals this IP address.
<b>Context</b>	<a href="#">acl</a> <a href="#">cpm-filter</a> <a href="#">ipv4-filter</a> <a href="#">entry</a> <a href="#">sequence-id</a> <a href="#">number</a> <a href="#">match</a> <a href="#">destination-ip</a> <a href="#">address</a> <a href="#">string</a>
<b>Tree</b>	<a href="#">address</a>
<b>Configurable</b>	True

**mask string**

<b>Description</b>	Match a packet if its destination IP address logically anded with the inverse of this mask equals the configured IP address.
<b>Context</b>	<a href="#">acl</a> <a href="#">cpm-filter</a> <a href="#">ipv4-filter</a> <a href="#">entry</a> <a href="#">sequence-id</a> <a href="#">number</a> <a href="#">match</a> <a href="#">destination-ip</a> <a href="#">mask</a> <a href="#">string</a>
<b>Tree</b>	<a href="#">mask</a>
<b>Configurable</b>	True

**prefix string**

<b>Description</b>	Match a packet if its destination IP address is within the specified IPv4 prefix.
<b>Context</b>	<a href="#">acl</a> <a href="#">cpm-filter</a> <a href="#">ipv4-filter</a> <a href="#">entry</a> <a href="#">sequence-id</a> <a href="#">number</a> <a href="#">match</a> <a href="#">destination-ip</a> <a href="#">prefix</a> <a href="#">string</a>



<b>Tree</b>	<a href="#">prefix</a>
<b>Configurable</b>	True

## destination-port

<b>Description</b>	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.
<b>Context</b>	<a href="#">acl cpm-filter ipv4-filter entry sequence-id number match destination-port</a>
<b>Tree</b>	<a href="#">destination-port</a>
<b>Configurable</b>	True

## operator *keyword*

<b>Description</b>	Comparison operator  eq = equal ge = greater than or equal to le = less than or equal to
<b>Context</b>	<a href="#">acl cpm-filter ipv4-filter entry sequence-id number match destination-port operator keyword</a>
<b>Tree</b>	<a href="#">operator</a>
<b>Options</b>	<ul style="list-style-type: none"> <li>• le Less than or equal.</li> <li>• ge Greater than or equal.</li> <li>• eq Equal to.</li> </ul>
<b>Configurable</b>	True

## range

<b>Description</b>	Container used to specify a contiguous range of TCP/UDP port numbers
<b>Context</b>	<a href="#">acl cpm-filter ipv4-filter entry sequence-id number match destination-port range</a>
<b>Tree</b>	<a href="#">range</a>
<b>Configurable</b>	True

**end (*number* | *keyword*)**

<b>Description</b>	The ending port number to include in the range
<b>Context</b>	<a href="#">acl</a> <a href="#">cpm-filter</a> <a href="#">ipv4-filter</a> <a href="#">entry</a> <a href="#">sequence-id</a> <i>number</i> <a href="#">match</a> <a href="#">destination-port</a> <a href="#">range</a> <b>end</b> ( <i>number</i>   <i>keyword</i> )
<b>Tree</b>	<a href="#">end</a>
<b>Range</b>	0 to 65535
<b>Options</b>	<ul style="list-style-type: none"> <li>• <b>acap</b> Application Configuration Access Protocol</li> <li>• <b>afp-tcp</b> Apple Filing Protocol over TCP</li> <li>• <b>arns</b> A Remote Network Server System</li> <li>• <b>asf-rmcp</b> ASF Remote Management and Control Protocol &amp; IPMI Remote Management Protocol</li> <li>• <b>ashare</b> AppleShare IP Web Administration</li> <li>• <b>atalk-rm</b> AppleTalk Routing Maintenance</li> <li>• <b>aurp</b> AppleTalk Update-Based Routing Protocol</li> <li>• <b>auth</b> Authentication Service</li> <li>• <b>bfd</b> Bidirectional Forwarding Detection Single Hop</li> <li>• <b>bfd-echo</b> BFD Echo</li> <li>• <b>bftp</b> Background File Transfer Program</li> <li>• <b>bgmp</b> Border Gateway Multicast Protocol</li> <li>• <b>bgp</b> Border Gateway Protocol</li> <li>• <b>bootpc</b> Bootstrap Protocol (BOOTP) Client and DHCP Client</li> <li>• <b>bootps</b> Bootstrap Protocol (BOOTP) Server and DHCP Server</li> </ul>

- ccs0-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)



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- 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
- 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

### **start (*number* | *keyword*)**

**Description** The starting port number to include in the range

**Context** [acl](#) [cpm-filter](#) [ipv4-filter](#) [entry](#) [sequence-id](#) *number* [match](#) [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
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  - ieee-mms-ssl  
IEEE Media Management System over SSL
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Internet Message Access Protocol (IMAP), version 3
  - imaps  
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  - ipp  
Internet Printing Protocol
  - ipsec  
Internet Protocol Security (IPSec)

- ipx  
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- irc  
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- 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)
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- 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  
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  - ptp-event  
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  - 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
- 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

**value (*number* | *keyword*)**

<b>Description</b>	A destination port number
<b>Context</b>	<a href="#">acl</a> <a href="#">cpm-filter</a> <a href="#">ipv4-filter</a> <a href="#">entry</a> <a href="#">sequence-id</a> <i>number</i> <a href="#">match</a> <a href="#">destination-port</a> <a href="#">value</a> ( <i>number</i>   <i>keyword</i> )
<b>Tree</b>	<a href="#">value</a>
<b>Range</b>	0 to 65535
<b>Options</b>	<ul style="list-style-type: none"> <li>• <a href="#">acap</a> Application Configuration Access Protocol</li> <li>• <a href="#">afp-tcp</a> Apple Filing Protocol over TCP</li> <li>• <a href="#">arns</a> A Remote Network Server System</li> <li>• <a href="#">asf-rmcp</a> ASF Remote Management and Control Protocol &amp; IPMI Remote Management Protocol</li> <li>• <a href="#">ashare</a> AppleShare IP Web Administration</li> <li>• <a href="#">atalk-rm</a> AppleTalk Routing Maintenance</li> <li>• <a href="#">aurp</a> AppleTalk Update-Based Routing Protocol</li> <li>• <a href="#">auth</a> Authentication Service</li> <li>• <a href="#">bfd</a> Bidirectional Forwarding Detection Single Hop</li> <li>• <a href="#">bfd-echo</a> BFD Echo</li> <li>• <a href="#">bftp</a> Background File Transfer Program</li> <li>• <a href="#">bgmp</a> Border Gateway Multicast Protocol</li> <li>• <a href="#">bgp</a> Border Gateway Protocol</li> </ul>

- 
- 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
- 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

### **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** [acl cpm-filter ipv4-filter entry sequence-id number match first-fragment boolean](#)

**Tree** [first-fragment](#)

**Configurable** True

### **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.

<b>Context</b>	<a href="#">acl cpm-filter ipv4-filter entry sequence-id number match fragment boolean</a>
<b>Tree</b>	<a href="#">fragment</a>
<b>Configurable</b>	True

## icmp

<b>Description</b>	<p>A packet matches this condition if its ICMP type and code matches one of the specified combinations</p> <p>The rule should also have a condition that the IP protocol equals 1 (ICMP) in order for this to be interpreted correctly.</p>
<b>Context</b>	<a href="#">acl cpm-filter ipv4-filter entry sequence-id number match icmp</a>
<b>Tree</b>	<a href="#">icmp</a>
<b>Configurable</b>	True

## code number

<b>Description</b>	<p>Match if the ICMP code value is any value in the list</p> <p>Requires ICMP type to be specified because codes are type dependent.</p>
<b>Context</b>	<a href="#">acl cpm-filter ipv4-filter entry sequence-id number match icmp code number</a>
<b>Tree</b>	<a href="#">code</a>
<b>Configurable</b>	True

## type (*number* | *keyword*)

<b>Description</b>	Match a single ICMP type value.
<b>Context</b>	<a href="#">acl cpm-filter ipv4-filter entry sequence-id number match icmp type (<i>number</i>   <i>keyword</i>)</a>
<b>Tree</b>	<a href="#">type</a>
<b>Range</b>	0 to 255
<b>Options</b>	<ul style="list-style-type: none"> <li>• echo-reply ICMP Echo Reply</li> <li>• dest-unreachable ICMP Destination Unreachable</li> <li>• source-quench ICMP Source Quench</li> </ul>

- 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

### **protocol (*number* | *keyword*)**

<b>Description</b>	An IPv4 packet matches this condition if its IP protocol type field matches the specified value
<b>Context</b>	<a href="#">acl cpm-filter ipv4-filter entry sequence-id</a> <i>number</i> <a href="#">match protocol</a> ( <i>number</i>   <i>keyword</i> )
<b>Tree</b>	<a href="#">protocol</a>
<b>Range</b>	0 to 255
<b>Options</b>	<ul style="list-style-type: none"> <li>• ipv6-hop IPv6 hop-by-hop option</li> <li>• icmp Internet Control Message Protocol</li> <li>• igmp Internet Group Management Protocol</li> <li>• ggp Gateway-to-Gateway Protocol</li> <li>• ipv4 IPv4 encapsulation</li> </ul>



- 
- 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
  - 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

## source-ip

**Description** Packet matching criteria based on source IPv4 address

**Context** [acl cpm-filter ipv4-filter entry sequence-id number match source-ip](#)

**Tree** [source-ip](#)

**Configurable** True

## 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 cpm-filter ipv4-filter entry sequence-id number match source-ip address string](#)

**Tree** [address](#)

**Configurable** True

## 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 cpm-filter ipv4-filter entry sequence-id number match source-ip mask string](#)

**Tree** [mask](#)

**Configurable** True

## prefix *string*

**Description** Match a packet if its source IP address is within the specified IPv4 prefix.

**Context** [acl cpm-filter ipv4-filter entry sequence-id number match source-ip prefix string](#)

<b>Tree</b>	<a href="#">prefix</a>
<b>Configurable</b>	True

## source-port

<b>Description</b>	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.
<b>Context</b>	<a href="#">acl cpm-filter ipv4-filter entry sequence-id number match source-port</a>
<b>Tree</b>	<a href="#">source-port</a>
<b>Configurable</b>	True

## operator *keyword*

<b>Description</b>	Comparison operator  eq = equal ge = greater than or equal to le = less than or equal to
<b>Context</b>	<a href="#">acl cpm-filter ipv4-filter entry sequence-id number match source-port operator keyword</a>
<b>Tree</b>	<a href="#">operator</a>
<b>Options</b>	<ul style="list-style-type: none"> <li>• le Less than or equal.</li> <li>• ge Greater than or equal.</li> <li>• eq Equal to.</li> </ul>
<b>Configurable</b>	True

## range

<b>Description</b>	Container used to specify a contiguous range of TCP/UDP port numbers
<b>Context</b>	<a href="#">acl cpm-filter ipv4-filter entry sequence-id number match source-port range</a>
<b>Tree</b>	<a href="#">range</a>
<b>Configurable</b>	True

**end (*number* | *keyword*)**

<b>Description</b>	The ending port number to include in the range
<b>Context</b>	<a href="#">acl</a> <a href="#">cpm-filter</a> <a href="#">ipv4-filter</a> <a href="#">entry</a> <a href="#">sequence-id</a> <i>number</i> <a href="#">match</a> <a href="#">source-port</a> <a href="#">range</a> <a href="#">end</a> ( <i>number</i>   <i>keyword</i> )
<b>Tree</b>	<a href="#">end</a>
<b>Range</b>	0 to 65535
<b>Options</b>	<ul style="list-style-type: none"> <li>• <a href="#">acap</a> Application Configuration Access Protocol</li> <li>• <a href="#">afp-tcp</a> Apple Filing Protocol over TCP</li> <li>• <a href="#">arns</a> A Remote Network Server System</li> <li>• <a href="#">asf-rmcp</a> ASF Remote Management and Control Protocol &amp; IPMI Remote Management Protocol</li> <li>• <a href="#">ashare</a> AppleShare IP Web Administration</li> <li>• <a href="#">atalk-rm</a> AppleTalk Routing Maintenance</li> <li>• <a href="#">aurp</a> AppleTalk Update-Based Routing Protocol</li> <li>• <a href="#">auth</a> Authentication Service</li> <li>• <a href="#">bfd</a> Bidirectional Forwarding Detection Single Hop</li> <li>• <a href="#">bfd-echo</a> BFD Echo</li> <li>• <a href="#">bftp</a> Background File Transfer Program</li> <li>• <a href="#">bgmp</a> Border Gateway Multicast Protocol</li> <li>• <a href="#">bgp</a> Border Gateway Protocol</li> <li>• <a href="#">bootpc</a> Bootstrap Protocol (BOOTP) Client and DHCP Client</li> <li>• <a href="#">bootps</a> Bootstrap Protocol (BOOTP) Server and DHCP Server</li> </ul>

- 
- ccs0-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
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DHCPv6 Client
  - dhcpv6-server  
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DHCP Failover Protocol
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Echo Protocol
  - epp  
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- ftp-data  
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GTP control messages (GTP-C)
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FileMaker Web Sharing (HTTP Alternate)
- http-mgmt  
http-mgmt

- 
- http-rpc  
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Kerberos login

- kpasswd  
Kerberos Change/Set password
- kshell  
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MPLS LSP-echo
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Mac OS X Server administration
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- matip-b  
Mapping of Airline Traffic over Internet Protocol (MATIP) type B
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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  
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- msdp  
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MS Exchange Routing
- msp  
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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  
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netwall, for Emergency Broadcasts
- new-rwho  
new-rwho, new-who

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Network News Transfer Protocol (NNTP)
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Network Time Protocol (NTP)
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OpenVPN
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PIM Auto-RP
- pkix-timestamp  
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Post Office Protocol, version 2 (POP2)
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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)

- 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)
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Secure Internet Live Conferencing (SILC)
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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

### **start (*number* | *keyword*)**

**Description** The starting port number to include in the range

**Context** [acl cpm-filter ipv4-filter entry sequence-id number match 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
  - 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)
- sgmpp  
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

### value (*number* | *keyword*)

<b>Description</b>	A source port number
<b>Context</b>	<a href="#">acl cpm-filter ipv4-filter entry sequence-id</a> <i>number</i> <a href="#">match source-port value</a> ( <i>number</i>   <i>keyword</i> )
<b>Tree</b>	<a href="#">value</a>
<b>Range</b>	0 to 65535
<b>Options</b>	<ul style="list-style-type: none"> <li>• <code>acap</code> Application Configuration Access Protocol</li> <li>• <code>afp-tcp</code> Apple Filing Protocol over TCP</li> <li>• <code>arns</code> A Remote Network Server System</li> <li>• <code>asf-rmcp</code> ASF Remote Management and Control Protocol &amp; IPMI Remote Management Protocol</li> <li>• <code>ashare</code> AppleShare IP Web Administration</li> <li>• <code>atalk-rm</code> AppleTalk Routing Maintenance</li> <li>• <code>aurp</code> AppleTalk Update-Based Routing Protocol</li> <li>• <code>auth</code> Authentication Service</li> <li>• <code>bfd</code> Bidirectional Forwarding Detection Single Hop</li> <li>• <code>bfd-echo</code> BFD Echo</li> <li>• <code>bftp</code> Background File Transfer Program</li> <li>• <code>bgmp</code> Border Gateway Multicast Protocol</li> <li>• <code>bgp</code> Border Gateway Protocol</li> </ul>

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- bootpc  
Bootstrap Protocol (BOOTP) Client and DHCP Client
  - bootps  
Bootstrap Protocol (BOOTP) Server and DHCP Server
  - ccso-ns  
CCSO Nameserver
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Character Generator Protocol (CHARGEN)
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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  
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  - dhcp-failover  
DHCP Failover Protocol
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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  
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  - epp  
Extensible Provisioning Protocol
  - esro  
Efficient Short Remote Operations (ESRO)
  - exec  
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  - 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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  - hp-alarm-mgr  
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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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  - imaps  
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- matip-b  
Mapping of Airline Traffic over Internet Protocol (MATIP) type B
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BFD session over each LAG member link
- microsoft-ds  
Microsoft Directory Services
- mobile-ip  
Mobile IP Agent

- 
- monitor  
Monitor
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Message posting protocol (MPP)
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  - mssql-s  
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NETRJS protocol
  - netrjs-2  
NETRJS protocol
  - netrjs-3  
NETRJS protocol
  - netrjs-4  
NETRJS protocol
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  - netbios-ns  
NetBIOS Name Service
  - netbios-ss  
NetBIOS Session Service
  - netnews  
Netnews

- netwall  
netwall, for Emergency Broadcasts
- new-rwho  
new-rwho, new-who
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- nntps  
Network News Transfer Protocol over TLS/SSL (NNTPS)
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Network Time Protocol (NTP)
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OpenVPN
- pim-auto-rp  
PIM Auto-RP
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- 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  
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  - rtsp  
Real Time Streaming Protocol (RTSP)
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Simple Gateway Monitoring Protocol (SGMP)

- silc  
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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

### tcp-flags *string*

**Description** A logical expression using the &, | and ! logical operators and the TCP flag names: rst, syn and ack.

**Context** [acl](#) [cpm-filter](#) [ipv4-filter](#) [entry](#) [sequence-id](#) *number* [match](#) [tcp-flags](#) *string*

**Tree** [tcp-flags](#)

**Configurable** True

### statistics

**Description** Statistics container for packets matching the CPM-filter entry

**Context** [acl](#) [cpm-filter](#) [ipv4-filter](#) [entry](#) [sequence-id](#) *number* [statistics](#)

**Tree** [statistics](#)

**Configurable** False



## distributed-policer



### Note:

This command is available for the following platforms:

- 7220 IXR-D2
- 7250 IXR-10
- 7220 IXR-D3L
- 7220 IXR-D2L
- 7220 IXR-D3
- 7250 IXR-6
- 7220 IXR-D1

<b>Description</b>	Distributed policer stats for traffic matching the entry.
<b>Context</b>	<a href="#">acl cpm-filter ipv4-filter entry sequence-id number statistics distributed-policer</a>
<b>Tree</b>	<a href="#">distributed-policer</a>
<b>Configurable</b>	False

## conforming-octets *number*



### Note:

This command is available for the following platforms:

- 7220 IXR-D2
- 7250 IXR-10
- 7220 IXR-D3L
- 7220 IXR-D2L
- 7220 IXR-D3
- 7250 IXR-6
- 7220 IXR-D1

<b>Description</b>	The number of bytes that were considered conforming by the policer. The byte count includes 18 bytes of Ethernet overhead for every IP packet.
<b>Context</b>	<a href="#">acl cpm-filter ipv4-filter entry sequence-id number statistics distributed-policer conforming-octets number</a>
<b>Tree</b>	<a href="#">conforming-octets</a>
<b>Default</b>	0
<b>Configurable</b>	False

## conforming-packets *number*



### Note:

This command is available for the following platforms:

- 7220 IXR-D2
- 7250 IXR-10
- 7220 IXR-D3L
- 7220 IXR-D2L
- 7220 IXR-D3
- 7250 IXR-6
- 7220 IXR-D1

<b>Description</b>	The number of packets (actually Ethernet frames) that were considered conforming by the policer
<b>Context</b>	<a href="#">acl</a> <a href="#">cpm-filter</a> <a href="#">ipv4-filter</a> <a href="#">entry</a> <a href="#">sequence-id</a> <i>number</i> <a href="#">statistics</a> <a href="#">distributed-policer</a> <a href="#">conforming-packets</a> <i>number</i>
<b>Tree</b>	<a href="#">conforming-packets</a>
<b>Default</b>	0
<b>Configurable</b>	False

## exceeding-octets *number*



### Note:

This command is available for the following platforms:

- 7220 IXR-D2
- 7250 IXR-10
- 7220 IXR-D3L
- 7220 IXR-D2L
- 7220 IXR-D3
- 7250 IXR-6
- 7220 IXR-D1

<b>Description</b>	The number of bytes that were considered exceeding by the policer. The byte count includes 18 bytes of Ethernet overhead for every IP packet.
<b>Context</b>	<a href="#">acl</a> <a href="#">cpm-filter</a> <a href="#">ipv4-filter</a> <a href="#">entry</a> <a href="#">sequence-id</a> <i>number</i> <a href="#">statistics</a> <a href="#">distributed-policer</a> <a href="#">exceeding-octets</a> <i>number</i>
<b>Tree</b>	<a href="#">exceeding-octets</a>
<b>Default</b>	0

<b>Configurable</b>	False
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### exceeding-packets *number*



**Note:**

This command is available for the following platforms:

- 7220 IXR-D2
- 7250 IXR-10
- 7220 IXR-D3L
- 7220 IXR-D2L
- 7220 IXR-D3
- 7250 IXR-6
- 7220 IXR-D1

<b>Description</b>	The number of packets (actually Ethernet frames) that were considered exceeding by the policer
<b>Context</b>	<a href="#">acl</a> <a href="#">cpm-filter</a> <a href="#">ipv4-filter</a> <a href="#">entry</a> <a href="#">sequence-id</a> <a href="#">number</a> <a href="#">statistics</a> <a href="#">distributed-policer</a> <a href="#">exceeding-packets</a> <a href="#">number</a>
<b>Tree</b>	<a href="#">exceeding-packets</a>
<b>Default</b>	0
<b>Configurable</b>	False

### last-clear *string*

<b>Description</b>	Time of the last clear command performed by the user at this level
<b>Context</b>	<a href="#">acl</a> <a href="#">cpm-filter</a> <a href="#">ipv4-filter</a> <a href="#">entry</a> <a href="#">sequence-id</a> <a href="#">number</a> <a href="#">statistics</a> <a href="#">last-clear</a> <a href="#">string</a>
<b>Tree</b>	<a href="#">last-clear</a>
<b>String Length</b>	20 to 32
<b>Configurable</b>	False

### last-match *string*

<b>Description</b>	The elapsed time since a packet last matched the entry, considering all subinterfaces and all linecards.
<b>Context</b>	<a href="#">acl</a> <a href="#">cpm-filter</a> <a href="#">ipv4-filter</a> <a href="#">entry</a> <a href="#">sequence-id</a> <a href="#">number</a> <a href="#">statistics</a> <a href="#">last-match</a> <a href="#">string</a>
<b>Tree</b>	<a href="#">last-match</a>
<b>String Length</b>	20 to 32

<b>Configurable</b>	False
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### matched-packets *number*

<b>Description</b>	The number of packets matching the entry since it was programmed or since the last clear, summed across all subinterfaces and all linecards
<b>Context</b>	<a href="#">acl cpm-filter ipv4-filter entry sequence-id number statistics matched-packets number</a>
<b>Tree</b>	<a href="#">matched-packets</a>
<b>Default</b>	0
<b>Configurable</b>	False

### system-cpu-policer

<b>Description</b>	System CPU policer stats for traffic matching the entry.
<b>Context</b>	<a href="#">acl cpm-filter ipv4-filter entry sequence-id number statistics system-cpu-policer</a>
<b>Tree</b>	<a href="#">system-cpu-policer</a>
<b>Configurable</b>	False

### conforming-octets *number*

<b>Description</b>	The number of bytes that were considered conforming by the policer. The byte count includes 18 bytes of Ethernet overhead for every IP packet.
<b>Context</b>	<a href="#">acl cpm-filter ipv4-filter entry sequence-id number statistics system-cpu-policer conforming-octets number</a>
<b>Tree</b>	<a href="#">conforming-octets</a>
<b>Default</b>	0
<b>Configurable</b>	False

### conforming-packets *number*

<b>Description</b>	The number of packets (actually Ethernet frames) that were considered conforming by the policer
<b>Context</b>	<a href="#">acl cpm-filter ipv4-filter entry sequence-id number statistics system-cpu-policer conforming-packets number</a>
<b>Tree</b>	<a href="#">conforming-packets</a>
<b>Default</b>	0

<b>Configurable</b>	False
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### **exceeding-octets *number***

<b>Description</b>	The number of bytes that were considered exceeding by the policer. The byte count includes 18 bytes of Ethernet overhead for every IP packet.
<b>Context</b>	<a href="#">acl cpm-filter ipv4-filter entry sequence-id number statistics system-cpu-policer exceeding-octets number</a>
<b>Tree</b>	<a href="#">exceeding-octets</a>
<b>Default</b>	0
<b>Configurable</b>	False

### **exceeding-packets *number***

<b>Description</b>	The number of packets (actually Ethernet frames) that were considered exceeding by the policer
<b>Context</b>	<a href="#">acl cpm-filter ipv4-filter entry sequence-id number statistics system-cpu-policer exceeding-packets number</a>
<b>Tree</b>	<a href="#">exceeding-packets</a>
<b>Default</b>	0
<b>Configurable</b>	False

### **tcam-entries *number***

<b>Description</b>	The number of TCAM entries required to implement a single instance of this filter rule.
<b>Context</b>	<a href="#">acl cpm-filter ipv4-filter entry sequence-id number tcam-entries number</a>
<b>Tree</b>	<a href="#">tcam-entries</a>
<b>Configurable</b>	False

### **last-clear *string***

<b>Description</b>	Time of the last clear command performed by the user at this level
<b>Context</b>	<a href="#">acl cpm-filter ipv4-filter last-clear string</a>
<b>Tree</b>	<a href="#">last-clear</a>
<b>String Length</b>	20 to 32
<b>Configurable</b>	False

**statistics-per-entry *boolean***

<b>Description</b>	Collect the following statistics per entry: the number of packets matching each entry, and the elapsed time since a packet last matched each entry
<b>Context</b>	<a href="#">acl cpm-filter ipv4-filter statistics-per-entry <i>boolean</i></a>
<b>Tree</b>	<a href="#">statistics-per-entry</a>
<b>Configurable</b>	True

**ipv6-filter**

<b>Description</b>	Top level container for CPM IPv6 filters
<b>Context</b>	<a href="#">acl cpm-filter ipv6-filter</a>
<b>Tree</b>	<a href="#">ipv6-filter</a>
<b>Configurable</b>	True

**entry *sequence-id number***

<b>Description</b>	List of filter rules.
<b>Context</b>	<a href="#">acl cpm-filter ipv6-filter entry <i>sequence-id number</i></a>
<b>Tree</b>	<a href="#">entry</a>
<b>Configurable</b>	True

**sequence-id *number***

<b>Description</b>	A number to indicate the relative evaluation order of the different entries; lower numbered entries are evaluated before higher numbered entries
<b>Context</b>	<a href="#">acl cpm-filter ipv6-filter entry <i>sequence-id number</i></a>
<b>Range</b>	1 to 65535
<b>Configurable</b>	True

**action**

<b>Description</b>	Container for the actions to be applied to packets matching the CPM filter entry.
<b>Context</b>	<a href="#">acl cpm-filter ipv6-filter entry <i>sequence-id number action</i></a>
<b>Tree</b>	<a href="#">action</a>
<b>Configurable</b>	True

## accept

<b>Description</b>	Accept matching packets and forward them towards their normal destination
<b>Context</b>	<a href="#">acl</a> <a href="#">cpm-filter</a> <a href="#">ipv6-filter</a> <a href="#">entry</a> <a href="#">sequence-id</a> <i>number</i> <a href="#">action</a> <a href="#">accept</a>
<b>Tree</b>	<a href="#">accept</a>
<b>Configurable</b>	True

## log *boolean*



### Note:

This command is available for the following platforms:

- 7250 IXR-6
- 7250 IXR-10

<b>Description</b>	When this is true, a log is created for each packet matching the entry The log entry contains the following information: [ <i>'timestamp'</i> , <i>'filter name'</i> , <i>'filter entry sequence-id'</i> , <i>'incoming linecard'</i> , <i>'action: accept'</i> , <i>'IP protocol'</i> , <i>'packet-length'</i> , <i>'source-IP'</i> , <i>'source-port (TCP/UDP packets)'</i> , <i>'dest-IP'</i> , <i>'dest-port (TCP/UDP packets)'</i> , <i>'icmp-type (ICMP packets)'</i> , <i>'icmp-code (ICMP packets)'</i> ]
<b>Context</b>	<a href="#">acl</a> <a href="#">cpm-filter</a> <a href="#">ipv6-filter</a> <a href="#">entry</a> <a href="#">sequence-id</a> <i>number</i> <a href="#">action</a> <a href="#">accept</a> <a href="#">log</a> <i>boolean</i>
<b>Tree</b>	<a href="#">log</a>
<b>Default</b>	false
<b>Configurable</b>	True

## rate-limit

<b>Description</b>	Rate-limit accepted packets
<b>Context</b>	<a href="#">acl</a> <a href="#">cpm-filter</a> <a href="#">ipv6-filter</a> <a href="#">entry</a> <a href="#">sequence-id</a> <i>number</i> <a href="#">action</a> <a href="#">accept</a> <a href="#">rate-limit</a>
<b>Tree</b>	<a href="#">rate-limit</a>
<b>Configurable</b>	True

## distributed-policer *reference*



### Note:

This command is available for the following platforms:

- 7220 IXR-D2
- 7250 IXR-10
- 7220 IXR-D3L
- 7220 IXR-D2L
- 7220 IXR-D3
- 7250 IXR-6
- 7220 IXR-D1

<b>Description</b>	Reference to a policer
<b>Context</b>	<a href="#">acl</a> <a href="#">cpm-filter</a> <a href="#">ipv6-filter</a> <a href="#">entry</a> <a href="#">sequence-id</a> <i>number</i> <a href="#">action</a> <a href="#">accept</a> <a href="#">rate-limit</a> <a href="#">distributed-policer</a> <i>reference</i>
<b>Tree</b>	<a href="#">distributed-policer</a>
<b>Reference</b>	<a href="#">acl</a> <a href="#">policers</a> <a href="#">policer</a> <i>name</i> <i>string</i>
<b>Configurable</b>	True

## system-cpu-policer *reference*

<b>Description</b>	Reference to a system-cpu-policer.
<b>Context</b>	<a href="#">acl</a> <a href="#">cpm-filter</a> <a href="#">ipv6-filter</a> <a href="#">entry</a> <a href="#">sequence-id</a> <i>number</i> <a href="#">action</a> <a href="#">accept</a> <a href="#">rate-limit</a> <a href="#">system-cpu-policer</a> <i>reference</i>
<b>Tree</b>	<a href="#">system-cpu-policer</a>
<b>Reference</b>	<a href="#">acl</a> <a href="#">policers</a> <a href="#">system-cpu-policer</a> <i>name</i> <i>string</i>
<b>Configurable</b>	True

## drop

<b>Description</b>	Drop matching packets without sending any ICMP messages back to the source
<b>Context</b>	<a href="#">acl</a> <a href="#">cpm-filter</a> <a href="#">ipv6-filter</a> <a href="#">entry</a> <a href="#">sequence-id</a> <i>number</i> <a href="#">action</a> <a href="#">drop</a>
<b>Tree</b>	<a href="#">drop</a>
<b>Configurable</b>	True



**log *boolean***

<b>Description</b>	When this is true, a log is created for each packet matching the entry The log entry contains the following information: ['timestamp', 'filter name', 'filter entry sequence-id', 'incoming linecard', 'action: drop', 'IP protocol', 'packet-length', 'source-IP', 'source-port (TCP/UDP packets)', 'dest-IP', 'dest-port (TCP/UDP packets)', 'icmp-type (ICMP packets)', 'icmp-code (ICMP packets)']
<b>Context</b>	<a href="#">acl cpm-filter ipv6-filter entry sequence-id number action drop log boolean</a>
<b>Tree</b>	<a href="#">log</a>
<b>Default</b>	false
<b>Configurable</b>	True

**description *string***

<b>Description</b>	Description string for the filter entry
<b>Context</b>	<a href="#">acl cpm-filter ipv6-filter entry sequence-id number description string</a>
<b>Tree</b>	<a href="#">description</a>
<b>String Length</b>	1 to 255
<b>Configurable</b>	True

**match**

<b>Description</b>	Container for the conditions that determine whether a packet matches this entry
<b>Context</b>	<a href="#">acl cpm-filter ipv6-filter entry sequence-id number match</a>
<b>Tree</b>	<a href="#">match</a>
<b>Configurable</b>	True

**destination-ip**

<b>Description</b>	Packet matching criteria based on destination IPv6 address
<b>Context</b>	<a href="#">acl cpm-filter ipv6-filter entry sequence-id number match destination-ip</a>
<b>Tree</b>	<a href="#">destination-ip</a>
<b>Configurable</b>	True

**address string**

<b>Description</b>	Match a packet if its destination IP address logically anded with the inverse of the mask equals this IP address.
<b>Context</b>	<a href="#">acl cpm-filter ipv6-filter entry sequence-id number match destination-ip address string</a>
<b>Tree</b>	<a href="#">address</a>
<b>Configurable</b>	True

**mask string**

<b>Description</b>	Match a packet if its destination IP address logically anded with the inverse of this mask equals the configured IP address.
<b>Context</b>	<a href="#">acl cpm-filter ipv6-filter entry sequence-id number match destination-ip mask string</a>
<b>Tree</b>	<a href="#">mask</a>
<b>Configurable</b>	True

**prefix string**

<b>Description</b>	Match a packet if its destination IP address is within the specified IPv6 prefix.
<b>Context</b>	<a href="#">acl cpm-filter ipv6-filter entry sequence-id number match destination-ip prefix string</a>
<b>Tree</b>	<a href="#">prefix</a>
<b>Configurable</b>	True

**destination-port**

<b>Description</b>	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.
<b>Context</b>	<a href="#">acl cpm-filter ipv6-filter entry sequence-id number match destination-port destination-port</a>
<b>Tree</b>	<a href="#">destination-port</a>
<b>Configurable</b>	True

**operator keyword**

<b>Description</b>	Comparison operator
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	eq = equal ge = greater than or equal to le = less than or equal to
<b>Context</b>	<a href="#">acl</a> <a href="#">cpm-filter</a> <a href="#">ipv6-filter</a> <a href="#">entry</a> <a href="#">sequence-id</a> <i>number</i> <a href="#">match</a> <a href="#">destination-port</a> <a href="#">operator</a> <i>keyword</i>
<b>Tree</b>	<a href="#">operator</a>
<b>Options</b>	<ul style="list-style-type: none"> <li>le Less than or equal.</li> <li>ge Greater than or equal.</li> <li>eq Equal to.</li> </ul>
<b>Configurable</b>	True

**range**

<b>Description</b>	Container used to specify a contiguous range of TCP/UDP port numbers
<b>Context</b>	<a href="#">acl</a> <a href="#">cpm-filter</a> <a href="#">ipv6-filter</a> <a href="#">entry</a> <a href="#">sequence-id</a> <i>number</i> <a href="#">match</a> <a href="#">destination-port</a> <a href="#">range</a>
<b>Tree</b>	<a href="#">range</a>
<b>Configurable</b>	True

**end (*number* | *keyword*)**

<b>Description</b>	The ending port number to include in the range
<b>Context</b>	<a href="#">acl</a> <a href="#">cpm-filter</a> <a href="#">ipv6-filter</a> <a href="#">entry</a> <a href="#">sequence-id</a> <i>number</i> <a href="#">match</a> <a href="#">destination-port</a> <a href="#">range</a> <a href="#">end</a> ( <i>number</i>   <i>keyword</i> )
<b>Tree</b>	<a href="#">end</a>
<b>Range</b>	0 to 65535
<b>Options</b>	<ul style="list-style-type: none"> <li>acap Application Configuration Access Protocol</li> <li>afp-tcp Apple Filing Protocol over TCP</li> <li>arns A Remote Network Server System</li> <li>asf-rmcp ASF Remote Management and Control Protocol &amp; IPMI Remote Management Protocol</li> </ul>

- 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
  - 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

	<ul style="list-style-type: none"> <li>z3950 ANSI Z39.50</li> </ul>
<b>Configurable</b>	True

### **start (*number* | *keyword*)**

<b>Description</b>	The starting port number to include in the range
<b>Context</b>	<a href="#">acl</a> <a href="#">cpm-filter</a> <a href="#">ipv6-filter</a> <a href="#">entry</a> <a href="#">sequence-id</a> <i>number</i> <a href="#">match</a> <a href="#">destination-port</a> <a href="#">range</a> <a href="#">start</a> ( <i>number</i>   <i>keyword</i> )
<b>Tree</b>	<a href="#">start</a>
<b>Range</b>	0 to 65535
<b>Options</b>	<ul style="list-style-type: none"> <li>acap Application Configuration Access Protocol</li> <li>afp-tcp Apple Filing Protocol over TCP</li> <li>arns A Remote Network Server System</li> <li>asf-rmcp ASF Remote Management and Control Protocol &amp; IPMI Remote Management Protocol</li> <li>ashare AppleShare IP Web Administration</li> <li>atalk-rm AppleTalk Routing Maintenance</li> <li>aurp AppleTalk Update-Based Routing Protocol</li> <li>auth Authentication Service</li> <li>bfd Bidirectional Forwarding Detection Single Hop</li> <li>bfd-echo BFD Echo</li> <li>bftp Background File Transfer Program</li> <li>bgmp Border Gateway Multicast Protocol</li> </ul>

- 
- 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
- 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

### value (*number* | *keyword*)

**Description** A destination port number

**Context** [acl](#) [cpm-filter](#) [ipv6-filter](#) [entry](#) [sequence-id](#) *number* [match](#) [destination-port](#)  
[value](#) (*number* | *keyword*)

**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
- 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

- 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
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NETRJS protocol
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new-rwho, new-who
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SupportSoft Nexus Remote Command
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rmonitor, Remote Monitor
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rsync file synchronization protocol
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- sgmplib  
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Talk
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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

	<ul style="list-style-type: none"> <li>xns-time Xerox Network Systems (XNS) Time Protocol</li> <li>z3950 ANSI Z39.50</li> </ul>
<b>Configurable</b>	True

## icmp6

<b>Description</b>	<p>A packet matches this condition if its ICMPv6 type and code matches one of the specified combinations</p> <p>The rule should also have a condition that the next-header value equals 58 (ICMPv6) in order for this to be interpreted correctly.</p>
<b>Context</b>	<a href="#">acl cpm-filter ipv6-filter entry sequence-id number match icmp6</a>
<b>Tree</b>	<a href="#">icmp6</a>
<b>Configurable</b>	True

## code number

<b>Description</b>	<p>Match if the ICMPv6 code value is any value in the list</p> <p>Requires ICMPv6 type to be specified because codes are type dependent.</p>
<b>Context</b>	<a href="#">acl cpm-filter ipv6-filter entry sequence-id number match icmp6 code number</a>
<b>Tree</b>	<a href="#">code</a>
<b>Configurable</b>	True

## type (number | keyword)

<b>Description</b>	Match a single ICMPv6 type value
<b>Context</b>	<a href="#">acl cpm-filter ipv6-filter entry sequence-id number match icmp6 type (number   keyword)</a>
<b>Tree</b>	<a href="#">type</a>
<b>Range</b>	0 to 255
<b>Options</b>	<ul style="list-style-type: none"> <li>dest-unreachable ICMPv6 Destination Unreachable</li> <li>packet-too-big ICMPv6 Packet Too Big</li> <li>time-exceeded ICMPv6 Time Exceeded</li> </ul>



- 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

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

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

- 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
- 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

## source-ip

**Description** Packet matching criteria based on source IPv6 address

**Context** [acl cpm-filter ipv6-filter entry sequence-id number match source-ip](#)

**Tree** [source-ip](#)

**Configurable** True

## address *string*

**Description** Match a packet if its source IP address logically anded with the inverse of the mask equals this IP address.

<b>Context</b>	<a href="#">acl cpm-filter ipv6-filter entry sequence-id number match source-ip address string</a>
<b>Tree</b>	<a href="#">address</a>
<b>Configurable</b>	True

**mask string**

<b>Description</b>	Match a packet if its source IP address logically anded with the inverse of this mask equals the configured IP address.
<b>Context</b>	<a href="#">acl cpm-filter ipv6-filter entry sequence-id number match source-ip mask string</a>
<b>Tree</b>	<a href="#">mask</a>
<b>Configurable</b>	True

**prefix string**

<b>Description</b>	Match a packet if its source IP address is within the specified IPv6 prefix.
<b>Context</b>	<a href="#">acl cpm-filter ipv6-filter entry sequence-id number match source-ip prefix string</a>
<b>Tree</b>	<a href="#">prefix</a>
<b>Configurable</b>	True

**source-port**

<b>Description</b>	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.
<b>Context</b>	<a href="#">acl cpm-filter ipv6-filter entry sequence-id number match source-port</a>
<b>Tree</b>	<a href="#">source-port</a>
<b>Configurable</b>	True

**operator keyword**

<b>Description</b>	Comparison operator eq = equal ge = greater than or equal to le = less than or equal to
<b>Context</b>	<a href="#">acl cpm-filter ipv6-filter entry sequence-id number match source-port operator keyword</a>

<b>Tree</b>	<a href="#">operator</a>
<b>Options</b>	<ul style="list-style-type: none"> <li>• <code>le</code> Less than or equal.</li> <li>• <code>ge</code> Greater than or equal.</li> <li>• <code>eq</code> Equal to.</li> </ul>
<b>Configurable</b>	True

## range

<b>Description</b>	Container used to specify a contiguous range of TCP/UDP port numbers
<b>Context</b>	<a href="#">acl</a> <a href="#">cpm-filter</a> <a href="#">ipv6-filter</a> <a href="#">entry</a> <a href="#">sequence-id</a> <i>number</i> <a href="#">match</a> <a href="#">source-port</a> <a href="#">range</a>
<b>Tree</b>	<a href="#">range</a>
<b>Configurable</b>	True

## end (*number* | *keyword*)

<b>Description</b>	The ending port number to include in the range
<b>Context</b>	<a href="#">acl</a> <a href="#">cpm-filter</a> <a href="#">ipv6-filter</a> <a href="#">entry</a> <a href="#">sequence-id</a> <i>number</i> <a href="#">match</a> <a href="#">source-port</a> <a href="#">range</a> <a href="#">end</a> ( <i>number</i>   <i>keyword</i> )
<b>Tree</b>	<a href="#">end</a>
<b>Range</b>	0 to 65535
<b>Options</b>	<ul style="list-style-type: none"> <li>• <code>acap</code> Application Configuration Access Protocol</li> <li>• <code>afp-tcp</code> Apple Filing Protocol over TCP</li> <li>• <code>arns</code> A Remote Network Server System</li> <li>• <code>asf-rmcp</code> ASF Remote Management and Control Protocol &amp; IPMI Remote Management Protocol</li> <li>• <code>ashare</code> AppleShare IP Web Administration</li> <li>• <code>atalk-rm</code> AppleTalk Routing Maintenance</li> </ul>

- 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
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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
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Echo Protocol
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Extensible Provisioning Protocol
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Efficient Short Remote Operations (ESRO)
  - exec  
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Finger protocol
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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
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FileMaker Web Sharing (HTTP Alternate)
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IPSec NAT Traversal
- iscsi  
iSCSI
- iso-tsap  
ISO Transport Service Access Point (TSAP) Class 0 protocol
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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  
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)
- xns-mail  
Xerox Network Systems (XNS) Mail
- xns-time  
Xerox Network Systems (XNS) Time Protocol
- z3950  
ANSI Z39.50

**Configurable**

True

**start (*number* | *keyword*)**

<b>Description</b>	The starting port number to include in the range
<b>Context</b>	<a href="#">acl</a> <a href="#">cpm-filter</a> <a href="#">ipv6-filter</a> <a href="#">entry</a> <a href="#">sequence-id</a> <i>number</i> <a href="#">match</a> <a href="#">source-port</a> <a href="#">range</a> <a href="#">start</a> ( <i>number</i>   <i>keyword</i> )
<b>Tree</b>	<a href="#">start</a>
<b>Range</b>	0 to 65535
<b>Options</b>	<ul style="list-style-type: none"> <li>• <a href="#">acap</a> Application Configuration Access Protocol</li> <li>• <a href="#">afp-tcp</a> Apple Filing Protocol over TCP</li> <li>• <a href="#">arns</a> A Remote Network Server System</li> <li>• <a href="#">asf-rmcp</a> ASF Remote Management and Control Protocol &amp; IPMI Remote Management Protocol</li> <li>• <a href="#">ashare</a> AppleShare IP Web Administration</li> <li>• <a href="#">atalk-rm</a> AppleTalk Routing Maintenance</li> <li>• <a href="#">aurp</a> AppleTalk Update-Based Routing Protocol</li> <li>• <a href="#">auth</a> Authentication Service</li> <li>• <a href="#">bfd</a> Bidirectional Forwarding Detection Single Hop</li> <li>• <a href="#">bfd-echo</a> BFD Echo</li> <li>• <a href="#">bftp</a> Background File Transfer Program</li> <li>• <a href="#">bgmp</a> Border Gateway Multicast Protocol</li> <li>• <a href="#">bgp</a> Border Gateway Protocol</li> <li>• <a href="#">bootpc</a> Bootstrap Protocol (BOOTP) Client and DHCP Client</li> <li>• <a href="#">bootps</a> Bootstrap Protocol (BOOTP) Server and DHCP Server</li> </ul>

- 
- ccs0-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  
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NETRJS protocol
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NETRJS protocol
- netrjs-3  
NETRJS protocol
- netrjs-4  
NETRJS protocol
- netbios-data  
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- netbios-ns  
NetBIOS Name Service
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Netnews
- netwall  
netwall, for Emergency Broadcasts
- new-rwho  
new-rwho, new-who

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Remote Job Entry
- rlp  
Resource Location Protocol
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RLZ DBase
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IBM RMC (Remote monitoring and Control) protocol
- rmonitor  
rmonitor, Remote Monitor
- rpc2portmap  
Rpc2portmap
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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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Structured Query Language (SQL) Service
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Secure Shell Protocol
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Email message submission (SMTP)
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Open Network Computing Remote Procedure Call (ONC RPC), also Sun RPC
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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

### **value (*number* | *keyword*)**

**Description** A source port number

**Context** [acl](#) [cpm-filter](#) [ipv6-filter](#) [entry](#) [sequence-id](#) *number* [match](#) [source-port](#) [value](#)  
(*number* | *keyword*)

**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
- 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
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File Transfer Protocol control
- ftp-data  
File Transfer Protocol data
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FTPS (FTP over SSL/TLS) data
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- 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)
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http-mgmt
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PIM Auto-RP

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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
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SNMP Traps
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Simple Network Paging Protocol (SNPP)
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Simple Mail Transfer Protocol (SMTP)
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Structured Query Language (SQL) Services
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Structured Query Language (SQL) Service
- ssh  
Secure Shell Protocol



- submission  
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Service Location Protocol (SLP)
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Active Users (systat service)
- tacacs  
TACACS Login Host protocol
- talk  
Talk
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TCP Port Service Multiplexer (TCPMUX)
- tcpnethaspsrv  
tcpnethaspsrv, Aladdin Knowledge Systems Hasp services
- tftp  
Trivial File Transfer Protocol (TFTP)
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Uninterruptible power supply (UPS)
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Xerox Network Systems (XNS) Mail
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Xerox Network Systems (XNS) Time Protocol
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ANSI Z39.50

<b>Configurable</b>	True
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### tcp-flags *string*

<b>Description</b>	A logical expression using the &,   and ! logical operators and the TCP flag names: rst, syn and ack.
<b>Context</b>	<a href="#">acl</a> <a href="#">cpm-filter</a> <a href="#">ipv6-filter</a> <a href="#">entry</a> <a href="#">sequence-id</a> <a href="#">number</a> <a href="#">match</a> <a href="#">tcp-flags</a> <a href="#">string</a>
<b>Tree</b>	<a href="#">tcp-flags</a>
<b>Configurable</b>	True

### statistics

<b>Description</b>	Statistics container for packets matching the CPM-filter entry
<b>Context</b>	<a href="#">acl</a> <a href="#">cpm-filter</a> <a href="#">ipv6-filter</a> <a href="#">entry</a> <a href="#">sequence-id</a> <a href="#">number</a> <a href="#">statistics</a>
<b>Tree</b>	<a href="#">statistics</a>
<b>Configurable</b>	False

### distributed-policer



**Note:**

This command is available for the following platforms:

- 7220 IXR-D2
- 7250 IXR-10
- 7220 IXR-D3L
- 7220 IXR-D2L
- 7220 IXR-D3
- 7250 IXR-6
- 7220 IXR-D1

<b>Description</b>	Distributed policer stats for traffic matching the entry.
<b>Context</b>	<a href="#">acl</a> <a href="#">cpm-filter</a> <a href="#">ipv6-filter</a> <a href="#">entry</a> <a href="#">sequence-id</a> <a href="#">number</a> <a href="#">statistics</a> <a href="#">distributed-policer</a>
<b>Tree</b>	<a href="#">distributed-policer</a>
<b>Configurable</b>	False

## conforming-octets *number*



### Note:

This command is available for the following platforms:

- 7220 IXR-D2
- 7250 IXR-10
- 7220 IXR-D3L
- 7220 IXR-D2L
- 7220 IXR-D3
- 7250 IXR-6
- 7220 IXR-D1

<b>Description</b>	The number of bytes that were considered conforming by the policer. The byte count includes 18 bytes of Ethernet overhead for every IP packet.
<b>Context</b>	<a href="#">acl</a> <a href="#">cpm-filter</a> <a href="#">ipv6-filter</a> <a href="#">entry</a> <a href="#">sequence-id</a> <i>number</i> <a href="#">statistics</a> <a href="#">distributed-policer</a> <a href="#">conforming-octets</a> <i>number</i>
<b>Tree</b>	<a href="#">conforming-octets</a>
<b>Default</b>	0
<b>Configurable</b>	False

## conforming-packets *number*



### Note:

This command is available for the following platforms:

- 7220 IXR-D2
- 7250 IXR-10
- 7220 IXR-D3L
- 7220 IXR-D2L
- 7220 IXR-D3
- 7250 IXR-6
- 7220 IXR-D1

<b>Description</b>	The number of packets (actually Ethernet frames) that were considered conforming by the policer
<b>Context</b>	<a href="#">acl</a> <a href="#">cpm-filter</a> <a href="#">ipv6-filter</a> <a href="#">entry</a> <a href="#">sequence-id</a> <i>number</i> <a href="#">statistics</a> <a href="#">distributed-policer</a> <a href="#">conforming-packets</a> <i>number</i>
<b>Tree</b>	<a href="#">conforming-packets</a>
<b>Default</b>	0
<b>Configurable</b>	False

**exceeding-octets *number*****Note:**

This command is available for the following platforms:

- 7220 IXR-D2
- 7250 IXR-10
- 7220 IXR-D3L
- 7220 IXR-D2L
- 7220 IXR-D3
- 7250 IXR-6
- 7220 IXR-D1

<b>Description</b>	The number of bytes that were considered exceeding by the policer. The byte count includes 18 bytes of Ethernet overhead for every IP packet.
<b>Context</b>	<a href="#">acl cpm-filter ipv6-filter entry sequence-id <i>number</i> statistics distributed-policer exceeding-octets <i>number</i></a>
<b>Tree</b>	<a href="#">exceeding-octets</a>
<b>Default</b>	0
<b>Configurable</b>	False

**exceeding-packets *number*****Note:**

This command is available for the following platforms:

- 7220 IXR-D2
- 7250 IXR-10
- 7220 IXR-D3L
- 7220 IXR-D2L
- 7220 IXR-D3
- 7250 IXR-6
- 7220 IXR-D1

<b>Description</b>	The number of packets (actually Ethernet frames) that were considered exceeding by the policer
<b>Context</b>	<a href="#">acl cpm-filter ipv6-filter entry sequence-id <i>number</i> statistics distributed-policer exceeding-packets <i>number</i></a>
<b>Tree</b>	<a href="#">exceeding-packets</a>
<b>Default</b>	0

**Configurable** False

### **last-clear *string***

**Description** Time of the last clear command performed by the user at this level

**Context** [acl](#) [cpm-filter](#) [ipv6-filter](#) [entry](#) [sequence-id](#) [number](#) [statistics](#) [last-clear](#) *string*

**Tree** [last-clear](#)

**String Length** 20 to 32

**Configurable** False

### **last-match *string***

**Description** The elapsed time since a packet last matched the entry, considering all subinterfaces and all linecards.

**Context** [acl](#) [cpm-filter](#) [ipv6-filter](#) [entry](#) [sequence-id](#) [number](#) [statistics](#) [last-match](#) *string*

**Tree** [last-match](#)

**String Length** 20 to 32

**Configurable** False

### **matched-packets *number***

**Description** The number of packets matching the entry since it was programmed or since the last clear, summed across all subinterfaces and all linecards

**Context** [acl](#) [cpm-filter](#) [ipv6-filter](#) [entry](#) [sequence-id](#) [number](#) [statistics](#) [matched-packets](#) *number*

**Tree** [matched-packets](#)

**Default** 0

**Configurable** False

### **system-cpu-policer**

**Description** System CPU policer stats for traffic matching the entry.

**Context** [acl](#) [cpm-filter](#) [ipv6-filter](#) [entry](#) [sequence-id](#) [number](#) [statistics](#) [system-cpu-policer](#)

**Tree** [system-cpu-policer](#)

**Configurable** False

**conforming-octets *number***

<b>Description</b>	The number of bytes that were considered conforming by the policer. The byte count includes 18 bytes of Ethernet overhead for every IP packet.
<b>Context</b>	<a href="#">acl cpm-filter ipv6-filter entry sequence-id number statistics system-cpu-policer conforming-octets number</a>
<b>Tree</b>	<a href="#">conforming-octets</a>
<b>Default</b>	0
<b>Configurable</b>	False

**conforming-packets *number***

<b>Description</b>	The number of packets (actually Ethernet frames) that were considered conforming by the policer
<b>Context</b>	<a href="#">acl cpm-filter ipv6-filter entry sequence-id number statistics system-cpu-policer conforming-packets number</a>
<b>Tree</b>	<a href="#">conforming-packets</a>
<b>Default</b>	0
<b>Configurable</b>	False

**exceeding-octets *number***

<b>Description</b>	The number of bytes that were considered exceeding by the policer. The byte count includes 18 bytes of Ethernet overhead for every IP packet.
<b>Context</b>	<a href="#">acl cpm-filter ipv6-filter entry sequence-id number statistics system-cpu-policer exceeding-octets number</a>
<b>Tree</b>	<a href="#">exceeding-octets</a>
<b>Default</b>	0
<b>Configurable</b>	False

**exceeding-packets *number***

<b>Description</b>	The number of packets (actually Ethernet frames) that were considered exceeding by the policer
<b>Context</b>	<a href="#">acl cpm-filter ipv6-filter entry sequence-id number statistics system-cpu-policer exceeding-packets number</a>
<b>Tree</b>	<a href="#">exceeding-packets</a>
<b>Default</b>	0
<b>Configurable</b>	False

**tcam-entries *number***

<b>Description</b>	The number of TCAM entries required to implement a single instance of this filter rule.
<b>Context</b>	<a href="#">acl cpm-filter ipv6-filter entry sequence-id</a> <i>number</i> <a href="#">tcam-entries</a> <i>number</i>
<b>Tree</b>	<a href="#">tcam-entries</a>
<b>Configurable</b>	False

**last-clear *string***

<b>Description</b>	Time of the last clear command performed by the user at this level
<b>Context</b>	<a href="#">acl cpm-filter ipv6-filter last-clear</a> <i>string</i>
<b>Tree</b>	<a href="#">last-clear</a>
<b>String Length</b>	20 to 32
<b>Configurable</b>	False

**statistics-per-entry *boolean***

<b>Description</b>	Collect the following statistics per entry: the number of packets matching each entry, and the elapsed time since a packet last matched each entry
<b>Context</b>	<a href="#">acl cpm-filter ipv6-filter statistics-per-entry</a> <i>boolean</i>
<b>Tree</b>	<a href="#">statistics-per-entry</a>
<b>Configurable</b>	True

**ipv4-filter *name string***

<b>Description</b>	List of IPv4 filter policies
<b>Context</b>	<a href="#">acl ipv4-filter name</a> <i>string</i>
<b>Tree</b>	<a href="#">ipv4-filter</a>
<b>Configurable</b>	True

**name *string***

<b>Description</b>	Name of the IPv4 filter policy.
<b>Context</b>	<a href="#">acl ipv4-filter name</a> <i>string</i>
<b>String Length</b>	1 to 255
<b>Configurable</b>	True

**description *string***

<b>Description</b>	Description string for the IPv4 filter policy
<b>Context</b>	<a href="#">acl ipv4-filter name</a> <i>string</i> <a href="#">description</a> <i>string</i>
<b>Tree</b>	<a href="#">description</a>
<b>String Length</b>	1 to 255
<b>Configurable</b>	True

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

<b>Description</b>	List of filter rules.
<b>Context</b>	<a href="#">acl ipv4-filter name</a> <i>string</i> <a href="#">entry sequence-id</a> <i>number</i>
<b>Tree</b>	<a href="#">entry</a>
<b>Configurable</b>	True

**sequence-id *number***

<b>Description</b>	A number to indicate the relative evaluation order of the different entries; lower numbered entries are evaluated before higher numbered entries
<b>Context</b>	<a href="#">acl ipv4-filter name</a> <i>string</i> <a href="#">entry sequence-id</a> <i>number</i>
<b>Range</b>	1 to 65535
<b>Configurable</b>	True

**action**

<b>Description</b>	Container for the actions to be applied to packets matching the filter entry.
<b>Context</b>	<a href="#">acl ipv4-filter name</a> <i>string</i> <a href="#">entry sequence-id</a> <i>number</i> <a href="#">action</a>
<b>Tree</b>	<a href="#">action</a>
<b>Configurable</b>	True

**accept**

<b>Description</b>	Accept matching packets and forward them towards their normal destination
<b>Context</b>	<a href="#">acl ipv4-filter name</a> <i>string</i> <a href="#">entry sequence-id</a> <i>number</i> <a href="#">action</a> <a href="#">accept</a>
<b>Tree</b>	<a href="#">accept</a>
<b>Configurable</b>	True



## log *boolean*



### Note:

This command is available for the following platforms:

- 7250 IXR-6
- 7250 IXR-10

<b>Description</b>	When this is true, a log is created for each packet matching the entry The log entry contains the following information: [ <i>'timestamp'</i> , <i>'filter name'</i> , <i>'filter entry sequence-id'</i> , <i>'incoming interface'</i> , <i>'action: accept'</i> , <i>'IP protocol'</i> , <i>'packet-length'</i> , <i>'source-IP'</i> , <i>'source-port (TCP/UDP packets)'</i> , <i>'dest-IP'</i> , <i>'dest-port (TCP/UDP packets)'</i> , <i>'icmp-type (ICMP packets)'</i> , <i>'icmp-code (ICMP packets)'</i> ]
<b>Context</b>	<a href="#">acl ipv4-filter name string entry sequence-id number action accept log boolean</a>
<b>Tree</b>	<a href="#">log</a>
<b>Default</b>	false
<b>Configurable</b>	True

## drop

<b>Description</b>	Drop matching packets without sending any ICMP messages back to the source
<b>Context</b>	<a href="#">acl ipv4-filter name string entry sequence-id number action drop</a>
<b>Tree</b>	<a href="#">drop</a>
<b>Configurable</b>	True

## log *boolean*

<b>Description</b>	When this is true, a log is created for each packet matching the entry The log entry contains the following information: [ <i>'timestamp'</i> , <i>'filter name'</i> , <i>'filter entry sequence-id'</i> , <i>'incoming interface'</i> , <i>'action: drop'</i> , <i>'IP protocol'</i> , <i>'packet-length'</i> , <i>'source-IP'</i> , <i>'source-port (TCP/UDP packets)'</i> , <i>'dest-IP'</i> , <i>'dest-port (TCP/UDP packets)'</i> , <i>'icmp-type (ICMP packets)'</i> , <i>'icmp-code (ICMP packets)'</i> ]  This action combination is not supported on Trident3 platforms when the filter is applied as an output (egress traffic) filter; no logs will be generated.
<b>Context</b>	<a href="#">acl ipv4-filter name string entry sequence-id number action drop log boolean</a>
<b>Tree</b>	<a href="#">log</a>

<b>Default</b>	false
<b>Configurable</b>	True

### **description *string***

<b>Description</b>	Description string for the filter entry
<b>Context</b>	<a href="#">acl ipv4-filter name</a> <i>string</i> <a href="#">entry</a> <a href="#">sequence-id</a> <i>number</i> <a href="#">description</a> <i>string</i>
<b>Tree</b>	<a href="#">description</a>
<b>String Length</b>	1 to 255
<b>Configurable</b>	True

### **match**

<b>Description</b>	Container for the conditions that determine whether a packet matches this entry
<b>Context</b>	<a href="#">acl ipv4-filter name</a> <i>string</i> <a href="#">entry</a> <a href="#">sequence-id</a> <i>number</i> <a href="#">match</a>
<b>Tree</b>	<a href="#">match</a>
<b>Configurable</b>	True

### **destination-ip**

<b>Description</b>	Packet matching criteria based on destination IPv4 address
<b>Context</b>	<a href="#">acl ipv4-filter name</a> <i>string</i> <a href="#">entry</a> <a href="#">sequence-id</a> <i>number</i> <a href="#">match</a> <a href="#">destination-ip</a>
<b>Tree</b>	<a href="#">destination-ip</a>
<b>Configurable</b>	True

### **address *string***

<b>Description</b>	Match a packet if its destination IP address logically anded with the inverse of the mask equals this IP address.
<b>Context</b>	<a href="#">acl ipv4-filter name</a> <i>string</i> <a href="#">entry</a> <a href="#">sequence-id</a> <i>number</i> <a href="#">match</a> <a href="#">destination-ip</a> <a href="#">address</a> <i>string</i>
<b>Tree</b>	<a href="#">address</a>
<b>Configurable</b>	True

**mask *string***

<b>Description</b>	Match a packet if its destination IP address logically anded with the inverse of this mask equals the configured IP address.
<b>Context</b>	<a href="#">acl ipv4-filter name <i>string</i> entry sequence-id number match destination-ip mask <i>string</i></a>
<b>Tree</b>	<a href="#">mask</a>
<b>Configurable</b>	True

**prefix *string***

<b>Description</b>	Match a packet if its destination IP address is within the specified IPv4 prefix.
<b>Context</b>	<a href="#">acl ipv4-filter name <i>string</i> entry sequence-id number match destination-ip prefix <i>string</i></a>
<b>Tree</b>	<a href="#">prefix</a>
<b>Configurable</b>	True

**destination-port**

<b>Description</b>	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.
<b>Context</b>	<a href="#">acl ipv4-filter name <i>string</i> entry sequence-id number match destination-port</a>
<b>Tree</b>	<a href="#">destination-port</a>
<b>Configurable</b>	True

**operator *keyword***

<b>Description</b>	Comparison operator  eq = equal ge = greater than or equal to le = less than or equal to
<b>Context</b>	<a href="#">acl ipv4-filter name <i>string</i> entry sequence-id number match destination-port operator <i>keyword</i></a>
<b>Tree</b>	<a href="#">operator</a>
<b>Options</b>	<ul style="list-style-type: none"> <li>• le Less than or equal.</li> <li>• ge Greater than or equal.</li> </ul>

	<ul style="list-style-type: none"> <li>• eq Equal to.</li> </ul>
<b>Configurable</b>	True

## range

<b>Description</b>	Container used to specify a contiguous range of TCP/UDP port numbers
<b>Context</b>	<a href="#">acl ipv4-filter name</a> <i>string</i> <a href="#">entry sequence-id</a> <i>number</i> <a href="#">match destination-port range</a>
<b>Tree</b>	<a href="#">range</a>
<b>Configurable</b>	True

## end (*number* | *keyword*)

<b>Description</b>	The ending port number to include in the range
<b>Context</b>	<a href="#">acl ipv4-filter name</a> <i>string</i> <a href="#">entry sequence-id</a> <i>number</i> <a href="#">match destination-port range end</a> ( <i>number</i>   <i>keyword</i> )
<b>Tree</b>	<a href="#">end</a>
<b>Range</b>	0 to 65535
<b>Options</b>	<ul style="list-style-type: none"> <li>• acap Application Configuration Access Protocol</li> <li>• afp-tcp Apple Filing Protocol over TCP</li> <li>• arns A Remote Network Server System</li> <li>• asf-rmcp ASF Remote Management and Control Protocol &amp; IPMI Remote Management Protocol</li> <li>• ashare AppleShare IP Web Administration</li> <li>• atalk-rm AppleTalk Routing Maintenance</li> <li>• aurp AppleTalk Update-Based Routing Protocol</li> <li>• auth Authentication Service</li> <li>• bfd Bidirectional Forwarding Detection Single Hop</li> </ul>

- 
- bfd-echo  
  BFDD 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
- 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

### **start** (*number* | *keyword*)

<b>Description</b>	The starting port number to include in the range
<b>Context</b>	<a href="#">acl</a> <a href="#">ipv4-filter name</a> <a href="#">string</a> <a href="#">entry</a> <a href="#">sequence-id</a> <a href="#">number</a> <a href="#">match</a> <a href="#">destination-port</a> <a href="#">range</a> <a href="#">start</a> ( <i>number</i>   <i>keyword</i> )
<b>Tree</b>	<a href="#">start</a>
<b>Range</b>	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
  - 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
  - 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

### value (*number* | *keyword*)

**Description** A destination port number

**Context** [acl ipv4-filter name string entry sequence-id number match destination-port value \(number | keyword\)](#)

**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
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Authentication Service

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Border Gateway Protocol
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Bootstrap Protocol (BOOTP) Client and DHCP Client
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  - 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
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Daytime Protocol
  - dhcpv6-client  
DHCPv6 Client
  - dhcpv6-server  
DHCPv6 Server
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Display Support Protocol
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Efficient Short Remote Operations (ESRO)
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Finger protocol
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FTPS (FTP over SSL/TLS) control
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  - 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)
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Linux-HA high-availability heartbeat
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- hp-alarm-mgr  
HP data alarm manager
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Hypertext Transfer Protocol
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FileMaker Web Sharing (HTTP Alternate)
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http-mgmt
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Remote procedure call over Hypertext Transfer Protocol
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Kerberos login
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Mac OS X Server administration

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Mapping of Airline Traffic over Internet Protocol (MATIP) type B
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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  
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- msdp  
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MS Exchange Routing
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Message Send Protocol
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Bidirectional Forwarding Detection Multi-Hop
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- ncp  
NetWare Core Protocol
- netrjs-1  
NETRJS protocol
- netrjs-2  
NETRJS protocol
- netrjs-3  
NETRJS protocol

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- 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  
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  - olsr  
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  - openvpn  
OpenVPN
  - pim-auto-rp  
PIM Auto-RP
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PKIX Time Stamp Protocol (TSP)
  - pop2  
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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

### **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.

<b>Context</b>	<a href="#">acl ipv4-filter name string entry sequence-id number match first-fragment boolean</a>
<b>Tree</b>	<a href="#">first-fragment</a>
<b>Configurable</b>	True

### **fragment boolean**

<b>Description</b>	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.
<b>Context</b>	<a href="#">acl ipv4-filter name string entry sequence-id number match fragment boolean</a>
<b>Tree</b>	<a href="#">fragment</a>
<b>Configurable</b>	True

### **icmp**

<b>Description</b>	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.
<b>Context</b>	<a href="#">acl ipv4-filter name string entry sequence-id number match icmp</a>
<b>Tree</b>	<a href="#">icmp</a>
<b>Configurable</b>	True

### **code number**

<b>Description</b>	Match if the ICMP code value is any value in the list  Requires ICMP type to be specified because codes are type dependent.
<b>Context</b>	<a href="#">acl ipv4-filter name string entry sequence-id number match icmp code number</a>
<b>Tree</b>	<a href="#">code</a>
<b>Configurable</b>	True

**type (*number* | *keyword*)**

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

**protocol (*number* | *keyword*)**

<b>Description</b>	An IPv4 packet matches this condition if its IP protocol type field matches the specified value
<b>Context</b>	<a href="#">acl ipv4-filter name</a> <i>string</i> <a href="#">entry sequence-id</a> <i>number</i> <a href="#">match protocol</a> ( <i>number</i>   <i>keyword</i> )
<b>Tree</b>	<a href="#">protocol</a>

---

<b>Range</b>	0 to 255
<b>Options</b>	<ul style="list-style-type: none"><li>• ipv6-hop IPv6 hop-by-hop option</li><li>• icmp Internet Control Message Protocol</li><li>• igmp Internet Group Management Protocol</li><li>• ggp Gateway-to-Gateway Protocol</li><li>• ipv4 IPv4 encapsulation</li><li>• st Stream Protocol</li><li>• tcp Transmission Control Protocol</li><li>• egp Exterior Gateway Protocol</li><li>• igp Interior Gateway Protocol</li><li>• udp User Datagram Protocol</li><li>• ipv6 IPv6 encapsulation</li><li>• idrp Inter-Domain Routing Protocol</li><li>• rsvp Resource Reservation Protocol</li><li>• gre Generic Routing Encapsulation</li><li>• esp IPSec Encapsulating Security Payload</li><li>• ah IPSec Authentication Header</li><li>• icmp6 IPSec Authentication Header</li><li>• no-next-hdr No Next Header for IPv6</li></ul>

- ipv6-dest-opts  
Destination Options for IPv6
- eigrp  
Cisco EIGRP
- 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

### source-ip

**Description** Packet matching criteria based on source IPv4 address

**Context** [acl ipv4-filter name string entry sequence-id number match source-ip](#)

**Tree** [source-ip](#)

**Configurable** True

### 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 ipv4-filter name string entry sequence-id number match source-ip address string](#)

**Tree** [address](#)

**Configurable** True

### mask string

**Description** Match a packet if its source IP address logically anded with the inverse of this mask equals the configured IP address.

<b>Context</b>	<a href="#">acl ipv4-filter name</a> <i>string</i> <a href="#">entry sequence-id</a> <i>number</i> <a href="#">match source-ip</a> <i>mask</i> <i>string</i>
<b>Tree</b>	<a href="#">mask</a>
<b>Configurable</b>	True

**prefix *string***

<b>Description</b>	Match a packet if its source IP address is within the specified IPv4 prefix.
<b>Context</b>	<a href="#">acl ipv4-filter name</a> <i>string</i> <a href="#">entry sequence-id</a> <i>number</i> <a href="#">match source-ip</a> <i>prefix</i> <i>string</i>
<b>Tree</b>	<a href="#">prefix</a>
<b>Configurable</b>	True

**source-port**

<b>Description</b>	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.
<b>Context</b>	<a href="#">acl ipv4-filter name</a> <i>string</i> <a href="#">entry sequence-id</a> <i>number</i> <a href="#">match source-port</a>
<b>Tree</b>	<a href="#">source-port</a>
<b>Configurable</b>	True

**operator *keyword***

<b>Description</b>	Comparison operator eq = equal ge = greater than or equal to le = less than or equal to
<b>Context</b>	<a href="#">acl ipv4-filter name</a> <i>string</i> <a href="#">entry sequence-id</a> <i>number</i> <a href="#">match source-port</a> <a href="#">operator</a> <i>keyword</i>
<b>Tree</b>	<a href="#">operator</a>
<b>Options</b>	<ul style="list-style-type: none"> <li>• le Less than or equal.</li> <li>• ge Greater than or equal.</li> <li>• eq Equal to.</li> </ul>
<b>Configurable</b>	True

**range**

<b>Description</b>	Container used to specify a contiguous range of TCP/UDP port numbers
<b>Context</b>	<a href="#">acl ipv4-filter name</a> <i>string</i> <a href="#">entry sequence-id</a> <i>number</i> <a href="#">match source-port</a> <a href="#">range</a>
<b>Tree</b>	<a href="#">range</a>
<b>Configurable</b>	True

**end (*number* | *keyword*)**

<b>Description</b>	The ending port number to include in the range
<b>Context</b>	<a href="#">acl ipv4-filter name</a> <i>string</i> <a href="#">entry sequence-id</a> <i>number</i> <a href="#">match source-port</a> <a href="#">range end</a> ( <i>number</i>   <i>keyword</i> )
<b>Tree</b>	<a href="#">end</a>
<b>Range</b>	0 to 65535
<b>Options</b>	<ul style="list-style-type: none"> <li>• <code>acap</code> Application Configuration Access Protocol</li> <li>• <code>afp-tcp</code> Apple Filing Protocol over TCP</li> <li>• <code>arns</code> A Remote Network Server System</li> <li>• <code>asf-rmcp</code> ASF Remote Management and Control Protocol &amp; IPMI Remote Management Protocol</li> <li>• <code>ashare</code> AppleShare IP Web Administration</li> <li>• <code>atalk-rm</code> AppleTalk Routing Maintenance</li> <li>• <code>aurp</code> AppleTalk Update-Based Routing Protocol</li> <li>• <code>auth</code> Authentication Service</li> <li>• <code>bfd</code> Bidirectional Forwarding Detection Single Hop</li> <li>• <code>bfd-echo</code> BFD Echo</li> </ul>

- 
- 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  
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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
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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
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FTPS (FTP over SSL/TLS) control
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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  
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  
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- ldp  
Label Distribution Protocol
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Link Management Protocol (LMP)
- login  
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Line Printer Daemon
- lsp-ping  
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- matip-a  
Mapping of Airline Traffic over Internet Protocol (MATIP) type A
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- 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)
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- pop3s  
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- pptp  
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- ptp-event  
Precision Time Protocol (PTP) event messages
  - ptp-general  
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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

### **start** (*number* | *keyword*)

<b>Description</b>	The starting port number to include in the range
<b>Context</b>	<a href="#">acl ipv4-filter name</a> <i>string</i> <a href="#">entry sequence-id</a> <i>number</i> <a href="#">match source-port range start</a> ( <i>number</i>   <i>keyword</i> )
<b>Tree</b>	<a href="#">start</a>
<b>Range</b>	0 to 65535
<b>Options</b>	<ul style="list-style-type: none"> <li>• acap Application Configuration Access Protocol</li> </ul>

- 
- 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
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Background File Transfer Program
  - bgmp  
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Remotefs, RFS Server

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

**Configurable** True

### value (*number* | *keyword*)

<b>Description</b>	A source port number
<b>Context</b>	<a href="#">acl</a> <a href="#">ipv4-filter name</a> <a href="#">string</a> <a href="#">entry</a> <a href="#">sequence-id</a> <a href="#">number</a> <a href="#">match</a> <a href="#">source-port</a> <a href="#">value</a> ( <i>number</i>   <i>keyword</i> )
<b>Tree</b>	<a href="#">value</a>
<b>Range</b>	0 to 65535
<b>Options</b>	<ul style="list-style-type: none"> <li>• acap Application Configuration Access Protocol</li> <li>• afp-tcp Apple Filing Protocol over TCP</li> <li>• arns A Remote Network Server System</li> <li>• asf-rmcp ASF Remote Management and Control Protocol &amp; IPMI Remote Management Protocol</li> <li>• ashare AppleShare IP Web Administration</li> <li>• atalk-rm AppleTalk Routing Maintenance</li> <li>• aurp AppleTalk Update-Based Routing Protocol</li> <li>• auth Authentication Service</li> <li>• bfd Bidirectional Forwarding Detection Single Hop</li> </ul>

- 
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  BFDD Echo
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Monitor
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RLZ DBase
- rmc  
IBM RMC (Remote monitoring and Control) protocol
- rmonitor  
rmonitor, Remote Monitor
- rpc2portmap  
Rpc2portmap



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

**Configurable** True

### **tcp-flags *string***

**Description** A logical expression using the &, | and ! logical operators and the TCP flag names: rst, syn and ack.

**Context** [acl ipv4-filter name \*string\* entry sequence-id number match tcp-flags \*string\*](#)

**Tree** [tcp-flags](#)

**Configurable** True

**statistics**

<b>Description</b>	Container for per-entry statistics
<b>Context</b>	<a href="#">acl ipv4-filter name</a> <i>string</i> <a href="#">entry</a> <a href="#">sequence-id</a> <i>number</i> <a href="#">statistics</a>
<b>Tree</b>	<a href="#">statistics</a>
<b>Configurable</b>	False

**aggregate**

<b>Description</b>	Container for aggregated per-entry statistics. Not present if the entry is part of a filter with statistics-per-entry set to false.
<b>Context</b>	<a href="#">acl ipv4-filter name</a> <i>string</i> <a href="#">entry</a> <a href="#">sequence-id</a> <i>number</i> <a href="#">statistics</a> <a href="#">aggregate</a>
<b>Tree</b>	<a href="#">aggregate</a>
<b>Configurable</b>	False

**in-last-match *string***

<b>Description</b>	The elapsed time since an ingress packet last matched the entry, considering the mgmt0 subinterface and all subinterfaces of all linecard ports that use the ACL as an input ACL
<b>Context</b>	<a href="#">acl ipv4-filter name</a> <i>string</i> <a href="#">entry</a> <a href="#">sequence-id</a> <i>number</i> <a href="#">statistics</a> <a href="#">aggregate</a> <a href="#">in-last-match</a> <i>string</i>
<b>Tree</b>	<a href="#">in-last-match</a>
<b>String Length</b>	20 to 32
<b>Configurable</b>	False

**in-matched-packets *number***

<b>Description</b>	The number of ingress 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
<b>Context</b>	<a href="#">acl ipv4-filter name</a> <i>string</i> <a href="#">entry</a> <a href="#">sequence-id</a> <i>number</i> <a href="#">statistics</a> <a href="#">aggregate</a> <a href="#">in-matched-packets</a> <i>number</i>
<b>Tree</b>	<a href="#">in-matched-packets</a>
<b>Default</b>	0
<b>Configurable</b>	False

**out-last-match *string***

<b>Description</b>	The elapsed time since an egress packet last matched the entry, considering the mgmt0 subinterface and all subinterfaces of all linecard ports that use the ACL as an output ACL
<b>Context</b>	<a href="#">acl ipv4-filter name</a> <i>string</i> <a href="#">entry sequence-id</a> <i>number</i> <a href="#">statistics aggregate out-last-match</a> <i>string</i>
<b>Tree</b>	<a href="#">out-last-match</a>
<b>String Length</b>	20 to 32
<b>Configurable</b>	False

**out-matched-packets *number***

<b>Description</b>	The number of egress 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 output ACL
<b>Context</b>	<a href="#">acl ipv4-filter name</a> <i>string</i> <a href="#">entry sequence-id</a> <i>number</i> <a href="#">statistics aggregate out-matched-packets</a> <i>number</i>
<b>Tree</b>	<a href="#">out-matched-packets</a>
<b>Default</b>	0
<b>Configurable</b>	False

**last-clear *string***

<b>Description</b>	Time of the last clear command performed by the user at this level or a higher level
<b>Context</b>	<a href="#">acl ipv4-filter name</a> <i>string</i> <a href="#">entry sequence-id</a> <i>number</i> <a href="#">statistics last-clear</a> <i>string</i>
<b>Tree</b>	<a href="#">last-clear</a>
<b>String Length</b>	20 to 32
<b>Configurable</b>	False

**per-interface**

<b>Description</b>	Container for per-entry statistics on a per interface basis. Not present if the entry is part of a filter with statistics-per-entry set to false.
<b>Context</b>	<a href="#">acl ipv4-filter name</a> <i>string</i> <a href="#">entry sequence-id</a> <i>number</i> <a href="#">statistics per-interface</a>
<b>Tree</b>	<a href="#">per-interface</a>
<b>Configurable</b>	False

**subinterface *name string***

<b>Description</b>	<p>If subinterface-specific=disabled then this list is empty.</p> <p>If subinterface-specific=input-only then this is the list of subinterfaces that apply the ACL as an input ACL</p> <p>If subinterface-specific=output-only then this is the list of subinterfaces that apply the ACL as an output ACL.</p> <p>If subinterface-specific=input-and-output then this is the list of subinterfaces that apply the ACL as an input ACL or an output ACL.</p>
<b>Context</b>	<a href="#">acl ipv4-filter name <i>string</i> entry sequence-id <i>number</i> statistics per-interface subinterface name <i>string</i></a>
<b>Tree</b>	<a href="#">subinterface</a>
<b>Configurable</b>	False

**name *string***

<b>Description</b>	Reference to a subinterface.
<b>Context</b>	<a href="#">acl ipv4-filter name <i>string</i> entry sequence-id <i>number</i> statistics per-interface subinterface name <i>string</i></a>
<b>Configurable</b>	False

**in-last-match *string***

<b>Description</b>	The elapsed time since an ingress packet last matched the entry on this specific subinterface. Updated only if subinterface-specific is set to input-only or input-and-output
<b>Context</b>	<a href="#">acl ipv4-filter name <i>string</i> entry sequence-id <i>number</i> statistics per-interface subinterface name <i>string</i> in-last-match <i>string</i></a>
<b>Tree</b>	<a href="#">in-last-match</a>
<b>String Length</b>	20 to 32
<b>Configurable</b>	False

**in-matched-packets *number***

<b>Description</b>	The number of ingress packets matching the entry on this specific subinterface. Incremented only if subinterface-specific is set to input-only or input-and-output
<b>Context</b>	<a href="#">acl ipv4-filter name <i>string</i> entry sequence-id <i>number</i> statistics per-interface subinterface name <i>string</i> in-matched-packets <i>number</i></a>

<b>Tree</b>	<a href="#">in-matched-packets</a>
<b>Default</b>	0
<b>Configurable</b>	False

### **last-clear *string***

<b>Description</b>	Time of the last clear command performed by the user at this level or a higher level
<b>Context</b>	<a href="#">acl ipv4-filter name <i>string</i> entry sequence-id <i>number</i> statistics per-interface subinterface name <i>string</i> last-clear <i>string</i></a>
<b>Tree</b>	<a href="#">last-clear</a>
<b>String Length</b>	20 to 32
<b>Configurable</b>	False

### **out-last-match *string***

<b>Description</b>	The elapsed time since an egress packet last matched the entry on this specific subinterface. Updated only if subinterface-specific is set to output-only or input-and-output
<b>Context</b>	<a href="#">acl ipv4-filter name <i>string</i> entry sequence-id <i>number</i> statistics per-interface subinterface name <i>string</i> out-last-match <i>string</i></a>
<b>Tree</b>	<a href="#">out-last-match</a>
<b>String Length</b>	20 to 32
<b>Configurable</b>	False

### **out-matched-packets *number***

<b>Description</b>	The number of egress packets matching the entry on this specific subinterface. Incremented only if subinterface-specific is set to output-only or input-and-output
<b>Context</b>	<a href="#">acl ipv4-filter name <i>string</i> entry sequence-id <i>number</i> statistics per-interface subinterface name <i>string</i> out-matched-packets <i>number</i></a>
<b>Tree</b>	<a href="#">out-matched-packets</a>
<b>Default</b>	0
<b>Configurable</b>	False

### **tcam-entries**

<b>Description</b>	Information about the TCAM entries used to implement the ACL entry
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<b>Context</b>	<a href="#">acl ipv4-filter name</a> <i>string</i> <a href="#">entry sequence-id</a> <i>number</i> <a href="#">tcam-entries</a>
<b>Tree</b>	<a href="#">tcam-entries</a>
<b>Configurable</b>	False

### linecard [slot number](#)

<b>Description</b>	List of linecards in the system
<b>Context</b>	<a href="#">acl ipv4-filter name</a> <i>string</i> <a href="#">entry sequence-id</a> <i>number</i> <a href="#">tcam-entries</a> <a href="#">linecard slot number</a>
<b>Tree</b>	<a href="#">linecard</a>
<b>Configurable</b>	False

### slot *number*

<b>Description</b>	Slot identifier
<b>Context</b>	<a href="#">acl ipv4-filter name</a> <i>string</i> <a href="#">entry sequence-id</a> <i>number</i> <a href="#">tcam-entries</a> <a href="#">linecard slot number</a>
<b>Range</b>	1 to 10
<b>Configurable</b>	False

### input-total *number*

<b>Description</b>	<p>The number of TCAM entries required to implement this entry on all subinterfaces of this slot where the filter is applied to ingress traffic.</p> <p>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 slot then input-total=0.</p>
<b>Context</b>	<a href="#">acl ipv4-filter name</a> <i>string</i> <a href="#">entry sequence-id</a> <i>number</i> <a href="#">tcam-entries</a> <a href="#">linecard slot number</a> <a href="#">input-total number</a>
<b>Tree</b>	<a href="#">input-total</a>
<b>Configurable</b>	False

### output-total *number*

<b>Description</b>	The number of TCAM entries required to implement this entry on all subinterfaces of this slot where the filter is applied to egress traffic.
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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 slot then output-total=0.

<b>Context</b>	<a href="#">acl ipv4-filter name string entry sequence-id number tcam-entries linecard slot number output-total number</a>
<b>Tree</b>	<a href="#">output-total</a>
<b>Configurable</b>	False

### single-instance *number*

<b>Description</b>	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 slot. It captures the effect of TCAM entry expansion to deal with port ranges, for example.
<b>Context</b>	<a href="#">acl ipv4-filter name string entry sequence-id number tcam-entries linecard slot number single-instance number</a>
<b>Tree</b>	<a href="#">single-instance</a>
<b>Configurable</b>	False

### last-clear *string*

<b>Description</b>	Time of the last clear command performed by the user at this level
<b>Context</b>	<a href="#">acl ipv4-filter name string last-clear string</a>
<b>Tree</b>	<a href="#">last-clear</a>
<b>String Length</b>	20 to 32
<b>Configurable</b>	False

### statistics

<b>Description</b>	Enter the statistics context
<b>Context</b>	<a href="#">acl ipv4-filter name string statistics</a>
<b>Tree</b>	<a href="#">statistics</a>
<b>Configurable</b>	False



**statistics-per-entry *boolean***

<b>Description</b>	Collect statistics for each entry of the ACL The exact set of statistics depend on the subinterface-specific mode
<b>Context</b>	<a href="#">acl ipv4-filter name</a> <i>string</i> <a href="#">statistics-per-entry</a> <i>boolean</i>
<b>Tree</b>	<a href="#">statistics-per-entry</a>
<b>Configurable</b>	True

**subinterface-specific *keyword***

<b>Description</b>	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
<b>Context</b>	<a href="#">acl ipv4-filter name</a> <i>string</i> <a href="#">subinterface-specific</a> <i>keyword</i>
<b>Tree</b>	<a href="#">subinterface-specific</a>
<b>Default</b>	disabled
<b>Options</b>	<ul style="list-style-type: none"> <li>• disabled</li> <li>• input-only</li> <li>• output-only</li> <li>• input-and-output</li> </ul>
<b>Configurable</b>	True

**ipv6-filter *name string***

<b>Description</b>	List of IPv6 filter policies
<b>Context</b>	<a href="#">acl ipv6-filter name</a> <i>string</i>
<b>Tree</b>	<a href="#">ipv6-filter</a>

**Configurable** True

### **name *string***

**Description** Name of the IPv6 filter policy.

**Context** [acl ipv6-filter name \*string\*](#)

**String Length** 1 to 255

**Configurable** True

### **description *string***

**Description** Description string for the IPv6 filter policy

**Context** [acl ipv6-filter name \*string\* description \*string\*](#)

**Tree** [description](#)

**String Length** 1 to 255

**Configurable** True

### **entry *sequence-id number***

**Description** List of filter rules.

**Context** [acl ipv6-filter name \*string\* entry \*sequence-id number\*](#)

**Tree** [entry](#)

**Configurable** True

### **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 ipv6-filter name \*string\* entry \*sequence-id number\*](#)

**Range** 1 to 65535

**Configurable** True

### **action**

**Description** Container for the actions to be applied to packets matching the filter entry.

**Context** [acl ipv6-filter name \*string\* entry \*sequence-id number\* action](#)

**Tree** [action](#)

**Configurable** True

## accept

**Description** Accept matching packets and forward them towards their normal destination

**Context** [acl ipv6-filter name string entry sequence-id number action accept](#)

**Tree** [accept](#)

**Configurable** True

## log *boolean*



### Note:

This command is available for the following platforms:

- 7250 IXR-6
- 7250 IXR-10

**Description** When this is true, a log is created for each packet matching the entry  
The log entry contains the following information:  
[*'timestamp', 'filter name', 'filter entry sequence-id', 'incoming interface', 'action: accept', 'IP protocol', 'packet-length', 'source-IP', 'source-port (TCP/UDP packets)', 'dest-IP', 'dest-port (TCP/UDP packets)', 'icmp-type (ICMP packets)', 'icmp-code (ICMP packets)'*]

**Context** [acl ipv6-filter name string entry sequence-id number action accept log boolean](#)

**Tree** [log](#)

**Default** false

**Configurable** True

## drop

**Description** Drop matching packets without sending any ICMP messages back to the source

**Context** [acl ipv6-filter name string entry sequence-id number action drop](#)

**Tree** [drop](#)

**Configurable** True

**log *boolean***

<b>Description</b>	When this is true, a log is created for each packet matching the entry The log entry contains the following information: ['timestamp', 'filter name', 'filter entry sequence-id', 'incoming interface', 'action: drop', 'IP protocol', 'packet-length', 'source-IP', 'source-port (TCP/UDP packets)', 'dest-IP', 'dest-port (TCP/UDP packets)', 'icmp-type (ICMP packets)', 'icmp-code (ICMP packets)'] This action combination is not supported on Trident3 platforms when the filter is applied as an output (egress traffic) filter; no logs will be generated.
<b>Context</b>	<a href="#">acl ipv6-filter name</a> <i>string</i> <a href="#">entry sequence-id</a> <i>number</i> <a href="#">action drop log</a> <i>boolean</i>
<b>Tree</b>	<a href="#">log</a>
<b>Default</b>	false
<b>Configurable</b>	True

**description *string***

<b>Description</b>	Description string for the filter entry
<b>Context</b>	<a href="#">acl ipv6-filter name</a> <i>string</i> <a href="#">entry sequence-id</a> <i>number</i> <a href="#">description</a> <i>string</i>
<b>Tree</b>	<a href="#">description</a>
<b>String Length</b>	1 to 255
<b>Configurable</b>	True

**match**

<b>Description</b>	Container for the conditions that determine whether a packet matches this entry
<b>Context</b>	<a href="#">acl ipv6-filter name</a> <i>string</i> <a href="#">entry sequence-id</a> <i>number</i> <a href="#">match</a>
<b>Tree</b>	<a href="#">match</a>
<b>Configurable</b>	True

**destination-ip**

<b>Description</b>	Packet matching criteria based on destination IPv6 address
<b>Context</b>	<a href="#">acl ipv6-filter name</a> <i>string</i> <a href="#">entry sequence-id</a> <i>number</i> <a href="#">match destination-ip</a>
<b>Tree</b>	<a href="#">destination-ip</a>
<b>Configurable</b>	True

**address string**

<b>Description</b>	Match a packet if its destination IP address logically anded with the inverse of the mask equals this IP address.
<b>Context</b>	<a href="#">acl ipv6-filter name string entry sequence-id number match destination-ip address string</a>
<b>Tree</b>	<a href="#">address</a>
<b>Configurable</b>	True

**mask string**

<b>Description</b>	Match a packet if its destination IP address logically anded with the inverse of this mask equals the configured IP address.
<b>Context</b>	<a href="#">acl ipv6-filter name string entry sequence-id number match destination-ip mask string</a>
<b>Tree</b>	<a href="#">mask</a>
<b>Configurable</b>	True

**prefix string**

<b>Description</b>	Match a packet if its destination IP address is within the specified IPv6 prefix.
<b>Context</b>	<a href="#">acl ipv6-filter name string entry sequence-id number match destination-ip prefix string</a>
<b>Tree</b>	<a href="#">prefix</a>
<b>Configurable</b>	True

**destination-port**

<b>Description</b>	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.
<b>Context</b>	<a href="#">acl ipv6-filter name string entry sequence-id number match destination-port</a>
<b>Tree</b>	<a href="#">destination-port</a>
<b>Configurable</b>	True

**operator keyword**

<b>Description</b>	Comparison operator
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	eq = equal ge = greater than or equal to le = less than or equal to
<b>Context</b>	<a href="#">acl ipv6-filter name</a> <i>string</i> <a href="#">entry sequence-id</a> <i>number</i> <a href="#">match destination-port operator</a> <i>keyword</i>
<b>Tree</b>	<a href="#">operator</a>
<b>Options</b>	<ul style="list-style-type: none"> <li>• le Less than or equal.</li> <li>• ge Greater than or equal.</li> <li>• eq Equal to.</li> </ul>
<b>Configurable</b>	True

## range

<b>Description</b>	Container used to specify a contiguous range of TCP/UDP port numbers
<b>Context</b>	<a href="#">acl ipv6-filter name</a> <i>string</i> <a href="#">entry sequence-id</a> <i>number</i> <a href="#">match destination-port range</a>
<b>Tree</b>	<a href="#">range</a>
<b>Configurable</b>	True

## end (*number* | *keyword*)

<b>Description</b>	The ending port number to include in the range
<b>Context</b>	<a href="#">acl ipv6-filter name</a> <i>string</i> <a href="#">entry sequence-id</a> <i>number</i> <a href="#">match destination-port range end</a> ( <i>number</i>   <i>keyword</i> )
<b>Tree</b>	<a href="#">end</a>
<b>Range</b>	0 to 65535
<b>Options</b>	<ul style="list-style-type: none"> <li>• acap Application Configuration Access Protocol</li> <li>• afp-tcp Apple Filing Protocol over TCP</li> <li>• arns A Remote Network Server System</li> <li>• asf-rmcp ASF Remote Management and Control Protocol &amp; IPMI Remote Management Protocol</li> </ul>

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- 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)
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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)
  - pop2  
Post Office Protocol, version 2 (POP2)
  - pop3  
Post Office Protocol, version 3 (POP3)
  - pop3s  
Post Office Protocol 3 over TLS/SSL (POP3S)
  - pptp  
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  - ptp-event  
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  - ptp-general  
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Network PostScript print server
  - qmtp  
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  - qotd  
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  - 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)
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Simple Mail Transfer Protocol (SMTP)
- sql-svcs  
Structured Query Language (SQL) Services
- sql  
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- 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

	<ul style="list-style-type: none"> <li>z3950</li> </ul> ANSI Z39.50
<b>Configurable</b>	True

### **start (*number* | *keyword*)**

<b>Description</b>	The starting port number to include in the range
<b>Context</b>	<a href="#">acl ipv6-filter name</a> <i>string</i> <a href="#">entry sequence-id</a> <i>number</i> <a href="#">match destination-port range start</a> ( <i>number</i>   <i>keyword</i> )
<b>Tree</b>	<a href="#">start</a>
<b>Range</b>	0 to 65535
<b>Options</b>	<ul style="list-style-type: none"> <li>acap Application Configuration Access Protocol</li> <li>afp-tcp Apple Filing Protocol over TCP</li> <li>arns A Remote Network Server System</li> <li>asf-rmcp ASF Remote Management and Control Protocol &amp; IPMI Remote Management Protocol</li> <li>ashare AppleShare IP Web Administration</li> <li>atalk-rm AppleTalk Routing Maintenance</li> <li>aurp AppleTalk Update-Based Routing Protocol</li> <li>auth Authentication Service</li> <li>bfd Bidirectional Forwarding Detection Single Hop</li> <li>bfd-echo BFD Echo</li> <li>bftp Background File Transfer Program</li> <li>bgmp Border Gateway Multicast Protocol</li> </ul>



- 
- 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)
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Internet Message Access Protocol (IMAP), version 3
- imaps  
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Internet Printing Protocol
- ipsec  
Internet Protocol Security (IPSec)
- ipx  
Internetwork Packet Exchange (IPX)
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  - rpc2portmap  
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- tcpmux  
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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

### value (*number* | *keyword*)

**Description** A destination port number

**Context** [acl ipv6-filter name string entry sequence-id number match destination-port value \(number | keyword\)](#)

**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  
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Citadel
- clearcase  
ClearCase albd
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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
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rmonitor, Remote Monitor
- rpc2portmap  
Rpc2portmap
- rsync  
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- rtelnet  
Remote User Telnet Service (RTelnet)
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Real Time Streaming Protocol (RTSP)
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- xns-ch  
Xerox Network Systems (XNS) Clearinghouse (Name Server)
- xns-mail  
Xerox Network Systems (XNS) Mail

	<ul style="list-style-type: none"> <li>xns-time Xerox Network Systems (XNS) Time Protocol</li> <li>z3950 ANSI Z39.50</li> </ul>
<b>Configurable</b>	True

## icmp6

<b>Description</b>	<p>A packet matches this condition if its ICMPv6 type and code matches one of the specified combinations</p> <p>The rule should also have a condition that the next-header value equals 58 (ICMPv6) in order for this to be interpreted correctly.</p>
<b>Context</b>	<code>acl ipv6-filter name string entry sequence-id number match icmp6</code>
<b>Tree</b>	<code>icmp6</code>
<b>Configurable</b>	True

## code number

<b>Description</b>	<p>Match if the ICMPv6 code value is any value in the list</p> <p>Requires ICMPv6 type to be specified because codes are type dependent.</p>
<b>Context</b>	<code>acl ipv6-filter name string entry sequence-id number match icmp6 code number</code>
<b>Tree</b>	<code>code</code>
<b>Configurable</b>	True

## type (number | keyword)

<b>Description</b>	Match a single ICMPv6 type value
<b>Context</b>	<code>acl ipv6-filter name string entry sequence-id number match icmp6 type (number   keyword)</code>
<b>Tree</b>	<code>type</code>
<b>Range</b>	0 to 255
<b>Options</b>	<ul style="list-style-type: none"> <li>dest-unreachable ICMPv6 Destination Unreachable</li> <li>packet-too-big ICMPv6 Packet Too Big</li> </ul>

- 
- 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

	<ul style="list-style-type: none"> <li>mcast-rtr-term Multicast Router Termination</li> </ul>
<b>Configurable</b>	True

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

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

- 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
- 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

## source-ip

**Description** Packet matching criteria based on source IPv6 address

**Context** [acl ipv6-filter name](#) *string* [entry sequence-id](#) *number* [match source-ip](#)

**Tree** [source-ip](#)

**Configurable** True

**address string**

<b>Description</b>	Match a packet if its source IP address logically anded with the inverse of the mask equals this IP address.
<b>Context</b>	<a href="#">acl ipv6-filter name string entry sequence-id number match source-ip address string</a>
<b>Tree</b>	<a href="#">address</a>
<b>Configurable</b>	True

**mask string**

<b>Description</b>	Match a packet if its source IP address logically anded with the inverse of this mask equals the configured IP address.
<b>Context</b>	<a href="#">acl ipv6-filter name string entry sequence-id number match source-ip mask string</a>
<b>Tree</b>	<a href="#">mask</a>
<b>Configurable</b>	True

**prefix string**

<b>Description</b>	Match a packet if its source IP address is within the specified IPv6 prefix.
<b>Context</b>	<a href="#">acl ipv6-filter name string entry sequence-id number match source-ip prefix string</a>
<b>Tree</b>	<a href="#">prefix</a>
<b>Configurable</b>	True

**source-port**

<b>Description</b>	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.
<b>Context</b>	<a href="#">acl ipv6-filter name string entry sequence-id number match source-port</a>
<b>Tree</b>	<a href="#">source-port</a>
<b>Configurable</b>	True

**operator *keyword***

<b>Description</b>	Comparison operator eq = equal ge = greater than or equal to le = less than or equal to
<b>Context</b>	<a href="#">acl ipv6-filter name</a> <i>string</i> <a href="#">entry sequence-id</a> <i>number</i> <a href="#">match source-port</a> <a href="#">operator keyword</a>
<b>Tree</b>	<a href="#">operator</a>
<b>Options</b>	<ul style="list-style-type: none"> <li>le Less than or equal.</li> <li>ge Greater than or equal.</li> <li>eq Equal to.</li> </ul>
<b>Configurable</b>	True

**range**

<b>Description</b>	Container used to specify a contiguous range of TCP/UDP port numbers
<b>Context</b>	<a href="#">acl ipv6-filter name</a> <i>string</i> <a href="#">entry sequence-id</a> <i>number</i> <a href="#">match source-port</a> <a href="#">range</a>
<b>Tree</b>	<a href="#">range</a>
<b>Configurable</b>	True

**end (*number* | *keyword*)**

<b>Description</b>	The ending port number to include in the range
<b>Context</b>	<a href="#">acl ipv6-filter name</a> <i>string</i> <a href="#">entry sequence-id</a> <i>number</i> <a href="#">match source-port</a> <a href="#">range end</a> ( <i>number</i>   <i>keyword</i> )
<b>Tree</b>	<a href="#">end</a>
<b>Range</b>	0 to 65535
<b>Options</b>	<ul style="list-style-type: none"> <li>acap Application Configuration Access Protocol</li> <li>afp-tcp Apple Filing Protocol over TCP</li> <li>arns A Remote Network Server System</li> </ul>



- 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

- 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)
- 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
- 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

	<ul style="list-style-type: none"> <li>xns-time Xerox Network Systems (XNS) Time Protocol</li> <li>z3950 ANSI Z39.50</li> </ul>
<b>Configurable</b>	True

### **start (*number* | *keyword*)**

<b>Description</b>	The starting port number to include in the range
<b>Context</b>	<a href="#">acl ipv6-filter name string entry sequence-id number match source-port range start (<i>number</i>   <i>keyword</i>)</a>
<b>Tree</b>	<a href="#">start</a>
<b>Range</b>	0 to 65535
<b>Options</b>	<ul style="list-style-type: none"> <li>acap Application Configuration Access Protocol</li> <li>afp-tcp Apple Filing Protocol over TCP</li> <li>arns A Remote Network Server System</li> <li>asf-rmcp ASF Remote Management and Control Protocol &amp; IPMI Remote Management Protocol</li> <li>ashare AppleShare IP Web Administration</li> <li>atalk-rm AppleTalk Routing Maintenance</li> <li>aurp AppleTalk Update-Based Routing Protocol</li> <li>auth Authentication Service</li> <li>bfd Bidirectional Forwarding Detection Single Hop</li> <li>bfd-echo BFD Echo</li> <li>bftp Background File Transfer Program</li> </ul>

- 
- 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  
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  - discard  
Discard Protocol. Also Wake-on-LAN.
  - dnsix  
DNSIX security protocol auditing

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Domain Name System
- dsp  
Display Support Protocol
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Echo Protocol
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Finger protocol
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- ftp-data  
File Transfer Protocol data
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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  
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- iscsi  
iSCSI

- iso-tsap  
ISO Transport Service Access Point (TSAP) Class 0 protocol
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Kerberos administration
- klogin  
Kerberos login
- kpasswd  
Kerberos Change/Set password
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- matip-b  
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- 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
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- multihop-bfd  
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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
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Network File System (NFS)
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OpenVPN
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PIM Auto-RP
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Post Office Protocol 3 over TLS/SSL (POP3S)
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- ptp-event  
Precision Time Protocol (PTP) event messages



- 
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  - qmtp  
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  - 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)
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  - smux  
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  - 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

### value (*number* | *keyword*)

**Description** A source port number

**Context** [acl ipv6-filter name](#) *string* [entry sequence-id](#) *number* [match source-port value](#) (*number* | *keyword*)

**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
- 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
- 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

### tcp-flags *string*

**Description** A logical expression using the &, | and ! logical operators and the TCP flag names: rst, syn and ack.

**Context** [acl ipv6-filter name](#) *string* [entry sequence-id](#) *number* [match tcp-flags](#) *string*

**Tree** [tcp-flags](#)

**Configurable** True

### statistics

**Description** Container for per-entry statistics

**Context** [acl ipv6-filter name](#) *string* [entry sequence-id](#) *number* [statistics](#)

**Tree** [statistics](#)

**Configurable** False

### aggregate

**Description** Container for aggregated per-entry statistics. Not present if the entry is part of a filter with statistics-per-entry set to false.

**Context** [acl ipv6-filter name](#) *string* [entry sequence-id](#) *number* [statistics](#) [aggregate](#)

**Tree** [aggregate](#)

**Configurable** False

### in-last-match *string*

**Description** The elapsed time since an ingress 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 ipv6-filter name](#) *string* [entry sequence-id](#) *number* [statistics](#) [aggregate](#) [in-last-match](#) *string*

---

<b>Tree</b>	<a href="#">in-last-match</a>
<b>String Length</b>	20 to 32
<b>Configurable</b>	False

### **in-matched-packets *number***

<b>Description</b>	The number of ingress 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
<b>Context</b>	<a href="#">acl ipv6-filter name string entry sequence-id number statistics aggregate in-matched-packets number</a>
<b>Tree</b>	<a href="#">in-matched-packets</a>
<b>Default</b>	0
<b>Configurable</b>	False

### **out-last-match *string***

<b>Description</b>	The elapsed time since an egress packet last matched the entry, considering the mgmt0 subinterface and all subinterfaces of all linecard ports that use the ACL as an output ACL
<b>Context</b>	<a href="#">acl ipv6-filter name string entry sequence-id number statistics aggregate out-last-match string</a>
<b>Tree</b>	<a href="#">out-last-match</a>
<b>String Length</b>	20 to 32
<b>Configurable</b>	False

### **out-matched-packets *number***

<b>Description</b>	The number of egress 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 output ACL
<b>Context</b>	<a href="#">acl ipv6-filter name string entry sequence-id number statistics aggregate out-matched-packets number</a>
<b>Tree</b>	<a href="#">out-matched-packets</a>
<b>Default</b>	0
<b>Configurable</b>	False

**last-clear *string***

<b>Description</b>	Time of the last clear command performed by the user at this level or a higher level
<b>Context</b>	<a href="#">acl ipv6-filter name <i>string</i> entry sequence-id number statistics last-clear <i>string</i></a>
<b>Tree</b>	<a href="#">last-clear</a>
<b>String Length</b>	20 to 32
<b>Configurable</b>	False

**per-interface**

<b>Description</b>	Container for per-entry statistics on a per interface basis. Not present if the entry is part of a filter with statistics-per-entry set to false.
<b>Context</b>	<a href="#">acl ipv6-filter name <i>string</i> entry sequence-id number statistics per-interface</a>
<b>Tree</b>	<a href="#">per-interface</a>
<b>Configurable</b>	False

**subinterface [name \*string\*](#)**

<b>Description</b>	<p>If subinterface-specific=disabled then this list is empty.</p> <p>If subinterface-specific=input-only then this is the list of subinterfaces that apply the ACL as an input ACL</p> <p>If subinterface-specific=output-only then this is the list of subinterfaces that apply the ACL as an output ACL.</p> <p>If subinterface-specific=input-and-output then this is the list of subinterfaces that apply the ACL as an input ACL or an output ACL.</p>
<b>Context</b>	<a href="#">acl ipv6-filter name <i>string</i> entry sequence-id number statistics per-interface subinterface name <i>string</i></a>
<b>Tree</b>	<a href="#">subinterface</a>
<b>Configurable</b>	False

**name *string***

<b>Description</b>	Reference to a subinterface.
<b>Context</b>	<a href="#">acl ipv6-filter name <i>string</i> entry sequence-id number statistics per-interface subinterface name <i>string</i></a>
<b>Configurable</b>	False

**in-last-match *string***

<b>Description</b>	The elapsed time since an ingress packet last matched the entry on this specific subinterface. Updated only if subinterface-specific is set to input-only or input-and-output
<b>Context</b>	<a href="#">acl ipv6-filter name</a> <i>string</i> <a href="#">entry sequence-id</a> <i>number</i> <a href="#">statistics per-interface subinterface name</a> <i>string</i> <a href="#">in-last-match</a> <i>string</i>
<b>Tree</b>	<a href="#">in-last-match</a>
<b>String Length</b>	20 to 32
<b>Configurable</b>	False

**in-matched-packets *number***

<b>Description</b>	The number of ingress packets matching the entry on this specific subinterface. Incremented only if subinterface-specific is set to input-only or input-and-output
<b>Context</b>	<a href="#">acl ipv6-filter name</a> <i>string</i> <a href="#">entry sequence-id</a> <i>number</i> <a href="#">statistics per-interface subinterface name</a> <i>string</i> <a href="#">in-matched-packets</a> <i>number</i>
<b>Tree</b>	<a href="#">in-matched-packets</a>
<b>Default</b>	0
<b>Configurable</b>	False

**last-clear *string***

<b>Description</b>	Time of the last clear command performed by the user at this level or a higher level
<b>Context</b>	<a href="#">acl ipv6-filter name</a> <i>string</i> <a href="#">entry sequence-id</a> <i>number</i> <a href="#">statistics per-interface subinterface name</a> <i>string</i> <a href="#">last-clear</a> <i>string</i>
<b>Tree</b>	<a href="#">last-clear</a>
<b>String Length</b>	20 to 32
<b>Configurable</b>	False

**out-last-match *string***

<b>Description</b>	The elapsed time since an egress packet last matched the entry on this specific subinterface. Updated only if subinterface-specific is set to output-only or input-and-output
<b>Context</b>	<a href="#">acl ipv6-filter name</a> <i>string</i> <a href="#">entry sequence-id</a> <i>number</i> <a href="#">statistics per-interface subinterface name</a> <i>string</i> <a href="#">out-last-match</a> <i>string</i>
<b>Tree</b>	<a href="#">out-last-match</a>



<b>String Length</b>	20 to 32
<b>Configurable</b>	False

### out-matched-packets *number*

<b>Description</b>	The number of egress packets matching the entry on this specific subinterface. Incremented only if subinterface-specific is set to output-only or input-and-output
<b>Context</b>	<a href="#">acl ipv6-filter name</a> <i>string</i> <a href="#">entry sequence-id</a> <i>number</i> <a href="#">statistics per-interface subinterface name</a> <i>string</i> <a href="#">out-matched-packets</a> <i>number</i>
<b>Tree</b>	<a href="#">out-matched-packets</a>
<b>Default</b>	0
<b>Configurable</b>	False

### tcam-entries

<b>Description</b>	Information about the TCAM entries used to implement the ACL entry
<b>Context</b>	<a href="#">acl ipv6-filter name</a> <i>string</i> <a href="#">entry sequence-id</a> <i>number</i> <a href="#">tcam-entries</a>
<b>Tree</b>	<a href="#">tcam-entries</a>
<b>Configurable</b>	False

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

<b>Description</b>	List of linecards in the system
<b>Context</b>	<a href="#">acl ipv6-filter name</a> <i>string</i> <a href="#">entry sequence-id</a> <i>number</i> <a href="#">tcam-entries</a> <a href="#">linecard</a> <a href="#">slot</a> <i>number</i>
<b>Tree</b>	<a href="#">linecard</a>
<b>Configurable</b>	False

### slot *number*

<b>Description</b>	Slot identifier
<b>Context</b>	<a href="#">acl ipv6-filter name</a> <i>string</i> <a href="#">entry sequence-id</a> <i>number</i> <a href="#">tcam-entries</a> <a href="#">linecard</a> <a href="#">slot</a> <i>number</i>
<b>Range</b>	1 to 10
<b>Configurable</b>	False

**input-total *number***

<b>Description</b>	The number of TCAM entries required to implement this entry on all subinterfaces of this slot 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 slot then input-total=0.
<b>Context</b>	<a href="#">acl ipv6-filter name string entry sequence-id number tcam-entries linecard slot number input-total number</a>
<b>Tree</b>	<a href="#">input-total</a>
<b>Configurable</b>	False

**output-total *number***

<b>Description</b>	The number of TCAM entries required to implement this entry on all subinterfaces of this slot 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 slot then output-total=0.
<b>Context</b>	<a href="#">acl ipv6-filter name string entry sequence-id number tcam-entries linecard slot number output-total number</a>
<b>Tree</b>	<a href="#">output-total</a>
<b>Configurable</b>	False

**single-instance *number***

<b>Description</b>	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 slot. It captures the effect of TCAM entry expansion to deal with port ranges, for example.
<b>Context</b>	<a href="#">acl ipv6-filter name string entry sequence-id number tcam-entries linecard slot number single-instance number</a>
<b>Tree</b>	<a href="#">single-instance</a>
<b>Configurable</b>	False

**last-clear *string***

<b>Description</b>	Time of the last clear command performed by the user at this level
<b>Context</b>	<a href="#">acl ipv6-filter name</a> <i>string</i> <b>last-clear</b> <i>string</i>
<b>Tree</b>	<a href="#">last-clear</a>
<b>String Length</b>	20 to 32
<b>Configurable</b>	False

**statistics**

<b>Description</b>	Enter the statistics context
<b>Context</b>	<a href="#">acl ipv6-filter name</a> <i>string</i> <b>statistics</b>
<b>Tree</b>	<a href="#">statistics</a>
<b>Configurable</b>	False

**statistics-per-entry *boolean***

<b>Description</b>	Collect statistics for each entry of the ACL The exact set of statistics depend on the subinterface-specific mode
<b>Context</b>	<a href="#">acl ipv6-filter name</a> <i>string</i> <b>statistics-per-entry</b> <i>boolean</i>
<b>Tree</b>	<a href="#">statistics-per-entry</a>
<b>Configurable</b>	True

**subinterface-specific *keyword***

<b>Description</b>	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
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<b>Context</b>	<a href="#">acl ipv6-filter name</a> <i>string</i> <a href="#">subinterface-specific</a> <i>keyword</i>
<b>Tree</b>	<a href="#">subinterface-specific</a>
<b>Default</b>	disabled
<b>Options</b>	<ul style="list-style-type: none"> <li>• disabled</li> <li>• input-only</li> <li>• output-only</li> <li>• input-and-output</li> </ul>
<b>Configurable</b>	True

## policers

<b>Description</b>	Container for policer definitions used by ACL entries
<b>Context</b>	<a href="#">acl policers</a>
<b>Tree</b>	<a href="#">policers</a>
<b>Configurable</b>	True

## policer [name](#) *string*



### Note:

This command is available for the following platforms:

- 7220 IXR-D2
- 7250 IXR-10
- 7220 IXR-D3L
- 7220 IXR-D2L
- 7220 IXR-D3
- 7250 IXR-6
- 7220 IXR-D1

<b>Description</b>	List of hardware policer templates. For each policer in this list one or more policer instances are implemented in the linecards of the system.
<b>Context</b>	<a href="#">acl policers policer name</a> <i>string</i>
<b>Tree</b>	<a href="#">policer</a>
<b>Configurable</b>	True

**name *string*****Note:**

This command is available for the following platforms:

- 7220 IXR-D2
- 7250 IXR-10
- 7220 IXR-D3L
- 7220 IXR-D2L
- 7220 IXR-D3
- 7250 IXR-6
- 7220 IXR-D1

<b>Description</b>	User-defined name of the policer
<b>Context</b>	<a href="#">acl</a> <a href="#">policers</a> <a href="#">policer</a> <a href="#">name</a> <i>string</i>
<b>String Length</b>	1 to 255
<b>Configurable</b>	True

**entry-specific *boolean*****Note:**

This command is available for the following platforms:

- 7220 IXR-D2
- 7250 IXR-10
- 7220 IXR-D3L
- 7220 IXR-D2L
- 7220 IXR-D3
- 7250 IXR-6
- 7220 IXR-D1

<b>Description</b>	<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>
<b>Context</b>	<a href="#">acl</a> <a href="#">policers</a> <a href="#">policer</a> <a href="#">name</a> <i>string</i> <a href="#">entry-specific</a> <i>boolean</i>
<b>Tree</b>	<a href="#">entry-specific</a>
<b>Default</b>	false
<b>Configurable</b>	True

**max-burst *number*****Note:**

This command is available for the following platforms:

- 7220 IXR-D2
- 7250 IXR-10
- 7220 IXR-D3L
- 7220 IXR-D2L
- 7220 IXR-D3
- 7250 IXR-6
- 7220 IXR-D1

<b>Description</b>	The MBS bucket depth in bytes
<b>Context</b>	<a href="#">acl policers policer name</a> <i>string</i> <a href="#">max-burst number</a>
<b>Tree</b>	<a href="#">max-burst</a>
<b>Range</b>	1 to 125000000
<b>Units</b>	bytes
<b>Configurable</b>	True

**peak-rate *number*****Note:**

This command is available for the following platforms:

- 7220 IXR-D2
- 7250 IXR-10
- 7220 IXR-D3L
- 7220 IXR-D2L
- 7220 IXR-D3
- 7250 IXR-6
- 7220 IXR-D1

<b>Description</b>	The PIR rate in kbps (bucket empty/fill rate).
<b>Context</b>	<a href="#">acl policers policer name</a> <i>string</i> <a href="#">peak-rate number</a>
<b>Tree</b>	<a href="#">peak-rate</a>
<b>Range</b>	1 to 1000000
<b>Units</b>	kbps

**Configurable** True

## statistics



**Note:**

This command is available for the following platforms:

- 7220 IXR-D2
- 7250 IXR-10
- 7220 IXR-D3L
- 7220 IXR-D2L
- 7220 IXR-D3
- 7250 IXR-6
- 7220 IXR-D1

**Description** Container for linecard policer statistics  
None of these statistics are populated if the policer is configured as entry-specific=true.

**Context** [acl policers policer name](#) *string* [statistics](#)

**Tree** [statistics](#)

**Configurable** False

## conforming-octets *number*



**Note:**

This command is available for the following platforms:

- 7220 IXR-D2
- 7250 IXR-10
- 7220 IXR-D3L
- 7220 IXR-D2L
- 7220 IXR-D3
- 7250 IXR-6
- 7220 IXR-D1

**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](#) *string* [statistics](#) [conforming-octets](#) *number*

**Tree** [conforming-octets](#)

<b>Default</b>	0
<b>Configurable</b>	False

### conforming-packets *number*



**Note:**

This command is available for the following platforms:

- 7220 IXR-D2
- 7250 IXR-10
- 7220 IXR-D3L
- 7220 IXR-D2L
- 7220 IXR-D3
- 7250 IXR-6
- 7220 IXR-D1

<b>Description</b>	The number of packets (actually Ethernet frames) that were considered conforming by the policer
<b>Context</b>	<a href="#">acl policers policer name string statistics conforming-packets number</a>
<b>Tree</b>	<a href="#">conforming-packets</a>
<b>Default</b>	0
<b>Configurable</b>	False

### exceeding-octets *number*



**Note:**

This command is available for the following platforms:

- 7220 IXR-D2
- 7250 IXR-10
- 7220 IXR-D3L
- 7220 IXR-D2L
- 7220 IXR-D3
- 7250 IXR-6
- 7220 IXR-D1

<b>Description</b>	The number of bytes that were considered exceeding by the policer. The byte count includes 18 bytes of Ethernet overhead for every IP packet.
<b>Context</b>	<a href="#">acl policers policer name string statistics exceeding-octets number</a>



<b>Tree</b>	<a href="#">exceeding-octets</a>
<b>Default</b>	0
<b>Configurable</b>	False

## exceeding-packets *number*



### Note:

This command is available for the following platforms:

- 7220 IXR-D2
- 7250 IXR-10
- 7220 IXR-D3L
- 7220 IXR-D2L
- 7220 IXR-D3
- 7250 IXR-6
- 7220 IXR-D1

<b>Description</b>	The number of packets (actually Ethernet frames) that were considered exceeding by the policer
<b>Context</b>	<a href="#">acl</a> <a href="#">policers</a> <a href="#">policer name</a> <a href="#">string</a> <a href="#">statistics</a> <a href="#">exceeding-packets</a> <a href="#">number</a>
<b>Tree</b>	<a href="#">exceeding-packets</a>
<b>Default</b>	0
<b>Configurable</b>	False

## last-clear *string*



### Note:

This command is available for the following platforms:

- 7220 IXR-D2
- 7250 IXR-10
- 7220 IXR-D3L
- 7220 IXR-D2L
- 7220 IXR-D3
- 7250 IXR-6
- 7220 IXR-D1

<b>Description</b>	Time of the last clear command that applied to these statistics
<b>Context</b>	<a href="#">acl</a> <a href="#">policers</a> <a href="#">policer name</a> <a href="#">string</a> <a href="#">statistics</a> <a href="#">last-clear</a> <a href="#">string</a>

<b>Tree</b>	<a href="#">last-clear</a>
<b>String Length</b>	20 to 32
<b>Configurable</b>	False

### **system-cpu-policer** [name](#) *string*

<b>Description</b>	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 policer instances process the aggregate of terminating traffic received from all linecards.
<b>Context</b>	<a href="#">acl policers system-cpu-policer name</a> <i>string</i>
<b>Tree</b>	<a href="#">system-cpu-policer</a>
<b>Configurable</b>	True

### **name** *string*

<b>Description</b>	User-defined name of the policer
<b>Context</b>	<a href="#">acl policers system-cpu-policer name</a> <i>string</i>
<b>String Length</b>	1 to 255
<b>Configurable</b>	True

### **entry-specific** *boolean*

<b>Description</b>	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. If set to true, multiple policer instances are created from this template, one for each cpm-filter entry that refers to the policer template.
<b>Context</b>	<a href="#">acl policers system-cpu-policer name</a> <i>string</i> <a href="#">entry-specific</a> <i>boolean</i>
<b>Tree</b>	<a href="#">entry-specific</a>
<b>Default</b>	false
<b>Configurable</b>	True

### **max-packet-burst** *number*

<b>Description</b>	The maximum depth of the policer bucket in number of packets
<b>Context</b>	<a href="#">acl policers system-cpu-policer name</a> <i>string</i> <a href="#">max-packet-burst</a> <i>number</i>
<b>Tree</b>	<a href="#">max-packet-burst</a>

---

<b>Range</b>	16 to 4000000
<b>Default</b>	16
<b>Configurable</b>	True

### **peak-packet-rate *number***

<b>Description</b>	The maximum number of packets per second (bucket empty/fill rate)
<b>Context</b>	<a href="#">acl policers system-cpu-policer name</a> <i>string</i> <a href="#">peak-packet-rate number</a>
<b>Tree</b>	<a href="#">peak-packet-rate</a>
<b>Range</b>	1 to 4000000
<b>Configurable</b>	True

### **statistics**

<b>Description</b>	Container for system CPU policer statistics None of these statistics are populated if the policer is configured as entry-specific=true.
<b>Context</b>	<a href="#">acl policers system-cpu-policer name</a> <i>string</i> <a href="#">statistics</a>
<b>Tree</b>	<a href="#">statistics</a>
<b>Configurable</b>	False

### **conforming-octets *number***

<b>Description</b>	The number of bytes that were considered conforming by the policer. The byte count includes 18 bytes of Ethernet overhead for every IP packet.
<b>Context</b>	<a href="#">acl policers system-cpu-policer name</a> <i>string</i> <a href="#">statistics conforming-octets number</a>
<b>Tree</b>	<a href="#">conforming-octets</a>
<b>Default</b>	0
<b>Configurable</b>	False

### **conforming-packets *number***

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

---

<b>Tree</b>	<a href="#">conforming-packets</a>
<b>Default</b>	0
<b>Configurable</b>	False

### **exceeding-octets *number***

<b>Description</b>	The number of bytes that were considered exceeding by the policer. The byte count includes 18 bytes of Ethernet overhead for every IP packet.
<b>Context</b>	<a href="#">acl policers system-cpu-policer name</a> <i>string</i> <a href="#">statistics exceeding-octets number</a>
<b>Tree</b>	<a href="#">exceeding-octets</a>
<b>Default</b>	0
<b>Configurable</b>	False

### **exceeding-packets *number***

<b>Description</b>	The number of packets (actually Ethernet frames) that were considered exceeding by the policer
<b>Context</b>	<a href="#">acl policers system-cpu-policer name</a> <i>string</i> <a href="#">statistics exceeding-packets number</a>
<b>Tree</b>	<a href="#">exceeding-packets</a>
<b>Default</b>	0
<b>Configurable</b>	False

### **last-clear *string***

<b>Description</b>	Time of the last clear command that applied to these statistics
<b>Context</b>	<a href="#">acl policers system-cpu-policer name</a> <i>string</i> <a href="#">statistics last-clear</a> <i>string</i>
<b>Tree</b>	<a href="#">last-clear</a>
<b>String Length</b>	20 to 32
<b>Configurable</b>	False

## system-filter


**Note:**

This command is available for the following platforms:

- 7220 IXR-D2
- 7220 IXR-D3L
- 7220 IXR-D2L
- 7220 IXR-D3
- 7220 IXR-D1

<b>Description</b>	Top level container for System filters
<b>Context</b>	<a href="#">acl system-filter</a>
<b>Tree</b>	<a href="#">system-filter</a>
<b>Configurable</b>	True

## ipv4-filter


**Note:**

This command is available for the following platforms:

- 7220 IXR-D2
- 7220 IXR-D3L
- 7220 IXR-D2L
- 7220 IXR-D3
- 7220 IXR-D1

<b>Description</b>	Top level container for System IPv4 filters
<b>Context</b>	<a href="#">acl system-filter ipv4-filter</a>
<b>Tree</b>	<a href="#">ipv4-filter</a>
<b>Configurable</b>	True

**entry** *sequence-id number***Note:**

This command is available for the following platforms:

- 7220 IXR-D2
- 7220 IXR-D3L
- 7220 IXR-D2L
- 7220 IXR-D3
- 7220 IXR-D1

<b>Description</b>	List of filter rules.
<b>Context</b>	<a href="#">acl system-filter ipv4-filter entry sequence-id number</a>
<b>Tree</b>	<a href="#">entry</a>
<b>Configurable</b>	True

**sequence-id** *number***Note:**

This command is available for the following platforms:

- 7220 IXR-D2
- 7220 IXR-D3L
- 7220 IXR-D2L
- 7220 IXR-D3
- 7220 IXR-D1

<b>Description</b>	A number to indicate the relative evaluation order of the different entries; lower numbered entries are evaluated before higher numbered entries
<b>Context</b>	<a href="#">acl system-filter ipv4-filter entry sequence-id number</a>
<b>Range</b>	1 to 256
<b>Configurable</b>	True

## action



### Note:

This command is available for the following platforms:

- 7220 IXR-D2
- 7220 IXR-D3L
- 7220 IXR-D2L
- 7220 IXR-D3
- 7220 IXR-D1

<b>Description</b>	Container for the actions to be applied to packets matching the System filter entry.
<b>Context</b>	<a href="#">acl system-filter ipv4-filter entry sequence-id number action</a>
<b>Tree</b>	<a href="#">action</a>
<b>Configurable</b>	True

## accept



### Note:

This command is available for the following platforms:

- 7220 IXR-D2
- 7220 IXR-D3L
- 7220 IXR-D2L
- 7220 IXR-D3
- 7220 IXR-D1

<b>Description</b>	Accept matching packets
<b>Context</b>	<a href="#">acl system-filter ipv4-filter entry sequence-id number action accept</a>
<b>Tree</b>	<a href="#">accept</a>
<b>Configurable</b>	True

## drop



### Note:

This command is available for the following platforms:

- 7220 IXR-D2
- 7220 IXR-D3L
- 7220 IXR-D2L
- 7220 IXR-D3
- 7220 IXR-D1

<b>Description</b>	Drop matching packets without sending any ICMP messages back to the source
<b>Context</b>	<a href="#">acl system-filter ipv4-filter entry sequence-id <i>number</i> action drop</a>
<b>Tree</b>	<a href="#">drop</a>
<b>Configurable</b>	True

## log *boolean*



### Note:

This command is available for the following platforms:

- 7220 IXR-D2
- 7220 IXR-D3L
- 7220 IXR-D2L
- 7220 IXR-D3
- 7220 IXR-D1

<b>Description</b>	When this is true, a log is created for each packet matching the entry The log entry contains the following information: [ <i>'timestamp', 'filter name', 'filter entry sequence-id', 'action: drop', 'IP protocol', 'packet-length', 'source-IP', 'source-port (TCP/UDP packets)', 'dest-IP', 'dest-port (TCP/UDP packets)', 'icmp-type (ICMP packets)', 'icmp-code (ICMP packets)'</i> ]
<b>Context</b>	<a href="#">acl system-filter ipv4-filter entry sequence-id <i>number</i> action drop log <i>boolean</i></a>
<b>Tree</b>	<a href="#">log</a>
<b>Default</b>	false
<b>Configurable</b>	True



## description *string*



### Note:

This command is available for the following platforms:

- 7220 IXR-D2
- 7220 IXR-D3L
- 7220 IXR-D2L
- 7220 IXR-D3
- 7220 IXR-D1

<b>Description</b>	Description string for the filter entry
<b>Context</b>	<a href="#">acl system-filter ipv4-filter entry sequence-id number description string</a>
<b>Tree</b>	<a href="#">description</a>
<b>String Length</b>	1 to 255
<b>Configurable</b>	True

## match



### Note:

This command is available for the following platforms:

- 7220 IXR-D2
- 7220 IXR-D3L
- 7220 IXR-D2L
- 7220 IXR-D3
- 7220 IXR-D1

<b>Description</b>	Container for the conditions that determine whether a packet matches this entry
<b>Context</b>	<a href="#">acl system-filter ipv4-filter entry sequence-id number match</a>
<b>Tree</b>	<a href="#">match</a>
<b>Configurable</b>	True

## destination-ip



### Note:

This command is available for the following platforms:

- 7220 IXR-D2
- 7220 IXR-D3L
- 7220 IXR-D2L
- 7220 IXR-D3
- 7220 IXR-D1

<b>Description</b>	Packet matching criteria based on destination IPv4 address
<b>Context</b>	<a href="#">acl system-filter ipv4-filter entry sequence-id number match destination-ip</a>
<b>Tree</b>	<a href="#">destination-ip</a>
<b>Configurable</b>	True

## address *string*



### Note:

This command is available for the following platforms:

- 7220 IXR-D2
- 7220 IXR-D3L
- 7220 IXR-D2L
- 7220 IXR-D3
- 7220 IXR-D1

<b>Description</b>	Match a packet if its destination IP address logically anded with the inverse of the mask equals this IP address.
<b>Context</b>	<a href="#">acl system-filter ipv4-filter entry sequence-id number match destination-ip address string</a>
<b>Tree</b>	<a href="#">address</a>
<b>Configurable</b>	True

## mask *string*

**Note:**

This command is available for the following platforms:

- 7220 IXR-D2
- 7220 IXR-D3L
- 7220 IXR-D2L
- 7220 IXR-D3
- 7220 IXR-D1

<b>Description</b>	Match a packet if its destination IP address logically anded with the inverse of this mask equals the configured IP address.
<b>Context</b>	<a href="#">acl system-filter ipv4-filter entry sequence-id number match destination-ip mask string</a>
<b>Tree</b>	<a href="#">mask</a>
<b>Configurable</b>	True

## prefix *string*

**Note:**

This command is available for the following platforms:

- 7220 IXR-D2
- 7220 IXR-D3L
- 7220 IXR-D2L
- 7220 IXR-D3
- 7220 IXR-D1

<b>Description</b>	Match a packet if its destination IP address is within the specified IPv4 prefix.
<b>Context</b>	<a href="#">acl system-filter ipv4-filter entry sequence-id number match destination-ip prefix string</a>
<b>Tree</b>	<a href="#">prefix</a>
<b>Configurable</b>	True

## destination-port



### Note:

This command is available for the following platforms:

- 7220 IXR-D2
- 7220 IXR-D3L
- 7220 IXR-D2L
- 7220 IXR-D3
- 7220 IXR-D1

<b>Description</b>	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.
<b>Context</b>	<a href="#">acl system-filter ipv4-filter entry sequence-id number match destination-port</a>
<b>Tree</b>	<a href="#">destination-port</a>
<b>Configurable</b>	True

## operator keyword



### Note:

This command is available for the following platforms:

- 7220 IXR-D2
- 7220 IXR-D3L
- 7220 IXR-D2L
- 7220 IXR-D3
- 7220 IXR-D1

<b>Description</b>	Comparison operator  eq = equal ge = greater than or equal to le = less than or equal to
<b>Context</b>	<a href="#">acl system-filter ipv4-filter entry sequence-id number match destination-port operator keyword</a>
<b>Tree</b>	<a href="#">operator</a>
<b>Options</b>	<ul style="list-style-type: none"> <li>• le Less than or equal.</li> <li>• ge Greater than or equal.</li> </ul>

	<ul style="list-style-type: none"> <li>• eq Equal to.</li> </ul>
<b>Configurable</b>	True

## range



### Note:

This command is available for the following platforms:

- 7220 IXR-D2
- 7220 IXR-D3L
- 7220 IXR-D2L
- 7220 IXR-D3
- 7220 IXR-D1

<b>Description</b>	Container used to specify a contiguous range of TCP/UDP port numbers
<b>Context</b>	<a href="#">acl system-filter ipv4-filter entry sequence-id number match destination-port range</a>
<b>Tree</b>	<a href="#">range</a>
<b>Configurable</b>	True

## end (*number* | *keyword*)



### Note:

This command is available for the following platforms:

- 7220 IXR-D2
- 7220 IXR-D3L
- 7220 IXR-D2L
- 7220 IXR-D3
- 7220 IXR-D1

<b>Description</b>	The ending port number to include in the range
<b>Context</b>	<a href="#">acl system-filter ipv4-filter entry sequence-id number match destination-port range end (number   keyword)</a>
<b>Tree</b>	<a href="#">end</a>
<b>Range</b>	0 to 65535
<b>Options</b>	<ul style="list-style-type: none"> <li>• acap Application Configuration Access Protocol</li> </ul>

- 
- 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)

- 
- Idaps  
Lightweight Directory Access Protocol over TLS/SSL (LDAPS)
  - Idp  
Label Distribution Protocol
  - Imp  
Link Management Protocol (LMP)
  - login  
rlogin (TCP) or Who (UDP)
  - Ipd  
Line Printer Daemon
  - Isp-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)
- 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

### start (*number* | *keyword*)



**Note:**

This command is available for the following platforms:

- 7220 IXR-D2
- 7220 IXR-D3L
- 7220 IXR-D2L
- 7220 IXR-D3
- 7220 IXR-D1

<b>Description</b>	The starting port number to include in the range
<b>Context</b>	<a href="#">acl system-filter ipv4-filter entry sequence-id</a> <i>number</i> <a href="#">match destination-port range start</a> ( <i>number</i>   <i>keyword</i> )
<b>Tree</b>	<a href="#">start</a>
<b>Range</b>	0 to 65535
<b>Options</b>	<ul style="list-style-type: none"> <li>• acap Application Configuration Access Protocol</li> <li>• afp-tcp Apple Filing Protocol over TCP</li> <li>• arns A Remote Network Server System</li> <li>• asf-rmcp ASF Remote Management and Control Protocol &amp; IPMI Remote Management Protocol</li> <li>• ashare AppleShare IP Web Administration</li> </ul>

- 
- 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)
- 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
- 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

### value (*number* | *keyword*)



**Note:**

This command is available for the following platforms:

- 7220 IXR-D2
- 7220 IXR-D3L
- 7220 IXR-D2L
- 7220 IXR-D3
- 7220 IXR-D1

<b>Description</b>	A destination port number
<b>Context</b>	<a href="#">acl system-filter ipv4-filter entry sequence-id number match destination-port value (number   keyword)</a>
<b>Tree</b>	<a href="#">value</a>
<b>Range</b>	0 to 65535
<b>Options</b>	<ul style="list-style-type: none"> <li>• <b>acap</b> Application Configuration Access Protocol</li> <li>• <b>afp-tcp</b> Apple Filing Protocol over TCP</li> <li>• <b>arns</b> A Remote Network Server System</li> <li>• <b>asf-rmcp</b> ASF Remote Management and Control Protocol &amp; IPMI Remote Management Protocol</li> <li>• <b>ashare</b> AppleShare IP Web Administration</li> <li>• <b>atalk-rm</b> AppleTalk Routing Maintenance</li> <li>• <b>aurp</b> AppleTalk Update-Based Routing Protocol</li> <li>• <b>auth</b> Authentication Service</li> <li>• <b>bfd</b> Bidirectional Forwarding Detection Single Hop</li> </ul>

- 
- bfd-echo  
  BFDD 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
- 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

**first-fragment *boolean*****Note:**

This command is available for the following platforms:

- 7220 IXR-D2
- 7220 IXR-D3L
- 7220 IXR-D2L
- 7220 IXR-D3
- 7220 IXR-D1

<b>Description</b>	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.
<b>Context</b>	<a href="#">acl system-filter ipv4-filter entry sequence-id number match first-fragment boolean</a>
<b>Tree</b>	<a href="#">first-fragment</a>
<b>Configurable</b>	True

**fragment *boolean*****Note:**

This command is available for the following platforms:

- 7220 IXR-D2
- 7220 IXR-D3L
- 7220 IXR-D2L
- 7220 IXR-D3
- 7220 IXR-D1

<b>Description</b>	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.
<b>Context</b>	<a href="#">acl system-filter ipv4-filter entry sequence-id number match fragment boolean</a>
<b>Tree</b>	<a href="#">fragment</a>
<b>Configurable</b>	True

## icmp

**Note:**

This command is available for the following platforms:

- 7220 IXR-D2
- 7220 IXR-D3L
- 7220 IXR-D2L
- 7220 IXR-D3
- 7220 IXR-D1

<b>Description</b>	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.
<b>Context</b>	<a href="#">acl system-filter ipv4-filter entry sequence-id number match icmp</a>
<b>Tree</b>	<a href="#">icmp</a>
<b>Configurable</b>	True

## code number

**Note:**

This command is available for the following platforms:

- 7220 IXR-D2
- 7220 IXR-D3L
- 7220 IXR-D2L
- 7220 IXR-D3
- 7220 IXR-D1

<b>Description</b>	Match if the ICMP code value is any value in the list  Requires ICMP type to be specified because codes are type dependent.
<b>Context</b>	<a href="#">acl system-filter ipv4-filter entry sequence-id number match icmp code number</a>
<b>Tree</b>	<a href="#">code</a>
<b>Configurable</b>	True

**type (*number* | *keyword*)****Note:**

This command is available for the following platforms:

- 7220 IXR-D2
- 7220 IXR-D3L
- 7220 IXR-D2L
- 7220 IXR-D3
- 7220 IXR-D1

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

**Configurable** True

## protocol (*number* | *keyword*)



### Note:

This command is available for the following platforms:

- 7220 IXR-D2
- 7220 IXR-D3L
- 7220 IXR-D2L
- 7220 IXR-D3
- 7220 IXR-D1

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

- 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
- 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

## source-ip



### Note:

This command is available for the following platforms:

- 7220 IXR-D2
- 7220 IXR-D3L
- 7220 IXR-D2L
- 7220 IXR-D3
- 7220 IXR-D1

<b>Description</b>	Packet matching criteria based on source IPv4 address
<b>Context</b>	<a href="#">acl system-filter ipv4-filter entry sequence-id number match source-ip</a>
<b>Tree</b>	<a href="#">source-ip</a>
<b>Configurable</b>	True

## address *string*



### Note:

This command is available for the following platforms:

- 7220 IXR-D2
- 7220 IXR-D3L
- 7220 IXR-D2L
- 7220 IXR-D3
- 7220 IXR-D1

<b>Description</b>	Match a packet if its source IP address logically anded with the inverse of the mask equals this IP address.
<b>Context</b>	<a href="#">acl system-filter ipv4-filter entry sequence-id number match source-ip address string</a>
<b>Tree</b>	<a href="#">address</a>
<b>Configurable</b>	True



## mask *string*

**Note:**

This command is available for the following platforms:

- 7220 IXR-D2
- 7220 IXR-D3L
- 7220 IXR-D2L
- 7220 IXR-D3
- 7220 IXR-D1

<b>Description</b>	Match a packet if its source IP address logically anded with the inverse of this mask equals the configured IP address.
<b>Context</b>	<a href="#">acl system-filter ipv4-filter entry sequence-id number match source-ip mask string</a>
<b>Tree</b>	<a href="#">mask</a>
<b>Configurable</b>	True

## prefix *string*

**Note:**

This command is available for the following platforms:

- 7220 IXR-D2
- 7220 IXR-D3L
- 7220 IXR-D2L
- 7220 IXR-D3
- 7220 IXR-D1

<b>Description</b>	Match a packet if its source IP address is within the specified IPv4 prefix.
<b>Context</b>	<a href="#">acl system-filter ipv4-filter entry sequence-id number match source-ip prefix string</a>
<b>Tree</b>	<a href="#">prefix</a>
<b>Configurable</b>	True

## source-port



### Note:

This command is available for the following platforms:

- 7220 IXR-D2
- 7220 IXR-D3L
- 7220 IXR-D2L
- 7220 IXR-D3
- 7220 IXR-D1

### 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 system-filter ipv4-filter entry sequence-id number match source-port](#)

### Tree

[source-port](#)

### Configurable

True

## operator *keyword*



### Note:

This command is available for the following platforms:

- 7220 IXR-D2
- 7220 IXR-D3L
- 7220 IXR-D2L
- 7220 IXR-D3
- 7220 IXR-D1

### Description

Comparison operator

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

### Context

[acl system-filter ipv4-filter entry sequence-id number match source-port operator keyword](#)

### Tree

[operator](#)

### Options

- le  
Less than or equal.
- ge  
Greater than or equal.

	<ul style="list-style-type: none"> <li>• eq Equal to.</li> </ul>
<b>Configurable</b>	True

## range



### Note:

This command is available for the following platforms:

- 7220 IXR-D2
- 7220 IXR-D3L
- 7220 IXR-D2L
- 7220 IXR-D3
- 7220 IXR-D1

<b>Description</b>	Container used to specify a contiguous range of TCP/UDP port numbers
<b>Context</b>	<a href="#">acl system-filter ipv4-filter entry sequence-id number match source-port range</a>
<b>Tree</b>	<a href="#">range</a>
<b>Configurable</b>	True

## end (*number* | *keyword*)



### Note:

This command is available for the following platforms:

- 7220 IXR-D2
- 7220 IXR-D3L
- 7220 IXR-D2L
- 7220 IXR-D3
- 7220 IXR-D1

<b>Description</b>	The ending port number to include in the range
<b>Context</b>	<a href="#">acl system-filter ipv4-filter entry sequence-id number match source-port range end (number   keyword)</a>
<b>Tree</b>	<a href="#">end</a>
<b>Range</b>	0 to 65535
<b>Options</b>	<ul style="list-style-type: none"> <li>• acap Application Configuration Access Protocol</li> </ul>

- 
- 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)

- 
- Idaps  
Lightweight Directory Access Protocol over TLS/SSL (LDAPS)
  - Idp  
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)
- xns-mail  
Xerox Network Systems (XNS) Mail
- xns-time  
Xerox Network Systems (XNS) Time Protocol
- z3950  
ANSI Z39.50

**Configurable** True

### start (*number* | *keyword*)



**Note:**

This command is available for the following platforms:

- 7220 IXR-D2
- 7220 IXR-D3L
- 7220 IXR-D2L
- 7220 IXR-D3
- 7220 IXR-D1

<b>Description</b>	The starting port number to include in the range
<b>Context</b>	<a href="#">acl system-filter ipv4-filter entry sequence-id</a> <i>number</i> <a href="#">match source-port range start</a> ( <i>number</i>   <i>keyword</i> )
<b>Tree</b>	<a href="#">start</a>
<b>Range</b>	0 to 65535
<b>Options</b>	<ul style="list-style-type: none"> <li>• acap Application Configuration Access Protocol</li> <li>• afp-tcp Apple Filing Protocol over TCP</li> <li>• arns A Remote Network Server System</li> <li>• asf-rmcp ASF Remote Management and Control Protocol &amp; IPMI Remote Management Protocol</li> <li>• ashare AppleShare IP Web Administration</li> </ul>

- 
- 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  
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- 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)
- sgmpp  
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

### value (*number* | *keyword*)



**Note:**

This command is available for the following platforms:

- 7220 IXR-D2
- 7220 IXR-D3L
- 7220 IXR-D2L
- 7220 IXR-D3
- 7220 IXR-D1

<b>Description</b>	A source port number
<b>Context</b>	<a href="#">acl system-filter ipv4-filter entry sequence-id</a> <i>number</i> <a href="#">match source-port value</a> ( <i>number</i>   <i>keyword</i> )
<b>Tree</b>	<a href="#">value</a>
<b>Range</b>	0 to 65535
<b>Options</b>	<ul style="list-style-type: none"> <li>• <b>acap</b> Application Configuration Access Protocol</li> <li>• <b>afp-tcp</b> Apple Filing Protocol over TCP</li> <li>• <b>arns</b> A Remote Network Server System</li> <li>• <b>asf-rmcp</b> ASF Remote Management and Control Protocol &amp; IPMI Remote Management Protocol</li> <li>• <b>ashare</b> AppleShare IP Web Administration</li> <li>• <b>atalk-rm</b> AppleTalk Routing Maintenance</li> <li>• <b>aurp</b> AppleTalk Update-Based Routing Protocol</li> <li>• <b>auth</b> Authentication Service</li> <li>• <b>bfd</b> Bidirectional Forwarding Detection Single Hop</li> </ul>

- bfd-echo  
  BFDD 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
- 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



## tcp-flags *string*



### Note:

This command is available for the following platforms:

- 7220 IXR-D2
- 7220 IXR-D3L
- 7220 IXR-D2L
- 7220 IXR-D3
- 7220 IXR-D1

<b>Description</b>	A logical expression using the &,   and ! logical operators and the TCP flag names: rst, syn and ack.
<b>Context</b>	<a href="#">acl system-filter ipv4-filter entry sequence-id number match tcp-flags string</a>
<b>Tree</b>	<a href="#">tcp-flags</a>
<b>Configurable</b>	True

## statistics



### Note:

This command is available for the following platforms:

- 7220 IXR-D2
- 7220 IXR-D3L
- 7220 IXR-D2L
- 7220 IXR-D3
- 7220 IXR-D1

<b>Description</b>	Statistics container for packets matching the system-filter entry
<b>Context</b>	<a href="#">acl system-filter ipv4-filter entry sequence-id number statistics</a>
<b>Tree</b>	<a href="#">statistics</a>
<b>Configurable</b>	False

## last-clear *string*

**Note:**

This command is available for the following platforms:

- 7220 IXR-D2
- 7220 IXR-D3L
- 7220 IXR-D2L
- 7220 IXR-D3
- 7220 IXR-D1

<b>Description</b>	Time of the last clear command performed by the user at this level
<b>Context</b>	<a href="#">acl system-filter ipv4-filter entry sequence-id number statistics last-clear string</a>
<b>Tree</b>	<a href="#">last-clear</a>
<b>String Length</b>	20 to 32
<b>Configurable</b>	False

## last-match *string*

**Note:**

This command is available for the following platforms:

- 7220 IXR-D2
- 7220 IXR-D3L
- 7220 IXR-D2L
- 7220 IXR-D3
- 7220 IXR-D1

<b>Description</b>	The elapsed time since a packet last matched the entry, considering all subinterfaces.
<b>Context</b>	<a href="#">acl system-filter ipv4-filter entry sequence-id number statistics last-match string</a>
<b>Tree</b>	<a href="#">last-match</a>
<b>String Length</b>	20 to 32
<b>Configurable</b>	False

**matched-packets *number*****Note:**

This command is available for the following platforms:

- 7220 IXR-D2
- 7220 IXR-D3L
- 7220 IXR-D2L
- 7220 IXR-D3
- 7220 IXR-D1

<b>Description</b>	The number of packets matching the entry since it was programmed or since the last clear, summed across all subinterfaces
<b>Context</b>	<a href="#">acl system-filter ipv4-filter entry sequence-id <i>number</i> statistics matched-packets <i>number</i></a>
<b>Tree</b>	<a href="#">matched-packets</a>
<b>Default</b>	0
<b>Configurable</b>	False

**tcam-entries *number*****Note:**

This command is available for the following platforms:

- 7220 IXR-D2
- 7220 IXR-D3L
- 7220 IXR-D2L
- 7220 IXR-D3
- 7220 IXR-D1

<b>Description</b>	The number of TCAM entries required to implement a single instance of this filter rule.
<b>Context</b>	<a href="#">acl system-filter ipv4-filter entry sequence-id <i>number</i> tcam-entries <i>number</i></a>
<b>Tree</b>	<a href="#">tcam-entries</a>
<b>Configurable</b>	False

## last-clear *string*



### Note:

This command is available for the following platforms:

- 7220 IXR-D2
- 7220 IXR-D3L
- 7220 IXR-D2L
- 7220 IXR-D3
- 7220 IXR-D1

<b>Description</b>	Time of the last clear command performed by the user at this level
<b>Context</b>	<a href="#">acl system-filter ipv4-filter last-clear string</a>
<b>Tree</b>	<a href="#">last-clear</a>
<b>String Length</b>	20 to 32
<b>Configurable</b>	False

## ipv6-filter



### Note:

This command is available for the following platforms:

- 7220 IXR-D2
- 7220 IXR-D3L
- 7220 IXR-D2L
- 7220 IXR-D3
- 7220 IXR-D1

<b>Description</b>	Top level container for System IPv6 filters
<b>Context</b>	<a href="#">acl system-filter ipv6-filter</a>
<b>Tree</b>	<a href="#">ipv6-filter</a>
<b>Configurable</b>	True

**entry** *sequence-id number***Note:**

This command is available for the following platforms:

- 7220 IXR-D2
- 7220 IXR-D3L
- 7220 IXR-D2L
- 7220 IXR-D3
- 7220 IXR-D1

<b>Description</b>	List of filter rules.
<b>Context</b>	<a href="#">acl system-filter ipv6-filter entry sequence-id number</a>
<b>Tree</b>	<a href="#">entry</a>
<b>Configurable</b>	True

**sequence-id** *number***Note:**

This command is available for the following platforms:

- 7220 IXR-D2
- 7220 IXR-D3L
- 7220 IXR-D2L
- 7220 IXR-D3
- 7220 IXR-D1

<b>Description</b>	A number to indicate the relative evaluation order of the different entries; lower numbered entries are evaluated before higher numbered entries
<b>Context</b>	<a href="#">acl system-filter ipv6-filter entry sequence-id number</a>
<b>Range</b>	1 to 128
<b>Configurable</b>	True

## action



### Note:

This command is available for the following platforms:

- 7220 IXR-D2
- 7220 IXR-D3L
- 7220 IXR-D2L
- 7220 IXR-D3
- 7220 IXR-D1

<b>Description</b>	Container for the actions to be applied to packets matching the System filter entry.
<b>Context</b>	<a href="#">acl system-filter ipv6-filter entry sequence-id number action</a>
<b>Tree</b>	<a href="#">action</a>
<b>Configurable</b>	True

## accept



### Note:

This command is available for the following platforms:

- 7220 IXR-D2
- 7220 IXR-D3L
- 7220 IXR-D2L
- 7220 IXR-D3
- 7220 IXR-D1

<b>Description</b>	Accept matching packets
<b>Context</b>	<a href="#">acl system-filter ipv6-filter entry sequence-id number action accept</a>
<b>Tree</b>	<a href="#">accept</a>
<b>Configurable</b>	True

## drop



### Note:

This command is available for the following platforms:

- 7220 IXR-D2
- 7220 IXR-D3L
- 7220 IXR-D2L
- 7220 IXR-D3
- 7220 IXR-D1

<b>Description</b>	Drop matching packets without sending any ICMP messages back to the source
<b>Context</b>	<a href="#">acl system-filter ipv6-filter entry sequence-id number action drop</a>
<b>Tree</b>	<a href="#">drop</a>
<b>Configurable</b>	True

## log *boolean*



### Note:

This command is available for the following platforms:

- 7220 IXR-D2
- 7220 IXR-D3L
- 7220 IXR-D2L
- 7220 IXR-D3
- 7220 IXR-D1

<b>Description</b>	When this is true, a log is created for each packet matching the entry The log entry contains the following information: [ <code>'timestamp'</code> , <code>'filter name'</code> , <code>'filter entry sequence-id'</code> , <code>'action: drop'</code> , <code>'IP protocol'</code> , <code>'packet-length'</code> , <code>'source-IP'</code> , <code>'source-port (TCP/UDP packets)'</code> , <code>'dest-IP'</code> , <code>'dest-port (TCP/UDP packets)'</code> , <code>'icmp-type (ICMP packets)'</code> , <code>'icmp-code (ICMP packets)'</code> ]
<b>Context</b>	<a href="#">acl system-filter ipv6-filter entry sequence-id number action drop log boolean</a>
<b>Tree</b>	<a href="#">log</a>
<b>Default</b>	false
<b>Configurable</b>	True

## description *string*



### Note:

This command is available for the following platforms:

- 7220 IXR-D2
- 7220 IXR-D3L
- 7220 IXR-D2L
- 7220 IXR-D3
- 7220 IXR-D1

<b>Description</b>	Description string for the filter entry
<b>Context</b>	<a href="#">acl system-filter ipv6-filter entry sequence-id number description string</a>
<b>Tree</b>	<a href="#">description</a>
<b>String Length</b>	1 to 255
<b>Configurable</b>	True

## match



### Note:

This command is available for the following platforms:

- 7220 IXR-D2
- 7220 IXR-D3L
- 7220 IXR-D2L
- 7220 IXR-D3
- 7220 IXR-D1

<b>Description</b>	Container for the conditions that determine whether a packet matches this entry
<b>Context</b>	<a href="#">acl system-filter ipv6-filter entry sequence-id number match</a>
<b>Tree</b>	<a href="#">match</a>
<b>Configurable</b>	True



## destination-ip



### Note:

This command is available for the following platforms:

- 7220 IXR-D2
- 7220 IXR-D3L
- 7220 IXR-D2L
- 7220 IXR-D3
- 7220 IXR-D1

<b>Description</b>	Packet matching criteria based on destination IPv6 address
<b>Context</b>	<a href="#">acl system-filter ipv6-filter entry sequence-id number match destination-ip</a>
<b>Tree</b>	<a href="#">destination-ip</a>
<b>Configurable</b>	True

## address *string*



### Note:

This command is available for the following platforms:

- 7220 IXR-D2
- 7220 IXR-D3L
- 7220 IXR-D2L
- 7220 IXR-D3
- 7220 IXR-D1

<b>Description</b>	Match a packet if its destination IP address logically anded with the inverse of the mask equals this IP address.
<b>Context</b>	<a href="#">acl system-filter ipv6-filter entry sequence-id number match destination-ip address string</a>
<b>Tree</b>	<a href="#">address</a>
<b>Configurable</b>	True

## mask *string*

**Note:**

This command is available for the following platforms:

- 7220 IXR-D2
- 7220 IXR-D3L
- 7220 IXR-D2L
- 7220 IXR-D3
- 7220 IXR-D1

<b>Description</b>	Match a packet if its destination IP address logically anded with the inverse of this mask equals the configured IP address.
<b>Context</b>	<a href="#">acl system-filter ipv6-filter entry sequence-id number match destination-ip mask string</a>
<b>Tree</b>	<a href="#">mask</a>
<b>Configurable</b>	True

## prefix *string*

**Note:**

This command is available for the following platforms:

- 7220 IXR-D2
- 7220 IXR-D3L
- 7220 IXR-D2L
- 7220 IXR-D3
- 7220 IXR-D1

<b>Description</b>	Match a packet if its destination IP address is within the specified IPv6 prefix.
<b>Context</b>	<a href="#">acl system-filter ipv6-filter entry sequence-id number match destination-ip prefix string</a>
<b>Tree</b>	<a href="#">prefix</a>
<b>Configurable</b>	True

## destination-port



### Note:

This command is available for the following platforms:

- 7220 IXR-D2
- 7220 IXR-D3L
- 7220 IXR-D2L
- 7220 IXR-D3
- 7220 IXR-D1

<b>Description</b>	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.
<b>Context</b>	<a href="#">acl system-filter ipv6-filter entry sequence-id number match destination-port</a>
<b>Tree</b>	<a href="#">destination-port</a>
<b>Configurable</b>	True

## operator keyword



### Note:

This command is available for the following platforms:

- 7220 IXR-D2
- 7220 IXR-D3L
- 7220 IXR-D2L
- 7220 IXR-D3
- 7220 IXR-D1

<b>Description</b>	Comparison operator  eq = equal ge = greater than or equal to le = less than or equal to
<b>Context</b>	<a href="#">acl system-filter ipv6-filter entry sequence-id number match destination-port operator keyword</a>
<b>Tree</b>	<a href="#">operator</a>
<b>Options</b>	<ul style="list-style-type: none"> <li>• le Less than or equal.</li> <li>• ge Greater than or equal.</li> </ul>

	<ul style="list-style-type: none"> <li>• eq Equal to.</li> </ul>
<b>Configurable</b>	True

## range



### Note:

This command is available for the following platforms:

- 7220 IXR-D2
- 7220 IXR-D3L
- 7220 IXR-D2L
- 7220 IXR-D3
- 7220 IXR-D1

<b>Description</b>	Container used to specify a contiguous range of TCP/UDP port numbers
<b>Context</b>	<a href="#">acl system-filter ipv6-filter entry sequence-id number match destination-port range</a>
<b>Tree</b>	<a href="#">range</a>
<b>Configurable</b>	True

## end (*number* | *keyword*)



### Note:

This command is available for the following platforms:

- 7220 IXR-D2
- 7220 IXR-D3L
- 7220 IXR-D2L
- 7220 IXR-D3
- 7220 IXR-D1

<b>Description</b>	The ending port number to include in the range
<b>Context</b>	<a href="#">acl system-filter ipv6-filter entry sequence-id number match destination-port range end (number   keyword)</a>
<b>Tree</b>	<a href="#">end</a>
<b>Range</b>	0 to 65535
<b>Options</b>	<ul style="list-style-type: none"> <li>• acap Application Configuration Access Protocol</li> </ul>

- 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

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- 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)



- Idaps  
Lightweight Directory Access Protocol over TLS/SSL (LDAPS)
- Idp  
Label Distribution Protocol
- Imp  
Link Management Protocol (LMP)
- login  
rlogin (TCP) or Who (UDP)
- lpd  
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- lsp-ping  
MPLS LSP-echo
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Mac OS X Server administration
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- matip-b  
Mapping of Airline Traffic over Internet Protocol (MATIP) type B
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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)
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  - 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)
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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)
- xns-mail  
Xerox Network Systems (XNS) Mail
- xns-time  
Xerox Network Systems (XNS) Time Protocol
- z3950  
ANSI Z39.50

**Configurable** True

### start (*number* | *keyword*)



**Note:**

This command is available for the following platforms:

- 7220 IXR-D2
- 7220 IXR-D3L
- 7220 IXR-D2L
- 7220 IXR-D3
- 7220 IXR-D1

<b>Description</b>	The starting port number to include in the range
<b>Context</b>	<a href="#">acl system-filter ipv6-filter entry sequence-id</a> <i>number</i> <a href="#">match destination-port range start</a> ( <i>number</i>   <i>keyword</i> )
<b>Tree</b>	<a href="#">start</a>
<b>Range</b>	0 to 65535
<b>Options</b>	<ul style="list-style-type: none"> <li>• acap Application Configuration Access Protocol</li> <li>• afp-tcp Apple Filing Protocol over TCP</li> <li>• arns A Remote Network Server System</li> <li>• asf-rmcp ASF Remote Management and Control Protocol &amp; IPMI Remote Management Protocol</li> <li>• ashare AppleShare IP Web Administration</li> </ul>

- 
- 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)
- 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
- 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

### value (*number* | *keyword*)



**Note:**

This command is available for the following platforms:

- 7220 IXR-D2
- 7220 IXR-D3L
- 7220 IXR-D2L
- 7220 IXR-D3
- 7220 IXR-D1

<b>Description</b>	A destination port number
<b>Context</b>	<a href="#">acl system-filter ipv6-filter entry sequence-id number match destination-port value (number   keyword)</a>
<b>Tree</b>	<a href="#">value</a>
<b>Range</b>	0 to 65535
<b>Options</b>	<ul style="list-style-type: none"> <li>• <b>acap</b> Application Configuration Access Protocol</li> <li>• <b>afp-tcp</b> Apple Filing Protocol over TCP</li> <li>• <b>arns</b> A Remote Network Server System</li> <li>• <b>asf-rmcp</b> ASF Remote Management and Control Protocol &amp; IPMI Remote Management Protocol</li> <li>• <b>ashare</b> AppleShare IP Web Administration</li> <li>• <b>atalk-rm</b> AppleTalk Routing Maintenance</li> <li>• <b>aurp</b> AppleTalk Update-Based Routing Protocol</li> <li>• <b>auth</b> Authentication Service</li> <li>• <b>bfd</b> Bidirectional Forwarding Detection Single Hop</li> </ul>



- 
- bfd-echo  
  BFDD 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
- 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

## icmp6



### Note:

This command is available for the following platforms:

- 7220 IXR-D2
- 7220 IXR-D3L
- 7220 IXR-D2L
- 7220 IXR-D3
- 7220 IXR-D1

<b>Description</b>	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.
<b>Context</b>	<a href="#">acl system-filter ipv6-filter entry sequence-id number match icmp6</a>
<b>Tree</b>	<a href="#">icmp6</a>
<b>Configurable</b>	True

## code number



### Note:

This command is available for the following platforms:

- 7220 IXR-D2
- 7220 IXR-D3L
- 7220 IXR-D2L
- 7220 IXR-D3
- 7220 IXR-D1

<b>Description</b>	Match if the ICMPv6 code value is any value in the list  Requires ICMPv6 type to be specified because codes are type dependent.
<b>Context</b>	<a href="#">acl system-filter ipv6-filter entry sequence-id number match icmp6 code number</a>
<b>Tree</b>	<a href="#">code</a>
<b>Configurable</b>	True

**type (*number* | *keyword*)****Note:**

This command is available for the following platforms:

- 7220 IXR-D2
- 7220 IXR-D3L
- 7220 IXR-D2L
- 7220 IXR-D3
- 7220 IXR-D1

<b>Description</b>	Match a single ICMPv6 type value
<b>Context</b>	<a href="#">acl system-filter ipv6-filter entry sequence-id</a> <i>number</i> <a href="#">match icmp6 type</a> ( <i>number</i>   <i>keyword</i> )
<b>Tree</b>	<a href="#">type</a>
<b>Range</b>	0 to 255
<b>Options</b>	<ul style="list-style-type: none"> <li>• <code>dest-unreachable</code> ICMPv6 Destination Unreachable</li> <li>• <code>packet-too-big</code> ICMPv6 Packet Too Big</li> <li>• <code>time-exceeded</code> ICMPv6 Time Exceeded</li> <li>• <code>param-problem</code> Parameter Problem</li> <li>• <code>echo-request</code> ICMPv6 Echo Request</li> <li>• <code>echo-reply</code> ICMPv6 Echo Reply</li> <li>• <code>mld-query</code> Multicast Listener Discovery Query</li> <li>• <code>mld-report</code> Multicast Listener Discovery Report</li> <li>• <code>mld-done</code> Multicast Listener Discovery Done</li> <li>• <code>router-solicit</code> ICMPv6 Router Solicitation</li> <li>• <code>router-advertise</code> ICMPv6 Router Advertisement</li> </ul>

- 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

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



**Note:**

This command is available for the following platforms:

- 7220 IXR-D2
- 7220 IXR-D3L
- 7220 IXR-D2L
- 7220 IXR-D3
- 7220 IXR-D1

**Description** An IPv6 packet matches this condition if its first next-header field (in the IPv6 fixed header) contains the specified value

**Context** [acl system-filter ipv6-filter entry sequence-id](#) *number* [match next-header](#) (*number* | *keyword*)

**Tree** [next-header](#)

---

<b>Range</b>	0 to 255
<b>Options</b>	<ul style="list-style-type: none"><li>• ipv6-hop IPv6 hop-by-hop option</li><li>• icmp Internet Control Message Protocol</li><li>• igmp Internet Group Management Protocol</li><li>• ggp Gateway-to-Gateway Protocol</li><li>• ipv4 IPv4 encapsulation</li><li>• st Stream Protocol</li><li>• tcp Transmission Control Protocol</li><li>• egp Exterior Gateway Protocol</li><li>• igp Interior Gateway Protocol</li><li>• udp User Datagram Protocol</li><li>• ipv6 IPv6 encapsulation</li><li>• idrp Inter-Domain Routing Protocol</li><li>• rsvp Resource Reservation Protocol</li><li>• gre Generic Routing Encapsulation</li><li>• esp IPSec Encapsulating Security Payload</li><li>• ah IPSec Authentication Header</li><li>• icmp6 IPSec Authentication Header</li><li>• no-next-hdr No Next Header for IPv6</li></ul>

- ipv6-dest-opts  
Destination Options for IPv6
- eigrp  
Cisco EIGRP
- 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

## source-ip



### Note:

This command is available for the following platforms:

- 7220 IXR-D2
- 7220 IXR-D3L
- 7220 IXR-D2L
- 7220 IXR-D3
- 7220 IXR-D1

<b>Description</b>	Packet matching criteria based on source IPv6 address
<b>Context</b>	<a href="#">acl system-filter ipv6-filter entry sequence-id</a> <i>number</i> <a href="#">match source-ip</a>
<b>Tree</b>	<a href="#">source-ip</a>
<b>Configurable</b>	True

## address *string*

**Note:**

This command is available for the following platforms:

- 7220 IXR-D2
- 7220 IXR-D3L
- 7220 IXR-D2L
- 7220 IXR-D3
- 7220 IXR-D1

<b>Description</b>	Match a packet if its source IP address logically anded with the inverse of the mask equals this IP address.
<b>Context</b>	<a href="#">acl system-filter ipv6-filter entry sequence-id number match source-ip address string</a>
<b>Tree</b>	<a href="#">address</a>
<b>Configurable</b>	True

## mask *string*

**Note:**

This command is available for the following platforms:

- 7220 IXR-D2
- 7220 IXR-D3L
- 7220 IXR-D2L
- 7220 IXR-D3
- 7220 IXR-D1

<b>Description</b>	Match a packet if its source IP address logically anded with the inverse of this mask equals the configured IP address.
<b>Context</b>	<a href="#">acl system-filter ipv6-filter entry sequence-id number match source-ip mask string</a>
<b>Tree</b>	<a href="#">mask</a>
<b>Configurable</b>	True

## prefix string



### Note:

This command is available for the following platforms:

- 7220 IXR-D2
- 7220 IXR-D3L
- 7220 IXR-D2L
- 7220 IXR-D3
- 7220 IXR-D1

<b>Description</b>	Match a packet if its source IP address is within the specified IPv6 prefix.
<b>Context</b>	<a href="#">acl system-filter ipv6-filter entry sequence-id number match source-ip prefix string</a>
<b>Tree</b>	<a href="#">prefix</a>
<b>Configurable</b>	True

## source-port



### Note:

This command is available for the following platforms:

- 7220 IXR-D2
- 7220 IXR-D3L
- 7220 IXR-D2L
- 7220 IXR-D3
- 7220 IXR-D1

<b>Description</b>	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.
<b>Context</b>	<a href="#">acl system-filter ipv6-filter entry sequence-id number match source-port</a>
<b>Tree</b>	<a href="#">source-port</a>
<b>Configurable</b>	True



## operator *keyword*



### Note:

This command is available for the following platforms:

- 7220 IXR-D2
- 7220 IXR-D3L
- 7220 IXR-D2L
- 7220 IXR-D3
- 7220 IXR-D1

<b>Description</b>	Comparison operator eq = equal ge = greater than or equal to le = less than or equal to
<b>Context</b>	<a href="#">acl system-filter ipv6-filter entry sequence-id number match source-port operator keyword</a>
<b>Tree</b>	<a href="#">operator</a>
<b>Options</b>	<ul style="list-style-type: none"> <li>• le Less than or equal.</li> <li>• ge Greater than or equal.</li> <li>• eq Equal to.</li> </ul>
<b>Configurable</b>	True

## range



### Note:

This command is available for the following platforms:

- 7220 IXR-D2
- 7220 IXR-D3L
- 7220 IXR-D2L
- 7220 IXR-D3
- 7220 IXR-D1

<b>Description</b>	Container used to specify a contiguous range of TCP/UDP port numbers
<b>Context</b>	<a href="#">acl system-filter ipv6-filter entry sequence-id number match source-port range</a>
<b>Tree</b>	<a href="#">range</a>
<b>Configurable</b>	True

**end (*number* | *keyword*)****Note:**

This command is available for the following platforms:

- 7220 IXR-D2
- 7220 IXR-D3L
- 7220 IXR-D2L
- 7220 IXR-D3
- 7220 IXR-D1

<b>Description</b>	The ending port number to include in the range
<b>Context</b>	<a href="#">acl</a> <a href="#">system-filter</a> <a href="#">ipv6-filter</a> <a href="#">entry</a> <a href="#">sequence-id</a> <i>number</i> <a href="#">match</a> <a href="#">source-port</a> <a href="#">range</a> <b>end</b> ( <i>number</i>   <i>keyword</i> )
<b>Tree</b>	<a href="#">end</a>
<b>Range</b>	0 to 65535
<b>Options</b>	<ul style="list-style-type: none"> <li>• <code>acap</code> Application Configuration Access Protocol</li> <li>• <code>afp-tcp</code> Apple Filing Protocol over TCP</li> <li>• <code>arns</code> A Remote Network Server System</li> <li>• <code>asf-rmcp</code> ASF Remote Management and Control Protocol &amp; IPMI Remote Management Protocol</li> <li>• <code>ashare</code> AppleShare IP Web Administration</li> <li>• <code>atalk-rm</code> AppleTalk Routing Maintenance</li> <li>• <code>aurp</code> AppleTalk Update-Based Routing Protocol</li> <li>• <code>auth</code> Authentication Service</li> <li>• <code>bfd</code> Bidirectional Forwarding Detection Single Hop</li> <li>• <code>bfd-echo</code> BFD Echo</li> </ul>

- 
- 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
- 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

**start (*number* | *keyword*)****Note:**

This command is available for the following platforms:

- 7220 IXR-D2
- 7220 IXR-D3L
- 7220 IXR-D2L
- 7220 IXR-D3
- 7220 IXR-D1

<b>Description</b>	The starting port number to include in the range
<b>Context</b>	<a href="#">acl system-filter ipv6-filter entry sequence-id number match source-port range start (<i>number</i>   <i>keyword</i>)</a>
<b>Tree</b>	<a href="#">start</a>
<b>Range</b>	0 to 65535
<b>Options</b>	<ul style="list-style-type: none"> <li>• <code>acap</code> Application Configuration Access Protocol</li> <li>• <code>afp-tcp</code> Apple Filing Protocol over TCP</li> <li>• <code>arns</code> A Remote Network Server System</li> <li>• <code>asf-rmcp</code> ASF Remote Management and Control Protocol &amp; IPMI Remote Management Protocol</li> <li>• <code>ashare</code> AppleShare IP Web Administration</li> <li>• <code>atalk-rm</code> AppleTalk Routing Maintenance</li> <li>• <code>aurp</code> AppleTalk Update-Based Routing Protocol</li> <li>• <code>auth</code> Authentication Service</li> <li>• <code>bfd</code> Bidirectional Forwarding Detection Single Hop</li> <li>• <code>bfd-echo</code> BFD Echo</li> <li>• <code>bftp</code> Background File Transfer Program</li> </ul>

- 
- 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
- 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

**value** (*number* | *keyword*)



**Note:**

This command is available for the following platforms:

- 7220 IXR-D2
- 7220 IXR-D3L
- 7220 IXR-D2L
- 7220 IXR-D3
- 7220 IXR-D1

**Description** A source port number

---

<b>Context</b>	<a href="#">acl system-filter ipv6-filter entry sequence-id number match source-port value (number   keyword)</a>
<b>Tree</b>	<a href="#">value</a>
<b>Range</b>	0 to 65535
<b>Options</b>	<ul style="list-style-type: none"> <li>• <a href="#">acap</a> Application Configuration Access Protocol</li> <li>• <a href="#">afp-tcp</a> Apple Filing Protocol over TCP</li> <li>• <a href="#">arns</a> A Remote Network Server System</li> <li>• <a href="#">asf-rmcp</a> ASF Remote Management and Control Protocol &amp; IPMI Remote Management Protocol</li> <li>• <a href="#">ashare</a> AppleShare IP Web Administration</li> <li>• <a href="#">atalk-rm</a> AppleTalk Routing Maintenance</li> <li>• <a href="#">aurp</a> AppleTalk Update-Based Routing Protocol</li> <li>• <a href="#">auth</a> Authentication Service</li> <li>• <a href="#">bfd</a> Bidirectional Forwarding Detection Single Hop</li> <li>• <a href="#">bfd-echo</a> BFD Echo</li> <li>• <a href="#">bftp</a> Background File Transfer Program</li> <li>• <a href="#">bgmp</a> Border Gateway Multicast Protocol</li> <li>• <a href="#">bgp</a> Border Gateway Protocol</li> <li>• <a href="#">bootpc</a> Bootstrap Protocol (BOOTP) Client and DHCP Client</li> <li>• <a href="#">bootps</a> Bootstrap Protocol (BOOTP) Server and DHCP Server</li> <li>• <a href="#">ccso-ns</a> CCSO Nameserver</li> </ul>

- 
- 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

- 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

### tcp-flags *string*



**Note:**

This command is available for the following platforms:

- 7220 IXR-D2
- 7220 IXR-D3L
- 7220 IXR-D2L
- 7220 IXR-D3
- 7220 IXR-D1

**Description** A logical expression using the &, | and ! logical operators and the TCP flag names: rst, syn and ack.

**Context** [acl system-filter ipv6-filter entry sequence-id number match tcp-flags string](#)

**Tree** [tcp-flags](#)

**Configurable** True

## statistics



### Note:

This command is available for the following platforms:

- 7220 IXR-D2
- 7220 IXR-D3L
- 7220 IXR-D2L
- 7220 IXR-D3
- 7220 IXR-D1

<b>Description</b>	Statistics container for packets matching the system-filter entry
<b>Context</b>	<a href="#">acl system-filter ipv6-filter entry sequence-id number statistics</a>
<b>Tree</b>	<a href="#">statistics</a>
<b>Configurable</b>	False

## last-clear *string*



### Note:

This command is available for the following platforms:

- 7220 IXR-D2
- 7220 IXR-D3L
- 7220 IXR-D2L
- 7220 IXR-D3
- 7220 IXR-D1

<b>Description</b>	Time of the last clear command performed by the user at this level
<b>Context</b>	<a href="#">acl system-filter ipv6-filter entry sequence-id number statistics last-clear string</a>
<b>Tree</b>	<a href="#">last-clear</a>
<b>String Length</b>	20 to 32
<b>Configurable</b>	False



## last-match *string*

**Note:**

This command is available for the following platforms:

- 7220 IXR-D2
- 7220 IXR-D3L
- 7220 IXR-D2L
- 7220 IXR-D3
- 7220 IXR-D1

<b>Description</b>	The elapsed time since a packet last matched the entry, considering all subinterfaces.
<b>Context</b>	<a href="#">acl system-filter ipv6-filter entry sequence-id number statistics last-match string</a>
<b>Tree</b>	<a href="#">last-match</a>
<b>String Length</b>	20 to 32
<b>Configurable</b>	False

## matched-packets *number*

**Note:**

This command is available for the following platforms:

- 7220 IXR-D2
- 7220 IXR-D3L
- 7220 IXR-D2L
- 7220 IXR-D3
- 7220 IXR-D1

<b>Description</b>	The number of packets matching the entry since it was programmed or since the last clear, summed across all subinterfaces
<b>Context</b>	<a href="#">acl system-filter ipv6-filter entry sequence-id number statistics matched-packets number</a>
<b>Tree</b>	<a href="#">matched-packets</a>
<b>Default</b>	0
<b>Configurable</b>	False

**tcam-entries *number*****Note:**

This command is available for the following platforms:

- 7220 IXR-D2
- 7220 IXR-D3L
- 7220 IXR-D2L
- 7220 IXR-D3
- 7220 IXR-D1

<b>Description</b>	The number of TCAM entries required to implement a single instance of this filter rule.
<b>Context</b>	<a href="#">acl system-filter ipv6-filter entry sequence-id</a> <i>number</i> <a href="#">tcam-entries</a> <i>number</i>
<b>Tree</b>	<a href="#">tcam-entries</a>
<b>Configurable</b>	False

**last-clear *string*****Note:**

This command is available for the following platforms:

- 7220 IXR-D2
- 7220 IXR-D3L
- 7220 IXR-D2L
- 7220 IXR-D3
- 7220 IXR-D1

<b>Description</b>	Time of the last clear command performed by the user at this level
<b>Context</b>	<a href="#">acl system-filter ipv6-filter last-clear</a> <i>string</i>
<b>Tree</b>	<a href="#">last-clear</a>
<b>String Length</b>	20 to 32
<b>Configurable</b>	False

**tcam-profile *keyword***

<b>Description</b>	Specify the TCAM resource management profile
<b>Context</b>	<a href="#">acl tcam-profile</a> <i>keyword</i>
<b>Tree</b>	<a href="#">tcam-profile</a>

---

<b>Options</b>	<ul style="list-style-type: none"><li>• default Default allocation that provides twice as many resources to ingress ACLs as egress ACLs</li><li>• ipv4-egress-scaled Alternate allocation that provides more resources to IPv4 egress ACLs than any other application</li></ul>
<b>Configurable</b>	True

## 4 bfd

```

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
- 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
- subscribed-protocols string
+ subinterface id string
+ admin-state keyword
+ desired-minimum-transmit-interval number
+ detection-multiplier number
+ minimum-echo-receive-interval number
+ required-minimum-receive number
- total-bfd-sessions number
- total-unmatched-bfd-packets number

```

## 4.1 bfd Descriptions

### bfd

<b>Description</b>	Context to configure BFD parameters and report BFD sessions state
<b>Context</b>	<a href="#">bfd</a>
<b>Tree</b>	<a href="#">bfd</a>
<b>Configurable</b>	True

### micro-bfd-sessions



**Note:**

This command is available for the following platforms:

- 7220 IXR-D2
- 7250 IXR-10
- 7220 IXR-D3L
- 7220 IXR-D2L
- 7220 IXR-H3
- 7220 IXR-H2
- 7220 IXR-D3
- 7250 IXR-6
- 7220 IXR-D1

<b>Description</b>	Context to configure micro-BFD session parameters and report sessions state
<b>Context</b>	<a href="#">bfd micro-bfd-sessions</a>
<b>Tree</b>	<a href="#">micro-bfd-sessions</a>
<b>Configurable</b>	True

**lag-interface** *name reference***Note:**

This command is available for the following platforms:

- 7220 IXR-D2
- 7250 IXR-10
- 7220 IXR-D3L
- 7220 IXR-D2L
- 7220 IXR-H3
- 7220 IXR-H2
- 7220 IXR-D3
- 7250 IXR-6
- 7220 IXR-D1

<b>Description</b>	List of ethernet interface references to associate a micro-BFD session config and state
<b>Context</b>	<a href="#">bfd micro-bfd-sessions lag-interface name reference</a>
<b>Tree</b>	<a href="#">lag-interface</a>
<b>Configurable</b>	True

**name** *reference***Note:**

This command is available for the following platforms:

- 7220 IXR-D2
- 7250 IXR-10
- 7220 IXR-D3L
- 7220 IXR-D2L
- 7220 IXR-H3
- 7220 IXR-H2
- 7220 IXR-D3
- 7250 IXR-6
- 7220 IXR-D1

<b>Description</b>	Reference ID for associated lag interface Example: lag1 (Reference Interface lag1).
<b>Context</b>	<a href="#">bfd micro-bfd-sessions lag-interface name reference</a>
<b>Reference</b>	<a href="#">interface name string</a>

**Configurable** True

### admin-state *keyword*



**Note:**

This command is available for the following platforms:

- 7220 IXR-D2
- 7250 IXR-10
- 7220 IXR-D3L
- 7220 IXR-D2L
- 7220 IXR-H3
- 7220 IXR-H2
- 7220 IXR-D3
- 7250 IXR-6
- 7220 IXR-D1

<b>Description</b>	Administratively enable or disable BFD for this subinterface
<b>Context</b>	<a href="#">bfd micro-bfd-sessions lag-interface name reference admin-state keyword</a>
<b>Tree</b>	<a href="#">admin-state</a>
<b>Default</b>	disable
<b>Options</b>	<ul style="list-style-type: none"> <li>• enable</li> <li>• disable</li> </ul>
<b>Configurable</b>	True

**desired-minimum-transmit-interval *number*****Note:**

This command is available for the following platforms:

- 7220 IXR-D2
- 7250 IXR-10
- 7220 IXR-D3L
- 7220 IXR-D2L
- 7220 IXR-H3
- 7220 IXR-H2
- 7220 IXR-D3
- 7250 IXR-6
- 7220 IXR-D1

<b>Description</b>	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.
<b>Context</b>	<a href="#">bfd micro-bfd-sessions lag-interface name</a> <i>reference</i> <a href="#">desired-minimum-transmit-interval</a> <i>number</i>
<b>Tree</b>	<a href="#">desired-minimum-transmit-interval</a>
<b>Range</b>	10000 to 100000000
<b>Default</b>	1000000
<b>Units</b>	microseconds
<b>Configurable</b>	True



**detection-multiplier *number*****Note:**

This command is available for the following platforms:

- 7220 IXR-D2
- 7250 IXR-10
- 7220 IXR-D3L
- 7220 IXR-D2L
- 7220 IXR-H3
- 7220 IXR-H2
- 7220 IXR-D3
- 7250 IXR-6
- 7220 IXR-D1

<b>Description</b>	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.
<b>Context</b>	<a href="#">bfd micro-bfd-sessions lag-interface name</a> <i>reference</i> <a href="#">detection-multiplier number</a>
<b>Tree</b>	<a href="#">detection-multiplier</a>
<b>Range</b>	3 to 20
<b>Default</b>	3
<b>Configurable</b>	True

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

This command is available for the following platforms:

- 7220 IXR-D2
- 7250 IXR-10
- 7220 IXR-D3L
- 7220 IXR-D2L
- 7220 IXR-H3
- 7220 IXR-H2
- 7220 IXR-D3
- 7250 IXR-6
- 7220 IXR-D1

<b>Description</b>	IP address to be used as source address in BFD packets
<b>Context</b>	<a href="#">bfd micro-bfd-sessions lag-interface name</a> <i>reference</i> <a href="#">local-address</a> ( <i>ipv4-address   ipv6-address</i> )
<b>Tree</b>	<a href="#">local-address</a>
<b>Configurable</b>	True

### member-interface [name string](#)



**Note:**

This command is available for the following platforms:

- 7220 IXR-D2
- 7250 IXR-10
- 7220 IXR-D3L
- 7220 IXR-D2L
- 7220 IXR-H3
- 7220 IXR-H2
- 7220 IXR-D3
- 7250 IXR-6
- 7220 IXR-D1

<b>Description</b>	List of ethernet interface references to associate a micro-BFD session config and state
<b>Context</b>	<a href="#">bfd micro-bfd-sessions lag-interface name</a> <i>reference</i> <a href="#">member-interface name string</a>
<b>Tree</b>	<a href="#">member-interface</a>
<b>Configurable</b>	False

**name *string*****Note:**

This command is available for the following platforms:

- 7220 IXR-D2
- 7250 IXR-10
- 7220 IXR-D3L
- 7220 IXR-D2L
- 7220 IXR-H3
- 7220 IXR-H2
- 7220 IXR-D3
- 7250 IXR-6
- 7220 IXR-D1

<b>Description</b>	Reference ID for associated ethernet interface Example: ethernet-2/1 (Reference Interface ethernet-2/1).
<b>Context</b>	<a href="#">bfd</a> <a href="#">micro-bfd-sessions</a> <a href="#">lag-interface name</a> <i>reference</i> <a href="#">member-interface name</a> <i>string</i>
<b>Configurable</b>	False

**active-receive-interval *number*****Note:**

This command is available for the following platforms:

- 7220 IXR-D2
- 7250 IXR-10
- 7220 IXR-D3L
- 7220 IXR-D2L
- 7220 IXR-H3
- 7220 IXR-H2
- 7220 IXR-D3
- 7250 IXR-6
- 7220 IXR-D1

<b>Description</b>	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.
<b>Context</b>	<a href="#">bfd</a> <a href="#">micro-bfd-sessions</a> <a href="#">lag-interface name</a> <i>reference</i> <a href="#">member-interface name</a> <i>string</i> <a href="#">active-receive-interval</a> <i>number</i>

<b>Tree</b>	<a href="#">active-receive-interval</a>
<b>Configurable</b>	False

### **active-transmit-interval *number***



**Note:**

This command is available for the following platforms:

- 7220 IXR-D2
- 7250 IXR-10
- 7220 IXR-D3L
- 7220 IXR-D2L
- 7220 IXR-H3
- 7220 IXR-H2
- 7220 IXR-D3
- 7250 IXR-6
- 7220 IXR-D1

<b>Description</b>	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
<b>Context</b>	<a href="#">bfd micro-bfd-sessions lag-interface name</a> <i>reference</i> <a href="#">member-interface name</a> <i>string</i> <a href="#">active-transmit-interval</a> <i>number</i>
<b>Tree</b>	<a href="#">active-transmit-interval</a>
<b>Configurable</b>	False

## async

**Note:**

This command is available for the following platforms:

- 7220 IXR-D2
- 7250 IXR-10
- 7220 IXR-D3L
- 7220 IXR-D2L
- 7220 IXR-H3
- 7220 IXR-H2
- 7220 IXR-D3
- 7250 IXR-6
- 7220 IXR-D1

<b>Description</b>	Container for async BFD operational state parameters
<b>Context</b>	<a href="#">bfd micro-bfd-sessions lag-interface name</a> <i>reference</i> <a href="#">member-interface name</a> <i>string</i> <a href="#">async</a>
<b>Tree</b>	<a href="#">async</a>
<b>Configurable</b>	False

## last-clear *string*

**Note:**

This command is available for the following platforms:

- 7220 IXR-D2
- 7250 IXR-10
- 7220 IXR-D3L
- 7220 IXR-D2L
- 7220 IXR-H3
- 7220 IXR-H2
- 7220 IXR-D3
- 7250 IXR-6
- 7220 IXR-D1

<b>Description</b>	Timestamp of the last time the session counters were cleared.
<b>Context</b>	<a href="#">bfd micro-bfd-sessions lag-interface name</a> <i>reference</i> <a href="#">member-interface name</a> <i>string</i> <a href="#">async</a> <a href="#">last-clear</a> <i>string</i>
<b>Tree</b>	<a href="#">last-clear</a>

<b>String Length</b>	20 to 32
<b>Configurable</b>	False

### last-packet-received *string*



**Note:**

This command is available for the following platforms:

- 7220 IXR-D2
- 7250 IXR-10
- 7220 IXR-D3L
- 7220 IXR-D2L
- 7220 IXR-H3
- 7220 IXR-H2
- 7220 IXR-D3
- 7250 IXR-6
- 7220 IXR-D1

<b>Description</b>	Timestamp for when the last BFD packet was received for this session
<b>Context</b>	<a href="#">bfd</a> <a href="#">micro-bfd-sessions</a> <a href="#">lag-interface name</a> <i>reference</i> <a href="#">member-interface name</a> <i>string</i> <a href="#">async</a> <a href="#">last-packet-received</a> <i>string</i>
<b>Tree</b>	<a href="#">last-packet-received</a>
<b>String Length</b>	20 to 32
<b>Configurable</b>	False

**last-packet-transmitted *string*****Note:**

This command is available for the following platforms:

- 7220 IXR-D2
- 7250 IXR-10
- 7220 IXR-D3L
- 7220 IXR-D2L
- 7220 IXR-H3
- 7220 IXR-H2
- 7220 IXR-D3
- 7250 IXR-6
- 7220 IXR-D1

<b>Description</b>	Timestamp for when the last BFD packet was transmitted for this session
<b>Context</b>	<a href="#">bfd</a> <a href="#">micro-bfd-sessions</a> <a href="#">lag-interface name</a> <i>reference</i> <a href="#">member-interface name</a> <i>string</i> <a href="#">async</a> <a href="#">last-packet-transmitted</a> <i>string</i>
<b>Tree</b>	<a href="#">last-packet-transmitted</a>
<b>String Length</b>	20 to 32
<b>Configurable</b>	False

**received-errored-packets *number*****Note:**

This command is available for the following platforms:

- 7220 IXR-D2
- 7250 IXR-10
- 7220 IXR-D3L
- 7220 IXR-D2L
- 7220 IXR-H3
- 7220 IXR-H2
- 7220 IXR-D3
- 7250 IXR-6
- 7220 IXR-D1

<b>Description</b>	Counter for the number of BFD packets received with BFD level errors
<b>Context</b>	<a href="#">bfd</a> <a href="#">micro-bfd-sessions</a> <a href="#">lag-interface name</a> <i>reference</i> <a href="#">member-interface name</a> <i>string</i> <a href="#">async</a> <a href="#">received-errored-packets</a> <i>number</i>

<b>Tree</b>	<a href="#">received-errored-packets</a>
<b>Default</b>	0
<b>Configurable</b>	False

## received-packets *number*



### Note:

This command is available for the following platforms:

- 7220 IXR-D2
- 7250 IXR-10
- 7220 IXR-D3L
- 7220 IXR-D2L
- 7220 IXR-H3
- 7220 IXR-H2
- 7220 IXR-D3
- 7250 IXR-6
- 7220 IXR-D1

<b>Description</b>	Counter for the number of BFD packets received for this session
<b>Context</b>	<a href="#">bfd micro-bfd-sessions lag-interface name</a> <i>reference</i> <a href="#">member-interface name</a> <i>string</i> <a href="#">async received-packets</a> <i>number</i>
<b>Tree</b>	<a href="#">received-packets</a>
<b>Default</b>	0
<b>Configurable</b>	False



**transmitted-packets *number*****Note:**

This command is available for the following platforms:

- 7220 IXR-D2
- 7250 IXR-10
- 7220 IXR-D3L
- 7220 IXR-D2L
- 7220 IXR-H3
- 7220 IXR-H2
- 7220 IXR-D3
- 7250 IXR-6
- 7220 IXR-D1

<b>Description</b>	Counter for the number of BFD packets transmitted for this session
<b>Context</b>	<a href="#">bfd micro-bfd-sessions lag-interface name reference member-interface name string async transmitted-packets number</a>
<b>Tree</b>	<a href="#">transmitted-packets</a>
<b>Default</b>	0
<b>Configurable</b>	False

**up-transitions *number*****Note:**

This command is available for the following platforms:

- 7220 IXR-D2
- 7250 IXR-10
- 7220 IXR-D3L
- 7220 IXR-D2L
- 7220 IXR-H3
- 7220 IXR-H2
- 7220 IXR-D3
- 7250 IXR-6
- 7220 IXR-D1

<b>Description</b>	Counter for the number of UP transitions for this BFD session
<b>Context</b>	<a href="#">bfd micro-bfd-sessions lag-interface name reference member-interface name string async up-transitions number</a>

<b>Tree</b>	<a href="#">up-transitions</a>
<b>Default</b>	0
<b>Configurable</b>	False

### **failure-transitions *number***



**Note:**

This command is available for the following platforms:

- 7220 IXR-D2
- 7250 IXR-10
- 7220 IXR-D3L
- 7220 IXR-D2L
- 7220 IXR-H3
- 7220 IXR-H2
- 7220 IXR-D3
- 7250 IXR-6
- 7220 IXR-D1

<b>Description</b>	The number of times that the BFD session has transitioned out of the up state
<b>Context</b>	<a href="#">bfd micro-bfd-sessions lag-interface name</a> <i>reference</i> <a href="#">member-interface name</a> <i>string failure-transitions number</i>
<b>Tree</b>	<a href="#">failure-transitions</a>
<b>Configurable</b>	False

**last-failure-time *string*****Note:**

This command is available for the following platforms:

- 7220 IXR-D2
- 7250 IXR-10
- 7220 IXR-D3L
- 7220 IXR-D2L
- 7220 IXR-H3
- 7220 IXR-H2
- 7220 IXR-D3
- 7250 IXR-6
- 7220 IXR-D1

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

**last-state-transition *string*****Note:**

This command is available for the following platforms:

- 7220 IXR-D2
- 7250 IXR-10
- 7220 IXR-D3L
- 7220 IXR-D2L
- 7220 IXR-H3
- 7220 IXR-H2
- 7220 IXR-D3
- 7250 IXR-6
- 7220 IXR-D1

<b>Description</b>	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.
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<b>Context</b>	<a href="#">bfd micro-bfd-sessions lag-interface name</a> <i>reference</i> <a href="#">member-interface name</a> <i>string</i> <a href="#">last-state-transition</a> <i>string</i>
<b>Tree</b>	<a href="#">last-state-transition</a>
<b>String Length</b>	20 to 32
<b>Configurable</b>	False

### local-diagnostic-code *keyword*



**Note:**

This command is available for the following platforms:

- 7220 IXR-D2
- 7250 IXR-10
- 7220 IXR-D3L
- 7220 IXR-D2L
- 7220 IXR-H3
- 7220 IXR-H2
- 7220 IXR-D3
- 7250 IXR-6
- 7220 IXR-D1

<b>Description</b>	The local BFD diagnostic code indicating the most recent reason for failure of this BFD session
<b>Context</b>	<a href="#">bfd micro-bfd-sessions lag-interface name</a> <i>reference</i> <a href="#">member-interface name</a> <i>string</i> <a href="#">local-diagnostic-code</a> <i>keyword</i>
<b>Tree</b>	<a href="#">local-diagnostic-code</a>
<b>Options</b>	<ul style="list-style-type: none"> <li>• NO_DIAGNOSTIC No diagnostic code was specified, or the session has not changed state</li> <li>• DETECTION_TIMEOUT The control detection time expired: no BFD packet was received within the required period</li> <li>• ECHO_FAILED The BFD echo function failed - echo packets have not been received for the required period of time</li> <li>• NEIGHBOR_SIGNALED_DOWN The neighbor signaled session down</li> </ul>

- **FORWARDING\_RESET**  
The forwarding plane in the local system was 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  
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  
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

**local-discriminator *number*****Note:**

This command is available for the following platforms:

- 7220 IXR-D2
- 7250 IXR-10
- 7220 IXR-D3L
- 7220 IXR-D2L
- 7220 IXR-H3
- 7220 IXR-H2
- 7220 IXR-D3
- 7250 IXR-6
- 7220 IXR-D1

**Description**

BFD session local discriminator

<b>Context</b>	<code>bfd micro-bfd-sessions lag-interface name <i>reference</i> member-interface name string local-discriminator number</code>
<b>Tree</b>	<code>local-discriminator</code>
<b>Configurable</b>	False

### remote-control-plane-independent *boolean*



**Note:**

This command is available for the following platforms:

- 7220 IXR-D2
- 7250 IXR-10
- 7220 IXR-D3L
- 7220 IXR-D2L
- 7220 IXR-H3
- 7220 IXR-H2
- 7220 IXR-D3
- 7250 IXR-6
- 7220 IXR-D1

<b>Description</b>	Indicates if the remote neighbor has set the control independent flag
<b>Context</b>	<code>bfd micro-bfd-sessions lag-interface name <i>reference</i> member-interface name string remote-control-plane-independent <i>boolean</i></code>
<b>Tree</b>	<code>remote-control-plane-independent</code>
<b>Configurable</b>	False

**remote-diagnostic-code *keyword*****Note:**

This command is available for the following platforms:

- 7220 IXR-D2
- 7250 IXR-10
- 7220 IXR-D3L
- 7220 IXR-D2L
- 7220 IXR-H3
- 7220 IXR-H2
- 7220 IXR-D3
- 7250 IXR-6
- 7220 IXR-D1

<b>Description</b>	The remote BFD diagnostic code indicating the remote system's reason for failure of the BFD session
<b>Context</b>	<a href="#">bfd</a> <a href="#">micro-bfd-sessions</a> <a href="#">lag-interface name</a> <i>reference</i> <a href="#">member-interface name</a> <i>string</i> <a href="#">remote-diagnostic-code</a> <i>keyword</i>
<b>Tree</b>	<a href="#">remote-diagnostic-code</a>
<b>Options</b>	<ul style="list-style-type: none"> <li>• NO_DIAGNOSTIC No diagnostic code was specified, or the session has not changed state</li> <li>• DETECTION_TIMEOUT The control detection time expired: no BFD packet was received within the required period</li> <li>• ECHO_FAILED The BFD echo function failed - echo packets have not been received for the required period of time</li> <li>• NEIGHBOR_SIGNED_DOWN The neighbor signaled session down</li> <li>• FORWARDING_RESET The forwarding plane in the local system was 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.</li> <li>• PATH_DOWN Signalling outside of BFD specified that the path underlying this session has failed</li> </ul>

- **CONCATENATED\_PATH\_DOWN**  
A segment on the path between source and destination has failed  
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  
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

### remote-discriminator *number*



**Note:**

This command is available for the following platforms:

- 7220 IXR-D2
- 7250 IXR-10
- 7220 IXR-D3L
- 7220 IXR-D2L
- 7220 IXR-H3
- 7220 IXR-H2
- 7220 IXR-D3
- 7250 IXR-6
- 7220 IXR-D1

<b>Description</b>	A unique identifier used by the remote system to identify this BFD session
<b>Context</b>	<a href="#">bfd</a> <a href="#">micro-bfd-sessions</a> <a href="#">lag-interface name</a> <i>reference</i> <a href="#">member-interface name</a> <i>string</i> <a href="#">remote-discriminator</a> <i>number</i>
<b>Tree</b>	<a href="#">remote-discriminator</a>
<b>Configurable</b>	False



**remote-minimum-receive-interval *number*****Note:**

This command is available for the following platforms:

- 7220 IXR-D2
- 7250 IXR-10
- 7220 IXR-D3L
- 7220 IXR-D2L
- 7220 IXR-H3
- 7220 IXR-H2
- 7220 IXR-D3
- 7250 IXR-6
- 7220 IXR-D1

<b>Description</b>	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.
<b>Context</b>	<a href="#">bfd micro-bfd-sessions lag-interface name</a> <i>reference</i> <a href="#">member-interface name string</a> <a href="#">remote-minimum-receive-interval number</a>
<b>Tree</b>	<a href="#">remote-minimum-receive-interval</a>
<b>Configurable</b>	False

**remote-multiplier *number*****Note:**

This command is available for the following platforms:

- 7220 IXR-D2
- 7250 IXR-10
- 7220 IXR-D3L
- 7220 IXR-D2L
- 7220 IXR-H3
- 7220 IXR-H2
- 7220 IXR-D3
- 7250 IXR-6
- 7220 IXR-D1

<b>Description</b>	The current number of packets that must be missed to declare the session as down
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The detection interval for the BFD session is calculated by multiplying the value of the negotiated transmission interval by this value.

<b>Context</b>	<a href="#">bfd micro-bfd-sessions lag-interface name</a> <i>reference</i> <a href="#">member-interface name</a> <i>string</i> <a href="#">remote-multiplier</a> <i>number</i>
<b>Tree</b>	<a href="#">remote-multiplier</a>
<b>Configurable</b>	False

### remote-session-state *keyword*



**Note:**

This command is available for the following platforms:

- 7220 IXR-D2
- 7250 IXR-10
- 7220 IXR-D3L
- 7220 IXR-D2L
- 7220 IXR-H3
- 7220 IXR-H2
- 7220 IXR-D3
- 7250 IXR-6
- 7220 IXR-D1

<b>Description</b>	The reported state of the BFD session according to the remote system This state reflects the last state reported in a BFD control packet.
<b>Context</b>	<a href="#">bfd micro-bfd-sessions lag-interface name</a> <i>reference</i> <a href="#">member-interface name</a> <i>string</i> <a href="#">remote-session-state</a> <i>keyword</i>
<b>Tree</b>	<a href="#">remote-session-state</a>
<b>Options</b>	<ul style="list-style-type: none"> <li>• ADMIN_DOWN The BFD session is administratively disabled</li> <li>• DOWN The BFD session is perceived to be down by the system</li> <li>• INIT The BFD session is perceived to be initialising by the system</li> <li>• UP The BFD session is perceived to be up by the system</li> </ul>
<b>Configurable</b>	False

**session-state keyword****Note:**

This command is available for the following platforms:

- 7220 IXR-D2
- 7250 IXR-10
- 7220 IXR-D3L
- 7220 IXR-D2L
- 7220 IXR-H3
- 7220 IXR-H2
- 7220 IXR-D3
- 7250 IXR-6
- 7220 IXR-D1

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

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

This command is available for the following platforms:

- 7220 IXR-D2
- 7250 IXR-10
- 7220 IXR-D3L
- 7220 IXR-D2L
- 7220 IXR-H3
- 7220 IXR-H2
- 7220 IXR-D3
- 7250 IXR-6
- 7220 IXR-D1

<b>Description</b>	The remote IP address for the far-end of the BFD session This must be the same IP version as the local-address.
<b>Context</b>	<a href="#">bfd micro-bfd-sessions lag-interface name reference remote-address (<i>ipv4-address</i>   <i>ipv6-address</i>)</a>
<b>Tree</b>	<a href="#">remote-address</a>
<b>Configurable</b>	True

**required-minimum-receive *number*****Note:**

This command is available for the following platforms:

- 7220 IXR-D2
- 7250 IXR-10
- 7220 IXR-D3L
- 7220 IXR-D2L
- 7220 IXR-H3
- 7220 IXR-H2
- 7220 IXR-D3
- 7250 IXR-6
- 7220 IXR-D1

<b>Description</b>	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.

<b>Context</b>	<a href="#">bfd micro-bfd-sessions lag-interface name</a> <i>reference</i> <a href="#">required-minimum-receive number</a>
<b>Tree</b>	<a href="#">required-minimum-receive</a>
<b>Range</b>	10000 to 100000000
<b>Default</b>	1000000
<b>Units</b>	microseconds
<b>Configurable</b>	True

### **network-instance** [name](#) *string*

<b>Description</b>	network-instance context for BFD session.
<b>Context</b>	<a href="#">bfd network-instance name</a> <i>string</i>
<b>Tree</b>	<a href="#">network-instance</a>
<b>Configurable</b>	False

### **name** *string*

<b>Description</b>	A unique name identifying the network instance
<b>Context</b>	<a href="#">bfd network-instance name</a> <i>string</i>
<b>Configurable</b>	False

### **peer** [local-discriminator](#) *number*

<b>Description</b>	BFD session state related to this peer
<b>Context</b>	<a href="#">bfd network-instance name</a> <i>string</i> <a href="#">peer local-discriminator</a> <i>number</i>
<b>Tree</b>	<a href="#">peer</a>
<b>Configurable</b>	False

### **local-discriminator** *number*

<b>Description</b>	BFD session local discriminator
<b>Context</b>	<a href="#">bfd network-instance name</a> <i>string</i> <a href="#">peer local-discriminator</a> <i>number</i>
<b>Configurable</b>	False

**active-receive-interval *number***

<b>Description</b>	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.
<b>Context</b>	<a href="#">bfd network-instance name</a> <i>string</i> <a href="#">peer local-discriminator</a> <i>number</i> <a href="#">active-receive-interval</a> <i>number</i>
<b>Tree</b>	<a href="#">active-receive-interval</a>
<b>Configurable</b>	False

**active-transmit-interval *number***

<b>Description</b>	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
<b>Context</b>	<a href="#">bfd network-instance name</a> <i>string</i> <a href="#">peer local-discriminator</a> <i>number</i> <a href="#">active-transmit-interval</a> <i>number</i>
<b>Tree</b>	<a href="#">active-transmit-interval</a>
<b>Configurable</b>	False

**async**

<b>Description</b>	Container for async BFD operational state parameters
<b>Context</b>	<a href="#">bfd network-instance name</a> <i>string</i> <a href="#">peer local-discriminator</a> <i>number</i> <a href="#">async</a>
<b>Tree</b>	<a href="#">async</a>
<b>Configurable</b>	False

**last-clear *string***

<b>Description</b>	Timestamp of the last time the session counters were cleared.
<b>Context</b>	<a href="#">bfd network-instance name</a> <i>string</i> <a href="#">peer local-discriminator</a> <i>number</i> <a href="#">async</a> <a href="#">last-clear</a> <i>string</i>
<b>Tree</b>	<a href="#">last-clear</a>
<b>String Length</b>	20 to 32
<b>Configurable</b>	False

**last-packet-received *string***

<b>Description</b>	Timestamp for when the last BFD packet was received for this session
<b>Context</b>	<a href="#">bfd network-instance name</a> <i>string</i> <a href="#">peer local-discriminator</a> <i>number</i> <a href="#">async last-packet-received</a> <i>string</i>
<b>Tree</b>	<a href="#">last-packet-received</a>
<b>String Length</b>	20 to 32
<b>Configurable</b>	False

**last-packet-transmitted *string***

<b>Description</b>	Timestamp for when the last BFD packet was transmitted for this session
<b>Context</b>	<a href="#">bfd network-instance name</a> <i>string</i> <a href="#">peer local-discriminator</a> <i>number</i> <a href="#">async last-packet-transmitted</a> <i>string</i>
<b>Tree</b>	<a href="#">last-packet-transmitted</a>
<b>String Length</b>	20 to 32
<b>Configurable</b>	False

**received-errored-packets *number***

<b>Description</b>	Counter for the number of BFD packets received with BFD level errors
<b>Context</b>	<a href="#">bfd network-instance name</a> <i>string</i> <a href="#">peer local-discriminator</a> <i>number</i> <a href="#">async received-errored-packets</a> <i>number</i>
<b>Tree</b>	<a href="#">received-errored-packets</a>
<b>Default</b>	0
<b>Configurable</b>	False

**received-packets *number***

<b>Description</b>	Counter for the number of BFD packets received for this session
<b>Context</b>	<a href="#">bfd network-instance name</a> <i>string</i> <a href="#">peer local-discriminator</a> <i>number</i> <a href="#">async received-packets</a> <i>number</i>
<b>Tree</b>	<a href="#">received-packets</a>
<b>Default</b>	0
<b>Configurable</b>	False

**transmitted-packets *number***

<b>Description</b>	Counter for the number of BFD packets transmitted for this session
<b>Context</b>	<a href="#">bfd network-instance name</a> <i>string</i> <a href="#">peer local-discriminator</a> <i>number</i> <a href="#">async transmitted-packets</a> <i>number</i>
<b>Tree</b>	<a href="#">transmitted-packets</a>
<b>Default</b>	0
<b>Configurable</b>	False

**up-transitions *number***

<b>Description</b>	Counter for the number of UP transitions for this BFD session
<b>Context</b>	<a href="#">bfd network-instance name</a> <i>string</i> <a href="#">peer local-discriminator</a> <i>number</i> <a href="#">async up-transitions</a> <i>number</i>
<b>Tree</b>	<a href="#">up-transitions</a>
<b>Default</b>	0
<b>Configurable</b>	False

**failure-transitions *number***

<b>Description</b>	The number of times that the BFD session has transitioned out of the up state
<b>Context</b>	<a href="#">bfd network-instance name</a> <i>string</i> <a href="#">peer local-discriminator</a> <i>number</i> <a href="#">failure-transitions</a> <i>number</i>
<b>Tree</b>	<a href="#">failure-transitions</a>
<b>Configurable</b>	False

**ipv6-link-local-interface *string***

<b>Description</b>	For IPv6 link local sessions only, indicates the local interface with which the session is associated.
<b>Context</b>	<a href="#">bfd network-instance name</a> <i>string</i> <a href="#">peer local-discriminator</a> <i>number</i> <a href="#">ipv6-link-local-interface</a> <i>string</i>
<b>Tree</b>	<a href="#">ipv6-link-local-interface</a>
<b>Configurable</b>	False



**last-failure-time *string***

<b>Description</b>	Timestamp of the last BFD session transition out of the up state to down state
<b>Context</b>	<a href="#">bfd network-instance name</a> <i>string</i> <a href="#">peer local-discriminator</a> <i>number</i> <a href="#">last-failure-time</a> <i>string</i>
<b>Tree</b>	<a href="#">last-failure-time</a>
<b>String Length</b>	20 to 32
<b>Configurable</b>	False

**last-state-transition *string***

<b>Description</b>	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.
<b>Context</b>	<a href="#">bfd network-instance name</a> <i>string</i> <a href="#">peer local-discriminator</a> <i>number</i> <a href="#">last-state-transition</a> <i>string</i>
<b>Tree</b>	<a href="#">last-state-transition</a>
<b>String Length</b>	20 to 32
<b>Configurable</b>	False

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

<b>Description</b>	IP address to be used as source address in BFD packets
<b>Context</b>	<a href="#">bfd network-instance name</a> <i>string</i> <a href="#">peer local-discriminator</a> <i>number</i> <a href="#">local-address</a> ( <i>ipv4-address</i>   <i>ipv6-address</i> )
<b>Tree</b>	<a href="#">local-address</a>
<b>Configurable</b>	False

**local-diagnostic-code *keyword***

<b>Description</b>	The local BFD diagnostic code indicating the most recent reason for failure of this BFD session
<b>Context</b>	<a href="#">bfd network-instance name</a> <i>string</i> <a href="#">peer local-discriminator</a> <i>number</i> <a href="#">local-diagnostic-code</a> <i>keyword</i>
<b>Tree</b>	<a href="#">local-diagnostic-code</a>
<b>Options</b>	<ul style="list-style-type: none"> <li>NO_DIAGNOSTIC</li> </ul> <p>No diagnostic code was specified, or the session has not changed state</p>

- **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\_SIGNALED\_DOWN**  
The neighbor signaled session down
- **FORWARDING\_RESET**  
The forwarding plane in the local system was 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  
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  
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

### **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  
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.

**Configurable** False

### **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](#) *string* [peer local-discriminator](#) *number* [remote-address](#) (*ipv4-address* | *ipv6-address*)

**Tree** [remote-address](#)

**Configurable** False

**remote-control-plane-independent *boolean***

<b>Description</b>	Indicates if the remote neighbor has set the control independent flag
<b>Context</b>	<a href="#">bfd network-instance name</a> <i>string</i> <a href="#">peer local-discriminator</a> <i>number</i> <a href="#">remote-control-plane-independent</a> <i>boolean</i>
<b>Tree</b>	<a href="#">remote-control-plane-independent</a>
<b>Configurable</b>	False

**remote-diagnostic-code *keyword***

<b>Description</b>	The remote BFD diagnostic code indicating the remote system's reason for failure of the BFD session
<b>Context</b>	<a href="#">bfd network-instance name</a> <i>string</i> <a href="#">peer local-discriminator</a> <i>number</i> <a href="#">remote-diagnostic-code</a> <i>keyword</i>
<b>Tree</b>	<a href="#">remote-diagnostic-code</a>
<b>Options</b>	<ul style="list-style-type: none"> <li>• NO_DIAGNOSTIC No diagnostic code was specified, or the session has not changed state</li> <li>• DETECTION_TIMEOUT The control detection time expired: no BFD packet was received within the required period</li> <li>• ECHO_FAILED The BFD echo function failed - echo packets have not been received for the required period of time</li> <li>• NEIGHBOR_SIGNED_DOWN The neighbor signaled session down</li> <li>• FORWARDING_RESET The forwarding plane in the local system was 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.</li> <li>• PATH_DOWN Signalling outside of BFD specified that the path underlying this session has failed</li> <li>• CONCATENATED_PATH_DOWN A segment on the path between source and destination has failed 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.</li> <li>• ADMIN_DOWN The BFD session has been administratively disabled by the peer</li> </ul>

- REVERSE\_CONCATENATED\_PATH\_DOWN

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

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

### remote-discriminator *number*

**Description** A unique identifier used by the remote system to identify this BFD session

**Context** [bfd network-instance name](#) *string* [peer local-discriminator](#) *number* [remote-discriminator](#) *number*

**Tree** [remote-discriminator](#)

**Configurable** False

### 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](#) *string* [peer local-discriminator](#) *number* [remote-minimum-receive-interval](#) *number*

**Tree** [remote-minimum-receive-interval](#)

**Configurable** False

### 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](#) *string* [peer local-discriminator](#) *number* [remote-multiplier](#) *number*

**Tree** [remote-multiplier](#)

**Configurable** False

**remote-session-state *keyword***

<b>Description</b>	The reported state of the BFD session according to the remote system This state reflects the last state reported in a BFD control packet.
<b>Context</b>	<a href="#">bfd network-instance name</a> <i>string</i> <a href="#">peer local-discriminator number</a> <a href="#">remote-session-state</a> <i>keyword</i>
<b>Tree</b>	<a href="#">remote-session-state</a>
<b>Options</b>	<ul style="list-style-type: none"> <li>• ADMIN_DOWN The BFD session is administratively disabled</li> <li>• DOWN The BFD session is perceived to be down by the system</li> <li>• INIT The BFD session is perceived to be initialising by the system</li> <li>• UP The BFD session is perceived to be up by the system</li> </ul>
<b>Configurable</b>	False

**session-state *keyword***

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

**subscribed-protocols *string***

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

### subinterface *id string*

<b>Description</b>	List of subinterface references to associating BFD config and state
<b>Context</b>	<code>bfd subinterface id string</code>
<b>Tree</b>	<code>subinterface</code>
<b>Configurable</b>	True

### *id string*

<b>Description</b>	Reference ID for associated subinterface Example: ethernet-2/1.100 (Reference Interface ethernet-2/1, subinterface 100).
<b>Context</b>	<code>bfd subinterface id string</code>
<b>String Length</b>	5 to 25
<b>Configurable</b>	True

### admin-state *keyword*

<b>Description</b>	Administratively enable or disable BFD for this subinterface
<b>Context</b>	<code>bfd subinterface id string admin-state keyword</code>
<b>Tree</b>	<code>admin-state</code>
<b>Default</b>	disable
<b>Options</b>	<ul style="list-style-type: none"> <li>• enable</li> <li>• disable</li> </ul>
<b>Configurable</b>	True

### desired-minimum-transmit-interval *number*

<b>Description</b>	<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>
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<b>Context</b>	<code>bfd subinterface id string desired-minimum-transmit-interval number</code>
<b>Tree</b>	<code>desired-minimum-transmit-interval</code>
<b>Range</b>	10000 to 100000000
<b>Default</b>	1000000
<b>Units</b>	microseconds
<b>Configurable</b>	True

### **detection-multiplier *number***

<b>Description</b>	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.
<b>Context</b>	<code>bfd subinterface id string detection-multiplier number</code>
<b>Tree</b>	<code>detection-multiplier</code>
<b>Range</b>	3 to 20
<b>Default</b>	3
<b>Configurable</b>	True

### **minimum-echo-receive-interval *number***

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

### **required-minimum-receive *number***

<b>Description</b>	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.
<b>Context</b>	<code>bfd subinterface id string required-minimum-receive number</code>



---

<b>Tree</b>	<a href="#">required-minimum-receive</a>
<b>Range</b>	10000 to 100000000
<b>Default</b>	1000000
<b>Units</b>	microseconds
<b>Configurable</b>	True

**total-bfd-sessions *number***

<b>Description</b>	Counter for the total number of BFD sessions
<b>Context</b>	<a href="#">bfd total-bfd-sessions <i>number</i></a>
<b>Tree</b>	<a href="#">total-bfd-sessions</a>
<b>Default</b>	0
<b>Configurable</b>	False

**total-unmatched-bfd-packets *number***

<b>Description</b>	Counter for the total number of BFD packets received not matching a BFD session
<b>Context</b>	<a href="#">bfd total-unmatched-bfd-packets <i>number</i></a>
<b>Tree</b>	<a href="#">total-unmatched-bfd-packets</a>
<b>Default</b>	0
<b>Configurable</b>	False

## 5 interface

```

interface name string
+ admin-state keyword
+ breakout-mode
+ channel-speed keyword
+ num-channels keyword
+ description string
+ ethernet
+ aggregate-id reference
+ auto-negotiate boolean
+ duplex-mode keyword
+ flow-control
+ receive boolean
- hw-mac-address string
+ lacp-port-priority number
- physical-medium keyword
+ port-speed keyword
+ 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
- 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-speed keyword
- members name reference
  - activity keyword
  - aggregatable boolean
  - collecting boolean
  - distributing boolean
  - lACP-port-priority number
  - last-change string
  - microbfd-enabled boolean
  - oper-down-reason keyword
  - oper-key number
  - oper-state keyword
  - 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
+ min-links number
- last-change string
+ loopback-mode boolean
+ mtu number
- oper-down-reason keyword
- oper-state keyword

+ qos
+ output
  + multicast-queue queue-id number
    - forwarding-class keyword
    - queue-depth
    - last-high-threshold-time string
    - maximum-burst-size number
  + scheduling
    - peak-rate-bps number
    + peak-rate-percent number
    - scheduler-node reference
  + template reference
+ scheduler
+ tier level number
  + node node-number number
    + strict-priority boolean
    + weight number
+ unicast-queue queue-id number
  - active-queue-management
    - ecn-slope ecn-drop-probability keyword
    - max-probability number
    - max-threshold-bytes number
    - min-threshold-bytes number
    - slope-enabled boolean
  - wred-slope traffic-type keyword drop-probability keyword
    - max-probability number
    - max-threshold-bytes number
    - min-threshold-bytes number
    - slope-enabled boolean
  - forwarding-class keyword

```

```

- queue-depth
- high-threshold-bytes number
- last-high-threshold-time string
- maximum-burst-size number
+ scheduling
- peak-rate-bps number
+ peak-rate-percent number
- scheduler-node reference
+ strict-priority boolean
+ weight number
+ template reference
+ voq-template reference
- queue-statistics
- multicast-queue queue-id number
- final-dropped-octets number
- final-dropped-packets number
- last-clear string
- transmitted-octets number
- transmitted-packets number
- unicast-queue queue-id number
- final-dropped-octets number
- final-dropped-packets number
- last-clear string
- transmitted-octets number
- transmitted-packets number
- virtual-output-queue slot number
- dropped-octets
- high-drop-probability number
- low-drop-probability number
- medium-drop-probability number
- dropped-packets
- high-drop-probability number
- low-drop-probability number
- medium-drop-probability number
- forwarded-octets
- high-drop-probability number
- low-drop-probability number
- medium-drop-probability number
- forwarded-packets
- high-drop-probability number
- low-drop-probability number
- medium-drop-probability number
- queue-depth
- high-threshold-bytes number
- last-high-threshold-time string
+ 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-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-unicast-packets number
+ subinterface index number

```

```

+ acl
+ input
+   ipv4-filter reference
+   ipv6-filter reference
+ output
+   ipv4-filter reference
+   ipv6-filter reference
+ 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
-     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
+ allow-directed-broadcast boolean
+ arp
+   debug keyword
+   duplicate-address-detection boolean
+ evpn
+   advertise route-type keyword
+   admin-tag number
+ host-route

```

```

    + populate route-type keyword
      + admin-tag number
+ learn-unsolicited boolean
+ neighbor ipv4-address string
  - expiration-time string
  + link-layer-address string
  - origin keyword
+ timeout number
+ dhcp-client
+ trace-options
  + trace keyword
+ dhcp-relay
+ admin-state keyword
+ 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
+ dhcp-client
+ trace-options
  + trace keyword
+ dhcp-relay
+ admin-state keyword
+ 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
  + admin-tag number
+ host-route
  + populate route-type keyword
  + admin-tag number
+ learn-unsolicited keyword
+ neighbor ipv6-address string
  - current-state keyword
  - is-router boolean
  + link-layer-address string
  - next-state-time string
  - origin keyword
+ reachable-time number
+ stale-time 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-octets number
    - in-packets number
    - last-clear string
    - 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
+ qos
+ input
  + classifiers
    + dscp reference
    + ipv4-dscp reference
    + ipv6-dscp reference
    + mpls-traffic-class reference
+ output
  + rewrite-rules
    + dscp reference
    + ipv4-dscp reference
    + ipv6-dscp reference
    + mpls-traffic-class reference
+ 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
+ vlan
+ encap

```



```

    + single-tagged
      + vlan-id (number | keyword)
    + untagged
- 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
- 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
+ tx-laser boolean
- vendor 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*

<b>Description</b>	The list of named interfaces on the device.
<b>Context</b>	<a href="#">interface name</a> <i>string</i>
<b>Tree</b>	<a href="#">interface</a>
<b>Configurable</b>	True

### **name** *string*

<b>Description</b>	The name of the interface
--------------------	---------------------------

Valid options are: irb<N>, N=0..255 lag<N>, N=1..128 [note1] lo<N>, N=0..255 mgmt0 mgmt0-standby ethernet-<slot>/<port> ethernet-<slot>/<mda>/<port> system0  
 <slot>=slot number {1,2,3,..} <mda>=mda id {a,b,c,d} <port>=port id {1,2,3,..}  
 [note1] N=1..32 for 7220-D1, 7220-D2, 7220-D3. N=1..127 for 7220-H2, 7220-H3.

<b>Context</b>	<a href="#">interface name</a> <i>string</i>
<b>String Length</b>	3 to 20
<b>Configurable</b>	True

### admin-state *keyword*

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

### breakout-mode



**Note:**

This command is available for the following platforms:

- 7220 IXR-D3
- 7220 IXR-D3L

<b>Description</b>	Configuration of breakout options
<b>Context</b>	<a href="#">interface name</a> <i>string</i> <a href="#">breakout-mode</a>
<b>Tree</b>	<a href="#">breakout-mode</a>
<b>Configurable</b>	True

**channel-speed *keyword*****Note:**

This command is available for the following platforms:

- 7220 IXR-D3
- 7220 IXR-D3L

<b>Description</b>	The speed of each channel (breakout port).
<b>Context</b>	<a href="#">interface name</a> <i>string</i> <a href="#">breakout-mode</a> <a href="#">channel-speed</a> <i>keyword</i>
<b>Tree</b>	<a href="#">channel-speed</a>
<b>Options</b>	<ul style="list-style-type: none"> <li>• 10G</li> <li>• 25G</li> </ul>
<b>Configurable</b>	True

**num-channels *keyword*****Note:**

This command is available for the following platforms:

- 7220 IXR-D3
- 7220 IXR-D3L

<b>Description</b>	The number of channels (breakout ports) supported by this connector.
<b>Context</b>	<a href="#">interface name</a> <i>string</i> <a href="#">breakout-mode</a> <a href="#">num-channels</a> <i>keyword</i>
<b>Tree</b>	<a href="#">num-channels</a>
<b>Options</b>	<ul style="list-style-type: none"> <li>• 4</li> </ul>
<b>Configurable</b>	True

**description *string***

<b>Description</b>	A user-configured description of the interface
<b>Context</b>	<a href="#">interface name</a> <i>string</i> <a href="#">description</a> <i>string</i>
<b>Tree</b>	<a href="#">description</a>
<b>String Length</b>	1 to 255
<b>Configurable</b>	True

## ethernet

<b>Description</b>	Enter the ethernet context
<b>Context</b>	<a href="#">interface name</a> <i>string</i> <a href="#">ethernet</a>
<b>Tree</b>	<a href="#">ethernet</a>
<b>Configurable</b>	True

## aggregate-id *reference*

**Note:**

This command is available for the following platforms:

- 7220 IXR-D2
- 7250 IXR-10
- 7220 IXR-D3L
- 7220 IXR-D2L
- 7220 IXR-H3
- 7220 IXR-H2
- 7220 IXR-D3
- 7250 IXR-6
- 7220 IXR-D1

<b>Description</b>	LAG interface this interface is associated with.
<b>Context</b>	<a href="#">interface name</a> <i>string</i> <a href="#">ethernet</a> <a href="#">aggregate-id</a> <i>reference</i>
<b>Tree</b>	<a href="#">aggregate-id</a>
<b>Reference</b>	<a href="#">interface name</a> <i>string</i>
<b>Configurable</b>	True

## auto-negotiate *boolean*

**Note:**

This command is available for the following platform:

7220 IXR-D1

<b>Description</b>	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.
<b>Context</b>	<a href="#">interface name</a> <i>string</i> <a href="#">ethernet</a> <a href="#">auto-negotiate</a> <i>boolean</i>

<b>Tree</b>	<a href="#">auto-negotiate</a>
<b>Configurable</b>	True

## duplex-mode *keyword*



### Note:

This command is available for the following platform:

7220 IXR-D1

<b>Description</b>	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.
<b>Context</b>	<a href="#">interface name</a> <i>string</i> <a href="#">ethernet duplex-mode</a> <i>keyword</i>
<b>Tree</b>	<a href="#">duplex-mode</a>
<b>Options</b>	<ul style="list-style-type: none"> <li>• full</li> <li>• half</li> </ul>
<b>Configurable</b>	True

## flow-control

<b>Description</b>	Enter the flow-control context
<b>Context</b>	<a href="#">interface name</a> <i>string</i> <a href="#">ethernet flow-control</a>
<b>Tree</b>	<a href="#">flow-control</a>
<b>Configurable</b>	True

## receive *boolean*

<b>Description</b>	<p>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).</p> <p>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)</p>
<b>Context</b>	<a href="#">interface name</a> <i>string</i> <a href="#">ethernet flow-control</a> <a href="#">receive</a> <i>boolean</i>
<b>Tree</b>	<a href="#">receive</a>
<b>Configurable</b>	True

**hw-mac-address *string***

<b>Description</b>	The MAC address associated with the port
<b>Context</b>	<a href="#">interface name</a> <i>string</i> <a href="#">ethernet</a> <a href="#">hw-mac-address</a> <i>string</i>
<b>Tree</b>	<a href="#">hw-mac-address</a>
<b>Configurable</b>	False

**lACP-port-priority *number*****Note:**

This command is available for the following platforms:

- 7220 IXR-D2
- 7220 IXR-D3L
- 7220 IXR-D2L
- 7220 IXR-D3
- 7220 IXR-D1

<b>Description</b>	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.
<b>Context</b>	<a href="#">interface name</a> <i>string</i> <a href="#">ethernet</a> <a href="#">lACP-port-priority</a> <i>number</i>
<b>Tree</b>	<a href="#">lACP-port-priority</a>
<b>Configurable</b>	True

**physical-medium *keyword***

<b>Description</b>	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.
<b>Context</b>	<a href="#">interface name</a> <i>string</i> <a href="#">ethernet</a> <a href="#">physical-medium</a> <i>keyword</i>
<b>Tree</b>	<a href="#">physical-medium</a>
<b>Options</b>	<ul style="list-style-type: none"> <li>• 1000BASE-T</li> </ul>
<b>Configurable</b>	False

**port-speed *keyword***

<b>Description</b>	The speed of the port or channel
--------------------	----------------------------------

The default speed of a port (when there is no configured value and auto-negotiation is disabled or unsupported) depends on the platform and port/connector number as follows:

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-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

Supported speeds: mgmt0 and mgmt0-standby ports: 1G J2 IMM ports 1-32: 40G, 100G [note1] 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 [note2] 7220-D2/D2L ports 49-56: 40G, 100G 7220-D2L ports 57-58: 10G 7220-D3 ports 1-2: 10G 7220-D3 ethernet-1/[3-34]: 40G, 100G 7220-D3 ethernet-1/[3-33]/n: 10G, 25G 7220-D3L ethernet-1/[1-32]: 40G, 100G 7220-D3L ethernet-1/[1-31]/n: 10G, 25G 7220-D3L ports 33-34: 10G 7220-D5 ports 1-32: 40G, 100G, 400G 7220-D5 ports 33-38: 10G 7220-H2 ports 1-128: 100G 7220-H3 ports 1-2: 10G 7220-H3 ports 3-34: 40G, 100G, 400G

[note1] 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 lowest-numbered configured port in this block; if any higher-numbered port in the block is configured with a different port speed that port will not come up.

[note2] On 7220-D2: if one port in each consecutive group of 4 ports (1-4, 5-8, .. , 45-48) is 25G the other 3 ports must also be 25G; if one port in each consecutive group of 4 ports (1-4, 5-8, .. , 45-48) is 1G or 10G the other 3 ports must also be 1G or 10G. On 7220-D2L: if one port in each consecutive group of 12 ports (1-12, 13-24, 25-36, 37-48) is 25G the other 11 ports must also be 25G; if one port in each consecutive group of 12 ports (1-12, 13-24, 25-36, 37-48) is 1G or 10G the other 11 ports must also be 1G or 10G.

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.

**Context**

`interface name string ethernet port-speed keyword`

**Tree**

`port-speed`

**Options**

- 10M
- 100M
- 1G
- 10G
- 25G
- 40G



	<ul style="list-style-type: none"> <li>• 50G</li> <li>• 100G</li> <li>• 200G</li> <li>• 400G</li> <li>• 1T</li> </ul>
<b>Configurable</b>	True

## reload-delay *number*



### Note:

This command is available for the following platforms:

- 7220 IXR-D2
- 7220 IXR-D3
- 7220 IXR-D3L
- 7220 IXR-D2L

### 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.

<b>Context</b>	<a href="#">interface name</a> <i>string</i> <a href="#">ethernet reload-delay</a> <i>number</i>
<b>Tree</b>	<a href="#">reload-delay</a>
<b>Range</b>	1 to 86400
<b>Units</b>	seconds
<b>Configurable</b>	True

## reload-delay-expires *string*



### Note:

This command is available for the following platforms:

- 7220 IXR-D2
- 7220 IXR-D3
- 7220 IXR-D3L
- 7220 IXR-D2L

<b>Description</b>	The remaining time until the reload-delay expires and the interface can go operationally up.
<b>Context</b>	<a href="#">interface name</a> <i>string</i> <a href="#">ethernet reload-delay-expires</a> <i>string</i>
<b>Tree</b>	<a href="#">reload-delay-expires</a>
<b>String Length</b>	20 to 32
<b>Configurable</b>	False

### standby-signaling *keyword*



**Note:**

This command is available for the following platforms:

- 7220 IXR-D2
- 7220 IXR-D3
- 7220 IXR-D3L
- 7220 IXR-D2L

<b>Description</b>	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.
<b>Context</b>	<a href="#">interface name</a> <i>string</i> <a href="#">ethernet standby-signaling</a> <i>keyword</i>
<b>Tree</b>	<a href="#">standby-signaling</a>
<b>Options</b>	<ul style="list-style-type: none"> <li>• power-off</li> <li>• lacp</li> </ul>
<b>Configurable</b>	True

### statistics

<b>Description</b>	Enter the statistics context
<b>Context</b>	<a href="#">interface name</a> <i>string</i> <a href="#">ethernet statistics</a>
<b>Tree</b>	<a href="#">statistics</a>
<b>Configurable</b>	False

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

<b>Description</b>	Number of received Ethernet frames that are 1024-1518 bytes in length
<b>Context</b>	<a href="#">interface name</a> <i>string</i> <a href="#">ethernet statistics in-1024b-to-1518b-frames</a> <i>number</i>

---

<b>Tree</b>	<a href="#">in-1024b-to-1518b-frames</a>
<b>Default</b>	0
<b>Configurable</b>	False

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

<b>Description</b>	Number of received Ethernet frames that are 128-255 bytes in length
<b>Context</b>	<a href="#">interface name</a> <i>string</i> <a href="#">ethernet statistics in-128b-to-255b-frames number</a>
<b>Tree</b>	<a href="#">in-128b-to-255b-frames</a>
<b>Default</b>	0
<b>Configurable</b>	False

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

<b>Description</b>	Number of received Ethernet frames that are 1519 bytes or longer
<b>Context</b>	<a href="#">interface name</a> <i>string</i> <a href="#">ethernet statistics in-1519b-or-longer-frames number</a>
<b>Tree</b>	<a href="#">in-1519b-or-longer-frames</a>
<b>Default</b>	0
<b>Configurable</b>	False

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

<b>Description</b>	Number of received Ethernet frames that are 256-511 bytes in length
<b>Context</b>	<a href="#">interface name</a> <i>string</i> <a href="#">ethernet statistics in-256b-to-511b-frames number</a>
<b>Tree</b>	<a href="#">in-256b-to-511b-frames</a>
<b>Default</b>	0
<b>Configurable</b>	False

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

<b>Description</b>	Number of received Ethernet frames that are 512-1023 bytes in length
<b>Context</b>	<a href="#">interface name</a> <i>string</i> <a href="#">ethernet statistics in-512b-to-1023b-frames number</a>
<b>Tree</b>	<a href="#">in-512b-to-1023b-frames</a>
<b>Default</b>	0
<b>Configurable</b>	False

**in-64b-frames *number***

<b>Description</b>	Number of received Ethernet frames that are exactly 64 bytes in length
<b>Context</b>	<a href="#">interface name</a> <i>string</i> <a href="#">ethernet statistics in-64b-frames number</a>
<b>Tree</b>	<a href="#">in-64b-frames</a>
<b>Default</b>	0
<b>Configurable</b>	False

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

<b>Description</b>	Number of received Ethernet frames that are 65-127 bytes in length
<b>Context</b>	<a href="#">interface name</a> <i>string</i> <a href="#">ethernet statistics in-65b-to-127b-frames number</a>
<b>Tree</b>	<a href="#">in-65b-to-127b-frames</a>
<b>Default</b>	0
<b>Configurable</b>	False

**in-crc-error-frames *number***

<b>Description</b>	Number of receive error events due to FCS/CRC check failure.
<b>Context</b>	<a href="#">interface name</a> <i>string</i> <a href="#">ethernet statistics in-crc-error-frames number</a>
<b>Tree</b>	<a href="#">in-crc-error-frames</a>
<b>Default</b>	0
<b>Configurable</b>	False

**in-fragment-frames *number***

<b>Description</b>	Number of fragment frames received on the interface.
<b>Context</b>	<a href="#">interface name</a> <i>string</i> <a href="#">ethernet statistics in-fragment-frames number</a>
<b>Tree</b>	<a href="#">in-fragment-frames</a>
<b>Default</b>	0
<b>Configurable</b>	False

**in-jabber-frames *number***

<b>Description</b>	Number of jabber frames received on the interface. Jabber frames are typically defined as oversize frames which also have a bad CRC.
<b>Context</b>	<a href="#">interface name</a> <i>string</i> <a href="#">ethernet statistics in-jabber-frames number</a>

---

<b>Tree</b>	<a href="#">in-jabber-frames</a>
<b>Default</b>	0
<b>Configurable</b>	False

### **in-mac-pause-frames *number***

<b>Description</b>	Number of MAC layer PAUSE frames received on the interface.
<b>Context</b>	<a href="#">interface name</a> <i>string</i> <a href="#">ethernet statistics in-mac-pause-frames</a> <i>number</i>
<b>Tree</b>	<a href="#">in-mac-pause-frames</a>
<b>Default</b>	0
<b>Configurable</b>	False

### **in-oversize-frames *number***

<b>Description</b>	Number of oversize frames received on the interface (i.e. frames that exceed the operational port MTU)
<b>Context</b>	<a href="#">interface name</a> <i>string</i> <a href="#">ethernet statistics in-oversize-frames</a> <i>number</i>
<b>Tree</b>	<a href="#">in-oversize-frames</a>
<b>Default</b>	0
<b>Configurable</b>	False

### **last-clear *string***

<b>Description</b>	Timestamp of the last time the MAC counters were cleared.
<b>Context</b>	<a href="#">interface name</a> <i>string</i> <a href="#">ethernet statistics last-clear</a> <i>string</i>
<b>Tree</b>	<a href="#">last-clear</a>
<b>String Length</b>	20 to 32
<b>Configurable</b>	False

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

<b>Description</b>	Number of transmitted Ethernet frames that are 1024-1518 bytes in length
<b>Context</b>	<a href="#">interface name</a> <i>string</i> <a href="#">ethernet statistics out-1024b-to-1518b-frames</a> <i>number</i>
<b>Tree</b>	<a href="#">out-1024b-to-1518b-frames</a>
<b>Default</b>	0
<b>Configurable</b>	False

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

<b>Description</b>	Number of transmitted Ethernet frames that are 128-255 bytes in length
<b>Context</b>	<a href="#">interface name</a> <i>string</i> <a href="#">ethernet statistics out-128b-to-255b-frames</a> <i>number</i>
<b>Tree</b>	<a href="#">out-128b-to-255b-frames</a>
<b>Default</b>	0
<b>Configurable</b>	False

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

<b>Description</b>	Number of transmitted Ethernet frames that are 1519 bytes or longer
<b>Context</b>	<a href="#">interface name</a> <i>string</i> <a href="#">ethernet statistics out-1519b-or-longer-frames</a> <i>number</i>
<b>Tree</b>	<a href="#">out-1519b-or-longer-frames</a>
<b>Default</b>	0
<b>Configurable</b>	False

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

<b>Description</b>	Number of transmitted Ethernet frames that are 256-511 bytes in length
<b>Context</b>	<a href="#">interface name</a> <i>string</i> <a href="#">ethernet statistics out-256b-to-511b-frames</a> <i>number</i>
<b>Tree</b>	<a href="#">out-256b-to-511b-frames</a>
<b>Default</b>	0
<b>Configurable</b>	False

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

<b>Description</b>	Number of transmitted Ethernet frames that are 512-1023 bytes in length
<b>Context</b>	<a href="#">interface name</a> <i>string</i> <a href="#">ethernet statistics out-512b-to-1023b-frames</a> <i>number</i>
<b>Tree</b>	<a href="#">out-512b-to-1023b-frames</a>
<b>Default</b>	0
<b>Configurable</b>	False

**out-64b-frames *number***

<b>Description</b>	Number of transmitted Ethernet frames that are exactly 64 bytes in length
<b>Context</b>	<a href="#">interface name</a> <i>string</i> <a href="#">ethernet statistics out-64b-frames</a> <i>number</i>

<b>Tree</b>	<a href="#">out-64b-frames</a>
<b>Default</b>	0
<b>Configurable</b>	False

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

<b>Description</b>	Number of transmitted Ethernet frames that are 65-127 bytes in length
<b>Context</b>	<a href="#">interface name</a> <i>string</i> <a href="#">ethernet statistics out-65b-to-127b-frames</a> <i>number</i>
<b>Tree</b>	<a href="#">out-65b-to-127b-frames</a>
<b>Default</b>	0
<b>Configurable</b>	False

### out-mac-pause-frames *number*

<b>Description</b>	Number of MAC layer PAUSE frames sent on the interface.
<b>Context</b>	<a href="#">interface name</a> <i>string</i> <a href="#">ethernet statistics out-mac-pause-frames</a> <i>number</i>
<b>Tree</b>	<a href="#">out-mac-pause-frames</a>
<b>Default</b>	0
<b>Configurable</b>	False

### storm-control



**Note:**

This command is available for the following platforms:

- 7220 IXR-D2
- 7220 IXR-D3
- 7220 IXR-D3L
- 7220 IXR-D2L

<b>Description</b>	Enable the storm-control context
<b>Context</b>	<a href="#">interface name</a> <i>string</i> <a href="#">ethernet storm-control</a>
<b>Tree</b>	<a href="#">storm-control</a>
<b>Configurable</b>	True

**broadcast-rate *number*****Note:**

This command is available for the following platforms:

- 7220 IXR-D2
- 7220 IXR-D3
- 7220 IXR-D3L
- 7220 IXR-D2L

<b>Description</b>	The maximum rate allowed for ingress broadcast frames on the interface
<b>Context</b>	<a href="#">interface name</a> <i>string</i> <a href="#">ethernet storm-control broadcast-rate</a> <i>number</i>
<b>Tree</b>	<a href="#">broadcast-rate</a>
<b>Range</b>	0 to 100000000
<b>Configurable</b>	True

**multicast-rate *number*****Note:**

This command is available for the following platforms:

- 7220 IXR-D2
- 7220 IXR-D3
- 7220 IXR-D3L
- 7220 IXR-D2L

<b>Description</b>	The maximum rate allowed for ingress multicast frames on the interface
<b>Context</b>	<a href="#">interface name</a> <i>string</i> <a href="#">ethernet storm-control multicast-rate</a> <i>number</i>
<b>Tree</b>	<a href="#">multicast-rate</a>
<b>Range</b>	0 to 100000000
<b>Configurable</b>	True



**operational-broadcast-rate *number*****Note:**

This command is available for the following platforms:

- 7220 IXR-D2
- 7220 IXR-D3
- 7220 IXR-D3L
- 7220 IXR-D2L

<b>Description</b>	The operational maximum rate for ingress broadcast frames programmed on the interface
<b>Context</b>	<a href="#">interface name</a> <i>string</i> <a href="#">ethernet storm-control operational-broadcast-rate number</a>
<b>Tree</b>	<a href="#">operational-broadcast-rate</a>
<b>Units</b>	kbps
<b>Configurable</b>	False

**operational-multicast-rate *number*****Note:**

This command is available for the following platforms:

- 7220 IXR-D2
- 7220 IXR-D3
- 7220 IXR-D3L
- 7220 IXR-D2L

<b>Description</b>	The operational maximum rate for ingress multicast frames programmed on the interface
<b>Context</b>	<a href="#">interface name</a> <i>string</i> <a href="#">ethernet storm-control operational-multicast-rate number</a>
<b>Tree</b>	<a href="#">operational-multicast-rate</a>
<b>Units</b>	kbps
<b>Configurable</b>	False

**operational-unknown-unicast-rate *number*****Note:**

This command is available for the following platforms:

- 7220 IXR-D2
- 7220 IXR-D3
- 7220 IXR-D3L
- 7220 IXR-D2L

<b>Description</b>	The operational maximum rate for ingress unknown unicast frames programmed on the interface
<b>Context</b>	<a href="#">interface name</a> <i>string</i> <a href="#">ethernet storm-control operational-unknown-unicast-rate</a> <i>number</i>
<b>Tree</b>	<a href="#">operational-unknown-unicast-rate</a>
<b>Units</b>	kbps
<b>Configurable</b>	False

**units *keyword*****Note:**

This command is available for the following platforms:

- 7220 IXR-D2
- 7220 IXR-D3
- 7220 IXR-D3L
- 7220 IXR-D2L

<b>Description</b>	Units of storm-control policer in kbps or percentage of the interface bandwidth
<b>Context</b>	<a href="#">interface name</a> <i>string</i> <a href="#">ethernet storm-control units</a> <i>keyword</i>
<b>Tree</b>	<a href="#">units</a>
<b>Default</b>	percentage
<b>Options</b>	<ul style="list-style-type: none"> <li>• kbps</li> <li>• percentage</li> </ul>
<b>Configurable</b>	True

**unknown-unicast-rate *number*****Note:**

This command is available for the following platforms:

- 7220 IXR-D2
- 7220 IXR-D3
- 7220 IXR-D3L
- 7220 IXR-D2L

<b>Description</b>	The maximum rate allowed for ingress unknown unicast frames on the interface
<b>Context</b>	<a href="#">interface name</a> <i>string</i> <a href="#">ethernet storm-control unknown-unicast-rate</a> <i>number</i>
<b>Tree</b>	<a href="#">unknown-unicast-rate</a>
<b>Range</b>	0 to 1000000000
<b>Configurable</b>	True

**ifindex *number***

<b>Description</b>	System-wide persistent unique ifIndex assigned to the interface
<b>Context</b>	<a href="#">interface name</a> <i>string</i> <a href="#">ifindex</a> <i>number</i>
<b>Tree</b>	<a href="#">ifindex</a>
<b>Configurable</b>	False

**lag****Note:**

This command is available for the following platforms:

- 7220 IXR-D2
- 7250 IXR-10
- 7220 IXR-D3L
- 7220 IXR-D2L
- 7220 IXR-H3
- 7220 IXR-H2
- 7220 IXR-D3
- 7250 IXR-6
- 7220 IXR-D1

<b>Description</b>	Container for options related to LAG
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<b>Context</b>	<a href="#">interface name</a> <i>string lag</i>
<b>Tree</b>	<a href="#">lag</a>
<b>Configurable</b>	True

## lacp



### Note:

This command is available for the following platforms:

- 7220 IXR-D2
- 7250 IXR-10
- 7220 IXR-D3L
- 7220 IXR-D2L
- 7220 IXR-H3
- 7220 IXR-H2
- 7220 IXR-D3
- 7250 IXR-6
- 7220 IXR-D1

<b>Description</b>	LACP parameters for the associated LAG
<b>Context</b>	<a href="#">interface name</a> <i>string lag lacp</i>
<b>Tree</b>	<a href="#">lacp</a>
<b>Configurable</b>	True

## admin-key *number*



### Note:

This command is available for the following platforms:

- 7220 IXR-D2
- 7250 IXR-10
- 7220 IXR-D3L
- 7220 IXR-D2L
- 7220 IXR-H3
- 7220 IXR-H2
- 7220 IXR-D3
- 7250 IXR-6
- 7220 IXR-D1

<b>Description</b>	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.
<b>Context</b>	<a href="#">interface name</a> <i>string lag lacp admin-key number</i>
<b>Tree</b>	<a href="#">admin-key</a>
<b>Range</b>	1 to 65535
<b>Configurable</b>	True

### interval *keyword*



**Note:**

This command is available for the following platforms:

- 7220 IXR-D2
- 7250 IXR-10
- 7220 IXR-D3L
- 7220 IXR-D2L
- 7220 IXR-H3
- 7220 IXR-H2
- 7220 IXR-D3
- 7250 IXR-6
- 7220 IXR-D1

<b>Description</b>	Set the period between LACP messages -- uses the lacp-period-type enumeration.
<b>Context</b>	<a href="#">interface name</a> <i>string lag lacp interval keyword</i>
<b>Tree</b>	<a href="#">interval</a>
<b>Default</b>	SLOW
<b>Options</b>	<ul style="list-style-type: none"> <li>• FAST Send LACP packets every second</li> <li>• SLOW Send LACP packets every 30 seconds</li> </ul>
<b>Configurable</b>	True

**lacp-mode *keyword*****Note:**

This command is available for the following platforms:

- 7220 IXR-D2
- 7250 IXR-10
- 7220 IXR-D3L
- 7220 IXR-D2L
- 7220 IXR-H3
- 7220 IXR-H2
- 7220 IXR-D3
- 7250 IXR-6
- 7220 IXR-D1

<b>Description</b>	ACTIVE is to initiate the transmission of LACP packets. PASSIVE is to wait for peer to initiate the transmission of LACP packets.
<b>Context</b>	<a href="#">interface name</a> <i>string</i> <a href="#">lag</a> <a href="#">lacp</a> <a href="#">lacp-mode</a> <i>keyword</i>
<b>Tree</b>	<a href="#">lacp-mode</a>
<b>Default</b>	ACTIVE
<b>Options</b>	<ul style="list-style-type: none"> <li>• ACTIVE Interface is an active member, i.e., will detect and maintain aggregates</li> <li>• PASSIVE Interface is a passive member, i.e., it participates with an active partner</li> </ul>
<b>Configurable</b>	True

**system-id-mac *string*****Note:**

This command is available for the following platforms:

- 7220 IXR-D2
- 7250 IXR-10
- 7220 IXR-D3L
- 7220 IXR-D2L
- 7220 IXR-H3
- 7220 IXR-H2
- 7220 IXR-D3
- 7250 IXR-6
- 7220 IXR-D1

<b>Description</b>	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.
<b>Context</b>	<a href="#">interface name</a> <i>string</i> <a href="#">lag lacp</a> <a href="#">system-id-mac</a> <i>string</i>
<b>Tree</b>	<a href="#">system-id-mac</a>
<b>Configurable</b>	True

**system-priority *number*****Note:**

This command is available for the following platforms:

- 7220 IXR-D2
- 7250 IXR-10
- 7220 IXR-D3L
- 7220 IXR-D2L
- 7220 IXR-H3
- 7220 IXR-H2
- 7220 IXR-D3
- 7250 IXR-6
- 7220 IXR-D1

<b>Description</b>	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.
<b>Context</b>	<a href="#">interface name</a> <i>string</i> <a href="#">lag lacp</a> <a href="#">system-priority</a> <i>number</i>

<b>Tree</b>	<a href="#">system-priority</a>
<b>Configurable</b>	True

### **lacp-fallback-mode *keyword***



**Note:**

This command is available for the following platforms:

- 7220 IXR-D2
- 7250 IXR-10
- 7220 IXR-D3L
- 7220 IXR-D2L
- 7220 IXR-H3
- 7220 IXR-H2
- 7220 IXR-D3
- 7250 IXR-6
- 7220 IXR-D1

<b>Description</b>	Specifies lacp-fallback mode if enabled
<b>Context</b>	<a href="#">interface name</a> <i>string</i> <a href="#">lag</a> <a href="#">lacp-fallback-mode</a> <i>keyword</i>
<b>Tree</b>	<a href="#">lacp-fallback-mode</a>
<b>Options</b>	<ul style="list-style-type: none"> <li>• static</li> </ul> Set the LACP-fallback mode as static
<b>Configurable</b>	True



**lacp-fallback-timeout *number*****Note:**

This command is available for the following platforms:

- 7220 IXR-D2
- 7250 IXR-10
- 7220 IXR-D3L
- 7220 IXR-D2L
- 7220 IXR-H3
- 7220 IXR-H2
- 7220 IXR-D3
- 7250 IXR-6
- 7220 IXR-D1

<b>Description</b>	Specifies the LACP-fallback timeout interval in seconds
<b>Context</b>	<a href="#">interface name</a> <i>string</i> <a href="#">lag lacp-fallback-timeout</a> <i>number</i>
<b>Tree</b>	<a href="#">lacp-fallback-timeout</a>
<b>Range</b>	4 to 3600
<b>Configurable</b>	True

**lag-speed *number*****Note:**

This command is available for the following platforms:

- 7220 IXR-D2
- 7250 IXR-10
- 7220 IXR-D3L
- 7220 IXR-D2L
- 7220 IXR-H3
- 7220 IXR-H2
- 7220 IXR-D3
- 7250 IXR-6
- 7220 IXR-D1

<b>Description</b>	Reports current aggregate bandwidth speed of the associated LAG
<b>Context</b>	<a href="#">interface name</a> <i>string</i> <a href="#">lag lag-speed</a> <i>number</i>
<b>Tree</b>	<a href="#">lag-speed</a>

<b>Units</b>	Mbps
<b>Configurable</b>	False

### lag-type *keyword*



**Note:**

This command is available for the following platforms:

- 7220 IXR-D2
- 7250 IXR-10
- 7220 IXR-D3L
- 7220 IXR-D2L
- 7220 IXR-H3
- 7220 IXR-H2
- 7220 IXR-D3
- 7250 IXR-6
- 7220 IXR-D1

<b>Description</b>	Sets the type of LAG, i.e., how it is configured / maintained
<b>Context</b>	<a href="#">interface name</a> <i>string</i> <a href="#">lag</a> <a href="#">lag-type</a> <i>keyword</i>
<b>Tree</b>	<a href="#">lag-type</a>
<b>Default</b>	static
<b>Options</b>	<ul style="list-style-type: none"> <li>• lacp LAG managed by LACP</li> <li>• static Statically configured bundle / LAG</li> </ul>
<b>Configurable</b>	True

**member-speed *keyword*****Note:**

This command is available for the following platforms:

- 7220 IXR-D2
- 7250 IXR-10
- 7220 IXR-D3L
- 7220 IXR-D2L
- 7220 IXR-H3
- 7220 IXR-H2
- 7220 IXR-D3
- 7250 IXR-6
- 7220 IXR-D1

<b>Description</b>	Specifies the link speed of allowed member-links
<b>Context</b>	<a href="#">interface name</a> <i>string</i> <a href="#">lag member-speed</a> <i>keyword</i>
<b>Tree</b>	<a href="#">member-speed</a>
<b>Options</b>	<ul style="list-style-type: none"> <li>• 10M Indicates the the LAG member-links must be 10M to be active</li> <li>• 100M Indicates the the LAG member-links must be 100M to be active</li> <li>• 1G Indicates the the LAG member-links must be 1G to be active</li> <li>• 10G Indicates the the LAG member-links must be 10G to be active</li> <li>• 25G Indicates the the LAG member-links must be 25G to be active</li> <li>• 40G Indicates the the LAG member-links must be 40G to be active</li> <li>• 100G Indicates the the LAG member-links must be 100G to be active</li> <li>• 400G Indicates the the LAG member-links must be 400G to be active</li> </ul>
<b>Configurable</b>	True

**members** *name reference***Note:**

This command is available for the following platforms:

- 7220 IXR-D2
- 7250 IXR-10
- 7220 IXR-D3L
- 7220 IXR-D2L
- 7220 IXR-H3
- 7220 IXR-H2
- 7220 IXR-D3
- 7250 IXR-6
- 7220 IXR-D1

<b>Description</b>	Reports the list of interfaces associated with the LAG instance
<b>Context</b>	<a href="#">interface name</a> <i>string</i> <a href="#">lag members name reference</a>
<b>Tree</b>	<a href="#">members</a>
<b>Configurable</b>	False

**name** *reference***Note:**

This command is available for the following platforms:

- 7220 IXR-D2
- 7250 IXR-10
- 7220 IXR-D3L
- 7220 IXR-D2L
- 7220 IXR-H3
- 7220 IXR-H2
- 7220 IXR-D3
- 7250 IXR-6
- 7220 IXR-D1

<b>Description</b>	Enter the name context
<b>Context</b>	<a href="#">interface name</a> <i>string</i> <a href="#">lag members name reference</a>
<b>Reference</b>	<a href="#">interface name</a> <i>string</i>
<b>Configurable</b>	False

**activity keyword****Note:**

This command is available for the following platforms:

- 7220 IXR-D2
- 7250 IXR-10
- 7220 IXR-D3L
- 7220 IXR-D2L
- 7220 IXR-H3
- 7220 IXR-H2
- 7220 IXR-D3
- 7250 IXR-6
- 7220 IXR-D1

<b>Description</b>	Indicates participant is active or passive
<b>Context</b>	<a href="#">interface name</a> <i>string</i> <a href="#">lag members name</a> <i>reference</i> <a href="#">activity keyword</a>
<b>Tree</b>	<a href="#">activity</a>
<b>Options</b>	<ul style="list-style-type: none"> <li>• ACTIVE Interface is an active member, i.e., will detect and maintain aggregates</li> <li>• PASSIVE Interface is a passive member, i.e., it participates with an active partner</li> </ul>
<b>Configurable</b>	False

**aggregatable boolean****Note:**

This command is available for the following platforms:

- 7220 IXR-D2
- 7250 IXR-10
- 7220 IXR-D3L
- 7220 IXR-D2L
- 7220 IXR-H3
- 7220 IXR-H2
- 7220 IXR-D3
- 7250 IXR-6
- 7220 IXR-D1

<b>Description</b>	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
<b>Context</b>	<a href="#">interface name</a> <i>string</i> <a href="#">lag members name</a> <i>reference</i> <a href="#">aggregatable</a> <i>boolean</i>
<b>Tree</b>	<a href="#">aggregatable</a>
<b>Configurable</b>	False

### collecting *boolean*



**Note:**

This command is available for the following platforms:

- 7220 IXR-D2
- 7250 IXR-10
- 7220 IXR-D3L
- 7220 IXR-D2L
- 7220 IXR-H3
- 7220 IXR-H2
- 7220 IXR-D3
- 7250 IXR-6
- 7220 IXR-D1

<b>Description</b>	If true, the participant is collecting incoming frames on the link, otherwise false
<b>Context</b>	<a href="#">interface name</a> <i>string</i> <a href="#">lag members name</a> <i>reference</i> <a href="#">collecting</a> <i>boolean</i>
<b>Tree</b>	<a href="#">collecting</a>
<b>Configurable</b>	False

## distributing *boolean*



### Note:

This command is available for the following platforms:

- 7220 IXR-D2
- 7250 IXR-10
- 7220 IXR-D3L
- 7220 IXR-D2L
- 7220 IXR-H3
- 7220 IXR-H2
- 7220 IXR-D3
- 7250 IXR-6
- 7220 IXR-D1

<b>Description</b>	When true, the participant is distributing outgoing frames; when false, distribution is disabled
<b>Context</b>	<a href="#">interface name</a> <i>string</i> <a href="#">lag members name</a> <i>reference</i> <a href="#">distributing</a> <i>boolean</i>
<b>Tree</b>	<a href="#">distributing</a>
<b>Configurable</b>	False

## lacp-port-priority *number*



### Note:

This command is available for the following platforms:

- 7220 IXR-D2
- 7220 IXR-D3L
- 7220 IXR-D2L
- 7220 IXR-D3
- 7220 IXR-D1

<b>Description</b>	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.
<b>Context</b>	<a href="#">interface name</a> <i>string</i> <a href="#">lag members name</a> <i>reference</i> <a href="#">lacp-port-priority</a> <i>number</i>
<b>Tree</b>	<a href="#">lacp-port-priority</a>
<b>Configurable</b>	False

**last-change *string*****Note:**

This command is available for the following platforms:

- 7220 IXR-D2
- 7250 IXR-10
- 7220 IXR-D3L
- 7220 IXR-D2L
- 7220 IXR-H3
- 7220 IXR-H2
- 7220 IXR-D3
- 7250 IXR-6
- 7220 IXR-D1

<b>Description</b>	The date and time of the most recent change to the LAG member-link state
<b>Context</b>	<a href="#">interface name</a> <i>string</i> <a href="#">lag members name</a> <i>reference</i> <a href="#">last-change</a> <i>string</i>
<b>Tree</b>	<a href="#">last-change</a>
<b>String Length</b>	20 to 32
<b>Configurable</b>	False

**microbfd-enabled *boolean*****Note:**

This command is available for the following platforms:

- 7220 IXR-D2
- 7250 IXR-10
- 7220 IXR-D3L
- 7220 IXR-D2L
- 7220 IXR-H3
- 7220 IXR-H2
- 7220 IXR-D3
- 7250 IXR-6
- 7220 IXR-D1

<b>Description</b>	Indicates if microBFD is currently used in the determination of the member-link oper-status
<b>Context</b>	<a href="#">interface name</a> <i>string</i> <a href="#">lag members name</a> <i>reference</i> <a href="#">microbfd-enabled</a> <i>boolean</i>



<b>Tree</b>	<a href="#">microbfd-enabled</a>
<b>Configurable</b>	False

### oper-down-reason *keyword*



**Note:**

This command is available for the following platforms:

- 7220 IXR-D2
- 7250 IXR-10
- 7220 IXR-D3L
- 7220 IXR-D2L
- 7220 IXR-H3
- 7220 IXR-H2
- 7220 IXR-D3
- 7250 IXR-6
- 7220 IXR-D1

<b>Description</b>	Reason for operational down state for the associated LAG
<b>Context</b>	<a href="#">interface name</a> <i>string</i> <a href="#">lag members name</a> <i>reference</i> <a href="#">oper-down-reason keyword</a>
<b>Tree</b>	<a href="#">oper-down-reason</a>
<b>Options</b>	<ul style="list-style-type: none"> <li>• port-disabled</li> <li>• port-oper-disabled</li> <li>• lag-admin-disabled</li> <li>• lacp-down</li> <li>• microBFD-down</li> <li>• lag-min-link-threshold</li> <li>• lag-speed-mismatch</li> <li>• other</li> </ul>
<b>Configurable</b>	False

**oper-key *number*****Note:**

This command is available for the following platforms:

- 7220 IXR-D2
- 7250 IXR-10
- 7220 IXR-D3L
- 7220 IXR-D2L
- 7220 IXR-H3
- 7220 IXR-H2
- 7220 IXR-D3
- 7250 IXR-6
- 7220 IXR-D1

<b>Description</b>	Current operational value of the key for the aggregate interface
<b>Context</b>	<a href="#">interface name</a> <i>string</i> <a href="#">lag members name</a> <i>reference</i> <a href="#">oper-key</a> <i>number</i>
<b>Tree</b>	<a href="#">oper-key</a>
<b>Configurable</b>	False

**oper-state *keyword*****Note:**

This command is available for the following platforms:

- 7220 IXR-D2
- 7250 IXR-10
- 7220 IXR-D3L
- 7220 IXR-D2L
- 7220 IXR-H3
- 7220 IXR-H2
- 7220 IXR-D3
- 7250 IXR-6
- 7220 IXR-D1

<b>Description</b>	Operational state for the associated LAG
<b>Context</b>	<a href="#">interface name</a> <i>string</i> <a href="#">lag members name</a> <i>reference</i> <a href="#">oper-state</a> <i>keyword</i>
<b>Tree</b>	<a href="#">oper-state</a>
<b>Options</b>	<ul style="list-style-type: none"> <li>• up Component or process is operational</li> </ul>

- 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  
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.

**Configurable**

False

**partner-id *string*****Note:**

This command is available for the following platforms:

- 7220 IXR-D2
- 7250 IXR-10
- 7220 IXR-D3L
- 7220 IXR-D2L
- 7220 IXR-H3
- 7220 IXR-H2
- 7220 IXR-D3
- 7250 IXR-6
- 7220 IXR-D1

<b>Description</b>	MAC address representing the protocol partner's interface system ID
<b>Context</b>	<a href="#">interface name</a> <i>string</i> <a href="#">lag members name</a> <i>reference</i> <a href="#">partner-id</a> <i>string</i>
<b>Tree</b>	<a href="#">partner-id</a>
<b>Configurable</b>	False

**partner-key *number*****Note:**

This command is available for the following platforms:

- 7220 IXR-D2
- 7250 IXR-10
- 7220 IXR-D3L
- 7220 IXR-D2L
- 7220 IXR-H3
- 7220 IXR-H2
- 7220 IXR-D3
- 7250 IXR-6
- 7220 IXR-D1

<b>Description</b>	Operational value of the protocol partner's key
<b>Context</b>	<a href="#">interface name</a> <i>string</i> <a href="#">lag members name</a> <i>reference</i> <a href="#">partner-key</a> <i>number</i>
<b>Tree</b>	<a href="#">partner-key</a>
<b>Configurable</b>	False

**partner-port-num *number*****Note:**

This command is available for the following platforms:

- 7220 IXR-D2
- 7250 IXR-10
- 7220 IXR-D3L
- 7220 IXR-D2L
- 7220 IXR-H3
- 7220 IXR-H2
- 7220 IXR-D3
- 7250 IXR-6
- 7220 IXR-D1

<b>Description</b>	Port number of the partner (remote) port for this member port
<b>Context</b>	<a href="#">interface name</a> <i>string</i> <a href="#">lag members name</a> <i>reference</i> <a href="#">partner-port-num number</a>
<b>Tree</b>	<a href="#">partner-port-num</a>
<b>Configurable</b>	False

**port-num *number*****Note:**

This command is available for the following platforms:

- 7220 IXR-D2
- 7250 IXR-10
- 7220 IXR-D3L
- 7220 IXR-D2L
- 7220 IXR-H3
- 7220 IXR-H2
- 7220 IXR-D3
- 7250 IXR-6
- 7220 IXR-D1

<b>Description</b>	Port number of the local (actor) aggregation member
<b>Context</b>	<a href="#">interface name</a> <i>string</i> <a href="#">lag members name</a> <i>reference</i> <a href="#">port-num number</a>
<b>Tree</b>	<a href="#">port-num</a>

**Configurable** False

## statistics



**Note:**

This command is available for the following platforms:

- 7220 IXR-D2
- 7250 IXR-10
- 7220 IXR-D3L
- 7220 IXR-D2L
- 7220 IXR-H3
- 7220 IXR-H2
- 7220 IXR-D3
- 7250 IXR-6
- 7220 IXR-D1

<b>Description</b>	LACP protocol counters
<b>Context</b>	<a href="#">interface name</a> <a href="#">string lag members name</a> <a href="#">reference</a> <a href="#">statistics</a>
<b>Tree</b>	<a href="#">statistics</a>
<b>Configurable</b>	False

## lACP-errors *number*



**Note:**

This command is available for the following platforms:

- 7220 IXR-D2
- 7250 IXR-10
- 7220 IXR-D3L
- 7220 IXR-D2L
- 7220 IXR-H3
- 7220 IXR-H2
- 7220 IXR-D3
- 7250 IXR-6
- 7220 IXR-D1

<b>Description</b>	Number of LACPDU illegal packet errors
--------------------	--

<b>Context</b>	<a href="#">interface name</a> <i>string</i> <a href="#">lag members name</a> <i>reference</i> <a href="#">statistics lacp-errors number</a>
<b>Tree</b>	<a href="#">lacp-errors</a>
<b>Default</b>	0
<b>Configurable</b>	False

### **lacp-in-pkts** *number*



**Note:**

This command is available for the following platforms:

- 7220 IXR-D2
- 7250 IXR-10
- 7220 IXR-D3L
- 7220 IXR-D2L
- 7220 IXR-H3
- 7220 IXR-H2
- 7220 IXR-D3
- 7250 IXR-6
- 7220 IXR-D1

<b>Description</b>	Number of LACPDUs received
<b>Context</b>	<a href="#">interface name</a> <i>string</i> <a href="#">lag members name</a> <i>reference</i> <a href="#">statistics lacp-in-pkts number</a>
<b>Tree</b>	<a href="#">lacp-in-pkts</a>
<b>Default</b>	0
<b>Configurable</b>	False

**lACP-out-pkts *number*****Note:**

This command is available for the following platforms:

- 7220 IXR-D2
- 7250 IXR-10
- 7220 IXR-D3L
- 7220 IXR-D2L
- 7220 IXR-H3
- 7220 IXR-H2
- 7220 IXR-D3
- 7250 IXR-6
- 7220 IXR-D1

<b>Description</b>	Number of LACPDU transmitted
<b>Context</b>	<a href="#">interface name</a> <i>string</i> <a href="#">lag members name</a> <i>reference</i> <a href="#">statistics</a> <a href="#">lACP-out-pkts number</a>
<b>Tree</b>	<a href="#">lACP-out-pkts</a>
<b>Default</b>	0
<b>Configurable</b>	False

**lACP-rx-errors *number*****Note:**

This command is available for the following platforms:

- 7220 IXR-D2
- 7250 IXR-10
- 7220 IXR-D3L
- 7220 IXR-D2L
- 7220 IXR-H3
- 7220 IXR-H2
- 7220 IXR-D3
- 7250 IXR-6
- 7220 IXR-D1

<b>Description</b>	Number of LACPDU receive packet errors
<b>Context</b>	<a href="#">interface name</a> <i>string</i> <a href="#">lag members name</a> <i>reference</i> <a href="#">statistics</a> <a href="#">lACP-rx-errors number</a>



<b>Tree</b>	<a href="#">lACP-rx-errors</a>
<b>Default</b>	0
<b>Configurable</b>	False

### **lACP-tx-errors *number***



**Note:**

This command is available for the following platforms:

- 7220 IXR-D2
- 7250 IXR-10
- 7220 IXR-D3L
- 7220 IXR-D2L
- 7220 IXR-H3
- 7220 IXR-H2
- 7220 IXR-D3
- 7250 IXR-6
- 7220 IXR-D1

<b>Description</b>	Number of LACPDU transmit packet errors
<b>Context</b>	<a href="#">interface name</a> <i>string</i> <a href="#">lag members name</a> <i>reference</i> <a href="#">statistics lACP-tx-errors number</a>
<b>Tree</b>	<a href="#">lACP-tx-errors</a>
<b>Default</b>	0
<b>Configurable</b>	False

**lacp-unknown-errors *number*****Note:**

This command is available for the following platforms:

- 7220 IXR-D2
- 7250 IXR-10
- 7220 IXR-D3L
- 7220 IXR-D2L
- 7220 IXR-H3
- 7220 IXR-H2
- 7220 IXR-D3
- 7250 IXR-6
- 7220 IXR-D1

<b>Description</b>	Number of LACPDU unknown packet errors
<b>Context</b>	<a href="#">interface name</a> <i>string</i> <a href="#">lag members name</a> <i>reference</i> <a href="#">statistics lacp-unknown-errors</a> <i>number</i>
<b>Tree</b>	<a href="#">lacp-unknown-errors</a>
<b>Default</b>	0
<b>Configurable</b>	False

**synchronization *keyword*****Note:**

This command is available for the following platforms:

- 7220 IXR-D2
- 7250 IXR-10
- 7220 IXR-D3L
- 7220 IXR-D2L
- 7220 IXR-H3
- 7220 IXR-H2
- 7220 IXR-D3
- 7250 IXR-6
- 7220 IXR-D1

<b>Description</b>	Indicates whether the participant is in-sync or out-of-sync
<b>Context</b>	<a href="#">interface name</a> <i>string</i> <a href="#">lag members name</a> <i>reference</i> <a href="#">synchronization</a> <i>keyword</i>
<b>Tree</b>	<a href="#">synchronization</a>

<b>Options</b>	<ul style="list-style-type: none"> <li>• IN_SYNC Participant is in sync with the system id and key transmitted</li> <li>• OUT_SYNC Participant is not in sync with the system id and key transmitted</li> </ul>
<b>Configurable</b>	False

### **system-id *string***



**Note:**

This command is available for the following platforms:

- 7220 IXR-D2
- 7250 IXR-10
- 7220 IXR-D3L
- 7220 IXR-D2L
- 7220 IXR-H3
- 7220 IXR-H2
- 7220 IXR-D3
- 7250 IXR-6
- 7220 IXR-D1

<b>Description</b>	MAC address that defines the local system ID for the aggregate interface
<b>Context</b>	<a href="#">interface name</a> <i>string</i> <a href="#">lag members name</a> <i>reference</i> <a href="#">system-id</a> <i>string</i>
<b>Tree</b>	<a href="#">system-id</a>
<b>Configurable</b>	False

**timeout *keyword*****Note:**

This command is available for the following platforms:

- 7220 IXR-D2
- 7250 IXR-10
- 7220 IXR-D3L
- 7220 IXR-D2L
- 7220 IXR-H3
- 7220 IXR-H2
- 7220 IXR-D3
- 7250 IXR-6
- 7220 IXR-D1

<b>Description</b>	The timeout type (short or long) used by the participant
<b>Context</b>	<a href="#">interface name</a> <i>string</i> <a href="#">lag members name</a> <i>reference</i> <a href="#">timeout keyword</a>
<b>Tree</b>	<a href="#">timeout</a>
<b>Options</b>	<ul style="list-style-type: none"> <li>• 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.</li> <li>• SHORT Participant wishes to use short timeouts, i.e., expects frequent transmissions to aggressively detect status changes. Short timeout is 3 seconds.</li> </ul>
<b>Configurable</b>	False

**min-links *number*****Note:**

This command is available for the following platforms:

- 7220 IXR-D2
- 7250 IXR-10
- 7220 IXR-D3L
- 7220 IXR-D2L
- 7220 IXR-H3
- 7220 IXR-H2
- 7220 IXR-D3
- 7250 IXR-6
- 7220 IXR-D1

<b>Description</b>	Specifies the minimum number of member interfaces that must be active for the aggregate interface to be available
<b>Context</b>	<a href="#">interface name</a> <i>string</i> <a href="#">lag min-links</a> <i>number</i>
<b>Tree</b>	<a href="#">min-links</a>
<b>Range</b>	1 to 64
<b>Default</b>	1
<b>Configurable</b>	True

**last-change *string***

<b>Description</b>	The date and time of the most recent change to the interface state
<b>Context</b>	<a href="#">interface name</a> <i>string</i> <a href="#">last-change</a> <i>string</i>
<b>Tree</b>	<a href="#">last-change</a>
<b>String Length</b>	20 to 32
<b>Configurable</b>	False

**loopback-mode *boolean***

<b>Description</b>	When loopback-mode is set to true the port loops back packets that come in via the port
<b>Context</b>	<a href="#">interface name</a> <i>string</i> <a href="#">loopback-mode</a> <i>boolean</i>
<b>Tree</b>	<a href="#">loopback-mode</a>
<b>Configurable</b>	True

**mtu number**

<b>Description</b>	<p>Port MTU in bytes including ethernet overhead but excluding 4-bytes FCS. If a transmitted packet exceeds this size it is dropped.</p> <p>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.</p> <p>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.</p> <p>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>
<b>Context</b>	<code>interface name string mtu number</code>
<b>Tree</b>	<code>mtu</code>
<b>Range</b>	1500 to 9500
<b>Units</b>	bytes
<b>Configurable</b>	True

**oper-down-reason keyword**

<b>Description</b>	The first (and possibly only) reason for the port being operationally down
<b>Context</b>	<code>interface name string oper-down-reason keyword</code>
<b>Tree</b>	<code>oper-down-reason</code>
<b>Options</b>	<ul style="list-style-type: none"> <li>• port-admin-disabled</li> <li>• mda-admin-disabled</li> <li>• transceiver-oper-down</li> <li>• loopback</li> <li>• port-not-present</li> <li>• mda-not-present</li> <li>• phy-initializing</li> <li>• lower-layer-down</li> <li>• auto-negotiation-mismatch</li> <li>• port-mtu-resource-exceeded</li> <li>• unsupported-speed</li> <li>• unsupported-fec</li> <li>• other</li> <li>• fabric-availability</li> </ul>

- 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

**Configurable** False

### oper-state keyword

**Description** The operational state of the interface

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

**Tree** [oper-state](#)

**Options**

- up
- down

**Configurable** False

### qos



**Note:**

This command is available for the following platforms:

- 7220 IXR-D2
- 7250 IXR-10
- 7220 IXR-D3L
- 7220 IXR-D2L
- 7220 IXR-H3
- 7220 IXR-H2
- 7220 IXR-D3
- 7250 IXR-6

**Description** Enable the qos context

**Context** [interface name](#) *string* [qos](#)

**Tree** [qos](#)

**Configurable** True

## output



### Note:

This command is available for the following platforms:

- 7220 IXR-D2
- 7250 IXR-10
- 7220 IXR-D3L
- 7220 IXR-D2L
- 7220 IXR-H3
- 7220 IXR-H2
- 7220 IXR-D3
- 7250 IXR-6

**Description** Container for QoS configuration that applies to outbound traffic through the port or LAG

**Context** [interface name](#) *string* [qos output](#)

**Tree** [output](#)

**Configurable** True

## multicast-queue [queue-id](#) *number*



### Note:

This command is available for the following platforms:

- 7220 IXR-D2
- 7250 IXR-10
- 7220 IXR-D3L
- 7220 IXR-D2L
- 7220 IXR-H3
- 7220 IXR-H2
- 7220 IXR-D3
- 7250 IXR-6

**Description** List of multicast queues

**Context** [interface name](#) *string* [qos output multicast-queue](#) [queue-id](#) *number*

**Tree** [multicast-queue](#)



<b>Configurable</b>	True
---------------------	------

### queue-id *number*



**Note:**

This command is available for the following platforms:

- 7220 IXR-D2
- 7250 IXR-10
- 7220 IXR-D3L
- 7220 IXR-D2L
- 7220 IXR-H3
- 7220 IXR-H2
- 7220 IXR-D3
- 7250 IXR-6

**Description**

The queue identifier

For J2 and TD3 there is a one-to-one mapping between queue-id and forwarding class. fc0 traffic always use queue-id 0, fc1 traffic always uses queue-id 1, etc.

For TH3 the multicast queue-id range is limited to 0-3 and the mapping is as follows: fc0+1 -> queue-id 0 fc2+3 -> queue-id 1 fc4+5 -> queue-id 2 fc6+7 -> queue-id 3

**Context**

[interface name](#) *string* [qos output multicast-queue](#) [queue-id](#) *number*

**Range**

0 to 7

**Configurable**

True

## forwarding-class *keyword*



### Note:

This command is available for the following platforms:

- 7220 IXR-D2
- 7250 IXR-10
- 7220 IXR-D3L
- 7220 IXR-D2L
- 7220 IXR-H3
- 7220 IXR-H2
- 7220 IXR-D3
- 7250 IXR-6

<b>Description</b>	The list of forwarding classes that map to this queue.
<b>Context</b>	<a href="#">interface name</a> <i>string</i> <a href="#">qos output multicast-queue queue-id</a> <i>number</i> <a href="#">forwarding-class</a> <i>keyword</i>
<b>Tree</b>	<a href="#">forwarding-class</a>
<b>Options</b>	<ul style="list-style-type: none"> <li>• fc0</li> <li>• fc1</li> <li>• fc2</li> <li>• fc3</li> <li>• fc4</li> <li>• fc5</li> <li>• fc6</li> <li>• fc7</li> </ul>
<b>Configurable</b>	False

## queue-depth



### Note:

This command is available for the following platforms:

- 7220 IXR-D2
- 7250 IXR-10
- 7220 IXR-D3L
- 7220 IXR-D2L
- 7220 IXR-H3
- 7220 IXR-H2
- 7220 IXR-D3
- 7250 IXR-6

<b>Description</b>	Enter the queue-depth context
<b>Context</b>	<a href="#">interface name</a> <i>string</i> <a href="#">qos output multicast-queue</a> <a href="#">queue-id</a> <i>number</i> <a href="#">queue-depth</a>
<b>Tree</b>	<a href="#">queue-depth</a>
<b>Configurable</b>	False

## last-high-threshold-time *string*



### Note:

This command is available for the following platforms:

- 7220 IXR-D2
- 7250 IXR-10
- 7220 IXR-D3L
- 7220 IXR-D2L
- 7220 IXR-H3
- 7220 IXR-H2
- 7220 IXR-D3
- 7250 IXR-6

<b>Description</b>	The last time the queue depth exceeded the high-threshold in a rising direction.
<b>Context</b>	<a href="#">interface name</a> <i>string</i> <a href="#">qos output multicast-queue</a> <a href="#">queue-id</a> <i>number</i> <a href="#">queue-depth</a> <a href="#">last-high-threshold-time</a> <i>string</i>
<b>Tree</b>	<a href="#">last-high-threshold-time</a>
<b>String Length</b>	20 to 32

**Configurable** False

### maximum-burst-size *number*



**Note:**

This command is available for the following platforms:

- 7220 IXR-D2
- 7250 IXR-10
- 7220 IXR-D3L
- 7220 IXR-D2L
- 7220 IXR-H3
- 7220 IXR-H2
- 7220 IXR-D3
- 7250 IXR-6

<b>Description</b>	Maximum queue depth in bytes.
<b>Context</b>	<a href="#">interface name</a> <i>string</i> <a href="#">qos output multicast-queue queue-id</a> <i>number</i> <a href="#">queue-depth maximum-burst-size</a> <i>number</i>
<b>Tree</b>	<a href="#">maximum-burst-size</a>
<b>Units</b>	bytes
<b>Configurable</b>	False

### scheduling



**Note:**

This command is available for the following platforms:

- 7220 IXR-D2
- 7250 IXR-10
- 7220 IXR-D3L
- 7220 IXR-D2L
- 7220 IXR-H3
- 7220 IXR-H2
- 7220 IXR-D3
- 7250 IXR-6

<b>Description</b>	Container for queue scheduling parameters
<b>Context</b>	<a href="#">interface name</a> <i>string</i> <a href="#">qos output multicast-queue queue-id</a> <i>number</i> <a href="#">scheduling</a>

<b>Tree</b>	<a href="#">scheduling</a>
<b>Configurable</b>	True

### peak-rate-bps *number*



**Note:**

This command is available for the following platforms:

- 7220 IXR-D2
- 7250 IXR-10
- 7220 IXR-D3L
- 7220 IXR-D2L
- 7220 IXR-H3
- 7220 IXR-H2
- 7220 IXR-D3
- 7250 IXR-6

<b>Description</b>	The actual/operational peak rate in bits per second.
<b>Context</b>	<a href="#">interface name</a> <i>string</i> <a href="#">qos output multicast-queue queue-id</a> <i>number</i> <a href="#">scheduling peak-rate-bps</a> <i>number</i>
<b>Tree</b>	<a href="#">peak-rate-bps</a>
<b>Configurable</b>	False

### peak-rate-percent *number*



**Note:**

This command is available for the following platforms:

- 7220 IXR-D2
- 7220 IXR-D3L
- 7220 IXR-D2L
- 7220 IXR-H3
- 7220 IXR-H2
- 7220 IXR-D3

<b>Description</b>	The maximum percentage of port bandwidth that is available to the traffic in this multicast queue. The default is 100.
<b>Context</b>	<a href="#">interface name</a> <i>string</i> <a href="#">qos output multicast-queue queue-id</a> <i>number</i> <a href="#">scheduling peak-rate-percent</a> <i>number</i>
<b>Tree</b>	<a href="#">peak-rate-percent</a>

<b>Range</b>	1 to 100
<b>Default</b>	100
<b>Configurable</b>	True

## scheduler-node *reference*



### Note:

This command is available for the following platforms:

- 7220 IXR-D2
- 7250 IXR-10
- 7220 IXR-D3L
- 7220 IXR-D2L
- 7220 IXR-H3
- 7220 IXR-H2
- 7220 IXR-D3
- 7250 IXR-6

<b>Description</b>	<p>The scheduler node to which the multicast queue is connected. The mappings are fixed and not user-configurable.</p> <p>J2: queue-id 0-7 -&gt; node 0</p> <p>TD3 (D2/D3): queue-id 0 -&gt; node 0 queue-id 1 -&gt; node 1 queue-id 2 -&gt; node 2 queue-id 3 -&gt; node 3 queue-id 4 -&gt; node 4 queue-id 5 -&gt; node 5 queue-id 6 -&gt; node 6 queue-id 7 -&gt; node 7</p> <p>TH3: queue-id 4 -&gt; node 0 queue-id 5 -&gt; node 3 queue-id 6 -&gt; node 6 queue-id 7 -&gt; node 9</p>
<b>Context</b>	<p><a href="#">interface name</a> <i>string</i> <a href="#">qos output multicast-queue</a> <i>queue-id</i> <i>number</i> <a href="#">scheduling scheduler-node</a> <i>reference</i></p>
<b>Tree</b>	<p><a href="#">scheduler-node</a></p>
<b>Reference</b>	<p><a href="#">interface name</a> <i>string</i> <a href="#">qos output scheduler tier level</a> <i>number</i> <a href="#">node node-number</a> <i>number</i></p>
<b>Configurable</b>	False

## template *reference*



### Note:

This command is available for the following platforms:

- 7220 IXR-D2
- 7220 IXR-D3
- 7220 IXR-D3L
- 7220 IXR-D2L

<b>Description</b>	The name of a queue-template to apply to the multicast queue. The active-queue-management container must not be present in order to apply the template. Also the high-threshold-bytes configuration in this template is ignored.
<b>Context</b>	<a href="#">interface name</a> <i>string</i> <a href="#">qos output multicast-queue queue-id</a> <i>number</i> <a href="#">template reference</a>
<b>Tree</b>	<a href="#">template</a>
<b>Reference</b>	<a href="#">qos queue-templates queue-template name string</a> <i>string</i>
<b>Configurable</b>	True

## scheduler



### Note:

This command is available for the following platforms:

- 7220 IXR-D2
- 7250 IXR-10
- 7220 IXR-D3L
- 7220 IXR-D2L
- 7220 IXR-H3
- 7220 IXR-H2
- 7220 IXR-D3
- 7250 IXR-6

<b>Description</b>	Output traffic scheduler options
<b>Context</b>	<a href="#">interface name</a> <i>string</i> <a href="#">qos output scheduler</a>
<b>Tree</b>	<a href="#">scheduler</a>
<b>Configurable</b>	True

**tier level number****Note:**

This command is available for the following platforms:

- 7220 IXR-D2
- 7250 IXR-10
- 7220 IXR-D3L
- 7220 IXR-D2L
- 7220 IXR-H3
- 7220 IXR-H2
- 7220 IXR-D3
- 7250 IXR-6

<b>Description</b>	List of output traffic scheduler tiers or levels
<b>Context</b>	<a href="#">interface name</a> <i>string</i> <a href="#">qos output scheduler tier level number</a>
<b>Tree</b>	<a href="#">tier</a>
<b>Configurable</b>	True
<b>Max. Elements</b>	1

**level number****Note:**

This command is available for the following platforms:

- 7220 IXR-D2
- 7250 IXR-10
- 7220 IXR-D3L
- 7220 IXR-D2L
- 7220 IXR-H3
- 7220 IXR-H2
- 7220 IXR-D3
- 7250 IXR-6

<b>Description</b>	Enter the level context
<b>Context</b>	<a href="#">interface name</a> <i>string</i> <a href="#">qos output scheduler tier level number</a>
<b>Range</b>	1 to 4
<b>Configurable</b>	True



**node** *node-number number***Note:**

This command is available for the following platforms:

- 7220 IXR-D2
- 7250 IXR-10
- 7220 IXR-D3L
- 7220 IXR-D2L
- 7220 IXR-H3
- 7220 IXR-H2
- 7220 IXR-D3
- 7250 IXR-6

<b>Description</b>	List of scheduler nodes at the specified scheduler level
<b>Context</b>	<a href="#">interface name</a> <i>string</i> <a href="#">qos output scheduler tier level</a> <i>number</i> <a href="#">node node-number</a> <i>number</i>
<b>Tree</b>	<a href="#">node</a>
<b>Configurable</b>	True
<b>Max. Elements</b>	12

**node-number** *number***Note:**

This command is available for the following platforms:

- 7220 IXR-D2
- 7250 IXR-10
- 7220 IXR-D3L
- 7220 IXR-D2L
- 7220 IXR-H3
- 7220 IXR-H2
- 7220 IXR-D3
- 7250 IXR-6

<b>Description</b>	An identifier of the scheduler node. Within a scheduler tier, higher-numbered nodes are served before lower-numbered nodes.
<b>Context</b>	<a href="#">interface name</a> <i>string</i> <a href="#">qos output scheduler tier level</a> <i>number</i> <a href="#">node node-number</a> <i>number</i>
<b>Range</b>	0 to 11

**Configurable** True

### **strict-priority *boolean***



**Note:**

This command is available for the following platforms:

- 7220 IXR-D2
- 7250 IXR-10
- 7220 IXR-D3L
- 7220 IXR-D2L
- 7220 IXR-H3
- 7220 IXR-H2
- 7220 IXR-D3
- 7250 IXR-6

**Description** A true value configures the node for strict priority scheduling, whether or not a weight is also configured. When set to false the node is serviced using DWRR, even if the node does not have a configured weight; in this case the default weight value of 1 is used.

**Context** [interface name](#) *string* [qos output scheduler tier level](#) *number* [node node-number](#) *number* [strict-priority](#) *boolean*

**Tree** [strict-priority](#)

**Configurable** True

### **weight *number***



**Note:**

This command is available for the following platforms:

- 7220 IXR-D2
- 7250 IXR-10
- 7220 IXR-D3L
- 7220 IXR-D2L
- 7220 IXR-H3
- 7220 IXR-H2
- 7220 IXR-D3
- 7250 IXR-6

**Description** The DWRR weight assigned to the scheduler node

<b>Context</b>	<code>interface name string qos output scheduler tier level number node node-number number weight number</code>
<b>Tree</b>	<code>weight</code>
<b>Range</b>	1 to 127
<b>Default</b>	1
<b>Configurable</b>	True

### unicast-queue `queue-id number`



**Note:**

This command is available for the following platforms:

- 7220 IXR-D2
- 7250 IXR-10
- 7220 IXR-D3L
- 7220 IXR-D2L
- 7220 IXR-H3
- 7220 IXR-H2
- 7220 IXR-D3
- 7250 IXR-6

<b>Description</b>	List of unicast queues
<b>Context</b>	<code>interface name string qos output unicast-queue queue-id number</code>
<b>Tree</b>	<code>unicast-queue</code>
<b>Configurable</b>	True

## queue-id *number*

**Note:**

This command is available for the following platforms:

- 7220 IXR-D2
- 7250 IXR-10
- 7220 IXR-D3L
- 7220 IXR-D2L
- 7220 IXR-H3
- 7220 IXR-H2
- 7220 IXR-D3
- 7250 IXR-6

<b>Description</b>	The queue identifier  For unicast traffic on all platforms there is a one-to-one mapping between queue-id and forwarding class. fc0 traffic always use queue-id 0, fc1 traffic always uses queue-id 1, etc.
<b>Context</b>	<a href="#">interface name</a> <i>string</i> <a href="#">qos output unicast-queue</a> <a href="#">queue-id</a> <i>number</i>
<b>Range</b>	0 to 7
<b>Configurable</b>	True

## active-queue-management

**Note:**

This command is available for the following platforms:

- 7220 IXR-D2
- 7250 IXR-10
- 7220 IXR-D3L
- 7220 IXR-D2L
- 7220 IXR-H3
- 7220 IXR-H2
- 7220 IXR-D3
- 7250 IXR-6

<b>Description</b>	Enter the active-queue-management context
<b>Context</b>	<a href="#">interface name</a> <i>string</i> <a href="#">qos output unicast-queue</a> <a href="#">queue-id</a> <i>number</i> <a href="#">active-queue-management</a>
<b>Tree</b>	<a href="#">active-queue-management</a>

**Configurable** False

### ecn-slope *ecn-drop-probability* **keyword**



**Note:**

This command is available for the following platforms:

- 7220 IXR-D2
- 7250 IXR-10
- 7220 IXR-D3L
- 7220 IXR-D2L
- 7220 IXR-H3
- 7220 IXR-H2
- 7220 IXR-D3
- 7250 IXR-6

**Description** List of ECN slopes.

**Context** [interface name](#) *string* [qos output unicast-queue](#) [queue-id](#) *number* [active-queue-management](#) [ecn-slope](#) [ecn-drop-probability](#) **keyword**

**Tree** [ecn-slope](#)

**Configurable** False

### ecn-drop-probability **keyword**



**Note:**

This command is available for the following platforms:

- 7220 IXR-D2
- 7250 IXR-10
- 7220 IXR-D3L
- 7220 IXR-D2L
- 7220 IXR-H3
- 7220 IXR-H2
- 7220 IXR-D3
- 7250 IXR-6

**Description** The drop probability to which the ECN slope applies.

**Context** [interface name](#) *string* [qos output unicast-queue](#) [queue-id](#) *number* [active-queue-management](#) [ecn-slope](#) [ecn-drop-probability](#) **keyword**

<b>Options</b>	<ul style="list-style-type: none"> <li>• low Traffic that should be dropped last when there is congestion. Internally this is traffic that is colored green.</li> <li>• 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.</li> <li>• high Traffic that should be dropped first when there is congestion. Internally this is traffic that is colored red.</li> <li>• all All traffic, consisting of traffic marked low, medium and high drop-probability.</li> </ul>
<b>Configurable</b>	False

### max-probability *number*



#### Note:

This command is available for the following platforms:

- 7220 IXR-D2
- 7250 IXR-10
- 7220 IXR-D3L
- 7220 IXR-D2L
- 7220 IXR-H3
- 7220 IXR-H2
- 7220 IXR-D3
- 7250 IXR-6

<b>Description</b>	<p>The maximum probability of marking a packet (at or above the max-threshold).</p> <p>On 7250 IXR systems there can be a significant difference between the configured value and the operational value.</p>
<b>Context</b>	<p><code>interface name string qos output unicast-queue queue-id number active-queue-management ecn-slope ecn-drop-probability keyword max-probability number</code></p>
<b>Tree</b>	<p><code>max-probability</code></p>
<b>Range</b>	0 to 100
<b>Configurable</b>	False

**max-threshold-bytes *number*****Note:**

This command is available for the following platforms:

- 7220 IXR-D2
- 7250 IXR-10
- 7220 IXR-D3L
- 7220 IXR-D2L
- 7220 IXR-H3
- 7220 IXR-H2
- 7220 IXR-D3
- 7250 IXR-6

<b>Description</b>	The queue depth in bytes that corresponds to the ECN maximum threshold parameter.
<b>Context</b>	<a href="#">interface name</a> <i>string</i> <a href="#">qos output unicast-queue queue-id</a> <i>number</i> <a href="#">active-queue-management ecn-slope ecn-drop-probability</a> <i>keyword</i> <a href="#">max-threshold-bytes</a> <i>number</i>
<b>Tree</b>	<a href="#">max-threshold-bytes</a>
<b>Units</b>	bytes
<b>Configurable</b>	False

**min-threshold-bytes *number*****Note:**

This command is available for the following platforms:

- 7220 IXR-D2
- 7250 IXR-10
- 7220 IXR-D3L
- 7220 IXR-D2L
- 7220 IXR-H3
- 7220 IXR-H2
- 7220 IXR-D3
- 7250 IXR-6

<b>Description</b>	The queue depth in bytes that corresponds to the ECN minimum threshold parameter.
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<b>Context</b>	<code>interface name string qos output unicast-queue queue-id number active-queue-management ecn-slope ecn-drop-probability keyword min-threshold-bytes number</code>
<b>Tree</b>	<code>min-threshold-bytes</code>
<b>Units</b>	bytes
<b>Configurable</b>	False

### **slope-enabled *boolean***



**Note:**

This command is available for the following platforms:

- 7220 IXR-D2
- 7250 IXR-10
- 7220 IXR-D3L
- 7220 IXR-D2L
- 7220 IXR-H3
- 7220 IXR-H2
- 7220 IXR-D3
- 7250 IXR-6

<b>Description</b>	Reads true if the slope is enabled. A disabled slope has min-threshold-bytes = max-threshold-bytes = max-probability = 0
<b>Context</b>	<code>interface name string qos output unicast-queue queue-id number active-queue-management ecn-slope ecn-drop-probability keyword slope-enabled boolean</code>
<b>Tree</b>	<code>slope-enabled</code>
<b>Configurable</b>	False



**wred-slope** *traffic-type keyword drop-probability keyword***Note:**

This command is available for the following platforms:

- 7220 IXR-D2
- 7250 IXR-10
- 7220 IXR-D3L
- 7220 IXR-D2L
- 7220 IXR-H3
- 7220 IXR-H2
- 7220 IXR-D3
- 7250 IXR-6

<b>Description</b>	List of WRED slopes.
<b>Context</b>	<i>interface name string qos output unicast-queue queue-id number active-queue-management wred-slope traffic-type keyword drop-probability keyword</i>
<b>Tree</b>	<i>wred-slope</i>
<b>Configurable</b>	False

**traffic-type** *keyword***Note:**

This command is available for the following platforms:

- 7220 IXR-D2
- 7250 IXR-10
- 7220 IXR-D3L
- 7220 IXR-D2L
- 7220 IXR-H3
- 7220 IXR-H2
- 7220 IXR-D3
- 7250 IXR-6

<b>Description</b>	The traffic type to which the WRED slope applies.
<b>Context</b>	<i>interface name string qos output unicast-queue queue-id number active-queue-management wred-slope traffic-type keyword drop-probability keyword</i>

<b>Options</b>	<ul style="list-style-type: none"> <li>• tcp Refers to IPv4/IPv6 packets with a protocol/next-header indicating a value of 6.</li> <li>• non-tcp Refers to all packets that are not IPv4/IPv6 packets with a protocol/next-header indicating a value of 6.</li> <li>• all Refers to all traffic, whether it is TCP or non-TCP.</li> </ul>
<b>Configurable</b>	False

### drop-probability *keyword*



#### Note:

This command is available for the following platforms:

- 7220 IXR-D2
- 7250 IXR-10
- 7220 IXR-D3L
- 7220 IXR-D2L
- 7220 IXR-H3
- 7220 IXR-H2
- 7220 IXR-D3
- 7250 IXR-6

<b>Description</b>	The drop probability to which the WRED slope applies.
<b>Context</b>	<code>interface name string qos output unicast-queue queue-id number active-queue-management wred-slope traffic-type keyword drop-probability keyword</code>
<b>Options</b>	<ul style="list-style-type: none"> <li>• low Traffic that should be dropped last when there is congestion. Internally this is traffic that is colored green.</li> <li>• 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.</li> <li>• high Traffic that should be dropped first when there is congestion. Internally this is traffic that is colored red.</li> </ul>
<b>Configurable</b>	False

**max-probability *number*****Note:**

This command is available for the following platforms:

- 7220 IXR-D2
- 7250 IXR-10
- 7220 IXR-D3L
- 7220 IXR-D2L
- 7220 IXR-H3
- 7220 IXR-H2
- 7220 IXR-D3
- 7250 IXR-6

<b>Description</b>	The maximum probability of dropping a packet (at or above the max-threshold).  On 7250 IXR systems there can be a significant difference between the configured value and the operational value.
<b>Context</b>	<a href="#">interface name</a> <i>string</i> <a href="#">qos output unicast-queue queue-id number active-queue-management wred-slope traffic-type keyword drop-probability keyword max-probability number</a>
<b>Tree</b>	<a href="#">max-probability</a>
<b>Range</b>	0 to 100
<b>Configurable</b>	False

**max-threshold-bytes *number*****Note:**

This command is available for the following platforms:

- 7220 IXR-D2
- 7250 IXR-10
- 7220 IXR-D3L
- 7220 IXR-D2L
- 7220 IXR-H3
- 7220 IXR-H2
- 7220 IXR-D3
- 7250 IXR-6

<b>Description</b>	The queue depth in bytes that corresponds to the WRED maximum threshold parameter.
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<b>Context</b>	<code>interface name</code> <i>string</i> <code>qos output unicast-queue queue-id number active-queue-management wred-slope traffic-type</code> <i>keyword</i> <code>drop-probability</code> <i>keyword</i> <code>max-threshold-bytes</code> <i>number</i>
<b>Tree</b>	<code>max-threshold-bytes</code>
<b>Units</b>	bytes
<b>Configurable</b>	False

### **min-threshold-bytes** *number*



**Note:**

This command is available for the following platforms:

- 7220 IXR-D2
- 7250 IXR-10
- 7220 IXR-D3L
- 7220 IXR-D2L
- 7220 IXR-H3
- 7220 IXR-H2
- 7220 IXR-D3
- 7250 IXR-6

<b>Description</b>	The queue depth in bytes that corresponds to the WRED minimum threshold parameter.
<b>Context</b>	<code>interface name</code> <i>string</i> <code>qos output unicast-queue queue-id number active-queue-management wred-slope traffic-type</code> <i>keyword</i> <code>drop-probability</code> <i>keyword</i> <code>min-threshold-bytes</code> <i>number</i>
<b>Tree</b>	<code>min-threshold-bytes</code>
<b>Units</b>	bytes
<b>Configurable</b>	False

**slope-enabled *boolean*****Note:**

This command is available for the following platforms:

- 7220 IXR-D2
- 7250 IXR-10
- 7220 IXR-D3L
- 7220 IXR-D2L
- 7220 IXR-H3
- 7220 IXR-H2
- 7220 IXR-D3
- 7250 IXR-6

<b>Description</b>	Reads true if the slope is enabled.  A disabled slope has min-threshold-bytes = max-threshold-bytes = max-probability = 0
<b>Context</b>	<a href="#">interface name</a> <i>string</i> <a href="#">qos output unicast-queue queue-id number active-queue-management wred-slope traffic-type keyword drop-probability keyword slope-enabled</a> <i>boolean</i>
<b>Tree</b>	<a href="#">slope-enabled</a>
<b>Configurable</b>	False

**forwarding-class *keyword*****Note:**

This command is available for the following platforms:

- 7220 IXR-D2
- 7250 IXR-10
- 7220 IXR-D3L
- 7220 IXR-D2L
- 7220 IXR-H3
- 7220 IXR-H2
- 7220 IXR-D3
- 7250 IXR-6

<b>Description</b>	The list of forwarding classes that map to this queue.
<b>Context</b>	<a href="#">interface name</a> <i>string</i> <a href="#">qos output unicast-queue queue-id number forwarding-class</a> <i>keyword</i>

<b>Tree</b>	<a href="#">forwarding-class</a>
<b>Options</b>	<ul style="list-style-type: none"> <li>• fc0</li> <li>• fc1</li> <li>• fc2</li> <li>• fc3</li> <li>• fc4</li> <li>• fc5</li> <li>• fc6</li> <li>• fc7</li> </ul>
<b>Configurable</b>	False

## queue-depth



### Note:

This command is available for the following platforms:

- 7220 IXR-D2
- 7250 IXR-10
- 7220 IXR-D3L
- 7220 IXR-D2L
- 7220 IXR-H3
- 7220 IXR-H2
- 7220 IXR-D3
- 7250 IXR-6

<b>Description</b>	Enter the queue-depth context
<b>Context</b>	<a href="#">interface name</a> <i>string</i> <a href="#">qos output unicast-queue</a> <a href="#">queue-id</a> <i>number</i> <a href="#">queue-depth</a>
<b>Tree</b>	<a href="#">queue-depth</a>
<b>Configurable</b>	False

## high-threshold-bytes *number*



### Note:

This command is available for the following platforms:

- 7220 IXR-D2
- 7250 IXR-10
- 7220 IXR-D3L
- 7220 IXR-D2L
- 7220 IXR-H3
- 7220 IXR-H2
- 7220 IXR-D3
- 7250 IXR-6

<b>Description</b>	The operational hardware value of the high threshold in bytes.
<b>Context</b>	<a href="#">interface name</a> <i>string</i> <a href="#">qos output unicast-queue queue-id</a> <i>number</i> <a href="#">queue-depth high-threshold-bytes</a> <i>number</i>
<b>Tree</b>	<a href="#">high-threshold-bytes</a>
<b>Units</b>	bytes
<b>Configurable</b>	False

## last-high-threshold-time *string*



### Note:

This command is available for the following platforms:

- 7220 IXR-D2
- 7250 IXR-10
- 7220 IXR-D3L
- 7220 IXR-D2L
- 7220 IXR-H3
- 7220 IXR-H2
- 7220 IXR-D3
- 7250 IXR-6

<b>Description</b>	The last time the queue depth exceeded the high-threshold in a rising direction.
<b>Context</b>	<a href="#">interface name</a> <i>string</i> <a href="#">qos output unicast-queue queue-id</a> <i>number</i> <a href="#">queue-depth last-high-threshold-time</a> <i>string</i>
<b>Tree</b>	<a href="#">last-high-threshold-time</a>

<b>String Length</b>	20 to 32
<b>Configurable</b>	False

### maximum-burst-size *number*



**Note:**

This command is available for the following platforms:

- 7220 IXR-D2
- 7250 IXR-10
- 7220 IXR-D3L
- 7220 IXR-D2L
- 7220 IXR-H3
- 7220 IXR-H2
- 7220 IXR-D3
- 7250 IXR-6

<b>Description</b>	Maximum queue depth in bytes.
<b>Context</b>	<a href="#">interface name</a> <i>string</i> <a href="#">qos output unicast-queue queue-id</a> <i>number</i> <a href="#">queue-depth maximum-burst-size</a> <i>number</i>
<b>Tree</b>	<a href="#">maximum-burst-size</a>
<b>Units</b>	bytes
<b>Configurable</b>	False

### scheduling



**Note:**

This command is available for the following platforms:

- 7220 IXR-D2
- 7250 IXR-10
- 7220 IXR-D3L
- 7220 IXR-D2L
- 7220 IXR-H3
- 7220 IXR-H2
- 7220 IXR-D3
- 7250 IXR-6

<b>Description</b>	Container for queue scheduling parameters
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<b>Context</b>	<a href="#">interface name</a> <i>string</i> <a href="#">qos output unicast-queue queue-id number scheduling</a>
<b>Tree</b>	<a href="#">scheduling</a>
<b>Configurable</b>	True

### peak-rate-bps *number*



**Note:**

This command is available for the following platforms:

- 7220 IXR-D2
- 7250 IXR-10
- 7220 IXR-D3L
- 7220 IXR-D2L
- 7220 IXR-H3
- 7220 IXR-H2
- 7220 IXR-D3
- 7250 IXR-6

<b>Description</b>	The actual/operational peak rate in bits per second.
<b>Context</b>	<a href="#">interface name</a> <i>string</i> <a href="#">qos output unicast-queue queue-id number scheduling</a> <a href="#">peak-rate-bps</a> <i>number</i>
<b>Tree</b>	<a href="#">peak-rate-bps</a>
<b>Configurable</b>	False

### peak-rate-percent *number*



**Note:**

This command is available for the following platforms:

- 7220 IXR-D2
- 7250 IXR-10
- 7220 IXR-D3L
- 7220 IXR-D2L
- 7220 IXR-H3
- 7220 IXR-H2
- 7220 IXR-D3
- 7250 IXR-6

<b>Description</b>	The maximum percentage of port bandwidth that is available to the traffic in this unicast queue. The default is 100.
--------------------	--

<b>Context</b>	<a href="#">interface name</a> <i>string</i> <a href="#">qos output unicast-queue queue-id number scheduling peak-rate-percent</a> <i>number</i>
<b>Tree</b>	<a href="#">peak-rate-percent</a>
<b>Range</b>	1 to 100
<b>Default</b>	100
<b>Configurable</b>	True

## scheduler-node *reference*



### Note:

This command is available for the following platforms:

- 7220 IXR-D2
- 7250 IXR-10
- 7220 IXR-D3L
- 7220 IXR-D2L
- 7220 IXR-H3
- 7220 IXR-H2
- 7220 IXR-D3
- 7250 IXR-6

<b>Description</b>	<p>The scheduler node to which the unicast queue is connected. The mappings are fixed and not user-configurable.</p> <p>J2: queue-id 0-7 -&gt; node 1</p> <p>TD3 (D2/D3): queue-id 0 -&gt; node 0 queue-id 1 -&gt; node 1 queue-id 2 -&gt; node 2 queue-id 3 -&gt; node 3 queue-id 4 -&gt; node 4 queue-id 5 -&gt; node 5 queue-id 6 -&gt; node 6 queue-id 7 -&gt; node 7</p> <p>TH3: queue-id 0 -&gt; node 1 queue-id 1 -&gt; node 2 queue-id 2 -&gt; node 4 queue-id 3 -&gt; node 5 queue-id 4 -&gt; node 7 queue-id 5 -&gt; node 8 queue-id 6 -&gt; node 10 queue-id 7 -&gt; node 11</p>
<b>Context</b>	<a href="#">interface name</a> <i>string</i> <a href="#">qos output unicast-queue queue-id number scheduling scheduler-node</a> <i>reference</i>
<b>Tree</b>	<a href="#">scheduler-node</a>
<b>Reference</b>	<a href="#">interface name</a> <i>string</i> <a href="#">qos output scheduler tier level number node node-number</a> <i>number</i>
<b>Configurable</b>	False

**strict-priority *boolean*****Note:**

This command is available for the following platforms:

- 7250 IXR-6
- 7250 IXR-10

<b>Description</b>	When set to true the unicast queue is serviced as a strict priority queue, regardless of whether a weight is configured or its value. When set to false the unicast 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.
<b>Context</b>	<a href="#">interface name</a> <i>string</i> <a href="#">qos output unicast-queue queue-id number scheduling</a> <a href="#">strict-priority</a> <i>boolean</i>
<b>Tree</b>	<a href="#">strict-priority</a>
<b>Default</b>	true
<b>Configurable</b>	True

**weight *number*****Note:**

This command is available for the following platforms:

- 7250 IXR-6
- 7250 IXR-10

<b>Description</b>	Configures the relative weight of a DWRR queue.
<b>Context</b>	<a href="#">interface name</a> <i>string</i> <a href="#">qos output unicast-queue queue-id number scheduling</a> <a href="#">weight</a> <i>number</i>
<b>Tree</b>	<a href="#">weight</a>
<b>Range</b>	1 to 255
<b>Default</b>	1
<b>Configurable</b>	True

## template *reference*



### Note:

This command is available for the following platforms:

- 7220 IXR-D2
- 7220 IXR-D3L
- 7220 IXR-D2L
- 7220 IXR-H3
- 7220 IXR-H2
- 7220 IXR-D3

<b>Description</b>	The name of a queue-template to apply to the unicast queue. If a queue has no queue-template, the default queue-template is applied. The user cannot modify the default queue-template.
<b>Context</b>	<a href="#">interface name</a> <i>string</i> <a href="#">qos output unicast-queue</a> <a href="#">queue-id</a> <i>number</i> <a href="#">template reference</a>
<b>Tree</b>	<a href="#">template</a>
<b>Reference</b>	<a href="#">qos queue-templates</a> <a href="#">queue-template name</a> <i>string</i> <a href="#">string</a>
<b>Configurable</b>	True

## voq-template *reference*



### Note:

This command is available for the following platforms:

- 7250 IXR-6
- 7250 IXR-10

<b>Description</b>	The name of a queue-template to apply to the set of associated VOQs. If a queue has no voq-template, the default queue-template is applied
<b>Context</b>	<a href="#">interface name</a> <i>string</i> <a href="#">qos output unicast-queue</a> <a href="#">queue-id</a> <i>number</i> <a href="#">voq-template reference</a>
<b>Tree</b>	<a href="#">voq-template</a>
<b>Reference</b>	<a href="#">qos queue-templates</a> <a href="#">queue-template name</a> <i>string</i> <a href="#">string</a>
<b>Configurable</b>	True

## queue-statistics



### Note:

This command is available for the following platforms:

- 7220 IXR-D2
- 7250 IXR-10
- 7220 IXR-D3L
- 7220 IXR-D2L
- 7220 IXR-H3
- 7220 IXR-H2
- 7220 IXR-D3
- 7250 IXR-6

<b>Description</b>	Enter the queue-statistics context
<b>Context</b>	<a href="#">interface name</a> <i>string</i> <a href="#">queue-statistics</a>
<b>Tree</b>	<a href="#">queue-statistics</a>
<b>Configurable</b>	False

## multicast-queue [queue-id](#) *number*



### Note:

This command is available for the following platforms:

- 7220 IXR-D2
- 7250 IXR-10
- 7220 IXR-D3L
- 7220 IXR-D2L
- 7220 IXR-H3
- 7220 IXR-H2
- 7220 IXR-D3
- 7250 IXR-6

<b>Description</b>	List of multicast queues.
<b>Context</b>	<a href="#">interface name</a> <i>string</i> <a href="#">queue-statistics</a> <a href="#">multicast-queue</a> <a href="#">queue-id</a> <i>number</i>
<b>Tree</b>	<a href="#">multicast-queue</a>
<b>Configurable</b>	False

**queue-id *number*****Note:**

This command is available for the following platforms:

- 7220 IXR-D2
- 7250 IXR-10
- 7220 IXR-D3L
- 7220 IXR-D2L
- 7220 IXR-H3
- 7220 IXR-H2
- 7220 IXR-D3
- 7250 IXR-6

**Description**

The queue identifier

For J2 and TD3 there is a one-to-one mapping between queue-id and forwarding class. fc0 traffic always use queue-id 0, fc1 traffic always uses queue-id 1, etc.

For TH3 the multicast queue-id range is limited to 0-3 and the mapping is as follows: fc0+1 -> queue-id 0 fc2+3 -> queue-id 1 fc4+5 -> queue-id 2 fc6+7 -> queue-id 3

**Context**

[interface name](#) *string* [queue-statistics](#) [multicast-queue](#) [queue-id](#) *number*

**Range**

0 to 7

**Configurable**

False

**final-dropped-octets *number*****Note:**

This command is available for the following platforms:

- 7220 IXR-D2
- 7250 IXR-10
- 7220 IXR-D3L
- 7220 IXR-D2L
- 7220 IXR-H3
- 7220 IXR-H2
- 7220 IXR-D3
- 7250 IXR-6

**Description**

Number of octets dropped by the multicast queue.

<b>Context</b>	<code>interface name</code> <i>string</i> <code>queue-statistics multicast-queue queue-id</code> <i>number</i> <code>final-dropped-octets</code> <i>number</i>
<b>Tree</b>	<code>final-dropped-octets</code>
<b>Default</b>	0
<b>Configurable</b>	False

### **final-dropped-packets** *number*



**Note:**

This command is available for the following platforms:

- 7220 IXR-D2
- 7250 IXR-10
- 7220 IXR-D3L
- 7220 IXR-D2L
- 7220 IXR-H3
- 7220 IXR-H2
- 7220 IXR-D3
- 7250 IXR-6

<b>Description</b>	Number of packets dropped by the multicast queue.
<b>Context</b>	<code>interface name</code> <i>string</i> <code>queue-statistics multicast-queue queue-id</code> <i>number</i> <code>final-dropped-packets</code> <i>number</i>
<b>Tree</b>	<code>final-dropped-packets</code>
<b>Default</b>	0
<b>Configurable</b>	False

**last-clear *string*****Note:**

This command is available for the following platforms:

- 7220 IXR-D2
- 7250 IXR-10
- 7220 IXR-D3L
- 7220 IXR-D2L
- 7220 IXR-H3
- 7220 IXR-H2
- 7220 IXR-D3
- 7250 IXR-6

<b>Description</b>	Timestamp of the last time the statistics associated with this multicast queue were cleared
<b>Context</b>	<a href="#">interface name</a> <i>string</i> <a href="#">queue-statistics multicast-queue queue-id</a> <i>number</i> <a href="#">last-clear</a> <i>string</i>
<b>Tree</b>	<a href="#">last-clear</a>
<b>String Length</b>	20 to 32
<b>Configurable</b>	False

**transmitted-octets *number*****Note:**

This command is available for the following platforms:

- 7220 IXR-D2
- 7250 IXR-10
- 7220 IXR-D3L
- 7220 IXR-D2L
- 7220 IXR-H3
- 7220 IXR-H2
- 7220 IXR-D3
- 7250 IXR-6

<b>Description</b>	Number of octets transmitted by the multicast queue.
<b>Context</b>	<a href="#">interface name</a> <i>string</i> <a href="#">queue-statistics multicast-queue queue-id</a> <i>number</i> <a href="#">transmitted-octets</a> <i>number</i>
<b>Tree</b>	<a href="#">transmitted-octets</a>



<b>Default</b>	0
<b>Configurable</b>	False

### transmitted-packets *number*



**Note:**

This command is available for the following platforms:

- 7220 IXR-D2
- 7250 IXR-10
- 7220 IXR-D3L
- 7220 IXR-D2L
- 7220 IXR-H3
- 7220 IXR-H2
- 7220 IXR-D3
- 7250 IXR-6

<b>Description</b>	Number of packets transmitted by the multicast queue.
<b>Context</b>	<a href="#">interface name</a> <i>string</i> <a href="#">queue-statistics</a> <a href="#">multicast-queue</a> <a href="#">queue-id</a> <i>number</i> <a href="#">transmitted-packets</a> <i>number</i>
<b>Tree</b>	<a href="#">transmitted-packets</a>
<b>Default</b>	0
<b>Configurable</b>	False

### unicast-queue [queue-id](#) *number*



**Note:**

This command is available for the following platforms:

- 7220 IXR-D2
- 7250 IXR-10
- 7220 IXR-D3L
- 7220 IXR-D2L
- 7220 IXR-H3
- 7220 IXR-H2
- 7220 IXR-D3
- 7250 IXR-6

<b>Description</b>	List of unicast queues.
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<b>Context</b>	<code>interface name string queue-statistics unicast-queue queue-id number</code>
<b>Tree</b>	<code>unicast-queue</code>
<b>Configurable</b>	False

### queue-id *number*



**Note:**

This command is available for the following platforms:

- 7220 IXR-D2
- 7250 IXR-10
- 7220 IXR-D3L
- 7220 IXR-D2L
- 7220 IXR-H3
- 7220 IXR-H2
- 7220 IXR-D3
- 7250 IXR-6

<b>Description</b>	The queue identifier  For unicast traffic on all platforms there is a one-to-one mapping between queue-id and forwarding class. fc0 traffic always use queue-id 0, fc1 traffic always uses queue-id 1, etc.
<b>Context</b>	<code>interface name string queue-statistics unicast-queue queue-id number</code>
<b>Range</b>	0 to 7
<b>Configurable</b>	False

**final-dropped-octets *number*****Note:**

This command is available for the following platforms:

- 7220 IXR-D2
- 7250 IXR-10
- 7220 IXR-D3L
- 7220 IXR-D2L
- 7220 IXR-H3
- 7220 IXR-H2
- 7220 IXR-D3
- 7250 IXR-6

<b>Description</b>	Number of octets dropped by the unicast queue.  On 7250-IXR (Jericho2-based) systems unicast packet drops related to egress port congestion should show up in the VOQ stats and not in this statistic.
<b>Context</b>	<a href="#">interface name</a> <i>string</i> <a href="#">queue-statistics</a> <a href="#">unicast-queue</a> <a href="#">queue-id</a> <i>number</i> <a href="#">final-dropped-octets</a> <i>number</i>
<b>Tree</b>	<a href="#">final-dropped-octets</a>
<b>Default</b>	0
<b>Configurable</b>	False

**final-dropped-packets *number*****Note:**

This command is available for the following platforms:

- 7220 IXR-D2
- 7250 IXR-10
- 7220 IXR-D3L
- 7220 IXR-D2L
- 7220 IXR-H3
- 7220 IXR-H2
- 7220 IXR-D3
- 7250 IXR-6

<b>Description</b>	Number of packets dropped by the unicast queue.
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On 7250-IXR (Jericho2-based) systems unicast packet drops related to egress port congestion should show up in the VOQ stats and not in this statistic.

<b>Context</b>	<a href="#">interface name</a> <i>string</i> <a href="#">queue-statistics</a> <a href="#">unicast-queue</a> <a href="#">queue-id</a> <i>number</i> <a href="#">final-dropped-packets</a> <i>number</i>
<b>Tree</b>	<a href="#">final-dropped-packets</a>
<b>Default</b>	0
<b>Configurable</b>	False

## last-clear *string*



### Note:

This command is available for the following platforms:

- 7220 IXR-D2
- 7250 IXR-10
- 7220 IXR-D3L
- 7220 IXR-D2L
- 7220 IXR-H3
- 7220 IXR-H2
- 7220 IXR-D3
- 7250 IXR-6

<b>Description</b>	Timestamp of the last time the statistics associated with this unicast queue were cleared
<b>Context</b>	<a href="#">interface name</a> <i>string</i> <a href="#">queue-statistics</a> <a href="#">unicast-queue</a> <a href="#">queue-id</a> <i>number</i> <a href="#">last-clear</a> <i>string</i>
<b>Tree</b>	<a href="#">last-clear</a>
<b>String Length</b>	20 to 32
<b>Configurable</b>	False

**transmitted-octets *number*****Note:**

This command is available for the following platforms:

- 7220 IXR-D2
- 7250 IXR-10
- 7220 IXR-D3L
- 7220 IXR-D2L
- 7220 IXR-H3
- 7220 IXR-H2
- 7220 IXR-D3
- 7250 IXR-6

<b>Description</b>	Number of octets transmitted by the unicast queue.
<b>Context</b>	<a href="#">interface name</a> <i>string</i> <a href="#">queue-statistics unicast-queue queue-id</a> <i>number</i> <a href="#">transmitted-octets</a> <i>number</i>
<b>Tree</b>	<a href="#">transmitted-octets</a>
<b>Default</b>	0
<b>Configurable</b>	False

**transmitted-packets *number*****Note:**

This command is available for the following platforms:

- 7220 IXR-D2
- 7250 IXR-10
- 7220 IXR-D3L
- 7220 IXR-D2L
- 7220 IXR-H3
- 7220 IXR-H2
- 7220 IXR-D3
- 7250 IXR-6

<b>Description</b>	Number of packets transmitted by the unicast queue, including transit traffic and locally originated traffic.
<b>Context</b>	<a href="#">interface name</a> <i>string</i> <a href="#">queue-statistics unicast-queue queue-id</a> <i>number</i> <a href="#">transmitted-packets</a> <i>number</i>
<b>Tree</b>	<a href="#">transmitted-packets</a>

<b>Default</b>	0
<b>Configurable</b>	False

### virtual-output-queue *slot number*



**Note:**

This command is available for the following platforms:

- 7250 IXR-6
- 7250 IXR-10

<b>Description</b>	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.
<b>Context</b>	<a href="#">interface name</a> <i>string</i> <a href="#">queue-statistics</a> <a href="#">unicast-queue</a> <a href="#">queue-id</a> <i>number</i> <a href="#">virtual-output-queue</a> <i>slot number</i>
<b>Tree</b>	<a href="#">virtual-output-queue</a>
<b>Configurable</b>	False

### slot *number*



**Note:**

This command is available for the following platforms:

- 7250 IXR-6
- 7250 IXR-10

<b>Description</b>	The slot identifier for the virtual output queue.
<b>Context</b>	<a href="#">interface name</a> <i>string</i> <a href="#">queue-statistics</a> <a href="#">unicast-queue</a> <a href="#">queue-id</a> <i>number</i> <a href="#">virtual-output-queue</a> <i>slot number</i>
<b>Range</b>	1 to 8
<b>Configurable</b>	False

### dropped-octets



**Note:**

This command is available for the following platforms:

- 7250 IXR-6
- 7250 IXR-10

<b>Description</b>	Enter the dropped-octets context
<b>Context</b>	<a href="#">interface name</a> <i>string</i> <a href="#">queue-statistics</a> <a href="#">unicast-queue</a> <a href="#">queue-id</a> <i>number</i> <a href="#">virtual-output-queue</a> <a href="#">slot</a> <i>number</i> <a href="#">dropped-octets</a>
<b>Tree</b>	<a href="#">dropped-octets</a>
<b>Configurable</b>	False

## high-drop-probability *number*



### Note:

This command is available for the following platforms:

- 7250 IXR-6
- 7250 IXR-10

<b>Description</b>	The number of octets in unicast packets dropped in the VOQ due to the congestion at the egress port/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.
<b>Context</b>	<a href="#">interface name</a> <i>string</i> <a href="#">queue-statistics</a> <a href="#">unicast-queue</a> <a href="#">queue-id</a> <i>number</i> <a href="#">virtual-output-queue</a> <a href="#">slot</a> <i>number</i> <a href="#">dropped-octets</a> <a href="#">high-drop-probability</a> <i>number</i>
<b>Tree</b>	<a href="#">high-drop-probability</a>
<b>Default</b>	0
<b>Configurable</b>	False

## low-drop-probability *number*



### Note:

This command is available for the following platforms:

- 7250 IXR-6
- 7250 IXR-10

<b>Description</b>	The number of octets in unicast packets dropped in the VOQ due to the congestion at the egress port/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.
<b>Context</b>	<a href="#">interface name</a> <i>string</i> <a href="#">queue-statistics</a> <a href="#">unicast-queue</a> <a href="#">queue-id</a> <i>number</i> <a href="#">virtual-output-queue</a> <a href="#">slot</a> <i>number</i> <a href="#">dropped-octets</a> <a href="#">low-drop-probability</a> <i>number</i>
<b>Tree</b>	<a href="#">low-drop-probability</a>

<b>Default</b>	0
<b>Configurable</b>	False

## medium-drop-probability *number*



### Note:

This command is available for the following platforms:

- 7250 IXR-6
- 7250 IXR-10

<b>Description</b>	The number of octets in unicast packets dropped in the VOQ due to the congestion at the egress port/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.
<b>Context</b>	<a href="#">interface name</a> <i>string</i> <a href="#">queue-statistics unicast-queue queue-id</a> <i>number</i> <a href="#">virtual-output-queue slot</a> <i>number</i> <a href="#">dropped-octets medium-drop-probability</a> <i>number</i>
<b>Tree</b>	<a href="#">medium-drop-probability</a>
<b>Default</b>	0
<b>Configurable</b>	False

## dropped-packets



### Note:

This command is available for the following platforms:

- 7250 IXR-6
- 7250 IXR-10

<b>Description</b>	Enter the dropped-packets context
<b>Context</b>	<a href="#">interface name</a> <i>string</i> <a href="#">queue-statistics unicast-queue queue-id</a> <i>number</i> <a href="#">virtual-output-queue slot</a> <i>number</i> <a href="#">dropped-packets</a>
<b>Tree</b>	<a href="#">dropped-packets</a>
<b>Configurable</b>	False



## high-drop-probability *number*



### Note:

This command is available for the following platforms:

- 7250 IXR-6
- 7250 IXR-10

<b>Description</b>	The number of unicast packets dropped in the VOQ due to the congestion at the egress port/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.
<b>Context</b>	<a href="#">interface name</a> <i>string</i> <a href="#">queue-statistics unicast-queue queue-id</a> <i>number</i> <a href="#">virtual-output-queue slot</a> <i>number</i> <a href="#">dropped-packets high-drop-probability</a> <i>number</i>
<b>Tree</b>	<a href="#">high-drop-probability</a>
<b>Default</b>	0
<b>Configurable</b>	False

## low-drop-probability *number*



### Note:

This command is available for the following platforms:

- 7250 IXR-6
- 7250 IXR-10

<b>Description</b>	The number of unicast packets dropped in the VOQ due to the congestion at the egress port/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.
<b>Context</b>	<a href="#">interface name</a> <i>string</i> <a href="#">queue-statistics unicast-queue queue-id</a> <i>number</i> <a href="#">virtual-output-queue slot</a> <i>number</i> <a href="#">dropped-packets low-drop-probability</a> <i>number</i>
<b>Tree</b>	<a href="#">low-drop-probability</a>
<b>Default</b>	0
<b>Configurable</b>	False

## medium-drop-probability *number*



### Note:

This command is available for the following platforms:

- 7250 IXR-6
- 7250 IXR-10

<b>Description</b>	The number of unicast packets dropped in the VOQ due to the congestion at the egress port/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.
<b>Context</b>	<a href="#">interface name</a> <i>string</i> <a href="#">queue-statistics unicast-queue queue-id</a> <i>number</i> <a href="#">virtual-output-queue slot</a> <i>number</i> <a href="#">dropped-packets medium-drop-probability</a> <i>number</i>
<b>Tree</b>	<a href="#">medium-drop-probability</a>
<b>Default</b>	0
<b>Configurable</b>	False

## forwarded-octets



### Note:

This command is available for the following platforms:

- 7250 IXR-6
- 7250 IXR-10

<b>Description</b>	Enter the forwarded-octets context
<b>Context</b>	<a href="#">interface name</a> <i>string</i> <a href="#">queue-statistics unicast-queue queue-id</a> <i>number</i> <a href="#">virtual-output-queue slot</a> <i>number</i> <a href="#">forwarded-octets</a>
<b>Tree</b>	<a href="#">forwarded-octets</a>
<b>Configurable</b>	False

## high-drop-probability *number*



### Note:

This command is available for the following platforms:

- 7250 IXR-6
- 7250 IXR-10

<b>Description</b>	The number of octets in unicast packets transmitted from the VOQ to the egress queue that were classified as high drop-probability. This reads 0
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	when the IMM associated with the VOQ is not inserted and it resets to 0 whenever the IMM associated with the VOQ is removed.
<b>Context</b>	<a href="#">interface name</a> <i>string</i> <a href="#">queue-statistics unicast-queue queue-id number virtual-output-queue slot number forwarded-octets high-drop-probability number</a>
<b>Tree</b>	<a href="#">high-drop-probability</a>
<b>Default</b>	0
<b>Configurable</b>	False

### low-drop-probability *number*



**Note:**

This command is available for the following platforms:

- 7250 IXR-6
- 7250 IXR-10

<b>Description</b>	The number of octets in unicast packets transmitted 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.
<b>Context</b>	<a href="#">interface name</a> <i>string</i> <a href="#">queue-statistics unicast-queue queue-id number virtual-output-queue slot number forwarded-octets low-drop-probability number</a>
<b>Tree</b>	<a href="#">low-drop-probability</a>
<b>Default</b>	0
<b>Configurable</b>	False

### medium-drop-probability *number*



**Note:**

This command is available for the following platforms:

- 7250 IXR-6
- 7250 IXR-10

<b>Description</b>	The number of octets in unicast packets transmitted 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.
<b>Context</b>	<a href="#">interface name</a> <i>string</i> <a href="#">queue-statistics unicast-queue queue-id number virtual-output-queue slot number forwarded-octets medium-drop-probability number</a>

<b>Tree</b>	<a href="#">medium-drop-probability</a>
<b>Default</b>	0
<b>Configurable</b>	False

## forwarded-packets



**Note:**

This command is available for the following platforms:

- 7250 IXR-6
- 7250 IXR-10

<b>Description</b>	Enter the forwarded-packets context
<b>Context</b>	<a href="#">interface name</a> <i>string</i> <a href="#">queue-statistics</a> <a href="#">unicast-queue</a> <a href="#">queue-id</a> <i>number</i> <a href="#">virtual-output-queue</a> <a href="#">slot</a> <i>number</i> <a href="#">forwarded-packets</a>
<b>Tree</b>	<a href="#">forwarded-packets</a>
<b>Configurable</b>	False

## high-drop-probability *number*



**Note:**

This command is available for the following platforms:

- 7250 IXR-6
- 7250 IXR-10

<b>Description</b>	The number of 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.
<b>Context</b>	<a href="#">interface name</a> <i>string</i> <a href="#">queue-statistics</a> <a href="#">unicast-queue</a> <a href="#">queue-id</a> <i>number</i> <a href="#">virtual-output-queue</a> <a href="#">slot</a> <i>number</i> <a href="#">forwarded-packets</a> <a href="#">high-drop-probability</a> <i>number</i>
<b>Tree</b>	<a href="#">high-drop-probability</a>
<b>Default</b>	0
<b>Configurable</b>	False

## low-drop-probability *number*



### Note:

This command is available for the following platforms:

- 7250 IXR-6
- 7250 IXR-10

<b>Description</b>	The number of unicast packets transmitted 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.
<b>Context</b>	<a href="#">interface name</a> <i>string</i> <a href="#">queue-statistics unicast-queue queue-id</a> <i>number</i> <a href="#">virtual-output-queue slot</a> <i>number</i> <a href="#">forwarded-packets low-drop-probability</a> <i>number</i>
<b>Tree</b>	<a href="#">low-drop-probability</a>
<b>Default</b>	0
<b>Configurable</b>	False

## medium-drop-probability *number*



### Note:

This command is available for the following platforms:

- 7250 IXR-6
- 7250 IXR-10

<b>Description</b>	The number of unicast packets transmitted 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.
<b>Context</b>	<a href="#">interface name</a> <i>string</i> <a href="#">queue-statistics unicast-queue queue-id</a> <i>number</i> <a href="#">virtual-output-queue slot</a> <i>number</i> <a href="#">forwarded-packets medium-drop-probability</a> <i>number</i>
<b>Tree</b>	<a href="#">medium-drop-probability</a>
<b>Default</b>	0
<b>Configurable</b>	False

## queue-depth



### Note:

This command is available for the following platforms:

- 7250 IXR-6
- 7250 IXR-10

<b>Description</b>	Enter the queue-depth context
<b>Context</b>	<a href="#">interface name</a> <i>string</i> <a href="#">queue-statistics</a> <a href="#">unicast-queue</a> <a href="#">queue-id</a> <i>number</i> <a href="#">virtual-output-queue</a> <a href="#">slot</a> <i>number</i> <a href="#">queue-depth</a>
<b>Tree</b>	<a href="#">queue-depth</a>
<b>Configurable</b>	False

## high-threshold-bytes *number*



### Note:

This command is available for the following platforms:

- 7250 IXR-6
- 7250 IXR-10

<b>Description</b>	The operational hardware value of the high threshold in bytes.
<b>Context</b>	<a href="#">interface name</a> <i>string</i> <a href="#">queue-statistics</a> <a href="#">unicast-queue</a> <a href="#">queue-id</a> <i>number</i> <a href="#">virtual-output-queue</a> <a href="#">slot</a> <i>number</i> <a href="#">queue-depth</a> <a href="#">high-threshold-bytes</a> <i>number</i>
<b>Tree</b>	<a href="#">high-threshold-bytes</a>
<b>Units</b>	bytes
<b>Configurable</b>	False

## last-high-threshold-time *string*



### Note:

This command is available for the following platforms:

- 7250 IXR-6
- 7250 IXR-10

<b>Description</b>	The last time the depth of either VOQ associated with this slot exceeded the high-threshold in a rising direction.
<b>Context</b>	<a href="#">interface name</a> <i>string</i> <a href="#">queue-statistics</a> <a href="#">unicast-queue</a> <a href="#">queue-id</a> <i>number</i> <a href="#">virtual-output-queue</a> <a href="#">slot</a> <i>number</i> <a href="#">queue-depth</a> <a href="#">last-high-threshold-time</a> <i>string</i>
<b>Tree</b>	<a href="#">last-high-threshold-time</a>

<b>String Length</b>	20 to 32
<b>Configurable</b>	False

**sflow**

<b>Description</b>	Context to configure sFlow parameters
<b>Context</b>	<a href="#">interface name</a> <i>string</i> <a href="#">sflow</a>
<b>Tree</b>	<a href="#">sflow</a>
<b>Configurable</b>	True

**admin-state *keyword***

<b>Description</b>	Administratively enable or disable sFlow on this interface
<b>Context</b>	<a href="#">interface name</a> <i>string</i> <a href="#">sflow</a> <a href="#">admin-state</a> <i>keyword</i>
<b>Tree</b>	<a href="#">admin-state</a>
<b>Options</b>	<ul style="list-style-type: none"> <li>• enable</li> <li>• disable</li> </ul>
<b>Configurable</b>	True

**statistics**

<b>Description</b>	Enter the statistics context
<b>Context</b>	<a href="#">interface name</a> <i>string</i> <a href="#">statistics</a>
<b>Tree</b>	<a href="#">statistics</a>
<b>Configurable</b>	False

**carrier-transitions *number***

<b>Description</b>	Number of times the interface state has transitioned from down to up since the time the device restarted or the last clear.
<b>Context</b>	<a href="#">interface name</a> <i>string</i> <a href="#">statistics</a> <a href="#">carrier-transitions</a> <i>number</i>
<b>Tree</b>	<a href="#">carrier-transitions</a>
<b>Default</b>	0
<b>Configurable</b>	False

**in-broadcast-packets *number***

<b>Description</b>	Corresponds to ifHCInBroadcastPkts from the IF-MIB.
<b>Context</b>	<a href="#">interface name</a> <i>string</i> <a href="#">statistics in-broadcast-packets</a> <i>number</i>
<b>Tree</b>	<a href="#">in-broadcast-packets</a>
<b>Default</b>	0
<b>Configurable</b>	False

**in-discarded-packets *number*****Note:**

This command is available for the following platforms:

- 7220 IXR-D2
- 7220 IXR-D3L
- 7220 IXR-D2L
- 7220 IXR-H3
- 7220 IXR-H2
- 7220 IXR-D3
- 7220 IXR-D1

<b>Description</b>	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.
<b>Context</b>	<a href="#">interface name</a> <i>string</i> <a href="#">statistics in-discarded-packets</a> <i>number</i>
<b>Tree</b>	<a href="#">in-discarded-packets</a>
<b>Default</b>	0
<b>Configurable</b>	False

**in-error-packets *number***

<b>Description</b>	Corresponds to ifInErrors from the IF-MIB.
<b>Context</b>	<a href="#">interface name</a> <i>string</i> <a href="#">statistics in-error-packets</a> <i>number</i>
<b>Tree</b>	<a href="#">in-error-packets</a>
<b>Default</b>	0
<b>Configurable</b>	False



**in-fcs-error-packets *number***

<b>Description</b>	Ingress FCS errors.
<b>Context</b>	<a href="#">interface name</a> <i>string</i> <a href="#">statistics</a> <a href="#">in-fcs-error-packets</a> <i>number</i>
<b>Tree</b>	<a href="#">in-fcs-error-packets</a>
<b>Default</b>	0
<b>Configurable</b>	False

**in-multicast-packets *number***

<b>Description</b>	Corresponds to ifHCInMulticastPkts from the IF-MIB.
<b>Context</b>	<a href="#">interface name</a> <i>string</i> <a href="#">statistics</a> <a href="#">in-multicast-packets</a> <i>number</i>
<b>Tree</b>	<a href="#">in-multicast-packets</a>
<b>Default</b>	0
<b>Configurable</b>	False

**in-octets *number***

<b>Description</b>	Corresponds to ifHCInOctets from the IFMIB.
<b>Context</b>	<a href="#">interface name</a> <i>string</i> <a href="#">statistics</a> <a href="#">in-octets</a> <i>number</i>
<b>Tree</b>	<a href="#">in-octets</a>
<b>Default</b>	0
<b>Configurable</b>	False

**in-unicast-packets *number***

<b>Description</b>	Corresponds to ifHCInUcastPkts from the IF-MIB.
<b>Context</b>	<a href="#">interface name</a> <i>string</i> <a href="#">statistics</a> <a href="#">in-unicast-packets</a> <i>number</i>
<b>Tree</b>	<a href="#">in-unicast-packets</a>
<b>Default</b>	0
<b>Configurable</b>	False

**last-clear *string***

<b>Description</b>	Timestamp of the last time the interface counters were cleared.
<b>Context</b>	<a href="#">interface name</a> <i>string</i> <a href="#">statistics</a> <a href="#">last-clear</a> <i>string</i>
<b>Tree</b>	<a href="#">last-clear</a>

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<b>String Length</b>	20 to 32
<b>Configurable</b>	False

### **out-broadcast-packets *number***

<b>Description</b>	Corresponds to ifHCOutBroadcastPkts from the IF-MIB.
<b>Context</b>	<a href="#">interface name</a> <i>string</i> <a href="#">statistics</a> <a href="#">out-broadcast-packets</a> <i>number</i>
<b>Tree</b>	<a href="#">out-broadcast-packets</a>
<b>Default</b>	0
<b>Configurable</b>	False

### **out-discarded-packets *number***

<b>Description</b>	Corresponds to ifOutDiscards from the IF-MIB. On Jericho2 systems this counts packets dropped by an egress IP ACL of any of the port's subinterfaces.
<b>Context</b>	<a href="#">interface name</a> <i>string</i> <a href="#">statistics</a> <a href="#">out-discarded-packets</a> <i>number</i>
<b>Tree</b>	<a href="#">out-discarded-packets</a>
<b>Default</b>	0
<b>Configurable</b>	False

### **out-error-packets *number***

<b>Description</b>	Corresponds to ifOutErrors from the IF-MIB.
<b>Context</b>	<a href="#">interface name</a> <i>string</i> <a href="#">statistics</a> <a href="#">out-error-packets</a> <i>number</i>
<b>Tree</b>	<a href="#">out-error-packets</a>
<b>Default</b>	0
<b>Configurable</b>	False

**out-mirror-octets *number*****Note:**

This command is available for the following platforms:

- 7220 IXR-D2
- 7220 IXR-D3
- 7220 IXR-D3L
- 7220 IXR-D2L

<b>Description</b>	This counts the number of outgoing mirrored octets
<b>Context</b>	<a href="#">interface name</a> <i>string</i> <a href="#">statistics</a> <a href="#">out-mirror-octets</a> <i>number</i>
<b>Tree</b>	<a href="#">out-mirror-octets</a>
<b>Default</b>	0
<b>Configurable</b>	False

**out-mirror-packets *number*****Note:**

This command is available for the following platforms:

- 7220 IXR-D2
- 7220 IXR-D3
- 7220 IXR-D3L
- 7220 IXR-D2L

<b>Description</b>	This counts the number of outgoing mirrored packets
<b>Context</b>	<a href="#">interface name</a> <i>string</i> <a href="#">statistics</a> <a href="#">out-mirror-packets</a> <i>number</i>
<b>Tree</b>	<a href="#">out-mirror-packets</a>
<b>Default</b>	0
<b>Configurable</b>	False

**out-multicast-packets *number***

<b>Description</b>	Corresponds to ifHCOutMulticastPkts from the IF-MIB.
<b>Context</b>	<a href="#">interface name</a> <i>string</i> <a href="#">statistics</a> <a href="#">out-multicast-packets</a> <i>number</i>
<b>Tree</b>	<a href="#">out-multicast-packets</a>
<b>Default</b>	0
<b>Configurable</b>	False

**out-octets *number***

<b>Description</b>	Corresponds to ifHCOutOctetsfrom the IF-MIB.
<b>Context</b>	<a href="#">interface name</a> <i>string</i> <a href="#">statistics</a> <a href="#">out-octets</a> <i>number</i>
<b>Tree</b>	<a href="#">out-octets</a>
<b>Default</b>	0
<b>Configurable</b>	False

**out-unicast-packets *number***

<b>Description</b>	Corresponds to ifHCOutUcastPktsfrom the IF-MIB.
<b>Context</b>	<a href="#">interface name</a> <i>string</i> <a href="#">statistics</a> <a href="#">out-unicast-packets</a> <i>number</i>
<b>Tree</b>	<a href="#">out-unicast-packets</a>
<b>Default</b>	0
<b>Configurable</b>	False

**subinterface [index](#) *number***

<b>Description</b>	The list of subinterfaces (logical interfaces) associated with a physical interface
<b>Context</b>	<a href="#">interface name</a> <i>string</i> <a href="#">subinterface</a> <a href="#">index</a> <i>number</i>
<b>Tree</b>	<a href="#">subinterface</a>
<b>Configurable</b>	True
<b>Max. Elements</b>	4095

**index *number***

<b>Description</b>	The index of the subinterface, or logical interface number
<b>Context</b>	<a href="#">interface name</a> <i>string</i> <a href="#">subinterface</a> <a href="#">index</a> <i>number</i>
<b>Range</b>	0 to 9999
<b>Configurable</b>	True

**acl**

<b>Description</b>	Container for ACL policies applied to the subinterface
<b>Context</b>	<a href="#">interface name</a> <i>string</i> <a href="#">subinterface</a> <a href="#">index</a> <i>number</i> <a href="#">acl</a>

<b>Tree</b>	<a href="#">acl</a>
<b>Configurable</b>	True

## input

<b>Description</b>	Container for ACL options that apply to ingress traffic on the subinterface
<b>Context</b>	<a href="#">interface name</a> <i>string</i> <a href="#">subinterface index</a> <i>number</i> <a href="#">acl input</a>
<b>Tree</b>	<a href="#">input</a>
<b>Configurable</b>	True

## ipv4-filter *reference*

<b>Description</b>	IPv4 ACL filter to be applied on this interface
<b>Context</b>	<a href="#">interface name</a> <i>string</i> <a href="#">subinterface index</a> <i>number</i> <a href="#">acl input ipv4-filter reference</a>
<b>Tree</b>	<a href="#">ipv4-filter</a>
<b>Reference</b>	<a href="#">acl ipv4-filter name stringname string</a> <i>string</i>
<b>Configurable</b>	True

## ipv6-filter *reference*

<b>Description</b>	IPv6 ACL filter to be applied on this interface
<b>Context</b>	<a href="#">interface name</a> <i>string</i> <a href="#">subinterface index</a> <i>number</i> <a href="#">acl input ipv6-filter reference</a>
<b>Tree</b>	<a href="#">ipv6-filter</a>
<b>Reference</b>	<a href="#">acl ipv6-filter name stringname string</a> <i>string</i>
<b>Configurable</b>	True

## output

<b>Description</b>	Container for ACL options that apply to egress traffic on the subinterface
<b>Context</b>	<a href="#">interface name</a> <i>string</i> <a href="#">subinterface index</a> <i>number</i> <a href="#">acl output</a>
<b>Tree</b>	<a href="#">output</a>
<b>Configurable</b>	True

**ipv4-filter reference**

<b>Description</b>	IPv4 ACL filter to be applied on this interface
<b>Context</b>	<a href="#">interface name</a> <i>string</i> <a href="#">subinterface index</a> <i>number</i> <a href="#">acl output ipv4-filter reference</a>
<b>Tree</b>	<a href="#">ipv4-filter</a>
<b>Reference</b>	<a href="#">acl ipv4-filter name</a> <i>string</i> <i>string</i>
<b>Configurable</b>	True

**ipv6-filter reference**

<b>Description</b>	IPv6 ACL filter to be applied on this interface
<b>Context</b>	<a href="#">interface name</a> <i>string</i> <a href="#">subinterface index</a> <i>number</i> <a href="#">acl output ipv6-filter reference</a>
<b>Tree</b>	<a href="#">ipv6-filter</a>
<b>Reference</b>	<a href="#">acl ipv6-filter name</a> <i>string</i> <i>string</i>
<b>Configurable</b>	True

**admin-state keyword**

<b>Description</b>	The configured, desired state of the subinterface
<b>Context</b>	<a href="#">interface name</a> <i>string</i> <a href="#">subinterface index</a> <i>number</i> <a href="#">admin-state</a> <i>keyword</i>
<b>Tree</b>	<a href="#">admin-state</a>
<b>Default</b>	enable
<b>Options</b>	<ul style="list-style-type: none"> <li>• enable</li> <li>• disable</li> </ul>
<b>Configurable</b>	True

## anycast-gw



### Note:

This command is available for the following platforms:

- 7220 IXR-D2
- 7220 IXR-D3L
- 7220 IXR-D2L
- 7220 IXR-D3
- 7220 IXR-D1

<b>Description</b>	Enable the anycast-gw context
<b>Context</b>	<a href="#">interface name</a> <i>string</i> <a href="#">subinterface index</a> <i>number</i> <a href="#">anycast-gw</a>
<b>Tree</b>	<a href="#">anycast-gw</a>
<b>Configurable</b>	True

## anycast-gw-mac *string*



### Note:

This command is available for the following platforms:

- 7220 IXR-D2
- 7220 IXR-D3L
- 7220 IXR-D2L
- 7220 IXR-D3
- 7220 IXR-D1

<b>Description</b>	The MAC address of associated to the anycast-gw IP address.  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.
<b>Context</b>	<a href="#">interface name</a> <i>string</i> <a href="#">subinterface index</a> <i>number</i> <a href="#">anycast-gw</a> <a href="#">anycast-gw-mac</a> <i>string</i>
<b>Tree</b>	<a href="#">anycast-gw-mac</a>
<b>Configurable</b>	True

**anycast-gw-mac-origin *keyword*****Note:**

This command is available for the following platforms:

- 7220 IXR-D2
- 7220 IXR-D3L
- 7220 IXR-D2L
- 7220 IXR-D3
- 7220 IXR-D1

<b>Description</b>	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.
<b>Context</b>	<a href="#">interface name</a> <i>string</i> <a href="#">subinterface index</a> <i>number</i> <a href="#">anycast-gw anycast-gw-mac-origin</a> <i>keyword</i>
<b>Tree</b>	<a href="#">anycast-gw-mac-origin</a>
<b>Options</b>	<ul style="list-style-type: none"> <li>• configured</li> <li>• vrid-auto-derived</li> </ul>
<b>Configurable</b>	False

**virtual-router-id *number*****Note:**

This command is available for the following platforms:

- 7220 IXR-D2
- 7220 IXR-D3L
- 7220 IXR-D2L
- 7220 IXR-D3
- 7220 IXR-D1

<b>Description</b>	The Virtual Router Identifier (VRID) value used to auto-derive the anycast-gw-mac in the format 00:00:5E:00:01:VRID.
<b>Context</b>	<a href="#">interface name</a> <i>string</i> <a href="#">subinterface index</a> <i>number</i> <a href="#">anycast-gw virtual-router-id</a> <i>number</i>
<b>Tree</b>	<a href="#">virtual-router-id</a>
<b>Range</b>	1 to 255
<b>Default</b>	1



<b>Configurable</b>	True
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## bridge-table



### Note:

This command is available for the following platforms:

- 7220 IXR-D2
- 7220 IXR-D3L
- 7220 IXR-D2L
- 7220 IXR-D3
- 7220 IXR-D1

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

## discard-unknown-src-mac *boolean*



### Note:

This command is available for the following platforms:

- 7220 IXR-D2
- 7220 IXR-D3L
- 7220 IXR-D2L
- 7220 IXR-D3
- 7220 IXR-D1

<b>Description</b>	Discard frames with unknown source mac addresses. The source mac address of the discarded frame is never learned when this command is enabled.
<b>Context</b>	<a href="#">interface name</a> <i>string</i> <a href="#">subinterface index number</a> <a href="#">bridge-table</a> <a href="#">discard-unknown-src-mac</a> <i>boolean</i>
<b>Tree</b>	<a href="#">discard-unknown-src-mac</a>
<b>Default</b>	false
<b>Configurable</b>	True

## mac-duplication



### Note:

This command is available for the following platforms:

- 7220 IXR-D2
- 7220 IXR-D3L
- 7220 IXR-D2L
- 7220 IXR-D3
- 7220 IXR-D1

<b>Description</b>	Enter the mac-duplication context
<b>Context</b>	<a href="#">interface name</a> <i>string</i> <a href="#">subinterface index number</a> <a href="#">bridge-table mac-duplication</a>
<b>Tree</b>	<a href="#">mac-duplication</a>
<b>Configurable</b>	True

## action keyword



### Note:

This command is available for the following platforms:

- 7220 IXR-D2
- 7220 IXR-D3L
- 7220 IXR-D2L
- 7220 IXR-D3
- 7220 IXR-D1

<b>Description</b>	<p>Action to take on the subinterface upon detecting at least one mac addresses as duplicate on the subinterface. In particular:</p> <p>[<i>use-net-instance-action</i>: upon detecting a duplicate mac on the subinterface, the action on the subinterface will be inherited from the action configured under <code>network-instance/bridge-table/mac-duplication/action.</code>, <i>oper-down</i>: if configured, upon detecting a duplicate mac on the subinterface, the subinterface will be brought oper-down, with <code>oper-down-reason mac-dup-detected</code>. The duplicate macs on the interface will be kept in CPM though, and shown in the <code>duplicate-entries</code> state. In this case, arriving frames on a different subinterface with the duplicate mac as source mac are dropped. Arriving frames on a different subinterface with a destination mac matching the duplicate mac are dropped.', <i>blackhole</i>: upon detecting a duplicate mac on the subinterface, the mac will be blackholed. Any frame received on this or any other subinterface with source mac matching a blackhole mac will be discarded. Any frame received with destination mac matching the blackhole mac will be discarded, although still processed for</p>
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source mac learning.', 'stop-learning: upon detecting a duplicate mac on the subinterface, existing macs are kept (and refreshed) but new macs are no longer learned on this subinterface. The duplicate mac will stay learned on the subinterface. Frames arriving to a different subinterface with a source mac matching the duplicate mac will be dropped. Frames arriving to a different subinterface with a destination mac matching the duplicate mac will be forwarded normally.')

<b>Context</b>	<a href="#">interface name</a> <i>string</i> <a href="#">subinterface index</a> <i>number</i> <a href="#">bridge-table mac-duplication action</a> <i>keyword</i>
<b>Tree</b>	<a href="#">action</a>
<b>Default</b>	use-net-instance-action
<b>Options</b>	<ul style="list-style-type: none"> <li>• use-net-instance-action</li> <li>• stop-learning</li> <li>• blackhole</li> <li>• oper-down</li> </ul>
<b>Configurable</b>	True

## duplicate-entries



### Note:

This command is available for the following platforms:

- 7220 IXR-D2
- 7220 IXR-D3L
- 7220 IXR-D2L
- 7220 IXR-D3
- 7220 IXR-D1

<b>Description</b>	Enter the duplicate-entries context
<b>Context</b>	<a href="#">interface name</a> <i>string</i> <a href="#">subinterface index</a> <i>number</i> <a href="#">bridge-table mac-duplication duplicate-entries</a>
<b>Tree</b>	<a href="#">duplicate-entries</a>
<b>Configurable</b>	False

**mac address string****Note:**

This command is available for the following platforms:

- 7220 IXR-D2
- 7220 IXR-D3L
- 7220 IXR-D2L
- 7220 IXR-D3
- 7220 IXR-D1

**Description** MACs duplicate on the bridging instance

macs

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

**Tree** [mac](#)

**Configurable** False

**address string****Note:**

This command is available for the following platforms:

- 7220 IXR-D2
- 7220 IXR-D3L
- 7220 IXR-D2L
- 7220 IXR-D3
- 7220 IXR-D1

**Description** Enter the address context

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

**Configurable** False

**dup-detect-time *string*****Note:**

This command is available for the following platforms:

- 7220 IXR-D2
- 7220 IXR-D3L
- 7220 IXR-D2L
- 7220 IXR-D3
- 7220 IXR-D1

<b>Description</b>	The date and time when the mac was declared duplicate
<b>Context</b>	<a href="#">interface name</a> <i>string</i> <a href="#">subinterface index</a> <i>number</i> <a href="#">bridge-table mac-duplication duplicate-entries mac address</a> <i>string</i> <a href="#">dup-detect-time</a> <i>string</i>
<b>Tree</b>	<a href="#">dup-detect-time</a>
<b>String Length</b>	20 to 32
<b>Configurable</b>	False

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

This command is available for the following platforms:

- 7220 IXR-D2
- 7220 IXR-D3L
- 7220 IXR-D2L
- 7220 IXR-D3
- 7220 IXR-D1

<b>Description</b>	Remaining hold down time for duplicate mac
<b>Context</b>	<a href="#">interface name</a> <i>string</i> <a href="#">subinterface index</a> <i>number</i> <a href="#">bridge-table mac-duplication duplicate-entries mac address</a> <i>string</i> <a href="#">hold-down-time-remaining</a> ( <i>keyword</i>   <i>number</i> )
<b>Tree</b>	<a href="#">hold-down-time-remaining</a>
<b>Units</b>	seconds
<b>Options</b>	<ul style="list-style-type: none"> <li>• indefinite</li> </ul>
<b>Configurable</b>	False

## mac-learning



### Note:

This command is available for the following platforms:

- 7220 IXR-D2
- 7220 IXR-D3L
- 7220 IXR-D2L
- 7220 IXR-D3
- 7220 IXR-D1

<b>Description</b>	Enter the mac-learning context
<b>Context</b>	<a href="#">interface name</a> <i>string</i> <a href="#">subinterface</a> <i>index number</i> <a href="#">bridge-table</a> <a href="#">mac-learning</a>
<b>Tree</b>	<a href="#">mac-learning</a>
<b>Configurable</b>	True

## admin-state *keyword*



### Note:

This command is available for the following platforms:

- 7220 IXR-D2
- 7220 IXR-D3L
- 7220 IXR-D2L
- 7220 IXR-D3
- 7220 IXR-D1

<b>Description</b>	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.
<b>Context</b>	<a href="#">interface name</a> <i>string</i> <a href="#">subinterface</a> <i>index number</i> <a href="#">bridge-table</a> <a href="#">mac-learning</a> <a href="#">admin-state</a> <i>keyword</i>
<b>Tree</b>	<a href="#">admin-state</a>
<b>Default</b>	enable
<b>Options</b>	<ul style="list-style-type: none"> <li>• enable</li> <li>• disable</li> </ul>
<b>Configurable</b>	True

## aging



### Note:

This command is available for the following platforms:

- 7220 IXR-D2
- 7220 IXR-D3L
- 7220 IXR-D2L
- 7220 IXR-D3
- 7220 IXR-D1

<b>Description</b>	Enter the aging context
<b>Context</b>	<a href="#">interface name</a> <i>string</i> <a href="#">subinterface</a> <a href="#">index</a> <i>number</i> <a href="#">bridge-table</a> <a href="#">mac-learning</a> <a href="#">aging</a>
<b>Tree</b>	<a href="#">aging</a>
<b>Configurable</b>	True

## admin-state *keyword*



### Note:

This command is available for the following platforms:

- 7220 IXR-D2
- 7220 IXR-D3L
- 7220 IXR-D2L
- 7220 IXR-D3
- 7220 IXR-D1

<b>Description</b>	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.
<b>Context</b>	<a href="#">interface name</a> <i>string</i> <a href="#">subinterface</a> <a href="#">index</a> <i>number</i> <a href="#">bridge-table</a> <a href="#">mac-learning</a> <a href="#">aging</a> <a href="#">admin-state</a> <i>keyword</i>
<b>Tree</b>	<a href="#">admin-state</a>
<b>Default</b>	enable
<b>Options</b>	<ul style="list-style-type: none"> <li>• enable</li> <li>• disable</li> </ul>
<b>Configurable</b>	True

## learnt-entries



### Note:

This command is available for the following platforms:

- 7220 IXR-D2
- 7220 IXR-D3L
- 7220 IXR-D2L
- 7220 IXR-D3
- 7220 IXR-D1

<b>Description</b>	Enter the learnt-entries context
<b>Context</b>	<a href="#">interface name</a> <i>string</i> <a href="#">subinterface</a> <i>index number</i> <a href="#">bridge-table</a> <a href="#">mac-learning</a> <a href="#">learnt-entries</a>
<b>Tree</b>	<a href="#">learnt-entries</a>
<b>Configurable</b>	False

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



### Note:

This command is available for the following platforms:

- 7220 IXR-D2
- 7220 IXR-D3L
- 7220 IXR-D2L
- 7220 IXR-D3
- 7220 IXR-D1

<b>Description</b>	MACs learnt on the bridging instance
<b>Context</b>	<a href="#">interface name</a> <i>string</i> <a href="#">subinterface</a> <i>index number</i> <a href="#">bridge-table</a> <a href="#">mac-learning</a> <a href="#">learnt-entries</a> <a href="#">mac address</a> <i>string</i>
<b>Tree</b>	<a href="#">mac</a>
<b>Configurable</b>	False



**address *string*****Note:**

This command is available for the following platforms:

- 7220 IXR-D2
- 7220 IXR-D3L
- 7220 IXR-D2L
- 7220 IXR-D3
- 7220 IXR-D1

<b>Description</b>	Enter the address context
<b>Context</b>	<a href="#">interface name</a> <i>string</i> <a href="#">subinterface index number</a> <a href="#">bridge-table mac-learning learnt-entries mac address</a> <i>string</i>
<b>Configurable</b>	False

**aging (*number* | *keyword*)****Note:**

This command is available for the following platforms:

- 7220 IXR-D2
- 7220 IXR-D3L
- 7220 IXR-D2L
- 7220 IXR-D3
- 7220 IXR-D1

<b>Description</b>	Remaining age time for learnt MACs
<b>Context</b>	<a href="#">interface name</a> <i>string</i> <a href="#">subinterface index number</a> <a href="#">bridge-table mac-learning learnt-entries mac address</a> <i>string</i> <a href="#">aging</a> ( <i>number</i>   <i>keyword</i> )
<b>Tree</b>	<a href="#">aging</a>
<b>Units</b>	seconds
<b>Options</b>	<ul style="list-style-type: none"> <li>• disabled</li> </ul>
<b>Configurable</b>	False

## last-update *string*



### Note:

This command is available for the following platforms:

- 7220 IXR-D2
- 7220 IXR-D3L
- 7220 IXR-D2L
- 7220 IXR-D3
- 7220 IXR-D1

<b>Description</b>	The date and time of the last update of this learnt mac
<b>Context</b>	<a href="#">interface name</a> <i>string</i> <a href="#">subinterface index number</a> <a href="#">bridge-table mac-learning learnt-entries mac address</a> <i>string</i> <a href="#">last-update</a> <i>string</i>
<b>Tree</b>	<a href="#">last-update</a>
<b>String Length</b>	20 to 32
<b>Configurable</b>	False

## mac-limit



### Note:

This command is available for the following platforms:

- 7220 IXR-D2
- 7220 IXR-D3L
- 7220 IXR-D2L
- 7220 IXR-D3
- 7220 IXR-D1

<b>Description</b>	Bridge Table size and thresholds.
<b>Context</b>	<a href="#">interface name</a> <i>string</i> <a href="#">subinterface index number</a> <a href="#">bridge-table mac-limit</a>
<b>Tree</b>	<a href="#">mac-limit</a>
<b>Configurable</b>	True

**maximum-entries *number*****Note:**

This command is available for the following platforms:

- 7220 IXR-D2
- 7220 IXR-D3L
- 7220 IXR-D2L
- 7220 IXR-D3
- 7220 IXR-D1

<b>Description</b>	Maximum number of mac addresses allowed in the bridge-table.
<b>Context</b>	<a href="#">interface name</a> <i>string</i> <a href="#">subinterface index</a> <i>number</i> <a href="#">bridge-table mac-limit maximum-entries</a> <i>number</i>
<b>Tree</b>	<a href="#">maximum-entries</a>
<b>Range</b>	1 to 8192
<b>Default</b>	250
<b>Configurable</b>	True

**warning-threshold-pct *number*****Note:**

This command is available for the following platforms:

- 7220 IXR-D2
- 7220 IXR-D3L
- 7220 IXR-D2L
- 7220 IXR-D3
- 7220 IXR-D1

<b>Description</b>	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%
<b>Context</b>	<a href="#">interface name</a> <i>string</i> <a href="#">subinterface index</a> <i>number</i> <a href="#">bridge-table mac-limit warning-threshold-pct</a> <i>number</i>
<b>Tree</b>	<a href="#">warning-threshold-pct</a>
<b>Range</b>	6 to 100
<b>Default</b>	95
<b>Configurable</b>	True

## mac-table



### Note:

This command is available for the following platforms:

- 7220 IXR-D2
- 7220 IXR-D3L
- 7220 IXR-D2L
- 7220 IXR-D3
- 7220 IXR-D1

<b>Description</b>	Enter the mac-table context
<b>Context</b>	<a href="#">interface name</a> <i>string</i> <a href="#">subinterface</a> <i>index number</i> <a href="#">bridge-table</a> <a href="#">mac-table</a>
<b>Tree</b>	<a href="#">mac-table</a>
<b>Configurable</b>	False

## mac [address string](#)



### Note:

This command is available for the following platforms:

- 7220 IXR-D2
- 7220 IXR-D3L
- 7220 IXR-D2L
- 7220 IXR-D3
- 7220 IXR-D1

<b>Description</b>	MACs learnt on the bridging instance
<b>Context</b>	<a href="#">interface name</a> <i>string</i> <a href="#">subinterface</a> <i>index number</i> <a href="#">bridge-table</a> <a href="#">mac-table</a> <a href="#">mac address</a> <i>string</i>
<b>Tree</b>	<a href="#">mac</a>
<b>Configurable</b>	False

**address *string*****Note:**

This command is available for the following platforms:

- 7220 IXR-D2
- 7220 IXR-D3L
- 7220 IXR-D2L
- 7220 IXR-D3
- 7220 IXR-D1

<b>Description</b>	Enter the address context
<b>Context</b>	<a href="#">interface name</a> <i>string</i> <a href="#">subinterface</a> <i>index number</i> <a href="#">bridge-table</a> <a href="#">mac-table</a> <a href="#">mac address</a> <i>string</i>
<b>Configurable</b>	False

**failed-slots *number*****Note:**

This command is available for the following platforms:

- 7220 IXR-D2
- 7220 IXR-D3L
- 7220 IXR-D2L
- 7220 IXR-D3
- 7220 IXR-D1

<b>Description</b>	The list of slot IDs corresponding to the linecards that did not successfully program the mac
<b>Context</b>	<a href="#">interface name</a> <i>string</i> <a href="#">subinterface</a> <i>index number</i> <a href="#">bridge-table</a> <a href="#">mac-table</a> <a href="#">mac address</a> <i>string</i> <a href="#">failed-slots</a> <i>number</i>
<b>Tree</b>	<a href="#">failed-slots</a>
<b>Range</b>	1 to 8
<b>Configurable</b>	False

## last-update *string*

**Note:**

This command is available for the following platforms:

- 7220 IXR-D2
- 7220 IXR-D3L
- 7220 IXR-D2L
- 7220 IXR-D3
- 7220 IXR-D1

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

## not-programmed-reason *keyword*

**Note:**

This command is available for the following platforms:

- 7220 IXR-D2
- 7220 IXR-D3L
- 7220 IXR-D2L
- 7220 IXR-D3
- 7220 IXR-D1

<b>Description</b>	The reason why the mac is not programmed
<b>Context</b>	<a href="#">interface name</a> <i>string</i> <a href="#">subinterface index number</a> <a href="#">bridge-table mac-table mac address</a> <i>string not-programmed-reason keyword</i>
<b>Tree</b>	<a href="#">not-programmed-reason</a>
<b>Options</b>	<ul style="list-style-type: none"> <li>• mac-limit</li> <li>• failed-on-slots</li> <li>• no-destination-index</li> <li>• reserved</li> </ul>
<b>Configurable</b>	False

**type keyword****Note:**

This command is available for the following platforms:

- 7220 IXR-D2
- 7220 IXR-D3L
- 7220 IXR-D2L
- 7220 IXR-D3
- 7220 IXR-D1

<b>Description</b>	The type of the MAC installed in the fib.
<b>Context</b>	<a href="#">interface name</a> <i>string</i> <a href="#">subinterface index</a> <i>number</i> <a href="#">bridge-table mac-table mac address</a> <i>string</i> <a href="#">type keyword</a>
<b>Tree</b>	<a href="#">type</a>
<b>Options</b>	<ul style="list-style-type: none"> <li>• static</li> <li>• duplicate</li> <li>• learnt</li> <li>• irb-interface</li> <li>• evpn</li> <li>• evpn-static</li> <li>• irb-interface-anycast</li> <li>• proxy-anti-spoof</li> <li>• reserved</li> <li>• eth-cfm</li> </ul>
<b>Configurable</b>	False

**statistics****Note:**

This command is available for the following platforms:

- 7220 IXR-D2
- 7220 IXR-D3L
- 7220 IXR-D2L
- 7220 IXR-D3
- 7220 IXR-D1

<b>Description</b>	Enter the statistics context
<b>Context</b>	<a href="#">interface name</a> <i>string</i> <a href="#">subinterface index</a> <i>number</i> <a href="#">bridge-table statistics</a>

<b>Tree</b>	<a href="#">statistics</a>
<b>Configurable</b>	False

### active-entries *number*



**Note:**

This command is available for the following platforms:

- 7220 IXR-D2
- 7220 IXR-D3L
- 7220 IXR-D2L
- 7220 IXR-D3
- 7220 IXR-D1

<b>Description</b>	The total number of entries that are active on the sub-interface.
<b>Context</b>	<a href="#">interface name</a> <i>string</i> <a href="#">subinterface</a> <i>index</i> <i>number</i> <a href="#">bridge-table</a> <a href="#">statistics</a> <a href="#">active-entries</a> <i>number</i>
<b>Tree</b>	<a href="#">active-entries</a>
<b>Default</b>	0
<b>Configurable</b>	False

### failed-entries *number*



**Note:**

This command is available for the following platforms:

- 7220 IXR-D2
- 7220 IXR-D3L
- 7220 IXR-D2L
- 7220 IXR-D3
- 7220 IXR-D1

<b>Description</b>	The total number of macs, which have not been programmed on atleast one slot
<b>Context</b>	<a href="#">interface name</a> <i>string</i> <a href="#">subinterface</a> <i>index</i> <i>number</i> <a href="#">bridge-table</a> <a href="#">statistics</a> <a href="#">failed-entries</a> <i>number</i>
<b>Tree</b>	<a href="#">failed-entries</a>
<b>Default</b>	0
<b>Configurable</b>	False



**mac-type** *type keyword***Note:**

This command is available for the following platforms:

- 7220 IXR-D2
- 7220 IXR-D3L
- 7220 IXR-D2L
- 7220 IXR-D3
- 7220 IXR-D1

<b>Description</b>	The type of the MAC on the sub-interface.
<b>Context</b>	<a href="#">interface name</a> <i>string</i> <a href="#">subinterface index</a> <i>number</i> <a href="#">bridge-table statistics</a> <a href="#">mac-type type</a> <i>keyword</i>
<b>Tree</b>	<a href="#">mac-type</a>
<b>Configurable</b>	False

**type** *keyword***Note:**

This command is available for the following platforms:

- 7220 IXR-D2
- 7220 IXR-D3L
- 7220 IXR-D2L
- 7220 IXR-D3
- 7220 IXR-D1

<b>Description</b>	Enter the type context
<b>Context</b>	<a href="#">interface name</a> <i>string</i> <a href="#">subinterface index</a> <i>number</i> <a href="#">bridge-table statistics</a> <a href="#">mac-type type</a> <i>keyword</i>
<b>Options</b>	<ul style="list-style-type: none"> <li>• static</li> <li>• duplicate</li> <li>• learnt</li> <li>• irb-interface</li> <li>• evpn</li> <li>• evpn-static</li> <li>• irb-interface-anycast</li> <li>• proxy-anti-spoof</li> </ul>

	<ul style="list-style-type: none"> <li>• reserved</li> <li>• eth-cfm</li> </ul>
<b>Configurable</b>	False

### active-entries *number*



**Note:**

This command is available for the following platforms:

- 7220 IXR-D2
- 7220 IXR-D3L
- 7220 IXR-D2L
- 7220 IXR-D3
- 7220 IXR-D1

<b>Description</b>	The total number of entries of this type on the sub-interface
<b>Context</b>	<a href="#">interface name</a> <i>string</i> <a href="#">subinterface</a> <i>index</i> <i>number</i> <a href="#">bridge-table</a> <i>statistics</i> <a href="#">mac-type</a> <i>type</i> <i>keyword</i> <a href="#">active-entries</a> <i>number</i>
<b>Tree</b>	<a href="#">active-entries</a>
<b>Default</b>	0
<b>Configurable</b>	False

### failed-entries *number*



**Note:**

This command is available for the following platforms:

- 7220 IXR-D2
- 7220 IXR-D3L
- 7220 IXR-D2L
- 7220 IXR-D3
- 7220 IXR-D1

<b>Description</b>	The total number of macs of this type, which have not been programmed on atleast one slot
<b>Context</b>	<a href="#">interface name</a> <i>string</i> <a href="#">subinterface</a> <i>index</i> <i>number</i> <a href="#">bridge-table</a> <i>statistics</i> <a href="#">mac-type</a> <i>type</i> <i>keyword</i> <a href="#">failed-entries</a> <i>number</i>
<b>Tree</b>	<a href="#">failed-entries</a>
<b>Default</b>	0
<b>Configurable</b>	False

**total-entries *number*****Note:**

This command is available for the following platforms:

- 7220 IXR-D2
- 7220 IXR-D3L
- 7220 IXR-D2L
- 7220 IXR-D3
- 7220 IXR-D1

<b>Description</b>	The total number of macs of this type , active and inactive, on the sub-interface.
<b>Context</b>	<a href="#">interface name</a> <i>string</i> <a href="#">subinterface index</a> <i>number</i> <a href="#">bridge-table statistics mac-type type</a> <i>keyword</i> <a href="#">total-entries</a> <i>number</i>
<b>Tree</b>	<a href="#">total-entries</a>
<b>Default</b>	0
<b>Configurable</b>	False

**total-entries *number*****Note:**

This command is available for the following platforms:

- 7220 IXR-D2
- 7220 IXR-D3L
- 7220 IXR-D2L
- 7220 IXR-D3
- 7220 IXR-D1

<b>Description</b>	The total number of macs, active and inactive, on the sub-interface.
<b>Context</b>	<a href="#">interface name</a> <i>string</i> <a href="#">subinterface index</a> <i>number</i> <a href="#">bridge-table statistics total-entries</a> <i>number</i>
<b>Tree</b>	<a href="#">total-entries</a>
<b>Default</b>	0
<b>Configurable</b>	False

**description *string***

<b>Description</b>	A user-configured description of the interface
<b>Context</b>	<a href="#">interface name</a> <i>string</i> <a href="#">subinterface</a> <i>index number</i> <a href="#">description</a> <i>string</i>
<b>Tree</b>	<a href="#">description</a>
<b>String Length</b>	1 to 255
<b>Configurable</b>	True

**ethernet-segment-association**

<b>Description</b>	ethernet-segment association information.
<b>Context</b>	<a href="#">interface name</a> <i>string</i> <a href="#">subinterface</a> <i>index number</i> <a href="#">ethernet-segment-association</a>
<b>Tree</b>	<a href="#">ethernet-segment-association</a>
<b>Configurable</b>	False

**designated-forwarder *boolean***

<b>Description</b>	The value of this leaf indicates if the interface is the designated forwarder for the ethernet-segment on the network-instance.
<b>Context</b>	<a href="#">interface name</a> <i>string</i> <a href="#">subinterface</a> <i>index number</i> <a href="#">ethernet-segment-association</a> <a href="#">designated-forwarder</a> <i>boolean</i>
<b>Tree</b>	<a href="#">designated-forwarder</a>
<b>Default</b>	false
<b>Configurable</b>	False

**es-managed *boolean***

<b>Description</b>	The value of this leaf indicates if the interface is managed by the ethernet-segment on the network-instance.
<b>Context</b>	<a href="#">interface name</a> <i>string</i> <a href="#">subinterface</a> <i>index number</i> <a href="#">ethernet-segment-association</a> <a href="#">es-managed</a> <i>boolean</i>
<b>Tree</b>	<a href="#">es-managed</a>
<b>Default</b>	false
<b>Configurable</b>	False

**ethernet-segment *string***

<b>Description</b>	The value of this leaf indicates the ethernet-segment, the sub-interface is associated to.
<b>Context</b>	<a href="#">interface name</a> <i>string</i> <a href="#">subinterface index</a> <i>number</i> <a href="#">ethernet-segment-association ethernet-segment</a> <i>string</i>
<b>Tree</b>	<a href="#">ethernet-segment</a>
<b>String Length</b>	1 to 255
<b>Configurable</b>	False

**ifindex *number***

<b>Description</b>	System-wide persistent unique ifIndex assigned to the subinterface
<b>Context</b>	<a href="#">interface name</a> <i>string</i> <a href="#">subinterface index</a> <i>number</i> <a href="#">ifindex</a> <i>number</i>
<b>Tree</b>	<a href="#">ifindex</a>
<b>Configurable</b>	False

**ip-mtu *number***

<b>Description</b>	<p>IP MTU of the subinterface in bytes, including the IP header but excluding 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> <p>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.</p> <p>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.</p>
<b>Context</b>	<a href="#">interface name</a> <i>string</i> <a href="#">subinterface index</a> <i>number</i> <a href="#">ip-mtu</a> <i>number</i>
<b>Tree</b>	<a href="#">ip-mtu</a>
<b>Range</b>	1280 to 9486
<b>Units</b>	bytes
<b>Configurable</b>	True

**ipv4**

<b>Description</b>	Enable IPv4 on the subinterface and configure associated parameters When this is present in the running configuration, 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.
<b>Context</b>	<a href="#">interface name</a> <i>string</i> <a href="#">subinterface index</a> <i>number</i> <a href="#">ipv4</a>
<b>Tree</b>	<a href="#">ipv4</a>
<b>Configurable</b>	True

**address ip-prefix *string***

<b>Description</b>	The list of IPv4 addresses assigned to the subinterface.
<b>Context</b>	<a href="#">interface name</a> <i>string</i> <a href="#">subinterface index</a> <i>number</i> <a href="#">ipv4</a> <a href="#">address ip-prefix</a> <i>string</i>
<b>Tree</b>	<a href="#">address</a>
<b>Configurable</b>	True
<b>Max. Elements</b>	64

**ip-prefix *string***

<b>Description</b>	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 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
<b>Context</b>	<a href="#">interface name</a> <i>string</i> <a href="#">subinterface index</a> <i>number</i> <a href="#">ipv4</a> <a href="#">address ip-prefix</a> <i>string</i>
<b>Configurable</b>	True

**anycast-gw *boolean*****Note:**

This command is available for the following platforms:

- 7220 IXR-D2
- 7220 IXR-D3L
- 7220 IXR-D2L
- 7220 IXR-D3
- 7220 IXR-D1

**Description**

This designates the associated IPv4 address as an anycast-gateway IPv4 address of the subinterface.

When this parameter is set to true:

[‘The IPv4 address is associated with the anycast-gw MAC address in the same subinterface. ARP Requests received for the anycast-gw IPv4 address will be replied using this anycast-gw MAC address.’, ‘The IPv4 address can have duplicate IPv4 addresses in other IRB subinterfaces of routers attached to the same broadcast domain. Because of that ARP duplicate-address-detection procedures do not apply to anycast-gw IP addresses.’]

**Context**

[interface name](#) *string* [subinterface index](#) *number* [ipv4 address ip-prefix](#) *string*  
[anycast-gw](#) *boolean*

**Tree**

[anycast-gw](#)

**Configurable**

True

**origin *keyword*****Description**

The origin of the IPv4 address.

**Context**

[interface name](#) *string* [subinterface index](#) *number* [ipv4 address ip-prefix](#) *string*  
[origin](#) *keyword*

**Tree**

[origin](#)

**Options**

- other
- static
- dhcp
- link-layer
- random

**Configurable**

False

**primary**

<b>Description</b>	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 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.
<b>Context</b>	<a href="#">interface name</a> <i>string</i> <a href="#">subinterface index</a> <i>number</i> <a href="#">ipv4 address ip-prefix</a> <i>string</i> <a href="#">primary</a>
<b>Tree</b>	<a href="#">primary</a>
<b>Configurable</b>	True

**status keyword**

<b>Description</b>	The status of an IPv4 address
<b>Context</b>	<a href="#">interface name</a> <i>string</i> <a href="#">subinterface index</a> <i>number</i> <a href="#">ipv4 address ip-prefix</a> <i>string</i> <a href="#">status keyword</a>
<b>Tree</b>	<a href="#">status</a>
<b>Options</b>	<ul style="list-style-type: none"> <li>• preferred</li> <li>• inaccessible</li> <li>• tentative</li> <li>• duplicate</li> </ul>
<b>Configurable</b>	False

**allow-directed-broadcast *boolean***

<b>Description</b>	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 <code>allow-directed-broadcasts=false</code> 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 <code>allow-directed-broadcasts=true</code> then it is delivered to the CPM and CPM
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replies to an ICMP echo per above, and CPM also re-broadcasts the packet on subinterface Y.

<b>Context</b>	<a href="#">interface name</a> <i>string</i> <a href="#">subinterface index</a> <i>number</i> <a href="#">ipv4 allow-directed-broadcast</a> <i>boolean</i>
<b>Tree</b>	<a href="#">allow-directed-broadcast</a>
<b>Default</b>	false
<b>Configurable</b>	True

## arp

<b>Description</b>	Container for the IPv4 ARP protocol
<b>Context</b>	<a href="#">interface name</a> <i>string</i> <a href="#">subinterface index</a> <i>number</i> <a href="#">ipv4 arp</a>
<b>Tree</b>	<a href="#">arp</a>
<b>Configurable</b>	True

## debug *keyword*

<b>Description</b>	List of events to debug
<b>Context</b>	<a href="#">interface name</a> <i>string</i> <a href="#">subinterface index</a> <i>number</i> <a href="#">ipv4 arp debug</a> <i>keyword</i>
<b>Tree</b>	<a href="#">debug</a>
<b>Options</b>	<ul style="list-style-type: none"> <li>messages</li> </ul> <p>Capture all arp-request and reply-messages sent and received by the subinterface</p>
<b>Configurable</b>	True

## duplicate-address-detection *boolean*

<b>Description</b>	If set to true IPv4 Address Conflict Detection per RFC 5227 is performed on the IPv4 address assigned to the subinterface
<b>Context</b>	<a href="#">interface name</a> <i>string</i> <a href="#">subinterface index</a> <i>number</i> <a href="#">ipv4 arp duplicate-address-detection</a> <i>boolean</i>
<b>Tree</b>	<a href="#">duplicate-address-detection</a>
<b>Default</b>	true
<b>Configurable</b>	True

## evpn

**Note:**

This command is available for the following platforms:

- 7220 IXR-D2
- 7220 IXR-D3
- 7220 IXR-D3L
- 7220 IXR-D2L

<b>Description</b>	Configure which types of ARP or ND entries will be advertised in EVPN MAC/IP routes.
<b>Context</b>	<a href="#">interface name</a> <i>string</i> <a href="#">subinterface</a> <i>index number</i> <a href="#">ipv4 arp evpn</a>
<b>Tree</b>	<a href="#">evpn</a>
<b>Configurable</b>	True

## advertise [route-type](#) *keyword*

**Note:**

This command is available for the following platforms:

- 7220 IXR-D2
- 7220 IXR-D3
- 7220 IXR-D3L
- 7220 IXR-D2L

<b>Description</b>	Enter the advertise list instance
<b>Context</b>	<a href="#">interface name</a> <i>string</i> <a href="#">subinterface</a> <i>index number</i> <a href="#">ipv4 arp evpn advertise</a> <a href="#">route-type</a> <i>keyword</i>
<b>Tree</b>	<a href="#">advertise</a>
<b>Configurable</b>	True

**route-type *keyword*****Note:**

This command is available for the following platforms:

- 7220 IXR-D2
- 7220 IXR-D3
- 7220 IXR-D3L
- 7220 IXR-D2L

<b>Description</b>	Controls what type of ARP or ND entries to advertise.
<b>Context</b>	<a href="#">interface name</a> <i>string</i> <a href="#">subinterface index number</a> <a href="#">ipv4 arp evpn advertise route-type keyword</a>
<b>Options</b>	<ul style="list-style-type: none"> <li>• static</li> <li>• dynamic</li> </ul>
<b>Configurable</b>	True

**admin-tag *number*****Note:**

This command is available for the following platforms:

- 7220 IXR-D2
- 7220 IXR-D3
- 7220 IXR-D3L
- 7220 IXR-D2L

<b>Description</b>	Configure tag to use with the host route generated from an ARP or ND entry.
<b>Context</b>	<a href="#">interface name</a> <i>string</i> <a href="#">subinterface index number</a> <a href="#">ipv4 arp evpn advertise route-type keyword admin-tag number</a>
<b>Tree</b>	<a href="#">admin-tag</a>
<b>Range</b>	0 to 255
<b>Default</b>	0
<b>Configurable</b>	True

**host-route**

<b>Description</b>	Configure which types of ARP or ND entries will be populated in the route-table.
<b>Context</b>	<a href="#">interface name</a> <i>string</i> <a href="#">subinterface index number</a> <a href="#">ipv4 arp host-route</a>

<b>Tree</b>	<a href="#">host-route</a>
<b>Configurable</b>	True

### populate [route-type keyword](#)

<b>Description</b>	Enter the populate list instance
<b>Context</b>	<a href="#">interface name string subinterface index number ipv4 arp host-route populate route-type keyword</a>
<b>Tree</b>	<a href="#">populate</a>
<b>Configurable</b>	True

### route-type *keyword*

<b>Description</b>	Controls what type of ARP or ND entries generate a host route.
<b>Context</b>	<a href="#">interface name string subinterface index number ipv4 arp host-route populate route-type keyword</a>
<b>Options</b>	<ul style="list-style-type: none"> <li>• static</li> <li>• dynamic</li> <li>• evpn</li> </ul>
<b>Configurable</b>	True

### admin-tag *number*

<b>Description</b>	Configure tag to use with the host route generated from an ARP or ND entry.
<b>Context</b>	<a href="#">interface name string subinterface index number ipv4 arp host-route populate route-type keyword admin-tag number</a>
<b>Tree</b>	<a href="#">admin-tag</a>
<b>Range</b>	1 to 255
<b>Configurable</b>	True

### learn-unsolicited *boolean*

<b>Description</b>	If set to true an ARP entry should be learned from any received ARP packets.
<b>Context</b>	<a href="#">interface name string subinterface index number ipv4 arp learn-unsolicited boolean</a>
<b>Tree</b>	<a href="#">learn-unsolicited</a>
<b>Default</b>	false

**Configurable** True

### 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](#) *string* [subinterface index](#) *number* [ipv4 arp neighbor ipv4-address](#) *string*

**Tree** [neighbor](#)

**Configurable** True

### 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](#) *string* [subinterface index](#) *number* [ipv4 arp neighbor ipv4-address](#) *string*

**Configurable** True

### expiration-time *string*

**Description** The date and time when the dynamic ARP entry is set to expire

**Context** [interface name](#) *string* [subinterface index](#) *number* [ipv4 arp neighbor ipv4-address](#) *string* [expiration-time](#) *string*

**Tree** [expiration-time](#)

**String Length** 20 to 32

**Configurable** False

### link-layer-address *string*

**Description** The resolving MAC address of the ARP entry  
To configure a static ARP entry a value must be written into this leaf and the ipv4-address leaf.

**Context** [interface name](#) *string* [subinterface index](#) *number* [ipv4 arp neighbor ipv4-address](#) *string* [link-layer-address](#) *string*

<b>Tree</b>	<a href="#">link-layer-address</a>
<b>Configurable</b>	True

**origin *keyword***

<b>Description</b>	The origin of the ARP entry
<b>Context</b>	<a href="#">interface name</a> <i>string</i> <a href="#">subinterface index</a> <i>number</i> <a href="#">ipv4 arp neighbor ipv4-address</a> <i>string</i> <a href="#">origin</a> <i>keyword</i>
<b>Tree</b>	<a href="#">origin</a>
<b>Options</b>	<ul style="list-style-type: none"> <li>• other</li> <li>• static</li> <li>• dynamic</li> <li>• evpn</li> </ul>
<b>Configurable</b>	False

**timeout *number***

<b>Description</b>	<p>Duration of time that dynamic ARP entries remain in the ARP cache before they expire</p> <p>A change to this value does not affect existing entries until they are refreshed.</p>
<b>Context</b>	<a href="#">interface name</a> <i>string</i> <a href="#">subinterface index</a> <i>number</i> <a href="#">ipv4 arp timeout</a> <i>number</i>
<b>Tree</b>	<a href="#">timeout</a>
<b>Range</b>	60 to 65535
<b>Default</b>	14400
<b>Units</b>	seconds
<b>Configurable</b>	True

**dhcp-client**

<b>Description</b>	Container for options related to DHCP
<b>Context</b>	<a href="#">interface name</a> <i>string</i> <a href="#">subinterface index</a> <i>number</i> <a href="#">ipv4 dhcp-client</a>
<b>Tree</b>	<a href="#">dhcp-client</a>
<b>Configurable</b>	True

**trace-options**

<b>Description</b>	Container for tracing DHCPv4 operations on the subinterface
<b>Context</b>	<a href="#">interface name</a> <i>string</i> <a href="#">subinterface</a> <i>index</i> <i>number</i> <a href="#">ipv4</a> <a href="#">dhcp-client</a> <a href="#">trace-options</a>
<b>Tree</b>	<a href="#">trace-options</a>
<b>Configurable</b>	True

**trace keyword**

<b>Description</b>	List of events to trace
<b>Context</b>	<a href="#">interface name</a> <i>string</i> <a href="#">subinterface</a> <i>index</i> <i>number</i> <a href="#">ipv4</a> <a href="#">dhcp-client</a> <a href="#">trace-options</a> <a href="#">trace</a> <i>keyword</i>
<b>Tree</b>	<a href="#">trace</a>
<b>Options</b>	<ul style="list-style-type: none"> <li>• <code>messages</code> Capture all DHCPv4 messages sent and received by the subinterface</li> </ul>
<b>Configurable</b>	True

**dhcp-relay**

<b>Description</b>	Container for options related to DHCPv4 relay
<b>Context</b>	<a href="#">interface name</a> <i>string</i> <a href="#">subinterface</a> <i>index</i> <i>number</i> <a href="#">ipv4</a> <a href="#">dhcp-relay</a>
<b>Tree</b>	<a href="#">dhcp-relay</a>
<b>Configurable</b>	True

**admin-state keyword**

<b>Description</b>	The configurable state of the dhcp relay agent
<b>Context</b>	<a href="#">interface name</a> <i>string</i> <a href="#">subinterface</a> <i>index</i> <i>number</i> <a href="#">ipv4</a> <a href="#">dhcp-relay</a> <a href="#">admin-state</a> <i>keyword</i>
<b>Tree</b>	<a href="#">admin-state</a>
<b>Default</b>	enable
<b>Options</b>	<ul style="list-style-type: none"> <li>• <code>enable</code></li> <li>• <code>disable</code></li> </ul>
<b>Configurable</b>	True

**gi-address *string***

<b>Description</b>	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
<b>Context</b>	<a href="#">interface name</a> <i>string</i> <a href="#">subinterface index</a> <i>number</i> <a href="#">ipv4 dhcp-relay gi-address</a> <i>string</i>
<b>Tree</b>	<a href="#">gi-address</a>
<b>Configurable</b>	True

**network-instance *reference***

<b>Description</b>	The network instance used to relay dhcp packets to
<b>Context</b>	<a href="#">interface name</a> <i>string</i> <a href="#">subinterface index</a> <i>number</i> <a href="#">ipv4 dhcp-relay network-instance</a> <i>reference</i>
<b>Tree</b>	<a href="#">network-instance</a>
<b>Reference</b>	network-instance name <i>string</i>
<b>Configurable</b>	True

**oper-down-reason *keyword***

<b>Description</b>	The reason causing the dhcp relay agent to go into operational down state
<b>Context</b>	<a href="#">interface name</a> <i>string</i> <a href="#">subinterface index</a> <i>number</i> <a href="#">ipv4 dhcp-relay oper-down-reason</a> <i>keyword</i>
<b>Tree</b>	<a href="#">oper-down-reason</a>
<b>Options</b>	<ul style="list-style-type: none"> <li>• dhcp-relay-admin-down</li> <li>• sub-interface-oper-down</li> <li>• all-dhcp-servers-unreachable-within-net-instance</li> <li>• gi-address-not-matching-relay-sub-interface-ipv4-addresses</li> <li>• no-valid-ipv4-address-on-sub-interface</li> </ul>
<b>Configurable</b>	False

**oper-state *keyword***

<b>Description</b>	The operational state of the dhcp relay agent
<b>Context</b>	<a href="#">interface name</a> <i>string</i> <a href="#">subinterface index</a> <i>number</i> <a href="#">ipv4 dhcp-relay oper-state</a> <i>keyword</i>
<b>Tree</b>	<a href="#">oper-state</a>



<b>Options</b>	<ul style="list-style-type: none"> <li>• up Component or process is operational</li> <li>• down Component or process is not operational</li> <li>• empty Component slot is empty</li> <li>• downloading Component is downloading image into memory</li> <li>• booting Component is booting downloaded image</li> <li>• starting Component image operational, application processes starting</li> <li>• failed Component or process has failed</li> <li>• synchronizing Component is currently being synchronized</li> <li>• upgrading Component is currently being upgraded</li> <li>• low-power Component is offline due to insufficient system power</li> <li>• degraded Component or process is in a degraded state</li> <li>• warm-reboot Component or process is currently warm rebooting  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.</li> </ul>
<b>Configurable</b>	False

**option keyword**

<b>Description</b>	List of option82 suboptions to insert into relayed packet towards DHCPv4 server
<b>Context</b>	<a href="#">interface name</a> <i>string</i> <a href="#">subinterface index</a> <i>number</i> <a href="#">ipv4 dhcp-relay option keyword</a>
<b>Tree</b>	<a href="#">option</a>

<b>Options</b>	<ul style="list-style-type: none"> <li>• 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</li> <li>• remote-id Enable option 82 suboption 2 remote-id into relayed packet towards DHCPv4 server, format=client MAC address</li> </ul>
<b>Configurable</b>	True

### **server (*ipv4-address* | *domain-name*)**

<b>Description</b>	List of the DHCPv4 servers that the DHCPv4 relay function will relay DHCPv4 packets to/from
<b>Context</b>	<a href="#">interface name</a> <i>string</i> <a href="#">subinterface index number</a> <a href="#">ipv4 dhcp-relay server (<i>ipv4-address</i>   <i>domain-name</i>)</a>
<b>Tree</b>	<a href="#">server</a>
<b>String Length</b>	1 to 253
<b>Configurable</b>	True
<b>Max. Elements</b>	8
<b>Min. Elements</b>	1

### **statistics**

<b>Description</b>	Enter the statistics context
<b>Context</b>	<a href="#">interface name</a> <i>string</i> <a href="#">subinterface index number</a> <a href="#">ipv4 dhcp-relay statistics</a>
<b>Tree</b>	<a href="#">statistics</a>
<b>Configurable</b>	False

### **client-packets-discarded *number***

<b>Description</b>	Total discarded dhcp packets from dhcp client(s) towards DHCP server(s)
<b>Context</b>	<a href="#">interface name</a> <i>string</i> <a href="#">subinterface index number</a> <a href="#">ipv4 dhcp-relay statistics</a> <a href="#">client-packets-discarded</a> <i>number</i>
<b>Tree</b>	<a href="#">client-packets-discarded</a>
<b>Default</b>	0
<b>Configurable</b>	False

**client-packets-received *number***

<b>Description</b>	Total received dhcp packets from dhcp client(s) for DHCP Relay
<b>Context</b>	<a href="#">interface name</a> <i>string</i> <a href="#">subinterface</a> <i>index</i> <i>number</i> <a href="#">ipv4 dhcp-relay statistics</a> <a href="#">client-packets-received</a> <i>number</i>
<b>Tree</b>	<a href="#">client-packets-received</a>
<b>Default</b>	0
<b>Configurable</b>	False

**client-packets-relayed *number***

<b>Description</b>	Total relayed dhcp packets from dhcp client(s) towards DHCP server(s)
<b>Context</b>	<a href="#">interface name</a> <i>string</i> <a href="#">subinterface</a> <i>index</i> <i>number</i> <a href="#">ipv4 dhcp-relay statistics</a> <a href="#">client-packets-relayed</a> <i>number</i>
<b>Tree</b>	<a href="#">client-packets-relayed</a>
<b>Default</b>	0
<b>Configurable</b>	False

**server-packets-discarded *number***

<b>Description</b>	Total discarded dhcp packets from DHCP server(s) towards dhcp client(s)
<b>Context</b>	<a href="#">interface name</a> <i>string</i> <a href="#">subinterface</a> <i>index</i> <i>number</i> <a href="#">ipv4 dhcp-relay statistics</a> <a href="#">server-packets-discarded</a> <i>number</i>
<b>Tree</b>	<a href="#">server-packets-discarded</a>
<b>Default</b>	0
<b>Configurable</b>	False

**server-packets-received *number***

<b>Description</b>	Total received dhcp packets from DHCP server(s) for DHCP Relay
<b>Context</b>	<a href="#">interface name</a> <i>string</i> <a href="#">subinterface</a> <i>index</i> <i>number</i> <a href="#">ipv4 dhcp-relay statistics</a> <a href="#">server-packets-received</a> <i>number</i>
<b>Tree</b>	<a href="#">server-packets-received</a>
<b>Default</b>	0
<b>Configurable</b>	False

**server-packets-relayed *number***

<b>Description</b>	Total relayed dhcp packets from DHCP server(s) towards dhcp client(s)
<b>Context</b>	<a href="#">interface name</a> <i>string</i> <a href="#">subinterface index</a> <i>number</i> <a href="#">ipv4 dhcp-relay statistics server-packets-relayed</a> <i>number</i>
<b>Tree</b>	<a href="#">server-packets-relayed</a>
<b>Default</b>	0
<b>Configurable</b>	False

**trace-options**

<b>Description</b>	Container for tracing DHCPv4 relay operations on the subinterface
<b>Context</b>	<a href="#">interface name</a> <i>string</i> <a href="#">subinterface index</a> <i>number</i> <a href="#">ipv4 dhcp-relay trace-options</a>
<b>Tree</b>	<a href="#">trace-options</a>
<b>Configurable</b>	True

**trace *keyword***

<b>Description</b>	List of events to trace
<b>Context</b>	<a href="#">interface name</a> <i>string</i> <a href="#">subinterface index</a> <i>number</i> <a href="#">ipv4 dhcp-relay trace-options trace</a> <i>keyword</i>
<b>Tree</b>	<a href="#">trace</a>
<b>Options</b>	<ul style="list-style-type: none"> <li>• messages Capture all DHCPv4 messages sent and received by the subinterface</li> </ul>
<b>Configurable</b>	True

**use-gi-addr-as-src-ip-addr *boolean***

<b>Description</b>	When this is set, the configured giaddress will be used as source ip address.
<b>Context</b>	<a href="#">interface name</a> <i>string</i> <a href="#">subinterface index</a> <i>number</i> <a href="#">ipv4 dhcp-relay use-gi-addr-as-src-ip-addr</a> <i>boolean</i>
<b>Tree</b>	<a href="#">use-gi-addr-as-src-ip-addr</a>
<b>Default</b>	false
<b>Configurable</b>	True

## dhcp-server



### Note:

This command is available for the following platforms:

- 7220 IXR-D2
- 7250 IXR-10
- 7220 IXR-D3L
- 7220 IXR-D2L
- 7220 IXR-H3
- 7220 IXR-H2
- 7220 IXR-D3
- 7250 IXR-6
- 7220 IXR-D1

<b>Description</b>	Enable the dhcp-server context
<b>Context</b>	<a href="#">interface name string subinterface index number ipv4 dhcp-server</a>
<b>Tree</b>	<a href="#">dhcp-server</a>
<b>Configurable</b>	True

## admin-state *keyword*



### Note:

This command is available for the following platforms:

- 7220 IXR-D2
- 7250 IXR-10
- 7220 IXR-D3L
- 7220 IXR-D2L
- 7220 IXR-H3
- 7220 IXR-H2
- 7220 IXR-D3
- 7250 IXR-6
- 7220 IXR-D1

<b>Description</b>	Enables/Disables DHCP server function on subinterface
<b>Context</b>	<a href="#">interface name string subinterface index number ipv4 dhcp-server admin-state keyword</a>
<b>Tree</b>	<a href="#">admin-state</a>
<b>Default</b>	disable

<b>Options</b>	<ul style="list-style-type: none"> <li>• enable</li> <li>• disable</li> </ul>
<b>Configurable</b>	True

### oper-state *keyword*



#### Note:

This command is available for the following platforms:

- 7220 IXR-D2
- 7250 IXR-10
- 7220 IXR-D3L
- 7220 IXR-D2L
- 7220 IXR-H3
- 7220 IXR-H2
- 7220 IXR-D3
- 7250 IXR-6
- 7220 IXR-D1

<b>Description</b>	Details if the dhcp server is operationally available
<b>Context</b>	<a href="#">interface name</a> <i>string</i> <a href="#">subinterface index number</a> <i>number</i> <a href="#">ipv4 dhcp-server oper-state keyword</a>
<b>Tree</b>	<a href="#">oper-state</a>
<b>Options</b>	<ul style="list-style-type: none"> <li>• up Component or process is operational</li> <li>• down Component or process is not operational</li> <li>• empty Component slot is empty</li> <li>• downloading Component is downloading image into memory</li> <li>• booting Component is booting downloaded image</li> <li>• starting Component image operational, application processes starting</li> <li>• failed Component or process has failed</li> </ul>

- 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  
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.

**Configurable** False

## statistics

**Description** Container for subinterface statistics, counting IPv4 packets or IPv6 packets or both depending on the context

**Context** [interface name](#) *string* [subinterface index](#) *number* [ipv4 statistics](#)

**Tree** [statistics](#)

**Configurable** False

## in-discarded-packets *number*

**Description** The total number of input IPv4 packets or IPv6 packets or both (transit and terminating traffic) that were dropped for any of the following reasons:  
[*'ingress interface ACL drop action', 'CPM filter drop action', 'VOQ congestion discards (7250 IXR only)', 'unicast destination MAC address is not the MAC address of the subinterface', 'packet matched a route with a blackhole next-hop', 'packet was non-terminating and its TTL expired', 'packet matched a route with a next-hop via another subinterface but the next-hop address was not resolvable by ARP/ND', 'packet is a host address on another subinterface but the host address was not resolvable by ARP/ND'*]  
This also includes IP/MPLS packets dropped by ingress interface ACL drop action or CPM filter drop action.

**Context** [interface name](#) *string* [subinterface index](#) *number* [ipv4 statistics in-discarded-packets](#) *number*

**Tree** [in-discarded-packets](#)

<b>Default</b>	0
<b>Configurable</b>	False

### in-error-packets *number*



**Note:**

This command is available for the following platforms:

- 7250 IXR-6
- 7250 IXR-10

<b>Description</b>	The total number of input IPv4 packets or IPv6 packets or both discarded due to errors, counting transit and terminating traffic  The sum of the following RFC 4293 counters: ipIfStatsInHdrErrors ipIfStatsInNoRoutes ipIfStatsInAddrErrors ipIfStatsInUnknownProtos ipIfStatsInTruncatedPkts
<b>Context</b>	<a href="#">interface name</a> <i>string</i> <a href="#">subinterface index</a> <i>number</i> <a href="#">ipv4 statistics in-error-packets</a> <i>number</i>
<b>Tree</b>	<a href="#">in-error-packets</a>
<b>Default</b>	0
<b>Configurable</b>	False

### in-forwarded-octets *number*

<b>Description</b>	The number of octets in input IPv4 packets or IPv6 packets or both received on this subinterface and counted in in-forwarded-packets
<b>Context</b>	<a href="#">interface name</a> <i>string</i> <a href="#">subinterface index</a> <i>number</i> <a href="#">ipv4 statistics in-forwarded-octets</a> <i>number</i>
<b>Tree</b>	<a href="#">in-forwarded-octets</a>
<b>Default</b>	0
<b>Configurable</b>	False

### in-forwarded-packets *number*

<b>Description</b>	The number of input IPv4 packets or IPv6 packets or both 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 (and not dropped) as are packets that trigger ICMP/ICMPv6 redirect messages.
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On 7220 IXR systems this also counts received traffic that is terminating.

<b>Context</b>	<a href="#">interface name</a> <i>string</i> <a href="#">subinterface index</a> <i>number</i> <a href="#">ipv4 statistics in-forwarded-packets</a> <i>number</i>
<b>Tree</b>	<a href="#">in-forwarded-packets</a>
<b>Default</b>	0
<b>Configurable</b>	False

### **in-matched-ra-packets** *number*

<b>Description</b>	The total number of IPv6 packets matched with applied RA-Guard policy
<b>Context</b>	<a href="#">interface name</a> <i>string</i> <a href="#">subinterface index</a> <i>number</i> <a href="#">ipv4 statistics in-matched-ra-packets</a> <i>number</i>
<b>Tree</b>	<a href="#">in-matched-ra-packets</a>
<b>Default</b>	0
<b>Configurable</b>	False

### **in-octets** *number*

<b>Description</b>	The total number of octets received in input packets, counting transit and terminating traffic
<b>Context</b>	<a href="#">interface name</a> <i>string</i> <a href="#">subinterface index</a> <i>number</i> <a href="#">ipv4 statistics in-octets</a> <i>number</i>
<b>Tree</b>	<a href="#">in-octets</a>
<b>Default</b>	0
<b>Configurable</b>	False

### **in-packets** *number*

<b>Description</b>	The total number of input packets received, counting transit and terminating traffic  This equals the sum of: in-error-packets in-discarded-packets (also includes IP/MPLS packets) in-terminated-packets (also includes IP/MPLS packets) in-forwarded-packets
<b>Context</b>	<a href="#">interface name</a> <i>string</i> <a href="#">subinterface index</a> <i>number</i> <a href="#">ipv4 statistics in-packets</a> <i>number</i>
<b>Tree</b>	<a href="#">in-packets</a>
<b>Default</b>	0
<b>Configurable</b>	False

**in-terminated-octets *number*****Note:**

This command is available for the following platforms:

- 7250 IXR-6
- 7250 IXR-10

<b>Description</b>	The total number of octets in input IPv4 packets or IPv6 packets or both that were received on this subinterface and counted in in-terminated-packets
<b>Context</b>	<a href="#">interface name</a> <i>string</i> <a href="#">subinterface index</a> <i>number</i> <a href="#">ipv4 statistics in-terminated-octets</a> <i>number</i>
<b>Tree</b>	<a href="#">in-terminated-octets</a>
<b>Default</b>	0
<b>Configurable</b>	False

**in-terminated-packets *number*****Note:**

This command is available for the following platforms:

- 7250 IXR-6
- 7250 IXR-10

<b>Description</b>	<p>The total number of input IPv4 packets or IPv6 packets or both that were received on this subinterface and that have a destination IP address matching a local interface address or an IPv6 multicast address to which the interface belongs. The count includes packets eventually discarded by the CPM. Such discards include:</p> <p>['packets with unsupported IP protocol numbers', 'packets destined to TCP/UDP ports that are not open/listening', 'IPv4 packets with any IP options', 'IPv6 packets with any extension headers']</p> <p>This also includes terminating IP/MPLS packets.</p>
<b>Context</b>	<a href="#">interface name</a> <i>string</i> <a href="#">subinterface index</a> <i>number</i> <a href="#">ipv4 statistics in-terminated-packets</a> <i>number</i>
<b>Tree</b>	<a href="#">in-terminated-packets</a>
<b>Default</b>	0
<b>Configurable</b>	False

**last-clear *string***

<b>Description</b>	Timestamp of the last time the subinterface counters were cleared.
<b>Context</b>	<a href="#">interface name</a> <i>string</i> <a href="#">subinterface index</a> <i>number</i> <a href="#">ipv4 statistics last-clear</a> <i>string</i>
<b>Tree</b>	<a href="#">last-clear</a>
<b>String Length</b>	20 to 32
<b>Configurable</b>	False

**out-discarded-packets *number***

<b>Description</b>	The total number of IPv4 packets or IPv6 packets or both, originating and transit, sent towards this subinterface that were dropped.  This also includes IP/MPLS packets dropped by egress interface ACL drop action.
<b>Context</b>	<a href="#">interface name</a> <i>string</i> <a href="#">subinterface index</a> <i>number</i> <a href="#">ipv4 statistics out-discarded-packets</a> <i>number</i>
<b>Tree</b>	<a href="#">out-discarded-packets</a>
<b>Default</b>	0
<b>Configurable</b>	False

**out-error-packets *number*****Note:**

This command is available for the following platforms:

- 7250 IXR-6
- 7250 IXR-10

<b>Description</b>	The number of IPv4 packets or IPv6 packets or both, 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
<b>Context</b>	<a href="#">interface name</a> <i>string</i> <a href="#">subinterface index</a> <i>number</i> <a href="#">ipv4 statistics out-error-packets</a> <i>number</i>
<b>Tree</b>	<a href="#">out-error-packets</a>
<b>Default</b>	0
<b>Configurable</b>	False

**out-forwarded-octets *number***

<b>Description</b>	The number of octets in transit IPv4 packets or IPv6 packets or both which the router attempted to route out this subinterface
<b>Context</b>	<a href="#">interface name</a> <i>string</i> <a href="#">subinterface index</a> <i>number</i> <a href="#">ipv4 statistics out-forwarded-octets</a> <i>number</i>
<b>Tree</b>	<a href="#">out-forwarded-octets</a>
<b>Default</b>	0
<b>Configurable</b>	False

**out-forwarded-packets *number***

<b>Description</b>	The number of transit IPv4 packets or IPv6 packets or both which the router attempted to route out this subinterface
<b>Context</b>	<a href="#">interface name</a> <i>string</i> <a href="#">subinterface index</a> <i>number</i> <a href="#">ipv4 statistics out-forwarded-packets</a> <i>number</i>
<b>Tree</b>	<a href="#">out-forwarded-packets</a>
<b>Default</b>	0
<b>Configurable</b>	False

**out-octets *number***

<b>Description</b>	The total number of octets in IPv4 packets or IPv6 packets or both delivered to the lower layers for transmission
<b>Context</b>	<a href="#">interface name</a> <i>string</i> <a href="#">subinterface index</a> <i>number</i> <a href="#">ipv4 statistics out-octets</a> <i>number</i>
<b>Tree</b>	<a href="#">out-octets</a>
<b>Default</b>	0
<b>Configurable</b>	False

**out-originated-octets *number***

<b>Description</b>	The number of octets in IPv4 packets or IPv6 packets or both which originated on the CPM and which the router attempted to route out this subinterface
<b>Context</b>	<a href="#">interface name</a> <i>string</i> <a href="#">subinterface index</a> <i>number</i> <a href="#">ipv4 statistics out-originated-octets</a> <i>number</i>
<b>Tree</b>	<a href="#">out-originated-octets</a>
<b>Default</b>	0

**Configurable** False

### out-originated-packets *number*

**Description** The number of IPv4 packets or IPv6 packets or both which originated on the CPM and which the router attempted to route out this subinterface. This includes all originated ICMP/ICMPv6 messages.

**Context** [interface name](#) *string* [subinterface index](#) *number* [ipv4 statistics out-originated-packets](#) *number*

**Tree** [out-originated-packets](#)

**Default** 0

**Configurable** False

### out-packets *number*

**Description** The total number of IPv4 packets or IPv6 packets or both that this router supplied to the lower layers for transmission. This includes packets generated locally and those forwarded by this router. If there are no queue drops it is equal to: <out-forwarded-packets> + <out-originated-packets>

**Context** [interface name](#) *string* [subinterface index](#) *number* [ipv4 statistics out-packets](#) *number*

**Tree** [out-packets](#)

**Default** 0

**Configurable** False

### ipv6

**Description** Enable IPv6 on the subinterface and configure associated parameters. When this is present in the running configuration, 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:  
[IPv6 link-local address', 'solicited-node multicast address for the link-local address', 'ff02::1 (all IPv6 devices)', 'ff02::2 (all IPv6 routers)']

**Context** [interface name](#) *string* [subinterface index](#) *number* [ipv6](#)

**Tree** [ipv6](#)

**Configurable** True

**address ip-prefix string**

<b>Description</b>	The list of IPv6 addresses assigned to the subinterface.
<b>Context</b>	<a href="#">interface name string subinterface index number ipv6 address ip-prefix string</a>
<b>Tree</b>	<a href="#">address</a>
<b>Configurable</b>	True
<b>Max. Elements</b>	18

**ip-prefix string**

<b>Description</b>	<p>The IPv6 address and prefix-length in CIDR notation</p> <p>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.</p>
<b>Context</b>	<a href="#">interface name string subinterface index number ipv6 address ip-prefix string</a>
<b>Configurable</b>	True

**anycast-gw boolean****Note:**

This command is available for the following platforms:

- 7220 IXR-D2
- 7220 IXR-D3L
- 7220 IXR-D2L
- 7220 IXR-D3
- 7220 IXR-D1

<b>Description</b>	<p>This designates the associated IPv6 address as an anycast-gateway IPv6 address of the subinterface.</p> <p>When this parameter is set to true:</p> <p>[‘The IPv6 address is associated with the anycast-gw MAC address in the same subinterface. Neighbor Solicitations received for the anycast-gw IPv6 address will be replied using this anycast-gw MAC address.’, ‘The IPv6 address can have duplicate IPv6 addresses in other IRB subinterfaces of routers attached to the same broadcast domain. Because of that, ND duplicate-address-detection procedures do not apply to anycast-gw IP addresses.’]</p>
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<b>Context</b>	<a href="#">interface name</a> <i>string</i> <a href="#">subinterface index</a> <i>number</i> <a href="#">ipv6 address ip-prefix</a> <i>string</i> <a href="#">anycast-gw</a> <i>boolean</i>
<b>Tree</b>	<a href="#">anycast-gw</a>
<b>Configurable</b>	True

**origin keyword**

<b>Description</b>	The origin of the IPv6 address
<b>Context</b>	<a href="#">interface name</a> <i>string</i> <a href="#">subinterface index</a> <i>number</i> <a href="#">ipv6 address ip-prefix</a> <i>string</i> <a href="#">origin</a> <i>keyword</i>
<b>Tree</b>	<a href="#">origin</a>
<b>Options</b>	<ul style="list-style-type: none"> <li>• other</li> <li>• static</li> <li>• dhcp</li> <li>• link-layer</li> <li>• random</li> </ul>
<b>Configurable</b>	False

**primary**

<b>Description</b>	<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>
<b>Context</b>	<a href="#">interface name</a> <i>string</i> <a href="#">subinterface index</a> <i>number</i> <a href="#">ipv6 address ip-prefix</a> <i>string</i> <a href="#">primary</a>
<b>Tree</b>	<a href="#">primary</a>
<b>Configurable</b>	True

**status keyword**

<b>Description</b>	The status of an IPv6 address
<b>Context</b>	<a href="#">interface name</a> <i>string</i> <a href="#">subinterface index</a> <i>number</i> <a href="#">ipv6 address ip-prefix</a> <i>string</i> <a href="#">status</a> <i>keyword</i>
<b>Tree</b>	<a href="#">status</a>
<b>Options</b>	<ul style="list-style-type: none"> <li>• preferred</li> </ul>

- deprecated
- invalid
- inaccessible
- unknown
- tentative
- duplicate
- optimistic

**Configurable** False

## dhcp-client

**Description** Container for options related to DHCPv6

**Context** [interface name](#) *string* [subinterface](#) *index* *number* [ipv6](#) [dhcp-client](#)

**Tree** [dhcp-client](#)

**Configurable** True

## trace-options

**Description** Container for tracing DHCPv6 operations on the subinterface

**Context** [interface name](#) *string* [subinterface](#) *index* *number* [ipv6](#) [dhcp-client](#) [trace-options](#)

**Tree** [trace-options](#)

**Configurable** True

## trace keyword

**Description** List of events to trace

**Context** [interface name](#) *string* [subinterface](#) *index* *number* [ipv6](#) [dhcp-client](#) [trace-options](#) [trace](#) *keyword*

**Tree** [trace](#)

**Options**

- messages  
Capture all DHCPv6 messages sent and received by the subinterface

**Configurable** True

## dhcp-relay

**Description** Container for options related to DHCPv6 relay



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<b>Context</b>	<a href="#">interface name</a> <i>string</i> <a href="#">subinterface</a> <a href="#">index</a> <i>number</i> <a href="#">ipv6</a> <a href="#">dhcp-relay</a>
<b>Tree</b>	<a href="#">dhcp-relay</a>
<b>Configurable</b>	True

### **admin-state *keyword***

<b>Description</b>	The configurable state of the dhcp relay agent
<b>Context</b>	<a href="#">interface name</a> <i>string</i> <a href="#">subinterface</a> <a href="#">index</a> <i>number</i> <a href="#">ipv6</a> <a href="#">dhcp-relay</a> <a href="#">admin-state</a> <a href="#">keyword</a>
<b>Tree</b>	<a href="#">admin-state</a>
<b>Default</b>	enable
<b>Options</b>	<ul style="list-style-type: none"> <li>• enable</li> <li>• disable</li> </ul>
<b>Configurable</b>	True

### **network-instance *reference***

<b>Description</b>	The network instance used to relay dhcp packets to
<b>Context</b>	<a href="#">interface name</a> <i>string</i> <a href="#">subinterface</a> <a href="#">index</a> <i>number</i> <a href="#">ipv6</a> <a href="#">dhcp-relay</a> <a href="#">network-instance</a> <a href="#">reference</a>
<b>Tree</b>	<a href="#">network-instance</a>
<b>Reference</b>	network-instance name <i>string</i>
<b>Configurable</b>	True

### **oper-down-reason *keyword***

<b>Description</b>	The reason causing the dhcp relay agent to go into operational down state
<b>Context</b>	<a href="#">interface name</a> <i>string</i> <a href="#">subinterface</a> <a href="#">index</a> <i>number</i> <a href="#">ipv6</a> <a href="#">dhcp-relay</a> <a href="#">oper-down-reason</a> <a href="#">keyword</a>
<b>Tree</b>	<a href="#">oper-down-reason</a>
<b>Options</b>	<ul style="list-style-type: none"> <li>• dhcp-relay-admin-down</li> <li>• sub-interface-oper-down</li> <li>• all-dhcpv6-servers-unreachable-within-net-instance</li> <li>• source-address-not-matching-relay-sub-interface-ipv6-addresses</li> <li>• no-valid-ipv6-address-on-sub-interface</li> </ul>
<b>Configurable</b>	False

**oper-state keyword**

<b>Description</b>	The operational state of the dhcp relay agent
<b>Context</b>	<a href="#">interface name</a> <i>string</i> <a href="#">subinterface</a> <i>index</i> <i>number</i> <a href="#">ipv6 dhcp-relay oper-state keyword</a>
<b>Tree</b>	<a href="#">oper-state</a>
<b>Options</b>	<ul style="list-style-type: none"> <li>• up Component or process is operational</li> <li>• down Component or process is not operational</li> <li>• empty Component slot is empty</li> <li>• downloading Component is downloading image into memory</li> <li>• booting Component is booting downloaded image</li> <li>• starting Component image operational, application processes starting</li> <li>• failed Component or process has failed</li> <li>• synchronizing Component is currently being synchronized</li> <li>• upgrading Component is currently being upgraded</li> <li>• low-power Component is offline due to insufficient system power</li> <li>• degraded Component or process is in a degraded state</li> <li>• warm-reboot Component or process is currently warm rebooting 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.</li> </ul>
<b>Configurable</b>	False

**option *keyword***

<b>Description</b>	List of options to insert into relayed packet towards DHCPv6 server
<b>Context</b>	<a href="#">interface name</a> <i>string</i> <a href="#">subinterface</a> <i>index</i> <i>number</i> <a href="#">ipv6 dhcp-relay option</a> <i>keyword</i>
<b>Tree</b>	<a href="#">option</a>
<b>Options</b>	<ul style="list-style-type: none"> <li>interface-id Enable option 18 Interface-Id into relayed packet towards DHCPv6 server, format=system_name/VRF_instance/sub-interface_id:vlan_id</li> <li>remote-id Enable option 37 Remote Identifier into relayed packet towards DHCPv6 server, format=client MAC address</li> </ul>
<b>Configurable</b>	True

**server (*ipv6-address* | *domain-name*)**

<b>Description</b>	List of the DHCPv6 servers that the DHCPv6 relay function will relay DHCPv6 packets to/from
<b>Context</b>	<a href="#">interface name</a> <i>string</i> <a href="#">subinterface</a> <i>index</i> <i>number</i> <a href="#">ipv6 dhcp-relay server</a> ( <i>ipv6-address</i>   <i>domain-name</i> )
<b>Tree</b>	<a href="#">server</a>
<b>String Length</b>	1 to 253
<b>Configurable</b>	True
<b>Max. Elements</b>	8
<b>Min. Elements</b>	1

**source-address *string***

<b>Description</b>	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
<b>Context</b>	<a href="#">interface name</a> <i>string</i> <a href="#">subinterface</a> <i>index</i> <i>number</i> <a href="#">ipv6 dhcp-relay source-address</a> <i>string</i>
<b>Tree</b>	<a href="#">source-address</a>
<b>Configurable</b>	True

**statistics**

<b>Description</b>	Enter the statistics context
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<b>Context</b>	<a href="#">interface name</a> <i>string</i> <a href="#">subinterface</a> <i>index</i> <i>number</i> <a href="#">ipv6 dhcp-relay</a> <a href="#">statistics</a>
<b>Tree</b>	<a href="#">statistics</a>
<b>Configurable</b>	False

**client-packets-discarded** *number*

<b>Description</b>	Total discarded dhcp packets from dhcp client(s) towards DHCP server(s)
<b>Context</b>	<a href="#">interface name</a> <i>string</i> <a href="#">subinterface</a> <i>index</i> <i>number</i> <a href="#">ipv6 dhcp-relay</a> <a href="#">statistics</a> <a href="#">client-packets-discarded</a> <i>number</i>
<b>Tree</b>	<a href="#">client-packets-discarded</a>
<b>Default</b>	0
<b>Configurable</b>	False

**client-packets-received** *number*

<b>Description</b>	Total received dhcp packets from dhcp client(s) for DHCP Relay
<b>Context</b>	<a href="#">interface name</a> <i>string</i> <a href="#">subinterface</a> <i>index</i> <i>number</i> <a href="#">ipv6 dhcp-relay</a> <a href="#">statistics</a> <a href="#">client-packets-received</a> <i>number</i>
<b>Tree</b>	<a href="#">client-packets-received</a>
<b>Default</b>	0
<b>Configurable</b>	False

**client-packets-relayed** *number*

<b>Description</b>	Total relayed dhcp packets from dhcp client(s) towards DHCP server(s)
<b>Context</b>	<a href="#">interface name</a> <i>string</i> <a href="#">subinterface</a> <i>index</i> <i>number</i> <a href="#">ipv6 dhcp-relay</a> <a href="#">statistics</a> <a href="#">client-packets-relayed</a> <i>number</i>
<b>Tree</b>	<a href="#">client-packets-relayed</a>
<b>Default</b>	0
<b>Configurable</b>	False

**server-packets-discarded** *number*

<b>Description</b>	Total discarded dhcp packets from DHCP server(s) towards dhcp client(s)
<b>Context</b>	<a href="#">interface name</a> <i>string</i> <a href="#">subinterface</a> <i>index</i> <i>number</i> <a href="#">ipv6 dhcp-relay</a> <a href="#">statistics</a> <a href="#">server-packets-discarded</a> <i>number</i>
<b>Tree</b>	<a href="#">server-packets-discarded</a>

<b>Default</b>	0
<b>Configurable</b>	False

### server-packets-received *number*

<b>Description</b>	Total received dhcp packets from DHCP server(s) for DHCP Relay
<b>Context</b>	<a href="#">interface name</a> <i>string</i> <a href="#">subinterface index</a> <i>number</i> <a href="#">ipv6 dhcp-relay statistics server-packets-received</a> <i>number</i>
<b>Tree</b>	<a href="#">server-packets-received</a>
<b>Default</b>	0
<b>Configurable</b>	False

### server-packets-relayed *number*

<b>Description</b>	Total relayed dhcp packets from DHCP server(s) towards dhcp client(s)
<b>Context</b>	<a href="#">interface name</a> <i>string</i> <a href="#">subinterface index</a> <i>number</i> <a href="#">ipv6 dhcp-relay statistics server-packets-relayed</a> <i>number</i>
<b>Tree</b>	<a href="#">server-packets-relayed</a>
<b>Default</b>	0
<b>Configurable</b>	False

### trace-options

<b>Description</b>	Container for tracing DHCPv6 relay operations on the subinterface
<b>Context</b>	<a href="#">interface name</a> <i>string</i> <a href="#">subinterface index</a> <i>number</i> <a href="#">ipv6 dhcp-relay trace-options</a>
<b>Tree</b>	<a href="#">trace-options</a>
<b>Configurable</b>	True

### trace *keyword*

<b>Description</b>	List of events to trace
<b>Context</b>	<a href="#">interface name</a> <i>string</i> <a href="#">subinterface index</a> <i>number</i> <a href="#">ipv6 dhcp-relay trace-options trace</a> <i>keyword</i>
<b>Tree</b>	<a href="#">trace</a>
<b>Options</b>	<ul style="list-style-type: none"> <li>• messages Capture all DHCPv6 messages sent and received by the subinterface</li> </ul>

**Configurable** True

## dhcpv6-server



**Note:**

This command is available for the following platforms:

- 7220 IXR-D2
- 7250 IXR-10
- 7220 IXR-D3L
- 7220 IXR-D2L
- 7220 IXR-H3
- 7220 IXR-H2
- 7220 IXR-D3
- 7250 IXR-6
- 7220 IXR-D1

<b>Description</b>	Enable the dhcpv6-server context
<b>Context</b>	<a href="#">interface name</a> <i>string</i> <a href="#">subinterface</a> <i>index</i> <i>number</i> <a href="#">ipv6</a> <a href="#">dhcpv6-server</a>
<b>Tree</b>	<a href="#">dhcpv6-server</a>
<b>Configurable</b>	True

## admin-state *keyword*



**Note:**

This command is available for the following platforms:

- 7220 IXR-D2
- 7250 IXR-10
- 7220 IXR-D3L
- 7220 IXR-D2L
- 7220 IXR-H3
- 7220 IXR-H2
- 7220 IXR-D3
- 7250 IXR-6
- 7220 IXR-D1

<b>Description</b>	Enables/Disables DHCPv6 server function on subinterface
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<b>Context</b>	<a href="#">interface name</a> <i>string</i> <a href="#">subinterface index</a> <i>number</i> <a href="#">ipv6 dhcpv6-server admin-state</a> <i>keyword</i>
<b>Tree</b>	<a href="#">admin-state</a>
<b>Default</b>	disable
<b>Options</b>	<ul style="list-style-type: none"> <li>• enable</li> <li>• disable</li> </ul>
<b>Configurable</b>	True

### oper-state *keyword*



#### Note:

This command is available for the following platforms:

- 7220 IXR-D2
- 7250 IXR-10
- 7220 IXR-D3L
- 7220 IXR-D2L
- 7220 IXR-H3
- 7220 IXR-H2
- 7220 IXR-D3
- 7250 IXR-6
- 7220 IXR-D1

<b>Description</b>	Details if the dhcp server is operationally available
<b>Context</b>	<a href="#">interface name</a> <i>string</i> <a href="#">subinterface index</a> <i>number</i> <a href="#">ipv6 dhcpv6-server oper-state</a> <i>keyword</i>
<b>Tree</b>	<a href="#">oper-state</a>
<b>Options</b>	<ul style="list-style-type: none"> <li>• up Component or process is operational</li> <li>• down Component or process is not operational</li> <li>• empty Component slot is empty</li> <li>• downloading Component is downloading image into memory</li> <li>• booting Component is booting downloaded image</li> </ul>

- 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  
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.

**Configurable** False

## 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

## 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



**duplicate-address-detection *boolean***

<b>Description</b>	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.
<b>Context</b>	<a href="#">interface name</a> <i>string</i> <a href="#">subinterface index</a> <i>number</i> <a href="#">ipv6 neighbor-discovery duplicate-address-detection</a> <i>boolean</i>
<b>Tree</b>	<a href="#">duplicate-address-detection</a>
<b>Default</b>	true
<b>Configurable</b>	True

**evpn****Note:**

This command is available for the following platforms:

- 7220 IXR-D2
- 7220 IXR-D3
- 7220 IXR-D3L
- 7220 IXR-D2L

<b>Description</b>	Configure which types of ARP or ND entries will be advertised in EVPN MAC/IP routes.
<b>Context</b>	<a href="#">interface name</a> <i>string</i> <a href="#">subinterface index</a> <i>number</i> <a href="#">ipv6 neighbor-discovery evpn</a>
<b>Tree</b>	<a href="#">evpn</a>
<b>Configurable</b>	True

**advertise *route-type keyword*****Note:**

This command is available for the following platforms:

- 7220 IXR-D2
- 7220 IXR-D3
- 7220 IXR-D3L
- 7220 IXR-D2L

<b>Description</b>	Enter the advertise list instance
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<b>Context</b>	<a href="#">interface name</a> <i>string</i> <a href="#">subinterface index</a> <i>number</i> <a href="#">ipv6 neighbor-discovery evpn advertise route-type</a> <i>keyword</i>
<b>Tree</b>	<a href="#">advertise</a>
<b>Configurable</b>	True

### route-type *keyword*



**Note:**

This command is available for the following platforms:

- 7220 IXR-D2
- 7220 IXR-D3
- 7220 IXR-D3L
- 7220 IXR-D2L

<b>Description</b>	Controls what type of ARP or ND entries to advertise.
<b>Context</b>	<a href="#">interface name</a> <i>string</i> <a href="#">subinterface index</a> <i>number</i> <a href="#">ipv6 neighbor-discovery evpn advertise route-type</a> <i>keyword</i>
<b>Options</b>	<ul style="list-style-type: none"> <li>• static</li> <li>• dynamic</li> </ul>
<b>Configurable</b>	True

### admin-tag *number*



**Note:**

This command is available for the following platforms:

- 7220 IXR-D2
- 7220 IXR-D3
- 7220 IXR-D3L
- 7220 IXR-D2L

<b>Description</b>	Configure tag to use with the host route generated from an ARP or ND entry.
<b>Context</b>	<a href="#">interface name</a> <i>string</i> <a href="#">subinterface index</a> <i>number</i> <a href="#">ipv6 neighbor-discovery evpn advertise route-type</a> <i>keyword</i> <a href="#">admin-tag</a> <i>number</i>
<b>Tree</b>	<a href="#">admin-tag</a>
<b>Range</b>	0 to 255
<b>Default</b>	0
<b>Configurable</b>	True

**host-route**

<b>Description</b>	Configure which types of ARP or ND entries will be populated in the route-table.
<b>Context</b>	<a href="#">interface name</a> <i>string</i> <a href="#">subinterface</a> <i>index</i> <i>number</i> <a href="#">ipv6</a> <a href="#">neighbor-discovery</a> <a href="#">host-route</a>
<b>Tree</b>	<a href="#">host-route</a>
<b>Configurable</b>	True

**populate** [route-type](#) *keyword*

<b>Description</b>	Enter the populate list instance
<b>Context</b>	<a href="#">interface name</a> <i>string</i> <a href="#">subinterface</a> <i>index</i> <i>number</i> <a href="#">ipv6</a> <a href="#">neighbor-discovery</a> <a href="#">host-route</a> <a href="#">populate</a> <a href="#">route-type</a> <i>keyword</i>
<b>Tree</b>	<a href="#">populate</a>
<b>Configurable</b>	True

**route-type** *keyword*

<b>Description</b>	Controls what type of ARP or ND entries generate a host route.
<b>Context</b>	<a href="#">interface name</a> <i>string</i> <a href="#">subinterface</a> <i>index</i> <i>number</i> <a href="#">ipv6</a> <a href="#">neighbor-discovery</a> <a href="#">host-route</a> <a href="#">populate</a> <a href="#">route-type</a> <i>keyword</i>
<b>Options</b>	<ul style="list-style-type: none"> <li>• static</li> <li>• dynamic</li> <li>• evpn</li> </ul>
<b>Configurable</b>	True

**admin-tag** *number*

<b>Description</b>	Configure tag to use with the host route generated from an ARP or ND entry.
<b>Context</b>	<a href="#">interface name</a> <i>string</i> <a href="#">subinterface</a> <i>index</i> <i>number</i> <a href="#">ipv6</a> <a href="#">neighbor-discovery</a> <a href="#">host-route</a> <a href="#">populate</a> <a href="#">route-type</a> <i>keyword</i> <a href="#">admin-tag</a> <i>number</i>
<b>Tree</b>	<a href="#">admin-tag</a>
<b>Range</b>	1 to 255
<b>Configurable</b>	True

**learn-unsolicited *keyword***

<b>Description</b>	Sets if neighbors should be learned from unsolicited neighbor advertisements for global or link local addresses or both.
<b>Context</b>	<a href="#">interface name</a> <i>string</i> <a href="#">subinterface index</a> <i>number</i> <a href="#">ipv6 neighbor-discovery learn-unsolicited</a> <i>keyword</i>
<b>Tree</b>	<a href="#">learn-unsolicited</a>
<b>Default</b>	none
<b>Options</b>	<ul style="list-style-type: none"> <li>• none</li> <li>• global</li> <li>• link-local</li> <li>• both</li> </ul>
<b>Configurable</b>	True

**neighbor [ipv6-address](#) *string***

<b>Description</b>	List of static and dynamic ND cache entries that map an IPv6 address to a MAC address
<b>Context</b>	<a href="#">interface name</a> <i>string</i> <a href="#">subinterface index</a> <i>number</i> <a href="#">ipv6 neighbor-discovery neighbor ipv6-address</a> <i>string</i>
<b>Tree</b>	<a href="#">neighbor</a>
<b>Configurable</b>	True

**ipv6-address *string***

<b>Description</b>	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.
<b>Context</b>	<a href="#">interface name</a> <i>string</i> <a href="#">subinterface index</a> <i>number</i> <a href="#">ipv6 neighbor-discovery neighbor ipv6-address</a> <i>string</i>
<b>Configurable</b>	True

**current-state *keyword***

<b>Description</b>	The Neighbor Unreachability Detection state
<b>Context</b>	<a href="#">interface name</a> <i>string</i> <a href="#">subinterface index</a> <i>number</i> <a href="#">ipv6 neighbor-discovery neighbor ipv6-address</a> <i>string</i> <a href="#">current-state</a> <i>keyword</i>
<b>Tree</b>	<a href="#">current-state</a>
<b>Options</b>	<ul style="list-style-type: none"> <li>• incomplete</li> </ul>

- reachable
- stale
- delay
- probe

**Configurable** False

### **is-router *boolean***

**Description** Indicates that the neighbor node claims to be a router (R bit in the Neighbor Advertisement message)

**Context** [interface name \*string\*](#) [subinterface index \*number\*](#) [ipv6 neighbor-discovery neighbor ipv6-address \*string\*](#) **is-router *boolean***

**Tree** [is-router](#)

**Configurable** False

### **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 \*string\*](#) [subinterface index \*number\*](#) [ipv6 neighbor-discovery neighbor ipv6-address \*string\*](#) **link-layer-address *string***

**Tree** [link-layer-address](#)

**Configurable** True

### **next-state-time *string***

**Description** The date and time when the neighbor state is expected to transition to the next state

**Context** [interface name \*string\*](#) [subinterface index \*number\*](#) [ipv6 neighbor-discovery neighbor ipv6-address \*string\*](#) **next-state-time *string***

**Tree** [next-state-time](#)

**String Length** 20 to 32

**Configurable** False

### **origin *keyword***

**Description** The origin of the neighbor cache entry.

<b>Context</b>	<a href="#">interface name</a> <i>string</i> <a href="#">subinterface</a> <a href="#">index</a> <i>number</i> <a href="#">ipv6 neighbor-discovery neighbor</a> <a href="#">ipv6-address</a> <i>string</i> <a href="#">origin</a> <i>keyword</i>
<b>Tree</b>	<a href="#">origin</a>
<b>Options</b>	<ul style="list-style-type: none"> <li>• other</li> <li>• static</li> <li>• dynamic</li> <li>• evpn</li> </ul>
<b>Configurable</b>	False

### reachable-time *number*

<b>Description</b>	<p>The period of time that a dynamic IPv6 neighbor cache entry is considered reachable after a reachability confirmation event</p> <p>After this time expires the neighbor state moves to STALE.</p>
<b>Context</b>	<a href="#">interface name</a> <i>string</i> <a href="#">subinterface</a> <a href="#">index</a> <i>number</i> <a href="#">ipv6 neighbor-discovery reachable-time</a> <i>number</i>
<b>Tree</b>	<a href="#">reachable-time</a>
<b>Range</b>	30 to 3600
<b>Default</b>	30
<b>Units</b>	seconds
<b>Configurable</b>	True

### stale-time *number*

<b>Description</b>	<p>The maximum time that a dynamic IPv6 neighbor cache entry can remain in the STALE state before it is removed</p> <p>This limit is reached only if no traffic is sent/queued towards the neighbor during the entire duration of the timer.</p>
<b>Context</b>	<a href="#">interface name</a> <i>string</i> <a href="#">subinterface</a> <a href="#">index</a> <i>number</i> <a href="#">ipv6 neighbor-discovery stale-time</a> <i>number</i>
<b>Tree</b>	<a href="#">stale-time</a>
<b>Range</b>	60 to 65535
<b>Default</b>	14400
<b>Units</b>	seconds
<b>Configurable</b>	True

**router-advertisement**

<b>Description</b>	Container for configuring IPv6 router discovery options
<b>Context</b>	<a href="#">interface name</a> <i>string</i> <a href="#">subinterface index</a> <i>number</i> <a href="#">ipv6 router-advertisement</a>
<b>Tree</b>	<a href="#">router-advertisement</a>
<b>Configurable</b>	True

**debug keyword**

<b>Description</b>	List of events to debug
<b>Context</b>	<a href="#">interface name</a> <i>string</i> <a href="#">subinterface index</a> <i>number</i> <a href="#">ipv6 router-advertisement debug keyword</a>
<b>Tree</b>	<a href="#">debug</a>
<b>Options</b>	<ul style="list-style-type: none"> <li>• messages</li> </ul> <p>Capture all router-solicitation and router-advertisement messages sent and received by the subinterface</p>
<b>Configurable</b>	True

**router-role**

<b>Description</b>	IPv6 router advertisement options that apply when the role of the interface is a router interface.
<b>Context</b>	<a href="#">interface name</a> <i>string</i> <a href="#">subinterface index</a> <i>number</i> <a href="#">ipv6 router-advertisement router-role</a>
<b>Tree</b>	<a href="#">router-role</a>
<b>Configurable</b>	True

**admin-state keyword**

<b>Description</b>	Administratively enable or disable the sending of router advertisements on the subinterface.
<b>Context</b>	<a href="#">interface name</a> <i>string</i> <a href="#">subinterface index</a> <i>number</i> <a href="#">ipv6 router-advertisement router-role admin-state keyword</a>
<b>Tree</b>	<a href="#">admin-state</a>
<b>Default</b>	disable
<b>Options</b>	<ul style="list-style-type: none"> <li>• enable</li> <li>• disable</li> </ul>
<b>Configurable</b>	True

**current-hop-limit *number***

<b>Description</b>	The current hop limit to advertise in the router advertisement messages.
<b>Context</b>	<a href="#">interface name</a> <i>string</i> <a href="#">subinterface index</a> <i>number</i> <a href="#">ipv6 router-advertisement router-role current-hop-limit</a> <i>number</i>
<b>Tree</b>	<a href="#">current-hop-limit</a>
<b>Default</b>	64
<b>Configurable</b>	True

**ip-mtu *number***

<b>Description</b>	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.
<b>Context</b>	<a href="#">interface name</a> <i>string</i> <a href="#">subinterface index</a> <i>number</i> <a href="#">ipv6 router-advertisement router-role ip-mtu</a> <i>number</i>
<b>Tree</b>	<a href="#">ip-mtu</a>
<b>Range</b>	1280 to 9486
<b>Configurable</b>	True

**managed-configuration-flag *boolean***

<b>Description</b>	When this is set the M-bit is set in the router advertisement messages, indicating that hosts should use DHCPv6 to obtain IPv6 addresses.
<b>Context</b>	<a href="#">interface name</a> <i>string</i> <a href="#">subinterface index</a> <i>number</i> <a href="#">ipv6 router-advertisement router-role managed-configuration-flag</a> <i>boolean</i>
<b>Tree</b>	<a href="#">managed-configuration-flag</a>
<b>Default</b>	false
<b>Configurable</b>	True

**max-advertisement-interval *number***

<b>Description</b>	The maximum 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.
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<b>Context</b>	<a href="#">interface name</a> <i>string</i> <a href="#">subinterface index</a> <i>number</i> <a href="#">ipv6 router-advertisement router-role max-advertisement-interval</a> <i>number</i>
<b>Tree</b>	<a href="#">max-advertisement-interval</a>
<b>Range</b>	4 to 1800
<b>Default</b>	600
<b>Units</b>	seconds
<b>Configurable</b>	True

### **min-advertisement-interval** *number*

<b>Description</b>	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.
<b>Context</b>	<a href="#">interface name</a> <i>string</i> <a href="#">subinterface index</a> <i>number</i> <a href="#">ipv6 router-advertisement router-role min-advertisement-interval</a> <i>number</i>
<b>Tree</b>	<a href="#">min-advertisement-interval</a>
<b>Range</b>	3 to 1350
<b>Default</b>	200
<b>Units</b>	seconds
<b>Configurable</b>	True

### **other-configuration-flag** *boolean*

<b>Description</b>	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).
<b>Context</b>	<a href="#">interface name</a> <i>string</i> <a href="#">subinterface index</a> <i>number</i> <a href="#">ipv6 router-advertisement router-role other-configuration-flag</a> <i>boolean</i>
<b>Tree</b>	<a href="#">other-configuration-flag</a>
<b>Default</b>	false
<b>Configurable</b>	True

### **prefix** [ipv6-prefix](#) *string*

<b>Description</b>	The list of IPv6 prefixes to advertise in the router advertisement messages.
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<b>Context</b>	<a href="#">interface name</a> <i>string</i> <a href="#">subinterface</a> <a href="#">index</a> <i>number</i> <a href="#">ipv6</a> <a href="#">router-advertisement</a> <a href="#">router-role</a> <a href="#">prefix</a> <a href="#">ipv6-prefix</a> <i>string</i>
<b>Tree</b>	<a href="#">prefix</a>
<b>Configurable</b>	True
<b>Max. Elements</b>	16

**ipv6-prefix *string***

<b>Description</b>	An IPv6 global unicast address prefix.
<b>Context</b>	<a href="#">interface name</a> <i>string</i> <a href="#">subinterface</a> <a href="#">index</a> <i>number</i> <a href="#">ipv6</a> <a href="#">router-advertisement</a> <a href="#">router-role</a> <a href="#">prefix</a> <a href="#">ipv6-prefix</a> <i>string</i>
<b>Configurable</b>	True

**autonomous-flag *boolean***

<b>Description</b>	When this is set in the prefix information option hosts can use the prefix for stateless address autoconfiguration (SLAAC).
<b>Context</b>	<a href="#">interface name</a> <i>string</i> <a href="#">subinterface</a> <a href="#">index</a> <i>number</i> <a href="#">ipv6</a> <a href="#">router-advertisement</a> <a href="#">router-role</a> <a href="#">prefix</a> <a href="#">ipv6-prefix</a> <i>string</i> <a href="#">autonomous-flag</a> <i>boolean</i>
<b>Tree</b>	<a href="#">autonomous-flag</a>
<b>Default</b>	true
<b>Configurable</b>	True

**on-link-flag *boolean***

<b>Description</b>	When this is set in the prefix information option hosts can use the prefix for on-link determination.
<b>Context</b>	<a href="#">interface name</a> <i>string</i> <a href="#">subinterface</a> <a href="#">index</a> <i>number</i> <a href="#">ipv6</a> <a href="#">router-advertisement</a> <a href="#">router-role</a> <a href="#">prefix</a> <a href="#">ipv6-prefix</a> <i>string</i> <a href="#">on-link-flag</a> <i>boolean</i>
<b>Tree</b>	<a href="#">on-link-flag</a>
<b>Default</b>	true
<b>Configurable</b>	True

**preferred-lifetime (*keyword* | *number*)**

<b>Description</b>	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.
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<b>Context</b>	<a href="#">interface name</a> <i>string</i> <a href="#">subinterface</a> <i>index</i> <i>number</i> <a href="#">ipv6</a> <a href="#">router-advertisement</a> <a href="#">router-role</a> <a href="#">prefix</a> <a href="#">ipv6-prefix</a> <i>string</i> <a href="#">preferred-lifetime</a> ( <i>keyword</i>   <i>number</i> )
<b>Tree</b>	<a href="#">preferred-lifetime</a>
<b>Default</b>	604800
<b>Units</b>	seconds
<b>Options</b>	<ul style="list-style-type: none"> <li>infinite</li> </ul>
<b>Configurable</b>	True

### **valid-lifetime** (*keyword* | *number*)

<b>Description</b>	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.
<b>Context</b>	<a href="#">interface name</a> <i>string</i> <a href="#">subinterface</a> <i>index</i> <i>number</i> <a href="#">ipv6</a> <a href="#">router-advertisement</a> <a href="#">router-role</a> <a href="#">prefix</a> <a href="#">ipv6-prefix</a> <i>string</i> <a href="#">valid-lifetime</a> ( <i>keyword</i>   <i>number</i> )
<b>Tree</b>	<a href="#">valid-lifetime</a>
<b>Default</b>	2592000
<b>Units</b>	seconds
<b>Options</b>	<ul style="list-style-type: none"> <li>infinite</li> </ul>
<b>Configurable</b>	True

### **reachable-time** *number*

<b>Description</b>	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.
<b>Context</b>	<a href="#">interface name</a> <i>string</i> <a href="#">subinterface</a> <i>index</i> <i>number</i> <a href="#">ipv6</a> <a href="#">router-advertisement</a> <a href="#">router-role</a> <a href="#">reachable-time</a> <i>number</i>
<b>Tree</b>	<a href="#">reachable-time</a>
<b>Range</b>	0 to 3600000
<b>Default</b>	0
<b>Configurable</b>	True

### **retransmit-time** *number*

<b>Description</b>	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.
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<b>Context</b>	<a href="#">interface name</a> <i>string</i> <a href="#">subinterface</a> <i>index</i> <i>number</i> <a href="#">ipv6</a> <a href="#">router-advertisement</a> <a href="#">router-role</a> <a href="#">retransmit-time</a> <i>number</i>
<b>Tree</b>	<a href="#">retransmit-time</a>
<b>Range</b>	0 to 1800000
<b>Default</b>	0
<b>Configurable</b>	True

### **router-lifetime** *number*

<b>Description</b>	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.
<b>Context</b>	<a href="#">interface name</a> <i>string</i> <a href="#">subinterface</a> <i>index</i> <i>number</i> <a href="#">ipv6</a> <a href="#">router-advertisement</a> <a href="#">router-role</a> <a href="#">router-lifetime</a> <i>number</i>
<b>Tree</b>	<a href="#">router-lifetime</a>
<b>Range</b>	0 to 9000
<b>Default</b>	1800
<b>Configurable</b>	True

### **statistics**

<b>Description</b>	Container for subinterface statistics, counting IPv4 packets or IPv6 packets or both depending on the context
<b>Context</b>	<a href="#">interface name</a> <i>string</i> <a href="#">subinterface</a> <i>index</i> <i>number</i> <a href="#">ipv6</a> <a href="#">statistics</a>
<b>Tree</b>	<a href="#">statistics</a>
<b>Configurable</b>	False

### **in-discarded-packets** *number*

<b>Description</b>	The total number of input IPv4 packets or IPv6 packets or both (transit and terminating traffic) that were dropped for any of the following reasons: ['ingress interface ACL drop action', 'CPM filter drop action', 'VOQ congestion discards (7250 IXR only)', 'unicast destination MAC address is not the MAC address of the subinterface', 'packet matched a route with a blackhole next-hop', 'packet was non-terminating and its TTL expired', 'packet matched a route with a next-hop via another subinterface but the next-hop address was not resolvable by ARP/ND', 'packet is a host address on another subinterface but the host address was not resolvable by ARP/ND']
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This also includes IP/MPLS packets dropped by ingress interface ACL drop action or CPM filter drop action.

<b>Context</b>	<a href="#">interface name</a> <i>string</i> <a href="#">subinterface index</a> <i>number</i> <a href="#">ipv6 statistics in-discarded-packets</a> <i>number</i>
<b>Tree</b>	<a href="#">in-discarded-packets</a>
<b>Default</b>	0
<b>Configurable</b>	False

### **in-error-packets** *number*



**Note:**

This command is available for the following platforms:

- 7250 IXR-6
- 7250 IXR-10

<b>Description</b>	The total number of input IPv4 packets or IPv6 packets or both discarded due to errors, counting transit and terminating traffic  The sum of the following RFC 4293 counters: ipIfStatsInHdrErrors ipIfStatsInNoRoutes ipIfStatsInAddrErrors ipIfStatsInUnknownProtos ipIfStatsInTruncatedPkts
<b>Context</b>	<a href="#">interface name</a> <i>string</i> <a href="#">subinterface index</a> <i>number</i> <a href="#">ipv6 statistics in-error-packets</a> <i>number</i>
<b>Tree</b>	<a href="#">in-error-packets</a>
<b>Default</b>	0
<b>Configurable</b>	False

### **in-forwarded-octets** *number*

<b>Description</b>	The number of octets in input IPv4 packets or IPv6 packets or both received on this subinterface and counted in in-forwarded-packets
<b>Context</b>	<a href="#">interface name</a> <i>string</i> <a href="#">subinterface index</a> <i>number</i> <a href="#">ipv6 statistics in-forwarded-octets</a> <i>number</i>
<b>Tree</b>	<a href="#">in-forwarded-octets</a>
<b>Default</b>	0
<b>Configurable</b>	False

**in-forwarded-packets *number***

<b>Description</b>	The number of input IPv4 packets or IPv6 packets or both 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 (and not dropped) as are packets that trigger ICMP/ICMPv6 redirect messages.  On 7220 IXR systems this also counts received traffic that is terminating.
<b>Context</b>	<a href="#">interface name</a> <i>string</i> <a href="#">subinterface index</a> <i>number</i> <a href="#">ipv6 statistics in-forwarded-packets</a> <i>number</i>
<b>Tree</b>	<a href="#">in-forwarded-packets</a>
<b>Default</b>	0
<b>Configurable</b>	False

**in-matched-ra-packets *number***

<b>Description</b>	The total number of IPv6 packets matched with applied RA-Guard policy
<b>Context</b>	<a href="#">interface name</a> <i>string</i> <a href="#">subinterface index</a> <i>number</i> <a href="#">ipv6 statistics in-matched-ra-packets</a> <i>number</i>
<b>Tree</b>	<a href="#">in-matched-ra-packets</a>
<b>Default</b>	0
<b>Configurable</b>	False

**in-octets *number***

<b>Description</b>	The total number of octets received in input packets, counting transit and terminating traffic
<b>Context</b>	<a href="#">interface name</a> <i>string</i> <a href="#">subinterface index</a> <i>number</i> <a href="#">ipv6 statistics in-octets</a> <i>number</i>
<b>Tree</b>	<a href="#">in-octets</a>
<b>Default</b>	0
<b>Configurable</b>	False

**in-packets *number***

<b>Description</b>	The total number of input packets received, counting transit and terminating traffic
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This equals the sum of: in-error-packets in-discarded-packets (also includes IP/MPLS packets) in-terminated-packets (also includes IP/MPLS packets) in-forwarded-packets

<b>Context</b>	<a href="#">interface name</a> <i>string</i> <a href="#">subinterface index</a> <i>number</i> <a href="#">ipv6 statistics in-packets number</a>
<b>Tree</b>	<a href="#">in-packets</a>
<b>Default</b>	0
<b>Configurable</b>	False

### in-terminated-octets *number*



**Note:**

This command is available for the following platforms:

- 7250 IXR-6
- 7250 IXR-10

<b>Description</b>	The total number of octets in input IPv4 packets or IPv6 packets or both that were received on this subinterface and counted in in-terminated-packets
<b>Context</b>	<a href="#">interface name</a> <i>string</i> <a href="#">subinterface index</a> <i>number</i> <a href="#">ipv6 statistics in-terminated-octets number</a>
<b>Tree</b>	<a href="#">in-terminated-octets</a>
<b>Default</b>	0
<b>Configurable</b>	False

### in-terminated-packets *number*

<b>Description</b>	<p>The total number of input IPv4 packets or IPv6 packets or both that were received on this subinterface and that have a destination IP address matching a local interface address or an IPv6 multicast address to which the interface belongs. The count includes packets eventually discarded by the CPM. Such discards include:</p> <p>['packets with unsupported IP protocol numbers', 'packets destined to TCP/UDP ports that are not open/listening', 'IPv4 packets with any IP options', 'IPv6 packets with any extension headers']</p> <p>This also includes terminating IP/MPLS packets.</p>
<b>Context</b>	<a href="#">interface name</a> <i>string</i> <a href="#">subinterface index</a> <i>number</i> <a href="#">ipv6 statistics in-terminated-packets number</a>
<b>Tree</b>	<a href="#">in-terminated-packets</a>
<b>Default</b>	0
<b>Configurable</b>	False

**last-clear *string***

<b>Description</b>	Timestamp of the last time the subinterface counters were cleared.
<b>Context</b>	<a href="#">interface name</a> <i>string</i> <a href="#">subinterface index</a> <i>number</i> <a href="#">ipv6 statistics last-clear</a> <i>string</i>
<b>Tree</b>	<a href="#">last-clear</a>
<b>String Length</b>	20 to 32
<b>Configurable</b>	False

**out-discarded-packets *number***

<b>Description</b>	The total number of IPv4 packets or IPv6 packets or both, originating and transit, sent towards this subinterface that were dropped.  This also includes IP/MPLS packets dropped by egress interface ACL drop action.
<b>Context</b>	<a href="#">interface name</a> <i>string</i> <a href="#">subinterface index</a> <i>number</i> <a href="#">ipv6 statistics out-discarded-packets</a> <i>number</i>
<b>Tree</b>	<a href="#">out-discarded-packets</a>
<b>Default</b>	0
<b>Configurable</b>	False

**out-error-packets *number*****Note:**

This command is available for the following platforms:

- 7250 IXR-6
- 7250 IXR-10

<b>Description</b>	The number of IPv4 packets or IPv6 packets or both, 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
<b>Context</b>	<a href="#">interface name</a> <i>string</i> <a href="#">subinterface index</a> <i>number</i> <a href="#">ipv6 statistics out-error-packets</a> <i>number</i>
<b>Tree</b>	<a href="#">out-error-packets</a>
<b>Default</b>	0
<b>Configurable</b>	False



**out-forwarded-octets *number***

<b>Description</b>	The number of octets in transit IPv4 packets or IPv6 packets or both which the router attempted to route out this subinterface
<b>Context</b>	<a href="#">interface name</a> <i>string</i> <a href="#">subinterface index</a> <i>number</i> <a href="#">ipv6 statistics out-forwarded-octets</a> <i>number</i>
<b>Tree</b>	<a href="#">out-forwarded-octets</a>
<b>Default</b>	0
<b>Configurable</b>	False

**out-forwarded-packets *number***

<b>Description</b>	The number of transit IPv4 packets or IPv6 packets or both which the router attempted to route out this subinterface
<b>Context</b>	<a href="#">interface name</a> <i>string</i> <a href="#">subinterface index</a> <i>number</i> <a href="#">ipv6 statistics out-forwarded-packets</a> <i>number</i>
<b>Tree</b>	<a href="#">out-forwarded-packets</a>
<b>Default</b>	0
<b>Configurable</b>	False

**out-octets *number***

<b>Description</b>	The total number of octets in IPv4 packets or IPv6 packets or both delivered to the lower layers for transmission
<b>Context</b>	<a href="#">interface name</a> <i>string</i> <a href="#">subinterface index</a> <i>number</i> <a href="#">ipv6 statistics out-octets</a> <i>number</i>
<b>Tree</b>	<a href="#">out-octets</a>
<b>Default</b>	0
<b>Configurable</b>	False

**out-originated-octets *number***

<b>Description</b>	The number of octets in IPv4 packets or IPv6 packets or both which originated on the CPM and which the router attempted to route out this subinterface
<b>Context</b>	<a href="#">interface name</a> <i>string</i> <a href="#">subinterface index</a> <i>number</i> <a href="#">ipv6 statistics out-originated-octets</a> <i>number</i>
<b>Tree</b>	<a href="#">out-originated-octets</a>
<b>Default</b>	0

**Configurable** False

### out-originated-packets *number*

**Description** The number of IPv4 packets or IPv6 packets or both which originated on the CPM and which the router attempted to route out this subinterface. This includes all originated ICMP/ICMPv6 messages.

**Context** [interface name](#) *string* [subinterface index](#) *number* [ipv6 statistics out-originated-packets](#) *number*

**Tree** [out-originated-packets](#)

**Default** 0

**Configurable** False

### out-packets *number*

**Description** The total number of IPv4 packets or IPv6 packets or both that this router supplied to the lower layers for transmission. This includes packets generated locally and those forwarded by this router. If there are no queue drops it is equal to: <out-forwarded-packets> + <out-originated-packets>

**Context** [interface name](#) *string* [subinterface index](#) *number* [ipv6 statistics out-packets](#) *number*

**Tree** [out-packets](#)

**Default** 0

**Configurable** False

### I2-mtu *number*



**Note:**

This command is available for the following platforms:

- 7220 IXR-D2
- 7220 IXR-D3L
- 7220 IXR-D2L
- 7220 IXR-D3
- 7220 IXR-D1

**Description** Layer-2 MTU of the subinterface in bytes, including the Ethernet header and VLAN tags, and excluding 4-bytes FCS.

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 l2-mtu of the subinterface exceeds the port-mtu of the associated interface, the subinterface will remain operationally down.

The default value for a subinterface is taken from /system/mtu/default-l2-mtu. The L2 MTU is only configurable for bridged 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.

<b>Context</b>	<a href="#">interface name</a> <i>string</i> <a href="#">subinterface index</a> <i>number</i> <a href="#">l2-mtu</a> <i>number</i>
<b>Tree</b>	<a href="#">l2-mtu</a>
<b>Range</b>	1500 to 9500
<b>Units</b>	bytes
<b>Configurable</b>	True

### last-change *string*

<b>Description</b>	The date and time of the most recent change to the subinterface state
<b>Context</b>	<a href="#">interface name</a> <i>string</i> <a href="#">subinterface index</a> <i>number</i> <a href="#">last-change</a> <i>string</i>
<b>Tree</b>	<a href="#">last-change</a>
<b>String Length</b>	20 to 32
<b>Configurable</b>	False

### local-mirror-destination



**Note:**

This command is available for the following platforms:

- 7220 IXR-D2
- 7220 IXR-D3
- 7220 IXR-D3L
- 7220 IXR-D2L

<b>Description</b>	Container for options related to local mirror destination
<b>Context</b>	<a href="#">interface name</a> <i>string</i> <a href="#">subinterface index</a> <i>number</i> <a href="#">local-mirror-destination</a>
<b>Tree</b>	<a href="#">local-mirror-destination</a>
<b>Configurable</b>	True

**admin-state keyword****Note:**

This command is available for the following platforms:

- 7220 IXR-D2
- 7220 IXR-D3
- 7220 IXR-D3L
- 7220 IXR-D2L

<b>Description</b>	The configurable state of the local mirror destination
<b>Context</b>	<a href="#">interface name</a> <i>string</i> <a href="#">subinterface</a> <i>index number</i> <a href="#">local-mirror-destination</a> <a href="#">admin-state</a> <i>keyword</i>
<b>Tree</b>	<a href="#">admin-state</a>
<b>Default</b>	enable
<b>Options</b>	<ul style="list-style-type: none"> <li>• enable</li> <li>• disable</li> </ul>
<b>Configurable</b>	True

**oper-state keyword****Note:**

This command is available for the following platforms:

- 7220 IXR-D2
- 7220 IXR-D3
- 7220 IXR-D3L
- 7220 IXR-D2L

<b>Description</b>	The operational state of the local mirror destination
<b>Context</b>	<a href="#">interface name</a> <i>string</i> <a href="#">subinterface</a> <i>index number</i> <a href="#">local-mirror-destination</a> <a href="#">oper-state</a> <i>keyword</i>
<b>Tree</b>	<a href="#">oper-state</a>
<b>Options</b>	<ul style="list-style-type: none"> <li>• up Component or process is operational</li> <li>• down Component or process is not operational</li> <li>• empty Component slot is empty</li> </ul>

- 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  
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.

**Configurable** False

## mpls



**Note:**

This command is available for the following platforms:

- 7250 IXR-6
- 7250 IXR-10

**Description** Container for MPLS configuration and state at the subinterface level

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

**Tree** [mpls](#)

**Configurable** False

## statistics



### Note:

This command is available for the following platforms:

- 7250 IXR-6
- 7250 IXR-10

<b>Description</b>	Container for MPLS-specific subinterface statistics
<b>Context</b>	<a href="#">interface name string subinterface index number mpls statistics</a>
<b>Tree</b>	<a href="#">statistics</a>
<b>Configurable</b>	False

## in-discarded-packets *number*



### Note:

This command is available for the following platforms:

- 7250 IXR-6
- 7250 IXR-10

<b>Description</b>	The total number of MPLS packets that were dropped because they were received with forwarded top label having an MPLS TTL value of 1
<b>Context</b>	<a href="#">interface name string subinterface index number mpls statistics in-discarded-packets number</a>
<b>Tree</b>	<a href="#">in-discarded-packets</a>
<b>Default</b>	0
<b>Configurable</b>	False

## in-error-packets *number*



### Note:

This command is available for the following platforms:

- 7250 IXR-6
- 7250 IXR-10

<b>Description</b>	The total number of MPLS packets that were dropped because they were received with errors that include:  [ 'forwarded top label had an MPLS TTL value of 0', 'terminating top label had an MPLS TTL value of 0', 'the top label was unknown (no matching forwarding entry)']
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<b>Context</b>	<a href="#">interface name</a> <i>string</i> <a href="#">subinterface index</a> <i>number</i> <a href="#">mpls statistics in-error-packets</a> <i>number</i>
<b>Tree</b>	<a href="#">in-error-packets</a>
<b>Default</b>	0
<b>Configurable</b>	False

### **in-forwarded-octets** *number*



**Note:**

This command is available for the following platforms:

- 7250 IXR-6
- 7250 IXR-10

<b>Description</b>	The number of octets in MPLS packets received on this subinterface that were attempted to be forwarded to another IP or MPLS interface
<b>Context</b>	<a href="#">interface name</a> <i>string</i> <a href="#">subinterface index</a> <i>number</i> <a href="#">mpls statistics in-forwarded-octets</a> <i>number</i>
<b>Tree</b>	<a href="#">in-forwarded-octets</a>
<b>Default</b>	0
<b>Configurable</b>	False

### **in-forwarded-packets** *number*



**Note:**

This command is available for the following platforms:

- 7250 IXR-6
- 7250 IXR-10

<b>Description</b>	The number of MPLS packets received on this subinterface that were attempted to be forwarded to another IP or MPLS interface
<b>Context</b>	<a href="#">interface name</a> <i>string</i> <a href="#">subinterface index</a> <i>number</i> <a href="#">mpls statistics in-forwarded-packets</a> <i>number</i>
<b>Tree</b>	<a href="#">in-forwarded-packets</a>
<b>Default</b>	0
<b>Configurable</b>	False

**in-octets *number*****Note:**

This command is available for the following platforms:

- 7250 IXR-6
- 7250 IXR-10

<b>Description</b>	The total number of octets in input MPLS packets received, not counting MPLS packets discarded due to ACLs or IP/MPLS packets that terminated on this router.
<b>Context</b>	<a href="#">interface name</a> <i>string</i> <a href="#">subinterface index</a> <i>number</i> <a href="#">mpls statistics in-octets</a> <i>number</i>
<b>Tree</b>	<a href="#">in-octets</a>
<b>Default</b>	0
<b>Configurable</b>	False

**in-packets *number*****Note:**

This command is available for the following platforms:

- 7250 IXR-6
- 7250 IXR-10

<b>Description</b>	The total number of input MPLS packets received, not counting MPLS packets discarded due to ACLs or IP/MPLS packets that terminated on this router.  This equals the sum of: in-error-packets in-discarded-packets in-forwarded-packets
<b>Context</b>	<a href="#">interface name</a> <i>string</i> <a href="#">subinterface index</a> <i>number</i> <a href="#">mpls statistics in-packets</a> <i>number</i>
<b>Tree</b>	<a href="#">in-packets</a>
<b>Default</b>	0
<b>Configurable</b>	False



**last-clear *string*****Note:**

This command is available for the following platforms:

- 7250 IXR-6
- 7250 IXR-10

<b>Description</b>	Timestamp of the last time the subinterface MPLS counters were cleared.
<b>Context</b>	<a href="#">interface name</a> <i>string</i> <a href="#">subinterface index</a> <i>number</i> <a href="#">mpls statistics last-clear</a> <i>string</i>
<b>Tree</b>	<a href="#">last-clear</a>
<b>String Length</b>	20 to 32
<b>Configurable</b>	False

**out-error-packets *number*****Note:**

This command is available for the following platforms:

- 7250 IXR-6
- 7250 IXR-10

<b>Description</b>	The number of MPLS packets that could not be transmitted on this subinterface because of an error.  For now this only counts transmission errors that result from the MPLS packet size exceeding the MPLS MTU of the subinterface.
<b>Context</b>	<a href="#">interface name</a> <i>string</i> <a href="#">subinterface index</a> <i>number</i> <a href="#">mpls statistics out-error-packets</a> <i>number</i>
<b>Tree</b>	<a href="#">out-error-packets</a>
<b>Default</b>	0
<b>Configurable</b>	False

**out-forwarded-octets *number*****Note:**

This command is available for the following platforms:

- 7250 IXR-6
- 7250 IXR-10

<b>Description</b>	The number of octets in MPLS packets transmitted on this subinterface. This does not include IP packets that resulted from a PHP pop operation.
<b>Context</b>	<a href="#">interface name</a> <i>string</i> <a href="#">subinterface index</a> <i>number</i> <a href="#">mpls statistics out-forwarded-octets</a> <i>number</i>
<b>Tree</b>	<a href="#">out-forwarded-octets</a>
<b>Default</b>	0
<b>Configurable</b>	False

### out-forwarded-packets *number*



**Note:**

This command is available for the following platforms:

- 7250 IXR-6
- 7250 IXR-10

<b>Description</b>	The number of MPLS packets transmitted on this subinterface. This does not include IP packets that resulted from a PHP pop operation.
<b>Context</b>	<a href="#">interface name</a> <i>string</i> <a href="#">subinterface index</a> <i>number</i> <a href="#">mpls statistics out-forwarded-packets</a> <i>number</i>
<b>Tree</b>	<a href="#">out-forwarded-packets</a>
<b>Default</b>	0
<b>Configurable</b>	False

### out-octets *number*



**Note:**

This command is available for the following platforms:

- 7250 IXR-6
- 7250 IXR-10

<b>Description</b>	The total number of octets in output MPLS packets transmitted.
<b>Context</b>	<a href="#">interface name</a> <i>string</i> <a href="#">subinterface index</a> <i>number</i> <a href="#">mpls statistics out-octets</a> <i>number</i>
<b>Tree</b>	<a href="#">out-octets</a>
<b>Default</b>	0
<b>Configurable</b>	False

**out-originated-octets *number*****Note:**

This command is available for the following platforms:

- 7250 IXR-6
- 7250 IXR-10

<b>Description</b>	The number of octets in MPLS packets that were originated by this router.
<b>Context</b>	<a href="#">interface name</a> <i>string</i> <a href="#">subinterface index</a> <i>number</i> <a href="#">mpls statistics out-originated-octets</a> <i>number</i>
<b>Tree</b>	<a href="#">out-originated-octets</a>
<b>Default</b>	0
<b>Configurable</b>	False

**out-originated-packets *number*****Note:**

This command is available for the following platforms:

- 7250 IXR-6
- 7250 IXR-10

<b>Description</b>	The number of MPLS packets that were originated by this router.
<b>Context</b>	<a href="#">interface name</a> <i>string</i> <a href="#">subinterface index</a> <i>number</i> <a href="#">mpls statistics out-originated-packets</a> <i>number</i>
<b>Tree</b>	<a href="#">out-originated-packets</a>
<b>Default</b>	0
<b>Configurable</b>	False

**out-packets *number*****Note:**

This command is available for the following platforms:

- 7250 IXR-6
- 7250 IXR-10

<b>Description</b>	The total number of output MPLS packets transmitted. This equals out-originated-packets + out-forwarded-packets
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<b>Context</b>	<a href="#">interface name</a> <i>string</i> <a href="#">subinterface</a> <i>index</i> <i>number</i> <a href="#">mpls statistics</a> <i>out-packets</i> <i>number</i>
<b>Tree</b>	<a href="#">out-packets</a>
<b>Default</b>	0
<b>Configurable</b>	False

## ***mpls-mtu number***



### **Note:**

This command is available for the following platforms:

- 7250 IXR-6
- 7250 IXR-10

<b>Description</b>	<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>
<b>Context</b>	<a href="#">interface name</a> <i>string</i> <a href="#">subinterface</a> <i>index</i> <i>number</i> <a href="#">mpls-mtu</a> <i>number</i>
<b>Tree</b>	<a href="#">mpls-mtu</a>
<b>Range</b>	1284 to 9496
<b>Units</b>	bytes
<b>Configurable</b>	True

## ***name string***

<b>Description</b>	The system assigned name of the subinterface. It is formed by taking the base interface name and appending a dot (.) and the subinterface index number. For example, ethernet-2/1.0
<b>Context</b>	<a href="#">interface name</a> <i>string</i> <a href="#">subinterface</a> <i>index</i> <i>number</i> <a href="#">name</a> <i>string</i>
<b>Tree</b>	<a href="#">name</a>
<b>Configurable</b>	False

**oper-down-reason keyword**

<b>Description</b>	The first (and possibly only) reason for the subinterface being operationally down
<b>Context</b>	<a href="#">interface name</a> <i>string</i> <a href="#">subinterface index</a> <i>number</i> <a href="#">oper-down-reason</a> <i>keyword</i>
<b>Tree</b>	<a href="#">oper-down-reason</a>
<b>Options</b>	<ul style="list-style-type: none"> <li>• admin-disabled</li> <li>• port-down</li> <li>• ip-mtu-resource-exceeded</li> <li>• mpls-mtu-resource-exceeded</li> <li>• ip-mtu-too-large</li> <li>• mpls-mtu-too-large</li> <li>• l2-mtu-too-large</li> <li>• no-ip-config</li> <li>• ip-mtu-larger-than-oper-mac-vrf-mtu</li> <li>• irb-mac-address-not-programmed</li> <li>• missing-xdp-state</li> <li>• no-underlay-egress-next-hop-resources</li> <li>• other</li> </ul>
<b>Configurable</b>	False

**oper-state keyword**

<b>Description</b>	The operational state of the subinterface
<b>Context</b>	<a href="#">interface name</a> <i>string</i> <a href="#">subinterface index</a> <i>number</i> <a href="#">oper-state</a> <i>keyword</i>
<b>Tree</b>	<a href="#">oper-state</a>
<b>Options</b>	<ul style="list-style-type: none"> <li>• up</li> <li>• down</li> </ul>
<b>Configurable</b>	False

## qos



### Note:

This command is available for the following platforms:

- 7220 IXR-D2
- 7250 IXR-10
- 7220 IXR-D3L
- 7220 IXR-D2L
- 7220 IXR-H3
- 7220 IXR-H2
- 7220 IXR-D3
- 7250 IXR-6

<b>Description</b>	Enter the qos context
<b>Context</b>	<a href="#">interface name</a> <i>string</i> <a href="#">subinterface index</a> <i>number</i> <a href="#">qos</a>
<b>Tree</b>	<a href="#">qos</a>
<b>Configurable</b>	True

## input



### Note:

This command is available for the following platforms:

- 7220 IXR-D2
- 7250 IXR-10
- 7220 IXR-D3L
- 7220 IXR-D2L
- 7220 IXR-H3
- 7220 IXR-H2
- 7220 IXR-D3
- 7250 IXR-6

<b>Description</b>	Enter the input context
<b>Context</b>	<a href="#">interface name</a> <i>string</i> <a href="#">subinterface index</a> <i>number</i> <a href="#">qos</a> <a href="#">input</a>
<b>Tree</b>	<a href="#">input</a>
<b>Configurable</b>	True

## classifiers



### Note:

This command is available for the following platforms:

- 7220 IXR-D2
- 7250 IXR-10
- 7220 IXR-D3L
- 7220 IXR-D2L
- 7220 IXR-H3
- 7220 IXR-H2
- 7220 IXR-D3
- 7250 IXR-6

<b>Description</b>	Enter the classifiers context
<b>Context</b>	<a href="#">interface name</a> <i>string</i> <a href="#">subinterface index</a> <i>number</i> <a href="#">qos input classifiers</a>
<b>Tree</b>	<a href="#">classifiers</a>
<b>Configurable</b>	True

## dscp reference



### Note:

This command is available for the following platforms:

- 7220 IXR-D2
- 7220 IXR-D3L
- 7220 IXR-D2L
- 7220 IXR-H3
- 7220 IXR-H2
- 7220 IXR-D3

<b>Description</b>	Reference to the name of a DSCP classifier policy that applies to both IPv4 and IPv6 traffic.
<b>Context</b>	<a href="#">interface name</a> <i>string</i> <a href="#">subinterface index</a> <i>number</i> <a href="#">qos input classifiers dscp reference</a>
<b>Tree</b>	<a href="#">dscp</a>
<b>Reference</b>	<a href="#">qos classifiers</a> <a href="#">dscp-policy name</a> <i>string</i>
<b>Configurable</b>	True

## ipv4-dscp *reference*

**Note:**

This command is available for the following platforms:

- 7250 IXR-6
- 7250 IXR-10

<b>Description</b>	Reference to the name of a DSCP classifier policy that applies only to IPv4 traffic.
<b>Context</b>	<a href="#">interface name</a> <i>string</i> <a href="#">subinterface index</a> <i>number</i> <a href="#">qos input classifiers</a> <a href="#">ipv4-dscp reference</a>
<b>Tree</b>	<a href="#">ipv4-dscp</a>
<b>Reference</b>	<a href="#">qos classifiers</a> <a href="#">dscp-policy name string</a> <a href="#">name string</a>
<b>Configurable</b>	True

## ipv6-dscp *reference*

**Note:**

This command is available for the following platforms:

- 7250 IXR-6
- 7250 IXR-10

<b>Description</b>	Reference to the name of a DSCP classifier policy that applies only to IPv6 traffic.
<b>Context</b>	<a href="#">interface name</a> <i>string</i> <a href="#">subinterface index</a> <i>number</i> <a href="#">qos input classifiers</a> <a href="#">ipv6-dscp reference</a>
<b>Tree</b>	<a href="#">ipv6-dscp</a>
<b>Reference</b>	<a href="#">qos classifiers</a> <a href="#">dscp-policy name string</a> <a href="#">name string</a>
<b>Configurable</b>	True

## mpls-traffic-class *reference*

**Note:**

This command is available for the following platforms:

- 7250 IXR-6
- 7250 IXR-10

<b>Description</b>	Reference to the name of an MPLS traffic-class classifier policy
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<b>Context</b>	<a href="#">interface name</a> <i>string</i> <a href="#">subinterface index</a> <i>number</i> <a href="#">qos input classifiers mpls-traffic-class</a> <i>reference</i>
<b>Tree</b>	<a href="#">mpls-traffic-class</a>
<b>Reference</b>	<a href="#">qos classifiers mpls-traffic-class-policy name</a> <i>string</i> <a href="#">mpls-traffic-class-policy name</a> <i>string</i>
<b>Configurable</b>	True

## output



### Note:

This command is available for the following platforms:

- 7220 IXR-D2
- 7250 IXR-10
- 7220 IXR-D3L
- 7220 IXR-D2L
- 7220 IXR-H3
- 7220 IXR-H2
- 7220 IXR-D3
- 7250 IXR-6

<b>Description</b>	Enter the output context
<b>Context</b>	<a href="#">interface name</a> <i>string</i> <a href="#">subinterface index</a> <i>number</i> <a href="#">qos output</a>
<b>Tree</b>	<a href="#">output</a>
<b>Configurable</b>	True

## rewrite-rules



### Note:

This command is available for the following platforms:

- 7220 IXR-D2
- 7250 IXR-10
- 7220 IXR-D3L
- 7220 IXR-D2L
- 7220 IXR-H3
- 7220 IXR-H2
- 7220 IXR-D3
- 7250 IXR-6

<b>Description</b>	Enter the rewrite-rules context
<b>Context</b>	<a href="#">interface name</a> <i>string</i> <a href="#">subinterface index</a> <i>number</i> <a href="#">qos output</a> <a href="#">rewrite-rules</a>
<b>Tree</b>	<a href="#">rewrite-rules</a>
<b>Configurable</b>	True

## dscp reference



### Note:

This command is available for the following platforms:

- 7220 IXR-D2
- 7220 IXR-D3L
- 7220 IXR-D2L
- 7220 IXR-H3
- 7220 IXR-H2
- 7220 IXR-D3

<b>Description</b>	Reference to the name of a DSCP rewrite-rule policy that applies to both IPv4 and IPv6 traffic.
<b>Context</b>	<a href="#">interface name</a> <i>string</i> <a href="#">subinterface index</a> <i>number</i> <a href="#">qos output</a> <a href="#">rewrite-rules</a> <a href="#">dscp reference</a>
<b>Tree</b>	<a href="#">dscp</a>
<b>Reference</b>	<a href="#">qos rewrite-rules</a> <a href="#">dscp-policy name</a> <i>string</i> <a href="#">name</a> <i>string</i>
<b>Configurable</b>	True

## ipv4-dscp *reference*

**Note:**

This command is available for the following platforms:

- 7250 IXR-6
- 7250 IXR-10

<b>Description</b>	Reference to the name of a DSCP rewrite-rule policy that applies only to IPv4 traffic.
<b>Context</b>	<a href="#">interface name string subinterface index number qos output rewrite-rules ipv4-dscp reference</a>
<b>Tree</b>	<a href="#">ipv4-dscp</a>
<b>Reference</b>	<a href="#">qos rewrite-rules dscp-policy name string name string</a>
<b>Configurable</b>	True

## ipv6-dscp *reference*

**Note:**

This command is available for the following platforms:

- 7250 IXR-6
- 7250 IXR-10

<b>Description</b>	Reference to the name of a DSCP rewrite-rule policy that applies only to IPv6 traffic.
<b>Context</b>	<a href="#">interface name string subinterface index number qos output rewrite-rules ipv6-dscp reference</a>
<b>Tree</b>	<a href="#">ipv6-dscp</a>
<b>Reference</b>	<a href="#">qos rewrite-rules dscp-policy name string name string</a>
<b>Configurable</b>	True

## mpls-traffic-class *reference*

**Note:**

This command is available for the following platforms:

- 7250 IXR-6
- 7250 IXR-10

<b>Description</b>	Reference to the name of an MPLS traffic-class rewrite-rule policy
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<b>Context</b>	<a href="#">interface name</a> <i>string</i> <a href="#">subinterface index</a> <i>number</i> <a href="#">qos output rewrite-rules mpls-traffic-class</a> <i>reference</i>
<b>Tree</b>	<a href="#">mpls-traffic-class</a>
<b>Reference</b>	<a href="#">qos rewrite-rules mpls-traffic-class-policy name stringname</a> <i>string</i>
<b>Configurable</b>	True

## ra-guard



### Note:

This command is available for the following platforms:

- 7220 IXR-D2
- 7220 IXR-D3L
- 7220 IXR-D2L
- 7220 IXR-D3
- 7220 IXR-D1

<b>Description</b>	Enable the ra-guard context
<b>Context</b>	<a href="#">interface name</a> <i>string</i> <a href="#">subinterface index</a> <i>number</i> <a href="#">ra-guard</a>
<b>Tree</b>	<a href="#">ra-guard</a>
<b>Configurable</b>	True

## policy reference



### Note:

This command is available for the following platforms:

- 7220 IXR-D2
- 7220 IXR-D3L
- 7220 IXR-D2L
- 7220 IXR-D3
- 7220 IXR-D1

<b>Description</b>	Reference to RA Guard Policy to apply to the associated subinterface
<b>Context</b>	<a href="#">interface name</a> <i>string</i> <a href="#">subinterface index</a> <i>number</i> <a href="#">ra-guard policy</a> <i>reference</i>
<b>Tree</b>	<a href="#">policy</a>
<b>Reference</b>	<a href="#">system ra-guard-policy name string name</a> <i>string</i>
<b>Configurable</b>	True

**vlan-list** *vlan-id number***Note:**

This command is available for the following platforms:

- 7220 IXR-D2
- 7220 IXR-D3L
- 7220 IXR-D2L
- 7220 IXR-D3
- 7220 IXR-D1

<b>Description</b>	List of VLAN IDs that the RA policy should be matched against
<b>Context</b>	<a href="#">interface name</a> <i>string</i> <a href="#">subinterface index</a> <i>number</i> <a href="#">ra-guard</a> <a href="#">vlan-list</a> <a href="#">vlan-id</a> <i>number</i>
<b>Tree</b>	<a href="#">vlan-list</a>
<b>Configurable</b>	True

**vlan-id** *number***Note:**

This command is available for the following platforms:

- 7220 IXR-D2
- 7220 IXR-D3L
- 7220 IXR-D2L
- 7220 IXR-D3
- 7220 IXR-D1

<b>Description</b>	Enter the vlan-id context
<b>Context</b>	<a href="#">interface name</a> <i>string</i> <a href="#">subinterface index</a> <i>number</i> <a href="#">ra-guard</a> <a href="#">vlan-list</a> <a href="#">vlan-id</a> <i>number</i>
<b>Range</b>	0 to 4095
<b>Configurable</b>	True

**statistics**

<b>Description</b>	Container for subinterface statistics, counting IPv4 packets or IPv6 packets or both depending on the context
<b>Context</b>	<a href="#">interface name</a> <i>string</i> <a href="#">subinterface index</a> <i>number</i> <a href="#">statistics</a>

<b>Tree</b>	<a href="#">statistics</a>
<b>Configurable</b>	False

### in-discarded-packets *number*

<b>Description</b>	<p>The total number of input IPv4 packets or IPv6 packets or both (transit and terminating traffic) that were dropped for any of the following reasons:</p> <p>[‘ingress interface ACL drop action’, ‘CPM filter drop action’, ‘VOQ congestion discards (7250 IXR only)’, ‘unicast destination MAC address is not the MAC address of the subinterface’, ‘packet matched a route with a blackhole next-hop’, ‘packet was non-terminating and its TTL expired’, ‘packet matched a route with a next-hop via another subinterface but the next-hop address was not resolvable by ARP/ND’, ‘packet is a host address on another subinterface but the host address was not resolvable by ARP/ND’]</p> <p>This also includes IP/MPLS packets dropped by ingress interface ACL drop action or CPM filer drop action.</p>
<b>Context</b>	<a href="#">interface name</a> <i>string</i> <a href="#">subinterface index</a> <i>number</i> <a href="#">statistics in-discarded-packets</a> <i>number</i>
<b>Tree</b>	<a href="#">in-discarded-packets</a>
<b>Default</b>	0
<b>Configurable</b>	False

### in-error-packets *number*



**Note:**

This command is available for the following platforms:

- 7250 IXR-6
- 7250 IXR-10

<b>Description</b>	<p>The total number of input IPv4 packets or IPv6 packets or both discarded due to errors, counting transit and terminating traffic</p> <p>The sum of the following RFC 4293 counters: ipIfStatsInHdrErrors ipIfStatsInNoRoutes ipIfStatsInAddrErrors ipIfStatsInUnknownProtos ipIfStatsInTruncatedPkts</p>
<b>Context</b>	<a href="#">interface name</a> <i>string</i> <a href="#">subinterface index</a> <i>number</i> <a href="#">statistics in-error-packets</a> <i>number</i>
<b>Tree</b>	<a href="#">in-error-packets</a>
<b>Default</b>	0
<b>Configurable</b>	False

**in-forwarded-octets *number***

<b>Description</b>	The number of octets in input IPv4 packets or IPv6 packets or both received on this subinterface and counted in in-forwarded-packets
<b>Context</b>	<a href="#">interface name</a> <i>string</i> <a href="#">subinterface index</a> <i>number</i> <a href="#">statistics in-forwarded-octets</a> <i>number</i>
<b>Tree</b>	<a href="#">in-forwarded-octets</a>
<b>Default</b>	0
<b>Configurable</b>	False

**in-forwarded-packets *number***

<b>Description</b>	The number of input IPv4 packets or IPv6 packets or both 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 (and not dropped) as are packets that trigger ICMP/ICMPv6 redirect messages.  On 7220 IXR systems this also counts received traffic that is terminating.
<b>Context</b>	<a href="#">interface name</a> <i>string</i> <a href="#">subinterface index</a> <i>number</i> <a href="#">statistics in-forwarded-packets</a> <i>number</i>
<b>Tree</b>	<a href="#">in-forwarded-packets</a>
<b>Default</b>	0
<b>Configurable</b>	False

**in-matched-ra-packets *number***

<b>Description</b>	The total number of IPv6 packets matched with applied RA-Guard policy
<b>Context</b>	<a href="#">interface name</a> <i>string</i> <a href="#">subinterface index</a> <i>number</i> <a href="#">statistics in-matched-ra-packets</a> <i>number</i>
<b>Tree</b>	<a href="#">in-matched-ra-packets</a>
<b>Default</b>	0
<b>Configurable</b>	False

**in-octets *number***

<b>Description</b>	The total number of octets received in input packets, counting transit and terminating traffic
<b>Context</b>	<a href="#">interface name</a> <i>string</i> <a href="#">subinterface index</a> <i>number</i> <a href="#">statistics in-octets</a> <i>number</i>

<b>Tree</b>	<a href="#">in-octets</a>
<b>Default</b>	0
<b>Configurable</b>	False

### **in-packets *number***

<b>Description</b>	The total number of input packets received, counting transit and terminating traffic  This equals the sum of: in-error-packets in-discarded-packets (also includes IP/MPLS packets) in-terminated-packets (also includes IP/MPLS packets) in-forwarded-packets
<b>Context</b>	<a href="#">interface name string subinterface index number statistics in-packets number</a>
<b>Tree</b>	<a href="#">in-packets</a>
<b>Default</b>	0
<b>Configurable</b>	False

### **in-terminated-octets *number***



**Note:**

This command is available for the following platforms:

- 7250 IXR-6
- 7250 IXR-10

<b>Description</b>	The total number of octets in input IPv4 packets or IPv6 packets or both that were received on this subinterface and counted in in-terminated-packets
<b>Context</b>	<a href="#">interface name string subinterface index number statistics in-terminated-octets number</a>
<b>Tree</b>	<a href="#">in-terminated-octets</a>
<b>Default</b>	0
<b>Configurable</b>	False

### **in-terminated-packets *number***



**Note:**

This command is available for the following platforms:

- 7250 IXR-6
- 7250 IXR-10



<b>Description</b>	The total number of input IPv4 packets or IPv6 packets or both that were received on this subinterface and that have a destination IP address matching a local interface address or an IPv6 multicast address to which the interface belongs. The count includes packets eventually discarded by the CPM. Such discards include:  ['packets with unsupported IP protocol numbers', 'packets destined to TCP/UDP ports that are not open/listening', 'IPv4 packets with any IP options', 'IPv6 packets with any extension headers']  This also includes terminating IP/MPLS packets.
<b>Context</b>	<a href="#">interface name string subinterface index number statistics in-terminated-packets number</a>
<b>Tree</b>	<a href="#">in-terminated-packets</a>
<b>Default</b>	0
<b>Configurable</b>	False

### **last-clear string**

<b>Description</b>	Timestamp of the last time the subinterface counters were cleared.
<b>Context</b>	<a href="#">interface name string subinterface index number statistics last-clear string</a>
<b>Tree</b>	<a href="#">last-clear</a>
<b>String Length</b>	20 to 32
<b>Configurable</b>	False

### **out-discarded-packets number**

<b>Description</b>	The total number of IPv4 packets or IPv6 packets or both, originating and transit, sent towards this subinterface that were dropped.  This also includes IP/MPLS packets dropped by egress interface ACL drop action.
<b>Context</b>	<a href="#">interface name string subinterface index number statistics out-discarded-packets number</a>
<b>Tree</b>	<a href="#">out-discarded-packets</a>
<b>Default</b>	0
<b>Configurable</b>	False

**out-error-packets *number*****Note:**

This command is available for the following platforms:

- 7250 IXR-6
- 7250 IXR-10

<b>Description</b>	The number of IPv4 packets or IPv6 packets or both, 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
<b>Context</b>	<a href="#">interface name</a> <i>string</i> <a href="#">subinterface</a> <i>index number</i> <a href="#">statistics</a> <a href="#">out-error-packets</a> <i>number</i>
<b>Tree</b>	<a href="#">out-error-packets</a>
<b>Default</b>	0
<b>Configurable</b>	False

**out-forwarded-octets *number***

<b>Description</b>	The number of octets in transit IPv4 packets or IPv6 packets or both which the router attempted to route out this subinterface
<b>Context</b>	<a href="#">interface name</a> <i>string</i> <a href="#">subinterface</a> <i>index number</i> <a href="#">statistics</a> <a href="#">out-forwarded-octets</a> <i>number</i>
<b>Tree</b>	<a href="#">out-forwarded-octets</a>
<b>Default</b>	0
<b>Configurable</b>	False

**out-forwarded-packets *number***

<b>Description</b>	The number of transit IPv4 packets or IPv6 packets or both which the router attempted to route out this subinterface
<b>Context</b>	<a href="#">interface name</a> <i>string</i> <a href="#">subinterface</a> <i>index number</i> <a href="#">statistics</a> <a href="#">out-forwarded-packets</a> <i>number</i>
<b>Tree</b>	<a href="#">out-forwarded-packets</a>
<b>Default</b>	0
<b>Configurable</b>	False

**out-octets *number***

<b>Description</b>	The total number of octets in IPv4 packets or IPv6 packets or both delivered to the lower layers for transmission
<b>Context</b>	<a href="#">interface name</a> <i>string</i> <a href="#">subinterface index</a> <i>number</i> <a href="#">statistics out-octets</a> <i>number</i>
<b>Tree</b>	<a href="#">out-octets</a>
<b>Default</b>	0
<b>Configurable</b>	False

**out-originated-octets *number***

<b>Description</b>	The number of octets in IPv4 packets or IPv6 packets or both which originated on the CPM and which the router attempted to route out this subinterface
<b>Context</b>	<a href="#">interface name</a> <i>string</i> <a href="#">subinterface index</a> <i>number</i> <a href="#">statistics out-originated-octets</a> <i>number</i>
<b>Tree</b>	<a href="#">out-originated-octets</a>
<b>Default</b>	0
<b>Configurable</b>	False

**out-originated-packets *number***

<b>Description</b>	The number of IPv4 packets or IPv6 packets or both which originated on the CPM and which the router attempted to route out this subinterface This includes all originated ICMP/ICMPv6 messages.
<b>Context</b>	<a href="#">interface name</a> <i>string</i> <a href="#">subinterface index</a> <i>number</i> <a href="#">statistics out-originated-packets</a> <i>number</i>
<b>Tree</b>	<a href="#">out-originated-packets</a>
<b>Default</b>	0
<b>Configurable</b>	False

**out-packets *number***

<b>Description</b>	The total number of IPv4 packets or IPv6 packets or both that this router supplied to the lower layers for transmission This includes packets generated locally and those forwarded by this router. If there are no queue drops it is equal to: <out-forwarded-packets> + <out-originated-packets>
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<b>Context</b>	<a href="#">interface name</a> <i>string</i> <a href="#">subinterface index</a> <i>number</i> <a href="#">statistics out-packets</a> <i>number</i>
<b>Tree</b>	<a href="#">out-packets</a>
<b>Default</b>	0
<b>Configurable</b>	False

**type *identityref***

<b>Description</b>	The value of this leaf indicates the context in which the ethernet subinterface will be used in
<b>Context</b>	<a href="#">interface name</a> <i>string</i> <a href="#">subinterface index</a> <i>number</i> <a href="#">type identityref</a>
<b>Tree</b>	<a href="#">type</a>
<b>Options</b>	<ul style="list-style-type: none"> <li>• <a href="#">routed</a> indicates subinterface is used in a routed context</li> <li>• <a href="#">bridged</a> indicates subinterface is used in a bridged context</li> <li>• <a href="#">local-mirror-dest</a> indicates subinterface is used in a mirroring destination SPAN context</li> </ul>
<b>Configurable</b>	True

**vlan**

<b>Description</b>	Parameters for VLAN definition under SRL interfaces.
<b>Context</b>	<a href="#">interface name</a> <i>string</i> <a href="#">subinterface index</a> <i>number</i> <a href="#">vlan</a>
<b>Tree</b>	<a href="#">vlan</a>
<b>Configurable</b>	True

**encap**

<b>Description</b>	VLAN match parameters for the associated subinterface.
<b>Context</b>	<a href="#">interface name</a> <i>string</i> <a href="#">subinterface index</a> <i>number</i> <a href="#">vlan encap</a>
<b>Tree</b>	<a href="#">encap</a>
<b>Configurable</b>	True

## single-tagged

<b>Description</b>	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 stripped at ingress and restored/added on egress.).
<b>Context</b>	<a href="#">interface name</a> <i>string</i> <a href="#">subinterface index</a> <i>number</i> <a href="#">vlan encap single-tagged</a>
<b>Tree</b>	<a href="#">single-tagged</a>
<b>Configurable</b>	True

## vlan-id (*number* | *keyword*)

<b>Description</b>	VLAN identifier for single-tagged packets.
<b>Context</b>	<a href="#">interface name</a> <i>string</i> <a href="#">subinterface index</a> <i>number</i> <a href="#">vlan encap single-tagged</a> <a href="#">vlan-id</a> ( <i>number</i>   <i>keyword</i> )
<b>Tree</b>	<a href="#">vlan-id</a>
<b>Range</b>	1 to 4094
<b>Options</b>	<ul style="list-style-type: none"> <li>any</li> </ul>
<b>Configurable</b>	True

## untagged



### Note:

This command is available for the following platforms:

- 7220 IXR-D2
- 7220 IXR-D3L
- 7220 IXR-D2L
- 7220 IXR-D3
- 7220 IXR-D1

<b>Description</b>	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.
<b>Context</b>	<a href="#">interface name</a> <i>string</i> <a href="#">subinterface index</a> <i>number</i> <a href="#">vlan encap untagged</a>
<b>Tree</b>	<a href="#">untagged</a>
<b>Configurable</b>	True

**traffic-rate**

<b>Description</b>	Container for traffic rate statistics
<b>Context</b>	<a href="#">interface name</a> <i>string</i> <a href="#">traffic-rate</a>
<b>Tree</b>	<a href="#">traffic-rate</a>
<b>Configurable</b>	False

**in-bps *number***

<b>Description</b>	The ingress bandwidth utilization of the port, updated every 10 seconds
<b>Context</b>	<a href="#">interface name</a> <i>string</i> <a href="#">traffic-rate</a> <a href="#">in-bps</a> <i>number</i>
<b>Tree</b>	<a href="#">in-bps</a>
<b>Configurable</b>	False

**out-bps *number***

<b>Description</b>	The egress bandwidth utilization of the port, updated every 10 seconds
<b>Context</b>	<a href="#">interface name</a> <i>string</i> <a href="#">traffic-rate</a> <a href="#">out-bps</a> <i>number</i>
<b>Tree</b>	<a href="#">out-bps</a>
<b>Configurable</b>	False

**transceiver**

<b>Description</b>	Enter the transceiver context
<b>Context</b>	<a href="#">interface name</a> <i>string</i> <a href="#">transceiver</a>
<b>Tree</b>	<a href="#">transceiver</a>
<b>Configurable</b>	True

**channel *index number***

<b>Description</b>	List of physical channels supported by the transceiver that are associated with this particular port
<b>Context</b>	<a href="#">interface name</a> <i>string</i> <a href="#">transceiver</a> <a href="#">channel</a> <i>index</i> <i>number</i>
<b>Tree</b>	<a href="#">channel</a>
<b>Configurable</b>	False

**index number**

<b>Description</b>	Index of the physical channel or lane
<b>Context</b>	<a href="#">interface name</a> <i>string</i> <a href="#">transceiver channel index number</a>
<b>Range</b>	1 to 10
<b>Configurable</b>	False

**input-power**

<b>Description</b>	Enter the input-power context
<b>Context</b>	<a href="#">interface name</a> <i>string</i> <a href="#">transceiver channel index number</a> <a href="#">input-power</a>
<b>Tree</b>	<a href="#">input-power</a>
<b>Configurable</b>	False

**high-alarm-condition *boolean***

<b>Description</b>	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
<b>Context</b>	<a href="#">interface name</a> <i>string</i> <a href="#">transceiver channel index number</a> <a href="#">input-power high-alarm-condition</a> <i>boolean</i>
<b>Tree</b>	<a href="#">high-alarm-condition</a>
<b>Configurable</b>	False

**high-alarm-threshold *decimal-number***

<b>Description</b>	Read from the installed transceiver
<b>Context</b>	<a href="#">interface name</a> <i>string</i> <a href="#">transceiver channel index number</a> <a href="#">input-power high-alarm-threshold</a> <i>decimal-number</i>
<b>Tree</b>	<a href="#">high-alarm-threshold</a>
<b>Configurable</b>	False

**high-warning-condition *boolean***

<b>Description</b>	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
<b>Context</b>	<a href="#">interface name</a> <i>string</i> <a href="#">transceiver channel index number</a> <a href="#">input-power high-warning-condition</a> <i>boolean</i>
<b>Tree</b>	<a href="#">high-warning-condition</a>

**Configurable** False

### high-warning-threshold *decimal-number*

**Description** Read from the installed transceiver

**Context** [interface name](#) *string* [transceiver channel index](#) *number* [input-power high-warning-threshold](#) *decimal-number*

**Tree** [high-warning-threshold](#)

**Configurable** False

### latest-value *decimal-number*

**Description** The current value of the optical Rx power in dBm

**Context** [interface name](#) *string* [transceiver channel index](#) *number* [input-power latest-value](#) *decimal-number*

**Tree** [latest-value](#)

**Configurable** False

### low-alarm-condition *boolean*

**Description** 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](#) *string* [transceiver channel index](#) *number* [input-power low-alarm-condition](#) *boolean*

**Tree** [low-alarm-condition](#)

**Configurable** False

### low-alarm-threshold *decimal-number*

**Description** Read from the installed transceiver

**Context** [interface name](#) *string* [transceiver channel index](#) *number* [input-power low-alarm-threshold](#) *decimal-number*

**Tree** [low-alarm-threshold](#)

**Configurable** False



**low-warning-condition *boolean***

<b>Description</b>	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
<b>Context</b>	<a href="#">interface name</a> <i>string</i> <a href="#">transceiver channel index</a> <i>number</i> <a href="#">input-power low-warning-condition</a> <i>boolean</i>
<b>Tree</b>	<a href="#">low-warning-condition</a>
<b>Configurable</b>	False

**low-warning-threshold *decimal-number***

<b>Description</b>	Read from the installed transceiver
<b>Context</b>	<a href="#">interface name</a> <i>string</i> <a href="#">transceiver channel index</a> <i>number</i> <a href="#">input-power low-warning-threshold</a> <i>decimal-number</i>
<b>Tree</b>	<a href="#">low-warning-threshold</a>
<b>Configurable</b>	False

**laser-bias-current**

<b>Description</b>	Enter the laser-bias-current context
<b>Context</b>	<a href="#">interface name</a> <i>string</i> <a href="#">transceiver channel index</a> <i>number</i> <a href="#">laser-bias-current</a>
<b>Tree</b>	<a href="#">laser-bias-current</a>
<b>Configurable</b>	False

**high-alarm-condition *boolean***

<b>Description</b>	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
<b>Context</b>	<a href="#">interface name</a> <i>string</i> <a href="#">transceiver channel index</a> <i>number</i> <a href="#">laser-bias-current high-alarm-condition</a> <i>boolean</i>
<b>Tree</b>	<a href="#">high-alarm-condition</a>
<b>Configurable</b>	False

**high-alarm-threshold *decimal-number***

<b>Description</b>	Read from the installed transceiver
<b>Context</b>	<a href="#">interface name</a> <i>string</i> <a href="#">transceiver channel index</a> <i>number</i> <a href="#">laser-bias-current high-alarm-threshold</a> <i>decimal-number</i>

<b>Tree</b>	<a href="#">high-alarm-threshold</a>
<b>Configurable</b>	False

### high-warning-condition *boolean*

<b>Description</b>	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
<b>Context</b>	<a href="#">interface name</a> <i>string</i> <a href="#">transceiver channel index</a> <i>number</i> <a href="#">laser-bias-current high-warning-condition</a> <i>boolean</i>
<b>Tree</b>	<a href="#">high-warning-condition</a>
<b>Configurable</b>	False

### high-warning-threshold *decimal-number*

<b>Description</b>	Read from the installed transceiver
<b>Context</b>	<a href="#">interface name</a> <i>string</i> <a href="#">transceiver channel index</a> <i>number</i> <a href="#">laser-bias-current high-warning-threshold</a> <i>decimal-number</i>
<b>Tree</b>	<a href="#">high-warning-threshold</a>
<b>Configurable</b>	False

### latest-value *decimal-number*

<b>Description</b>	The current value of the laser bias current in mA
<b>Context</b>	<a href="#">interface name</a> <i>string</i> <a href="#">transceiver channel index</a> <i>number</i> <a href="#">laser-bias-current latest-value</a> <i>decimal-number</i>
<b>Tree</b>	<a href="#">latest-value</a>
<b>Configurable</b>	False

### low-alarm-condition *boolean*

<b>Description</b>	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
<b>Context</b>	<a href="#">interface name</a> <i>string</i> <a href="#">transceiver channel index</a> <i>number</i> <a href="#">laser-bias-current low-alarm-condition</a> <i>boolean</i>
<b>Tree</b>	<a href="#">low-alarm-condition</a>
<b>Configurable</b>	False

**low-alarm-threshold *decimal-number***

<b>Description</b>	Read from the installed transceiver
<b>Context</b>	<a href="#">interface name</a> <i>string</i> <a href="#">transceiver channel index</a> <i>number</i> <a href="#">laser-bias-current low-alarm-threshold</a> <i>decimal-number</i>
<b>Tree</b>	<a href="#">low-alarm-threshold</a>
<b>Configurable</b>	False

**low-warning-condition *boolean***

<b>Description</b>	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
<b>Context</b>	<a href="#">interface name</a> <i>string</i> <a href="#">transceiver channel index</a> <i>number</i> <a href="#">laser-bias-current low-warning-condition</a> <i>boolean</i>
<b>Tree</b>	<a href="#">low-warning-condition</a>
<b>Configurable</b>	False

**low-warning-threshold *decimal-number***

<b>Description</b>	Read from the installed transceiver
<b>Context</b>	<a href="#">interface name</a> <i>string</i> <a href="#">transceiver channel index</a> <i>number</i> <a href="#">laser-bias-current low-warning-threshold</a> <i>decimal-number</i>
<b>Tree</b>	<a href="#">low-warning-threshold</a>
<b>Configurable</b>	False

**output-power**

<b>Description</b>	Enter the output-power context
<b>Context</b>	<a href="#">interface name</a> <i>string</i> <a href="#">transceiver channel index</a> <i>number</i> <a href="#">output-power</a>
<b>Tree</b>	<a href="#">output-power</a>
<b>Configurable</b>	False

**high-alarm-condition *boolean***

<b>Description</b>	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
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<b>Context</b>	<a href="#">interface name</a> <i>string</i> <a href="#">transceiver channel index</a> <i>number</i> <a href="#">output-power high-alarm-condition</a> <i>boolean</i>
<b>Tree</b>	<a href="#">high-alarm-condition</a>
<b>Configurable</b>	False

### high-alarm-threshold *decimal-number*

<b>Description</b>	Read from the installed transceiver
<b>Context</b>	<a href="#">interface name</a> <i>string</i> <a href="#">transceiver channel index</a> <i>number</i> <a href="#">output-power high-alarm-threshold</a> <i>decimal-number</i>
<b>Tree</b>	<a href="#">high-alarm-threshold</a>
<b>Configurable</b>	False

### high-warning-condition *boolean*

<b>Description</b>	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
<b>Context</b>	<a href="#">interface name</a> <i>string</i> <a href="#">transceiver channel index</a> <i>number</i> <a href="#">output-power high-warning-condition</a> <i>boolean</i>
<b>Tree</b>	<a href="#">high-warning-condition</a>
<b>Configurable</b>	False

### high-warning-threshold *decimal-number*

<b>Description</b>	Read from the installed transceiver
<b>Context</b>	<a href="#">interface name</a> <i>string</i> <a href="#">transceiver channel index</a> <i>number</i> <a href="#">output-power high-warning-threshold</a> <i>decimal-number</i>
<b>Tree</b>	<a href="#">high-warning-threshold</a>
<b>Configurable</b>	False

### latest-value *decimal-number*

<b>Description</b>	The current value of the optical Tx power in dBm
<b>Context</b>	<a href="#">interface name</a> <i>string</i> <a href="#">transceiver channel index</a> <i>number</i> <a href="#">output-power latest-value</a> <i>decimal-number</i>
<b>Tree</b>	<a href="#">latest-value</a>
<b>Configurable</b>	False

**low-alarm-condition *boolean***

<b>Description</b>	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
<b>Context</b>	<a href="#">interface name</a> <i>string</i> <a href="#">transceiver channel index</a> <i>number</i> <a href="#">output-power low-alarm-condition</a> <i>boolean</i>
<b>Tree</b>	<a href="#">low-alarm-condition</a>
<b>Configurable</b>	False

**low-alarm-threshold *decimal-number***

<b>Description</b>	Read from the installed transceiver
<b>Context</b>	<a href="#">interface name</a> <i>string</i> <a href="#">transceiver channel index</a> <i>number</i> <a href="#">output-power low-alarm-threshold</a> <i>decimal-number</i>
<b>Tree</b>	<a href="#">low-alarm-threshold</a>
<b>Configurable</b>	False

**low-warning-condition *boolean***

<b>Description</b>	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
<b>Context</b>	<a href="#">interface name</a> <i>string</i> <a href="#">transceiver channel index</a> <i>number</i> <a href="#">output-power low-warning-condition</a> <i>boolean</i>
<b>Tree</b>	<a href="#">low-warning-condition</a>
<b>Configurable</b>	False

**low-warning-threshold *decimal-number***

<b>Description</b>	Read from the installed transceiver
<b>Context</b>	<a href="#">interface name</a> <i>string</i> <a href="#">transceiver channel index</a> <i>number</i> <a href="#">output-power low-warning-threshold</a> <i>decimal-number</i>
<b>Tree</b>	<a href="#">low-warning-threshold</a>
<b>Configurable</b>	False

**wavelength *decimal-number***

<b>Description</b>	Wavelength of the transmitting laser in nanometers
<b>Context</b>	<a href="#">interface name</a> <i>string</i> <a href="#">transceiver channel index</a> <i>number</i> <a href="#">wavelength</a> <i>decimal-number</i>

<b>Tree</b>	<a href="#">wavelength</a>
<b>Configurable</b>	False

### connector-type *keyword*

<b>Description</b>	Specifies the fiber connector type of the transceiver associated with the port.
<b>Context</b>	<a href="#">interface name</a> <i>string</i> <a href="#">transceiver</a> <a href="#">connector-type</a> <i>keyword</i>
<b>Tree</b>	<a href="#">connector-type</a>
<b>Options</b>	<ul style="list-style-type: none"> <li>• SC</li> <li>• FC-STYLE1-COPPER</li> <li>• FC-STYLE2-COPPER</li> <li>• BNC-OR-TNC</li> <li>• FC-COAX</li> <li>• FIBER-JACK</li> <li>• LC</li> <li>• MT-RJ</li> <li>• MU</li> <li>• SG</li> <li>• OPTICAL-PIGTAIL</li> <li>• MPO-1x12</li> <li>• MPO-2x16</li> <li>• HSSDC</li> <li>• COPPER-PIGTAIL</li> <li>• RJ45</li> <li>• no-separable-connector</li> <li>• MXC-2x16</li> <li>• CS-OPTICAL-CONNECTOR</li> <li>• SN-OPTICAL-CONNECTOR</li> <li>• MPO-2x12</li> <li>• MPO-1x16</li> <li>• unknown</li> </ul>
<b>Configurable</b>	False

### date-code *string*

<b>Description</b>	Transceiver date code.
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<b>Context</b>	<a href="#">interface name</a> <i>string</i> <a href="#">transceiver</a> <a href="#">date-code</a> <i>string</i>
<b>Tree</b>	<a href="#">date-code</a>
<b>Configurable</b>	False

**ddm-events *boolean***

<b>Description</b>	<p>When set to true, log events and state related to the Digital Diagnostic Monitoring (DDM) capabilities of the transceiver are generated and populated.</p> <p>When set to false, no DDM-related log events and state are generated and populated for this port/transceiver.</p> <p>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.</p>
<b>Context</b>	<a href="#">interface name</a> <i>string</i> <a href="#">transceiver</a> <a href="#">ddm-events</a> <i>boolean</i>
<b>Tree</b>	<a href="#">ddm-events</a>
<b>Configurable</b>	True

**ethernet-pmd *string***

<b>Description</b>	Specifies the Ethernet compliance code of the transceiver associated with the port.
<b>Context</b>	<a href="#">interface name</a> <i>string</i> <a href="#">transceiver</a> <a href="#">ethernet-pmd</a> <i>string</i>
<b>Tree</b>	<a href="#">ethernet-pmd</a>
<b>Configurable</b>	False

**fault-condition *boolean***

<b>Description</b>	Indicates if a fault condition exists in the transceiver.
<b>Context</b>	<a href="#">interface name</a> <i>string</i> <a href="#">transceiver</a> <a href="#">fault-condition</a> <i>boolean</i>
<b>Tree</b>	<a href="#">fault-condition</a>
<b>Configurable</b>	False

**form-factor *keyword***

<b>Description</b>	Specifies the transceiver form factor associated with the port.
<b>Context</b>	<a href="#">interface name</a> <i>string</i> <a href="#">transceiver</a> <a href="#">form-factor</a> <i>keyword</i>
<b>Tree</b>	<a href="#">form-factor</a>
<b>Options</b>	<ul style="list-style-type: none"> <li>CFP2</li> </ul>

- CFP2-ACO
- CFP4
- QSFP
- QSFPplus
- QSFP28
- QSFPDD
- SFP
- SFPplus
- Non-pluggable
- Other
- SFP28

**Configurable** False

### forward-error-correction *keyword*

**Description**

The forward error correction algorithm to use on the optical channel. The same FEC algorithm must be used at both ends of a link.

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.

100G interfaces support disabled and rs-528; configuring other (incompatible) options will bring the port down.

400G interfaces require rs-544; configuring other (unsupported) options will bring the port down.

**Context**

[interface name](#) *string* [transceiver](#) [forward-error-correction](#) *keyword*

**Tree**

[forward-error-correction](#)

**Options**

- 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



## input-power

<b>Description</b>	Enter the input-power context
<b>Context</b>	<a href="#">interface name</a> <i>string</i> <a href="#">transceiver</a> <a href="#">input-power</a>
<b>Tree</b>	<a href="#">input-power</a>
<b>Configurable</b>	False

## high-alarm-condition *boolean*

<b>Description</b>	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
<b>Context</b>	<a href="#">interface name</a> <i>string</i> <a href="#">transceiver</a> <a href="#">input-power</a> <a href="#">high-alarm-condition</a> <i>boolean</i>
<b>Tree</b>	<a href="#">high-alarm-condition</a>
<b>Configurable</b>	False

## high-alarm-threshold *decimal-number*

<b>Description</b>	Read from the installed transceiver
<b>Context</b>	<a href="#">interface name</a> <i>string</i> <a href="#">transceiver</a> <a href="#">input-power</a> <a href="#">high-alarm-threshold</a> <i>decimal-number</i>
<b>Tree</b>	<a href="#">high-alarm-threshold</a>
<b>Configurable</b>	False

## high-warning-condition *boolean*

<b>Description</b>	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
<b>Context</b>	<a href="#">interface name</a> <i>string</i> <a href="#">transceiver</a> <a href="#">input-power</a> <a href="#">high-warning-condition</a> <i>boolean</i>
<b>Tree</b>	<a href="#">high-warning-condition</a>
<b>Configurable</b>	False

## high-warning-threshold *decimal-number*

<b>Description</b>	Read from the installed transceiver
<b>Context</b>	<a href="#">interface name</a> <i>string</i> <a href="#">transceiver</a> <a href="#">input-power</a> <a href="#">high-warning-threshold</a> <i>decimal-number</i>
<b>Tree</b>	<a href="#">high-warning-threshold</a>

**Configurable** False

### latest-value *decimal-number*

**Description** The current value of the optical Rx power in dBm

**Context** [interface name](#) *string* [transceiver input-power latest-value](#) *decimal-number*

**Tree** [latest-value](#)

**Configurable** False

### low-alarm-condition *boolean*

**Description** 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](#) *string* [transceiver input-power low-alarm-condition](#) *boolean*

**Tree** [low-alarm-condition](#)

**Configurable** False

### low-alarm-threshold *decimal-number*

**Description** Read from the installed transceiver

**Context** [interface name](#) *string* [transceiver input-power low-alarm-threshold](#) *decimal-number*

**Tree** [low-alarm-threshold](#)

**Configurable** False

### low-warning-condition *boolean*

**Description** 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](#) *string* [transceiver input-power low-warning-condition](#) *boolean*

**Tree** [low-warning-condition](#)

**Configurable** False

### low-warning-threshold *decimal-number*

**Description** Read from the installed transceiver

**Context** [interface name](#) *string* [transceiver input-power low-warning-threshold](#) *decimal-number*

<b>Tree</b>	<a href="#">low-warning-threshold</a>
<b>Configurable</b>	False

### laser-bias-current

<b>Description</b>	Enter the laser-bias-current context
<b>Context</b>	<a href="#">interface name</a> <i>string</i> <a href="#">transceiver</a> <a href="#">laser-bias-current</a>
<b>Tree</b>	<a href="#">laser-bias-current</a>
<b>Configurable</b>	False

### high-alarm-condition *boolean*

<b>Description</b>	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
<b>Context</b>	<a href="#">interface name</a> <i>string</i> <a href="#">transceiver</a> <a href="#">laser-bias-current</a> <a href="#">high-alarm-condition</a> <i>boolean</i>
<b>Tree</b>	<a href="#">high-alarm-condition</a>
<b>Configurable</b>	False

### high-alarm-threshold *decimal-number*

<b>Description</b>	Read from the installed transceiver
<b>Context</b>	<a href="#">interface name</a> <i>string</i> <a href="#">transceiver</a> <a href="#">laser-bias-current</a> <a href="#">high-alarm-threshold</a> <i>decimal-number</i>
<b>Tree</b>	<a href="#">high-alarm-threshold</a>
<b>Configurable</b>	False

### high-warning-condition *boolean*

<b>Description</b>	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
<b>Context</b>	<a href="#">interface name</a> <i>string</i> <a href="#">transceiver</a> <a href="#">laser-bias-current</a> <a href="#">high-warning-condition</a> <i>boolean</i>
<b>Tree</b>	<a href="#">high-warning-condition</a>
<b>Configurable</b>	False

**high-warning-threshold *decimal-number***

<b>Description</b>	Read from the installed transceiver
<b>Context</b>	<a href="#">interface name</a> <i>string</i> <a href="#">transceiver</a> <a href="#">laser-bias-current</a> <a href="#">high-warning-threshold</a> <i>decimal-number</i>
<b>Tree</b>	<a href="#">high-warning-threshold</a>
<b>Configurable</b>	False

**latest-value *decimal-number***

<b>Description</b>	The current value of the laser bias current in mA
<b>Context</b>	<a href="#">interface name</a> <i>string</i> <a href="#">transceiver</a> <a href="#">laser-bias-current</a> <a href="#">latest-value</a> <i>decimal-number</i>
<b>Tree</b>	<a href="#">latest-value</a>
<b>Configurable</b>	False

**low-alarm-condition *boolean***

<b>Description</b>	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
<b>Context</b>	<a href="#">interface name</a> <i>string</i> <a href="#">transceiver</a> <a href="#">laser-bias-current</a> <a href="#">low-alarm-condition</a> <i>boolean</i>
<b>Tree</b>	<a href="#">low-alarm-condition</a>
<b>Configurable</b>	False

**low-alarm-threshold *decimal-number***

<b>Description</b>	Read from the installed transceiver
<b>Context</b>	<a href="#">interface name</a> <i>string</i> <a href="#">transceiver</a> <a href="#">laser-bias-current</a> <a href="#">low-alarm-threshold</a> <i>decimal-number</i>
<b>Tree</b>	<a href="#">low-alarm-threshold</a>
<b>Configurable</b>	False

**low-warning-condition *boolean***

<b>Description</b>	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
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<b>Context</b>	<a href="#">interface name</a> <i>string</i> <a href="#">transceiver</a> <a href="#">laser-bias-current</a> <a href="#">low-warning-condition</a> <i>boolean</i>
<b>Tree</b>	<a href="#">low-warning-condition</a>
<b>Configurable</b>	False

### **low-warning-threshold** *decimal-number*

<b>Description</b>	Read from the installed transceiver
<b>Context</b>	<a href="#">interface name</a> <i>string</i> <a href="#">transceiver</a> <a href="#">laser-bias-current</a> <a href="#">low-warning-threshold</a> <i>decimal-number</i>
<b>Tree</b>	<a href="#">low-warning-threshold</a>
<b>Configurable</b>	False

### **oper-down-reason** *keyword*

<b>Description</b>	The reason for the transceiver being operationally down.
<b>Context</b>	<a href="#">interface name</a> <i>string</i> <a href="#">transceiver</a> <a href="#">oper-down-reason</a> <i>keyword</i>
<b>Tree</b>	<a href="#">oper-down-reason</a>
<b>Options</b>	<ul style="list-style-type: none"> <li>• not-present</li> <li>• read-failure</li> <li>• checksum-failure</li> <li>• unknown-transceiver</li> <li>• tx-laser-disabled</li> <li>• unsupported-breakout</li> <li>• port-disabled</li> <li>• connector-transceiver-down</li> </ul>
<b>Configurable</b>	False

### **oper-state** *keyword*

<b>Description</b>	<p>The operational state of the transceiver.</p> <p>The oper-state is always down when the Ethernet port is a copper/RJ45 port.</p>
<b>Context</b>	<a href="#">interface name</a> <i>string</i> <a href="#">transceiver</a> <a href="#">oper-state</a> <i>keyword</i>
<b>Tree</b>	<a href="#">oper-state</a>
<b>Options</b>	<ul style="list-style-type: none"> <li>• up</li> <li>• down</li> </ul>

<b>Configurable</b>	False
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## output-power

<b>Description</b>	Enter the output-power context
<b>Context</b>	<a href="#">interface name</a> <i>string</i> <a href="#">transceiver</a> <a href="#">output-power</a>
<b>Tree</b>	<a href="#">output-power</a>
<b>Configurable</b>	False

## high-alarm-condition *boolean*

<b>Description</b>	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
<b>Context</b>	<a href="#">interface name</a> <i>string</i> <a href="#">transceiver</a> <a href="#">output-power</a> <a href="#">high-alarm-condition</a> <i>boolean</i>
<b>Tree</b>	<a href="#">high-alarm-condition</a>
<b>Configurable</b>	False

## high-alarm-threshold *decimal-number*

<b>Description</b>	Read from the installed transceiver
<b>Context</b>	<a href="#">interface name</a> <i>string</i> <a href="#">transceiver</a> <a href="#">output-power</a> <a href="#">high-alarm-threshold</a> <i>decimal-number</i>
<b>Tree</b>	<a href="#">high-alarm-threshold</a>
<b>Configurable</b>	False

## high-warning-condition *boolean*

<b>Description</b>	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
<b>Context</b>	<a href="#">interface name</a> <i>string</i> <a href="#">transceiver</a> <a href="#">output-power</a> <a href="#">high-warning-condition</a> <i>boolean</i>
<b>Tree</b>	<a href="#">high-warning-condition</a>
<b>Configurable</b>	False

## high-warning-threshold *decimal-number*

<b>Description</b>	Read from the installed transceiver
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<b>Context</b>	<a href="#">interface name</a> <i>string</i> <a href="#">transceiver output-power high-warning-threshold</a> <i>decimal-number</i>
<b>Tree</b>	<a href="#">high-warning-threshold</a>
<b>Configurable</b>	False

### latest-value *decimal-number*

<b>Description</b>	The current value of the optical Tx power in dBm
<b>Context</b>	<a href="#">interface name</a> <i>string</i> <a href="#">transceiver output-power latest-value</a> <i>decimal-number</i>
<b>Tree</b>	<a href="#">latest-value</a>
<b>Configurable</b>	False

### low-alarm-condition *boolean*

<b>Description</b>	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
<b>Context</b>	<a href="#">interface name</a> <i>string</i> <a href="#">transceiver output-power low-alarm-condition</a> <i>boolean</i>
<b>Tree</b>	<a href="#">low-alarm-condition</a>
<b>Configurable</b>	False

### low-alarm-threshold *decimal-number*

<b>Description</b>	Read from the installed transceiver
<b>Context</b>	<a href="#">interface name</a> <i>string</i> <a href="#">transceiver output-power low-alarm-threshold</a> <i>decimal-number</i>
<b>Tree</b>	<a href="#">low-alarm-threshold</a>
<b>Configurable</b>	False

### low-warning-condition *boolean*

<b>Description</b>	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
<b>Context</b>	<a href="#">interface name</a> <i>string</i> <a href="#">transceiver output-power low-warning-condition</a> <i>boolean</i>
<b>Tree</b>	<a href="#">low-warning-condition</a>
<b>Configurable</b>	False

**low-warning-threshold *decimal-number***

<b>Description</b>	Read from the installed transceiver
<b>Context</b>	<a href="#">interface name</a> <i>string</i> <a href="#">transceiver output-power low-warning-threshold</a> <i>decimal-number</i>
<b>Tree</b>	<a href="#">low-warning-threshold</a>
<b>Configurable</b>	False

**serial-number *string***

<b>Description</b>	Transceiver serial number.
<b>Context</b>	<a href="#">interface name</a> <i>string</i> <a href="#">transceiver serial-number</a> <i>string</i>
<b>Tree</b>	<a href="#">serial-number</a>
<b>Configurable</b>	False

**temperature**

<b>Description</b>	Enter the temperature context
<b>Context</b>	<a href="#">interface name</a> <i>string</i> <a href="#">transceiver temperature</a>
<b>Tree</b>	<a href="#">temperature</a>
<b>Configurable</b>	False

**high-alarm-condition *boolean***

<b>Description</b>	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
<b>Context</b>	<a href="#">interface name</a> <i>string</i> <a href="#">transceiver temperature high-alarm-condition</a> <i>boolean</i>
<b>Tree</b>	<a href="#">high-alarm-condition</a>
<b>Configurable</b>	False

**high-alarm-threshold *number***

<b>Description</b>	Read from the installed transceiver
<b>Context</b>	<a href="#">interface name</a> <i>string</i> <a href="#">transceiver temperature high-alarm-threshold</a> <i>number</i>
<b>Tree</b>	<a href="#">high-alarm-threshold</a>
<b>Configurable</b>	False



**high-warning-condition *boolean***

<b>Description</b>	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
<b>Context</b>	<a href="#">interface name</a> <i>string</i> <a href="#">transceiver temperature high-warning-condition</a> <i>boolean</i>
<b>Tree</b>	<a href="#">high-warning-condition</a>
<b>Configurable</b>	False

**high-warning-threshold *number***

<b>Description</b>	Read from the installed transceiver
<b>Context</b>	<a href="#">interface name</a> <i>string</i> <a href="#">transceiver temperature high-warning-threshold</a> <i>number</i>
<b>Tree</b>	<a href="#">high-warning-threshold</a>
<b>Configurable</b>	False

**latest-value *number***

<b>Description</b>	The current temperature of the transceiver module in degrees Celsius
<b>Context</b>	<a href="#">interface name</a> <i>string</i> <a href="#">transceiver temperature latest-value</a> <i>number</i>
<b>Tree</b>	<a href="#">latest-value</a>
<b>Configurable</b>	False

**low-alarm-condition *boolean***

<b>Description</b>	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
<b>Context</b>	<a href="#">interface name</a> <i>string</i> <a href="#">transceiver temperature low-alarm-condition</a> <i>boolean</i>
<b>Tree</b>	<a href="#">low-alarm-condition</a>
<b>Configurable</b>	False

**low-alarm-threshold *number***

<b>Description</b>	Read from the installed transceiver
<b>Context</b>	<a href="#">interface name</a> <i>string</i> <a href="#">transceiver temperature low-alarm-threshold</a> <i>number</i>
<b>Tree</b>	<a href="#">low-alarm-threshold</a>

**Configurable** False

### low-warning-condition *boolean*

**Description** 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](#) *string* [transceiver temperature low-warning-condition](#) *boolean*

**Tree** [low-warning-condition](#)

**Configurable** False

### low-warning-threshold *number*

**Description** Read from the installed transceiver

**Context** [interface name](#) *string* [transceiver temperature low-warning-threshold](#) *number*

**Tree** [low-warning-threshold](#)

**Configurable** False

### 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](#) *string* [transceiver tx-laser](#) *boolean*

**Tree** [tx-laser](#)

**Configurable** True

### vendor *string*

**Description** Name of the transceiver vendor.

**Context** [interface name](#) *string* [transceiver vendor](#) *string*

**Tree** [vendor](#)

**Configurable** False

**vendor-part-number *string***

<b>Description</b>	Vendor's part number for the transceiver.
<b>Context</b>	<a href="#">interface name</a> <i>string</i> <a href="#">transceiver</a> <a href="#">vendor-part-number</a> <i>string</i>
<b>Tree</b>	<a href="#">vendor-part-number</a>
<b>Configurable</b>	False

**vendor-revision *string***

<b>Description</b>	Vendor's revision number for the transceiver.
<b>Context</b>	<a href="#">interface name</a> <i>string</i> <a href="#">transceiver</a> <a href="#">vendor-revision</a> <i>string</i>
<b>Tree</b>	<a href="#">vendor-revision</a>
<b>Configurable</b>	False

**voltage**

<b>Description</b>	Enter the voltage context
<b>Context</b>	<a href="#">interface name</a> <i>string</i> <a href="#">transceiver</a> <a href="#">voltage</a>
<b>Tree</b>	<a href="#">voltage</a>
<b>Configurable</b>	False

**high-alarm-condition *boolean***

<b>Description</b>	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
<b>Context</b>	<a href="#">interface name</a> <i>string</i> <a href="#">transceiver</a> <a href="#">voltage</a> <a href="#">high-alarm-condition</a> <i>boolean</i>
<b>Tree</b>	<a href="#">high-alarm-condition</a>
<b>Configurable</b>	False

**high-alarm-threshold *decimal-number***

<b>Description</b>	Read from the installed transceiver
<b>Context</b>	<a href="#">interface name</a> <i>string</i> <a href="#">transceiver</a> <a href="#">voltage</a> <a href="#">high-alarm-threshold</a> <i>decimal-number</i>
<b>Tree</b>	<a href="#">high-alarm-threshold</a>
<b>Configurable</b>	False

### high-warning-condition *boolean*

<b>Description</b>	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
<b>Context</b>	<a href="#">interface name</a> <i>string</i> <a href="#">transceiver voltage</a> <a href="#">high-warning-condition</a> <i>boolean</i>
<b>Tree</b>	<a href="#">high-warning-condition</a>
<b>Configurable</b>	False

### high-warning-threshold *decimal-number*

<b>Description</b>	Read from the installed transceiver
<b>Context</b>	<a href="#">interface name</a> <i>string</i> <a href="#">transceiver voltage</a> <a href="#">high-warning-threshold</a> <i>decimal-number</i>
<b>Tree</b>	<a href="#">high-warning-threshold</a>
<b>Configurable</b>	False

### latest-value *decimal-number*

<b>Description</b>	The current voltage reading of the transceiver module (in Volts)
<b>Context</b>	<a href="#">interface name</a> <i>string</i> <a href="#">transceiver voltage</a> <a href="#">latest-value</a> <i>decimal-number</i>
<b>Tree</b>	<a href="#">latest-value</a>
<b>Configurable</b>	False

### low-alarm-condition *boolean*

<b>Description</b>	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
<b>Context</b>	<a href="#">interface name</a> <i>string</i> <a href="#">transceiver voltage</a> <a href="#">low-alarm-condition</a> <i>boolean</i>
<b>Tree</b>	<a href="#">low-alarm-condition</a>
<b>Configurable</b>	False

### low-alarm-threshold *decimal-number*

<b>Description</b>	Read from the installed transceiver
<b>Context</b>	<a href="#">interface name</a> <i>string</i> <a href="#">transceiver voltage</a> <a href="#">low-alarm-threshold</a> <i>decimal-number</i>

<b>Tree</b>	<a href="#">low-alarm-threshold</a>
<b>Configurable</b>	False

### **low-warning-condition *boolean***

<b>Description</b>	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
<b>Context</b>	<a href="#">interface name</a> <i>string</i> <a href="#">transceiver voltage</a> <a href="#">low-warning-condition</a> <i>boolean</i>
<b>Tree</b>	<a href="#">low-warning-condition</a>
<b>Configurable</b>	False

### **low-warning-threshold *decimal-number***

<b>Description</b>	Read from the installed transceiver
<b>Context</b>	<a href="#">interface name</a> <i>string</i> <a href="#">transceiver voltage</a> <a href="#">low-warning-threshold</a> <i>decimal-number</i>
<b>Tree</b>	<a href="#">low-warning-threshold</a>
<b>Configurable</b>	False

### **wavelength *decimal-number***

<b>Description</b>	Wavelength of the transmitting laser in nanometers
<b>Context</b>	<a href="#">interface name</a> <i>string</i> <a href="#">transceiver wavelength</a> <i>decimal-number</i>
<b>Tree</b>	<a href="#">wavelength</a>
<b>Configurable</b>	False

### **vlan-tagging *boolean***

<b>Description</b>	When set to true the interface is allowed to accept frames with one or more VLAN tags
<b>Context</b>	<a href="#">interface name</a> <i>string</i> <a href="#">vlan-tagging</a> <i>boolean</i>
<b>Tree</b>	<a href="#">vlan-tagging</a>
<b>Configurable</b>	True

## 6 network-instance

```

network-instance name string
+ admin-state keyword
+ aggregate-routes
  + route prefix (ipv4-prefix | ipv6-prefix)
    + admin-state keyword
    + aggregator
      + address string
      + as-number number
    + communities
      + add (bgp-std-community-type | bgp-std-community-regexp-type | identityref | bgp-
large-community-type | bgp-large-community-regexp-type)
      + generate-icmp boolean
      - installed boolean
      + summary-only boolean
- bgp-rib
  - attr-sets
    - attr-set attr-set-type keyword 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 | 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
          - tunnel-endpoint (ipv4-address | ipv6-address)
          - tunnel-type keyword
          - vni number
      - unknown-attributes
        - unknown-attribute unknown-attr-index number
          - attr-len number
          - attr-type number
          - extended boolean
          - optional boolean
          - partial boolean
          - transitive boolean
- evpn
  - rib-in-out
    - rib-in-post

```

```

- ethernet-ad-routes route-distinguisher (string | string | string |
string) esi string ethernet-tag-id number neighbor (ipv4-address | ipv6-address)
  - attr-id reference
  - best-route boolean
  - invalid-reason
    - as-loop boolean
    - cluster-loop boolean
    - next-hop-unresolved boolean
    - rejected-route boolean
  - last-modified string
  - pending-delete boolean
  - stale-route boolean
  - tie-break-reason keyword
  - used-route boolean
  - valid-route boolean
  - vni number
- ethernet-segment-routes route-distinguisher (string | string | string |
string) esi string originating-router (ipv4-address | ipv6-address) neighbor (ipv4-address |
ipv6-address)
  - attr-id reference
  - best-route boolean
  - invalid-reason
    - as-loop boolean
    - cluster-loop boolean
    - next-hop-unresolved boolean
    - rejected-route boolean
  - last-modified string
  - pending-delete boolean
  - stale-route boolean
  - tie-break-reason keyword
  - used-route boolean
  - valid-route boolean
- imet-routes route-distinguisher (string | string | string | string) originating-
router (ipv4-address | ipv6-address) ethernet-tag-id number neighbor (ipv4-address | ipv6-
address)
  - attr-id reference
  - best-route boolean
  - invalid-reason
    - as-loop boolean
    - cluster-loop boolean
    - next-hop-unresolved boolean
    - rejected-route boolean
  - last-modified string
  - pending-delete boolean
  - stale-route boolean
  - tie-break-reason keyword
  - used-route boolean
  - valid-route boolean
- ip-prefix-routes route-distinguisher (string | string | string |
string) ethernet-tag-id number ip-prefix-length number ip-prefix (ipv4-prefix | ipv6-
prefix) neighbor (ipv4-address | ipv6-address)
  - attr-id reference
  - best-route boolean
  - esi string
  - gateway-ip (ipv4-address | ipv6-address)
  - invalid-reason
    - as-loop boolean
    - cluster-loop boolean
    - next-hop-unresolved boolean
    - rejected-route boolean
  - last-modified string
  - pending-delete boolean
  - stale-route boolean
  - tie-break-reason keyword
  - used-route boolean
  - valid-route boolean

```

```

- vni number
- mac-ip-routes route-distinguisher (string | string | string | string) mac-length number mac-address string ip-address (ipv4-address | ipv6-address) ethernet-tag-id number neighbor (ipv4-address | ipv6-address)
- attr-id reference
- best-route boolean
- esi string
- invalid-reason
- as-loop boolean
- cluster-loop boolean
- next-hop-unresolved boolean
- rejected-route boolean
- last-modified string
- pending-delete boolean
- stale-route boolean
- tie-break-reason keyword
- used-route boolean
- valid-route boolean
- vni number
- rib-in-pre
- ethernet-ad-routes route-distinguisher (string | string | string | string) esi string ethernet-tag-id number neighbor (ipv4-address | ipv6-address)
- attr-id reference
- vni number
- ethernet-segment-routes route-distinguisher (string | string | string | string) esi string originating-router (ipv4-address | ipv6-address) neighbor (ipv4-address | ipv6-address)
- attr-id reference
- imet-routes route-distinguisher (string | string | string | string) originating-router (ipv4-address | ipv6-address) ethernet-tag-id number neighbor (ipv4-address | ipv6-address)
- attr-id reference
- ip-prefix-routes route-distinguisher (string | string | string | string) ethernet-tag-id number ip-prefix-length number ip-prefix (ipv4-prefix | ipv6-prefix) neighbor (ipv4-address | ipv6-address)
- attr-id reference
- esi string
- gateway-ip (ipv4-address | ipv6-address)
- vni number
- mac-ip-routes route-distinguisher (string | string | string | string) mac-length number mac-address string ip-address (ipv4-address | ipv6-address) ethernet-tag-id number neighbor (ipv4-address | ipv6-address)
- attr-id reference
- esi string
- vni number
- rib-out-post
- ethernet-ad-routes route-distinguisher (string | string | string | string) esi string ethernet-tag-id number neighbor (ipv4-address | ipv6-address)
- attr-id reference
- next-hop (ipv4-address | ipv6-address)
- vni number
- ethernet-segment-routes route-distinguisher (string | string | string | string) esi string originating-router (ipv4-address | ipv6-address) neighbor (ipv4-address | ipv6-address)
- attr-id reference
- next-hop (ipv4-address | ipv6-address)
- imet-routes route-distinguisher (string | string | string | string) originating-router (ipv4-address | ipv6-address) ethernet-tag-id number neighbor (ipv4-address | ipv6-address)
- attr-id reference
- next-hop (ipv4-address | ipv6-address)
- ip-prefix-routes route-distinguisher (string | string | string | string) ethernet-tag-id number ip-prefix-length number ip-prefix (ipv4-prefix | ipv6-prefix) neighbor (ipv4-address | ipv6-address)
- attr-id reference
- esi string

```



```

- gateway-ip (ipv4-address | ipv6-address)
- next-hop (ipv4-address | ipv6-address)
- vni number
- mac-ip-routes route-distinguisher (string | string | string | string) mac-
length number mac-address string ip-address (ipv4-address | ipv6-address) ethernet-tag-
id number neighbor (ipv4-address | ipv6-address)
- attr-id reference
- esi string
- next-hop (ipv4-address | ipv6-address)
- vni number
- ipv4-unicast
- local-rib
- routes prefix (ipv4-prefix | ipv6-prefix) neighbor (ipv4-address | ipv6-address-
with-zone) origin-protocol identityref
- attr-id reference
- best-route boolean
- invalid-reason
- as-loop boolean
- cluster-loop boolean
- next-hop-unresolved boolean
- rejected-route boolean
- last-modified string
- pending-delete boolean
- stale-route boolean
- tie-break-reason keyword
- used-route boolean
- valid-route boolean
- rib-in-out
- rib-in-post
- routes prefix (ipv4-prefix | ipv6-prefix) neighbor (ipv4-address | ipv6-address-
with-zone)
- attr-id reference
- best-route boolean
- invalid-reason
- as-loop boolean
- cluster-loop boolean
- next-hop-unresolved boolean
- rejected-route boolean
- last-modified string
- pending-delete boolean
- stale-route boolean
- tie-break-reason keyword
- used-route boolean
- valid-route boolean
- rib-in-pre
- routes prefix (ipv4-prefix | ipv6-prefix) neighbor (ipv4-address | ipv6-address-
with-zone)
- attr-id reference
- rib-out-post
- routes prefix (ipv4-prefix | ipv6-prefix) neighbor (ipv4-address | ipv6-address-
with-zone)
- attr-id reference
- ipv6-unicast
- local-rib
- routes prefix (ipv4-prefix | ipv6-prefix) neighbor (ipv4-address | ipv6-address-
with-zone) origin-protocol identityref
- attr-id reference
- best-route boolean
- invalid-reason
- as-loop boolean
- cluster-loop boolean
- next-hop-unresolved boolean
- rejected-route boolean
- last-modified string
- pending-delete boolean
- stale-route boolean

```

```

    - tie-break-reason keyword
    - used-route boolean
    - valid-route boolean
  - rib-in-out
    - rib-in-post
    - routes prefix (ipv4-prefix | ipv6-prefix) neighbor (ipv4-address | ipv6-address-
with-zone)
      - attr-id reference
      - best-route boolean
      - invalid-reason
        - as-loop boolean
        - cluster-loop boolean
        - next-hop-unresolved boolean
        - rejected-route boolean
      - last-modified string
      - pending-delete boolean
      - stale-route boolean
      - tie-break-reason keyword
      - used-route boolean
      - valid-route boolean
    - rib-in-pre
    - routes prefix (ipv4-prefix | ipv6-prefix) neighbor (ipv4-address | ipv6-address-
with-zone)
      - attr-id reference
    - rib-out-post
    - routes prefix (ipv4-prefix | ipv6-prefix) neighbor (ipv4-address | ipv6-address-
with-zone)
      - attr-id reference
+ 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
- reserved-macs
  - mac address string
  - users application string
+ static-mac
+ mac address string
  + destination (keyword | reference)
- 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
+ interface name string
  - index number
  - mac-relearn-only boolean
  - multicast-forwarding keyword
  - oper-down-reason keyword
  - oper-mac-learning keyword
  - oper-mac-learning-disabled-reason keyword
  - oper-state keyword
+ ip-forwarding
+ 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
+ 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
+ mpls-forwarding
+ forward-received-packets boolean
+ mtu
+ path-mtu-discovery boolean
+ next-hop-groups
+ group name string
+ admin-state keyword
+ blackhole
+ generate-icmp boolean
+ nexthop index number
+ admin-state keyword
+ failure-detection
+ enable-bfd
+ local-address (ipv4-address | ipv6-address)
+ local-discriminator number
+ remote-discriminator number
+ ip-address (ipv4-address | ipv6-address)
+ pushed-mpls-label-stack (number | keyword)
+ resolve boolean
- oper-mac-vrf-mtu number
- oper-state keyword
+ policy-forwarding
+ interface subinterface reference
+ apply-forwarding-policy reference
+ policy policy-id string
+ description string
- last-clear string
+ rule sequence-id number
+ action
+ network-instance reference
+ description string
+ match
+ ipv4
+ dscp-set (number | keyword)
+ protocol (number | keyword)
- tcam-entries number
+ protocols
+ bgp
+ admin-state keyword
+ as-path-options
+ allow-own-as number
+ remove-private-as
+ ignore-peer-as boolean
+ leading-only boolean
+ mode keyword
+ authentication
+ keychain reference
+ autonomous-system number
+ 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
+ ebgp-default-policy
+ export-reject-all boolean
+ import-reject-all boolean
+ evpn
- active-routes number
+ admin-state keyword
+ advertise-ipv6-next-hops boolean
+ inter-as-vpn boolean
+ keep-all-routes boolean

```

```

+ rapid-update boolean
- received-routes number
+ export-policy reference
+ failure-detection
+ enable-bfd boolean
+ fast-failover boolean
+ graceful-restart
+ admin-state keyword
+ stale-routes-time number
+ group group-name string
+ admin-state keyword
+ 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
+ description string
+ evpn
+ admin-state keyword
+ advertise-ipv6-next-hops boolean
+ prefix-limit
+ max-received-routes number
+ warning-threshold-pct number
+ export-policy reference
+ failure-detection
+ enable-bfd boolean
+ fast-failover boolean
+ graceful-restart
+ admin-state keyword
+ stale-routes-time number
+ import-policy reference
+ ipv4-unicast
+ admin-state keyword
+ advertise-ipv6-next-hops boolean
+ prefix-limit
+ max-received-routes number
+ warning-threshold-pct number
+ receive-ipv6-next-hops boolean
+ ipv6-unicast
+ admin-state keyword
+ prefix-limit
+ max-received-routes number
+ warning-threshold-pct number
+ 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
+ peer-as number
+ route-reflector
+ client boolean
+ cluster-id string
+ 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
+ trace-options
+ flag name keyword
+ modifier keyword
+ transport
+ local-address (ipv4-address | ipv6-address | string)
+ passive-mode boolean
+ tcp-mss number
- under-maintenance boolean
+ import-policy reference
+ ipv4-unicast
- active-routes number
+ admin-state keyword
+ 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
+ multipath
+ allow-multiple-as boolean
+ max-paths-level-1 number
+ max-paths-level-2 number
+ next-hop-resolution
+ ipv4-next-hops
+ tunnel-resolution
+ allowed-tunnel-types identityref
+ mode keyword
+ receive-ipv6-next-hops boolean
- received-routes number
+ ipv6-unicast
- active-routes number
+ admin-state keyword
+ 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
+ multipath
+ allow-multiple-as boolean
+ max-paths-level-1 number

```

```

+ max-paths-level-2 number
+ next-hop-resolution
+ ipv4-next-hops
  + tunnel-resolution
    + allowed-tunnel-types identityref
    + mode keyword
- received-routes number
+ local-preference number
- maintenance-group string
+ neighbor peer-address (ipv4-address | ipv6-address-with-zone)
+ admin-state keyword
- advertised-capabilities keyword
+ 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
  - transmit-active boolean
+ description string
- discovered-by-lldp boolean
- dynamic-neighbor boolean
- established-transitions number
+ evpn
  - active-routes number
  + admin-state keyword
  + advertise-ipv6-next-hops boolean
  - oper-state keyword
  + prefix-limit
    + max-received-routes number
    + warning-threshold-pct number
  - received-routes number
  - rejected-routes number
  - sent-routes 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 keyword
    - forwarding-preserved boolean
    - restart-time number
  - number-of-restarts number
  + stale-routes-time number
+ import-policy reference
+ ipv4-unicast
  - active-routes number
  + admin-state keyword
  + advertise-ipv6-next-hops boolean
  - oper-state keyword
  + prefix-limit
    + max-received-routes number
    + warning-threshold-pct number
  + receive-ipv6-next-hops boolean
  - received-routes number
  - rejected-routes number
  - sent-routes number
+ ipv6-unicast
  - active-routes number

```

```

+ admin-state keyword
- oper-state keyword
+ prefix-limit
  + max-received-routes number
  + warning-threshold-pct number
- received-routes number
- rejected-routes number
- sent-routes number
- last-established string
- last-event keyword
- last-notification-error-code keyword
- last-notification-error-subcode 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
+ peer-as number
+ peer-group reference
- peer-router-id string
- received-afi-safi keyword
- received-capabilities keyword
- received-end-of-rib keyword
- received-messages
  - last-update-time string
  - malformed-updates number
  - queue-depth number
  - route-refresh number
  - total-messages number
  - total-non-updates number
  - total-updates number
+ route-reflector
+ client boolean
+ cluster-id string
+ send-community
  + large boolean
  + standard boolean
+ send-default-route
+ export-policy reference
+ ipv4-unicast boolean
+ ipv6-unicast boolean
- sent-end-of-rib keyword
- sent-messages
  - queue-depth number
  - route-refresh number
  - total-messages number
  - total-non-updates 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
+ trace-options
  + flag name keyword
  + modifier keyword

```



```

+ transport
+ local-address (ipv4-address | ipv6-address | string)
- local-port number
+ passive-mode boolean
- remote-port number
+ tcp-mss number
- under-maintenance boolean
- oper-state keyword
+ preference
+ ebgp number
+ ibgp number
+ route-advertisement
+ rapid-withdrawal boolean
+ wait-for-fib-install boolean
+ route-reflector
+ client boolean
+ cluster-id string
+ router-id (ipv4-address | ipv6-address)
+ 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
+ tcp-mss number
- under-maintenance boolean
+ bgp-evpn
+ bgp-instance id reference
+ admin-state keyword
+ default-admin-tag number
+ ecmp number
+ encapsulation-type keyword
+ evi 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-only-with-mac-table-entry boolean
+ next-hop (keyword | ipv4-address | ipv6-address)
+ vlan-aware-bundle-eth-tag number
+ route-table
+ mac-ip
+ advertise-gateway-mac boolean
+ vxlan-interface reference
+ bgp-vpn
+ bgp-instance id number
+ export-policy reference
+ import-policy reference
- oper-down-reason keyword
+ route-distinguisher

```

```

+ rd (string | string | string | string)
- route-distinguisher-origin keyword
+ route-target
- export-route-target-origin keyword
+ export-rt (string | string | string | string | string | string | string | string
| string | string)
- import-route-target-origin keyword
+ import-rt (string | string | string | string | string | string | string | string
| string | string)
+ isis
+ instance name string
+ admin-state keyword
+ attached-bit
+ ignore boolean
+ suppress boolean
+ authentication
+ csnp-authentication boolean
+ hello-authentication boolean
+ keychain reference
+ psnp-authentication boolean
+ auto-cost
+ reference-bandwidth number
+ export-policy reference
+ graceful-restart
+ helper-mode boolean
- hostnames
- system-id host-system-id string
- hostname string
+ inter-level-propagation-policies
+ level1-to-level2
+ summary-address ip-prefix (ipv4-prefix | ipv6-prefix)
+ route-tag number
+ interface interface-name reference
- adjacency neighbor-system-id string adjacency-level string
- down-reason keyword
- last-up-down-transition string
- neighbor-circuit-type keyword
- 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
- remaining-holdtime number
- state keyword
- up-down-transitions number
+ admin-state keyword
+ authentication
+ hello-authentication boolean
+ keychain reference
- circuit-id number
+ circuit-type keyword
+ hello-padding keyword
+ 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
  + keychain reference
+ disable boolean
+ ipv6-unicast-metric number
+ metric number
+ priority number
+ timers
  + hello-interval number
  + hello-multiplier number
- oper-state keyword
+ passive boolean
+ segment-routing
+ mpls
  + ipv4-node-sid
    + index number
  + ipv6-node-sid
    + index number
+ timers
  + csnp-interval number
  + lsp-pacing-interval number
+ trace-options
  + trace 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 boolean
  + hello-authentication boolean
  + keychain reference
  + psnp-authentication boolean
+ metric-style keyword
+ route-preference
  + external number
  + internal 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
    - area-addresses string
    - authentication
      - auth-data string
      - auth-type keyword
    - extended-ipv4-reachability ipv4-prefix string
      - down boolean
      - metric number
    - sub-tlvs
      - 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
  - 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
  - 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
- 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
- ipv6-interface-addresses (ipv4-address | ipv6-address)
- ipv6-reachability ipv6-prefix string
  - down boolean
  - external boolean
  - metric number
  - sub-tlvs
    - 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
- 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
  - 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
    - 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
    - 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
    - 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
- 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
+ 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
- statistics
  - last-partial-spf string
  - last-spf string
  - partial-spf-runs number
  - pdu pdu-name keyword
    - dropped number
    - processed number
    - received number
    - retransmitted number
    - sent number
  - spf-runs 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
    + transport
      + lsp-mtu-size number
+ ldp
+ admin-state keyword
+ discovery
+ interfaces
  + hello-holdtime number
  + hello-interval number
  + interface name reference
  + hello-holdtime number
  + hello-interval number
  + ipv4
    + admin-state keyword
    - 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
      - last-oper-state-change string
      - oper-down-reason keyword
      - oper-state 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
+ graceful-restart
+ helper-enable boolean
+ max-reconnect-time number
+ max-recovery-time number
+ ipv4
- bindings
  - advertised-address
    - peer lsr-id reference label-space-id reference
    - ip-address string
  - advertised-prefix-fecs 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-fecs fec string lsr-id reference label-space-id reference
    - ingress-lsr-fec boolean
    - label (number | keyword)
    - next-hop index number
    - interface string

```

```

    - next-hop (ipv4-address | ipv6-address)
    - not-used-reason keyword
    - used-in-forwarding boolean
+ fec-resolution
+ longest-prefix boolean
- last-oper-state-change string
- oper-down-reason keyword
- oper-state keyword
- oper-up-to-down-transitions number
- lsr-id string
+ multipath
+ max-paths number
+ peers
+ peer lsr-id string label-space-id number
  - end-of-lib
  - ipv4-prefix-fecs
    - received boolean
    - sent boolean
+ fec-limit number
- fec-limit-exceeded boolean
- graceful-restart
  - peer-reconnect-time number
  - peer-recovery-time number
  - peer-restarting boolean
- 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
  - fec-statistics
    - ipv4-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 string
  - local-port number
  - remote-address string
  - remote-port number
+ trace-options
  + trace keyword
+ session-keepalive-holdtime number
+ session-keepalive-interval number
+ trace-options
  + trace keyword
- statistics
  - fec-statistics
    - ipv4-prefix
      - advertised-fecs number
      - received-fecs 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
    - total-discovery-interfaces number
    - total-hello-adjacencies number
    - total-peers number
+ linux
+ export-neighbors boolean
+ export-routes boolean
+ import-routes boolean
+ 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 reference
+   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
-   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 | ipv6-address-with-zone)
-     adjacency-state identityref
-     backup-designated-router
-     dead-time number
-     designated-router
-     last-established-time number
-     last-event-time
-     last-restart-time
-     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
- type keyword
- last-spf-run-time
- 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
- route-table
-   ipv4-unicast

```

```

- route ipv4-prefix string route-type identityref route-owner string id number
- active boolean
- fib-programming
  - failed-slots number
  - status keyword
- last-app-update string
- metric number
- next-hop-group reference
- preference number
- resilient-hash boolean
- 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
- active boolean
- fib-programming
  - failed-slots number
  - status keyword
- last-app-update string
- metric number
- next-hop-group reference
- preference number
- resilient-hash boolean
- 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-hop-group reference
- next-network-instance reference
- operation keyword
- statistics
  - active-entries number
- next-hop index number
- ip-address (ipv4-address | ipv6-address)
- mpls
  - pushed-mpls-label-stack (number | keyword)
- 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-group reference
- fib-programming
- next-hop id number
  - fib-programming
  - next-hop reference
  - resolved keyword
  - weight number
+ router-id string
+ segment-routing
+ mpls
  - 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
    - inactive-reason keyword
    - isis
      - 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
+ segment-routing-policies
+ named-paths
  + path named-path-name string
    + hop index number
    + hop-type keyword
    + ip-address (ipv4-address | ipv6-address)
  - policy-database
    - policy color number endpoint (ipv4-address | ipv6-address)
    - candidate-path candidate-path-index number
      - discriminator number
      - last-oper-change string
      - oper-state keyword
      - oper-state-transitions number
      - originator string
      - policy-down-reason identityref
      - policy-inactive-reason identityref
      - preference number
      - protocol-origin keyword
      - segment-list segment-list-index number
        - last-oper-change string
        - oper-state keyword
        - oper-state-transitions number
        - seamless-bfd
          - hold-down-time-remaining number
          - hold-down-timer-active boolean
          - session-state keyword
        - segment segment-index number
        - segment-type-a
          - sid-value number
        - segment-list-down-reason identityref
        - segment-list-inactive-reason identityref
      - statistics
        - out-octets number
        - out-packets number
    - standby-available boolean
    - statistics
      - in-labeled-octets number
      - in-labeled-packets number
      - in-octets number
      - in-packets number

```

```

        - out-octets number
        - out-packets number
+ protection-policies
+ policy protection-policy-name string
+ hold-down-timer number
+ min-segment-list-threshold number
+ mode keyword
+ revert-timer number
+ seamless-bfd boolean
+ static-policies
+ policy static-policy-name string
+ admin-state keyword
+ color number
+ description string
+ endpoint (ipv4-address | ipv6-address)
- last-oper-change string
- oper-state keyword
- oper-state-transitions number
- policy-down-reason identityref
- policy-inactive-reason identityref
+ preference number
+ protection-policy reference
+ re-optimization-timer number
+ segment-list segment-list-index number
+ admin-state keyword
- last-oper-change string
+ named-path reference
- oper-state keyword
- oper-state-transitions number
- seamless-bfd
- hold-down-time-remaining number
- hold-down-timer-active boolean
- session-state keyword
+ segment segment-index number
+ segment-type-a
+ sid-value number
- segment-list-down-reason identityref
- segment-list-inactive-reason identityref
- statistics
- out-octets number
- out-packets number
- standby-available boolean
- statistics
- in-labeled-octets number
- in-labeled-packets number
- in-octets number
- in-packets number
- out-octets number
- out-packets number
+ static-routes
+ route prefix (ipv4-prefix | ipv6-prefix)
+ admin-state keyword
- installed boolean
+ metric number
+ next-hop-group reference
+ preference number
- 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
- 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
- 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
- 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
+ vxlan-interface name string
- oper-down-reason keyword
- oper-state keyword

```

## 6.1 network-instance Descriptions

### network-instance *name string*

<b>Description</b>	Network instances configured on the local system
<b>Context</b>	<a href="#">network-instance name string</a>
<b>Tree</b>	<a href="#">network-instance</a>
<b>Configurable</b>	True

### name *string*

<b>Description</b>	A unique name identifying the network instance
<b>Context</b>	<a href="#">network-instance name string</a>
<b>String Length</b>	1 to 255
<b>Configurable</b>	True

### admin-state *keyword*

<b>Description</b>	This leaf contains the configured/desired state of the network instance.
<b>Context</b>	<a href="#">network-instance name string admin-state keyword</a>
<b>Tree</b>	<a href="#">admin-state</a>
<b>Default</b>	enable
<b>Options</b>	<ul style="list-style-type: none"> <li>• enable</li> <li>• disable</li> </ul>
<b>Configurable</b>	True

## aggregate-routes

<b>Description</b>	Enable the aggregate-routes context
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">aggregate-routes</a>
<b>Tree</b>	<a href="#">aggregate-routes</a>
<b>Configurable</b>	True

## route [prefix](#) (*ipv4-prefix* | *ipv6-prefix*)

<b>Description</b>	Enter the route list instance
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">aggregate-routes</a> <a href="#">route prefix</a> ( <i>ipv4-prefix</i>   <i>ipv6-prefix</i> )
<b>Tree</b>	<a href="#">route</a>
<b>Configurable</b>	True
<b>Max. Elements</b>	16384

## [prefix](#) (*ipv4-prefix* | *ipv6-prefix*)

<b>Description</b>	Enter the prefix context
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">aggregate-routes</a> <a href="#">route prefix</a> ( <i>ipv4-prefix</i>   <i>ipv6-prefix</i> )
<b>Configurable</b>	True

## admin-state *keyword*

<b>Description</b>	This leaf contains the configured, desired state of the aggregate prefix.
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">aggregate-routes</a> <a href="#">route prefix</a> ( <i>ipv4-prefix</i>   <i>ipv6-prefix</i> ) <a href="#">admin-state</a> <i>keyword</i>
<b>Tree</b>	<a href="#">admin-state</a>
<b>Default</b>	enable
<b>Options</b>	<ul style="list-style-type: none"> <li>• enable</li> <li>• disable</li> </ul>
<b>Configurable</b>	True

## aggregator

<b>Description</b>	Enter the aggregator context
--------------------	------------------------------

<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">aggregate-routes route prefix</a> ( <a href="#">ipv4-prefix</a>   <a href="#">ipv6-prefix</a> ) <a href="#">aggregator</a>
<b>Tree</b>	<a href="#">aggregator</a>
<b>Configurable</b>	True

**address *string***

<b>Description</b>	Specifies the aggregator's IP address.
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">aggregate-routes route prefix</a> ( <a href="#">ipv4-prefix</a>   <a href="#">ipv6-prefix</a> ) <a href="#">aggregator address</a> <i>string</i>
<b>Tree</b>	<a href="#">address</a>
<b>Configurable</b>	True

**as-number *number***

<b>Description</b>	Specifies the aggregator's ASN
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">aggregate-routes route prefix</a> ( <a href="#">ipv4-prefix</a>   <a href="#">ipv6-prefix</a> ) <a href="#">aggregator as-number</a> <i>number</i>
<b>Tree</b>	<a href="#">as-number</a>
<b>Range</b>	1 to 4294967295
<b>Configurable</b>	True

**communities**

<b>Description</b>	Enter the communities context
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">aggregate-routes route prefix</a> ( <a href="#">ipv4-prefix</a>   <a href="#">ipv6-prefix</a> ) <a href="#">communities</a>
<b>Tree</b>	<a href="#">communities</a>
<b>Configurable</b>	True

**add ([bgp-std-community-type](#) | [bgp-std-community-regexp-type](#) | [identityref](#) | [bgp-large-community-type](#) | [bgp-large-community-regexp-type](#))**

<b>Description</b>	Enter the add context
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">aggregate-routes route prefix</a> ( <a href="#">ipv4-prefix</a>   <a href="#">ipv6-prefix</a> ) <a href="#">communities add</a> ( <a href="#">bgp-std-community-type</a>   <a href="#">bgp-std-community-regexp-type</a>   <a href="#">identityref</a>   <a href="#">bgp-large-community-type</a>   <a href="#">bgp-large-community-regexp-type</a> )
<b>Tree</b>	<a href="#">add</a>

<b>Options</b>	<ul style="list-style-type: none"> <li>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.</li> <li>no-advertise All NLRI received carrying this community must not be advertised to other BGP peers. This community has a value of 0xFFFFFFFF02.</li> <li>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.</li> </ul>
<b>Configurable</b>	True
<b>Max. Elements</b>	12

### generate-icmp *boolean*

<b>Description</b>	When set to true the router generates ICMP unreachable messages for packets matching the aggregate route (and not a more specific route).
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">aggregate-routes route prefix</a> ( <i>ipv4-prefix</i>   <i>ipv6-prefix</i> ) <a href="#">generate-icmp</a> <i>boolean</i>
<b>Tree</b>	<a href="#">generate-icmp</a>
<b>Configurable</b>	True

### installed *boolean*

<b>Description</b>	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
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">aggregate-routes route prefix</a> ( <i>ipv4-prefix</i>   <i>ipv6-prefix</i> ) <a href="#">installed</a> <i>boolean</i>
<b>Tree</b>	<a href="#">installed</a>
<b>Configurable</b>	False

### summary-only *boolean*

<b>Description</b>	When set to true the router blocks the advertisement of all contributing routes of this aggregate route in dynamic protocols such as BGP.
--------------------	---

<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">aggregate-routes</a> <a href="#">route prefix</a> ( <a href="#">ipv4-prefix</a>   <a href="#">ipv6-prefix</a> ) <a href="#">summary-only</a> <i>boolean</i>
<b>Tree</b>	<a href="#">summary-only</a>
<b>Default</b>	false
<b>Configurable</b>	True

## bgp-rib

<b>Description</b>	Container for BGP RIB state.
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">bgp-rib</a>
<b>Tree</b>	<a href="#">bgp-rib</a>
<b>Configurable</b>	False

## attr-sets

<b>Description</b>	Container for BGP RIB path attribute sets that can be shared by one or more BGP routes.
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">bgp-rib</a> <a href="#">attr-sets</a>
<b>Tree</b>	<a href="#">attr-sets</a>
<b>Configurable</b>	False

## attr-set [attr-set-type](#) *keyword* *index* *number*

<b>Description</b>	List of attribute sets.
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">bgp-rib</a> <a href="#">attr-sets</a> <a href="#">attr-set</a> <a href="#">attr-set-type</a> <i>keyword</i> <i>index</i> <i>number</i>
<b>Tree</b>	<a href="#">attr-set</a>
<b>Configurable</b>	False

## attr-set-type *keyword*

<b>Description</b>	The type of the attribute-set. RIB-IN attribute sets can only be referenced by BGP routes in the RIB-IN. RIB-OUT attribute sets can only be referenced by BGP routes in the RIB-OUT.
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">bgp-rib</a> <a href="#">attr-sets</a> <a href="#">attr-set</a> <a href="#">attr-set-type</a> <i>keyword</i> <i>index</i> <i>number</i>
<b>Options</b>	<ul style="list-style-type: none"> <li>• <a href="#">rib-in</a></li> <li>• <a href="#">rib-out</a></li> </ul>

<b>Configurable</b>	False
---------------------	-------

### **index number**

<b>Description</b>	A unique internal identifier of the attribute set.
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">bgp-rib</a> <a href="#">attr-sets</a> <a href="#">attr-set</a> <a href="#">attr-set-type</a> <i>keyword</i> <a href="#">index number</a>
<b>Configurable</b>	False

### **aggregator**

<b>Description</b>	Enter the aggregator context
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">bgp-rib</a> <a href="#">attr-sets</a> <a href="#">attr-set</a> <a href="#">attr-set-type</a> <i>keyword</i> <a href="#">index number</a> <a href="#">aggregator</a>
<b>Tree</b>	<a href="#">aggregator</a>
<b>Configurable</b>	False

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

<b>Description</b>	The router ID of the BGP router that formed the aggregate route.
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">bgp-rib</a> <a href="#">attr-sets</a> <a href="#">attr-set</a> <a href="#">attr-set-type</a> <i>keyword</i> <a href="#">index number</a> <a href="#">aggregator</a> <a href="#">address</a> ( <a href="#">ipv4-address</a>   <a href="#">ipv6-address</a> )
<b>Tree</b>	<a href="#">address</a>
<b>Configurable</b>	False

### **as-number number**

<b>Description</b>	The 2byte or 4byte AS number of the router that formed the aggregate route.
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">bgp-rib</a> <a href="#">attr-sets</a> <a href="#">attr-set</a> <a href="#">attr-set-type</a> <i>keyword</i> <a href="#">index number</a> <a href="#">aggregator</a> <a href="#">as-number</a> <i>number</i>
<b>Tree</b>	<a href="#">as-number</a>
<b>Range</b>	1 to 4294967295
<b>Configurable</b>	False

### **aigp number**

<b>Description</b>	The value in the AIGP path attribute.
--------------------	---------------------------------------

<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">bgp-rib</a> <a href="#">attr-sets</a> <a href="#">attr-set</a> <a href="#">attr-set-type</a> <i>keyword</i> <a href="#">index</a> <i>number</i> <a href="#">aigp</a> <i>number</i>
<b>Tree</b>	<a href="#">aigp</a>
<b>Configurable</b>	False

**as-path**

<b>Description</b>	A container for the AS path attribute of the attribute set.
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">bgp-rib</a> <a href="#">attr-sets</a> <a href="#">attr-set</a> <a href="#">attr-set-type</a> <i>keyword</i> <a href="#">index</a> <i>number</i> <a href="#">as-path</a>
<b>Tree</b>	<a href="#">as-path</a>
<b>Configurable</b>	False

**segment** [as-path-index](#) *number*

<b>Description</b>	A list of segments. Each segment has a type and a list of one or more AS numbers.
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">bgp-rib</a> <a href="#">attr-sets</a> <a href="#">attr-set</a> <a href="#">attr-set-type</a> <i>keyword</i> <a href="#">index</a> <i>number</i> <a href="#">as-path</a> <a href="#">segment</a> <a href="#">as-path-index</a> <i>number</i>
<b>Tree</b>	<a href="#">segment</a>
<b>Configurable</b>	False

**as-path-index** *number*

<b>Description</b>	RIB attribute AS Path index
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">bgp-rib</a> <a href="#">attr-sets</a> <a href="#">attr-set</a> <a href="#">attr-set-type</a> <i>keyword</i> <a href="#">index</a> <i>number</i> <a href="#">as-path</a> <a href="#">segment</a> <a href="#">as-path-index</a> <i>number</i>
<b>Configurable</b>	False

**member** *number*

<b>Description</b>	A list of AS numbers (each of which is a 2byte-ASN or a 4byte-ASN) that belong to the AS path segment.
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">bgp-rib</a> <a href="#">attr-sets</a> <a href="#">attr-set</a> <a href="#">attr-set-type</a> <i>keyword</i> <a href="#">index</a> <i>number</i> <a href="#">as-path</a> <a href="#">segment</a> <a href="#">as-path-index</a> <i>number</i> <a href="#">member</a> <i>number</i>
<b>Tree</b>	<a href="#">member</a>
<b>Range</b>	1 to 4294967295
<b>Configurable</b>	False



**type keyword**

<b>Description</b>	The type of the AS path segment.
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">bgp-rib attr-sets attr-set attr-set-type</a> <i>keyword</i> <a href="#">index number as-path segment as-path-index</a> <i>number</i> <a href="#">type</a> <i>keyword</i>
<b>Tree</b>	<a href="#">type</a>
<b>Options</b>	<ul style="list-style-type: none"> <li>• as-set</li> <li>• as-sequence</li> <li>• as-confed-sequence</li> <li>• as-confed-set</li> </ul>
<b>Configurable</b>	False

**atomic-aggregate boolean**

<b>Description</b>	Set to true to indicate the presence of the ATOMIC_AGGREGATE path attribute.
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">bgp-rib attr-sets attr-set attr-set-type</a> <i>keyword</i> <a href="#">index number atomic-aggregate</a> <i>boolean</i>
<b>Tree</b>	<a href="#">atomic-aggregate</a>
<b>Configurable</b>	False

**cluster-list (ipv4-address | ipv6-address)**

<b>Description</b>	The list of IPv4 addresses in the CLUSTER_LIST path attribute.
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">bgp-rib attr-sets attr-set attr-set-type</a> <i>keyword</i> <a href="#">index number cluster-list (ipv4-address   ipv6-address)</a>
<b>Tree</b>	<a href="#">cluster-list</a>
<b>Configurable</b>	False

**communities**

<b>Description</b>	Enter the communities context
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">bgp-rib attr-sets attr-set attr-set-type</a> <i>keyword</i> <a href="#">index number communities</a>
<b>Tree</b>	<a href="#">communities</a>
<b>Configurable</b>	False

**community string**

<b>Description</b>	List of standard 4-byte community values in the COMMUNITY path attribute. Each should be displayed in the format <0..65355>:<0..65355>
<b>Context</b>	<a href="#">network-instance name</a> <a href="#">string</a> <a href="#">bgp-rib</a> <a href="#">attr-sets</a> <a href="#">attr-set</a> <a href="#">attr-set-type</a> <a href="#">keyword</a> <a href="#">index</a> <a href="#">number</a> <a href="#">communities</a> <a href="#">community</a> <a href="#">string</a>
<b>Tree</b>	<a href="#">community</a>
<b>Configurable</b>	False

**ext-community string**

<b>Description</b>	List of extended 8-byte community values in the COMMUNITY path attribute.
<b>Context</b>	<a href="#">network-instance name</a> <a href="#">string</a> <a href="#">bgp-rib</a> <a href="#">attr-sets</a> <a href="#">attr-set</a> <a href="#">attr-set-type</a> <a href="#">keyword</a> <a href="#">index</a> <a href="#">number</a> <a href="#">communities</a> <a href="#">ext-community</a> <a href="#">string</a>
<b>Tree</b>	<a href="#">ext-community</a>
<b>Configurable</b>	False

**large-community string**

<b>Description</b>	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>
<b>Context</b>	<a href="#">network-instance name</a> <a href="#">string</a> <a href="#">bgp-rib</a> <a href="#">attr-sets</a> <a href="#">attr-set</a> <a href="#">attr-set-type</a> <a href="#">keyword</a> <a href="#">index</a> <a href="#">number</a> <a href="#">communities</a> <a href="#">large-community</a> <a href="#">string</a>
<b>Tree</b>	<a href="#">large-community</a>
<b>String Length</b>	1 to 72
<b>Configurable</b>	False

**local-pref number**

<b>Description</b>	The value of the LOCAL_PREF path attribute.
<b>Context</b>	<a href="#">network-instance name</a> <a href="#">string</a> <a href="#">bgp-rib</a> <a href="#">attr-sets</a> <a href="#">attr-set</a> <a href="#">attr-set-type</a> <a href="#">keyword</a> <a href="#">index</a> <a href="#">number</a> <a href="#">local-pref</a> <a href="#">number</a>
<b>Tree</b>	<a href="#">local-pref</a>
<b>Configurable</b>	False

**med number**

<b>Description</b>	The value of the MULTI_EXIT_DISC path attribute.
--------------------	--

<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">bgp-rib</a> <a href="#">attr-sets</a> <a href="#">attr-set</a> <a href="#">attr-set-type</a> <i>keyword</i> <a href="#">index</a> <i>number</i> <a href="#">med</a> <i>number</i>
<b>Tree</b>	<a href="#">med</a>
<b>Configurable</b>	False

### **next-hop (*ipv4-address* | *ipv6-address-with-zone*)**

<b>Description</b>	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).
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">bgp-rib</a> <a href="#">attr-sets</a> <a href="#">attr-set</a> <a href="#">attr-set-type</a> <i>keyword</i> <a href="#">index</a> <i>number</i> <a href="#">next-hop</a> ( <i>ipv4-address</i>   <i>ipv6-address-with-zone</i> )
<b>Tree</b>	<a href="#">next-hop</a>
<b>Configurable</b>	False

### **origin *keyword***

<b>Description</b>	The value of the ORIGIN path attribute
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">bgp-rib</a> <a href="#">attr-sets</a> <a href="#">attr-set</a> <a href="#">attr-set-type</a> <i>keyword</i> <a href="#">index</a> <i>number</i> <a href="#">origin</a> <i>keyword</i>
<b>Tree</b>	<a href="#">origin</a>
<b>Options</b>	<ul style="list-style-type: none"> <li>• <a href="#">igp</a></li> <li>• <a href="#">egp</a></li> <li>• <a href="#">incomplete</a></li> </ul>
<b>Configurable</b>	False

### **originator-id (*ipv4-address* | *ipv6-address*)**

<b>Description</b>	The address in the ORIGINATOR_ID attribute added by a route reflector.
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">bgp-rib</a> <a href="#">attr-sets</a> <a href="#">attr-set</a> <a href="#">attr-set-type</a> <i>keyword</i> <a href="#">index</a> <i>number</i> <a href="#">originator-id</a> ( <i>ipv4-address</i>   <i>ipv6-address</i> )
<b>Tree</b>	<a href="#">originator-id</a>
<b>Configurable</b>	False

### **pmsi-tunnel**

<b>Description</b>	A container for the Provider Multicast Service Interface Tunnel Attribute (PTA) of the attribute set.
--------------------	---

<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">bgp-rib</a> <a href="#">attr-sets</a> <a href="#">attr-set</a> <a href="#">attr-set-type</a> <i>keyword</i> <a href="#">index</a> <i>number</i> <a href="#">pmsi-tunnel</a>
<b>Tree</b>	<a href="#">pmsi-tunnel</a>
<b>Configurable</b>	False

**flags**

<b>Description</b>	A container for the PTA Flags
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">bgp-rib</a> <a href="#">attr-sets</a> <a href="#">attr-set</a> <a href="#">attr-set-type</a> <i>keyword</i> <a href="#">index</a> <i>number</i> <a href="#">pmsi-tunnel</a> <a href="#">flags</a>
<b>Tree</b>	<a href="#">flags</a>
<b>Configurable</b>	False

**assisted-replication-type** *keyword*

<b>Description</b>	The value of the assisted-replication role type.
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">bgp-rib</a> <a href="#">attr-sets</a> <a href="#">attr-set</a> <a href="#">attr-set-type</a> <i>keyword</i> <a href="#">index</a> <i>number</i> <a href="#">pmsi-tunnel</a> <a href="#">flags</a> <a href="#">assisted-replication-type</a> <i>keyword</i>
<b>Tree</b>	<a href="#">assisted-replication-type</a>
<b>Options</b>	<ul style="list-style-type: none"> <li>• none</li> <li>• ar-replicator</li> <li>• ar-leaf</li> <li>• reserved</li> </ul>
<b>Configurable</b>	False

**leaf-information-required** *boolean*

<b>Description</b>	The value of the Leaf Information Required (LIR) flag.
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">bgp-rib</a> <a href="#">attr-sets</a> <a href="#">attr-set</a> <a href="#">attr-set-type</a> <i>keyword</i> <a href="#">index</a> <i>number</i> <a href="#">pmsi-tunnel</a> <a href="#">flags</a> <a href="#">leaf-information-required</a> <i>boolean</i>
<b>Tree</b>	<a href="#">leaf-information-required</a>
<b>Configurable</b>	False

**pruned-flood-list**

<b>Description</b>	A container for the optimized ingress replication pruned flood list flags.
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">bgp-rib</a> <a href="#">attr-sets</a> <a href="#">attr-set</a> <a href="#">attr-set-type</a> <i>keyword</i> <a href="#">index</a> <i>number</i> <a href="#">pmsi-tunnel</a> <a href="#">flags</a> <a href="#">pruned-flood-list</a>

<b>Tree</b>	<a href="#">pruned-flood-list</a>
<b>Configurable</b>	False

### **broadcast-multicast *keyword***

<b>Description</b>	The value of the broadcast-multicast flag.
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">bgp-rib</a> <a href="#">attr-sets</a> <a href="#">attr-set</a> <a href="#">attr-set-type</a> <i>keyword</i> <a href="#">index</a> <i>number</i> <a href="#">pmsi-tunnel</a> <a href="#">flags</a> <a href="#">pruned-flood-list</a> <a href="#">broadcast-multicast</a> <i>keyword</i>
<b>Tree</b>	<a href="#">broadcast-multicast</a>
<b>Options</b>	<ul style="list-style-type: none"> <li>• 0</li> <li>• 1</li> </ul>
<b>Configurable</b>	False

### **unknown-unicast *keyword***

<b>Description</b>	The value of the unknown-unicast flag.
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">bgp-rib</a> <a href="#">attr-sets</a> <a href="#">attr-set</a> <a href="#">attr-set-type</a> <i>keyword</i> <a href="#">index</a> <i>number</i> <a href="#">pmsi-tunnel</a> <a href="#">flags</a> <a href="#">pruned-flood-list</a> <a href="#">unknown-unicast</a> <i>keyword</i>
<b>Tree</b>	<a href="#">unknown-unicast</a>
<b>Options</b>	<ul style="list-style-type: none"> <li>• 0</li> <li>• 1</li> </ul>
<b>Configurable</b>	False

### **tunnel-endpoint (*ipv4-address* | *ipv6-address*)**

<b>Description</b>	The value of the tunnel-endpoint in the PMSI Tunnel Attribute.
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">bgp-rib</a> <a href="#">attr-sets</a> <a href="#">attr-set</a> <a href="#">attr-set-type</a> <i>keyword</i> <a href="#">index</a> <i>number</i> <a href="#">pmsi-tunnel</a> <a href="#">tunnel-endpoint</a> ( <i>ipv4-address</i>   <i>ipv6-address</i> )
<b>Tree</b>	<a href="#">tunnel-endpoint</a>
<b>Configurable</b>	False

### **tunnel-type *keyword***

<b>Description</b>	The value of the tunnel-type in the PMSI Tunnel Attribute
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">bgp-rib</a> <a href="#">attr-sets</a> <a href="#">attr-set</a> <a href="#">attr-set-type</a> <i>keyword</i> <a href="#">index</a> <i>number</i> <a href="#">pmsi-tunnel</a> <a href="#">tunnel-type</a> <i>keyword</i>

<b>Tree</b>	<a href="#">tunnel-type</a>
<b>Options</b>	<ul style="list-style-type: none"> <li>• no-tunnel</li> <li>• rsvp-te-p2mp</li> <li>• mldp-p2mp</li> <li>• pim-ssm</li> <li>• pim-sm</li> <li>• bidir-pim</li> <li>• ingress-replication</li> <li>• mldp-mp2mp</li> <li>• assisted-replication</li> <li>• bier</li> </ul>
<b>Configurable</b>	False

### **vni number**

<b>Description</b>	The VXLAN Network Identifier
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">bgp-rib attr-sets attr-set attr-set-type</a> <i>keyword</i> <a href="#">index number</a> <a href="#">pmsi-tunnel vni number</a>
<b>Tree</b>	<a href="#">vni</a>
<b>Range</b>	0 to 16777215
<b>Configurable</b>	False

### **unknown-attributes**

<b>Description</b>	Container for unknown path attributes
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">bgp-rib attr-sets attr-set attr-set-type</a> <i>keyword</i> <a href="#">index number</a> <a href="#">unknown-attributes</a>
<b>Tree</b>	<a href="#">unknown-attributes</a>
<b>Configurable</b>	False

### **unknown-attribute [unknown-attr-index](#) number**

<b>Description</b>	Enter the unknown-attribute list instance
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">bgp-rib attr-sets attr-set attr-set-type</a> <i>keyword</i> <a href="#">index number</a> <a href="#">unknown-attributes</a> <a href="#">unknown-attribute</a> <a href="#">unknown-attr-index number</a>
<b>Tree</b>	<a href="#">unknown-attribute</a>

**Configurable** False

### unknown-attr-index *number*

**Description** RIB attribute unknown attribute index

**Context** [network-instance name](#) [string](#) [bgp-rib](#) [attr-sets](#) [attr-set](#) [attr-set-type](#) [keyword](#) [index](#) [number](#) [unknown-attributes](#) [unknown-attribute](#) [unknown-attr-index](#) [number](#)

**Configurable** False

### attr-len *number*

**Description** The length of the unknown path attribute

**Context** [network-instance name](#) [string](#) [bgp-rib](#) [attr-sets](#) [attr-set](#) [attr-set-type](#) [keyword](#) [index](#) [number](#) [unknown-attributes](#) [unknown-attribute](#) [unknown-attr-index](#) [number](#) [attr-len](#) [number](#)

**Tree** [attr-len](#)

**Configurable** False

### attr-type *number*

**Description** The type code of the unknown path attribute

**Context** [network-instance name](#) [string](#) [bgp-rib](#) [attr-sets](#) [attr-set](#) [attr-set-type](#) [keyword](#) [index](#) [number](#) [unknown-attributes](#) [unknown-attribute](#) [unknown-attr-index](#) [number](#) [attr-type](#) [number](#)

**Tree** [attr-type](#)

**Configurable** False

### extended *boolean*

**Description** Set to true if the unknown path attribute has the extended length flag is set to 1.

**Context** [network-instance name](#) [string](#) [bgp-rib](#) [attr-sets](#) [attr-set](#) [attr-set-type](#) [keyword](#) [index](#) [number](#) [unknown-attributes](#) [unknown-attribute](#) [unknown-attr-index](#) [number](#) [extended](#) [boolean](#)

**Tree** [extended](#)

**Configurable** False

**optional *boolean***

<b>Description</b>	Set to true if the unknown path attribute has the optional flag is set to 1.
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">bgp-rib attr-sets attr-set attr-set-type keyword index number unknown-attributes unknown-attribute unknown-attr-index number</a> <a href="#">optional boolean</a>
<b>Tree</b>	<a href="#">optional</a>
<b>Configurable</b>	False

**partial *boolean***

<b>Description</b>	Set to true if the unknown path attribute has the partial flag is set to 1.
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">bgp-rib attr-sets attr-set attr-set-type keyword index number unknown-attributes unknown-attribute unknown-attr-index number</a> <a href="#">partial boolean</a>
<b>Tree</b>	<a href="#">partial</a>
<b>Configurable</b>	False

**transitive *boolean***

<b>Description</b>	Set to true if the unknown path attribute has the transitive flag is set to 1.
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">bgp-rib attr-sets attr-set attr-set-type keyword index number unknown-attributes unknown-attribute unknown-attr-index number</a> <a href="#">transitive boolean</a>
<b>Tree</b>	<a href="#">transitive</a>
<b>Configurable</b>	False

**evpn**

<b>Description</b>	Container for RIB state of EVPN routes.
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">bgp-rib evpn</a>
<b>Tree</b>	<a href="#">evpn</a>
<b>Configurable</b>	False

**rib-in-out**

<b>Description</b>	Container for BGP routes learned and advertised to BGP neighbors.
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">bgp-rib evpn rib-in-out</a>
<b>Tree</b>	<a href="#">rib-in-out</a>



**Configurable** False

## rib-in-post

**Description** Container for the post-import-policy version of BGP routes learned from BGP neighbors.

**Context** [network-instance name](#) *string* [bgp-rib](#) [evpn](#) [rib-in-out](#) [rib-in-post](#)

**Tree** [rib-in-post](#)

**Configurable** False

## **ethernet-ad-routes** [route-distinguisher](#) (*string* | *string* | *string* | *string*) [esi](#) *string* [ethernet-tag-id](#) *number* [neighbor](#) (*ipv4-address* | *ipv6-address*)

**Description** List of Ethernet AD (Auto-Discovery) routes

**Context** [network-instance name](#) *string* [bgp-rib](#) [evpn](#) [rib-in-out](#) [rib-in-post](#) [ethernet-ad-routes](#) [route-distinguisher](#) (*string* | *string* | *string* | *string*) [esi](#) *string* [ethernet-tag-id](#) *number* [neighbor](#) (*ipv4-address* | *ipv6-address*)

**Tree** [ethernet-ad-routes](#)

**Configurable** False

## **route-distinguisher** (*string* | *string* | *string* | *string*)

**Description** The route distinguisher encoded in the NLRI.

**Context** [network-instance name](#) *string* [bgp-rib](#) [evpn](#) [rib-in-out](#) [rib-in-post](#) [ethernet-ad-routes](#) [route-distinguisher](#) (*string* | *string* | *string* | *string*) [esi](#) *string* [ethernet-tag-id](#) *number* [neighbor](#) (*ipv4-address* | *ipv6-address*)

**Configurable** False

## **esi** *string*

**Description** The Ethernet Segment Identifier encoded in the NLRI

**Context** [network-instance name](#) *string* [bgp-rib](#) [evpn](#) [rib-in-out](#) [rib-in-post](#) [ethernet-ad-routes](#) [route-distinguisher](#) (*string* | *string* | *string* | *string*) [esi](#) *string* [ethernet-tag-id](#) *number* [neighbor](#) (*ipv4-address* | *ipv6-address*)

**Configurable** False

**ethernet-tag-id *number***

<b>Description</b>	The 32-bit Ethernet Tag ID encoded in the NLRI. The Ethernet Tag ID identifies a broadcast domain.
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">bgp-rib</a> <a href="#">evpn</a> <a href="#">rib-in-out</a> <a href="#">rib-in-post</a> <a href="#">ethernet-ad-routes</a> <a href="#">route-distinguisher</a> ( <i>string</i>   <i>string</i>   <i>string</i>   <i>string</i> ) <a href="#">esi</a> <i>string</i> <a href="#">ethernet-tag-id</a> <i>number</i> <a href="#">neighbor</a> ( <i>ipv4-address</i>   <i>ipv6-address</i> )
<b>Configurable</b>	False

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

<b>Description</b>	If the route was learned from a BGP neighbor, this is the IPv4 or IPv6 address of that neighbor.
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">bgp-rib</a> <a href="#">evpn</a> <a href="#">rib-in-out</a> <a href="#">rib-in-post</a> <a href="#">ethernet-ad-routes</a> <a href="#">route-distinguisher</a> ( <i>string</i>   <i>string</i>   <i>string</i>   <i>string</i> ) <a href="#">esi</a> <i>string</i> <a href="#">ethernet-tag-id</a> <i>number</i> <a href="#">neighbor</a> ( <i>ipv4-address</i>   <i>ipv6-address</i> )
<b>Configurable</b>	False

**attr-id *reference***

<b>Description</b>	Leaf reference to networkinstance/protocols/bgp/rib/attr-sets/attr-set/index.
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">bgp-rib</a> <a href="#">evpn</a> <a href="#">rib-in-out</a> <a href="#">rib-in-post</a> <a href="#">ethernet-ad-routes</a> <a href="#">route-distinguisher</a> ( <i>string</i>   <i>string</i>   <i>string</i>   <i>string</i> ) <a href="#">esi</a> <i>string</i> <a href="#">ethernet-tag-id</a> <i>number</i> <a href="#">neighbor</a> ( <i>ipv4-address</i>   <i>ipv6-address</i> ) <a href="#">attr-id</a> <i>reference</i>
<b>Tree</b>	<a href="#">attr-id</a>
<b>Reference</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">bgp-rib</a> <a href="#">attr-sets</a> <a href="#">attr-set</a> <a href="#">attr-set-type</a> <i>keyword</i> <a href="#">index</a> <i>number</i>
<b>Configurable</b>	False

**best-route *boolean***

<b>Description</b>	Set to true if the route is the BGP best path for the prefix.
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">bgp-rib</a> <a href="#">evpn</a> <a href="#">rib-in-out</a> <a href="#">rib-in-post</a> <a href="#">ethernet-ad-routes</a> <a href="#">route-distinguisher</a> ( <i>string</i>   <i>string</i>   <i>string</i>   <i>string</i> ) <a href="#">esi</a> <i>string</i> <a href="#">ethernet-tag-id</a> <i>number</i> <a href="#">neighbor</a> ( <i>ipv4-address</i>   <i>ipv6-address</i> ) <a href="#">best-route</a> <i>boolean</i>
<b>Tree</b>	<a href="#">best-route</a>
<b>Configurable</b>	False

**invalid-reason**

<b>Description</b>	Enter the invalid-reason context
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">bgp-rib</a> <a href="#">evpn</a> <a href="#">rib-in-out</a> <a href="#">rib-in-post</a> <a href="#">ethernet-ad-routes</a> <a href="#">route-distinguisher</a> ( <i>string</i>   <i>string</i>   <i>string</i>   <i>string</i> ) <a href="#">esi</a> <i>string</i> <a href="#">ethernet-tag-id</a> <i>number</i> <a href="#">neighbor</a> ( <i>ipv4-address</i>   <i>ipv6-address</i> ) <a href="#">invalid-reason</a>
<b>Tree</b>	<a href="#">invalid-reason</a>
<b>Configurable</b>	False

**as-loop *boolean***

<b>Description</b>	Indicates true if the BGP route has an AS path loop that exceeds the configured threshold.
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">bgp-rib</a> <a href="#">evpn</a> <a href="#">rib-in-out</a> <a href="#">rib-in-post</a> <a href="#">ethernet-ad-routes</a> <a href="#">route-distinguisher</a> ( <i>string</i>   <i>string</i>   <i>string</i>   <i>string</i> ) <a href="#">esi</a> <i>string</i> <a href="#">ethernet-tag-id</a> <i>number</i> <a href="#">neighbor</a> ( <i>ipv4-address</i>   <i>ipv6-address</i> ) <a href="#">invalid-reason</a> <a href="#">as-loop</a> <i>boolean</i>
<b>Tree</b>	<a href="#">as-loop</a>
<b>Configurable</b>	False

**cluster-loop *boolean***

<b>Description</b>	Indicates true if the BGP route has a cluster-list loop.
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">bgp-rib</a> <a href="#">evpn</a> <a href="#">rib-in-out</a> <a href="#">rib-in-post</a> <a href="#">ethernet-ad-routes</a> <a href="#">route-distinguisher</a> ( <i>string</i>   <i>string</i>   <i>string</i>   <i>string</i> ) <a href="#">esi</a> <i>string</i> <a href="#">ethernet-tag-id</a> <i>number</i> <a href="#">neighbor</a> ( <i>ipv4-address</i>   <i>ipv6-address</i> ) <a href="#">invalid-reason</a> <a href="#">cluster-loop</a> <i>boolean</i>
<b>Tree</b>	<a href="#">cluster-loop</a>
<b>Configurable</b>	False

**next-hop-unresolved *boolean***

<b>Description</b>	Indicates true if the BGP route has a BGP next-hop that cannot be resolved to an outgoing interface.
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">bgp-rib</a> <a href="#">evpn</a> <a href="#">rib-in-out</a> <a href="#">rib-in-post</a> <a href="#">ethernet-ad-routes</a> <a href="#">route-distinguisher</a> ( <i>string</i>   <i>string</i>   <i>string</i>   <i>string</i> ) <a href="#">esi</a> <i>string</i> <a href="#">ethernet-tag-id</a> <i>number</i> <a href="#">neighbor</a> ( <i>ipv4-address</i>   <i>ipv6-address</i> ) <a href="#">invalid-reason</a> <a href="#">next-hop-unresolved</a> <i>boolean</i>
<b>Tree</b>	<a href="#">next-hop-unresolved</a>
<b>Configurable</b>	False

**rejected-route *boolean***

<b>Description</b>	Indicates true if the route was rejected by an import policy.
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">bgp-rib</a> <a href="#">evpn</a> <a href="#">rib-in-out</a> <a href="#">rib-in-post</a> <a href="#">ethernet-ad-routes</a> <a href="#">route-distinguisher</a> ( <i>string</i>   <i>string</i>   <i>string</i>   <i>string</i> ) <a href="#">esi</a> <i>string</i> <a href="#">ethernet-tag-id</a> <i>number</i> <a href="#">neighbor</a> ( <i>ipv4-address</i>   <i>ipv6-address</i> ) <a href="#">invalid-reason</a> <a href="#">rejected-route</a> <i>boolean</i>
<b>Tree</b>	<a href="#">rejected-route</a>
<b>Configurable</b>	False

**last-modified *string***

<b>Description</b>	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.
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">bgp-rib</a> <a href="#">evpn</a> <a href="#">rib-in-out</a> <a href="#">rib-in-post</a> <a href="#">ethernet-ad-routes</a> <a href="#">route-distinguisher</a> ( <i>string</i>   <i>string</i>   <i>string</i>   <i>string</i> ) <a href="#">esi</a> <i>string</i> <a href="#">ethernet-tag-id</a> <i>number</i> <a href="#">neighbor</a> ( <i>ipv4-address</i>   <i>ipv6-address</i> ) <a href="#">last-modified</a> <i>string</i>
<b>Tree</b>	<a href="#">last-modified</a>
<b>String Length</b>	20 to 32
<b>Configurable</b>	False

**pending-delete *boolean***

<b>Description</b>	Set to true if the route is marked for deletion.
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">bgp-rib</a> <a href="#">evpn</a> <a href="#">rib-in-out</a> <a href="#">rib-in-post</a> <a href="#">ethernet-ad-routes</a> <a href="#">route-distinguisher</a> ( <i>string</i>   <i>string</i>   <i>string</i>   <i>string</i> ) <a href="#">esi</a> <i>string</i> <a href="#">ethernet-tag-id</a> <i>number</i> <a href="#">neighbor</a> ( <i>ipv4-address</i>   <i>ipv6-address</i> ) <a href="#">pending-delete</a> <i>boolean</i>
<b>Tree</b>	<a href="#">pending-delete</a>
<b>Configurable</b>	False

**stale-route *boolean***

<b>Description</b>	Set to true if the route is stale due to BGP graceful restart.
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">bgp-rib</a> <a href="#">evpn</a> <a href="#">rib-in-out</a> <a href="#">rib-in-post</a> <a href="#">ethernet-ad-routes</a> <a href="#">route-distinguisher</a> ( <i>string</i>   <i>string</i>   <i>string</i>   <i>string</i> ) <a href="#">esi</a> <i>string</i> <a href="#">ethernet-tag-id</a> <i>number</i> <a href="#">neighbor</a> ( <i>ipv4-address</i>   <i>ipv6-address</i> ) <a href="#">stale-route</a> <i>boolean</i>
<b>Tree</b>	<a href="#">stale-route</a>

**Configurable** False

### **tie-break-reason *keyword***

<b>Description</b>	Indicates the reason why a BGP route is sorted behind the next best route. The BGP best path displays a value of 'none'.
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">bgp-rib evpn rib-in-out rib-in-post ethernet-ad-routes route-distinguisher</a> ( <i>string</i>   <i>string</i>   <i>string</i>   <i>string</i> ) <a href="#">esi</a> <i>string</i> <a href="#">ethernet-tag-id</a> <i>number</i> <a href="#">neighbor</a> ( <i>ipv4-address</i>   <i>ipv6-address</i> ) <b>tie-break-reason</b> <i>keyword</i>
<b>Tree</b>	<a href="#">tie-break-reason</a>
<b>Options</b>	<ul style="list-style-type: none"> <li>• unknown</li> <li>• none</li> <li>• origin</li> <li>• as-path-length</li> <li>• next-hop-cost</li> <li>• med</li> <li>• local-pref</li> <li>• aggregate</li> <li>• originator-id</li> <li>• cluster-list</li> <li>• extended-community</li> <li>• aigp</li> <li>• missing-attribute</li> <li>• rtm-pref</li> <li>• owner</li> <li>• eigrp-labeled</li> <li>• vpn-route</li> <li>• ebgp-route</li> <li>• peer-ip</li> <li>• local-peer</li> <li>• multi-path</li> <li>• vpn-rd</li> <li>• next-hop-type</li> <li>• invalid-route</li> <li>• origin-validation</li> <li>• long-live-gr-stale</li> <li>• default-originate</li> </ul>

- rtm-install-disabled
- peer-router-id
- path-identifier

**Configurable** False

### used-route *boolean*

**Description** Indicates true if the route is being used for forwarding.

**Context** [network-instance name](#) *string* [bgp-rib evpn rib-in-out rib-in-post ethernet-ad-routes route-distinguisher](#) (*string* | *string* | *string* | *string*) [esi](#) *string* [ethernet-tag-id number neighbor](#) (*ipv4-address* | *ipv6-address*) [used-route](#) *boolean*

**Tree** [used-route](#)

**Configurable** False

### valid-route *boolean*

**Description** Indicates true if the route is valid.

**Context** [network-instance name](#) *string* [bgp-rib evpn rib-in-out rib-in-post ethernet-ad-routes route-distinguisher](#) (*string* | *string* | *string* | *string*) [esi](#) *string* [ethernet-tag-id number neighbor](#) (*ipv4-address* | *ipv6-address*) [valid-route](#) *boolean*

**Tree** [valid-route](#)

**Configurable** False

### vni *number*

**Description** The VXLAN Network Identifier

**Context** [network-instance name](#) *string* [bgp-rib evpn rib-in-out rib-in-post ethernet-ad-routes route-distinguisher](#) (*string* | *string* | *string* | *string*) [esi](#) *string* [ethernet-tag-id number neighbor](#) (*ipv4-address* | *ipv6-address*) [vni](#) *number*

**Tree** [vni](#)

**Range** 0 to 16777215

**Configurable** False

**ethernet-segment-routes** [route-distinguisher](#) (*string* | *string* | *string* | *string*) [esi](#) *string* [originating-router](#) (*ipv4-address* | *ipv6-address*) [neighbor](#) (*ipv4-address* | *ipv6-address*)

**Description** List of Ethernet Segment routes

<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">bgp-rib evpn rib-in-out rib-in-post ethernet-segment-routes route-distinguisher</a> ( <i>string</i>   <i>string</i>   <i>string</i>   <i>string</i> ) <a href="#">esi</a> <i>string</i> <a href="#">originating-router</a> ( <i>ipv4-address</i>   <i>ipv6-address</i> ) <a href="#">neighbor</a> ( <i>ipv4-address</i>   <i>ipv6-address</i> )
<b>Tree</b>	<a href="#">ethernet-segment-routes</a>
<b>Configurable</b>	False

### **route-distinguisher (*string* | *string* | *string* | *string*)**

<b>Description</b>	The route distinguisher encoded in the NLRI.
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">bgp-rib evpn rib-in-out rib-in-post ethernet-segment-routes route-distinguisher</a> ( <i>string</i>   <i>string</i>   <i>string</i>   <i>string</i> ) <a href="#">esi</a> <i>string</i> <a href="#">originating-router</a> ( <i>ipv4-address</i>   <i>ipv6-address</i> ) <a href="#">neighbor</a> ( <i>ipv4-address</i>   <i>ipv6-address</i> )
<b>Configurable</b>	False

### **esi *string***

<b>Description</b>	The Ethernet Segment Identifier
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">bgp-rib evpn rib-in-out rib-in-post ethernet-segment-routes route-distinguisher</a> ( <i>string</i>   <i>string</i>   <i>string</i>   <i>string</i> ) <a href="#">esi</a> <i>string</i> <a href="#">originating-router</a> ( <i>ipv4-address</i>   <i>ipv6-address</i> ) <a href="#">neighbor</a> ( <i>ipv4-address</i>   <i>ipv6-address</i> )
<b>Configurable</b>	False

### **originating-router (*ipv4-address* | *ipv6-address*)**

<b>Description</b>	The IPv4 or IPv6 address of the originating router
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">bgp-rib evpn rib-in-out rib-in-post ethernet-segment-routes route-distinguisher</a> ( <i>string</i>   <i>string</i>   <i>string</i>   <i>string</i> ) <a href="#">esi</a> <i>string</i> <a href="#">originating-router</a> ( <i>ipv4-address</i>   <i>ipv6-address</i> ) <a href="#">neighbor</a> ( <i>ipv4-address</i>   <i>ipv6-address</i> )
<b>Configurable</b>	False

### **neighbor (*ipv4-address* | *ipv6-address*)**

<b>Description</b>	If the route was learned from a BGP neighbor, this is the IPv4 or IPv6 address of that neighbor.
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">bgp-rib evpn rib-in-out rib-in-post ethernet-segment-routes route-distinguisher</a> ( <i>string</i>   <i>string</i>   <i>string</i>   <i>string</i> ) <a href="#">esi</a> <i>string</i>

	<a href="#">originating-router</a> ( <i>ipv4-address</i>   <i>ipv6-address</i> ) <a href="#">neighbor</a> ( <i>ipv4-address</i>   <i>ipv6-address</i> )
<b>Configurable</b>	False

**attr-id reference**

<b>Description</b>	Leaf reference to networkinstance/protocols/bgp/rib/attr-sets/attr-set/index.
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">bgp-rib</a> <a href="#">evpn</a> <a href="#">rib-in-out</a> <a href="#">rib-in-post</a> <a href="#">ethernet-segment-routes</a> <a href="#">route-distinguisher</a> ( <i>string</i>   <i>string</i>   <i>string</i>   <i>string</i> ) <a href="#">esi</a> <i>string</i> <a href="#">originating-router</a> ( <i>ipv4-address</i>   <i>ipv6-address</i> ) <a href="#">neighbor</a> ( <i>ipv4-address</i>   <i>ipv6-address</i> ) <a href="#">attr-id</a> <i>reference</i>
<b>Tree</b>	<a href="#">attr-id</a>
<b>Reference</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">bgp-rib</a> <a href="#">attr-sets</a> <a href="#">attr-set</a> <a href="#">attr-set-type</a> <i>keyword</i> <a href="#">index</a> <i>number</i>
<b>Configurable</b>	False

**best-route boolean**

<b>Description</b>	Set to true if the route is the BGP best path for the prefix.
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">bgp-rib</a> <a href="#">evpn</a> <a href="#">rib-in-out</a> <a href="#">rib-in-post</a> <a href="#">ethernet-segment-routes</a> <a href="#">route-distinguisher</a> ( <i>string</i>   <i>string</i>   <i>string</i>   <i>string</i> ) <a href="#">esi</a> <i>string</i> <a href="#">originating-router</a> ( <i>ipv4-address</i>   <i>ipv6-address</i> ) <a href="#">neighbor</a> ( <i>ipv4-address</i>   <i>ipv6-address</i> ) <a href="#">best-route</a> <i>boolean</i>
<b>Tree</b>	<a href="#">best-route</a>
<b>Configurable</b>	False

**invalid-reason**

<b>Description</b>	Enter the invalid-reason context
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">bgp-rib</a> <a href="#">evpn</a> <a href="#">rib-in-out</a> <a href="#">rib-in-post</a> <a href="#">ethernet-segment-routes</a> <a href="#">route-distinguisher</a> ( <i>string</i>   <i>string</i>   <i>string</i>   <i>string</i> ) <a href="#">esi</a> <i>string</i> <a href="#">originating-router</a> ( <i>ipv4-address</i>   <i>ipv6-address</i> ) <a href="#">neighbor</a> ( <i>ipv4-address</i>   <i>ipv6-address</i> ) <a href="#">invalid-reason</a>
<b>Tree</b>	<a href="#">invalid-reason</a>
<b>Configurable</b>	False

**as-loop boolean**

<b>Description</b>	Indicates true if the BGP route has an AS path loop that exceeds the configured threshold.
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<b>Context</b>	<code>network-instance name</code> <i>string</i> <code>bgp-rib evpn rib-in-out rib-in-post ethernet-segment-routes route-distinguisher</code> ( <i>string</i>   <i>string</i>   <i>string</i>   <i>string</i> ) <code>esi</code> <i>string</i> <code>originating-router</code> ( <i>ipv4-address</i>   <i>ipv6-address</i> ) <code>neighbor</code> ( <i>ipv4-address</i>   <i>ipv6-address</i> ) <code>invalid-reason as-loop</code> <i>boolean</i>
<b>Tree</b>	<code>as-loop</code>
<b>Configurable</b>	False

### **cluster-loop** *boolean*

<b>Description</b>	Indicates true if the BGP route has a cluster-list loop.
<b>Context</b>	<code>network-instance name</code> <i>string</i> <code>bgp-rib evpn rib-in-out rib-in-post ethernet-segment-routes route-distinguisher</code> ( <i>string</i>   <i>string</i>   <i>string</i>   <i>string</i> ) <code>esi</code> <i>string</i> <code>originating-router</code> ( <i>ipv4-address</i>   <i>ipv6-address</i> ) <code>neighbor</code> ( <i>ipv4-address</i>   <i>ipv6-address</i> ) <code>invalid-reason cluster-loop</code> <i>boolean</i>
<b>Tree</b>	<code>cluster-loop</code>
<b>Configurable</b>	False

### **next-hop-unresolved** *boolean*

<b>Description</b>	Indicates true if the BGP route has a BGP next-hop that cannot be resolved to an outgoing interface.
<b>Context</b>	<code>network-instance name</code> <i>string</i> <code>bgp-rib evpn rib-in-out rib-in-post ethernet-segment-routes route-distinguisher</code> ( <i>string</i>   <i>string</i>   <i>string</i>   <i>string</i> ) <code>esi</code> <i>string</i> <code>originating-router</code> ( <i>ipv4-address</i>   <i>ipv6-address</i> ) <code>neighbor</code> ( <i>ipv4-address</i>   <i>ipv6-address</i> ) <code>invalid-reason next-hop-unresolved</code> <i>boolean</i>
<b>Tree</b>	<code>next-hop-unresolved</code>
<b>Configurable</b>	False

### **rejected-route** *boolean*

<b>Description</b>	Indicates true if the route was rejected by an import policy.
<b>Context</b>	<code>network-instance name</code> <i>string</i> <code>bgp-rib evpn rib-in-out rib-in-post ethernet-segment-routes route-distinguisher</code> ( <i>string</i>   <i>string</i>   <i>string</i>   <i>string</i> ) <code>esi</code> <i>string</i> <code>originating-router</code> ( <i>ipv4-address</i>   <i>ipv6-address</i> ) <code>neighbor</code> ( <i>ipv4-address</i>   <i>ipv6-address</i> ) <code>invalid-reason rejected-route</code> <i>boolean</i>
<b>Tree</b>	<code>rejected-route</code>
<b>Configurable</b>	False

**last-modified *string***

<b>Description</b>	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.
<b>Context</b>	<a href="#">network-instance name</a> <a href="#">string</a> <a href="#">bgp-rib</a> <a href="#">evpn</a> <a href="#">rib-in-out</a> <a href="#">rib-in-post</a> <a href="#">ethernet-segment-routes</a> <a href="#">route-distinguisher</a> ( <a href="#">string</a>   <a href="#">string</a>   <a href="#">string</a>   <a href="#">string</a> ) <a href="#">esi</a> <a href="#">string</a> <a href="#">originating-router</a> ( <a href="#">ipv4-address</a>   <a href="#">ipv6-address</a> ) <a href="#">neighbor</a> ( <a href="#">ipv4-address</a>   <a href="#">ipv6-address</a> ) <a href="#">last-modified</a> <a href="#">string</a>
<b>Tree</b>	<a href="#">last-modified</a>
<b>String Length</b>	20 to 32
<b>Configurable</b>	False

**pending-delete *boolean***

<b>Description</b>	Set to true if the route is marked for deletion.
<b>Context</b>	<a href="#">network-instance name</a> <a href="#">string</a> <a href="#">bgp-rib</a> <a href="#">evpn</a> <a href="#">rib-in-out</a> <a href="#">rib-in-post</a> <a href="#">ethernet-segment-routes</a> <a href="#">route-distinguisher</a> ( <a href="#">string</a>   <a href="#">string</a>   <a href="#">string</a>   <a href="#">string</a> ) <a href="#">esi</a> <a href="#">string</a> <a href="#">originating-router</a> ( <a href="#">ipv4-address</a>   <a href="#">ipv6-address</a> ) <a href="#">neighbor</a> ( <a href="#">ipv4-address</a>   <a href="#">ipv6-address</a> ) <a href="#">pending-delete</a> <a href="#">boolean</a>
<b>Tree</b>	<a href="#">pending-delete</a>
<b>Configurable</b>	False

**stale-route *boolean***

<b>Description</b>	Set to true if the route is stale due to BGP graceful restart.
<b>Context</b>	<a href="#">network-instance name</a> <a href="#">string</a> <a href="#">bgp-rib</a> <a href="#">evpn</a> <a href="#">rib-in-out</a> <a href="#">rib-in-post</a> <a href="#">ethernet-segment-routes</a> <a href="#">route-distinguisher</a> ( <a href="#">string</a>   <a href="#">string</a>   <a href="#">string</a>   <a href="#">string</a> ) <a href="#">esi</a> <a href="#">string</a> <a href="#">originating-router</a> ( <a href="#">ipv4-address</a>   <a href="#">ipv6-address</a> ) <a href="#">neighbor</a> ( <a href="#">ipv4-address</a>   <a href="#">ipv6-address</a> ) <a href="#">stale-route</a> <a href="#">boolean</a>
<b>Tree</b>	<a href="#">stale-route</a>
<b>Configurable</b>	False

**tie-break-reason *keyword***

<b>Description</b>	Indicates the reason why a BGP route is sorted behind the next best route. The BGP best path displays a value of 'none'.
<b>Context</b>	<a href="#">network-instance name</a> <a href="#">string</a> <a href="#">bgp-rib</a> <a href="#">evpn</a> <a href="#">rib-in-out</a> <a href="#">rib-in-post</a> <a href="#">ethernet-segment-routes</a> <a href="#">route-distinguisher</a> ( <a href="#">string</a>   <a href="#">string</a>   <a href="#">string</a>   <a href="#">string</a> ) <a href="#">esi</a> <a href="#">string</a> <a href="#">originating-router</a> ( <a href="#">ipv4-address</a>   <a href="#">ipv6-address</a> ) <a href="#">neighbor</a> ( <a href="#">ipv4-address</a>   <a href="#">ipv6-address</a> ) <a href="#">tie-break-reason</a> <a href="#">keyword</a>

<b>Tree</b>	<a href="#">tie-break-reason</a>
<b>Options</b>	<ul style="list-style-type: none"> <li>• unknown</li> <li>• none</li> <li>• origin</li> <li>• as-path-length</li> <li>• next-hop-cost</li> <li>• med</li> <li>• local-pref</li> <li>• aggregate</li> <li>• originator-id</li> <li>• cluster-list</li> <li>• extended-community</li> <li>• aigp</li> <li>• missing-attribute</li> <li>• rtm-pref</li> <li>• owner</li> <li>• eigrp-labeled</li> <li>• vpn-route</li> <li>• ebgp-route</li> <li>• peer-ip</li> <li>• local-peer</li> <li>• multi-path</li> <li>• vpn-rd</li> <li>• next-hop-type</li> <li>• invalid-route</li> <li>• origin-validation</li> <li>• long-live-gr-stale</li> <li>• default-originate</li> <li>• rtm-install-disabled</li> <li>• peer-router-id</li> <li>• path-identifier</li> </ul>
<b>Configurable</b>	False

### **used-route *boolean***

<b>Description</b>	Indicates true if the route is being used for forwarding.
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<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">bgp-rib</a> <a href="#">evpn</a> <a href="#">rib-in-out</a> <a href="#">rib-in-post</a> <a href="#">ethernet-segment-routes</a> <a href="#">route-distinguisher</a> ( <i>string</i>   <i>string</i>   <i>string</i>   <i>string</i> ) <a href="#">esi</a> <i>string</i> <a href="#">originating-router</a> ( <i>ipv4-address</i>   <i>ipv6-address</i> ) <a href="#">neighbor</a> ( <i>ipv4-address</i>   <i>ipv6-address</i> ) <a href="#">used-route</a> <i>boolean</i>
<b>Tree</b>	<a href="#">used-route</a>
<b>Configurable</b>	False

**valid-route *boolean***

<b>Description</b>	Indicates true if the route is valid.
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">bgp-rib</a> <a href="#">evpn</a> <a href="#">rib-in-out</a> <a href="#">rib-in-post</a> <a href="#">ethernet-segment-routes</a> <a href="#">route-distinguisher</a> ( <i>string</i>   <i>string</i>   <i>string</i>   <i>string</i> ) <a href="#">esi</a> <i>string</i> <a href="#">originating-router</a> ( <i>ipv4-address</i>   <i>ipv6-address</i> ) <a href="#">neighbor</a> ( <i>ipv4-address</i>   <i>ipv6-address</i> ) <a href="#">valid-route</a> <i>boolean</i>
<b>Tree</b>	<a href="#">valid-route</a>
<b>Configurable</b>	False

**imet-routes [route-distinguisher](#) (*string* | *string* | *string* | *string*) [originating-router](#) (*ipv4-address* | *ipv6-address*) [ethernet-tag-id](#) *number* [neighbor](#) (*ipv4-address* | *ipv6-address*)**

<b>Description</b>	List of Inclusive Multicast Ethernet Tag routes
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">bgp-rib</a> <a href="#">evpn</a> <a href="#">rib-in-out</a> <a href="#">rib-in-post</a> <a href="#">imet-routes</a> <a href="#">route-distinguisher</a> ( <i>string</i>   <i>string</i>   <i>string</i>   <i>string</i> ) <a href="#">originating-router</a> ( <i>ipv4-address</i>   <i>ipv6-address</i> ) <a href="#">ethernet-tag-id</a> <i>number</i> <a href="#">neighbor</a> ( <i>ipv4-address</i>   <i>ipv6-address</i> )
<b>Tree</b>	<a href="#">imet-routes</a>
<b>Configurable</b>	False

**route-distinguisher (*string* | *string* | *string* | *string*)**

<b>Description</b>	The route distinguisher encoded in the NLRI.
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">bgp-rib</a> <a href="#">evpn</a> <a href="#">rib-in-out</a> <a href="#">rib-in-post</a> <a href="#">imet-routes</a> <a href="#">route-distinguisher</a> ( <i>string</i>   <i>string</i>   <i>string</i>   <i>string</i> ) <a href="#">originating-router</a> ( <i>ipv4-address</i>   <i>ipv6-address</i> ) <a href="#">ethernet-tag-id</a> <i>number</i> <a href="#">neighbor</a> ( <i>ipv4-address</i>   <i>ipv6-address</i> )
<b>Configurable</b>	False

**originating-router (*ipv4-address* | *ipv6-address*)**

<b>Description</b>	The IPv4 or IPv6 address of the originating router
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">bgp-rib evpn rib-in-out rib-in-post imet-routes route-distinguisher</a> ( <i>string</i>   <i>string</i>   <i>string</i>   <i>string</i> ) <a href="#">originating-router</a> ( <i>ipv4-address</i>   <i>ipv6-address</i> ) <a href="#">ethernet-tag-id number</a> <a href="#">neighbor</a> ( <i>ipv4-address</i>   <i>ipv6-address</i> )
<b>Configurable</b>	False

**ethernet-tag-id *number***

<b>Description</b>	The 32-bit Ethernet Tag ID encoded in the NLRI. The Ethernet Tag ID identifies a broadcast domain.
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">bgp-rib evpn rib-in-out rib-in-post imet-routes route-distinguisher</a> ( <i>string</i>   <i>string</i>   <i>string</i>   <i>string</i> ) <a href="#">originating-router</a> ( <i>ipv4-address</i>   <i>ipv6-address</i> ) <a href="#">ethernet-tag-id number</a> <a href="#">neighbor</a> ( <i>ipv4-address</i>   <i>ipv6-address</i> )
<b>Configurable</b>	False

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

<b>Description</b>	If the route was learned from a BGP neighbor, this is the IPv4 or IPv6 address of that neighbor.
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">bgp-rib evpn rib-in-out rib-in-post imet-routes route-distinguisher</a> ( <i>string</i>   <i>string</i>   <i>string</i>   <i>string</i> ) <a href="#">originating-router</a> ( <i>ipv4-address</i>   <i>ipv6-address</i> ) <a href="#">ethernet-tag-id number</a> <a href="#">neighbor</a> ( <i>ipv4-address</i>   <i>ipv6-address</i> )
<b>Configurable</b>	False

**attr-id *reference***

<b>Description</b>	Leaf reference to networkinstance/protocols/bgp/rib/attr-sets/attr-set/index.
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">bgp-rib evpn rib-in-out rib-in-post imet-routes route-distinguisher</a> ( <i>string</i>   <i>string</i>   <i>string</i>   <i>string</i> ) <a href="#">originating-router</a> ( <i>ipv4-address</i>   <i>ipv6-address</i> ) <a href="#">ethernet-tag-id number</a> <a href="#">neighbor</a> ( <i>ipv4-address</i>   <i>ipv6-address</i> ) <a href="#">attr-id reference</a>
<b>Tree</b>	<a href="#">attr-id</a>
<b>Reference</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">bgp-rib attr-sets attr-set attr-set-type keyword index</a> <i>number</i>
<b>Configurable</b>	False

**best-route *boolean***

<b>Description</b>	Set to true if the route is the BGP best path for the prefix.
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">bgp-rib evpn rib-in-out rib-in-post imet-routes route-distinguisher</a> ( <i>string</i>   <i>string</i>   <i>string</i>   <i>string</i> ) <a href="#">originating-router</a> ( <i>ipv4-address</i>   <i>ipv6-address</i> ) <a href="#">ethernet-tag-id</a> <i>number</i> <a href="#">neighbor</a> ( <i>ipv4-address</i>   <i>ipv6-address</i> ) <a href="#">best-route</a> <i>boolean</i>
<b>Tree</b>	<a href="#">best-route</a>
<b>Configurable</b>	False

**invalid-reason**

<b>Description</b>	Enter the invalid-reason context
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">bgp-rib evpn rib-in-out rib-in-post imet-routes route-distinguisher</a> ( <i>string</i>   <i>string</i>   <i>string</i>   <i>string</i> ) <a href="#">originating-router</a> ( <i>ipv4-address</i>   <i>ipv6-address</i> ) <a href="#">ethernet-tag-id</a> <i>number</i> <a href="#">neighbor</a> ( <i>ipv4-address</i>   <i>ipv6-address</i> ) <a href="#">invalid-reason</a>
<b>Tree</b>	<a href="#">invalid-reason</a>
<b>Configurable</b>	False

**as-loop *boolean***

<b>Description</b>	Indicates true if the BGP route has an AS path loop that exceeds the configured threshold.
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">bgp-rib evpn rib-in-out rib-in-post imet-routes route-distinguisher</a> ( <i>string</i>   <i>string</i>   <i>string</i>   <i>string</i> ) <a href="#">originating-router</a> ( <i>ipv4-address</i>   <i>ipv6-address</i> ) <a href="#">ethernet-tag-id</a> <i>number</i> <a href="#">neighbor</a> ( <i>ipv4-address</i>   <i>ipv6-address</i> ) <a href="#">invalid-reason as-loop</a> <i>boolean</i>
<b>Tree</b>	<a href="#">as-loop</a>
<b>Configurable</b>	False

**cluster-loop *boolean***

<b>Description</b>	Indicates true if the BGP route has a cluster-list loop.
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">bgp-rib evpn rib-in-out rib-in-post imet-routes route-distinguisher</a> ( <i>string</i>   <i>string</i>   <i>string</i>   <i>string</i> ) <a href="#">originating-router</a> ( <i>ipv4-address</i>   <i>ipv6-address</i> ) <a href="#">ethernet-tag-id</a> <i>number</i> <a href="#">neighbor</a> ( <i>ipv4-address</i>   <i>ipv6-address</i> ) <a href="#">invalid-reason cluster-loop</a> <i>boolean</i>
<b>Tree</b>	<a href="#">cluster-loop</a>
<b>Configurable</b>	False

**next-hop-unresolved *boolean***

<b>Description</b>	Indicates true if the BGP route has a BGP next-hop that cannot be resolved to an outgoing interface.
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">bgp-rib evpn rib-in-out rib-in-post imet-routes route-distinguisher</a> ( <i>string</i>   <i>string</i>   <i>string</i>   <i>string</i> ) <a href="#">originating-router</a> ( <i>ipv4-address</i>   <i>ipv6-address</i> ) <a href="#">ethernet-tag-id</a> <i>number</i> <a href="#">neighbor</a> ( <i>ipv4-address</i>   <i>ipv6-address</i> ) <a href="#">invalid-reason</a> <a href="#">next-hop-unresolved</a> <i>boolean</i>
<b>Tree</b>	<a href="#">next-hop-unresolved</a>
<b>Configurable</b>	False

**rejected-route *boolean***

<b>Description</b>	Indicates true if the route was rejected by an import policy.
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">bgp-rib evpn rib-in-out rib-in-post imet-routes route-distinguisher</a> ( <i>string</i>   <i>string</i>   <i>string</i>   <i>string</i> ) <a href="#">originating-router</a> ( <i>ipv4-address</i>   <i>ipv6-address</i> ) <a href="#">ethernet-tag-id</a> <i>number</i> <a href="#">neighbor</a> ( <i>ipv4-address</i>   <i>ipv6-address</i> ) <a href="#">invalid-reason</a> <a href="#">rejected-route</a> <i>boolean</i>
<b>Tree</b>	<a href="#">rejected-route</a>
<b>Configurable</b>	False

**last-modified *string***

<b>Description</b>	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.
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">bgp-rib evpn rib-in-out rib-in-post imet-routes route-distinguisher</a> ( <i>string</i>   <i>string</i>   <i>string</i>   <i>string</i> ) <a href="#">originating-router</a> ( <i>ipv4-address</i>   <i>ipv6-address</i> ) <a href="#">ethernet-tag-id</a> <i>number</i> <a href="#">neighbor</a> ( <i>ipv4-address</i>   <i>ipv6-address</i> ) <a href="#">last-modified</a> <i>string</i>
<b>Tree</b>	<a href="#">last-modified</a>
<b>String Length</b>	20 to 32
<b>Configurable</b>	False

**pending-delete *boolean***

<b>Description</b>	Set to true if the route is marked for deletion.
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">bgp-rib evpn rib-in-out rib-in-post imet-routes route-distinguisher</a> ( <i>string</i>   <i>string</i>   <i>string</i>   <i>string</i> ) <a href="#">originating-router</a> ( <i>ipv4-</i>

	<i>address   ipv6-address</i> ) <i>ethernet-tag-id number neighbor (ipv4-address   ipv6-address) pending-delete boolean</i>
<b>Tree</b>	<a href="#">pending-delete</a>
<b>Configurable</b>	False

### **stale-route *boolean***

<b>Description</b>	Set to true if the route is stale due to BGP graceful restart.
<b>Context</b>	<a href="#">network-instance name string bgp-rib evpn rib-in-out rib-in-post imet-routes route-distinguisher (string   string   string   string) originating-router (ipv4-address   ipv6-address) ethernet-tag-id number neighbor (ipv4-address   ipv6-address) stale-route boolean</a>
<b>Tree</b>	<a href="#">stale-route</a>
<b>Configurable</b>	False

### **tie-break-reason *keyword***

<b>Description</b>	Indicates the reason why a BGP route is sorted behind the next best route. The BGP best path displays a value of 'none'.
<b>Context</b>	<a href="#">network-instance name string bgp-rib evpn rib-in-out rib-in-post imet-routes route-distinguisher (string   string   string   string) originating-router (ipv4-address   ipv6-address) ethernet-tag-id number neighbor (ipv4-address   ipv6-address) tie-break-reason keyword</a>
<b>Tree</b>	<a href="#">tie-break-reason</a>
<b>Options</b>	<ul style="list-style-type: none"> <li>• unknown</li> <li>• none</li> <li>• origin</li> <li>• as-path-length</li> <li>• next-hop-cost</li> <li>• med</li> <li>• local-pref</li> <li>• aggregate</li> <li>• originator-id</li> <li>• cluster-list</li> <li>• extended-community</li> <li>• aigp</li> <li>• missing-attribute</li> <li>• rtm-pref</li> <li>• owner</li> </ul>



- 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
- rtm-install-disabled
- peer-router-id
- path-identifier

**Configurable** False

### **used-route *boolean***

**Description** Indicates true if the route is being used for forwarding.

**Context** [network-instance name](#) *string* [bgp-rib](#) [evpn](#) [rib-in-out](#) [rib-in-post](#) [imet-routes](#) [route-distinguisher](#) (*string* | *string* | *string* | *string*) [originating-router](#) (*ipv4-address* | *ipv6-address*) [ethernet-tag-id](#) *number* [neighbor](#) (*ipv4-address* | *ipv6-address*) [used-route](#) *boolean*

**Tree** [used-route](#)

**Configurable** False

### **valid-route *boolean***

**Description** Indicates true if the route is valid.

**Context** [network-instance name](#) *string* [bgp-rib](#) [evpn](#) [rib-in-out](#) [rib-in-post](#) [imet-routes](#) [route-distinguisher](#) (*string* | *string* | *string* | *string*) [originating-router](#) (*ipv4-address* | *ipv6-address*) [ethernet-tag-id](#) *number* [neighbor](#) (*ipv4-address* | *ipv6-address*) [valid-route](#) *boolean*

**Tree** [valid-route](#)

**Configurable** False

**ip-prefix-routes route-distinguisher (*string* | *string* | *string* | *string*) ethernet-tag-id number ip-prefix-length number ip-prefix (*ipv4-prefix* | *ipv6-prefix*) neighbor (*ipv4-address* | *ipv6-address*)**

<b>Description</b>	List of IP prefix routes
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">bgp-rib evpn rib-in-out rib-in-post ip-prefix-routes route-distinguisher</a> ( <i>string</i>   <i>string</i>   <i>string</i>   <i>string</i> ) <a href="#">ethernet-tag-id number ip-prefix-length number ip-prefix</a> ( <i>ipv4-prefix</i>   <i>ipv6-prefix</i> ) <a href="#">neighbor</a> ( <i>ipv4-address</i>   <i>ipv6-address</i> )
<b>Tree</b>	<a href="#">ip-prefix-routes</a>
<b>Configurable</b>	False

**route-distinguisher (*string* | *string* | *string* | *string*)**

<b>Description</b>	The route distinguisher encoded in the NLRI.
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">bgp-rib evpn rib-in-out rib-in-post ip-prefix-routes route-distinguisher</a> ( <i>string</i>   <i>string</i>   <i>string</i>   <i>string</i> ) <a href="#">ethernet-tag-id number ip-prefix-length number ip-prefix</a> ( <i>ipv4-prefix</i>   <i>ipv6-prefix</i> ) <a href="#">neighbor</a> ( <i>ipv4-address</i>   <i>ipv6-address</i> )
<b>Configurable</b>	False

**ethernet-tag-id number**

<b>Description</b>	The 32-bit Ethernet Tag ID encoded in the NLRI. The Ethernet Tag ID identifies a broadcast domain.
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">bgp-rib evpn rib-in-out rib-in-post ip-prefix-routes route-distinguisher</a> ( <i>string</i>   <i>string</i>   <i>string</i>   <i>string</i> ) <a href="#">ethernet-tag-id number ip-prefix-length number ip-prefix</a> ( <i>ipv4-prefix</i>   <i>ipv6-prefix</i> ) <a href="#">neighbor</a> ( <i>ipv4-address</i>   <i>ipv6-address</i> )
<b>Configurable</b>	False

**ip-prefix-length number**

<b>Description</b>	IP prefix length
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">bgp-rib evpn rib-in-out rib-in-post ip-prefix-routes route-distinguisher</a> ( <i>string</i>   <i>string</i>   <i>string</i>   <i>string</i> ) <a href="#">ethernet-tag-id number ip-prefix-length number ip-prefix</a> ( <i>ipv4-prefix</i>   <i>ipv6-prefix</i> ) <a href="#">neighbor</a> ( <i>ipv4-address</i>   <i>ipv6-address</i> )
<b>Range</b>	0 to 128
<b>Units</b>	bits
<b>Configurable</b>	False

**ip-prefix (*ipv4-prefix* | *ipv6-prefix*)**

<b>Description</b>	The IPv4 or IPv6 prefix
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">bgp-rib evpn rib-in-out rib-in-post ip-prefix-routes route-distinguisher</a> ( <i>string</i>   <i>string</i>   <i>string</i>   <i>string</i> ) <a href="#">ethernet-tag-id number ip-prefix-length number ip-prefix</a> ( <i>ipv4-prefix</i>   <i>ipv6-prefix</i> ) <a href="#">neighbor</a> ( <i>ipv4-address</i>   <i>ipv6-address</i> )
<b>Configurable</b>	False

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

<b>Description</b>	If the route was learned from a BGP neighbor, this is the IPv4 or IPv6 address of that neighbor.
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">bgp-rib evpn rib-in-out rib-in-post ip-prefix-routes route-distinguisher</a> ( <i>string</i>   <i>string</i>   <i>string</i>   <i>string</i> ) <a href="#">ethernet-tag-id number ip-prefix-length number ip-prefix</a> ( <i>ipv4-prefix</i>   <i>ipv6-prefix</i> ) <a href="#">neighbor</a> ( <i>ipv4-address</i>   <i>ipv6-address</i> )
<b>Configurable</b>	False

**attr-id reference**

<b>Description</b>	Leaf reference to <a href="#">networkinstance/protocols/bgp/rib/attr-sets/attr-set/index</a> .
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">bgp-rib evpn rib-in-out rib-in-post ip-prefix-routes route-distinguisher</a> ( <i>string</i>   <i>string</i>   <i>string</i>   <i>string</i> ) <a href="#">ethernet-tag-id number ip-prefix-length number ip-prefix</a> ( <i>ipv4-prefix</i>   <i>ipv6-prefix</i> ) <a href="#">neighbor</a> ( <i>ipv4-address</i>   <i>ipv6-address</i> ) <a href="#">attr-id reference</a>
<b>Tree</b>	<a href="#">attr-id</a>
<b>Reference</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">bgp-rib attr-sets attr-set attr-set-type keyword index</a> <i>number</i>
<b>Configurable</b>	False

**best-route boolean**

<b>Description</b>	Set to true if the route is the BGP best path for the prefix.
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">bgp-rib evpn rib-in-out rib-in-post ip-prefix-routes route-distinguisher</a> ( <i>string</i>   <i>string</i>   <i>string</i>   <i>string</i> ) <a href="#">ethernet-tag-id number ip-prefix-length number ip-prefix</a> ( <i>ipv4-prefix</i>   <i>ipv6-prefix</i> ) <a href="#">neighbor</a> ( <i>ipv4-address</i>   <i>ipv6-address</i> ) <a href="#">best-route boolean</a>
<b>Tree</b>	<a href="#">best-route</a>
<b>Configurable</b>	False

**esi string**

<b>Description</b>	The Ethernet Segment Identifier
<b>Context</b>	<a href="#">network-instance name string</a> <a href="#">bgp-rib evpn rib-in-out rib-in-post ip-prefix-routes route-distinguisher (string   string   string   string)</a> <a href="#">ethernet-tag-id number ip-prefix-length number ip-prefix (ipv4-prefix   ipv6-prefix)</a> <a href="#">neighbor (ipv4-address   ipv6-address)</a> <a href="#">esi string</a>
<b>Tree</b>	<a href="#">esi</a>
<b>Configurable</b>	False

**gateway-ip (ipv4-address | ipv6-address)**

<b>Description</b>	An IP address that encodes an overlay index
<b>Context</b>	<a href="#">network-instance name string</a> <a href="#">bgp-rib evpn rib-in-out rib-in-post ip-prefix-routes route-distinguisher (string   string   string   string)</a> <a href="#">ethernet-tag-id number ip-prefix-length number ip-prefix (ipv4-prefix   ipv6-prefix)</a> <a href="#">neighbor (ipv4-address   ipv6-address)</a> <a href="#">gateway-ip (ipv4-address   ipv6-address)</a>
<b>Tree</b>	<a href="#">gateway-ip</a>
<b>Configurable</b>	False

**invalid-reason**

<b>Description</b>	Enter the invalid-reason context
<b>Context</b>	<a href="#">network-instance name string</a> <a href="#">bgp-rib evpn rib-in-out rib-in-post ip-prefix-routes route-distinguisher (string   string   string   string)</a> <a href="#">ethernet-tag-id number ip-prefix-length number ip-prefix (ipv4-prefix   ipv6-prefix)</a> <a href="#">neighbor (ipv4-address   ipv6-address)</a> <a href="#">invalid-reason</a>
<b>Tree</b>	<a href="#">invalid-reason</a>
<b>Configurable</b>	False

**as-loop boolean**

<b>Description</b>	Indicates true if the BGP route has an AS path loop that exceeds the configured threshold.
<b>Context</b>	<a href="#">network-instance name string</a> <a href="#">bgp-rib evpn rib-in-out rib-in-post ip-prefix-routes route-distinguisher (string   string   string   string)</a> <a href="#">ethernet-tag-id number ip-prefix-length number ip-prefix (ipv4-prefix   ipv6-prefix)</a> <a href="#">neighbor (ipv4-address   ipv6-address)</a> <a href="#">invalid-reason</a> <a href="#">as-loop boolean</a>
<b>Tree</b>	<a href="#">as-loop</a>
<b>Configurable</b>	False

**cluster-loop *boolean***

<b>Description</b>	Indicates true if the BGP route has a cluster-list loop.
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">bgp-rib evpn rib-in-out rib-in-post ip-prefix-routes route-distinguisher</a> ( <i>string</i>   <i>string</i>   <i>string</i>   <i>string</i> ) <a href="#">ethernet-tag-id number ip-prefix-length number ip-prefix</a> ( <i>ipv4-prefix</i>   <i>ipv6-prefix</i> ) <a href="#">neighbor</a> ( <i>ipv4-address</i>   <i>ipv6-address</i> ) <a href="#">invalid-reason cluster-loop</a> <i>boolean</i>
<b>Tree</b>	<a href="#">cluster-loop</a>
<b>Configurable</b>	False

**next-hop-unresolved *boolean***

<b>Description</b>	Indicates true if the BGP route has a BGP next-hop that cannot be resolved to an outgoing interface.
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">bgp-rib evpn rib-in-out rib-in-post ip-prefix-routes route-distinguisher</a> ( <i>string</i>   <i>string</i>   <i>string</i>   <i>string</i> ) <a href="#">ethernet-tag-id number ip-prefix-length number ip-prefix</a> ( <i>ipv4-prefix</i>   <i>ipv6-prefix</i> ) <a href="#">neighbor</a> ( <i>ipv4-address</i>   <i>ipv6-address</i> ) <a href="#">invalid-reason next-hop-unresolved</a> <i>boolean</i>
<b>Tree</b>	<a href="#">next-hop-unresolved</a>
<b>Configurable</b>	False

**rejected-route *boolean***

<b>Description</b>	Indicates true if the route was rejected by an import policy.
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">bgp-rib evpn rib-in-out rib-in-post ip-prefix-routes route-distinguisher</a> ( <i>string</i>   <i>string</i>   <i>string</i>   <i>string</i> ) <a href="#">ethernet-tag-id number ip-prefix-length number ip-prefix</a> ( <i>ipv4-prefix</i>   <i>ipv6-prefix</i> ) <a href="#">neighbor</a> ( <i>ipv4-address</i>   <i>ipv6-address</i> ) <a href="#">invalid-reason rejected-route</a> <i>boolean</i>
<b>Tree</b>	<a href="#">rejected-route</a>
<b>Configurable</b>	False

**last-modified *string***

<b>Description</b>	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.
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">bgp-rib evpn rib-in-out rib-in-post ip-prefix-routes route-distinguisher</a> ( <i>string</i>   <i>string</i>   <i>string</i>   <i>string</i> ) <a href="#">ethernet-tag-id number ip-prefix-length number ip-prefix</a> ( <i>ipv4-prefix</i>   <i>ipv6-prefix</i> ) <a href="#">neighbor</a> ( <i>ipv4-address</i>   <i>ipv6-address</i> ) <a href="#">last-modified</a> <i>string</i>

<b>Tree</b>	<a href="#">last-modified</a>
<b>String Length</b>	20 to 32
<b>Configurable</b>	False

### pending-delete *boolean*

<b>Description</b>	Set to true if the route is marked for deletion.
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">bgp-rib evpn rib-in-out rib-in-post ip-prefix-routes route-distinguisher</a> ( <i>string</i>   <i>string</i>   <i>string</i>   <i>string</i> ) <a href="#">ethernet-tag-id number ip-prefix-length number ip-prefix</a> ( <i>ipv4-prefix</i>   <i>ipv6-prefix</i> ) <a href="#">neighbor</a> ( <i>ipv4-address</i>   <i>ipv6-address</i> ) <a href="#">pending-delete</a> <i>boolean</i>
<b>Tree</b>	<a href="#">pending-delete</a>
<b>Configurable</b>	False

### stale-route *boolean*

<b>Description</b>	Set to true if the route is stale due to BGP graceful restart.
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">bgp-rib evpn rib-in-out rib-in-post ip-prefix-routes route-distinguisher</a> ( <i>string</i>   <i>string</i>   <i>string</i>   <i>string</i> ) <a href="#">ethernet-tag-id number ip-prefix-length number ip-prefix</a> ( <i>ipv4-prefix</i>   <i>ipv6-prefix</i> ) <a href="#">neighbor</a> ( <i>ipv4-address</i>   <i>ipv6-address</i> ) <a href="#">stale-route</a> <i>boolean</i>
<b>Tree</b>	<a href="#">stale-route</a>
<b>Configurable</b>	False

### tie-break-reason *keyword*

<b>Description</b>	Indicates the reason why a BGP route is sorted behind the next best route. The BGP best path displays a value of 'none'.
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">bgp-rib evpn rib-in-out rib-in-post ip-prefix-routes route-distinguisher</a> ( <i>string</i>   <i>string</i>   <i>string</i>   <i>string</i> ) <a href="#">ethernet-tag-id number ip-prefix-length number ip-prefix</a> ( <i>ipv4-prefix</i>   <i>ipv6-prefix</i> ) <a href="#">neighbor</a> ( <i>ipv4-address</i>   <i>ipv6-address</i> ) <a href="#">tie-break-reason</a> <i>keyword</i>
<b>Tree</b>	<a href="#">tie-break-reason</a>
<b>Options</b>	<ul style="list-style-type: none"> <li>• unknown</li> <li>• none</li> <li>• origin</li> <li>• as-path-length</li> <li>• next-hop-cost</li> <li>• med</li> </ul>

- 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
- rtm-install-disabled
- peer-router-id
- path-identifier

**Configurable** False

### **used-route *boolean***

**Description** Indicates true if the route is being used for forwarding.

**Context** [network-instance name](#) *string* [bgp-rib evpn rib-in-out rib-in-post ip-prefix-routes route-distinguisher](#) (*string* | *string* | *string* | *string*) [ethernet-tag-id](#) *number* [ip-prefix-length](#) *number* [ip-prefix](#) (*ipv4-prefix* | *ipv6-prefix*) [neighbor](#) (*ipv4-address* | *ipv6-address*) [used-route](#) *boolean*

**Tree** [used-route](#)

**Configurable** False

**valid-route *boolean***

<b>Description</b>	Indicates true if the route is valid.
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">bgp-rib evpn rib-in-out rib-in-post ip-prefix-routes route-distinguisher</a> ( <i>string</i>   <i>string</i>   <i>string</i>   <i>string</i> ) <a href="#">ethernet-tag-id number ip-prefix-length number ip-prefix</a> ( <i>ipv4-prefix</i>   <i>ipv6-prefix</i> ) <a href="#">neighbor</a> ( <i>ipv4-address</i>   <i>ipv6-address</i> ) <a href="#">valid-route</a> <i>boolean</i>
<b>Tree</b>	<a href="#">valid-route</a>
<b>Configurable</b>	False

**vni *number***

<b>Description</b>	The VXLAN Network Identifier
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">bgp-rib evpn rib-in-out rib-in-post ip-prefix-routes route-distinguisher</a> ( <i>string</i>   <i>string</i>   <i>string</i>   <i>string</i> ) <a href="#">ethernet-tag-id number ip-prefix-length number ip-prefix</a> ( <i>ipv4-prefix</i>   <i>ipv6-prefix</i> ) <a href="#">neighbor</a> ( <i>ipv4-address</i>   <i>ipv6-address</i> ) <a href="#">vni</a> <i>number</i>
<b>Tree</b>	<a href="#">vni</a>
<b>Range</b>	0 to 16777215
<b>Configurable</b>	False

**mac-ip-routes [route-distinguisher](#) (*string* | *string* | *string* | *string*) [mac-length](#) *number* [mac-address](#) *string* [ip-address](#) (*ipv4-address* | *ipv6-address*) [ethernet-tag-id](#) *number* [neighbor](#) (*ipv4-address* | *ipv6-address*)**

<b>Description</b>	List of Mac/IP Advertisement routes
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">bgp-rib evpn rib-in-out rib-in-post mac-ip-routes route-distinguisher</a> ( <i>string</i>   <i>string</i>   <i>string</i>   <i>string</i> ) <a href="#">mac-length</a> <i>number</i> <a href="#">mac-address</a> <i>string</i> <a href="#">ip-address</a> ( <i>ipv4-address</i>   <i>ipv6-address</i> ) <a href="#">ethernet-tag-id</a> <i>number</i> <a href="#">neighbor</a> ( <i>ipv4-address</i>   <i>ipv6-address</i> )
<b>Tree</b>	<a href="#">mac-ip-routes</a>
<b>Configurable</b>	False

**route-distinguisher (*string* | *string* | *string* | *string*)**

<b>Description</b>	The route distinguisher encoded in the NLRI.
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">bgp-rib evpn rib-in-out rib-in-post mac-ip-routes route-distinguisher</a> ( <i>string</i>   <i>string</i>   <i>string</i>   <i>string</i> ) <a href="#">mac-length</a> <i>number</i> <a href="#">mac-address</a> <i>string</i> <a href="#">ip-address</a> ( <i>ipv4-address</i>   <i>ipv6-address</i> ) <a href="#">ethernet-tag-id</a> <i>number</i> <a href="#">neighbor</a> ( <i>ipv4-address</i>   <i>ipv6-address</i> )
<b>Configurable</b>	False



**mac-length *number***

<b>Description</b>	MAC address length
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">bgp-rib evpn rib-in-out rib-in-post mac-ip-routes route-distinguisher</a> ( <i>string</i>   <i>string</i>   <i>string</i>   <i>string</i> ) <a href="#">mac-length number</a> <a href="#">mac-address</a> <i>string</i> <a href="#">ip-address</a> ( <i>ipv4-address</i>   <i>ipv6-address</i> ) <a href="#">ethernet-tag-id number</a> <a href="#">neighbor</a> ( <i>ipv4-address</i>   <i>ipv6-address</i> )
<b>Range</b>	0 to 48
<b>Units</b>	bits
<b>Configurable</b>	False

**mac-address *string***

<b>Description</b>	The MAC address
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">bgp-rib evpn rib-in-out rib-in-post mac-ip-routes route-distinguisher</a> ( <i>string</i>   <i>string</i>   <i>string</i>   <i>string</i> ) <a href="#">mac-length number</a> <a href="#">mac-address</a> <i>string</i> <a href="#">ip-address</a> ( <i>ipv4-address</i>   <i>ipv6-address</i> ) <a href="#">ethernet-tag-id number</a> <a href="#">neighbor</a> ( <i>ipv4-address</i>   <i>ipv6-address</i> )
<b>Configurable</b>	False

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

<b>Description</b>	The IP host address
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">bgp-rib evpn rib-in-out rib-in-post mac-ip-routes route-distinguisher</a> ( <i>string</i>   <i>string</i>   <i>string</i>   <i>string</i> ) <a href="#">mac-length number</a> <a href="#">mac-address</a> <i>string</i> <a href="#">ip-address</a> ( <i>ipv4-address</i>   <i>ipv6-address</i> ) <a href="#">ethernet-tag-id number</a> <a href="#">neighbor</a> ( <i>ipv4-address</i>   <i>ipv6-address</i> )
<b>Configurable</b>	False

**ethernet-tag-id *number***

<b>Description</b>	The 32-bit Ethernet Tag ID encoded in the NLRI. The Ethernet Tag ID identifies a broadcast domain.
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">bgp-rib evpn rib-in-out rib-in-post mac-ip-routes route-distinguisher</a> ( <i>string</i>   <i>string</i>   <i>string</i>   <i>string</i> ) <a href="#">mac-length number</a> <a href="#">mac-address</a> <i>string</i> <a href="#">ip-address</a> ( <i>ipv4-address</i>   <i>ipv6-address</i> ) <a href="#">ethernet-tag-id number</a> <a href="#">neighbor</a> ( <i>ipv4-address</i>   <i>ipv6-address</i> )
<b>Configurable</b>	False

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

<b>Description</b>	If the route was learned from a BGP neighbor, this is the IPv4 or IPv6 address of that neighbor.
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">bgp-rib evpn rib-in-out rib-in-post mac-ip-routes route-distinguisher</a> ( <i>string</i>   <i>string</i>   <i>string</i>   <i>string</i> ) <a href="#">mac-length</a> <i>number</i> <a href="#">mac-address</a> <i>string</i> <a href="#">ip-address</a> ( <i>ipv4-address</i>   <i>ipv6-address</i> ) <a href="#">ethernet-tag-id</a> <i>number</i> <a href="#">neighbor</a> ( <i>ipv4-address</i>   <i>ipv6-address</i> )
<b>Configurable</b>	False

**attr-id reference**

<b>Description</b>	Leaf reference to networkinstance/protocols/bgp/rib/attr-sets/attr-set/index.
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">bgp-rib evpn rib-in-out rib-in-post mac-ip-routes route-distinguisher</a> ( <i>string</i>   <i>string</i>   <i>string</i>   <i>string</i> ) <a href="#">mac-length</a> <i>number</i> <a href="#">mac-address</a> <i>string</i> <a href="#">ip-address</a> ( <i>ipv4-address</i>   <i>ipv6-address</i> ) <a href="#">ethernet-tag-id</a> <i>number</i> <a href="#">neighbor</a> ( <i>ipv4-address</i>   <i>ipv6-address</i> ) <a href="#">attr-id</a> <i>reference</i>
<b>Tree</b>	<a href="#">attr-id</a>
<b>Reference</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">bgp-rib attr-sets attr-set attr-set-type</a> <i>keyword</i> <a href="#">index</a> <i>number</i>
<b>Configurable</b>	False

**best-route *boolean***

<b>Description</b>	Set to true if the route is the BGP best path for the prefix.
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">bgp-rib evpn rib-in-out rib-in-post mac-ip-routes route-distinguisher</a> ( <i>string</i>   <i>string</i>   <i>string</i>   <i>string</i> ) <a href="#">mac-length</a> <i>number</i> <a href="#">mac-address</a> <i>string</i> <a href="#">ip-address</a> ( <i>ipv4-address</i>   <i>ipv6-address</i> ) <a href="#">ethernet-tag-id</a> <i>number</i> <a href="#">neighbor</a> ( <i>ipv4-address</i>   <i>ipv6-address</i> ) <a href="#">best-route</a> <i>boolean</i>
<b>Tree</b>	<a href="#">best-route</a>
<b>Configurable</b>	False

**esi *string***

<b>Description</b>	The Ethernet Segment Identifier
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">bgp-rib evpn rib-in-out rib-in-post mac-ip-routes route-distinguisher</a> ( <i>string</i>   <i>string</i>   <i>string</i>   <i>string</i> ) <a href="#">mac-length</a> <i>number</i> <a href="#">mac-address</a> <i>string</i> <a href="#">ip-address</a> ( <i>ipv4-address</i>   <i>ipv6-address</i> ) <a href="#">ethernet-tag-id</a> <i>number</i> <a href="#">neighbor</a> ( <i>ipv4-address</i>   <i>ipv6-address</i> ) <a href="#">esi</a> <i>string</i>
<b>Tree</b>	<a href="#">esi</a>
<b>Configurable</b>	False

**invalid-reason**

<b>Description</b>	Enter the invalid-reason context
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">bgp-rib</a> <a href="#">evpn</a> <a href="#">rib-in-out</a> <a href="#">rib-in-post</a> <a href="#">mac-ip-routes</a> <a href="#">route-distinguisher</a> ( <i>string</i>   <i>string</i>   <i>string</i>   <i>string</i> ) <a href="#">mac-length</a> <i>number</i> <a href="#">mac-address</a> <i>string</i> <a href="#">ip-address</a> ( <i>ipv4-address</i>   <i>ipv6-address</i> ) <a href="#">ethernet-tag-id</a> <i>number</i> <a href="#">neighbor</a> ( <i>ipv4-address</i>   <i>ipv6-address</i> ) <a href="#">invalid-reason</a>
<b>Tree</b>	<a href="#">invalid-reason</a>
<b>Configurable</b>	False

**as-loop *boolean***

<b>Description</b>	Indicates true if the BGP route has an AS path loop that exceeds the configured threshold.
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">bgp-rib</a> <a href="#">evpn</a> <a href="#">rib-in-out</a> <a href="#">rib-in-post</a> <a href="#">mac-ip-routes</a> <a href="#">route-distinguisher</a> ( <i>string</i>   <i>string</i>   <i>string</i>   <i>string</i> ) <a href="#">mac-length</a> <i>number</i> <a href="#">mac-address</a> <i>string</i> <a href="#">ip-address</a> ( <i>ipv4-address</i>   <i>ipv6-address</i> ) <a href="#">ethernet-tag-id</a> <i>number</i> <a href="#">neighbor</a> ( <i>ipv4-address</i>   <i>ipv6-address</i> ) <a href="#">invalid-reason</a> <a href="#">as-loop</a> <i>boolean</i>
<b>Tree</b>	<a href="#">as-loop</a>
<b>Configurable</b>	False

**cluster-loop *boolean***

<b>Description</b>	Indicates true if the BGP route has a cluster-list loop.
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">bgp-rib</a> <a href="#">evpn</a> <a href="#">rib-in-out</a> <a href="#">rib-in-post</a> <a href="#">mac-ip-routes</a> <a href="#">route-distinguisher</a> ( <i>string</i>   <i>string</i>   <i>string</i>   <i>string</i> ) <a href="#">mac-length</a> <i>number</i> <a href="#">mac-address</a> <i>string</i> <a href="#">ip-address</a> ( <i>ipv4-address</i>   <i>ipv6-address</i> ) <a href="#">ethernet-tag-id</a> <i>number</i> <a href="#">neighbor</a> ( <i>ipv4-address</i>   <i>ipv6-address</i> ) <a href="#">invalid-reason</a> <a href="#">cluster-loop</a> <i>boolean</i>
<b>Tree</b>	<a href="#">cluster-loop</a>
<b>Configurable</b>	False

**next-hop-unresolved *boolean***

<b>Description</b>	Indicates true if the BGP route has a BGP next-hop that cannot be resolved to an outgoing interface.
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">bgp-rib</a> <a href="#">evpn</a> <a href="#">rib-in-out</a> <a href="#">rib-in-post</a> <a href="#">mac-ip-routes</a> <a href="#">route-distinguisher</a> ( <i>string</i>   <i>string</i>   <i>string</i>   <i>string</i> ) <a href="#">mac-length</a> <i>number</i> <a href="#">mac-address</a> <i>string</i> <a href="#">ip-address</a> ( <i>ipv4-address</i>   <i>ipv6-address</i> ) <a href="#">ethernet-tag-</a>

	<a href="#">id</a> <a href="#">number</a> <a href="#">neighbor</a> ( <a href="#">ipv4-address</a>   <a href="#">ipv6-address</a> ) <a href="#">invalid-reason</a> <a href="#">next-hop-unresolved</a> <a href="#">boolean</a>
<b>Tree</b>	<a href="#">next-hop-unresolved</a>
<b>Configurable</b>	False

**rejected-route *boolean***

<b>Description</b>	Indicates true if the route was rejected by an import policy.
<b>Context</b>	<a href="#">network-instance</a> <a href="#">name</a> <a href="#">string</a> <a href="#">bgp-rib</a> <a href="#">evpn</a> <a href="#">rib-in-out</a> <a href="#">rib-in-post</a> <a href="#">mac-ip-routes</a> <a href="#">route-distinguisher</a> ( <a href="#">string</a>   <a href="#">string</a>   <a href="#">string</a>   <a href="#">string</a> ) <a href="#">mac-length</a> <a href="#">number</a> <a href="#">mac-address</a> <a href="#">string</a> <a href="#">ip-address</a> ( <a href="#">ipv4-address</a>   <a href="#">ipv6-address</a> ) <a href="#">ethernet-tag-id</a> <a href="#">number</a> <a href="#">neighbor</a> ( <a href="#">ipv4-address</a>   <a href="#">ipv6-address</a> ) <a href="#">invalid-reason</a> <a href="#">rejected-route</a> <a href="#">boolean</a>
<b>Tree</b>	<a href="#">rejected-route</a>
<b>Configurable</b>	False

**last-modified *string***

<b>Description</b>	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.
<b>Context</b>	<a href="#">network-instance</a> <a href="#">name</a> <a href="#">string</a> <a href="#">bgp-rib</a> <a href="#">evpn</a> <a href="#">rib-in-out</a> <a href="#">rib-in-post</a> <a href="#">mac-ip-routes</a> <a href="#">route-distinguisher</a> ( <a href="#">string</a>   <a href="#">string</a>   <a href="#">string</a>   <a href="#">string</a> ) <a href="#">mac-length</a> <a href="#">number</a> <a href="#">mac-address</a> <a href="#">string</a> <a href="#">ip-address</a> ( <a href="#">ipv4-address</a>   <a href="#">ipv6-address</a> ) <a href="#">ethernet-tag-id</a> <a href="#">number</a> <a href="#">neighbor</a> ( <a href="#">ipv4-address</a>   <a href="#">ipv6-address</a> ) <a href="#">last-modified</a> <a href="#">string</a>
<b>Tree</b>	<a href="#">last-modified</a>
<b>String Length</b>	20 to 32
<b>Configurable</b>	False

**pending-delete *boolean***

<b>Description</b>	Set to true if the route is marked for deletion.
<b>Context</b>	<a href="#">network-instance</a> <a href="#">name</a> <a href="#">string</a> <a href="#">bgp-rib</a> <a href="#">evpn</a> <a href="#">rib-in-out</a> <a href="#">rib-in-post</a> <a href="#">mac-ip-routes</a> <a href="#">route-distinguisher</a> ( <a href="#">string</a>   <a href="#">string</a>   <a href="#">string</a>   <a href="#">string</a> ) <a href="#">mac-length</a> <a href="#">number</a> <a href="#">mac-address</a> <a href="#">string</a> <a href="#">ip-address</a> ( <a href="#">ipv4-address</a>   <a href="#">ipv6-address</a> ) <a href="#">ethernet-tag-id</a> <a href="#">number</a> <a href="#">neighbor</a> ( <a href="#">ipv4-address</a>   <a href="#">ipv6-address</a> ) <a href="#">pending-delete</a> <a href="#">boolean</a>
<b>Tree</b>	<a href="#">pending-delete</a>
<b>Configurable</b>	False

**stale-route *boolean***

<b>Description</b>	Set to true if the route is stale due to BGP graceful restart.
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">bgp-rib evpn rib-in-out rib-in-post mac-ip-routes route-distinguisher</a> ( <i>string</i>   <i>string</i>   <i>string</i>   <i>string</i> ) <a href="#">mac-length</a> <i>number</i> <a href="#">mac-address</a> <i>string</i> <a href="#">ip-address</a> ( <i>ipv4-address</i>   <i>ipv6-address</i> ) <a href="#">ethernet-tag-id</a> <i>number</i> <a href="#">neighbor</a> ( <i>ipv4-address</i>   <i>ipv6-address</i> ) <a href="#">stale-route</a> <i>boolean</i>
<b>Tree</b>	<a href="#">stale-route</a>
<b>Configurable</b>	False

**tie-break-reason *keyword***

<b>Description</b>	Indicates the reason why a BGP route is sorted behind the next best route. The BGP best path displays a value of 'none'.
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">bgp-rib evpn rib-in-out rib-in-post mac-ip-routes route-distinguisher</a> ( <i>string</i>   <i>string</i>   <i>string</i>   <i>string</i> ) <a href="#">mac-length</a> <i>number</i> <a href="#">mac-address</a> <i>string</i> <a href="#">ip-address</a> ( <i>ipv4-address</i>   <i>ipv6-address</i> ) <a href="#">ethernet-tag-id</a> <i>number</i> <a href="#">neighbor</a> ( <i>ipv4-address</i>   <i>ipv6-address</i> ) <a href="#">tie-break-reason</a> <i>keyword</i>
<b>Tree</b>	<a href="#">tie-break-reason</a>
<b>Options</b>	<ul style="list-style-type: none"> <li>• unknown</li> <li>• none</li> <li>• origin</li> <li>• as-path-length</li> <li>• next-hop-cost</li> <li>• med</li> <li>• local-pref</li> <li>• aggregate</li> <li>• originator-id</li> <li>• cluster-list</li> <li>• extended-community</li> <li>• aigp</li> <li>• missing-attribute</li> <li>• rtm-pref</li> <li>• owner</li> <li>• eigrp-labeled</li> <li>• vpn-route</li> <li>• ebgp-route</li> <li>• peer-ip</li> <li>• local-peer</li> </ul>

- multi-path
- vpn-rd
- next-hop-type
- invalid-route
- origin-validation
- long-live-gr-stale
- default-originate
- rtm-install-disabled
- peer-router-id
- path-identifier

**Configurable** False

### **used-route *boolean***

**Description** Indicates true if the route is being used for forwarding.

**Context** [network-instance name](#) *string* [bgp-rib](#) [evpn](#) [rib-in-out](#) [rib-in-post](#) [mac-ip-routes](#) [route-distinguisher](#) (*string* | *string* | *string* | *string*) [mac-length](#) *number* [mac-address](#) *string* [ip-address](#) (*ipv4-address* | *ipv6-address*) [ethernet-tag-id](#) *number* [neighbor](#) (*ipv4-address* | *ipv6-address*) [used-route](#) *boolean*

**Tree** [used-route](#)

**Configurable** False

### **valid-route *boolean***

**Description** Indicates true if the route is valid.

**Context** [network-instance name](#) *string* [bgp-rib](#) [evpn](#) [rib-in-out](#) [rib-in-post](#) [mac-ip-routes](#) [route-distinguisher](#) (*string* | *string* | *string* | *string*) [mac-length](#) *number* [mac-address](#) *string* [ip-address](#) (*ipv4-address* | *ipv6-address*) [ethernet-tag-id](#) *number* [neighbor](#) (*ipv4-address* | *ipv6-address*) [valid-route](#) *boolean*

**Tree** [valid-route](#)

**Configurable** False

### **vni *number***

**Description** The VXLAN Network Identifier

**Context** [network-instance name](#) *string* [bgp-rib](#) [evpn](#) [rib-in-out](#) [rib-in-post](#) [mac-ip-routes](#) [route-distinguisher](#) (*string* | *string* | *string* | *string*) [mac-length](#) *number* [mac-address](#) *string* [ip-address](#) (*ipv4-address* | *ipv6-address*) [ethernet-tag-id](#) *number* [neighbor](#) (*ipv4-address* | *ipv6-address*) [vni](#) *number*

<b>Tree</b>	vni
<b>Range</b>	0 to 16777215
<b>Configurable</b>	False

**rib-in-pre**

<b>Description</b>	Container for the pre-import-policy version of BGP routes learned from BGP neighbors.
<b>Context</b>	network-instance name <i>string</i> bgp-rib evpn rib-in-out rib-in-pre
<b>Tree</b>	rib-in-pre
<b>Configurable</b>	False

**ethernet-ad-routes route-distinguisher (*string* | *string* | *string* | *string*) esi *string* ethernet-tag-id *number* neighbor (*ipv4-address* | *ipv6-address*)**

<b>Description</b>	List of Ethernet AD (Auto-Discovery) routes
<b>Context</b>	network-instance name <i>string</i> bgp-rib evpn rib-in-out rib-in-pre ethernet-ad-routes route-distinguisher ( <i>string</i>   <i>string</i>   <i>string</i>   <i>string</i> ) esi <i>string</i> ethernet-tag-id <i>number</i> neighbor ( <i>ipv4-address</i>   <i>ipv6-address</i> )
<b>Tree</b>	ethernet-ad-routes
<b>Configurable</b>	False

**route-distinguisher (*string* | *string* | *string* | *string*)**

<b>Description</b>	The route distinguisher encoded in the NLRI.
<b>Context</b>	network-instance name <i>string</i> bgp-rib evpn rib-in-out rib-in-pre ethernet-ad-routes route-distinguisher ( <i>string</i>   <i>string</i>   <i>string</i>   <i>string</i> ) esi <i>string</i> ethernet-tag-id <i>number</i> neighbor ( <i>ipv4-address</i>   <i>ipv6-address</i> )
<b>Configurable</b>	False

**esi *string***

<b>Description</b>	The Ethernet Segment Identifier encoded in the NLRI
<b>Context</b>	network-instance name <i>string</i> bgp-rib evpn rib-in-out rib-in-pre ethernet-ad-routes route-distinguisher ( <i>string</i>   <i>string</i>   <i>string</i>   <i>string</i> ) esi <i>string</i> ethernet-tag-id <i>number</i> neighbor ( <i>ipv4-address</i>   <i>ipv6-address</i> )
<b>Configurable</b>	False

**ethernet-tag-id *number***

<b>Description</b>	The 32-bit Ethernet Tag ID encoded in the NLRI. The Ethernet Tag ID identifies a broadcast domain.
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">bgp-rib</a> <a href="#">evpn</a> <a href="#">rib-in-out</a> <a href="#">rib-in-pre</a> <a href="#">ethernet-ad-routes</a> <a href="#">route-distinguisher</a> ( <i>string</i>   <i>string</i>   <i>string</i>   <i>string</i> ) <a href="#">esi</a> <i>string</i> <a href="#">ethernet-tag-id</a> <i>number</i> <a href="#">neighbor</a> ( <i>ipv4-address</i>   <i>ipv6-address</i> )
<b>Configurable</b>	False

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

<b>Description</b>	If the route was learned from a BGP neighbor, this is the IPv4 or IPv6 address of that neighbor.
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">bgp-rib</a> <a href="#">evpn</a> <a href="#">rib-in-out</a> <a href="#">rib-in-pre</a> <a href="#">ethernet-ad-routes</a> <a href="#">route-distinguisher</a> ( <i>string</i>   <i>string</i>   <i>string</i>   <i>string</i> ) <a href="#">esi</a> <i>string</i> <a href="#">ethernet-tag-id</a> <i>number</i> <a href="#">neighbor</a> ( <i>ipv4-address</i>   <i>ipv6-address</i> )
<b>Configurable</b>	False

**attr-id *reference***

<b>Description</b>	Leaf reference to networkinstance/protocols/bgp/rib/attr-sets/attr-set/index.
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">bgp-rib</a> <a href="#">evpn</a> <a href="#">rib-in-out</a> <a href="#">rib-in-pre</a> <a href="#">ethernet-ad-routes</a> <a href="#">route-distinguisher</a> ( <i>string</i>   <i>string</i>   <i>string</i>   <i>string</i> ) <a href="#">esi</a> <i>string</i> <a href="#">ethernet-tag-id</a> <i>number</i> <a href="#">neighbor</a> ( <i>ipv4-address</i>   <i>ipv6-address</i> ) <a href="#">attr-id</a> <i>reference</i>
<b>Tree</b>	<a href="#">attr-id</a>
<b>Reference</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">bgp-rib</a> <a href="#">attr-sets</a> <a href="#">attr-set</a> <a href="#">attr-set-type</a> <i>keyword</i> <a href="#">index</a> <i>number</i>
<b>Configurable</b>	False

**vni *number***

<b>Description</b>	The VXLAN Network Identifier
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">bgp-rib</a> <a href="#">evpn</a> <a href="#">rib-in-out</a> <a href="#">rib-in-pre</a> <a href="#">ethernet-ad-routes</a> <a href="#">route-distinguisher</a> ( <i>string</i>   <i>string</i>   <i>string</i>   <i>string</i> ) <a href="#">esi</a> <i>string</i> <a href="#">ethernet-tag-id</a> <i>number</i> <a href="#">neighbor</a> ( <i>ipv4-address</i>   <i>ipv6-address</i> ) <a href="#">vni</a> <i>number</i>
<b>Tree</b>	<a href="#">vni</a>
<b>Range</b>	0 to 16777215
<b>Configurable</b>	False



**ethernet-segment-routes route-distinguisher (*string* | *string* | *string* | *string*) esi *string* originating-router (*ipv4-address* | *ipv6-address*) neighbor (*ipv4-address* | *ipv6-address*)**

<b>Description</b>	List of Ethernet Segment routes
<b>Context</b>	<a href="#">network-instance name</a> <a href="#">string</a> <a href="#">bgp-rib evpn rib-in-out rib-in-pre ethernet-segment-routes route-distinguisher (<i>string</i>   <i>string</i>   <i>string</i>   <i>string</i>) esi string originating-router (<i>ipv4-address</i>   <i>ipv6-address</i>) neighbor (<i>ipv4-address</i>   <i>ipv6-address</i>)</a>
<b>Tree</b>	<a href="#">ethernet-segment-routes</a>
<b>Configurable</b>	False

**route-distinguisher (*string* | *string* | *string* | *string*)**

<b>Description</b>	The route distinguisher encoded in the NLRI.
<b>Context</b>	<a href="#">network-instance name</a> <a href="#">string</a> <a href="#">bgp-rib evpn rib-in-out rib-in-pre ethernet-segment-routes route-distinguisher (<i>string</i>   <i>string</i>   <i>string</i>   <i>string</i>) esi string originating-router (<i>ipv4-address</i>   <i>ipv6-address</i>) neighbor (<i>ipv4-address</i>   <i>ipv6-address</i>)</a>
<b>Configurable</b>	False

**esi *string***

<b>Description</b>	The Ethernet Segment Identifier
<b>Context</b>	<a href="#">network-instance name</a> <a href="#">string</a> <a href="#">bgp-rib evpn rib-in-out rib-in-pre ethernet-segment-routes route-distinguisher (<i>string</i>   <i>string</i>   <i>string</i>   <i>string</i>) esi string originating-router (<i>ipv4-address</i>   <i>ipv6-address</i>) neighbor (<i>ipv4-address</i>   <i>ipv6-address</i>)</a>
<b>Configurable</b>	False

**originating-router (*ipv4-address* | *ipv6-address*)**

<b>Description</b>	The IPv4 or IPv6 address of the originating router
<b>Context</b>	<a href="#">network-instance name</a> <a href="#">string</a> <a href="#">bgp-rib evpn rib-in-out rib-in-pre ethernet-segment-routes route-distinguisher (<i>string</i>   <i>string</i>   <i>string</i>   <i>string</i>) esi string originating-router (<i>ipv4-address</i>   <i>ipv6-address</i>) neighbor (<i>ipv4-address</i>   <i>ipv6-address</i>)</a>
<b>Configurable</b>	False

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

<b>Description</b>	If the route was learned from a BGP neighbor, this is the IPv4 or IPv6 address of that neighbor.
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">bgp-rib evpn rib-in-out rib-in-pre ethernet-segment-routes route-distinguisher</a> ( <i>string   string   string   string</i> ) <a href="#">esi</a> <i>string</i> <a href="#">originating-router</a> ( <i>ipv4-address   ipv6-address</i> ) <a href="#">neighbor</a> ( <i>ipv4-address   ipv6-address</i> )
<b>Configurable</b>	False

**attr-id reference**

<b>Description</b>	Leaf reference to networkinstance/protocols/bgp/rib/attr-sets/attr-set/index.
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">bgp-rib evpn rib-in-out rib-in-pre ethernet-segment-routes route-distinguisher</a> ( <i>string   string   string   string</i> ) <a href="#">esi</a> <i>string</i> <a href="#">originating-router</a> ( <i>ipv4-address   ipv6-address</i> ) <a href="#">neighbor</a> ( <i>ipv4-address   ipv6-address</i> ) <a href="#">attr-id</a> <i>reference</i>
<b>Tree</b>	<a href="#">attr-id</a>
<b>Reference</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">bgp-rib attr-sets attr-set attr-set-type</a> <i>keyword</i> <a href="#">index</a> <i>number</i>
<b>Configurable</b>	False

**imet-routes route-distinguisher (string | string | string | string) originating-router (ipv4-address | ipv6-address) ethernet-tag-id number neighbor (ipv4-address | ipv6-address)**

<b>Description</b>	List of Inclusive Multicast Ethernet Tag routes
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">bgp-rib evpn rib-in-out rib-in-pre imet-routes route-distinguisher</a> ( <i>string   string   string   string</i> ) <a href="#">originating-router</a> ( <i>ipv4-address   ipv6-address</i> ) <a href="#">ethernet-tag-id</a> <i>number</i> <a href="#">neighbor</a> ( <i>ipv4-address   ipv6-address</i> )
<b>Tree</b>	<a href="#">imet-routes</a>
<b>Configurable</b>	False

**route-distinguisher (string | string | string | string)**

<b>Description</b>	The route distinguisher encoded in the NLRI.
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">bgp-rib evpn rib-in-out rib-in-pre imet-routes route-distinguisher</a> ( <i>string   string   string   string</i> ) <a href="#">originating-router</a> ( <i>ipv4-address   ipv6-address</i> ) <a href="#">ethernet-tag-id</a> <i>number</i> <a href="#">neighbor</a> ( <i>ipv4-address   ipv6-address</i> )

**Configurable** False

### originating-router (*ipv4-address* | *ipv6-address*)

**Description** The IPv4 or IPv6 address of the originating router

**Context** [network-instance name](#) *string* [bgp-rib evpn rib-in-out rib-in-pre imet-routes route-distinguisher](#) (*string* | *string* | *string* | *string*) [originating-router \(ipv4-address | ipv6-address\)](#) [ethernet-tag-id number](#) [neighbor \(ipv4-address | ipv6-address\)](#)

**Configurable** False

### ethernet-tag-id *number*

**Description** The 32-bit Ethernet Tag ID encoded in the NLRI. The Ethernet Tag ID identifies a broadcast domain.

**Context** [network-instance name](#) *string* [bgp-rib evpn rib-in-out rib-in-pre imet-routes route-distinguisher](#) (*string* | *string* | *string* | *string*) [originating-router \(ipv4-address | ipv6-address\)](#) [ethernet-tag-id number](#) [neighbor \(ipv4-address | ipv6-address\)](#)

**Configurable** False

### neighbor (*ipv4-address* | *ipv6-address*)

**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 evpn rib-in-out rib-in-pre imet-routes route-distinguisher](#) (*string* | *string* | *string* | *string*) [originating-router \(ipv4-address | ipv6-address\)](#) [ethernet-tag-id number](#) [neighbor \(ipv4-address | ipv6-address\)](#)

**Configurable** False

### attr-id *reference*

**Description** Leaf reference to [networkinstance/protocols/bgp/rib/attr-sets/attr-set/index](#).

**Context** [network-instance name](#) *string* [bgp-rib evpn rib-in-out rib-in-pre imet-routes route-distinguisher](#) (*string* | *string* | *string* | *string*) [originating-router \(ipv4-address | ipv6-address\)](#) [ethernet-tag-id number](#) [neighbor \(ipv4-address | ipv6-address\)](#) [attr-id reference](#)

**Tree** [attr-id](#)

**Reference** [network-instance name](#) *string* [bgp-rib attr-sets attr-set attr-set-type keyword index number](#)

<b>Configurable</b>	False
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**ip-prefix-routes route-distinguisher** (*string* | *string* | *string* | *string*) **ethernet-tag-id number ip-prefix-length number ip-prefix** (*ipv4-prefix* | *ipv6-prefix*) **neighbor** (*ipv4-address* | *ipv6-address*)

<b>Description</b>	List of IP prefix routes
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<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">bgp-rib evpn rib-in-out rib-in-pre ip-prefix-routes route-distinguisher</a> ( <i>string</i>   <i>string</i>   <i>string</i>   <i>string</i> ) <a href="#">ethernet-tag-id number ip-prefix-length number ip-prefix</a> ( <i>ipv4-prefix</i>   <i>ipv6-prefix</i> ) <a href="#">neighbor</a> ( <i>ipv4-address</i>   <i>ipv6-address</i> )
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<b>Tree</b>	<a href="#">ip-prefix-routes</a>
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<b>Configurable</b>	False
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**route-distinguisher** (*string* | *string* | *string* | *string*)

<b>Description</b>	The route distinguisher encoded in the NLRI.
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<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">bgp-rib evpn rib-in-out rib-in-pre ip-prefix-routes route-distinguisher</a> ( <i>string</i>   <i>string</i>   <i>string</i>   <i>string</i> ) <a href="#">ethernet-tag-id number ip-prefix-length number ip-prefix</a> ( <i>ipv4-prefix</i>   <i>ipv6-prefix</i> ) <a href="#">neighbor</a> ( <i>ipv4-address</i>   <i>ipv6-address</i> )
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<b>Configurable</b>	False
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**ethernet-tag-id number**

<b>Description</b>	The 32-bit Ethernet Tag ID encoded in the NLRI. The Ethernet Tag ID identifies a broadcast domain.
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<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">bgp-rib evpn rib-in-out rib-in-pre ip-prefix-routes route-distinguisher</a> ( <i>string</i>   <i>string</i>   <i>string</i>   <i>string</i> ) <a href="#">ethernet-tag-id number ip-prefix-length number ip-prefix</a> ( <i>ipv4-prefix</i>   <i>ipv6-prefix</i> ) <a href="#">neighbor</a> ( <i>ipv4-address</i>   <i>ipv6-address</i> )
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<b>Configurable</b>	False
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**ip-prefix-length number**

<b>Description</b>	IP prefix length
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<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">bgp-rib evpn rib-in-out rib-in-pre ip-prefix-routes route-distinguisher</a> ( <i>string</i>   <i>string</i>   <i>string</i>   <i>string</i> ) <a href="#">ethernet-tag-id number ip-prefix-length number ip-prefix</a> ( <i>ipv4-prefix</i>   <i>ipv6-prefix</i> ) <a href="#">neighbor</a> ( <i>ipv4-address</i>   <i>ipv6-address</i> )
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<b>Range</b>	0 to 128
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<b>Units</b>	bits
<b>Configurable</b>	False

### **ip-prefix (*ipv4-prefix* | *ipv6-prefix*)**

<b>Description</b>	The IPv4 or IPv6 prefix
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">bgp-rib evpn rib-in-out rib-in-pre ip-prefix-routes route-distinguisher</a> ( <i>string</i>   <i>string</i>   <i>string</i>   <i>string</i> ) <a href="#">ethernet-tag-id number ip-prefix-length number ip-prefix</a> ( <i>ipv4-prefix</i>   <i>ipv6-prefix</i> ) <a href="#">neighbor</a> ( <i>ipv4-address</i>   <i>ipv6-address</i> )
<b>Configurable</b>	False

### **neighbor (*ipv4-address* | *ipv6-address*)**

<b>Description</b>	If the route was learned from a BGP neighbor, this is the IPv4 or IPv6 address of that neighbor.
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">bgp-rib evpn rib-in-out rib-in-pre ip-prefix-routes route-distinguisher</a> ( <i>string</i>   <i>string</i>   <i>string</i>   <i>string</i> ) <a href="#">ethernet-tag-id number ip-prefix-length number ip-prefix</a> ( <i>ipv4-prefix</i>   <i>ipv6-prefix</i> ) <a href="#">neighbor</a> ( <i>ipv4-address</i>   <i>ipv6-address</i> )
<b>Configurable</b>	False

### **attr-id reference**

<b>Description</b>	Leaf reference to networkinstance/protocols/bgp/rib/attr-sets/attr-set/index.
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">bgp-rib evpn rib-in-out rib-in-pre ip-prefix-routes route-distinguisher</a> ( <i>string</i>   <i>string</i>   <i>string</i>   <i>string</i> ) <a href="#">ethernet-tag-id number ip-prefix-length number ip-prefix</a> ( <i>ipv4-prefix</i>   <i>ipv6-prefix</i> ) <a href="#">neighbor</a> ( <i>ipv4-address</i>   <i>ipv6-address</i> ) <a href="#">attr-id reference</a>
<b>Tree</b>	<a href="#">attr-id</a>
<b>Reference</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">bgp-rib attr-sets attr-set attr-set-type keyword index</a> <i>number</i>
<b>Configurable</b>	False

### **esi string**

<b>Description</b>	The Ethernet Segment Identifier
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">bgp-rib evpn rib-in-out rib-in-pre ip-prefix-routes route-distinguisher</a> ( <i>string</i>   <i>string</i>   <i>string</i>   <i>string</i> ) <a href="#">ethernet-tag-id</a>

*number ip-prefix-length number ip-prefix (ipv4-prefix | ipv6-prefix) neighbor (ipv4-address | ipv6-address) esi string*

<b>Tree</b>	<a href="#">esi</a>
<b>Configurable</b>	False

### **gateway-ip (ipv4-address | ipv6-address)**

<b>Description</b>	An IP address that encodes an overlay index
<b>Context</b>	<a href="#">network-instance name string bgp-rib evpn rib-in-out rib-in-pre ip-prefix-routes route-distinguisher (string   string   string   string) ethernet-tag-id number ip-prefix-length number ip-prefix (ipv4-prefix   ipv6-prefix) neighbor (ipv4-address   ipv6-address) gateway-ip (ipv4-address   ipv6-address)</a>
<b>Tree</b>	<a href="#">gateway-ip</a>
<b>Configurable</b>	False

### **vni number**

<b>Description</b>	The VXLAN Network Identifier
<b>Context</b>	<a href="#">network-instance name string bgp-rib evpn rib-in-out rib-in-pre ip-prefix-routes route-distinguisher (string   string   string   string) ethernet-tag-id number ip-prefix-length number ip-prefix (ipv4-prefix   ipv6-prefix) neighbor (ipv4-address   ipv6-address) vni number</a>
<b>Tree</b>	<a href="#">vni</a>
<b>Range</b>	0 to 16777215
<b>Configurable</b>	False

### **mac-ip-routes route-distinguisher (string | string | string | string) mac-length number mac-address string ip-address (ipv4-address | ipv6-address) ethernet-tag-id number neighbor (ipv4-address | ipv6-address)**

<b>Description</b>	List of Mac/IP Advertisement routes
<b>Context</b>	<a href="#">network-instance name string bgp-rib evpn rib-in-out rib-in-pre mac-ip-routes route-distinguisher (string   string   string   string) mac-length number mac-address string ip-address (ipv4-address   ipv6-address) ethernet-tag-id number neighbor (ipv4-address   ipv6-address)</a>
<b>Tree</b>	<a href="#">mac-ip-routes</a>
<b>Configurable</b>	False

**route-distinguisher (*string* | *string* | *string* | *string*)**

<b>Description</b>	The route distinguisher encoded in the NLRI.
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">bgp-rib evpn rib-in-out rib-in-pre mac-ip-routes route-distinguisher</a> ( <i>string</i>   <i>string</i>   <i>string</i>   <i>string</i> ) <a href="#">mac-length number mac-address</a> <i>string</i> <a href="#">ip-address</a> ( <i>ipv4-address</i>   <i>ipv6-address</i> ) <a href="#">ethernet-tag-id number neighbor</a> ( <i>ipv4-address</i>   <i>ipv6-address</i> )
<b>Configurable</b>	False

**mac-length *number***

<b>Description</b>	MAC address length
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">bgp-rib evpn rib-in-out rib-in-pre mac-ip-routes route-distinguisher</a> ( <i>string</i>   <i>string</i>   <i>string</i>   <i>string</i> ) <a href="#">mac-length number mac-address</a> <i>string</i> <a href="#">ip-address</a> ( <i>ipv4-address</i>   <i>ipv6-address</i> ) <a href="#">ethernet-tag-id number neighbor</a> ( <i>ipv4-address</i>   <i>ipv6-address</i> )
<b>Range</b>	0 to 48
<b>Units</b>	bits
<b>Configurable</b>	False

**mac-address *string***

<b>Description</b>	The MAC address
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">bgp-rib evpn rib-in-out rib-in-pre mac-ip-routes route-distinguisher</a> ( <i>string</i>   <i>string</i>   <i>string</i>   <i>string</i> ) <a href="#">mac-length number mac-address</a> <i>string</i> <a href="#">ip-address</a> ( <i>ipv4-address</i>   <i>ipv6-address</i> ) <a href="#">ethernet-tag-id number neighbor</a> ( <i>ipv4-address</i>   <i>ipv6-address</i> )
<b>Configurable</b>	False

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

<b>Description</b>	The IP host address
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">bgp-rib evpn rib-in-out rib-in-pre mac-ip-routes route-distinguisher</a> ( <i>string</i>   <i>string</i>   <i>string</i>   <i>string</i> ) <a href="#">mac-length number mac-address</a> <i>string</i> <a href="#">ip-address</a> ( <i>ipv4-address</i>   <i>ipv6-address</i> ) <a href="#">ethernet-tag-id number neighbor</a> ( <i>ipv4-address</i>   <i>ipv6-address</i> )
<b>Configurable</b>	False

**ethernet-tag-id *number***

<b>Description</b>	The 32-bit Ethernet Tag ID encoded in the NLRI. The Ethernet Tag ID identifies a broadcast domain.
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">bgp-rib</a> <a href="#">evpn</a> <a href="#">rib-in-out</a> <a href="#">rib-in-pre</a> <a href="#">mac-ip-routes</a> <a href="#">route-distinguisher</a> ( <i>string</i>   <i>string</i>   <i>string</i>   <i>string</i> ) <a href="#">mac-length</a> <i>number</i> <a href="#">mac-address</a> <i>string</i> <a href="#">ip-address</a> ( <i>ipv4-address</i>   <i>ipv6-address</i> ) <a href="#">ethernet-tag-id</a> <i>number</i> <a href="#">neighbor</a> ( <i>ipv4-address</i>   <i>ipv6-address</i> )
<b>Configurable</b>	False

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

<b>Description</b>	If the route was learned from a BGP neighbor, this is the IPv4 or IPv6 address of that neighbor.
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">bgp-rib</a> <a href="#">evpn</a> <a href="#">rib-in-out</a> <a href="#">rib-in-pre</a> <a href="#">mac-ip-routes</a> <a href="#">route-distinguisher</a> ( <i>string</i>   <i>string</i>   <i>string</i>   <i>string</i> ) <a href="#">mac-length</a> <i>number</i> <a href="#">mac-address</a> <i>string</i> <a href="#">ip-address</a> ( <i>ipv4-address</i>   <i>ipv6-address</i> ) <a href="#">ethernet-tag-id</a> <i>number</i> <a href="#">neighbor</a> ( <i>ipv4-address</i>   <i>ipv6-address</i> )
<b>Configurable</b>	False

**attr-id *reference***

<b>Description</b>	Leaf reference to networkinstance/protocols/bgp/rib/attr-sets/attr-set/index.
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">bgp-rib</a> <a href="#">evpn</a> <a href="#">rib-in-out</a> <a href="#">rib-in-pre</a> <a href="#">mac-ip-routes</a> <a href="#">route-distinguisher</a> ( <i>string</i>   <i>string</i>   <i>string</i>   <i>string</i> ) <a href="#">mac-length</a> <i>number</i> <a href="#">mac-address</a> <i>string</i> <a href="#">ip-address</a> ( <i>ipv4-address</i>   <i>ipv6-address</i> ) <a href="#">ethernet-tag-id</a> <i>number</i> <a href="#">neighbor</a> ( <i>ipv4-address</i>   <i>ipv6-address</i> ) <a href="#">attr-id</a> <i>reference</i>
<b>Tree</b>	<a href="#">attr-id</a>
<b>Reference</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">bgp-rib</a> <a href="#">attr-sets</a> <a href="#">attr-set</a> <a href="#">attr-set-type</a> <i>keyword</i> <a href="#">index</a> <i>number</i>
<b>Configurable</b>	False

**esi *string***

<b>Description</b>	The Ethernet Segment Identifier
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">bgp-rib</a> <a href="#">evpn</a> <a href="#">rib-in-out</a> <a href="#">rib-in-pre</a> <a href="#">mac-ip-routes</a> <a href="#">route-distinguisher</a> ( <i>string</i>   <i>string</i>   <i>string</i>   <i>string</i> ) <a href="#">mac-length</a> <i>number</i> <a href="#">mac-address</a> <i>string</i> <a href="#">ip-address</a> ( <i>ipv4-address</i>   <i>ipv6-address</i> ) <a href="#">ethernet-tag-id</a> <i>number</i> <a href="#">neighbor</a> ( <i>ipv4-address</i>   <i>ipv6-address</i> ) <a href="#">esi</a> <i>string</i>
<b>Tree</b>	<a href="#">esi</a>
<b>Configurable</b>	False



**vni number**

<b>Description</b>	The VXLAN Network Identifier
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">bgp-rib evpn rib-in-out rib-in-pre mac-ip-routes route-distinguisher</a> ( <i>string</i>   <i>string</i>   <i>string</i>   <i>string</i> ) <a href="#">mac-length</a> <i>number</i> <a href="#">mac-address</a> <i>string</i> <a href="#">ip-address</a> ( <i>ipv4-address</i>   <i>ipv6-address</i> ) <a href="#">ethernet-tag-id</a> <i>number</i> <a href="#">neighbor</a> ( <i>ipv4-address</i>   <i>ipv6-address</i> ) <a href="#">vni number</a>
<b>Tree</b>	<a href="#">vni</a>
<b>Range</b>	0 to 16777215
<b>Configurable</b>	False

**rib-out-post**

<b>Description</b>	Container for the post-export-policy version of BGP routes advertised to BGP neighbors.
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">bgp-rib evpn rib-in-out rib-out-post</a>
<b>Tree</b>	<a href="#">rib-out-post</a>
<b>Configurable</b>	False

**ethernet-ad-routes route-distinguisher (*string* | *string* | *string* | *string*) esi *string* ethernet-tag-id *number* neighbor (*ipv4-address* | *ipv6-address*)**

<b>Description</b>	List of Ethernet AD (Auto-Discovery) routes
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">bgp-rib evpn rib-in-out rib-out-post ethernet-ad-routes route-distinguisher</a> ( <i>string</i>   <i>string</i>   <i>string</i>   <i>string</i> ) <a href="#">esi</a> <i>string</i> <a href="#">ethernet-tag-id</a> <i>number</i> <a href="#">neighbor</a> ( <i>ipv4-address</i>   <i>ipv6-address</i> )
<b>Tree</b>	<a href="#">ethernet-ad-routes</a>
<b>Configurable</b>	False

**route-distinguisher (*string* | *string* | *string* | *string*)**

<b>Description</b>	The route distinguisher encoded in the NLRI.
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">bgp-rib evpn rib-in-out rib-out-post ethernet-ad-routes route-distinguisher</a> ( <i>string</i>   <i>string</i>   <i>string</i>   <i>string</i> ) <a href="#">esi</a> <i>string</i> <a href="#">ethernet-tag-id</a> <i>number</i> <a href="#">neighbor</a> ( <i>ipv4-address</i>   <i>ipv6-address</i> )
<b>Configurable</b>	False

**esi string**

<b>Description</b>	The Ethernet Segment Identifier encoded in the NLRI
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">bgp-rib</a> <a href="#">evpn</a> <a href="#">rib-in-out</a> <a href="#">rib-out-post</a> <a href="#">ethernet-ad-routes</a> <a href="#">route-distinguisher</a> ( <i>string</i>   <i>string</i>   <i>string</i>   <i>string</i> ) <a href="#">esi</a> <i>string</i> <a href="#">ethernet-tag-id</a> <i>number</i> <a href="#">neighbor</a> ( <i>ipv4-address</i>   <i>ipv6-address</i> )
<b>Configurable</b>	False

**ethernet-tag-id number**

<b>Description</b>	The 32-bit Ethernet Tag ID encoded in the NLRI. The Ethernet Tag ID identifies a broadcast domain.
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">bgp-rib</a> <a href="#">evpn</a> <a href="#">rib-in-out</a> <a href="#">rib-out-post</a> <a href="#">ethernet-ad-routes</a> <a href="#">route-distinguisher</a> ( <i>string</i>   <i>string</i>   <i>string</i>   <i>string</i> ) <a href="#">esi</a> <i>string</i> <a href="#">ethernet-tag-id</a> <i>number</i> <a href="#">neighbor</a> ( <i>ipv4-address</i>   <i>ipv6-address</i> )
<b>Configurable</b>	False

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

<b>Description</b>	If the route was learned from a BGP neighbor, this is the IPv4 or IPv6 address of that neighbor.
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">bgp-rib</a> <a href="#">evpn</a> <a href="#">rib-in-out</a> <a href="#">rib-out-post</a> <a href="#">ethernet-ad-routes</a> <a href="#">route-distinguisher</a> ( <i>string</i>   <i>string</i>   <i>string</i>   <i>string</i> ) <a href="#">esi</a> <i>string</i> <a href="#">ethernet-tag-id</a> <i>number</i> <a href="#">neighbor</a> ( <i>ipv4-address</i>   <i>ipv6-address</i> )
<b>Configurable</b>	False

**attr-id reference**

<b>Description</b>	Leaf reference to networkinstance/protocols/bgp/rib/attr-sets/attr-set/index.
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">bgp-rib</a> <a href="#">evpn</a> <a href="#">rib-in-out</a> <a href="#">rib-out-post</a> <a href="#">ethernet-ad-routes</a> <a href="#">route-distinguisher</a> ( <i>string</i>   <i>string</i>   <i>string</i>   <i>string</i> ) <a href="#">esi</a> <i>string</i> <a href="#">ethernet-tag-id</a> <i>number</i> <a href="#">neighbor</a> ( <i>ipv4-address</i>   <i>ipv6-address</i> ) <a href="#">attr-id</a> <i>reference</i>
<b>Tree</b>	<a href="#">attr-id</a>
<b>Reference</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">bgp-rib</a> <a href="#">attr-sets</a> <a href="#">attr-set</a> <a href="#">attr-set-type</a> <i>keyword</i> <a href="#">index</a> <i>number</i>
<b>Configurable</b>	False

**next-hop (ipv4-address | ipv6-address)**

<b>Description</b>	The advertised BGP next-hop address.
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<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">bgp-rib</a> <a href="#">evpn</a> <a href="#">rib-in-out</a> <a href="#">rib-out-post</a> <a href="#">ethernet-ad-routes</a> <a href="#">route-distinguisher</a> ( <i>string</i>   <i>string</i>   <i>string</i>   <i>string</i> ) <a href="#">esi</a> <i>string</i> <a href="#">ethernet-tag-id</a> <i>number</i> <a href="#">neighbor</a> ( <i>ipv4-address</i>   <i>ipv6-address</i> ) <a href="#">next-hop</a> ( <i>ipv4-address</i>   <i>ipv6-address</i> )
<b>Tree</b>	<a href="#">next-hop</a>
<b>Configurable</b>	False

**vni number**

<b>Description</b>	The VXLAN Network Identifier
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">bgp-rib</a> <a href="#">evpn</a> <a href="#">rib-in-out</a> <a href="#">rib-out-post</a> <a href="#">ethernet-ad-routes</a> <a href="#">route-distinguisher</a> ( <i>string</i>   <i>string</i>   <i>string</i>   <i>string</i> ) <a href="#">esi</a> <i>string</i> <a href="#">ethernet-tag-id</a> <i>number</i> <a href="#">neighbor</a> ( <i>ipv4-address</i>   <i>ipv6-address</i> ) <a href="#">vni number</a>
<b>Tree</b>	<a href="#">vni</a>
<b>Range</b>	0 to 16777215
<b>Configurable</b>	False

**ethernet-segment-routes** [route-distinguisher](#) (*string* | *string* | *string* | *string*) [esi](#) *string* [originating-router](#) (*ipv4-address* | *ipv6-address*) [neighbor](#) (*ipv4-address* | *ipv6-address*)

<b>Description</b>	List of Ethernet Segment routes
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">bgp-rib</a> <a href="#">evpn</a> <a href="#">rib-in-out</a> <a href="#">rib-out-post</a> <a href="#">ethernet-segment-routes</a> <a href="#">route-distinguisher</a> ( <i>string</i>   <i>string</i>   <i>string</i>   <i>string</i> ) <a href="#">esi</a> <i>string</i> <a href="#">originating-router</a> ( <i>ipv4-address</i>   <i>ipv6-address</i> ) <a href="#">neighbor</a> ( <i>ipv4-address</i>   <i>ipv6-address</i> )
<b>Tree</b>	<a href="#">ethernet-segment-routes</a>
<b>Configurable</b>	False

**route-distinguisher** (*string* | *string* | *string* | *string*)

<b>Description</b>	The route distinguisher encoded in the NLRI.
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">bgp-rib</a> <a href="#">evpn</a> <a href="#">rib-in-out</a> <a href="#">rib-out-post</a> <a href="#">ethernet-segment-routes</a> <a href="#">route-distinguisher</a> ( <i>string</i>   <i>string</i>   <i>string</i>   <i>string</i> ) <a href="#">esi</a> <i>string</i> <a href="#">originating-router</a> ( <i>ipv4-address</i>   <i>ipv6-address</i> ) <a href="#">neighbor</a> ( <i>ipv4-address</i>   <i>ipv6-address</i> )
<b>Configurable</b>	False

**esi string**

<b>Description</b>	The Ethernet Segment Identifier
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">bgp-rib evpn rib-in-out rib-out-post ethernet-segment-routes route-distinguisher</a> ( <i>string</i>   <i>string</i>   <i>string</i>   <i>string</i> ) <a href="#">esi</a> <i>string</i> <a href="#">originating-router</a> ( <i>ipv4-address</i>   <i>ipv6-address</i> ) <a href="#">neighbor</a> ( <i>ipv4-address</i>   <i>ipv6-address</i> )
<b>Configurable</b>	False

**originating-router (ipv4-address | ipv6-address)**

<b>Description</b>	The IPv4 or IPv6 address of the originating router
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">bgp-rib evpn rib-in-out rib-out-post ethernet-segment-routes route-distinguisher</a> ( <i>string</i>   <i>string</i>   <i>string</i>   <i>string</i> ) <a href="#">esi</a> <i>string</i> <a href="#">originating-router</a> ( <i>ipv4-address</i>   <i>ipv6-address</i> ) <a href="#">neighbor</a> ( <i>ipv4-address</i>   <i>ipv6-address</i> )
<b>Configurable</b>	False

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

<b>Description</b>	If the route was learned from a BGP neighbor, this is the IPv4 or IPv6 address of that neighbor.
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">bgp-rib evpn rib-in-out rib-out-post ethernet-segment-routes route-distinguisher</a> ( <i>string</i>   <i>string</i>   <i>string</i>   <i>string</i> ) <a href="#">esi</a> <i>string</i> <a href="#">originating-router</a> ( <i>ipv4-address</i>   <i>ipv6-address</i> ) <a href="#">neighbor</a> ( <i>ipv4-address</i>   <i>ipv6-address</i> )
<b>Configurable</b>	False

**attr-id reference**

<b>Description</b>	Leaf reference to networkinstance/protocols/bgp/rib/attr-sets/attr-set/index.
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">bgp-rib evpn rib-in-out rib-out-post ethernet-segment-routes route-distinguisher</a> ( <i>string</i>   <i>string</i>   <i>string</i>   <i>string</i> ) <a href="#">esi</a> <i>string</i> <a href="#">originating-router</a> ( <i>ipv4-address</i>   <i>ipv6-address</i> ) <a href="#">neighbor</a> ( <i>ipv4-address</i>   <i>ipv6-address</i> ) <a href="#">attr-id</a> <i>reference</i>
<b>Tree</b>	<a href="#">attr-id</a>
<b>Reference</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">bgp-rib attr-sets attr-set attr-set-type</a> <i>keyword</i> <a href="#">index</a> <i>number</i>
<b>Configurable</b>	False

**next-hop (ipv4-address | ipv6-address)**

<b>Description</b>	The advertised BGP next-hop address.
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">bgp-rib evpn rib-in-out rib-out-post ethernet-segment-routes route-distinguisher</a> ( <i>string   string   string   string</i> ) <a href="#">esi</a> <i>string</i> <a href="#">originating-router</a> ( <i>ipv4-address   ipv6-address</i> ) <a href="#">neighbor</a> ( <i>ipv4-address   ipv6-address</i> ) <a href="#">next-hop</a> ( <i>ipv4-address   ipv6-address</i> )
<b>Tree</b>	<a href="#">next-hop</a>
<b>Configurable</b>	False

**imet-routes route-distinguisher (string | string | string | string) originating-router (ipv4-address | ipv6-address) ethernet-tag-id number neighbor (ipv4-address | ipv6-address)**

<b>Description</b>	List of Inclusive Multicast Ethernet Tag routes
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">bgp-rib evpn rib-in-out rib-out-post imet-routes route-distinguisher</a> ( <i>string   string   string   string</i> ) <a href="#">originating-router</a> ( <i>ipv4-address   ipv6-address</i> ) <a href="#">ethernet-tag-id</a> <i>number</i> <a href="#">neighbor</a> ( <i>ipv4-address   ipv6-address</i> )
<b>Tree</b>	<a href="#">imet-routes</a>
<b>Configurable</b>	False

**route-distinguisher (string | string | string | string)**

<b>Description</b>	The route distinguisher encoded in the NLRI.
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">bgp-rib evpn rib-in-out rib-out-post imet-routes route-distinguisher</a> ( <i>string   string   string   string</i> ) <a href="#">originating-router</a> ( <i>ipv4-address   ipv6-address</i> ) <a href="#">ethernet-tag-id</a> <i>number</i> <a href="#">neighbor</a> ( <i>ipv4-address   ipv6-address</i> )
<b>Configurable</b>	False

**originating-router (ipv4-address | ipv6-address)**

<b>Description</b>	The IPv4 or IPv6 address of the originating router
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">bgp-rib evpn rib-in-out rib-out-post imet-routes route-distinguisher</a> ( <i>string   string   string   string</i> ) <a href="#">originating-router</a> ( <i>ipv4-address   ipv6-address</i> ) <a href="#">ethernet-tag-id</a> <i>number</i> <a href="#">neighbor</a> ( <i>ipv4-address   ipv6-address</i> )
<b>Configurable</b>	False

**ethernet-tag-id *number***

<b>Description</b>	The 32-bit Ethernet Tag ID encoded in the NLRI. The Ethernet Tag ID identifies a broadcast domain.
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">bgp-rib evpn rib-in-out rib-out-post imet-routes route-distinguisher</a> ( <i>string</i>   <i>string</i>   <i>string</i>   <i>string</i> ) <a href="#">originating-router</a> ( <i>ipv4-address</i>   <i>ipv6-address</i> ) <a href="#">ethernet-tag-id number</a> <a href="#">neighbor</a> ( <i>ipv4-address</i>   <i>ipv6-address</i> )
<b>Configurable</b>	False

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

<b>Description</b>	If the route was learned from a BGP neighbor, this is the IPv4 or IPv6 address of that neighbor.
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">bgp-rib evpn rib-in-out rib-out-post imet-routes route-distinguisher</a> ( <i>string</i>   <i>string</i>   <i>string</i>   <i>string</i> ) <a href="#">originating-router</a> ( <i>ipv4-address</i>   <i>ipv6-address</i> ) <a href="#">ethernet-tag-id number</a> <a href="#">neighbor</a> ( <i>ipv4-address</i>   <i>ipv6-address</i> )
<b>Configurable</b>	False

**attr-id *reference***

<b>Description</b>	Leaf reference to networkinstance/protocols/bgp/rib/attr-sets/attr-set/index.
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">bgp-rib evpn rib-in-out rib-out-post imet-routes route-distinguisher</a> ( <i>string</i>   <i>string</i>   <i>string</i>   <i>string</i> ) <a href="#">originating-router</a> ( <i>ipv4-address</i>   <i>ipv6-address</i> ) <a href="#">ethernet-tag-id number</a> <a href="#">neighbor</a> ( <i>ipv4-address</i>   <i>ipv6-address</i> ) <a href="#">attr-id reference</a>
<b>Tree</b>	<a href="#">attr-id</a>
<b>Reference</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">bgp-rib attr-sets attr-set attr-set-type keyword index number</a>
<b>Configurable</b>	False

**next-hop (*ipv4-address* | *ipv6-address*)**

<b>Description</b>	The advertised BGP next-hop address.
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">bgp-rib evpn rib-in-out rib-out-post imet-routes route-distinguisher</a> ( <i>string</i>   <i>string</i>   <i>string</i>   <i>string</i> ) <a href="#">originating-router</a> ( <i>ipv4-address</i>   <i>ipv6-address</i> ) <a href="#">ethernet-tag-id number</a> <a href="#">neighbor</a> ( <i>ipv4-address</i>   <i>ipv6-address</i> ) <a href="#">next-hop</a> ( <i>ipv4-address</i>   <i>ipv6-address</i> )
<b>Tree</b>	<a href="#">next-hop</a>
<b>Configurable</b>	False

**ip-prefix-routes route-distinguisher (*string* | *string* | *string* | *string*) ethernet-tag-id number ip-prefix-length number ip-prefix (*ipv4-prefix* | *ipv6-prefix*) neighbor (*ipv4-address* | *ipv6-address*)**

<b>Description</b>	List of IP prefix routes
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">bgp-rib evpn rib-in-out rib-out-post ip-prefix-routes route-distinguisher</a> ( <i>string</i>   <i>string</i>   <i>string</i>   <i>string</i> ) <a href="#">ethernet-tag-id number ip-prefix-length number ip-prefix</a> ( <i>ipv4-prefix</i>   <i>ipv6-prefix</i> ) <a href="#">neighbor</a> ( <i>ipv4-address</i>   <i>ipv6-address</i> )
<b>Tree</b>	<a href="#">ip-prefix-routes</a>
<b>Configurable</b>	False

**route-distinguisher (*string* | *string* | *string* | *string*)**

<b>Description</b>	The route distinguisher encoded in the NLRI.
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">bgp-rib evpn rib-in-out rib-out-post ip-prefix-routes route-distinguisher</a> ( <i>string</i>   <i>string</i>   <i>string</i>   <i>string</i> ) <a href="#">ethernet-tag-id number ip-prefix-length number ip-prefix</a> ( <i>ipv4-prefix</i>   <i>ipv6-prefix</i> ) <a href="#">neighbor</a> ( <i>ipv4-address</i>   <i>ipv6-address</i> )
<b>Configurable</b>	False

**ethernet-tag-id number**

<b>Description</b>	The 32-bit Ethernet Tag ID encoded in the NLRI. The Ethernet Tag ID identifies a broadcast domain.
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">bgp-rib evpn rib-in-out rib-out-post ip-prefix-routes route-distinguisher</a> ( <i>string</i>   <i>string</i>   <i>string</i>   <i>string</i> ) <a href="#">ethernet-tag-id number ip-prefix-length number ip-prefix</a> ( <i>ipv4-prefix</i>   <i>ipv6-prefix</i> ) <a href="#">neighbor</a> ( <i>ipv4-address</i>   <i>ipv6-address</i> )
<b>Configurable</b>	False

**ip-prefix-length number**

<b>Description</b>	IP prefix length
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">bgp-rib evpn rib-in-out rib-out-post ip-prefix-routes route-distinguisher</a> ( <i>string</i>   <i>string</i>   <i>string</i>   <i>string</i> ) <a href="#">ethernet-tag-id number ip-prefix-length number ip-prefix</a> ( <i>ipv4-prefix</i>   <i>ipv6-prefix</i> ) <a href="#">neighbor</a> ( <i>ipv4-address</i>   <i>ipv6-address</i> )
<b>Range</b>	0 to 128
<b>Units</b>	bits

**Configurable** False

### **ip-prefix (*ipv4-prefix* | *ipv6-prefix*)**

**Description** The IPv4 or IPv6 prefix

**Context** [network-instance name](#) *string* [bgp-rib evpn rib-in-out rib-out-post ip-prefix-routes route-distinguisher](#) (*string* | *string* | *string* | *string*) [ethernet-tag-id number ip-prefix-length number ip-prefix](#) (*ipv4-prefix* | *ipv6-prefix*) [neighbor](#) (*ipv4-address* | *ipv6-address*)

**Configurable** False

### **neighbor (*ipv4-address* | *ipv6-address*)**

**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 evpn rib-in-out rib-out-post ip-prefix-routes route-distinguisher](#) (*string* | *string* | *string* | *string*) [ethernet-tag-id number ip-prefix-length number ip-prefix](#) (*ipv4-prefix* | *ipv6-prefix*) [neighbor](#) (*ipv4-address* | *ipv6-address*)

**Configurable** False

### **attr-id reference**

**Description** Leaf reference to networkinstance/protocols/bgp/rib/attr-sets/attr-set/index.

**Context** [network-instance name](#) *string* [bgp-rib evpn rib-in-out rib-out-post ip-prefix-routes route-distinguisher](#) (*string* | *string* | *string* | *string*) [ethernet-tag-id number ip-prefix-length number ip-prefix](#) (*ipv4-prefix* | *ipv6-prefix*) [neighbor](#) (*ipv4-address* | *ipv6-address*) [attr-id reference](#)

**Tree** [attr-id](#)

**Reference** [network-instance name](#) *string* [bgp-rib attr-sets attr-set attr-set-type keyword index](#) *number*

**Configurable** False

### **esi string**

**Description** The Ethernet Segment Identifier

**Context** [network-instance name](#) *string* [bgp-rib evpn rib-in-out rib-out-post ip-prefix-routes route-distinguisher](#) (*string* | *string* | *string* | *string*) [ethernet-tag-id number ip-prefix-length number ip-prefix](#) (*ipv4-prefix* | *ipv6-prefix*) [neighbor](#) (*ipv4-address* | *ipv6-address*) [esi string](#)



<b>Tree</b>	<a href="#">esi</a>
<b>Configurable</b>	False

### **gateway-ip ([ipv4-address](#) | [ipv6-address](#))**

<b>Description</b>	An IP address that encodes an overlay index
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">bgp-rib</a> <a href="#">evpn</a> <a href="#">rib-in-out</a> <a href="#">rib-out-post</a> <a href="#">ip-prefix-routes</a> <a href="#">route-distinguisher</a> ( <i>string</i>   <i>string</i>   <i>string</i>   <i>string</i> ) <a href="#">ethernet-tag-id</a> <i>number</i> <a href="#">ip-prefix-length</a> <i>number</i> <a href="#">ip-prefix</a> ( <a href="#">ipv4-prefix</a>   <a href="#">ipv6-prefix</a> ) <a href="#">neighbor</a> ( <a href="#">ipv4-address</a>   <a href="#">ipv6-address</a> ) <a href="#">gateway-ip</a> ( <a href="#">ipv4-address</a>   <a href="#">ipv6-address</a> )
<b>Tree</b>	<a href="#">gateway-ip</a>
<b>Configurable</b>	False

### **next-hop ([ipv4-address](#) | [ipv6-address](#))**

<b>Description</b>	The advertised BGP next-hop address.
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">bgp-rib</a> <a href="#">evpn</a> <a href="#">rib-in-out</a> <a href="#">rib-out-post</a> <a href="#">ip-prefix-routes</a> <a href="#">route-distinguisher</a> ( <i>string</i>   <i>string</i>   <i>string</i>   <i>string</i> ) <a href="#">ethernet-tag-id</a> <i>number</i> <a href="#">ip-prefix-length</a> <i>number</i> <a href="#">ip-prefix</a> ( <a href="#">ipv4-prefix</a>   <a href="#">ipv6-prefix</a> ) <a href="#">neighbor</a> ( <a href="#">ipv4-address</a>   <a href="#">ipv6-address</a> ) <a href="#">next-hop</a> ( <a href="#">ipv4-address</a>   <a href="#">ipv6-address</a> )
<b>Tree</b>	<a href="#">next-hop</a>
<b>Configurable</b>	False

### **vni number**

<b>Description</b>	The VXLAN Network Identifier
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">bgp-rib</a> <a href="#">evpn</a> <a href="#">rib-in-out</a> <a href="#">rib-out-post</a> <a href="#">ip-prefix-routes</a> <a href="#">route-distinguisher</a> ( <i>string</i>   <i>string</i>   <i>string</i>   <i>string</i> ) <a href="#">ethernet-tag-id</a> <i>number</i> <a href="#">ip-prefix-length</a> <i>number</i> <a href="#">ip-prefix</a> ( <a href="#">ipv4-prefix</a>   <a href="#">ipv6-prefix</a> ) <a href="#">neighbor</a> ( <a href="#">ipv4-address</a>   <a href="#">ipv6-address</a> ) <a href="#">vni number</a>
<b>Tree</b>	<a href="#">vni</a>
<b>Range</b>	0 to 16777215
<b>Configurable</b>	False

### **mac-ip-routes [route-distinguisher](#) (*string* | *string* | *string* | *string*) [mac-length](#) *number* [mac-address](#) *string* [ip-address](#) ([ipv4-address](#) | [ipv6-address](#)) [ethernet-tag-id](#) *number* [neighbor](#) ([ipv4-address](#) | [ipv6-address](#))**

<b>Description</b>	List of Mac/IP Advertisement routes
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<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">bgp-rib</a> <a href="#">evpn</a> <a href="#">rib-in-out</a> <a href="#">rib-out-post</a> <a href="#">mac-ip-routes</a> <a href="#">route-distinguisher</a> ( <i>string</i>   <i>string</i>   <i>string</i>   <i>string</i> ) <a href="#">mac-length</a> <i>number</i> <a href="#">mac-address</a> <i>string</i> <a href="#">ip-address</a> ( <i>ipv4-address</i>   <i>ipv6-address</i> ) <a href="#">ethernet-tag-id</a> <i>number</i> <a href="#">neighbor</a> ( <i>ipv4-address</i>   <i>ipv6-address</i> )
<b>Tree</b>	<a href="#">mac-ip-routes</a>
<b>Configurable</b>	False

### **route-distinguisher (*string* | *string* | *string* | *string*)**

<b>Description</b>	The route distinguisher encoded in the NLRI.
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">bgp-rib</a> <a href="#">evpn</a> <a href="#">rib-in-out</a> <a href="#">rib-out-post</a> <a href="#">mac-ip-routes</a> <a href="#">route-distinguisher</a> ( <i>string</i>   <i>string</i>   <i>string</i>   <i>string</i> ) <a href="#">mac-length</a> <i>number</i> <a href="#">mac-address</a> <i>string</i> <a href="#">ip-address</a> ( <i>ipv4-address</i>   <i>ipv6-address</i> ) <a href="#">ethernet-tag-id</a> <i>number</i> <a href="#">neighbor</a> ( <i>ipv4-address</i>   <i>ipv6-address</i> )
<b>Configurable</b>	False

### **mac-length *number***

<b>Description</b>	MAC address length
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">bgp-rib</a> <a href="#">evpn</a> <a href="#">rib-in-out</a> <a href="#">rib-out-post</a> <a href="#">mac-ip-routes</a> <a href="#">route-distinguisher</a> ( <i>string</i>   <i>string</i>   <i>string</i>   <i>string</i> ) <a href="#">mac-length</a> <i>number</i> <a href="#">mac-address</a> <i>string</i> <a href="#">ip-address</a> ( <i>ipv4-address</i>   <i>ipv6-address</i> ) <a href="#">ethernet-tag-id</a> <i>number</i> <a href="#">neighbor</a> ( <i>ipv4-address</i>   <i>ipv6-address</i> )
<b>Range</b>	0 to 48
<b>Units</b>	bits
<b>Configurable</b>	False

### **mac-address *string***

<b>Description</b>	The MAC address
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">bgp-rib</a> <a href="#">evpn</a> <a href="#">rib-in-out</a> <a href="#">rib-out-post</a> <a href="#">mac-ip-routes</a> <a href="#">route-distinguisher</a> ( <i>string</i>   <i>string</i>   <i>string</i>   <i>string</i> ) <a href="#">mac-length</a> <i>number</i> <a href="#">mac-address</a> <i>string</i> <a href="#">ip-address</a> ( <i>ipv4-address</i>   <i>ipv6-address</i> ) <a href="#">ethernet-tag-id</a> <i>number</i> <a href="#">neighbor</a> ( <i>ipv4-address</i>   <i>ipv6-address</i> )
<b>Configurable</b>	False

### **ip-address (*ipv4-address* | *ipv6-address*)**

<b>Description</b>	The IP host address
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**Context** [network-instance name](#) *string* [bgp-rib](#) [evpn](#) [rib-in-out](#) [rib-out-post](#) [mac-ip-routes](#) [route-distinguisher](#) (*string* | *string* | *string* | *string*) [mac-length](#) *number* [mac-address](#) *string* [ip-address](#) (*ipv4-address* | *ipv6-address*) [ethernet-tag-id](#) *number* [neighbor](#) (*ipv4-address* | *ipv6-address*)

**Configurable** False

### **ethernet-tag-id *number***

**Description** The 32-bit Ethernet Tag ID encoded in the NLRI. The Ethernet Tag ID identifies a broadcast domain.

**Context** [network-instance name](#) *string* [bgp-rib](#) [evpn](#) [rib-in-out](#) [rib-out-post](#) [mac-ip-routes](#) [route-distinguisher](#) (*string* | *string* | *string* | *string*) [mac-length](#) *number* [mac-address](#) *string* [ip-address](#) (*ipv4-address* | *ipv6-address*) [ethernet-tag-id](#) *number* [neighbor](#) (*ipv4-address* | *ipv6-address*)

**Configurable** False

### **neighbor (*ipv4-address* | *ipv6-address*)**

**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](#) [evpn](#) [rib-in-out](#) [rib-out-post](#) [mac-ip-routes](#) [route-distinguisher](#) (*string* | *string* | *string* | *string*) [mac-length](#) *number* [mac-address](#) *string* [ip-address](#) (*ipv4-address* | *ipv6-address*) [ethernet-tag-id](#) *number* [neighbor](#) (*ipv4-address* | *ipv6-address*)

**Configurable** False

### **attr-id *reference***

**Description** Leaf reference to `networkinstance/protocols/bgp/rib/attr-sets/attr-set/index`.

**Context** [network-instance name](#) *string* [bgp-rib](#) [evpn](#) [rib-in-out](#) [rib-out-post](#) [mac-ip-routes](#) [route-distinguisher](#) (*string* | *string* | *string* | *string*) [mac-length](#) *number* [mac-address](#) *string* [ip-address](#) (*ipv4-address* | *ipv6-address*) [ethernet-tag-id](#) *number* [neighbor](#) (*ipv4-address* | *ipv6-address*) [attr-id](#) *reference*

**Tree** [attr-id](#)

**Reference** [network-instance name](#) *string* [bgp-rib](#) [attr-sets](#) [attr-set](#) [attr-set-type](#) *keyword* [index](#) *number*

**Configurable** False

### **esi *string***

**Description** The Ethernet Segment Identifier

<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">bgp-rib</a> <a href="#">evpn</a> <a href="#">rib-in-out</a> <a href="#">rib-out-post</a> <a href="#">mac-ip-routes</a> <a href="#">route-distinguisher</a> ( <i>string</i>   <i>string</i>   <i>string</i>   <i>string</i> ) <a href="#">mac-length</a> <i>number</i> <a href="#">mac-address</a> <i>string</i> <a href="#">ip-address</a> ( <i>ipv4-address</i>   <i>ipv6-address</i> ) <a href="#">ethernet-tag-id</a> <i>number</i> <a href="#">neighbor</a> ( <i>ipv4-address</i>   <i>ipv6-address</i> ) <a href="#">esi</a> <i>string</i>
<b>Tree</b>	<a href="#">esi</a>
<b>Configurable</b>	False

### **next-hop (*ipv4-address* | *ipv6-address*)**

<b>Description</b>	The advertised BGP next-hop address.
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">bgp-rib</a> <a href="#">evpn</a> <a href="#">rib-in-out</a> <a href="#">rib-out-post</a> <a href="#">mac-ip-routes</a> <a href="#">route-distinguisher</a> ( <i>string</i>   <i>string</i>   <i>string</i>   <i>string</i> ) <a href="#">mac-length</a> <i>number</i> <a href="#">mac-address</a> <i>string</i> <a href="#">ip-address</a> ( <i>ipv4-address</i>   <i>ipv6-address</i> ) <a href="#">ethernet-tag-id</a> <i>number</i> <a href="#">neighbor</a> ( <i>ipv4-address</i>   <i>ipv6-address</i> ) <a href="#">next-hop</a> ( <i>ipv4-address</i>   <i>ipv6-address</i> )
<b>Tree</b>	<a href="#">next-hop</a>
<b>Configurable</b>	False

### **vni number**

<b>Description</b>	The VXLAN Network Identifier
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">bgp-rib</a> <a href="#">evpn</a> <a href="#">rib-in-out</a> <a href="#">rib-out-post</a> <a href="#">mac-ip-routes</a> <a href="#">route-distinguisher</a> ( <i>string</i>   <i>string</i>   <i>string</i>   <i>string</i> ) <a href="#">mac-length</a> <i>number</i> <a href="#">mac-address</a> <i>string</i> <a href="#">ip-address</a> ( <i>ipv4-address</i>   <i>ipv6-address</i> ) <a href="#">ethernet-tag-id</a> <i>number</i> <a href="#">neighbor</a> ( <i>ipv4-address</i>   <i>ipv6-address</i> ) <a href="#">vni</a> <i>number</i>
<b>Tree</b>	<a href="#">vni</a>
<b>Range</b>	0 to 16777215
<b>Configurable</b>	False

### **ipv4-unicast**

<b>Description</b>	Container for RIB state of IPv4-unicast routes.
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">bgp-rib</a> <a href="#">ipv4-unicast</a>
<b>Tree</b>	<a href="#">ipv4-unicast</a>
<b>Configurable</b>	False

**local-rib**

<b>Description</b>	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.
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">bgp-rib</a> <a href="#">ipv4-unicast</a> <a href="#">local-rib</a>
<b>Tree</b>	<a href="#">local-rib</a>
<b>Configurable</b>	False

**routes** [prefix](#) ([ipv4-prefix](#) | [ipv6-prefix](#)) [neighbor](#) ([ipv4-address](#) | [ipv6-address-with-zone](#)) [origin-protocol](#) [identityref](#)

<b>Description</b>	List of IPv4 routes in the local RIB.
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">bgp-rib</a> <a href="#">ipv4-unicast</a> <a href="#">local-rib</a> <a href="#">routes</a> <a href="#">prefix</a> ( <a href="#">ipv4-prefix</a>   <a href="#">ipv6-prefix</a> ) <a href="#">neighbor</a> ( <a href="#">ipv4-address</a>   <a href="#">ipv6-address-with-zone</a> ) <a href="#">origin-protocol</a> <a href="#">identityref</a>
<b>Tree</b>	<a href="#">routes</a>
<b>Configurable</b>	False

**prefix** ([ipv4-prefix](#) | [ipv6-prefix](#))

<b>Description</b>	Enter the prefix context
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">bgp-rib</a> <a href="#">ipv4-unicast</a> <a href="#">local-rib</a> <a href="#">routes</a> <a href="#">prefix</a> ( <a href="#">ipv4-prefix</a>   <a href="#">ipv6-prefix</a> ) <a href="#">neighbor</a> ( <a href="#">ipv4-address</a>   <a href="#">ipv6-address-with-zone</a> ) <a href="#">origin-protocol</a> <a href="#">identityref</a>
<b>Configurable</b>	False

**neighbor** ([ipv4-address](#) | [ipv6-address-with-zone](#))

<b>Description</b>	If the route was learned from a BGP neighbor, this is the IPv4 or IPv6 address of that neighbor.
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">bgp-rib</a> <a href="#">ipv4-unicast</a> <a href="#">local-rib</a> <a href="#">routes</a> <a href="#">prefix</a> ( <a href="#">ipv4-prefix</a>   <a href="#">ipv6-prefix</a> ) <a href="#">neighbor</a> ( <a href="#">ipv4-address</a>   <a href="#">ipv6-address-with-zone</a> ) <a href="#">origin-protocol</a> <a href="#">identityref</a>
<b>Configurable</b>	False

**origin-protocol** [identityref](#)

<b>Description</b>	If the route was imported from another protocol, this is the protocol name.
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<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">bgp-rib</a> <a href="#">ipv4-unicast</a> <a href="#">local-rib</a> <a href="#">routes</a> <a href="#">prefix</a> ( <a href="#">ipv4-prefix</a>   <a href="#">ipv6-prefix</a> ) <a href="#">neighbor</a> ( <a href="#">ipv4-address</a>   <a href="#">ipv6-address-with-zone</a> ) <a href="#">origin-protocol</a> <a href="#">identityref</a>
<b>Options</b>	<ul style="list-style-type: none"> <li>• <a href="#">aggregate</a> Locally configured aggregate route</li> <li>• <a href="#">arp-nd</a> IP route added by ARP ND.</li> <li>• <a href="#">bgp</a> Border Gateway Protocol version 4</li> <li>• <a href="#">bgp-evpn</a> BGP Ethernet VPN (EVPN)</li> <li>• <a href="#">dhcp</a> IP (default) route added by DHCP.</li> <li>• <a href="#">gribi</a> A gRIBI route</li> <li>• <a href="#">host</a> A host route</li> <li>• <a href="#">isis</a> IS-IS</li> <li>• <a href="#">local</a> A directly connected route</li> <li>• <a href="#">linux</a> IP route added by the linux kernel.</li> <li>• <a href="#">ndk1</a> Route added by an agent application using the NDK</li> <li>• <a href="#">ndk2</a> Route added by an agent application using the NDK</li> <li>• <a href="#">ospfv2</a> OSPFv2</li> <li>• <a href="#">ospfv3</a> OSPFv3</li> <li>• <a href="#">static</a> Locally configured static route</li> </ul>
<b>Configurable</b>	False

**attr-id reference**

<b>Description</b>	Leaf reference to networkinstance/bgp-rib/ attr-sets/attr-set/index
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">bgp-rib</a> <a href="#">ipv4-unicast</a> <a href="#">local-rib</a> <a href="#">routes</a> <a href="#">prefix</a> ( <a href="#">ipv4-prefix</a>   <a href="#">ipv6-prefix</a> ) <a href="#">neighbor</a> ( <a href="#">ipv4-address</a>   <a href="#">ipv6-address-with-zone</a> ) <a href="#">origin-protocol</a> <a href="#">identityref</a> <a href="#">attr-id</a> <i>reference</i>
<b>Tree</b>	<a href="#">attr-id</a>
<b>Reference</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">bgp-rib</a> <a href="#">attr-sets</a> <a href="#">attr-set</a> <a href="#">attr-set-type</a> <i>keyword</i> <a href="#">index</a> <i>number</i>
<b>Configurable</b>	False

**best-route boolean**

<b>Description</b>	Set to true if the route is the BGP best path for the prefix.
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">bgp-rib</a> <a href="#">ipv4-unicast</a> <a href="#">local-rib</a> <a href="#">routes</a> <a href="#">prefix</a> ( <a href="#">ipv4-prefix</a>   <a href="#">ipv6-prefix</a> ) <a href="#">neighbor</a> ( <a href="#">ipv4-address</a>   <a href="#">ipv6-address-with-zone</a> ) <a href="#">origin-protocol</a> <a href="#">identityref</a> <a href="#">best-route</a> <i>boolean</i>
<b>Tree</b>	<a href="#">best-route</a>
<b>Configurable</b>	False

**invalid-reason**

<b>Description</b>	Enter the invalid-reason context
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">bgp-rib</a> <a href="#">ipv4-unicast</a> <a href="#">local-rib</a> <a href="#">routes</a> <a href="#">prefix</a> ( <a href="#">ipv4-prefix</a>   <a href="#">ipv6-prefix</a> ) <a href="#">neighbor</a> ( <a href="#">ipv4-address</a>   <a href="#">ipv6-address-with-zone</a> ) <a href="#">origin-protocol</a> <a href="#">identityref</a> <a href="#">invalid-reason</a>
<b>Tree</b>	<a href="#">invalid-reason</a>
<b>Configurable</b>	False

**as-loop boolean**

<b>Description</b>	Indicates true if the BGP route has an AS path loop that exceeds the configured threshold.
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">bgp-rib</a> <a href="#">ipv4-unicast</a> <a href="#">local-rib</a> <a href="#">routes</a> <a href="#">prefix</a> ( <a href="#">ipv4-prefix</a>   <a href="#">ipv6-prefix</a> ) <a href="#">neighbor</a> ( <a href="#">ipv4-address</a>   <a href="#">ipv6-address-with-zone</a> ) <a href="#">origin-protocol</a> <a href="#">identityref</a> <a href="#">invalid-reason</a> <a href="#">as-loop</a> <i>boolean</i>
<b>Tree</b>	<a href="#">as-loop</a>
<b>Configurable</b>	False

**cluster-loop *boolean***

<b>Description</b>	Indicates true if the BGP route has a cluster-list loop.
<b>Context</b>	<a href="#">network-instance name</a> <a href="#">string</a> <a href="#">bgp-rib</a> <a href="#">ipv4-unicast</a> <a href="#">local-rib</a> <a href="#">routes</a> <a href="#">prefix</a> ( <a href="#">ipv4-prefix</a>   <a href="#">ipv6-prefix</a> ) <a href="#">neighbor</a> ( <a href="#">ipv4-address</a>   <a href="#">ipv6-address-with-zone</a> ) <a href="#">origin-protocol</a> <a href="#">identityref</a> <a href="#">invalid-reason</a> <a href="#">cluster-loop</a> <a href="#">boolean</a>
<b>Tree</b>	<a href="#">cluster-loop</a>
<b>Configurable</b>	False

**next-hop-unresolved *boolean***

<b>Description</b>	Indicates true if the BGP route has a BGP next-hop that cannot be resolved to an outgoing interface.
<b>Context</b>	<a href="#">network-instance name</a> <a href="#">string</a> <a href="#">bgp-rib</a> <a href="#">ipv4-unicast</a> <a href="#">local-rib</a> <a href="#">routes</a> <a href="#">prefix</a> ( <a href="#">ipv4-prefix</a>   <a href="#">ipv6-prefix</a> ) <a href="#">neighbor</a> ( <a href="#">ipv4-address</a>   <a href="#">ipv6-address-with-zone</a> ) <a href="#">origin-protocol</a> <a href="#">identityref</a> <a href="#">invalid-reason</a> <a href="#">next-hop-unresolved</a> <a href="#">boolean</a>
<b>Tree</b>	<a href="#">next-hop-unresolved</a>
<b>Configurable</b>	False

**rejected-route *boolean***

<b>Description</b>	Indicates true if the route was rejected by an import policy.
<b>Context</b>	<a href="#">network-instance name</a> <a href="#">string</a> <a href="#">bgp-rib</a> <a href="#">ipv4-unicast</a> <a href="#">local-rib</a> <a href="#">routes</a> <a href="#">prefix</a> ( <a href="#">ipv4-prefix</a>   <a href="#">ipv6-prefix</a> ) <a href="#">neighbor</a> ( <a href="#">ipv4-address</a>   <a href="#">ipv6-address-with-zone</a> ) <a href="#">origin-protocol</a> <a href="#">identityref</a> <a href="#">invalid-reason</a> <a href="#">rejected-route</a> <a href="#">boolean</a>
<b>Tree</b>	<a href="#">rejected-route</a>
<b>Configurable</b>	False

**last-modified *string***

<b>Description</b>	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.
<b>Context</b>	<a href="#">network-instance name</a> <a href="#">string</a> <a href="#">bgp-rib</a> <a href="#">ipv4-unicast</a> <a href="#">local-rib</a> <a href="#">routes</a> <a href="#">prefix</a> ( <a href="#">ipv4-prefix</a>   <a href="#">ipv6-prefix</a> ) <a href="#">neighbor</a> ( <a href="#">ipv4-address</a>   <a href="#">ipv6-address-with-zone</a> ) <a href="#">origin-protocol</a> <a href="#">identityref</a> <a href="#">last-modified</a> <a href="#">string</a>
<b>Tree</b>	<a href="#">last-modified</a>
<b>String Length</b>	20 to 32
<b>Configurable</b>	False



**pending-delete *boolean***

<b>Description</b>	Set to true if the route is marked for deletion.
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">bgp-rib</a> <a href="#">ipv4-unicast</a> <a href="#">local-rib</a> <a href="#">routes</a> <a href="#">prefix</a> ( <a href="#">ipv4-prefix</a>   <a href="#">ipv6-prefix</a> ) <a href="#">neighbor</a> ( <a href="#">ipv4-address</a>   <a href="#">ipv6-address-with-zone</a> ) <a href="#">origin-protocol</a> <a href="#">identityref</a> <a href="#">pending-delete</a> <i>boolean</i>
<b>Tree</b>	<a href="#">pending-delete</a>
<b>Configurable</b>	False

**stale-route *boolean***

<b>Description</b>	Set to true if the route is stale due to BGP graceful restart.
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">bgp-rib</a> <a href="#">ipv4-unicast</a> <a href="#">local-rib</a> <a href="#">routes</a> <a href="#">prefix</a> ( <a href="#">ipv4-prefix</a>   <a href="#">ipv6-prefix</a> ) <a href="#">neighbor</a> ( <a href="#">ipv4-address</a>   <a href="#">ipv6-address-with-zone</a> ) <a href="#">origin-protocol</a> <a href="#">identityref</a> <a href="#">stale-route</a> <i>boolean</i>
<b>Tree</b>	<a href="#">stale-route</a>
<b>Configurable</b>	False

**tie-break-reason *keyword***

<b>Description</b>	Indicates the reason why a BGP route is sorted behind the next best route. The BGP best path displays a value of 'none'.
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">bgp-rib</a> <a href="#">ipv4-unicast</a> <a href="#">local-rib</a> <a href="#">routes</a> <a href="#">prefix</a> ( <a href="#">ipv4-prefix</a>   <a href="#">ipv6-prefix</a> ) <a href="#">neighbor</a> ( <a href="#">ipv4-address</a>   <a href="#">ipv6-address-with-zone</a> ) <a href="#">origin-protocol</a> <a href="#">identityref</a> <a href="#">tie-break-reason</a> <i>keyword</i>
<b>Tree</b>	<a href="#">tie-break-reason</a>
<b>Options</b>	<ul style="list-style-type: none"> <li>• unknown</li> <li>• none</li> <li>• origin</li> <li>• as-path-length</li> <li>• next-hop-cost</li> <li>• med</li> <li>• local-pref</li> <li>• aggregate</li> <li>• originator-id</li> <li>• cluster-list</li> <li>• extended-community</li> <li>• aigp</li> </ul>

- 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
- rtm-install-disabled
- peer-router-id
- path-identifier

**Configurable** False

### **used-route *boolean***

**Description** Indicates true if the route is being used for forwarding.

**Context** [network-instance name](#) *string* [bgp-rib](#) [ipv4-unicast](#) [local-rib](#) [routes](#) [prefix](#) ([ipv4-prefix](#) | [ipv6-prefix](#)) [neighbor](#) ([ipv4-address](#) | [ipv6-address-with-zone](#)) [origin-protocol](#) [identityref](#) [used-route](#) *boolean*

**Tree** [used-route](#)

**Configurable** False

### **valid-route *boolean***

**Description** Indicates true if the route is valid.

**Context** [network-instance name](#) *string* [bgp-rib](#) [ipv4-unicast](#) [local-rib](#) [routes](#) [prefix](#) ([ipv4-prefix](#) | [ipv6-prefix](#)) [neighbor](#) ([ipv4-address](#) | [ipv6-address-with-zone](#)) [origin-protocol](#) [identityref](#) [valid-route](#) *boolean*

**Tree** [valid-route](#)

**Configurable** False

**rib-in-out**

<b>Description</b>	Container for BGP routes learned and advertised to BGP neighbors.
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">bgp-rib</a> <a href="#">ipv4-unicast</a> <a href="#">rib-in-out</a>
<b>Tree</b>	<a href="#">rib-in-out</a>
<b>Configurable</b>	False

**rib-in-post**

<b>Description</b>	Container for the post-import-policy version of BGP routes learned from BGP neighbors.
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">bgp-rib</a> <a href="#">ipv4-unicast</a> <a href="#">rib-in-out</a> <a href="#">rib-in-post</a>
<b>Tree</b>	<a href="#">rib-in-post</a>
<b>Configurable</b>	False

**routes [prefix \(ipv4-prefix | ipv6-prefix\)](#) [neighbor \(ipv4-address | ipv6-address-with-zone\)](#)**

<b>Description</b>	List of IPv4 routes
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">bgp-rib</a> <a href="#">ipv4-unicast</a> <a href="#">rib-in-out</a> <a href="#">rib-in-post</a> <a href="#">routes</a> <a href="#">prefix (ipv4-prefix   ipv6-prefix)</a> <a href="#">neighbor (ipv4-address   ipv6-address-with-zone)</a>
<b>Tree</b>	<a href="#">routes</a>
<b>Configurable</b>	False

**[prefix \(ipv4-prefix | ipv6-prefix\)](#)**

<b>Description</b>	Enter the prefix context
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">bgp-rib</a> <a href="#">ipv4-unicast</a> <a href="#">rib-in-out</a> <a href="#">rib-in-post</a> <a href="#">routes</a> <a href="#">prefix (ipv4-prefix   ipv6-prefix)</a> <a href="#">neighbor (ipv4-address   ipv6-address-with-zone)</a>
<b>Configurable</b>	False

**[neighbor \(ipv4-address | ipv6-address-with-zone\)](#)**

<b>Description</b>	If the route was learned from a BGP neighbor, this is the IPv4 or IPv6 address of that neighbor.
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<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">bgp-rib</a> <a href="#">ipv4-unicast</a> <a href="#">rib-in-out</a> <a href="#">rib-in-post</a> <a href="#">routes</a> <a href="#">prefix</a> ( <a href="#">ipv4-prefix</a>   <a href="#">ipv6-prefix</a> ) <a href="#">neighbor</a> ( <a href="#">ipv4-address</a>   <a href="#">ipv6-address-with-zone</a> )
<b>Configurable</b>	False

**attr-id reference**

<b>Description</b>	Leaf reference to networkinstance/protocols/bgp/rib/ attr-sets/attr-set/index.
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">bgp-rib</a> <a href="#">ipv4-unicast</a> <a href="#">rib-in-out</a> <a href="#">rib-in-post</a> <a href="#">routes</a> <a href="#">prefix</a> ( <a href="#">ipv4-prefix</a>   <a href="#">ipv6-prefix</a> ) <a href="#">neighbor</a> ( <a href="#">ipv4-address</a>   <a href="#">ipv6-address-with-zone</a> ) <a href="#">attr-id</a> <i>reference</i>
<b>Tree</b>	<a href="#">attr-id</a>
<b>Reference</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">bgp-rib</a> <a href="#">attr-sets</a> <a href="#">attr-set</a> <a href="#">attr-set-type</a> <i>keyword</i> <a href="#">index</a> <i>number</i>
<b>Configurable</b>	False

**best-route boolean**

<b>Description</b>	Set to true if the route is the BGP best path for the prefix.
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">bgp-rib</a> <a href="#">ipv4-unicast</a> <a href="#">rib-in-out</a> <a href="#">rib-in-post</a> <a href="#">routes</a> <a href="#">prefix</a> ( <a href="#">ipv4-prefix</a>   <a href="#">ipv6-prefix</a> ) <a href="#">neighbor</a> ( <a href="#">ipv4-address</a>   <a href="#">ipv6-address-with-zone</a> ) <a href="#">best-route</a> <i>boolean</i>
<b>Tree</b>	<a href="#">best-route</a>
<b>Configurable</b>	False

**invalid-reason**

<b>Description</b>	Enter the invalid-reason context
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">bgp-rib</a> <a href="#">ipv4-unicast</a> <a href="#">rib-in-out</a> <a href="#">rib-in-post</a> <a href="#">routes</a> <a href="#">prefix</a> ( <a href="#">ipv4-prefix</a>   <a href="#">ipv6-prefix</a> ) <a href="#">neighbor</a> ( <a href="#">ipv4-address</a>   <a href="#">ipv6-address-with-zone</a> ) <a href="#">invalid-reason</a>
<b>Tree</b>	<a href="#">invalid-reason</a>
<b>Configurable</b>	False

**as-loop boolean**

<b>Description</b>	Indicates true if the BGP route has an AS path loop that exceeds the configured threshold.
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<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">bgp-rib</a> <a href="#">ipv4-unicast</a> <a href="#">rib-in-out</a> <a href="#">rib-in-post</a> <a href="#">routes</a> <a href="#">prefix (ipv4-prefix   ipv6-prefix)</a> <a href="#">neighbor (ipv4-address   ipv6-address-with-zone)</a> <a href="#">invalid-reason</a> <a href="#">as-loop</a> <i>boolean</i>
<b>Tree</b>	<a href="#">as-loop</a>
<b>Configurable</b>	False

### **cluster-loop *boolean***

<b>Description</b>	Indicates true if the BGP route has a cluster-list loop.
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">bgp-rib</a> <a href="#">ipv4-unicast</a> <a href="#">rib-in-out</a> <a href="#">rib-in-post</a> <a href="#">routes</a> <a href="#">prefix (ipv4-prefix   ipv6-prefix)</a> <a href="#">neighbor (ipv4-address   ipv6-address-with-zone)</a> <a href="#">invalid-reason</a> <a href="#">cluster-loop</a> <i>boolean</i>
<b>Tree</b>	<a href="#">cluster-loop</a>
<b>Configurable</b>	False

### **next-hop-unresolved *boolean***

<b>Description</b>	Indicates true if the BGP route has a BGP next-hop that cannot be resolved to an outgoing interface.
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">bgp-rib</a> <a href="#">ipv4-unicast</a> <a href="#">rib-in-out</a> <a href="#">rib-in-post</a> <a href="#">routes</a> <a href="#">prefix (ipv4-prefix   ipv6-prefix)</a> <a href="#">neighbor (ipv4-address   ipv6-address-with-zone)</a> <a href="#">invalid-reason</a> <a href="#">next-hop-unresolved</a> <i>boolean</i>
<b>Tree</b>	<a href="#">next-hop-unresolved</a>
<b>Configurable</b>	False

### **rejected-route *boolean***

<b>Description</b>	Indicates true if the route was rejected by an import policy.
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">bgp-rib</a> <a href="#">ipv4-unicast</a> <a href="#">rib-in-out</a> <a href="#">rib-in-post</a> <a href="#">routes</a> <a href="#">prefix (ipv4-prefix   ipv6-prefix)</a> <a href="#">neighbor (ipv4-address   ipv6-address-with-zone)</a> <a href="#">invalid-reason</a> <a href="#">rejected-route</a> <i>boolean</i>
<b>Tree</b>	<a href="#">rejected-route</a>
<b>Configurable</b>	False

### **last-modified *string***

<b>Description</b>	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.
--------------------	--

<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">bgp-rib</a> <a href="#">ipv4-unicast</a> <a href="#">rib-in-out</a> <a href="#">rib-in-post</a> <a href="#">routes prefix (ipv4-prefix   ipv6-prefix)</a> <a href="#">neighbor (ipv4-address   ipv6-address-with-zone)</a> <a href="#">last-modified</a> <i>string</i>
<b>Tree</b>	<a href="#">last-modified</a>
<b>String Length</b>	20 to 32
<b>Configurable</b>	False

### **pending-delete *boolean***

<b>Description</b>	Set to true if the route is marked for deletion.
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">bgp-rib</a> <a href="#">ipv4-unicast</a> <a href="#">rib-in-out</a> <a href="#">rib-in-post</a> <a href="#">routes prefix (ipv4-prefix   ipv6-prefix)</a> <a href="#">neighbor (ipv4-address   ipv6-address-with-zone)</a> <a href="#">pending-delete</a> <i>boolean</i>
<b>Tree</b>	<a href="#">pending-delete</a>
<b>Configurable</b>	False

### **stale-route *boolean***

<b>Description</b>	Set to true if the route is stale due to BGP graceful restart.
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">bgp-rib</a> <a href="#">ipv4-unicast</a> <a href="#">rib-in-out</a> <a href="#">rib-in-post</a> <a href="#">routes prefix (ipv4-prefix   ipv6-prefix)</a> <a href="#">neighbor (ipv4-address   ipv6-address-with-zone)</a> <a href="#">stale-route</a> <i>boolean</i>
<b>Tree</b>	<a href="#">stale-route</a>
<b>Configurable</b>	False

### **tie-break-reason *keyword***

<b>Description</b>	Indicates the reason why a BGP route is sorted behind the next best route. The BGP best path displays a value of 'none'.
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">bgp-rib</a> <a href="#">ipv4-unicast</a> <a href="#">rib-in-out</a> <a href="#">rib-in-post</a> <a href="#">routes prefix (ipv4-prefix   ipv6-prefix)</a> <a href="#">neighbor (ipv4-address   ipv6-address-with-zone)</a> <a href="#">tie-break-reason</a> <i>keyword</i>
<b>Tree</b>	<a href="#">tie-break-reason</a>
<b>Options</b>	<ul style="list-style-type: none"> <li>• unknown</li> <li>• none</li> <li>• origin</li> <li>• as-path-length</li> <li>• next-hop-cost</li> <li>• med</li> </ul>

- 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
- rtm-install-disabled
- peer-router-id
- path-identifier

**Configurable** False

### used-route *boolean*

**Description** Indicates true if the route is being used for forwarding.

**Context** [network-instance name](#) *string* [bgp-rib](#) [ipv4-unicast](#) [rib-in-out](#) [rib-in-post](#) [routes prefix](#) (*ipv4-prefix* | *ipv6-prefix*) [neighbor](#) (*ipv4-address* | *ipv6-address-with-zone*) [used-route](#) *boolean*

**Tree** [used-route](#)

**Configurable** False

**valid-route *boolean***

<b>Description</b>	Indicates true if the route is valid.
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">bgp-rib</a> <a href="#">ipv4-unicast</a> <a href="#">rib-in-out</a> <a href="#">rib-in-post</a> <a href="#">routes prefix (ipv4-prefix   ipv6-prefix)</a> <a href="#">neighbor (ipv4-address   ipv6-address-with-zone)</a> <b>valid-route</b> <i>boolean</i>
<b>Tree</b>	<a href="#">valid-route</a>
<b>Configurable</b>	False

**rib-in-pre**

<b>Description</b>	Container for the pre-import-policy version of BGP routes learned from BGP neighbors.
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">bgp-rib</a> <a href="#">ipv4-unicast</a> <a href="#">rib-in-out</a> <b>rib-in-pre</b>
<b>Tree</b>	<a href="#">rib-in-pre</a>
<b>Configurable</b>	False

**routes [prefix \(ipv4-prefix | ipv6-prefix\)](#) [neighbor \(ipv4-address | ipv6-address-with-zone\)](#)**

<b>Description</b>	List of IPv4 routes.
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">bgp-rib</a> <a href="#">ipv4-unicast</a> <a href="#">rib-in-out</a> <a href="#">rib-in-pre</a> <b>routes prefix (ipv4-prefix   ipv6-prefix)</b> <a href="#">neighbor (ipv4-address   ipv6-address-with-zone)</a>
<b>Tree</b>	<a href="#">routes</a>
<b>Configurable</b>	False

**[prefix \(ipv4-prefix | ipv6-prefix\)](#)**

<b>Description</b>	Enter the prefix context
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">bgp-rib</a> <a href="#">ipv4-unicast</a> <a href="#">rib-in-out</a> <a href="#">rib-in-pre</a> <b>routes prefix (ipv4-prefix   ipv6-prefix)</b> <a href="#">neighbor (ipv4-address   ipv6-address-with-zone)</a>
<b>Configurable</b>	False

**[neighbor \(ipv4-address | ipv6-address-with-zone\)](#)**

<b>Description</b>	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](#) *string* [bgp-rib](#) [ipv4-unicast](#) [rib-in-out](#) [rib-in-pre](#) [routes](#) [prefix \(ipv4-prefix | ipv6-prefix\)](#) [neighbor \(ipv4-address | ipv6-address-with-zone\)](#)

**Configurable** False

### **attr-id reference**

**Description** Leaf reference to networkinstance/protocols/bgp/rib/ attr-sets/attr-set/index.

**Context** [network-instance name](#) *string* [bgp-rib](#) [ipv4-unicast](#) [rib-in-out](#) [rib-in-pre](#) [routes](#) [prefix \(ipv4-prefix | ipv6-prefix\)](#) [neighbor \(ipv4-address | ipv6-address-with-zone\)](#) [attr-id reference](#)

**Tree** [attr-id](#)

**Reference** [network-instance name](#) *string* [bgp-rib](#) [attr-sets](#) [attr-set](#) [attr-set-type](#) *keyword* [index](#) *number*

**Configurable** False

### **rib-out-post**

**Description** Container for the post-export-policy version of BGP routes advertised to BGP neighbors.

**Context** [network-instance name](#) *string* [bgp-rib](#) [ipv4-unicast](#) [rib-in-out](#) [rib-out-post](#)

**Tree** [rib-out-post](#)

**Configurable** False

### **routes [prefix \(ipv4-prefix | ipv6-prefix\)](#) [neighbor \(ipv4-address | ipv6-address-with-zone\)](#)**

**Description** List of IPv4 routes.

**Context** [network-instance name](#) *string* [bgp-rib](#) [ipv4-unicast](#) [rib-in-out](#) [rib-out-post](#) [routes](#) [prefix \(ipv4-prefix | ipv6-prefix\)](#) [neighbor \(ipv4-address | ipv6-address-with-zone\)](#)

**Tree** [routes](#)

**Configurable** False

### **[prefix \(ipv4-prefix | ipv6-prefix\)](#)**

**Description** Enter the prefix context

<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">bgp-rib</a> <a href="#">ipv4-unicast</a> <a href="#">rib-in-out</a> <a href="#">rib-out-post</a> <a href="#">routes prefix</a> ( <a href="#">ipv4-prefix</a>   <a href="#">ipv6-prefix</a> ) <a href="#">neighbor</a> ( <a href="#">ipv4-address</a>   <a href="#">ipv6-address-with-zone</a> )
<b>Configurable</b>	False

### **neighbor ([ipv4-address](#) | [ipv6-address-with-zone](#))**

<b>Description</b>	If the route was learned from a BGP neighbor, this is the IPv4 or IPv6 address of that neighbor.
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">bgp-rib</a> <a href="#">ipv4-unicast</a> <a href="#">rib-in-out</a> <a href="#">rib-out-post</a> <a href="#">routes prefix</a> ( <a href="#">ipv4-prefix</a>   <a href="#">ipv6-prefix</a> ) <a href="#">neighbor</a> ( <a href="#">ipv4-address</a>   <a href="#">ipv6-address-with-zone</a> )
<b>Configurable</b>	False

### **attr-id reference**

<b>Description</b>	Leaf reference to <a href="#">networkinstance/protocols/bgp/rib/ attr-sets/attr-set/index</a> .
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">bgp-rib</a> <a href="#">ipv4-unicast</a> <a href="#">rib-in-out</a> <a href="#">rib-out-post</a> <a href="#">routes prefix</a> ( <a href="#">ipv4-prefix</a>   <a href="#">ipv6-prefix</a> ) <a href="#">neighbor</a> ( <a href="#">ipv4-address</a>   <a href="#">ipv6-address-with-zone</a> ) <a href="#">attr-id reference</a>
<b>Tree</b>	<a href="#">attr-id</a>
<b>Reference</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">bgp-rib</a> <a href="#">attr-sets</a> <a href="#">attr-set</a> <a href="#">attr-set-type</a> <i>keyword</i> <a href="#">index</a> <i>number</i>
<b>Configurable</b>	False

### **ipv6-unicast**

<b>Description</b>	Container for RIB state of IPv6-unicast routes.
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">bgp-rib</a> <a href="#">ipv6-unicast</a>
<b>Tree</b>	<a href="#">ipv6-unicast</a>
<b>Configurable</b>	False

### **local-rib**

<b>Description</b>	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.
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">bgp-rib</a> <a href="#">ipv6-unicast</a> <a href="#">local-rib</a>
<b>Tree</b>	<a href="#">local-rib</a>

**Configurable** False

### **routes prefix (ipv4-prefix | ipv6-prefix) neighbor (ipv4-address | ipv6-address-with-zone) origin-protocol identityref**

**Description** List of IPv6 routes in the local RIB.

**Context** [network-instance name](#) [string](#) [bgp-rib](#) [ipv6-unicast](#) [local-rib](#) [routes prefix \(ipv4-prefix | ipv6-prefix\)](#) [neighbor \(ipv4-address | ipv6-address-with-zone\)](#) [origin-protocol](#) [identityref](#)

**Tree** [routes](#)

**Configurable** False

### **prefix (ipv4-prefix | ipv6-prefix)**

**Description** Enter the prefix context

**Context** [network-instance name](#) [string](#) [bgp-rib](#) [ipv6-unicast](#) [local-rib](#) [routes prefix \(ipv4-prefix | ipv6-prefix\)](#) [neighbor \(ipv4-address | ipv6-address-with-zone\)](#) [origin-protocol](#) [identityref](#)

**Configurable** False

### **neighbor (ipv4-address | 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](#) [ipv6-unicast](#) [local-rib](#) [routes prefix \(ipv4-prefix | ipv6-prefix\)](#) [neighbor \(ipv4-address | ipv6-address-with-zone\)](#) [origin-protocol](#) [identityref](#)

**Configurable** False

### **origin-protocol identityref**

**Description** If the route was imported from another protocol, this is the protocol name.

**Context** [network-instance name](#) [string](#) [bgp-rib](#) [ipv6-unicast](#) [local-rib](#) [routes prefix \(ipv4-prefix | ipv6-prefix\)](#) [neighbor \(ipv4-address | ipv6-address-with-zone\)](#) [origin-protocol](#) [identityref](#)

**Options**

- aggregate  
Locally configured aggregate route
- arp-nd  
IP route added by ARP ND.

- bgp  
Border Gateway Protocol version 4
- bgp-evpn  
BGP Ethernet VPN (EVPN)
- 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

### attr-id reference

**Description** Leaf reference to `networkinstance/protocols/bgp/rib/ attr-sets/attr-set/index`

**Context** `network-instance name string bgp-rib ipv6-unicast local-rib routes prefix (ipv4-prefix | ipv6-prefix) neighbor (ipv4-address | ipv6-address-with-zone) origin-protocol identityref attr-id reference`

**Tree** `attr-id`

**Reference** `network-instance name string bgp-rib attr-sets attr-set attr-set-type keyword index number`

**Configurable** False

### best-route *boolean*

**Description** Set to true if the route is the BGP best path for the prefix.

**Context** [network-instance name](#) *string* [bgp-rib](#) [ipv6-unicast](#) [local-rib](#) [routes](#) [prefix](#) ([ipv4-prefix](#) | [ipv6-prefix](#)) [neighbor](#) ([ipv4-address](#) | [ipv6-address-with-zone](#)) [origin-protocol](#) [identityref](#) [best-route](#) *boolean*

**Tree** [best-route](#)

**Configurable** False

### invalid-reason

**Description** Enter the invalid-reason context

**Context** [network-instance name](#) *string* [bgp-rib](#) [ipv6-unicast](#) [local-rib](#) [routes](#) [prefix](#) ([ipv4-prefix](#) | [ipv6-prefix](#)) [neighbor](#) ([ipv4-address](#) | [ipv6-address-with-zone](#)) [origin-protocol](#) [identityref](#) [invalid-reason](#)

**Tree** [invalid-reason](#)

**Configurable** False

### 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](#) [ipv6-unicast](#) [local-rib](#) [routes](#) [prefix](#) ([ipv4-prefix](#) | [ipv6-prefix](#)) [neighbor](#) ([ipv4-address](#) | [ipv6-address-with-zone](#)) [origin-protocol](#) [identityref](#) [invalid-reason](#) [as-loop](#) *boolean*

**Tree** [as-loop](#)

**Configurable** False

### cluster-loop *boolean*

**Description** Indicates true if the BGP route has a cluster-list loop.

**Context** [network-instance name](#) *string* [bgp-rib](#) [ipv6-unicast](#) [local-rib](#) [routes](#) [prefix](#) ([ipv4-prefix](#) | [ipv6-prefix](#)) [neighbor](#) ([ipv4-address](#) | [ipv6-address-with-zone](#)) [origin-protocol](#) [identityref](#) [invalid-reason](#) [cluster-loop](#) *boolean*

**Tree** [cluster-loop](#)

**Configurable** False

**next-hop-unresolved *boolean***

<b>Description</b>	Indicates true if the BGP route has a BGP next-hop that cannot be resolved to an outgoing interface.
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">bgp-rib</a> <a href="#">ipv6-unicast</a> <a href="#">local-rib</a> <a href="#">routes</a> <a href="#">prefix</a> ( <a href="#">ipv4-prefix</a>   <a href="#">ipv6-prefix</a> ) <a href="#">neighbor</a> ( <a href="#">ipv4-address</a>   <a href="#">ipv6-address-with-zone</a> ) <a href="#">origin-protocol</a> <a href="#">identityref</a> <a href="#">invalid-reason</a> <a href="#">next-hop-unresolved</a> <i>boolean</i>
<b>Tree</b>	<a href="#">next-hop-unresolved</a>
<b>Configurable</b>	False

**rejected-route *boolean***

<b>Description</b>	Indicates true if the route was rejected by an import policy.
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">bgp-rib</a> <a href="#">ipv6-unicast</a> <a href="#">local-rib</a> <a href="#">routes</a> <a href="#">prefix</a> ( <a href="#">ipv4-prefix</a>   <a href="#">ipv6-prefix</a> ) <a href="#">neighbor</a> ( <a href="#">ipv4-address</a>   <a href="#">ipv6-address-with-zone</a> ) <a href="#">origin-protocol</a> <a href="#">identityref</a> <a href="#">invalid-reason</a> <a href="#">rejected-route</a> <i>boolean</i>
<b>Tree</b>	<a href="#">rejected-route</a>
<b>Configurable</b>	False

**last-modified *string***

<b>Description</b>	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.
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">bgp-rib</a> <a href="#">ipv6-unicast</a> <a href="#">local-rib</a> <a href="#">routes</a> <a href="#">prefix</a> ( <a href="#">ipv4-prefix</a>   <a href="#">ipv6-prefix</a> ) <a href="#">neighbor</a> ( <a href="#">ipv4-address</a>   <a href="#">ipv6-address-with-zone</a> ) <a href="#">origin-protocol</a> <a href="#">identityref</a> <a href="#">last-modified</a> <i>string</i>
<b>Tree</b>	<a href="#">last-modified</a>
<b>String Length</b>	20 to 32
<b>Configurable</b>	False

**pending-delete *boolean***

<b>Description</b>	Set to true if the route is marked for deletion.
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">bgp-rib</a> <a href="#">ipv6-unicast</a> <a href="#">local-rib</a> <a href="#">routes</a> <a href="#">prefix</a> ( <a href="#">ipv4-prefix</a>   <a href="#">ipv6-prefix</a> ) <a href="#">neighbor</a> ( <a href="#">ipv4-address</a>   <a href="#">ipv6-address-with-zone</a> ) <a href="#">origin-protocol</a> <a href="#">identityref</a> <a href="#">pending-delete</a> <i>boolean</i>
<b>Tree</b>	<a href="#">pending-delete</a>
<b>Configurable</b>	False

**stale-route *boolean***

<b>Description</b>	Set to true if the route is stale due to BGP graceful restart.
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">bgp-rib</a> <a href="#">ipv6-unicast</a> <a href="#">local-rib</a> <a href="#">routes</a> <a href="#">prefix</a> ( <a href="#">ipv4-prefix</a>   <a href="#">ipv6-prefix</a> ) <a href="#">neighbor</a> ( <a href="#">ipv4-address</a>   <a href="#">ipv6-address-with-zone</a> ) <a href="#">origin-protocol</a> <a href="#">identityref</a> <a href="#">stale-route</a> <i>boolean</i>
<b>Tree</b>	<a href="#">stale-route</a>
<b>Configurable</b>	False

**tie-break-reason *keyword***

<b>Description</b>	Indicates the reason why a BGP route is sorted behind the next best route. The BGP best path displays a value of 'none'.
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">bgp-rib</a> <a href="#">ipv6-unicast</a> <a href="#">local-rib</a> <a href="#">routes</a> <a href="#">prefix</a> ( <a href="#">ipv4-prefix</a>   <a href="#">ipv6-prefix</a> ) <a href="#">neighbor</a> ( <a href="#">ipv4-address</a>   <a href="#">ipv6-address-with-zone</a> ) <a href="#">origin-protocol</a> <a href="#">identityref</a> <a href="#">tie-break-reason</a> <i>keyword</i>
<b>Tree</b>	<a href="#">tie-break-reason</a>
<b>Options</b>	<ul style="list-style-type: none"> <li>• unknown</li> <li>• none</li> <li>• origin</li> <li>• as-path-length</li> <li>• next-hop-cost</li> <li>• med</li> <li>• local-pref</li> <li>• aggregate</li> <li>• originator-id</li> <li>• cluster-list</li> <li>• extended-community</li> <li>• aigp</li> <li>• missing-attribute</li> <li>• rtm-pref</li> <li>• owner</li> <li>• eigrp-labeled</li> <li>• vpn-route</li> <li>• ebgp-route</li> <li>• peer-ip</li> <li>• local-peer</li> <li>• multi-path</li> </ul>

- vpn-rd
- next-hop-type
- invalid-route
- origin-validation
- long-live-gr-stale
- default-originate
- rtm-install-disabled
- peer-router-id
- path-identifier

**Configurable** False

### used-route *boolean*

**Description** Indicates true if the route is being used for forwarding.

**Context** [network-instance name](#) *string* [bgp-rib](#) [ipv6-unicast](#) [local-rib](#) [routes](#) [prefix \(ipv4-prefix | ipv6-prefix\)](#) [neighbor \(ipv4-address | ipv6-address-with-zone\)](#) [origin-protocol](#) [identityref](#) [used-route](#) *boolean*

**Tree** [used-route](#)

**Configurable** False

### valid-route *boolean*

**Description** Indicates true if the route is valid.

**Context** [network-instance name](#) *string* [bgp-rib](#) [ipv6-unicast](#) [local-rib](#) [routes](#) [prefix \(ipv4-prefix | ipv6-prefix\)](#) [neighbor \(ipv4-address | ipv6-address-with-zone\)](#) [origin-protocol](#) [identityref](#) [valid-route](#) *boolean*

**Tree** [valid-route](#)

**Configurable** False

### rib-in-out

**Description** Container for BGP routes learned and advertised to BGP neighbors.

**Context** [network-instance name](#) *string* [bgp-rib](#) [ipv6-unicast](#) [rib-in-out](#)

**Tree** [rib-in-out](#)

**Configurable** False



**rib-in-post**

<b>Description</b>	Container for the post-import-policy version of BGP routes learned from BGP neighbors.
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">bgp-rib</a> <a href="#">ipv6-unicast</a> <a href="#">rib-in-out</a> <a href="#">rib-in-post</a>
<b>Tree</b>	<a href="#">rib-in-post</a>
<b>Configurable</b>	False

**routes [prefix \(ipv4-prefix | ipv6-prefix\)](#) [neighbor \(ipv4-address | ipv6-address-with-zone\)](#)**

<b>Description</b>	List of IPv6 routes
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">bgp-rib</a> <a href="#">ipv6-unicast</a> <a href="#">rib-in-out</a> <a href="#">rib-in-post</a> <a href="#">routes prefix (ipv4-prefix   ipv6-prefix)</a> <a href="#">neighbor (ipv4-address   ipv6-address-with-zone)</a>
<b>Tree</b>	<a href="#">routes</a>
<b>Configurable</b>	False

**[prefix \(ipv4-prefix | ipv6-prefix\)](#)**

<b>Description</b>	Enter the prefix context
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">bgp-rib</a> <a href="#">ipv6-unicast</a> <a href="#">rib-in-out</a> <a href="#">rib-in-post</a> <a href="#">routes prefix (ipv4-prefix   ipv6-prefix)</a> <a href="#">neighbor (ipv4-address   ipv6-address-with-zone)</a>
<b>Configurable</b>	False

**[neighbor \(ipv4-address | ipv6-address-with-zone\)](#)**

<b>Description</b>	If the route was learned from a BGP neighbor, this is the IPv4 or IPv6 address of that neighbor.
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">bgp-rib</a> <a href="#">ipv6-unicast</a> <a href="#">rib-in-out</a> <a href="#">rib-in-post</a> <a href="#">routes prefix (ipv4-prefix   ipv6-prefix)</a> <a href="#">neighbor (ipv4-address   ipv6-address-with-zone)</a>
<b>Configurable</b>	False

**[attr-id reference](#)**

<b>Description</b>	Leaf reference to <a href="#">networkinstance/protocols/bgp/rib/ attr-sets/attr-set/index</a> .
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<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">bgp-rib</a> <a href="#">ipv6-unicast</a> <a href="#">rib-in-out</a> <a href="#">rib-in-post</a> <a href="#">routes prefix (ipv4-prefix   ipv6-prefix)</a> <a href="#">neighbor (ipv4-address   ipv6-address-with-zone)</a> <a href="#">attr-id</a> <i>reference</i>
<b>Tree</b>	<a href="#">attr-id</a>
<b>Reference</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">bgp-rib</a> <a href="#">attr-sets</a> <a href="#">attr-set</a> <a href="#">attr-set-type</a> <i>keyword</i> <a href="#">index</a> <i>number</i>
<b>Configurable</b>	False

### **best-route *boolean***

<b>Description</b>	Set to true if the route is the BGP best path for the prefix.
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">bgp-rib</a> <a href="#">ipv6-unicast</a> <a href="#">rib-in-out</a> <a href="#">rib-in-post</a> <a href="#">routes prefix (ipv4-prefix   ipv6-prefix)</a> <a href="#">neighbor (ipv4-address   ipv6-address-with-zone)</a> <a href="#">best-route</a> <i>boolean</i>
<b>Tree</b>	<a href="#">best-route</a>
<b>Configurable</b>	False

### **invalid-reason**

<b>Description</b>	Enter the invalid-reason context
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">bgp-rib</a> <a href="#">ipv6-unicast</a> <a href="#">rib-in-out</a> <a href="#">rib-in-post</a> <a href="#">routes prefix (ipv4-prefix   ipv6-prefix)</a> <a href="#">neighbor (ipv4-address   ipv6-address-with-zone)</a> <a href="#">invalid-reason</a>
<b>Tree</b>	<a href="#">invalid-reason</a>
<b>Configurable</b>	False

### **as-loop *boolean***

<b>Description</b>	Indicates true if the BGP route has an AS path loop that exceeds the configured threshold.
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">bgp-rib</a> <a href="#">ipv6-unicast</a> <a href="#">rib-in-out</a> <a href="#">rib-in-post</a> <a href="#">routes prefix (ipv4-prefix   ipv6-prefix)</a> <a href="#">neighbor (ipv4-address   ipv6-address-with-zone)</a> <a href="#">invalid-reason</a> <a href="#">as-loop</a> <i>boolean</i>
<b>Tree</b>	<a href="#">as-loop</a>
<b>Configurable</b>	False

### **cluster-loop *boolean***

<b>Description</b>	Indicates true if the BGP route has a cluster-list loop.
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<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">bgp-rib</a> <a href="#">ipv6-unicast</a> <a href="#">rib-in-out</a> <a href="#">rib-in-post</a> <a href="#">routes prefix (ipv4-prefix   ipv6-prefix)</a> <a href="#">neighbor (ipv4-address   ipv6-address-with-zone)</a> <a href="#">invalid-reason</a> <a href="#">cluster-loop</a> <i>boolean</i>
<b>Tree</b>	<a href="#">cluster-loop</a>
<b>Configurable</b>	False

### **next-hop-unresolved *boolean***

<b>Description</b>	Indicates true if the BGP route has a BGP next-hop that cannot be resolved to an outgoing interface.
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">bgp-rib</a> <a href="#">ipv6-unicast</a> <a href="#">rib-in-out</a> <a href="#">rib-in-post</a> <a href="#">routes prefix (ipv4-prefix   ipv6-prefix)</a> <a href="#">neighbor (ipv4-address   ipv6-address-with-zone)</a> <a href="#">invalid-reason</a> <a href="#">next-hop-unresolved</a> <i>boolean</i>
<b>Tree</b>	<a href="#">next-hop-unresolved</a>
<b>Configurable</b>	False

### **rejected-route *boolean***

<b>Description</b>	Indicates true if the route was rejected by an import policy.
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">bgp-rib</a> <a href="#">ipv6-unicast</a> <a href="#">rib-in-out</a> <a href="#">rib-in-post</a> <a href="#">routes prefix (ipv4-prefix   ipv6-prefix)</a> <a href="#">neighbor (ipv4-address   ipv6-address-with-zone)</a> <a href="#">invalid-reason</a> <a href="#">rejected-route</a> <i>boolean</i>
<b>Tree</b>	<a href="#">rejected-route</a>
<b>Configurable</b>	False

### **last-modified *string***

<b>Description</b>	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.
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">bgp-rib</a> <a href="#">ipv6-unicast</a> <a href="#">rib-in-out</a> <a href="#">rib-in-post</a> <a href="#">routes prefix (ipv4-prefix   ipv6-prefix)</a> <a href="#">neighbor (ipv4-address   ipv6-address-with-zone)</a> <a href="#">last-modified</a> <i>string</i>
<b>Tree</b>	<a href="#">last-modified</a>
<b>String Length</b>	20 to 32
<b>Configurable</b>	False

**pending-delete *boolean***

<b>Description</b>	Set to true if the route is marked for deletion.
<b>Context</b>	<a href="#">network-instance name</a> <a href="#">string</a> <a href="#">bgp-rib</a> <a href="#">ipv6-unicast</a> <a href="#">rib-in-out</a> <a href="#">rib-in-post</a> <a href="#">routes prefix (ipv4-prefix   ipv6-prefix)</a> <a href="#">neighbor (ipv4-address   ipv6-address-with-zone)</a> <a href="#">pending-delete</a> <a href="#">boolean</a>
<b>Tree</b>	<a href="#">pending-delete</a>
<b>Configurable</b>	False

**stale-route *boolean***

<b>Description</b>	Set to true if the route is stale due to BGP graceful restart.
<b>Context</b>	<a href="#">network-instance name</a> <a href="#">string</a> <a href="#">bgp-rib</a> <a href="#">ipv6-unicast</a> <a href="#">rib-in-out</a> <a href="#">rib-in-post</a> <a href="#">routes prefix (ipv4-prefix   ipv6-prefix)</a> <a href="#">neighbor (ipv4-address   ipv6-address-with-zone)</a> <a href="#">stale-route</a> <a href="#">boolean</a>
<b>Tree</b>	<a href="#">stale-route</a>
<b>Configurable</b>	False

**tie-break-reason *keyword***

<b>Description</b>	Indicates the reason why a BGP route is sorted behind the next best route. The BGP best path displays a value of 'none'.
<b>Context</b>	<a href="#">network-instance name</a> <a href="#">string</a> <a href="#">bgp-rib</a> <a href="#">ipv6-unicast</a> <a href="#">rib-in-out</a> <a href="#">rib-in-post</a> <a href="#">routes prefix (ipv4-prefix   ipv6-prefix)</a> <a href="#">neighbor (ipv4-address   ipv6-address-with-zone)</a> <a href="#">tie-break-reason</a> <a href="#">keyword</a>
<b>Tree</b>	<a href="#">tie-break-reason</a>
<b>Options</b>	<ul style="list-style-type: none"> <li>• unknown</li> <li>• none</li> <li>• origin</li> <li>• as-path-length</li> <li>• next-hop-cost</li> <li>• med</li> <li>• local-pref</li> <li>• aggregate</li> <li>• originator-id</li> <li>• cluster-list</li> <li>• extended-community</li> <li>• aigp</li> <li>• missing-attribute</li> </ul>

- 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
- rtm-install-disabled
- peer-router-id
- path-identifier

**Configurable** False

### **used-route *boolean***

**Description** Indicates true if the route is being used for forwarding.

**Context** [network-instance name](#) *string* [bgp-rib](#) [ipv6-unicast](#) [rib-in-out](#) [rib-in-post](#) [routes prefix \(ipv4-prefix | ipv6-prefix\)](#) [neighbor \(ipv4-address | ipv6-address-with-zone\)](#) [used-route](#) *boolean*

**Tree** [used-route](#)

**Configurable** False

### **valid-route *boolean***

**Description** Indicates true if the route is valid.

**Context** [network-instance name](#) *string* [bgp-rib](#) [ipv6-unicast](#) [rib-in-out](#) [rib-in-post](#) [routes prefix \(ipv4-prefix | ipv6-prefix\)](#) [neighbor \(ipv4-address | ipv6-address-with-zone\)](#) [valid-route](#) *boolean*

**Tree** [valid-route](#)

**Configurable** False

**rib-in-pre**

<b>Description</b>	Container for the pre-import-policy version of BGP routes learned from BGP neighbors.
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">bgp-rib</a> <a href="#">ipv6-unicast</a> <a href="#">rib-in-out</a> <a href="#">rib-in-pre</a>
<b>Tree</b>	<a href="#">rib-in-pre</a>
<b>Configurable</b>	False

**routes [prefix \(ipv4-prefix | ipv6-prefix\)](#) [neighbor \(ipv4-address | ipv6-address-with-zone\)](#)**

<b>Description</b>	List of IPv6 routes.
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">bgp-rib</a> <a href="#">ipv6-unicast</a> <a href="#">rib-in-out</a> <a href="#">rib-in-pre</a> <a href="#">routes prefix (ipv4-prefix   ipv6-prefix)</a> <a href="#">neighbor (ipv4-address   ipv6-address-with-zone)</a>
<b>Tree</b>	<a href="#">routes</a>
<b>Configurable</b>	False

**[prefix \(ipv4-prefix | ipv6-prefix\)](#)**

<b>Description</b>	Enter the prefix context
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">bgp-rib</a> <a href="#">ipv6-unicast</a> <a href="#">rib-in-out</a> <a href="#">rib-in-pre</a> <a href="#">routes prefix (ipv4-prefix   ipv6-prefix)</a> <a href="#">neighbor (ipv4-address   ipv6-address-with-zone)</a>
<b>Configurable</b>	False

**[neighbor \(ipv4-address | ipv6-address-with-zone\)](#)**

<b>Description</b>	If the route was learned from a BGP neighbor, this is the IPv4 or IPv6 address of that neighbor.
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">bgp-rib</a> <a href="#">ipv6-unicast</a> <a href="#">rib-in-out</a> <a href="#">rib-in-pre</a> <a href="#">routes prefix (ipv4-prefix   ipv6-prefix)</a> <a href="#">neighbor (ipv4-address   ipv6-address-with-zone)</a>
<b>Configurable</b>	False

**[attr-id reference](#)**

<b>Description</b>	Leaf reference to <a href="#">networkinstance/protocols/bgp/rib/ attr-sets/attr-set/index</a> .
--------------------	---

<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">bgp-rib</a> <a href="#">ipv6-unicast</a> <a href="#">rib-in-out</a> <a href="#">rib-in-pre</a> <a href="#">routes prefix (ipv4-prefix   ipv6-prefix)</a> <a href="#">neighbor (ipv4-address   ipv6-address-with-zone)</a> <a href="#">attr-id</a> <i>reference</i>
<b>Tree</b>	<a href="#">attr-id</a>
<b>Reference</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">bgp-rib</a> <a href="#">attr-sets</a> <a href="#">attr-set</a> <a href="#">attr-set-type</a> <i>keyword</i> <a href="#">index</a> <i>number</i>
<b>Configurable</b>	False

## rib-out-post

<b>Description</b>	Container for the post-export-policy version of BGP routes advertised to BGP neighbors.
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">bgp-rib</a> <a href="#">ipv6-unicast</a> <a href="#">rib-in-out</a> <a href="#">rib-out-post</a>
<b>Tree</b>	<a href="#">rib-out-post</a>
<b>Configurable</b>	False

## **routes** [prefix \(ipv4-prefix | ipv6-prefix\)](#) [neighbor \(ipv4-address | ipv6-address-with-zone\)](#)

<b>Description</b>	List of IPv6 routes.
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">bgp-rib</a> <a href="#">ipv6-unicast</a> <a href="#">rib-in-out</a> <a href="#">rib-out-post</a> <a href="#">routes prefix (ipv4-prefix   ipv6-prefix)</a> <a href="#">neighbor (ipv4-address   ipv6-address-with-zone)</a>
<b>Tree</b>	<a href="#">routes</a>
<b>Configurable</b>	False

## **prefix (ipv4-prefix | ipv6-prefix)**

<b>Description</b>	Enter the prefix context
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">bgp-rib</a> <a href="#">ipv6-unicast</a> <a href="#">rib-in-out</a> <a href="#">rib-out-post</a> <a href="#">routes prefix (ipv4-prefix   ipv6-prefix)</a> <a href="#">neighbor (ipv4-address   ipv6-address-with-zone)</a>
<b>Configurable</b>	False

## **neighbor (ipv4-address | ipv6-address-with-zone)**

<b>Description</b>	If the route was learned from a BGP neighbor, this is the IPv4 or IPv6 address of that neighbor.
--------------------	--

<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">bgp-rib</a> <a href="#">ipv6-unicast</a> <a href="#">rib-in-out</a> <a href="#">rib-out-post</a> <a href="#">routes prefix</a> ( <a href="#">ipv4-prefix</a>   <a href="#">ipv6-prefix</a> ) <a href="#">neighbor</a> ( <a href="#">ipv4-address</a>   <a href="#">ipv6-address-with-zone</a> )
<b>Configurable</b>	False

### attr-id reference

<b>Description</b>	Leaf reference to networkinstance/protocols/bgp/rib/ attr-sets/attr-set/index.
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">bgp-rib</a> <a href="#">ipv6-unicast</a> <a href="#">rib-in-out</a> <a href="#">rib-out-post</a> <a href="#">routes prefix</a> ( <a href="#">ipv4-prefix</a>   <a href="#">ipv6-prefix</a> ) <a href="#">neighbor</a> ( <a href="#">ipv4-address</a>   <a href="#">ipv6-address-with-zone</a> ) <a href="#">attr-id reference</a>
<b>Tree</b>	<a href="#">attr-id</a>
<b>Reference</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">bgp-rib</a> <a href="#">attr-sets</a> <a href="#">attr-set</a> <a href="#">attr-set-type</a> <i>keyword</i> <a href="#">index</a> <i>number</i>
<b>Configurable</b>	False

### bridge-table



**Note:**

This command is available for the following platforms:

- 7220 IXR-D2
- 7220 IXR-D3L
- 7220 IXR-D2L
- 7220 IXR-D3
- 7220 IXR-D1

<b>Description</b>	Enable the bridge-table context
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">bridge-table</a>
<b>Tree</b>	<a href="#">bridge-table</a>
<b>Configurable</b>	True



## discard-unknown-dest-mac *boolean*



### Note:

This command is available for the following platforms:

- 7220 IXR-D2
- 7220 IXR-D3L
- 7220 IXR-D2L
- 7220 IXR-D3
- 7220 IXR-D1

<b>Description</b>	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.
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">bridge-table</a> <a href="#">discard-unknown-dest-mac</a> <i>boolean</i>
<b>Tree</b>	<a href="#">discard-unknown-dest-mac</a>
<b>Default</b>	false
<b>Configurable</b>	True

## mac-duplication



### Note:

This command is available for the following platforms:

- 7220 IXR-D2
- 7220 IXR-D3L
- 7220 IXR-D2L
- 7220 IXR-D3
- 7220 IXR-D1

<b>Description</b>	Configuration of the MAC duplication procedures.
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">bridge-table</a> <a href="#">mac-duplication</a>
<b>Tree</b>	<a href="#">mac-duplication</a>
<b>Configurable</b>	True

## action keyword

**Note:**

This command is available for the following platforms:

- 7220 IXR-D2
- 7220 IXR-D3L
- 7220 IXR-D2L
- 7220 IXR-D3
- 7220 IXR-D1

**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:

[oper-down: if configured, upon detecting a duplicate mac on the subinterface, the subinterface will be brought oper-down, with oper-down-reason mac-dup-detected. The duplicate macs on the interface will be kept in CPM though, and shown in the duplicate-entries state. In this case, arriving frames on a different subinterface with the duplicate mac as source mac are dropped. Arriving frames on a different subinterface with a destination mac matching the duplicate mac are dropped.', blackhole: upon detecting a duplicate mac on the subinterface, the mac will be blackholed. Any frame received on this or any other subinterface with source mac matching a blackhole mac will be discarded. Any frame received with destination mac matching the blackhole mac will be discarded, although still processed for source mac learning.', stop-learning: upon detecting a duplicate mac on the subinterface, existing macs are kept (and refreshed) but new macs are no longer learned on this subinterface. The duplicate mac will stay learned on the subinterface. Frames arriving to a different subinterface with a source mac matching the duplicate mac will be dropped. Frames arriving to a different subinterface with a destination mac matching the duplicate mac will be forwarded normally.')

**Context**

[network-instance name](#) [string](#) [bridge-table](#) [mac-duplication](#) [action](#) [keyword](#)

**Tree**

[action](#)

**Default**

stop-learning

**Options**

- stop-learning
- blackhole
- oper-down

**Configurable**

True

## admin-state *keyword*

**Note:**

This command is available for the following platforms:

- 7220 IXR-D2
- 7220 IXR-D3L
- 7220 IXR-D2L
- 7220 IXR-D3
- 7220 IXR-D1

<b>Description</b>	Configurable state of the mac-duplication procedures. Mac-duplication detects duplicate macs that move between different subinterfaces or a subinterface and an evpn destination.
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">bridge-table</a> <a href="#">mac-duplication</a> <a href="#">admin-state</a> <i>keyword</i>
<b>Tree</b>	<a href="#">admin-state</a>
<b>Default</b>	enable
<b>Options</b>	<ul style="list-style-type: none"> <li>• enable</li> <li>• disable</li> </ul>
<b>Configurable</b>	True

## duplicate-entries

**Note:**

This command is available for the following platforms:

- 7220 IXR-D2
- 7220 IXR-D3L
- 7220 IXR-D2L
- 7220 IXR-D3
- 7220 IXR-D1

<b>Description</b>	Enter the duplicate-entries context
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">bridge-table</a> <a href="#">mac-duplication</a> <a href="#">duplicate-entries</a>
<b>Tree</b>	<a href="#">duplicate-entries</a>
<b>Configurable</b>	False

## mac address *string*

**Note:**

This command is available for the following platforms:

- 7220 IXR-D2
- 7220 IXR-D3L
- 7220 IXR-D2L
- 7220 IXR-D3
- 7220 IXR-D1

<b>Description</b>	The MAC duplicate on the bridging instance
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">bridge-table</a> <a href="#">mac-duplication</a> <a href="#">duplicate-entries</a> <a href="#">mac address</a> <i>string</i>
<b>Tree</b>	<a href="#">mac</a>
<b>Configurable</b>	False

## address *string*

**Note:**

This command is available for the following platforms:

- 7220 IXR-D2
- 7220 IXR-D3L
- 7220 IXR-D2L
- 7220 IXR-D3
- 7220 IXR-D1

<b>Description</b>	Enter the address context
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">bridge-table</a> <a href="#">mac-duplication</a> <a href="#">duplicate-entries</a> <a href="#">mac address</a> <i>string</i>
<b>Configurable</b>	False

## destination *string*

**Note:**

This command is available for the following platforms:

- 7220 IXR-D2
- 7220 IXR-D3L
- 7220 IXR-D2L
- 7220 IXR-D3
- 7220 IXR-D1

<b>Description</b>	The name of the destination the duplicate MAC is installed against in the fdb.
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">bridge-table</a> <a href="#">mac-duplication</a> <a href="#">duplicate-entries</a> <a href="#">mac address</a> <i>string</i> <a href="#">destination</a> <i>string</i>
<b>Tree</b>	<a href="#">destination</a>
<b>Configurable</b>	False

## destination-index *number*

**Note:**

This command is available for the following platforms:

- 7220 IXR-D2
- 7220 IXR-D3L
- 7220 IXR-D2L
- 7220 IXR-D3
- 7220 IXR-D1

<b>Description</b>	A system-wide unique identifier of a subinterface object (system allocated).
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">bridge-table</a> <a href="#">mac-duplication</a> <a href="#">duplicate-entries</a> <a href="#">mac address</a> <i>string</i> <a href="#">destination-index</a> <i>number</i>
<b>Tree</b>	<a href="#">destination-index</a>
<b>Configurable</b>	False

**destination-type keyword****Note:**

This command is available for the following platforms:

- 7220 IXR-D2
- 7220 IXR-D3L
- 7220 IXR-D2L
- 7220 IXR-D3
- 7220 IXR-D1

<b>Description</b>	The type of the destination the duplicate mac is installed against in the fdb.
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">bridge-table</a> <a href="#">mac-duplication</a> <a href="#">duplicate-entries</a> <a href="#">mac address</a> <i>string</i> <a href="#">destination-type</a> <i>keyword</i>
<b>Tree</b>	<a href="#">destination-type</a>
<b>Options</b>	<ul style="list-style-type: none"> <li>• sub-interface</li> <li>• blackhole</li> <li>• irb-interface</li> <li>• vxlan</li> <li>• reserved</li> </ul>
<b>Configurable</b>	False

**dup-detect-time string****Note:**

This command is available for the following platforms:

- 7220 IXR-D2
- 7220 IXR-D3L
- 7220 IXR-D2L
- 7220 IXR-D3
- 7220 IXR-D1

<b>Description</b>	The date and time when the mac was declared duplicate
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">bridge-table</a> <a href="#">mac-duplication</a> <a href="#">duplicate-entries</a> <a href="#">mac address</a> <i>string</i> <a href="#">dup-detect-time</a> <i>string</i>
<b>Tree</b>	<a href="#">dup-detect-time</a>
<b>String Length</b>	20 to 32
<b>Configurable</b>	False

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

This command is available for the following platforms:

- 7220 IXR-D2
- 7220 IXR-D3L
- 7220 IXR-D2L
- 7220 IXR-D3
- 7220 IXR-D1

<b>Description</b>	Remaining hold down time for duplicate mac
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">bridge-table</a> <a href="#">mac-duplication</a> <a href="#">duplicate-entries</a> <a href="#">mac address</a> <i>string</i> <b>hold-down-time-remaining</b> ( <i>keyword   number</i> )
<b>Tree</b>	<a href="#">hold-down-time-remaining</a>
<b>Units</b>	seconds
<b>Options</b>	<ul style="list-style-type: none"> <li>• indefinite</li> </ul>
<b>Configurable</b>	False

**hold-down-time (keyword | number)****Note:**

This command is available for the following platforms:

- 7220 IXR-D2
- 7220 IXR-D3L
- 7220 IXR-D2L
- 7220 IXR-D3
- 7220 IXR-D1

<b>Description</b>	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.
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">bridge-table</a> <a href="#">mac-duplication</a> <b>hold-down-time</b> ( <i>keyword   number</i> )
<b>Tree</b>	<a href="#">hold-down-time</a>
<b>Range</b>	2 to 60
<b>Default</b>	9
<b>Units</b>	minutes

<b>Options</b>	• indefinite
<b>Configurable</b>	True

### monitoring-window *number*



**Note:**

This command is available for the following platforms:

- 7220 IXR-D2
- 7220 IXR-D3L
- 7220 IXR-D2L
- 7220 IXR-D3
- 7220 IXR-D1

<b>Description</b>	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.
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">bridge-table</a> <a href="#">mac-duplication</a> <a href="#">monitoring-window</a> <i>number</i>
<b>Tree</b>	<a href="#">monitoring-window</a>
<b>Range</b>	1 to 15
<b>Default</b>	3
<b>Units</b>	minutes
<b>Configurable</b>	True

### num-moves *number*



**Note:**

This command is available for the following platforms:

- 7220 IXR-D2
- 7220 IXR-D3L
- 7220 IXR-D2L
- 7220 IXR-D3
- 7220 IXR-D1

<b>Description</b>	Number of moves a mac is allowed within the monitoring-window, before it is declared duplicate.
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">bridge-table</a> <a href="#">mac-duplication</a> <a href="#">num-moves</a> <i>number</i>



<b>Tree</b>	<a href="#">num-moves</a>
<b>Range</b>	3 to 10
<b>Default</b>	5
<b>Configurable</b>	True

## mac-learning



### Note:

This command is available for the following platforms:

- 7220 IXR-D2
- 7220 IXR-D3L
- 7220 IXR-D2L
- 7220 IXR-D3
- 7220 IXR-D1

<b>Description</b>	Enter the mac-learning context
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">bridge-table</a> <a href="#">mac-learning</a>
<b>Tree</b>	<a href="#">mac-learning</a>
<b>Configurable</b>	True

## admin-state *keyword*



### Note:

This command is available for the following platforms:

- 7220 IXR-D2
- 7220 IXR-D3L
- 7220 IXR-D2L
- 7220 IXR-D3
- 7220 IXR-D1

<b>Description</b>	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.
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">bridge-table</a> <a href="#">mac-learning</a> <a href="#">admin-state</a> <i>keyword</i>
<b>Tree</b>	<a href="#">admin-state</a>

<b>Default</b>	enable
<b>Options</b>	<ul style="list-style-type: none"> <li>• enable</li> <li>• disable</li> </ul>
<b>Configurable</b>	True

## aging



### Note:

This command is available for the following platforms:

- 7220 IXR-D2
- 7220 IXR-D3L
- 7220 IXR-D2L
- 7220 IXR-D3
- 7220 IXR-D1

<b>Description</b>	Enter the aging context
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">bridge-table</a> <a href="#">mac-learning</a> <a href="#">aging</a>
<b>Tree</b>	<a href="#">aging</a>
<b>Configurable</b>	True

## admin-state *keyword*



### Note:

This command is available for the following platforms:

- 7220 IXR-D2
- 7220 IXR-D3L
- 7220 IXR-D2L
- 7220 IXR-D3
- 7220 IXR-D1

<b>Description</b>	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.
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">bridge-table</a> <a href="#">mac-learning</a> <a href="#">aging</a> <a href="#">admin-state</a> <i>keyword</i>
<b>Tree</b>	<a href="#">admin-state</a>
<b>Default</b>	enable

<b>Options</b>	<ul style="list-style-type: none"> <li>• enable</li> <li>• disable</li> </ul>
<b>Configurable</b>	True

### age-time *number*



**Note:**

This command is available for the following platforms:

- 7220 IXR-D2
- 7220 IXR-D3L
- 7220 IXR-D2L
- 7220 IXR-D3
- 7220 IXR-D1

<b>Description</b>	Configurable aging time for dynamically learned mac addresses
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">bridge-table</a> <a href="#">mac-learning</a> <a href="#">aging</a> <a href="#">age-time</a> <i>number</i>
<b>Tree</b>	<a href="#">age-time</a>
<b>Range</b>	60 to 86400
<b>Default</b>	300
<b>Configurable</b>	True

### learnt-entries



**Note:**

This command is available for the following platforms:

- 7220 IXR-D2
- 7220 IXR-D3L
- 7220 IXR-D2L
- 7220 IXR-D3
- 7220 IXR-D1

<b>Description</b>	Enter the learnt-entries context
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">bridge-table</a> <a href="#">mac-learning</a> <a href="#">learnt-entries</a>
<b>Tree</b>	<a href="#">learnt-entries</a>
<b>Configurable</b>	False

**mac address string****Note:**

This command is available for the following platforms:

- 7220 IXR-D2
- 7220 IXR-D3L
- 7220 IXR-D2L
- 7220 IXR-D3
- 7220 IXR-D1

<b>Description</b>	MACs learnt on the bridging instance
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">bridge-table</a> <a href="#">mac-learning</a> <a href="#">learnt-entries</a> <a href="#">mac address</a> <i>string</i>
<b>Tree</b>	<a href="#">mac</a>
<b>Configurable</b>	False

**address string****Note:**

This command is available for the following platforms:

- 7220 IXR-D2
- 7220 IXR-D3L
- 7220 IXR-D2L
- 7220 IXR-D3
- 7220 IXR-D1

<b>Description</b>	Enter the address context
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">bridge-table</a> <a href="#">mac-learning</a> <a href="#">learnt-entries</a> <a href="#">mac address</a> <i>string</i>
<b>Configurable</b>	False

**aging (*number* | *keyword*)****Note:**

This command is available for the following platforms:

- 7220 IXR-D2
- 7220 IXR-D3L
- 7220 IXR-D2L
- 7220 IXR-D3
- 7220 IXR-D1

<b>Description</b>	Remaining age time for learnt macs
<b>Context</b>	<a href="#">network-instance name</a> <a href="#">string</a> <a href="#">bridge-table</a> <a href="#">mac-learning</a> <a href="#">learnt-entries</a> <a href="#">mac address</a> <a href="#">string</a> <a href="#">aging</a> ( <i>number</i>   <i>keyword</i> )
<b>Tree</b>	<a href="#">aging</a>
<b>Units</b>	seconds
<b>Options</b>	<ul style="list-style-type: none"> <li>• disabled</li> </ul>
<b>Configurable</b>	False

**destination *string*****Note:**

This command is available for the following platforms:

- 7220 IXR-D2
- 7220 IXR-D3L
- 7220 IXR-D2L
- 7220 IXR-D3
- 7220 IXR-D1

<b>Description</b>	The name of the subinterface where the MAC is learnt against.
<b>Context</b>	<a href="#">network-instance name</a> <a href="#">string</a> <a href="#">bridge-table</a> <a href="#">mac-learning</a> <a href="#">learnt-entries</a> <a href="#">mac address</a> <a href="#">string</a> <a href="#">destination</a> <a href="#">string</a>
<b>Tree</b>	<a href="#">destination</a>
<b>Configurable</b>	False

## last-update *string*

**Note:**

This command is available for the following platforms:

- 7220 IXR-D2
- 7220 IXR-D3L
- 7220 IXR-D2L
- 7220 IXR-D3
- 7220 IXR-D1

<b>Description</b>	The date and time of the last update of this learnt mac
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">bridge-table</a> <a href="#">mac-learning</a> <a href="#">learnt-entries</a> <a href="#">mac address</a> <i>string</i> <a href="#">last-update</a> <i>string</i>
<b>Tree</b>	<a href="#">last-update</a>
<b>String Length</b>	20 to 32
<b>Configurable</b>	False

## mac-relearn-only *boolean*

**Note:**

This command is available for the following platforms:

- 7220 IXR-D2
- 7220 IXR-D3L
- 7220 IXR-D2L
- 7220 IXR-D3
- 7220 IXR-D1

<b>Description</b>	The value of this leaf indicates that network-instance will not learn any new mac addresses, but will relearn any that are already programmed
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">bridge-table</a> <a href="#">mac-learning</a> <a href="#">mac-relearn-only</a> <i>boolean</i>
<b>Tree</b>	<a href="#">mac-relearn-only</a>
<b>Default</b>	true
<b>Configurable</b>	False

**oper-mac-learning keyword****Note:**

This command is available for the following platforms:

- 7220 IXR-D2
- 7220 IXR-D3L
- 7220 IXR-D2L
- 7220 IXR-D3
- 7220 IXR-D1

<b>Description</b>	The operational state of mac-learning on this network instance.
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">bridge-table</a> <a href="#">mac-learning</a> <a href="#">oper-mac-learning keyword</a>
<b>Tree</b>	<a href="#">oper-mac-learning</a>
<b>Options</b>	<ul style="list-style-type: none"> <li>• up Component or process is operational</li> <li>• down Component or process is not operational</li> <li>• empty Component slot is empty</li> <li>• downloading Component is downloading image into memory</li> <li>• booting Component is booting downloaded image</li> <li>• starting Component image operational, application processes starting</li> <li>• failed Component or process has failed</li> <li>• synchronizing Component is currently being synchronized</li> <li>• upgrading Component is currently being upgraded</li> <li>• low-power Component is offline due to insufficient system power</li> <li>• degraded Component or process is in a degraded state</li> </ul>

- warm-reboot

Component or process is currently warm rebooting

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.

**Configurable** False

## oper-mac-learning-disabled-reason *keyword*



### Note:

This command is available for the following platforms:

- 7220 IXR-D2
- 7220 IXR-D3L
- 7220 IXR-D2L
- 7220 IXR-D3
- 7220 IXR-D1

<b>Description</b>	The reason for the mac-learning being disabled on this network instance
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">bridge-table</a> <a href="#">mac-learning</a> <a href="#">oper-mac-learning-disabled-reason</a> <i>keyword</i>
<b>Tree</b>	<a href="#">oper-mac-learning-disabled-reason</a>
<b>Options</b>	<ul style="list-style-type: none"> <li>• admin-disabled</li> </ul>
<b>Configurable</b>	False

## mac-limit



### Note:

This command is available for the following platforms:

- 7220 IXR-D2
- 7220 IXR-D3L
- 7220 IXR-D2L
- 7220 IXR-D3
- 7220 IXR-D1

<b>Description</b>	Bridge Table size and thresholds.
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">bridge-table</a> <a href="#">mac-limit</a>
<b>Tree</b>	<a href="#">mac-limit</a>



<b>Configurable</b>	True
---------------------	------

## maximum-entries *number*



### Note:

This command is available for the following platforms:

- 7220 IXR-D2
- 7220 IXR-D3L
- 7220 IXR-D2L
- 7220 IXR-D3
- 7220 IXR-D1

<b>Description</b>	Maximum number of mac addresses allowed in the bridge-table.
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">bridge-table</a> <a href="#">mac-limit</a> <a href="#">maximum-entries</a> <i>number</i>
<b>Tree</b>	<a href="#">maximum-entries</a>
<b>Range</b>	1 to 8192
<b>Default</b>	250
<b>Configurable</b>	True

## warning-threshold-pct *number*



### Note:

This command is available for the following platforms:

- 7220 IXR-D2
- 7220 IXR-D3L
- 7220 IXR-D2L
- 7220 IXR-D3
- 7220 IXR-D1

<b>Description</b>	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%
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">bridge-table</a> <a href="#">mac-limit</a> <a href="#">warning-threshold-pct</a> <i>number</i>
<b>Tree</b>	<a href="#">warning-threshold-pct</a>
<b>Range</b>	6 to 100
<b>Default</b>	95

<b>Configurable</b>	True
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## mac-table



**Note:**

This command is available for the following platforms:

- 7220 IXR-D2
- 7220 IXR-D3L
- 7220 IXR-D2L
- 7220 IXR-D3
- 7220 IXR-D1

<b>Description</b>	Enter the mac-table context
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">bridge-table</a> <a href="#">mac-table</a>
<b>Tree</b>	<a href="#">mac-table</a>
<b>Configurable</b>	False

## mac address *string*



**Note:**

This command is available for the following platforms:

- 7220 IXR-D2
- 7220 IXR-D3L
- 7220 IXR-D2L
- 7220 IXR-D3
- 7220 IXR-D1

<b>Description</b>	The MACs learnt on the bridging instance
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">bridge-table</a> <a href="#">mac-table</a> <a href="#">mac address</a> <i>string</i>
<b>Tree</b>	<a href="#">mac</a>
<b>Configurable</b>	False

## address *string*

**Note:**

This command is available for the following platforms:

- 7220 IXR-D2
- 7220 IXR-D3L
- 7220 IXR-D2L
- 7220 IXR-D3
- 7220 IXR-D1

<b>Description</b>	Enter the address context
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">bridge-table</a> <a href="#">mac-table</a> <a href="#">mac address</a> <i>string</i>
<b>Configurable</b>	False

## destination *string*

**Note:**

This command is available for the following platforms:

- 7220 IXR-D2
- 7220 IXR-D3L
- 7220 IXR-D2L
- 7220 IXR-D3
- 7220 IXR-D1

<b>Description</b>	The name of the destination where the MAC is programmed against.
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">bridge-table</a> <a href="#">mac-table</a> <a href="#">mac address</a> <i>string</i> <a href="#">destination</a> <i>string</i>
<b>Tree</b>	<a href="#">destination</a>
<b>Configurable</b>	False

## destination-index *number*

**Note:**

This command is available for the following platforms:

- 7220 IXR-D2
- 7220 IXR-D3L
- 7220 IXR-D2L
- 7220 IXR-D3
- 7220 IXR-D1

<b>Description</b>	A system-wide unique identifier of a subinterface object (system allocated).
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">bridge-table</a> <a href="#">mac-table</a> <a href="#">mac address</a> <i>string</i> <a href="#">destination-index</a> <i>number</i>
<b>Tree</b>	<a href="#">destination-index</a>
<b>Configurable</b>	False

## destination-type *keyword*

**Note:**

This command is available for the following platforms:

- 7220 IXR-D2
- 7220 IXR-D3L
- 7220 IXR-D2L
- 7220 IXR-D3
- 7220 IXR-D1

<b>Description</b>	the type of the destination the mac installed against in the fdb.
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">bridge-table</a> <a href="#">mac-table</a> <a href="#">mac address</a> <i>string</i> <a href="#">destination-type</a> <i>keyword</i>
<b>Tree</b>	<a href="#">destination-type</a>
<b>Options</b>	<ul style="list-style-type: none"> <li>• sub-interface</li> <li>• blackhole</li> <li>• irb-interface</li> <li>• vxlan</li> <li>• reserved</li> </ul>
<b>Configurable</b>	False

**failed-slots *number*****Note:**

This command is available for the following platforms:

- 7220 IXR-D2
- 7220 IXR-D3L
- 7220 IXR-D2L
- 7220 IXR-D3
- 7220 IXR-D1

<b>Description</b>	The list of slot IDs corresponding to the linecards that did not successfully program the mac
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">bridge-table</a> <a href="#">mac-table</a> <a href="#">mac address</a> <i>string</i> <a href="#">failed-slots</a> <i>number</i>
<b>Tree</b>	<a href="#">failed-slots</a>
<b>Range</b>	1 to 8
<b>Configurable</b>	False

**is-protected *boolean*****Note:**

This command is available for the following platforms:

- 7220 IXR-D2
- 7220 IXR-D3L
- 7220 IXR-D2L
- 7220 IXR-D3
- 7220 IXR-D1

<b>Description</b>	Indicates if the mac is protected in the hardware.
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">bridge-table</a> <a href="#">mac-table</a> <a href="#">mac address</a> <i>string</i> <a href="#">is-protected</a> <i>boolean</i>
<b>Tree</b>	<a href="#">is-protected</a>
<b>Configurable</b>	False

**last-update *string*****Note:**

This command is available for the following platforms:

- 7220 IXR-D2
- 7220 IXR-D3L
- 7220 IXR-D2L
- 7220 IXR-D3
- 7220 IXR-D1

<b>Description</b>	The date and time of the last update of this mac
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">bridge-table</a> <a href="#">mac-table</a> <a href="#">mac address</a> <i>string</i> <a href="#">last-update</a> <i>string</i>
<b>Tree</b>	<a href="#">last-update</a>
<b>String Length</b>	20 to 32
<b>Configurable</b>	False

**not-programmed-reason *keyword*****Note:**

This command is available for the following platforms:

- 7220 IXR-D2
- 7220 IXR-D3L
- 7220 IXR-D2L
- 7220 IXR-D3
- 7220 IXR-D1

<b>Description</b>	The reason why the mac is not programmed
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">bridge-table</a> <a href="#">mac-table</a> <a href="#">mac address</a> <i>string</i> <a href="#">not-programmed-reason</a> <i>keyword</i>
<b>Tree</b>	<a href="#">not-programmed-reason</a>
<b>Options</b>	<ul style="list-style-type: none"> <li>• mac-limit</li> <li>• failed-on-slots</li> <li>• no-destination-index</li> <li>• reserved</li> </ul>
<b>Configurable</b>	False

**type keyword****Note:**

This command is available for the following platforms:

- 7220 IXR-D2
- 7220 IXR-D3L
- 7220 IXR-D2L
- 7220 IXR-D3
- 7220 IXR-D1

<b>Description</b>	The type of MAC installed in the fib.
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">bridge-table</a> <a href="#">mac-table</a> <a href="#">mac address</a> <i>string</i> <a href="#">type</a> <i>keyword</i>
<b>Tree</b>	<a href="#">type</a>
<b>Options</b>	<ul style="list-style-type: none"> <li>• static</li> <li>• duplicate</li> <li>• learnt</li> <li>• irb-interface</li> <li>• evpn</li> <li>• evpn-static</li> <li>• irb-interface-anycast</li> <li>• proxy-anti-spoof</li> <li>• reserved</li> <li>• eth-cfm</li> </ul>
<b>Configurable</b>	False

**protect-anycast-gw-mac *boolean*****Note:**

This command is available for the following platforms:

- 7220 IXR-D2
- 7220 IXR-D3L
- 7220 IXR-D2L
- 7220 IXR-D3
- 7220 IXR-D1

<b>Description</b>	Protect anycast gateway mac's installed in the FDB, when this mac-vrf is part of an IRB.
--------------------	--

<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">bridge-table</a> <a href="#">protect-anycast-gw-mac</a> <i>boolean</i>
<b>Tree</b>	<a href="#">protect-anycast-gw-mac</a>
<b>Default</b>	false
<b>Configurable</b>	True

## reserved-macs



### Note:

This command is available for the following platforms:

- 7220 IXR-D2
- 7220 IXR-D3L
- 7220 IXR-D2L
- 7220 IXR-D3
- 7220 IXR-D1

<b>Description</b>	Enter the reserved-macs context
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">bridge-table</a> <a href="#">reserved-macs</a>
<b>Tree</b>	<a href="#">reserved-macs</a>
<b>Configurable</b>	False

## mac address *string*



### Note:

This command is available for the following platforms:

- 7220 IXR-D2
- 7220 IXR-D3L
- 7220 IXR-D2L
- 7220 IXR-D3
- 7220 IXR-D1

<b>Description</b>	Reserved MACs on the bridging instance
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">bridge-table</a> <a href="#">reserved-macs</a> <a href="#">mac address</a> <i>string</i>
<b>Tree</b>	<a href="#">mac</a>
<b>Configurable</b>	False



**address *string*****Note:**

This command is available for the following platforms:

- 7220 IXR-D2
- 7220 IXR-D3L
- 7220 IXR-D2L
- 7220 IXR-D3
- 7220 IXR-D1

<b>Description</b>	Enter the address context
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">bridge-table</a> <a href="#">reserved-macs</a> <a href="#">mac address</a> <i>string</i>
<b>Configurable</b>	False

**users [application](#) *string*****Note:**

This command is available for the following platforms:

- 7220 IXR-D2
- 7220 IXR-D3L
- 7220 IXR-D2L
- 7220 IXR-D3
- 7220 IXR-D1

<b>Description</b>	The applications reserving this MAC
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">bridge-table</a> <a href="#">reserved-macs</a> <a href="#">mac address</a> <i>string</i> <a href="#">users</a> <a href="#">application</a> <i>string</i>
<b>Tree</b>	<a href="#">users</a>
<b>Configurable</b>	False

## application *string*



### Note:

This command is available for the following platforms:

- 7220 IXR-D2
- 7220 IXR-D3L
- 7220 IXR-D2L
- 7220 IXR-D3
- 7220 IXR-D1

<b>Description</b>	Enter the application context
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">bridge-table</a> <a href="#">reserved-macs</a> <a href="#">mac address</a> <a href="#">string</a> <a href="#">users</a> <a href="#">application</a> <i>string</i>
<b>Configurable</b>	False

## static-mac



### Note:

This command is available for the following platforms:

- 7220 IXR-D2
- 7220 IXR-D3L
- 7220 IXR-D2L
- 7220 IXR-D3
- 7220 IXR-D1

<b>Description</b>	Enter the static-mac context
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">bridge-table</a> <a href="#">static-mac</a>
<b>Tree</b>	<a href="#">static-mac</a>
<b>Configurable</b>	True

**mac address string****Note:**

This command is available for the following platforms:

- 7220 IXR-D2
- 7220 IXR-D3L
- 7220 IXR-D2L
- 7220 IXR-D3
- 7220 IXR-D1

<b>Description</b>	Static MACs configured on the bridging instance
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">bridge-table</a> <a href="#">static-mac</a> <a href="#">mac address</a> <i>string</i>
<b>Tree</b>	<a href="#">mac</a>
<b>Configurable</b>	True

**address string****Note:**

This command is available for the following platforms:

- 7220 IXR-D2
- 7220 IXR-D3L
- 7220 IXR-D2L
- 7220 IXR-D3
- 7220 IXR-D1

<b>Description</b>	Enter the address context
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">bridge-table</a> <a href="#">static-mac</a> <a href="#">mac address</a> <i>string</i>
<b>Configurable</b>	True

**destination (*keyword* | *reference*)****Note:**

This command is available for the following platforms:

- 7220 IXR-D2
- 7220 IXR-D3L
- 7220 IXR-D2L
- 7220 IXR-D3
- 7220 IXR-D1

<b>Description</b>	The destination the MAC is programmed against.
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">bridge-table static-mac mac address</a> <i>string</i> <a href="#">destination</a> ( <i>keyword</i>   <i>reference</i> )
<b>Tree</b>	<a href="#">destination</a>
<b>Options</b>	<ul style="list-style-type: none"> <li>• blackhole</li> </ul>
<b>Reference</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">interface name</a> <i>string</i>
<b>Configurable</b>	True

**statistics****Note:**

This command is available for the following platforms:

- 7220 IXR-D2
- 7220 IXR-D3L
- 7220 IXR-D2L
- 7220 IXR-D3
- 7220 IXR-D1

<b>Description</b>	Enter the statistics context
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">bridge-table statistics</a>
<b>Tree</b>	<a href="#">statistics</a>
<b>Configurable</b>	False

**active-entries *number*****Note:**

This command is available for the following platforms:

- 7220 IXR-D2
- 7220 IXR-D3L
- 7220 IXR-D2L
- 7220 IXR-D3
- 7220 IXR-D1

<b>Description</b>	The total number of entries that are active in the mac-table.
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">bridge-table statistics active-entries number</a>
<b>Tree</b>	<a href="#">active-entries</a>
<b>Default</b>	0
<b>Configurable</b>	False

**failed-entries *number*****Note:**

This command is available for the following platforms:

- 7220 IXR-D2
- 7220 IXR-D3L
- 7220 IXR-D2L
- 7220 IXR-D3
- 7220 IXR-D1

<b>Description</b>	The total number of macs, which have not been programmed on atleast one slot
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">bridge-table statistics failed-entries number</a>
<b>Tree</b>	<a href="#">failed-entries</a>
<b>Default</b>	0
<b>Configurable</b>	False

**mac-type** *type keyword***Note:**

This command is available for the following platforms:

- 7220 IXR-D2
- 7220 IXR-D3L
- 7220 IXR-D2L
- 7220 IXR-D3
- 7220 IXR-D1

<b>Description</b>	The type of MAC installed in the fib.
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">bridge-table</a> <a href="#">statistics</a> <a href="#">mac-type</a> <a href="#">type</a> <i>keyword</i>
<b>Tree</b>	<a href="#">mac-type</a>
<b>Configurable</b>	False

**type** *keyword***Note:**

This command is available for the following platforms:

- 7220 IXR-D2
- 7220 IXR-D3L
- 7220 IXR-D2L
- 7220 IXR-D3
- 7220 IXR-D1

<b>Description</b>	Enter the type context
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">bridge-table</a> <a href="#">statistics</a> <a href="#">mac-type</a> <a href="#">type</a> <i>keyword</i>
<b>Options</b>	<ul style="list-style-type: none"> <li>• static</li> <li>• duplicate</li> <li>• learnt</li> <li>• irb-interface</li> <li>• evpn</li> <li>• evpn-static</li> <li>• irb-interface-anycast</li> <li>• proxy-anti-spoof</li> <li>• reserved</li> <li>• eth-cfm</li> </ul>

<b>Configurable</b>	False
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### active-entries *number*



**Note:**

This command is available for the following platforms:

- 7220 IXR-D2
- 7220 IXR-D3L
- 7220 IXR-D2L
- 7220 IXR-D3
- 7220 IXR-D1

<b>Description</b>	The total number of entries of this type that are active in the mac-table.
<b>Context</b>	<a href="#">network-instance name</a> <a href="#">string</a> <a href="#">bridge-table</a> <a href="#">statistics</a> <a href="#">mac-type</a> <a href="#">type</a> <a href="#">keyword</a> <a href="#">active-entries</a> <a href="#">number</a>
<b>Tree</b>	<a href="#">active-entries</a>
<b>Default</b>	0
<b>Configurable</b>	False

### failed-entries *number*



**Note:**

This command is available for the following platforms:

- 7220 IXR-D2
- 7220 IXR-D3L
- 7220 IXR-D2L
- 7220 IXR-D3
- 7220 IXR-D1

<b>Description</b>	The total number of macs of this type, which have not been programmed on at least one slot
<b>Context</b>	<a href="#">network-instance name</a> <a href="#">string</a> <a href="#">bridge-table</a> <a href="#">statistics</a> <a href="#">mac-type</a> <a href="#">type</a> <a href="#">keyword</a> <a href="#">failed-entries</a> <a href="#">number</a>
<b>Tree</b>	<a href="#">failed-entries</a>
<b>Default</b>	0
<b>Configurable</b>	False

**total-entries *number*****Note:**

This command is available for the following platforms:

- 7220 IXR-D2
- 7220 IXR-D3L
- 7220 IXR-D2L
- 7220 IXR-D3
- 7220 IXR-D1

<b>Description</b>	The total number of macs of this type , active and inactive, that are present in the mac-table.
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">bridge-table statistics mac-type type</a> <i>keyword</i> <a href="#">total-entries</a> <i>number</i>
<b>Tree</b>	<a href="#">total-entries</a>
<b>Default</b>	0
<b>Configurable</b>	False

**total-entries *number*****Note:**

This command is available for the following platforms:

- 7220 IXR-D2
- 7220 IXR-D3L
- 7220 IXR-D2L
- 7220 IXR-D3
- 7220 IXR-D1

<b>Description</b>	The total number of macs, active and inactive, that are present in the mac-table.
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">bridge-table statistics total-entries</a> <i>number</i>
<b>Tree</b>	<a href="#">total-entries</a>
<b>Default</b>	0
<b>Configurable</b>	False

**description *string***

<b>Description</b>	A user-entered description of this network instance.
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<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">description</a> <i>string</i>
<b>Tree</b>	<a href="#">description</a>
<b>String Length</b>	1 to 255
<b>Configurable</b>	True

**icmp**

<b>Description</b>	Enter the icmp context
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">icmp</a>
<b>Tree</b>	<a href="#">icmp</a>
<b>Configurable</b>	False

**statistics**

<b>Description</b>	ICMP version 4 statistics
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">icmp</a> <a href="#">statistics</a>
<b>Tree</b>	<a href="#">statistics</a>
<b>Configurable</b>	False

**last-clear *string***

<b>Description</b>	Timestamp of the last time the interface counters were cleared.
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">icmp</a> <a href="#">statistics</a> <a href="#">last-clear</a> <i>string</i>
<b>Tree</b>	<a href="#">last-clear</a>
<b>String Length</b>	20 to 32
<b>Configurable</b>	False

**total**

<b>Description</b>	Aggregate statistics, counting all ICMP message types
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">icmp</a> <a href="#">statistics</a> <a href="#">total</a>
<b>Tree</b>	<a href="#">total</a>
<b>Configurable</b>	False

### **in-error-packets *number***

<b>Description</b>	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.)
<b>Context</b>	<a href="#">network-instance name</a> <a href="#">string</a> <a href="#">icmp statistics total in-error-packets</a> <a href="#">number</a>
<b>Tree</b>	<a href="#">in-error-packets</a>
<b>Default</b>	0
<b>Configurable</b>	False

### **in-packets *number***

<b>Description</b>	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.
<b>Context</b>	<a href="#">network-instance name</a> <a href="#">string</a> <a href="#">icmp statistics total in-packets</a> <a href="#">number</a>
<b>Tree</b>	<a href="#">in-packets</a>
<b>Default</b>	0
<b>Configurable</b>	False

### **out-error-packets *number***

<b>Description</b>	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'
<b>Context</b>	<a href="#">network-instance name</a> <a href="#">string</a> <a href="#">icmp statistics total out-error-packets</a> <a href="#">number</a>
<b>Tree</b>	<a href="#">out-error-packets</a>
<b>Default</b>	0
<b>Configurable</b>	False

### **out-packets *number***

<b>Description</b>	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.
<b>Context</b>	<a href="#">network-instance name</a> <a href="#">string</a> <a href="#">icmp statistics total out-packets</a> <a href="#">number</a>
<b>Tree</b>	<a href="#">out-packets</a>
<b>Default</b>	0

**Configurable** False

### type *name keyword*

**Description** Enter the type list instance  
**Context** [network-instance name](#) *string icmp statistics type name keyword*  
**Tree** [type](#)  
**Configurable** False

### name *keyword*

**Description** Enter the name context  
**Context** [network-instance name](#) *string icmp statistics type name keyword*  
**Options**

- echo-reply
- dest-unreachable
- redirect
- echo
- rtr-advertisement
- rtr-selection
- time-exceeded
- param-problem
- timestamp
- timestamp-reply

**Configurable** False

### 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](#) *string icmp statistics type name keyword in-packets number*  
**Tree** [in-packets](#)  
**Default** 0  
**Configurable** False

**out-error-packets *number***

<b>Description</b>	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'
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">icmp statistics type name</a> <i>keyword</i> <a href="#">out-error-packets</a> <i>number</i>
<b>Tree</b>	<a href="#">out-error-packets</a>
<b>Default</b>	0
<b>Configurable</b>	False

**out-packets *number***

<b>Description</b>	The total number of ICMPv4 messages of this type that the network instance attempted to send.
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">icmp statistics type name</a> <i>keyword</i> <a href="#">out-packets</a> <i>number</i>
<b>Tree</b>	<a href="#">out-packets</a>
<b>Default</b>	0
<b>Configurable</b>	False

**icmp6**

<b>Description</b>	Enter the icmp6 context
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">icmp6</a>
<b>Tree</b>	<a href="#">icmp6</a>
<b>Configurable</b>	False

**statistics**

<b>Description</b>	ICMP version 6 statistics
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">icmp6 statistics</a>
<b>Tree</b>	<a href="#">statistics</a>
<b>Configurable</b>	False

**last-clear *string***

<b>Description</b>	Timestamp of the last time the interface counters were cleared.
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<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">icmp6 statistics last-clear</a> <i>string</i>
<b>Tree</b>	<a href="#">last-clear</a>
<b>String Length</b>	20 to 32
<b>Configurable</b>	False

**total**

<b>Description</b>	Aggregate statistics, counting all ICMP message types
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">icmp6 statistics total</a>
<b>Tree</b>	<a href="#">total</a>
<b>Configurable</b>	False

**in-error-packets** *number*

<b>Description</b>	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.)
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">icmp6 statistics total in-error-packets</a> <i>number</i>
<b>Tree</b>	<a href="#">in-error-packets</a>
<b>Default</b>	0
<b>Configurable</b>	False

**in-packets** *number*

<b>Description</b>	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.
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">icmp6 statistics total in-packets</a> <i>number</i>
<b>Tree</b>	<a href="#">in-packets</a>
<b>Default</b>	0
<b>Configurable</b>	False

**out-error-packets** *number*

<b>Description</b>	The number of ICMPv6 messages that could not be sent from this network instance due to issues such as 'no route to the source'
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">icmp6 statistics total out-error-packets</a> <i>number</i>

<b>Tree</b>	<a href="#">out-error-packets</a>
<b>Default</b>	0
<b>Configurable</b>	False

### **out-packets *number***

<b>Description</b>	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.
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">icmp6 statistics total out-packets</a> <i>number</i>
<b>Tree</b>	<a href="#">out-packets</a>
<b>Default</b>	0
<b>Configurable</b>	False

### **type *name keyword***

<b>Description</b>	Enter the type list instance
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">icmp6 statistics type name</a> <i>keyword</i>
<b>Tree</b>	<a href="#">type</a>
<b>Configurable</b>	False

### **name *keyword***

<b>Description</b>	Enter the name context
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">icmp6 statistics type name</a> <i>keyword</i>
<b>Options</b>	<ul style="list-style-type: none"> <li>• dest-unreachable</li> <li>• packet-too-big</li> <li>• time-exceeded</li> <li>• param-problem</li> <li>• echo-request</li> <li>• echo-reply</li> <li>• rtr-solicitation</li> <li>• rtr-advertisement</li> <li>• nbr-solicitation</li> <li>• nbr-advertisement</li> <li>• redirect</li> </ul>
<b>Configurable</b>	False

**in-packets *number***

<b>Description</b>	The total number of ICMPv6 messages of this type that the network instance received and extracted successfully to the CPM.
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">icmp6 statistics type name</a> <i>keyword</i> <a href="#">in-packets number</a>
<b>Tree</b>	<a href="#">in-packets</a>
<b>Default</b>	0
<b>Configurable</b>	False

**out-error-packets *number***

<b>Description</b>	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'
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">icmp6 statistics type name</a> <i>keyword</i> <a href="#">out-error-packets number</a>
<b>Tree</b>	<a href="#">out-error-packets</a>
<b>Default</b>	0
<b>Configurable</b>	False

**out-packets *number***

<b>Description</b>	The total number of ICMPv6 messages of this type that the network instance attempted to send.
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">icmp6 statistics type name</a> <i>keyword</i> <a href="#">out-packets number</a>
<b>Tree</b>	<a href="#">out-packets</a>
<b>Default</b>	0
<b>Configurable</b>	False

**interface [name](#) *string***

<b>Description</b>	List of subinterfaces used by this network-instance
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">interface name</a> <i>string</i>
<b>Tree</b>	<a href="#">interface</a>
<b>Configurable</b>	True

**name *string***

<b>Description</b>	Identifier of sub-interface used in this network-instance
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">interface name</a> <i>string</i>
<b>String Length</b>	5 to 25
<b>Configurable</b>	True

**index *number***

<b>Description</b>	The network instance allocated sub interface index
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">interface name</a> <i>string</i> <a href="#">index number</a>
<b>Tree</b>	<a href="#">index</a>
<b>Default</b>	0
<b>Configurable</b>	False

**mac-relearn-only *boolean***

<b>Description</b>	The value of this leaf indicates that the interface will not learn any new mac addresses, but will relearn any that are already programmed
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">interface name</a> <i>string</i> <a href="#">mac-relearn-only boolean</a>
<b>Tree</b>	<a href="#">mac-relearn-only</a>
<b>Default</b>	true
<b>Configurable</b>	False

**multicast-forwarding *keyword***

<b>Description</b>	The type of multicast data forwarded by this subinterface.
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">interface name</a> <i>string</i> <a href="#">multicast-forwarding keyword</a>
<b>Tree</b>	<a href="#">multicast-forwarding</a>
<b>Options</b>	<ul style="list-style-type: none"> <li>• none</li> <li>• BUM</li> <li>• unknown-unicast</li> <li>• broadcast-mcast</li> </ul>
<b>Configurable</b>	False



**oper-down-reason *keyword***

<b>Description</b>	The reason for the interface being down in the network-instance
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">interface name</a> <i>string</i> <b>oper-down-reason</b> <i>keyword</i>
<b>Tree</b>	<a href="#">oper-down-reason</a>
<b>Options</b>	<ul style="list-style-type: none"> <li>• ip-addr-missing</li> <li>• ip-addr-overlap</li> <li>• subif-down</li> <li>• net-inst-down</li> <li>• vrf-type-mismatch</li> <li>• mac-dup-detected</li> <li>• associated-mac-vrf-down</li> <li>• mac-vrf-association-missing</li> <li>• ip-vrf-association-missing</li> <li>• associated-ip-vrf-down</li> <li>• evpn-mh-standby</li> </ul>
<b>Configurable</b>	False

**oper-mac-learning *keyword***

<b>Description</b>	The operational state of mac-learning on this subinterface.
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">interface name</a> <i>string</i> <b>oper-mac-learning</b> <i>keyword</i>
<b>Tree</b>	<a href="#">oper-mac-learning</a>
<b>Options</b>	<ul style="list-style-type: none"> <li>• up Component or process is operational</li> <li>• down Component or process is not operational</li> <li>• empty Component slot is empty</li> <li>• downloading Component is downloading image into memory</li> <li>• booting Component is booting downloaded image</li> <li>• starting Component image operational, application processes starting</li> </ul>

- 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  
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.

**Configurable** False

### **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 oper-mac-learning-disabled-reason keyword](#)

**Tree** [oper-mac-learning-disabled-reason](#)

**Options**

- routed
- admin-disabled
- mac-dup-detected

**Configurable** False

### **oper-state *keyword***

**Description** The operational state of this subinterface.

**Context** [network-instance name string 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  
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.

**Configurable** False

## ip-forwarding

**Description** Forwarding options that apply to the entire network instance.

**Context** [network-instance name](#) *string* [ip-forwarding](#)

**Tree** [ip-forwarding](#)

**Configurable** True

## 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.

<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">ip-forwarding</a> <a href="#">receive-ipv4-check</a> <i>boolean</i>
<b>Tree</b>	<a href="#">receive-ipv4-check</a>
<b>Configurable</b>	True

### receive-ipv6-check *boolean*

<b>Description</b>	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 subinterfaces of the network-instance that are up, even if they do not have any IPv6 addresses.
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<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">ip-forwarding</a> <a href="#">receive-ipv6-check</a> <i>boolean</i>
<b>Tree</b>	<a href="#">receive-ipv6-check</a>
<b>Configurable</b>	True

### ip-load-balancing



**Note:**

This command is available for the following platforms:

- 7250 IXR-6
- 7250 IXR-10

<b>Description</b>	Container for IP load-balancing options that are specific to the network-instance
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">ip-load-balancing</a>
<b>Tree</b>	<a href="#">ip-load-balancing</a>
<b>Configurable</b>	True

### resilient-hash-prefix [ip-prefix](#) (*ipv4-prefix* | *ipv6-prefix*)



**Note:**

This command is available for the following platforms:

- 7250 IXR-6
- 7250 IXR-10

<b>Description</b>	List of IPv4 and IPv6 prefixes which should be programmed for resilient ECMP hashing.
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">ip-load-balancing</a> <a href="#">resilient-hash-prefix</a> <a href="#">ip-prefix</a> ( <a href="#">ipv4-prefix</a>   <a href="#">ipv6-prefix</a> )
<b>Tree</b>	<a href="#">resilient-hash-prefix</a>
<b>Configurable</b>	True

### **ip-prefix ([ipv4-prefix](#) | [ipv6-prefix](#))**



**Note:**

This command is available for the following platforms:

- 7250 IXR-6
- 7250 IXR-10

<b>Description</b>	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.
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">ip-load-balancing</a> <a href="#">resilient-hash-prefix</a> <a href="#">ip-prefix</a> ( <a href="#">ipv4-prefix</a>   <a href="#">ipv6-prefix</a> )
<b>Configurable</b>	True

### **hash-buckets-per-path *number***



**Note:**

This command is available for the following platforms:

- 7250 IXR-6
- 7250 IXR-10

<b>Description</b>	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. Note that hash-buckets-per-path * max-paths must be less than or equal to 128.
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">ip-load-balancing</a> <a href="#">resilient-hash-prefix</a> <a href="#">ip-prefix</a> ( <a href="#">ipv4-prefix</a>   <a href="#">ipv6-prefix</a> ) <a href="#">hash-buckets-per-path</a> <i>number</i>
<b>Tree</b>	<a href="#">hash-buckets-per-path</a>
<b>Range</b>	1 to 32
<b>Default</b>	1
<b>Configurable</b>	True

## max-paths *number*

**Note:**

This command is available for the following platforms:

- 7250 IXR-6
- 7250 IXR-10

<b>Description</b>	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. Note that hash-buckets-per-path * max-paths must be less than or equal to 128.
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">ip-load-balancing</a> <a href="#">resilient-hash-prefix</a> <a href="#">ip-prefix</a> ( <a href="#">ipv4-prefix</a>   <a href="#">ipv6-prefix</a> ) <a href="#">max-paths</a> <i>number</i>
<b>Tree</b>	<a href="#">max-paths</a>
<b>Range</b>	1 to 64
<b>Default</b>	1
<b>Configurable</b>	True

## mpls

**Note:**

This command is available for the following platforms:

- 7250 IXR-6
- 7250 IXR-10

<b>Description</b>	Enable the mpls context
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">mpls</a>
<b>Tree</b>	<a href="#">mpls</a>
<b>Configurable</b>	True

## icmp-tunneling *boolean*

**Note:**

This command is available for the following platforms:

- 7250 IXR-6
- 7250 IXR-10

<b>Description</b>	<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 <code>icmp-tunneling</code> 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>
<b>Context</b>	<code>network-instance name string mpls icmp-tunneling boolean</code>
<b>Tree</b>	<code>icmp-tunneling</code>
<b>Configurable</b>	True

### `static-entry top-label number preference number`



**Note:**

This command is available for the following platforms:

- 7250 IXR-6
- 7250 IXR-10

<b>Description</b>	Enter the static-entry list instance
<b>Context</b>	<code>network-instance name string mpls static-entry top-label number preference number</code>
<b>Tree</b>	<code>static-entry</code>
<b>Configurable</b>	True

### `top-label number`



**Note:**

This command is available for the following platforms:

- 7250 IXR-6
- 7250 IXR-10

<b>Description</b>	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.
<b>Context</b>	<code>network-instance name string mpls static-entry top-label number preference number</code>
<b>Range</b>	16 to 1048575
<b>Configurable</b>	True

**preference *number*****Note:**

This command is available for the following platforms:

- 7250 IXR-6
- 7250 IXR-10

<b>Description</b>	For a given top label value the entry with the lowest preference is selected as the active entry
<b>Context</b>	<a href="#">network-instance name</a> <a href="#">string</a> <a href="#">mpls static-entry top-label</a> <a href="#">number</a> <a href="#">preference number</a>
<b>Range</b>	0 to 255
<b>Configurable</b>	True

**admin-state *keyword*****Note:**

This command is available for the following platforms:

- 7250 IXR-6
- 7250 IXR-10

<b>Description</b>	Used to disable the entire static route and all its next-hops.
<b>Context</b>	<a href="#">network-instance name</a> <a href="#">string</a> <a href="#">mpls static-entry top-label</a> <a href="#">number</a> <a href="#">preference number</a> <a href="#">admin-state</a> <a href="#">keyword</a>
<b>Tree</b>	<a href="#">admin-state</a>
<b>Default</b>	enable
<b>Options</b>	<ul style="list-style-type: none"> <li>• enable</li> <li>• disable</li> </ul>
<b>Configurable</b>	True

**collect-stats *boolean*****Note:**

This command is available for the following platforms:

- 7250 IXR-6
- 7250 IXR-10



<b>Description</b>	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
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">mpls static-entry top-label</a> <i>number</i> <a href="#">preference</a> <i>number</i> <a href="#">collect-stats</a> <i>boolean</i>
<b>Tree</b>	<a href="#">collect-stats</a>
<b>Default</b>	false
<b>Configurable</b>	True

### installed *boolean*



**Note:**

This command is available for the following platforms:

- 7250 IXR-6
- 7250 IXR-10

<b>Description</b>	Indicates whether the MPLS route entry was programmed in the data path.
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">mpls static-entry top-label</a> <i>number</i> <a href="#">preference</a> <i>number</i> <a href="#">installed</a> <i>boolean</i>
<b>Tree</b>	<a href="#">installed</a>
<b>Configurable</b>	False

### next-hop-group *reference*



**Note:**

This command is available for the following platforms:

- 7250 IXR-6
- 7250 IXR-10

<b>Description</b>	Enter the next-hop-group context
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">mpls static-entry top-label</a> <i>number</i> <a href="#">preference</a> <i>number</i> <a href="#">next-hop-group</a> <i>reference</i>
<b>Tree</b>	<a href="#">next-hop-group</a>
<b>Reference</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">next-hop-groups</a> <i>group name</i> <i>string</i>
<b>Configurable</b>	True

## operation *keyword*



### Note:

This command is available for the following platforms:

- 7250 IXR-6
- 7250 IXR-10

<b>Description</b>	The operation to be performed with the top label.
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">mpls static-entry top-label</a> <i>number</i> <a href="#">preference number</a> <a href="#">operation keyword</a>
<b>Tree</b>	<a href="#">operation</a>
<b>Default</b>	swap
<b>Options</b>	<ul style="list-style-type: none"> <li>• pop</li> <li>• swap</li> </ul>
<b>Configurable</b>	True

## resolved-next-hop-group-id *reference*



### Note:

This command is available for the following platforms:

- 7250 IXR-6
- 7250 IXR-10

<b>Description</b>	Enter the resolved-next-hop-group-id context
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">mpls static-entry top-label</a> <i>number</i> <a href="#">preference number</a> <a href="#">resolved-next-hop-group-id reference</a>
<b>Tree</b>	<a href="#">resolved-next-hop-group-id</a>
<b>Reference</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">route-table next-hop-group index</a> <i>number</i>
<b>Configurable</b>	False

## mpls-forwarding

<b>Description</b>	Enter the mpls-forwarding context
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">mpls-forwarding</a>
<b>Tree</b>	<a href="#">mpls-forwarding</a>
<b>Configurable</b>	True

**forward-received-packets *boolean***

<b>Description</b>	<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>
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">mpls-forwarding</a> <a href="#">forward-received-packets</a> <i>boolean</i>
<b>Tree</b>	<a href="#">forward-received-packets</a>
<b>Configurable</b>	True

**mtu**

<b>Description</b>	Top-level container for configuration and state data related to network-instance MTU
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">mtu</a>
<b>Tree</b>	<a href="#">mtu</a>
<b>Configurable</b>	True

**path-mtu-discovery *boolean***

<b>Description</b>	<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 its Path MTU appropriately. The process is repeated until the MTU is small enough to traverse the entire path without fragmentation.</p>
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">mtu</a> <a href="#">path-mtu-discovery</a> <i>boolean</i>
<b>Tree</b>	<a href="#">path-mtu-discovery</a>
<b>Default</b>	true
<b>Configurable</b>	True

**next-hop-groups**

<b>Description</b>	Enable the next-hop-groups context
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">next-hop-groups</a>
<b>Tree</b>	<a href="#">next-hop-groups</a>
<b>Configurable</b>	True

**group name string**

<b>Description</b>	Specifies the next hop group.
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">next-hop-groups</a> <a href="#">group name</a> <i>string</i>
<b>Tree</b>	<a href="#">group</a>
<b>Configurable</b>	True

**name string**

<b>Description</b>	Specifies the next hop group name
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">next-hop-groups</a> <a href="#">group name</a> <i>string</i>
<b>String Length</b>	1 to 255
<b>Configurable</b>	True

**admin-state keyword**

<b>Description</b>	Used to enable or disable a next-hop group
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">next-hop-groups</a> <a href="#">group name</a> <i>string</i> <a href="#">admin-state</a> <i>keyword</i>
<b>Tree</b>	<a href="#">admin-state</a>
<b>Default</b>	enable
<b>Options</b>	<ul style="list-style-type: none"> <li>• enable</li> <li>• disable</li> </ul>
<b>Configurable</b>	True

**blackhole**

<b>Description</b>	Enable the blackhole context
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">next-hop-groups</a> <a href="#">group name</a> <i>string</i> <a href="#">blackhole</a>
<b>Tree</b>	<a href="#">blackhole</a>

**Configurable** True

### generate-icmp *boolean*

**Description** When set to true the router generates ICMP unreachable messages for the dropped packets

**Context** [network-instance name](#) *string* [next-hop-groups group name](#) *string* [blackhole generate-icmp](#) *boolean*

**Tree** [generate-icmp](#)

**Default** false

**Configurable** True

### nexthop *index number*

**Description** Enter the nexthop list instance

**Context** [network-instance name](#) *string* [next-hop-groups group name](#) *string* [nexthop index number](#)

**Tree** [nexthop](#)

**Configurable** True

**Max. Elements** 128

### *index number*

**Description** Numerical index of the next-hop member

**Context** [network-instance name](#) *string* [next-hop-groups group name](#) *string* [nexthop index number](#)

**Configurable** True

### admin-state *keyword*

**Description** Used to enable or disable a particular next-hop

**Context** [network-instance name](#) *string* [next-hop-groups group name](#) *string* [nexthop index number](#) [admin-state](#) *keyword*

**Tree** [admin-state](#)

**Default** enable

**Options**

- enable
- disable

**Configurable** True

## failure-detection

**Description** Enter the failure-detection context

**Context** [network-instance name](#) *string* [next-hop-groups group name](#) *string* [nexthop index](#) *number* [failure-detection](#)

**Tree** [failure-detection](#)

**Configurable** True

## enable-bfd

**Description** Enable the enable-bfd context

**Context** [network-instance name](#) *string* [next-hop-groups group name](#) *string* [nexthop index](#) *number* [failure-detection enable-bfd](#)

**Tree** [enable-bfd](#)

**Configurable** True

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

**Description** The local address to be used for the associated BFD session

**Context** [network-instance name](#) *string* [next-hop-groups group name](#) *string* [nexthop index](#) *number* [failure-detection enable-bfd local-address](#) (*ipv4-address* | *ipv6-address*)

**Tree** [local-address](#)

**Configurable** True

## local-discriminator *number*

**Description** The local discriminator to be used for the associated BFD session

**Context** [network-instance name](#) *string* [next-hop-groups group name](#) *string* [nexthop index](#) *number* [failure-detection enable-bfd local-discriminator](#) *number*

**Tree** [local-discriminator](#)

**Range** 1 to 16384

**Configurable** True

**remote-discriminator *number***

<b>Description</b>	The remote discriminator to be used for the associated BFD session
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">next-hop-groups group name</a> <i>string</i> <a href="#">nexthop index</a> <i>number</i> <a href="#">failure-detection enable-bfd remote-discriminator</a> <i>number</i>
<b>Tree</b>	<a href="#">remote-discriminator</a>
<b>Range</b>	1 to 16384
<b>Configurable</b>	True

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

<b>Description</b>	The next-hop IPv4 or IPv6 address
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">next-hop-groups group name</a> <i>string</i> <a href="#">nexthop index</a> <i>number</i> <a href="#">ip-address</a> ( <i>ipv4-address</i>   <i>ipv6-address</i> )
<b>Tree</b>	<a href="#">ip-address</a>
<b>Configurable</b>	True

**pushed-mpls-label-stack (*number* | *keyword*)****Note:**

This command is available for the following platforms:

- 7250 IXR-6
- 7250 IXR-10

<b>Description</b>	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.
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">next-hop-groups group name</a> <i>string</i> <a href="#">nexthop index</a> <i>number</i> <a href="#">pushed-mpls-label-stack</a> ( <i>number</i>   <i>keyword</i> )
<b>Tree</b>	<a href="#">pushed-mpls-label-stack</a>
<b>Range</b>	16 to 1048575
<b>Options</b>	<ul style="list-style-type: none"> <li>• IPV4_EXPLICIT_NULL</li> <li>• IPV6_EXPLICIT_NULL</li> <li>• IMPLICIT_NULL</li> </ul>
<b>Configurable</b>	True
<b>Max. Elements</b>	1

**resolve *boolean***

<b>Description</b>	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.
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">next-hop-groups group name</a> <i>string</i> <a href="#">nexthop index number</a> <a href="#">resolve</a> <i>boolean</i>
<b>Tree</b>	<a href="#">resolve</a>
<b>Default</b>	true
<b>Configurable</b>	True

**oper-mac-vrf-mtu *number***

<b>Description</b>	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). 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. The oper-mac-vrf-mtu is only available in mac-vrf network-instances.
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">oper-mac-vrf-mtu</a> <i>number</i>
<b>Tree</b>	<a href="#">oper-mac-vrf-mtu</a>
<b>Range</b>	1492 to 9500
<b>Units</b>	bytes
<b>Configurable</b>	False

**oper-state *keyword***

<b>Description</b>	This leaf contains the operational state of the network instance.
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">oper-state</a> <i>keyword</i>
<b>Tree</b>	<a href="#">oper-state</a>
<b>Options</b>	<ul style="list-style-type: none"> <li>• up Component or process is operational</li> <li>• down Component or process is not operational</li> <li>• empty Component slot is empty</li> </ul>



- 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  
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.

**Configurable** False

## 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

## interface [subinterface](#) *reference*

**Description** List of subinterfaces that use the policy forwarding policy.

**Context** [network-instance name](#) *string* [policy-forwarding](#) [interface subinterface](#) *reference*

**Tree** [interface](#)

<b>Configurable</b>	True
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### subinterface *reference*

<b>Description</b>	A subinterface of the network-instance
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">policy-forwarding interface subinterface reference</a>
<b>Reference</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">interface name</a> <i>string</i>
<b>Configurable</b>	True

### apply-forwarding-policy *reference*

<b>Description</b>	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.
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">policy-forwarding interface subinterface reference</a> <a href="#">apply-forwarding-policy reference</a>
<b>Tree</b>	<a href="#">apply-forwarding-policy</a>
<b>Reference</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">policy-forwarding policy</a> <a href="#">policy-id</a> <i>string</i>
<b>Configurable</b>	True

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

<b>Description</b>	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.
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">policy-forwarding policy</a> <a href="#">policy-id</a> <i>string</i>
<b>Tree</b>	<a href="#">policy</a>
<b>Configurable</b>	True
<b>Max. Elements</b>	4

### policy-id *string*

<b>Description</b>	A unique name identifying the forwarding policy. This name is used when applying the policy to a particular interface.
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">policy-forwarding policy</a> <a href="#">policy-id</a> <i>string</i>
<b>String Length</b>	1 to 255

**Configurable** True

### **description *string***

**Description** Description string for the policy

**Context** [network-instance name](#) *string* [policy-forwarding policy](#) [policy-id](#) *string* [description](#) *string*

**Tree** [description](#)

**String Length** 1 to 255

**Configurable** True

### **last-clear *string***

**Description** Time of the last clear command performed by the user at this level

**Context** [network-instance name](#) *string* [policy-forwarding policy](#) [policy-id](#) *string* [last-clear](#) *string*

**Tree** [last-clear](#)

**String Length** 20 to 32

**Configurable** False

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

**Description** List of policy forwarding rules.

**Context** [network-instance name](#) *string* [policy-forwarding policy](#) [policy-id](#) *string* [rule](#) [sequence-id](#) *number*

**Tree** [rule](#)

**Configurable** True

### **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](#) *string* [policy-forwarding policy](#) [policy-id](#) *string* [rule](#) [sequence-id](#) *number*

**Range** 1 to 128

**Configurable** True

**action**

<b>Description</b>	Container for the actions to be applied to packets matching the policy forwarding rule.
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">policy-forwarding policy</a> <a href="#">policy-id</a> <i>string</i> <a href="#">rule sequence-id</a> <i>number</i> <a href="#">action</a>
<b>Tree</b>	<a href="#">action</a>
<b>Configurable</b>	True

**network-instance *reference***

<b>Description</b>	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.
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">policy-forwarding policy</a> <a href="#">policy-id</a> <i>string</i> <a href="#">rule sequence-id</a> <i>number</i> <a href="#">action</a> <a href="#">network-instance</a> <i>reference</i>
<b>Tree</b>	<a href="#">network-instance</a>
<b>Reference</b>	<a href="#">network-instance name</a> <i>string</i>
<b>Configurable</b>	True

**description *string***

<b>Description</b>	Description string for the rule
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">policy-forwarding policy</a> <a href="#">policy-id</a> <i>string</i> <a href="#">rule sequence-id</a> <i>number</i> <a href="#">description</a> <i>string</i>
<b>Tree</b>	<a href="#">description</a>
<b>String Length</b>	1 to 255
<b>Configurable</b>	True

**match**

<b>Description</b>	Container for the conditions that determine whether a packet matches this entry
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">policy-forwarding policy</a> <a href="#">policy-id</a> <i>string</i> <a href="#">rule sequence-id</a> <i>number</i> <a href="#">match</a>
<b>Tree</b>	<a href="#">match</a>
<b>Configurable</b>	True

**ipv4**

<b>Description</b>	Container for match conditions associated with IPv4 header fields If no match conditions are provided then all IPv4 packets are matched.
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">policy-forwarding policy</a> <a href="#">policy-id</a> <i>string</i> <a href="#">rule sequence-id</a> <i>number</i> <a href="#">match ipv4</a>
<b>Tree</b>	<a href="#">ipv4</a>
<b>Configurable</b>	True

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

<b>Description</b>	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.
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">policy-forwarding policy</a> <a href="#">policy-id</a> <i>string</i> <a href="#">rule sequence-id</a> <i>number</i> <a href="#">match ipv4 dscp-set</a> ( <i>number</i>   <i>keyword</i> )
<b>Tree</b>	<a href="#">dscp-set</a>
<b>Range</b>	0 to 63
<b>Options</b>	<ul style="list-style-type: none"> <li>• CS0</li> <li>• LE</li> <li>• CS1</li> <li>• AF11</li> <li>• AF12</li> <li>• AF13</li> <li>• CS2</li> <li>• AF21</li> <li>• AF22</li> <li>• AF23</li> <li>• CS3</li> <li>• AF31</li> <li>• AF32</li> <li>• AF33</li> <li>• CS4</li> <li>• AF41</li> <li>• AF42</li> <li>• AF43</li> <li>• CS5</li> <li>• EF</li> </ul>

	<ul style="list-style-type: none"> <li>• CS6</li> <li>• CS7</li> </ul>
<b>Configurable</b>	True

### protocol (*number* | *keyword*)

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

- 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
- 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

### **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](#) [number](#)

**Tree** [tcam-entries](#)

**Configurable** False

## protocols

<b>Description</b>	The routing protocols that are enabled for this network-instance.
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">protocols</a>
<b>Tree</b>	<a href="#">protocols</a>
<b>Configurable</b>	True

## bgp

<b>Description</b>	Enable the bgp context
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">protocols</a> <a href="#">bgp</a>
<b>Tree</b>	<a href="#">bgp</a>
<b>Configurable</b>	True

## admin-state *keyword*

<b>Description</b>	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.
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">protocols</a> <a href="#">bgp</a> <a href="#">admin-state</a> <i>keyword</i>
<b>Tree</b>	<a href="#">admin-state</a>
<b>Default</b>	enable
<b>Options</b>	<ul style="list-style-type: none"> <li>• enable</li> <li>• disable</li> </ul>
<b>Configurable</b>	True

## as-path-options

<b>Description</b>	Options for handling the AS_PATH in received BGP routes
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">protocols</a> <a href="#">bgp</a> <a href="#">as-path-options</a>
<b>Tree</b>	<a href="#">as-path-options</a>
<b>Configurable</b>	True



### **allow-own-as *number***

<b>Description</b>	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
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">protocols bgp as-path-options allow-own-as number</a>
<b>Tree</b>	<a href="#">allow-own-as</a>
<b>Default</b>	0
<b>Configurable</b>	True

### **remove-private-as**

<b>Description</b>	Container with options for removing private AS numbers (2-byte and 4-byte) from the advertised AS path towards all peers
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">protocols bgp as-path-options remove-private-as</a>
<b>Tree</b>	<a href="#">remove-private-as</a>
<b>Configurable</b>	True

### **ignore-peer-as *boolean***

<b>Description</b>	If set to true then do not delete or replace a private AS number that is the same as the peer AS number
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">protocols bgp as-path-options remove-private-as ignore-peer-as</a> <i>boolean</i>
<b>Tree</b>	<a href="#">ignore-peer-as</a>
<b>Default</b>	false
<b>Configurable</b>	True

### **leading-only *boolean***

<b>Description</b>	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
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">protocols bgp as-path-options remove-private-as leading-only</a> <i>boolean</i>
<b>Tree</b>	<a href="#">leading-only</a>
<b>Default</b>	false
<b>Configurable</b>	True

**mode keyword**

<b>Description</b>	The method by which private AS numbers are removed from the advertised AS_PATH attribute
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">protocols bgp as-path-options remove-private-as mode keyword</a>
<b>Tree</b>	<a href="#">mode</a>
<b>Default</b>	disabled
<b>Options</b>	<ul style="list-style-type: none"> <li>disabled Do not strip or replace any private AS numbers</li> <li>delete Delete private AS numbers, shortening the AS path</li> <li>replace Replace private AS numbers with the local AS number used towards the peer, maintaining the AS path length</li> </ul>
<b>Configurable</b>	True

**authentication**

<b>Description</b>	Container with authentication options that apply to all peers of the BGP instance
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">protocols bgp authentication</a>
<b>Tree</b>	<a href="#">authentication</a>
<b>Configurable</b>	True

**keychain reference**

<b>Description</b>	Reference to a keychain. The keychain type must be tcp-md5.
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">protocols bgp authentication keychain reference</a>
<b>Tree</b>	<a href="#">keychain</a>
<b>Reference</b>	<a href="#">system authentication keychain name</a> <i>string</i> <a href="#">name</a> <i>string</i> <a href="#">string</a> <i>string</i>
<b>Configurable</b>	True

**autonomous-system number**

<b>Description</b>	The global AS number of the BGP instance
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Values greater than 65535 must be entered in ASPLAIN format.

<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">protocols bgp autonomous-system</a> <i>number</i>
<b>Tree</b>	<a href="#">autonomous-system</a>
<b>Range</b>	1 to 4294967295
<b>Configurable</b>	True

## convergence

<b>Description</b>	Options for configuring address family independent BGP convergence parameters
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">protocols bgp convergence</a>
<b>Tree</b>	<a href="#">convergence</a>
<b>Configurable</b>	True

## min-wait-to-advertise *number*

<b>Description</b>	<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> <p>This timer and associated state machine are only restarted by one of the following triggers:</p> <p>['BGP instance admin disable/enable', 'tools clear network-instance protocols bgp reset-peer', 'bgp application restart', 'node reboot']</p>
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">protocols bgp convergence min-wait-to-advertise</a> <i>number</i>
<b>Tree</b>	<a href="#">min-wait-to-advertise</a>
<b>Range</b>	0 to 3600
<b>Default</b>	0
<b>Configurable</b>	True

## dynamic-neighbors

<b>Description</b>	Options related to the acceptance and initiation of dynamic BGP sessions
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">protocols bgp dynamic-neighbors</a>
<b>Tree</b>	<a href="#">dynamic-neighbors</a>

**Configurable** True

## accept

**Description** Options related to the acceptance of dynamic BGP sessions from remote peers

**Context** [network-instance name](#) *string* [protocols bgp dynamic-neighbors accept](#)

**Tree** [accept](#)

**Configurable** True

## match [prefix \(ipv4-prefix | ipv6-prefix\)](#)

**Description** List of prefix and group-id combinations from which incoming TCP connections to port 179 will be accepted

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.

**Context** [network-instance name](#) *string* [protocols bgp dynamic-neighbors accept match prefix \(ipv4-prefix | ipv6-prefix\)](#)

**Tree** [match](#)

**Configurable** True

## prefix [\(ipv4-prefix | ipv6-prefix\)](#)

**Description** The IP prefix used to match an incoming dynamic BGP session to a group.

**Context** [network-instance name](#) *string* [protocols bgp dynamic-neighbors accept match prefix \(ipv4-prefix | ipv6-prefix\)](#)

**Configurable** True

## allowed-peer-as *string*

**Description** The allowed AS numbers that can establish incoming BGP sessions from this prefix and group-id-range combination

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

**Context** [network-instance name](#) *string* [protocols bgp dynamic-neighbors accept match prefix \(ipv4-prefix | ipv6-prefix\) allowed-peer-as string](#)

<b>Tree</b>	<a href="#">allowed-peer-as</a>
<b>Configurable</b>	True
<b>Max. Elements</b>	32

### peer-group *reference*

<b>Description</b>	Reference to a peer-group  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.
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">protocols bgp dynamic-neighbors accept match prefix</a> ( <i>ipv4-prefix   ipv6-prefix</i> ) <a href="#">peer-group reference</a>
<b>Tree</b>	<a href="#">peer-group</a>
<b>Reference</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">protocols bgp group group-name</a> <i>string</i>
<b>Configurable</b>	True

### max-sessions *number*

<b>Description</b>	The maximum number of incoming BGP sessions that will be accepted by the router  A value of 0 means no limit.
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">protocols bgp dynamic-neighbors accept max-sessions</a> <i>number</i>
<b>Tree</b>	<a href="#">max-sessions</a>
<b>Default</b>	0
<b>Configurable</b>	True

### ebgp-default-policy

<b>Description</b>	Options for controlling the default policies that apply to EBGp sessions
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">protocols bgp ebgp-default-policy</a>
<b>Tree</b>	<a href="#">ebgp-default-policy</a>
<b>Configurable</b>	True

**export-reject-all *boolean***

<b>Description</b>	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
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">protocols bgp ebgp-default-policy export-reject-all</a> <i>boolean</i>
<b>Tree</b>	<a href="#">export-reject-all</a>
<b>Default</b>	true
<b>Configurable</b>	True

**import-reject-all *boolean***

<b>Description</b>	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
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">protocols bgp ebgp-default-policy import-reject-all</a> <i>boolean</i>
<b>Tree</b>	<a href="#">import-reject-all</a>
<b>Default</b>	true
<b>Configurable</b>	True

**evpn**

<b>Description</b>	Options related to the EVPN address family
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">protocols bgp evpn</a>
<b>Tree</b>	<a href="#">evpn</a>
<b>Configurable</b>	True

**active-routes *number***

<b>Description</b>	The total number of received EVPN routes that are currently installed in a mac-vrf and used for forwarding
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">protocols bgp evpn active-routes</a> <i>number</i>
<b>Tree</b>	<a href="#">active-routes</a>
<b>Default</b>	0
<b>Configurable</b>	False

**admin-state *keyword***

<b>Description</b>	Administratively enable or disable the EVPN address family on all sessions
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">protocols bgp evpn admin-state keyword</a>
<b>Tree</b>	<a href="#">admin-state</a>
<b>Default</b>	disable
<b>Options</b>	<ul style="list-style-type: none"> <li>• enable</li> <li>• disable</li> </ul>
<b>Configurable</b>	True

**advertise-ipv6-next-hops *boolean***

<b>Description</b>	<p>Enables advertisement of EVPN routes with IPv6 next-hops to peers</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 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.</p>
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">protocols bgp evpn advertise-ipv6-next-hops boolean</a>
<b>Tree</b>	<a href="#">advertise-ipv6-next-hops</a>
<b>Default</b>	false
<b>Configurable</b>	True

**inter-as-vpn *boolean***

<b>Description</b>	<p>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.</p> <p>This command supersedes the effect of keep-all-routes.</p>
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">protocols bgp evpn inter-as-vpn boolean</a>
<b>Tree</b>	<a href="#">inter-as-vpn</a>
<b>Default</b>	false
<b>Configurable</b>	True

**keep-all-routes *boolean***

<b>Description</b>	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.
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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.

<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">protocols bgp evpn keep-all-routes</a> <i>boolean</i>
<b>Tree</b>	<a href="#">keep-all-routes</a>
<b>Default</b>	false
<b>Configurable</b>	True

### **rapid-update** *boolean*

<b>Description</b>	When this is set to true, EVPN UPDATEs advertising reachability and withdrawals are advertised immediately, bypassing the session level min-route-advertisement-interval. When this is false, reachability updates and withdrawals are subject to the MRAI interval.
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">protocols bgp evpn rapid-update</a> <i>boolean</i>
<b>Tree</b>	<a href="#">rapid-update</a>
<b>Default</b>	false
<b>Configurable</b>	True

### **received-routes** *number*

<b>Description</b>	The total number of EVPN routes received from all peers of the BGP instance
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">protocols bgp evpn received-routes</a> <i>number</i>
<b>Tree</b>	<a href="#">received-routes</a>
<b>Default</b>	0
<b>Configurable</b>	False

### **export-policy** *reference*

<b>Description</b>	Apply an export policy to advertised BGP routes
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">protocols bgp export-policy</a> <i>reference</i>
<b>Tree</b>	<a href="#">export-policy</a>
<b>Reference</b>	<a href="#">routing-policy policy name</a> <i>string</i> <i>string</i>
<b>Configurable</b>	True



## failure-detection

<b>Description</b>	Options related to methods of detecting BGP session failure
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">protocols bgp failure-detection</a>
<b>Tree</b>	<a href="#">failure-detection</a>
<b>Configurable</b>	True

## enable-bfd *boolean*

<b>Description</b>	The true setting enables Bi-directional Forwarding Detection on BGP sessions belonging to the peer group
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">protocols bgp failure-detection enable-bfd</a> <i>boolean</i>
<b>Tree</b>	<a href="#">enable-bfd</a>
<b>Default</b>	false
<b>Configurable</b>	True

## fast-failover *boolean*

<b>Description</b>	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
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">protocols bgp failure-detection fast-failover</a> <i>boolean</i>
<b>Tree</b>	<a href="#">fast-failover</a>
<b>Default</b>	true
<b>Configurable</b>	True

## graceful-restart

<b>Description</b>	Options for controlling the behavior of the router as a graceful restart helper
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">protocols bgp graceful-restart</a>
<b>Tree</b>	<a href="#">graceful-restart</a>
<b>Configurable</b>	True

## admin-state *keyword*

<b>Description</b>	Administratively enable or disable graceful restart helper for all address families
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<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">protocols bgp graceful-restart admin-state</a> <i>keyword</i>
<b>Tree</b>	<a href="#">admin-state</a>
<b>Default</b>	disable
<b>Options</b>	<ul style="list-style-type: none"> <li>• enable</li> <li>• disable</li> </ul>
<b>Configurable</b>	True

### stale-routes-time *number*

<b>Description</b>	<p>The maximum number of seconds that routes received from a helped peer 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>
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">protocols bgp graceful-restart stale-routes-time</a> <i>number</i>
<b>Tree</b>	<a href="#">stale-routes-time</a>
<b>Range</b>	1 to 3600
<b>Default</b>	360
<b>Units</b>	seconds
<b>Configurable</b>	True

### group [group-name](#) *string*

<b>Description</b>	Peer group templates
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">protocols bgp group group-name</a> <i>string</i>
<b>Tree</b>	<a href="#">group</a>
<b>Configurable</b>	True

### group-name *string*

<b>Description</b>	The configured name of the peer group
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">protocols bgp group group-name</a> <i>string</i>
<b>String Length</b>	1 to 64
<b>Configurable</b>	True

**admin-state *keyword***

<b>Description</b>	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.
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">protocols bgp group group-name</a> <i>string</i> <a href="#">admin-state</a> <i>keyword</i>
<b>Tree</b>	<a href="#">admin-state</a>
<b>Default</b>	enable
<b>Options</b>	<ul style="list-style-type: none"> <li>• enable</li> <li>• disable</li> </ul>
<b>Configurable</b>	True

**as-path-options**

<b>Description</b>	Options for handling the AS_PATH in received BGP routes
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">protocols bgp group group-name</a> <i>string</i> <a href="#">as-path-options</a>
<b>Tree</b>	<a href="#">as-path-options</a>
<b>Configurable</b>	True

**allow-own-as *number***

<b>Description</b>	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.
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">protocols bgp group group-name</a> <i>string</i> <a href="#">as-path-options allow-own-as</a> <i>number</i>
<b>Tree</b>	<a href="#">allow-own-as</a>
<b>Configurable</b>	True

**remove-private-as**

<b>Description</b>	Container with options for removing private AS numbers (2-byte and 4-byte) from the advertised AS path towards all peers
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">protocols bgp group group-name</a> <i>string</i> <a href="#">as-path-options remove-private-as</a>

<b>Tree</b>	<a href="#">remove-private-as</a>
<b>Configurable</b>	True

### **ignore-peer-as *boolean***

<b>Description</b>	If set to true then do not delete or replace a private AS number that is the same as the peer AS number
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">protocols bgp group group-name</a> <i>string</i> <a href="#">as-path-options remove-private-as ignore-peer-as</a> <i>boolean</i>
<b>Tree</b>	<a href="#">ignore-peer-as</a>
<b>Default</b>	false
<b>Configurable</b>	True

### **leading-only *boolean***

<b>Description</b>	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
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">protocols bgp group group-name</a> <i>string</i> <a href="#">as-path-options remove-private-as leading-only</a> <i>boolean</i>
<b>Tree</b>	<a href="#">leading-only</a>
<b>Default</b>	false
<b>Configurable</b>	True

### **mode *keyword***

<b>Description</b>	The method by which private AS numbers are removed from the advertised AS_PATH attribute
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">protocols bgp group group-name</a> <i>string</i> <a href="#">as-path-options remove-private-as mode</a> <i>keyword</i>
<b>Tree</b>	<a href="#">mode</a>
<b>Options</b>	<ul style="list-style-type: none"> <li>• disabled Do not strip or replace any private AS numbers</li> <li>• delete Delete private AS numbers, shortening the AS path</li> <li>• replace Replace private AS numbers with the local AS number used towards the peer, maintaining the AS path length</li> </ul>

**Configurable** True

### 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

### 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

### 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 name string string](#)

**Configurable** True

### description *string*

**Description** A user provided description string for the peer group

**Context** [network-instance name string protocols bgp group group-name string description string](#)

**Tree** [description](#)

**String Length** 1 to 255

**Configurable** True

**evpn**

<b>Description</b>	Options related to the EVPN address family
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">protocols bgp group group-name</a> <i>string</i> <a href="#">evpn</a>
<b>Tree</b>	<a href="#">evpn</a>
<b>Configurable</b>	True

**admin-state *keyword***

<b>Description</b>	Administratively enable or disable the EVPN address family on the BGP sessions of the peer-group
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">protocols bgp group group-name</a> <i>string</i> <a href="#">evpn admin-state</a> <i>keyword</i>
<b>Tree</b>	<a href="#">admin-state</a>
<b>Options</b>	<ul style="list-style-type: none"> <li>• enable</li> <li>• disable</li> </ul>
<b>Configurable</b>	True

**advertise-ipv6-next-hops *boolean***

<b>Description</b>	<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 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.</p>
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">protocols bgp group group-name</a> <i>string</i> <a href="#">evpn advertise-ipv6-next-hops</a> <i>boolean</i>
<b>Tree</b>	<a href="#">advertise-ipv6-next-hops</a>
<b>Configurable</b>	True

**prefix-limit**

<b>Description</b>	Options for configuring the maximum number of EVPN routes allowed to be received from each peer in the peer-group
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">protocols bgp group group-name</a> <i>string</i> <a href="#">evpn prefix-limit</a>
<b>Tree</b>	<a href="#">prefix-limit</a>

**Configurable** True

### 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](#) *string* [protocols bgp group group-name](#) *string* [evpn prefix-limit max-received-routes](#) *number*

**Tree** [max-received-routes](#)

**Range** 1 to 4294967295

**Default** 4294967295

**Configurable** True

### 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](#) *string* [protocols bgp group group-name](#) *string* [evpn prefix-limit warning-threshold-pct](#) *number*

**Tree** [warning-threshold-pct](#)

**Range** 0 to 100

**Default** 90

**Configurable** True

### export-policy *reference*

**Description** Apply an export policy to advertised BGP routes

**Context** [network-instance name](#) *string* [protocols bgp group group-name](#) *string* [export-policy](#) *reference*

**Tree** [export-policy](#)

**Reference** [routing-policy](#) [policy name](#) *string* *string*

**Configurable** True

### failure-detection

**Description** Options related to methods of detecting BGP session failure

<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">protocols bgp group group-name</a> <i>string</i> <a href="#">failure-detection</a>
<b>Tree</b>	<a href="#">failure-detection</a>
<b>Configurable</b>	True

**enable-bfd *boolean***

<b>Description</b>	The true setting enables Bi-directional Forwarding Detection on BGP sessions belonging to the peer group
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">protocols bgp group group-name</a> <i>string</i> <a href="#">failure-detection enable-bfd</a> <i>boolean</i>
<b>Tree</b>	<a href="#">enable-bfd</a>
<b>Configurable</b>	True

**fast-failover *boolean***

<b>Description</b>	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
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">protocols bgp group group-name</a> <i>string</i> <a href="#">failure-detection fast-failover</a> <i>boolean</i>
<b>Tree</b>	<a href="#">fast-failover</a>
<b>Configurable</b>	True

**graceful-restart**

<b>Description</b>	Options related to router behavior as a graceful restart helper
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">protocols bgp group group-name</a> <i>string</i> <a href="#">graceful-restart</a>
<b>Tree</b>	<a href="#">graceful-restart</a>
<b>Configurable</b>	True

**admin-state *keyword***

<b>Description</b>	Administratively enable or disable graceful restart helper for all address families
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">protocols bgp group group-name</a> <i>string</i> <a href="#">graceful-restart admin-state</a> <i>keyword</i>
<b>Tree</b>	<a href="#">admin-state</a>



<b>Options</b>	<ul style="list-style-type: none"> <li>• enable</li> <li>• disable</li> </ul>
<b>Configurable</b>	True

### stale-routes-time *number*

<b>Description</b>	<p>The maximum number of seconds that routes received from a helped peer 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>
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">protocols bgp group group-name</a> <i>string</i> <a href="#">graceful-restart stale-routes-time</a> <i>number</i>
<b>Tree</b>	<a href="#">stale-routes-time</a>
<b>Range</b>	1 to 3600
<b>Units</b>	seconds
<b>Configurable</b>	True

### import-policy *reference*

<b>Description</b>	Apply an import policy to received BGP routes
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">protocols bgp group group-name</a> <i>string</i> <a href="#">import-policy</a> <i>reference</i>
<b>Tree</b>	<a href="#">import-policy</a>
<b>Reference</b>	<a href="#">routing-policy</a> <i>policy name</i> <i>string</i> <i>string</i>
<b>Configurable</b>	True

### ipv4-unicast

<b>Description</b>	Options related to the IPv4-unicast address family
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">protocols bgp group group-name</a> <i>string</i> <a href="#">ipv4-unicast</a>
<b>Tree</b>	<a href="#">ipv4-unicast</a>
<b>Configurable</b>	True

**admin-state *keyword***

<b>Description</b>	Administratively enable or disable the IPv4 unicast address family on all sessions belonging to the group
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">protocols bgp group group-name</a> <i>string</i> <a href="#">ipv4-unicast admin-state</a> <i>keyword</i>
<b>Tree</b>	<a href="#">admin-state</a>
<b>Options</b>	<ul style="list-style-type: none"> <li>• enable</li> <li>• disable</li> </ul>
<b>Configurable</b>	True

**advertise-ipv6-next-hops *boolean***

<b>Description</b>	<p>Enables advertisement of IPv4 routes with IPv6 next-hops to peers in the group</p> <p>When set to true, BGP advertises IPv4-unicast routes to its peers using MP-BGP. If the local-address towards a peer is an IPv6 address and BGP is supposed to apply next-hop-self the MP_REACH_NLRI will encode the IPv6 local-address as the BGP next-hop. When set to false, BGP is required to advertise an IPv4 next-hop with every IPv4 route (and to encode that in the NEXT_HOP attribute).</p>
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">protocols bgp group group-name</a> <i>string</i> <a href="#">ipv4-unicast advertise-ipv6-next-hops</a> <i>boolean</i>
<b>Tree</b>	<a href="#">advertise-ipv6-next-hops</a>
<b>Configurable</b>	True

**prefix-limit**

<b>Description</b>	Options for configuring the maximum number of IPv4 routes allowed to be received from each peer in the group
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">protocols bgp group group-name</a> <i>string</i> <a href="#">ipv4-unicast prefix-limit</a>
<b>Tree</b>	<a href="#">prefix-limit</a>
<b>Configurable</b>	True

**max-received-routes *number***

<b>Description</b>	Maximum number of IPv4 routes that will be accepted from each neighbor, counting routes accepted and rejected by import policies
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<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">protocols bgp group group-name</a> <i>string</i> <a href="#">ipv4-unicast prefix-limit max-received-routes</a> <i>number</i>
<b>Tree</b>	<a href="#">max-received-routes</a>
<b>Range</b>	1 to 4294967295
<b>Default</b>	4294967295
<b>Configurable</b>	True

### warning-threshold-pct *number*

<b>Description</b>	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
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">protocols bgp group group-name</a> <i>string</i> <a href="#">ipv4-unicast prefix-limit warning-threshold-pct</a> <i>number</i>
<b>Tree</b>	<a href="#">warning-threshold-pct</a>
<b>Range</b>	0 to 100
<b>Default</b>	90
<b>Configurable</b>	True

### receive-ipv6-next-hops *boolean*

<b>Description</b>	Enables the advertisement of the RFC 5549 capability to receive IPv4 routes with IPv6 next-hops  When set to true, BGP advertises an extended NH encoding (RFC 5549) capability to its peers. This capability indicates that local router is prepared to accept BGP routes for IPv4 NLRI with IPv6 next-hops from peers in the scope of the command. When set to false, BGP handles received IPV4 routes with IPv6 next-hops as an error and applies treat-as-withdraw.
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">protocols bgp group group-name</a> <i>string</i> <a href="#">ipv4-unicast receive-ipv6-next-hops</a> <i>boolean</i>
<b>Tree</b>	<a href="#">receive-ipv6-next-hops</a>
<b>Configurable</b>	True

### ipv6-unicast

<b>Description</b>	Options related to the IPv6-unicast address family
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">protocols bgp group group-name</a> <i>string</i> <a href="#">ipv6-unicast</a>
<b>Tree</b>	<a href="#">ipv6-unicast</a>

**Configurable** True

### admin-state *keyword*

**Description** Administratively enable or disable the IPv6 unicast address family on all sessions belonging to the group

**Context** [network-instance name](#) *string* [protocols bgp group group-name](#) *string* [ipv6-unicast admin-state](#) *keyword*

**Tree** [admin-state](#)

**Options**

- enable
- disable

**Configurable** True

### prefix-limit

**Description** Options for configuring the maximum number of IPv6 routes allowed to be received from each peer in the group

**Context** [network-instance name](#) *string* [protocols bgp group group-name](#) *string* [ipv6-unicast prefix-limit](#)

**Tree** [prefix-limit](#)

**Configurable** True

### 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](#) *string* [protocols bgp group group-name](#) *string* [ipv6-unicast prefix-limit max-received-routes](#) *number*

**Tree** [max-received-routes](#)

**Range** 1 to 4294967295

**Default** 4294967295

**Configurable** True

### 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

<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">protocols bgp group group-name</a> <i>string</i> <a href="#">ipv6-unicast prefix-limit warning-threshold-pct</a> <i>number</i>
<b>Tree</b>	<a href="#">warning-threshold-pct</a>
<b>Range</b>	0 to 100
<b>Default</b>	90
<b>Configurable</b>	True

### **local-as** [as-number](#) *number*

<b>Description</b>	Options related to the local autonomous-system number advertised by this router to its peers
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">protocols bgp group group-name</a> <i>string</i> <a href="#">local-as as-number</a> <i>number</i>
<b>Tree</b>	<a href="#">local-as</a>
<b>Configurable</b>	True
<b>Max. Elements</b>	1

### **as-number** *number*

<b>Description</b>	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.
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">protocols bgp group group-name</a> <i>string</i> <a href="#">local-as as-number</a> <i>number</i>
<b>Range</b>	1 to 4294967295
<b>Configurable</b>	True

### **prepend-global-as** *boolean*

<b>Description</b>	When set to true, the global ASN value is prepended to the AS path in outbound routes towards each BGP peer in the group  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.
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">protocols bgp group group-name</a> <i>string</i> <a href="#">local-as as-number</a> <i>number</i> <a href="#">prepend-global-as</a> <i>boolean</i>
<b>Tree</b>	<a href="#">prepend-global-as</a>
<b>Default</b>	true

**Configurable** True

### 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 string protocols bgp group group-name string local-as as-number number prepend-local-as boolean](#)

**Tree** [prepend-local-as](#)

**Default** true

**Configurable** True

### 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 string protocols bgp group group-name string local-preference number](#)

**Tree** [local-preference](#)

**Configurable** True

### maintenance-group *string*

**Description** State field to display the maintenance group to which this group belongs to.

**Context** [network-instance name string protocols bgp group group-name string maintenance-group string](#)

**Tree** [maintenance-group](#)

**Configurable** False

### multihop

**Description** Configuration parameters specifying the multihop behaviour for EBGP peers in the peer group.

**Context** [network-instance name string protocols bgp group group-name string multihop](#)

**Tree** [multihop](#)

**Configurable** True

### **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

### **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 string protocols bgp group group-name string multihop maximum-hops number](#)

**Tree** [maximum-hops](#)

**Range** 1 to 255

**Configurable** True

### **next-hop-self *boolean***

**Description** When set to true, the next-hop in all IPv4-unicast, IPv6-unicast and EVPN 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.

<b>Context</b>	<code>network-instance name string protocols bgp group group-name string next-hop-self boolean</code>
<b>Tree</b>	<code>next-hop-self</code>
<b>Default</b>	false
<b>Configurable</b>	True

### **peer-as *number***

<b>Description</b>	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.
<b>Context</b>	<code>network-instance name string protocols bgp group group-name string peer-as number</code>
<b>Tree</b>	<code>peer-as</code>
<b>Range</b>	1 to 4294967295
<b>Configurable</b>	True

### **route-reflector**

<b>Description</b>	Container with route reflection configuration options.
<b>Context</b>	<code>network-instance name string protocols bgp group group-name string route-reflector</code>
<b>Tree</b>	<code>route-reflector</code>
<b>Configurable</b>	True

### **client *boolean***

<b>Description</b>	When this is set to true all configured and dynamic BGP sessions that belong to the peer-group are considered RR clients.
<b>Context</b>	<code>network-instance name string protocols bgp group group-name string route-reflector client boolean</code>
<b>Tree</b>	<code>client</code>
<b>Configurable</b>	True



**cluster-id *string***

<b>Description</b>	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.
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">protocols bgp group group-name</a> <i>string</i> <a href="#">route-reflector cluster-id</a> <i>string</i>
<b>Tree</b>	<a href="#">cluster-id</a>
<b>Configurable</b>	True

**send-community**

<b>Description</b>	Options for controlling the sending of BGP communities to peers in the group
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">protocols bgp group group-name</a> <i>string</i> <a href="#">send-community</a>
<b>Tree</b>	<a href="#">send-community</a>
<b>Configurable</b>	True

**large *boolean***

<b>Description</b>	The false setting causes BGP to strip all large (12 byte) BGP communities from all outbound routes advertised to each peer in the group
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">protocols bgp group group-name</a> <i>string</i> <a href="#">send-community large</a> <i>boolean</i>
<b>Tree</b>	<a href="#">large</a>
<b>Configurable</b>	True

**standard *boolean***

<b>Description</b>	The false setting causes BGP to strip all standard (4 byte) communities from all outbound routes advertised to each peer in the group
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">protocols bgp group group-name</a> <i>string</i> <a href="#">send-community standard</a> <i>boolean</i>
<b>Tree</b>	<a href="#">standard</a>
<b>Configurable</b>	True

**send-default-route**

<b>Description</b>	Options for controlling the generation of default routes towards group peers
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<b>Context</b>	<code>network-instance name string protocols bgp group group-name string send-default-route</code>
<b>Tree</b>	<code>send-default-route</code>
<b>Configurable</b>	True

### **export-policy *reference***

<b>Description</b>	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.
<b>Context</b>	<code>network-instance name string protocols bgp group group-name string send-default-route export-policy reference</code>
<b>Tree</b>	<code>export-policy</code>
<b>Reference</b>	<code>routing-policy policy name string string</code>
<b>Configurable</b>	True

### **ipv4-unicast *boolean***

<b>Description</b>	Enables the sending of a synthetically generated default IPv4 route [0/0] to each peer in the group
<b>Context</b>	<code>network-instance name string protocols bgp group group-name string send-default-route ipv4-unicast boolean</code>
<b>Tree</b>	<code>ipv4-unicast</code>
<b>Default</b>	false
<b>Configurable</b>	True

### **ipv6-unicast *boolean***

<b>Description</b>	Enables the sending of a synthetically generated default IPv6 route [::0] to each peer in the group
<b>Context</b>	<code>network-instance name string protocols bgp group group-name string send-default-route ipv6-unicast boolean</code>
<b>Tree</b>	<code>ipv6-unicast</code>
<b>Default</b>	false
<b>Configurable</b>	True

**statistics**

<b>Description</b>	Container for BGP statistics.
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">protocols bgp group group-name</a> <i>string</i> <a href="#">statistics</a>
<b>Tree</b>	<a href="#">statistics</a>
<b>Configurable</b>	False

**disabled-peers number**

<b>Description</b>	The number of configured BGP peers associated with the peer-group that are administratively disabled
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">protocols bgp group group-name</a> <i>string</i> <a href="#">statistics disabled-peers</a> <i>number</i>
<b>Tree</b>	<a href="#">disabled-peers</a>
<b>Configurable</b>	False

**dynamic-peers number**

<b>Description</b>	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
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">protocols bgp group group-name</a> <i>string</i> <a href="#">statistics dynamic-peers</a> <i>number</i>
<b>Tree</b>	<a href="#">dynamic-peers</a>
<b>Configurable</b>	False

**path-memory number**

<b>Description</b>	The total number of bytes required to store the path attribute objects used by received BGP routes associated with the peer-group
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">protocols bgp group group-name</a> <i>string</i> <a href="#">statistics path-memory</a> <i>number</i>
<b>Tree</b>	<a href="#">path-memory</a>
<b>Default</b>	0
<b>Configurable</b>	False

**total-active-routes *number***

<b>Description</b>	The total number of received BGP routes that are active (installed for forwarding) and associated with the peer-group, summed across all address families
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">protocols bgp group group-name</a> <i>string</i> <a href="#">statistics total-active-routes</a> <i>number</i>
<b>Tree</b>	<a href="#">total-active-routes</a>
<b>Default</b>	0
<b>Configurable</b>	False

**total-paths *number***

<b>Description</b>	The total number of path attribute objects used by received BGP routes associated with the peer-group
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">protocols bgp group group-name</a> <i>string</i> <a href="#">statistics total-paths</a> <i>number</i>
<b>Tree</b>	<a href="#">total-paths</a>
<b>Default</b>	0
<b>Configurable</b>	False

**total-peers *number***

<b>Description</b>	The total number of configured BGP peers associated with the peer-group
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">protocols bgp group group-name</a> <i>string</i> <a href="#">statistics total-peers</a> <i>number</i>
<b>Tree</b>	<a href="#">total-peers</a>
<b>Configurable</b>	False

**total-prefixes *number***

<b>Description</b>	The total number of unique NLRI contained in all received BGP routes associated with the BGP instance or the peer-group.
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">protocols bgp group group-name</a> <i>string</i> <a href="#">statistics total-prefixes</a> <i>number</i>
<b>Tree</b>	<a href="#">total-prefixes</a>
<b>Configurable</b>	False

**total-received-routes *number***

<b>Description</b>	The total number of received BGP routes associated with the peer-group, summed across all address families
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">protocols bgp group group-name</a> <i>string</i> <a href="#">statistics total-received-routes</a> <i>number</i>
<b>Tree</b>	<a href="#">total-received-routes</a>
<b>Default</b>	0
<b>Configurable</b>	False

**up-peers *number***

<b>Description</b>	The number of configured BGP peers associated with the peer-group that are currently in the established state
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">protocols bgp group group-name</a> <i>string</i> <a href="#">statistics up-peers</a> <i>number</i>
<b>Tree</b>	<a href="#">up-peers</a>
<b>Configurable</b>	False

**timers**

<b>Description</b>	Enter the timers context
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">protocols bgp group group-name</a> <i>string</i> <a href="#">timers</a>
<b>Tree</b>	<a href="#">timers</a>
<b>Configurable</b>	True

**connect-retry *number***

<b>Description</b>	The time interval in seconds between successive attempts to establish a session with a peer
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">protocols bgp group group-name</a> <i>string</i> <a href="#">timers connect-retry</a> <i>number</i>
<b>Tree</b>	<a href="#">connect-retry</a>
<b>Range</b>	1 to 65535
<b>Default</b>	120
<b>Units</b>	seconds
<b>Configurable</b>	True

**hold-time *number***

<b>Description</b>	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.
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">protocols bgp group group-name</a> <i>string</i> <a href="#">timers hold-time</a> <i>number</i>
<b>Tree</b>	<a href="#">hold-time</a>
<b>Range</b>	0   3 to 65535
<b>Default</b>	90
<b>Units</b>	seconds
<b>Configurable</b>	True

**keepalive-interval *number***

<b>Description</b>	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.
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">protocols bgp group group-name</a> <i>string</i> <a href="#">timers keepalive-interval</a> <i>number</i>
<b>Tree</b>	<a href="#">keepalive-interval</a>
<b>Range</b>	0 to 21845
<b>Units</b>	seconds
<b>Configurable</b>	True

**minimum-advertisement-interval *number***

<b>Description</b>	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.
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">protocols bgp group group-name</a> <i>string</i> <a href="#">timers minimum-advertisement-interval</a> <i>number</i>
<b>Tree</b>	<a href="#">minimum-advertisement-interval</a>

<b>Range</b>	1 to 255
<b>Default</b>	5
<b>Units</b>	seconds
<b>Configurable</b>	True

### trace-options

<b>Description</b>	Debug traceoptions for BGP
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">protocols bgp group group-name</a> <i>string</i> <a href="#">trace-options</a>
<b>Tree</b>	<a href="#">trace-options</a>
<b>Configurable</b>	True

### flag *name keyword*

<b>Description</b>	Tracing parameters
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">protocols bgp group group-name</a> <i>string</i> <a href="#">trace-options</a> <a href="#">flag name</a> <i>keyword</i>
<b>Tree</b>	<a href="#">flag</a>
<b>Configurable</b>	True

### name *keyword*

<b>Description</b>	Enter the name context
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">protocols bgp group group-name</a> <i>string</i> <a href="#">trace-options</a> <a href="#">flag name</a> <i>keyword</i>
<b>Options</b>	<ul style="list-style-type: none"> <li>• <code>events</code> Trace all BGP events.</li> <li>• <code>packets</code> Trace all BGP protocol packets.</li> <li>• <code>open</code> Trace BGP open packets.</li> <li>• <code>keepalive</code> Trace BGP keepalive packets.</li> <li>• <code>graceful-restart</code> Trace Graceful Restart events.</li> </ul>

- 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

### 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

### transport

**Description** Enter the transport context

**Context** [network-instance name](#) *string* [protocols bgp group group-name](#) *string* [transport](#)

**Tree** [transport](#)

**Configurable** True

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

**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.

<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">protocols bgp group group-name</a> <i>string</i> <a href="#">transport local-address</a> ( <i>ipv4-address</i>   <i>ipv6-address</i>   <i>string</i> )
<b>Tree</b>	<a href="#">local-address</a>
<b>Configurable</b>	True

### **passive-mode *boolean***

<b>Description</b>	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.
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">protocols bgp group group-name</a> <i>string</i> <a href="#">transport passive-mode</a> <i>boolean</i>
<b>Tree</b>	<a href="#">passive-mode</a>
<b>Default</b>	false
<b>Configurable</b>	True

### **tcp-mss *number***

<b>Description</b>	The maximum segment size for each BGP TCP session belonging to the group  If the configured tcp-mss value is higher than the discovered path MTU it has no effect and the path MTU is used as the operational TCP MSS.
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">protocols bgp group group-name</a> <i>string</i> <a href="#">transport tcp-mss</a> <i>number</i>
<b>Tree</b>	<a href="#">tcp-mss</a>
<b>Range</b>	536 to 9446
<b>Units</b>	bytes
<b>Configurable</b>	True

### **under-maintenance *boolean***

<b>Description</b>	State field to determine if this bgp group is in maintenance mode.
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">protocols bgp group group-name</a> <i>string</i> <a href="#">under-maintenance</a> <i>boolean</i>

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<b>Tree</b>	<a href="#">under-maintenance</a>
<b>Configurable</b>	False

### import-policy *reference*

<b>Description</b>	Apply an import policy to received BGP routes
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">protocols bgp import-policy reference</a>
<b>Tree</b>	<a href="#">import-policy</a>
<b>Reference</b>	<a href="#">routing-policy</a> <a href="#">policy name stringname</a> <i>string</i> <i>string</i>
<b>Configurable</b>	True

### ipv4-unicast

<b>Description</b>	Options related to the IPv4-unicast address family
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">protocols bgp ipv4-unicast</a>
<b>Tree</b>	<a href="#">ipv4-unicast</a>
<b>Configurable</b>	True

### active-routes *number*

<b>Description</b>	The total number of received IPv4 unicast routes that are currently used for forwarding
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">protocols bgp ipv4-unicast active-routes number</a>
<b>Tree</b>	<a href="#">active-routes</a>
<b>Default</b>	0
<b>Configurable</b>	False

### admin-state *keyword*

<b>Description</b>	Administratively enable or disable the IPv4 unicast address family on all sessions
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">protocols bgp ipv4-unicast admin-state keyword</a>
<b>Tree</b>	<a href="#">admin-state</a>
<b>Default</b>	enable
<b>Options</b>	<ul style="list-style-type: none"> <li>enable</li> </ul>

	<ul style="list-style-type: none"> <li>• disable</li> </ul>
<b>Configurable</b>	True

### advertise-ipv6-next-hops *boolean*

<b>Description</b>	<p>Enables advertisement of IPv4 routes with IPv6 next-hops to peers</p> <p>When set to true, BGP advertises IPv4-unicast routes to its peers using MP-BGP. If the local-address towards a peer is an IPv6 address and BGP is supposed to apply next-hop-self the MP_REACH_NLRI will encode the IPv6 local-address as the BGP next-hop. When set to false, BGP is required to advertise an IPv4 next-hop with every IPv4 route (and to encode that in the NEXT_HOP attribute).</p>
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">protocols bgp ipv4-unicast advertise-ipv6-next-hops</a> <i>boolean</i>
<b>Tree</b>	<a href="#">advertise-ipv6-next-hops</a>
<b>Default</b>	false
<b>Configurable</b>	True

### convergence

<b>Description</b>	Options for controlling and monitoring routing convergence of the relevant address family
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">protocols bgp ipv4-unicast convergence</a>
<b>Tree</b>	<a href="#">convergence</a>
<b>Configurable</b>	True

### converged-peers *number*

<b>Description</b>	The number of peers that have sent an EOR marker for the address family since the last BGP restart
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">protocols bgp ipv4-unicast convergence converged-peers</a> <i>number</i>
<b>Tree</b>	<a href="#">converged-peers</a>
<b>Configurable</b>	False

### convergence-state *keyword*

<b>Description</b>	Enter the convergence-state context
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<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">protocols bgp ipv4-unicast convergence convergence-state</a> <i>keyword</i>
<b>Tree</b>	<a href="#">convergence-state</a>
<b>Options</b>	<ul style="list-style-type: none"> <li>• waiting BGP has recently restarted and no sessions have re-established yet</li> <li>• started BGP has recently restarted and at least one session has re-established with support of the address family</li> <li>• partial BGP has recently restarted and at least one session has advertised an End-of-RIB marker for the address family.</li> <li>• 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</li> <li>• converged All non-slow peers that support the address family have have advertised the End-of-RIB marker for the address family</li> </ul>
<b>Configurable</b>	False

### **convergence-time *number***

<b>Description</b>	The elapsed time in seconds, starting from the last BGP restart, to reach the converged state for the address family
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">protocols bgp ipv4-unicast convergence convergence-time</a> <i>number</i>
<b>Tree</b>	<a href="#">convergence-time</a>
<b>Configurable</b>	False

### **first-up-peer-time *number***

<b>Description</b>	The time when the first session supporting the address family came up, measured from the time that the BGP instance restarted
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">protocols bgp ipv4-unicast convergence first-up-peer-time</a> <i>number</i>
<b>Tree</b>	<a href="#">first-up-peer-time</a>
<b>Configurable</b>	False

**last-up-peer-time *number***

<b>Description</b>	The time when the last session supporting the address family came up, measured from the time that the BGP instance restarted
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">protocols bgp ipv4-unicast convergence last-up-peer-time</a> <i>number</i>
<b>Tree</b>	<a href="#">last-up-peer-time</a>
<b>Configurable</b>	False

**max-wait-to-advertise *number***

<b>Description</b>	<p>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</p> <p>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.</p>
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">protocols bgp ipv4-unicast convergence max-wait-to-advertise</a> <i>number</i>
<b>Tree</b>	<a href="#">max-wait-to-advertise</a>
<b>Range</b>	0 to 3600
<b>Default</b>	0
<b>Configurable</b>	True

**oper-max-wait-to-advertise *number***

<b>Description</b>	The operational value of the max-wait-to-advertise timer for the address family
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">protocols bgp ipv4-unicast convergence oper-max-wait-to-advertise</a> <i>number</i>
<b>Tree</b>	<a href="#">oper-max-wait-to-advertise</a>
<b>Range</b>	0 to 10800
<b>Configurable</b>	False

**up-peers *number***

<b>Description</b>	The number of BGP sessions (configured and dynamic) that support the address family and that are currently in the established state
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<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">protocols bgp ipv4-unicast convergence up-peers</a> <i>number</i>
<b>Tree</b>	<a href="#">up-peers</a>
<b>Configurable</b>	False

### **up-peers-when-min-expired** *number*

<b>Description</b>	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
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">protocols bgp ipv4-unicast convergence up-peers-when-min-expired</a> <i>number</i>
<b>Tree</b>	<a href="#">up-peers-when-min-expired</a>
<b>Configurable</b>	False

### **multipath**

<b>Description</b>	Options related to BGP multipath
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">protocols bgp ipv4-unicast multipath</a>
<b>Tree</b>	<a href="#">multipath</a>
<b>Configurable</b>	True

### **allow-multiple-as** *boolean*

<b>Description</b>	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
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">protocols bgp ipv4-unicast multipath allow-multiple-as</a> <i>boolean</i>
<b>Tree</b>	<a href="#">allow-multiple-as</a>
<b>Default</b>	true
<b>Configurable</b>	True

### **max-paths-level-1** *number*

<b>Description</b>	The maximum number of BGP ECMP next-hops for BGP routes with an NLRI belonging to the address family of this configuration context
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<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">protocols bgp ipv4-unicast multipath max-paths-level-1</a> <i>number</i>
<b>Tree</b>	<a href="#">max-paths-level-1</a>
<b>Range</b>	1 to 64
<b>Default</b>	1
<b>Configurable</b>	True

### max-paths-level-2 *number*

<b>Description</b>	The maximum number of resolving ECMP next-hops per BGP next-hop associated with BGP routes having an NLRI belonging to the address family of this configuration context
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">protocols bgp ipv4-unicast multipath max-paths-level-2</a> <i>number</i>
<b>Tree</b>	<a href="#">max-paths-level-2</a>
<b>Range</b>	1 to 64
<b>Default</b>	1
<b>Configurable</b>	True

### next-hop-resolution



**Note:**

This command is available for the following platforms:

- 7250 IXR-6
- 7250 IXR-10

<b>Description</b>	Options for controlling next-hop resolution procedures
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">protocols bgp ipv4-unicast next-hop-resolution</a>
<b>Tree</b>	<a href="#">next-hop-resolution</a>
<b>Configurable</b>	True

### ipv4-next-hops



**Note:**

This command is available for the following platforms:

- 7250 IXR-6
- 7250 IXR-10

<b>Description</b>	Options related to the resolution of BGP next-hops that are IPv4 addresses
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">protocols bgp ipv4-unicast next-hop-resolution ipv4-next-hops</a>
<b>Tree</b>	<a href="#">ipv4-next-hops</a>
<b>Configurable</b>	True

## tunnel-resolution



### Note:

This command is available for the following platforms:

- 7250 IXR-6
- 7250 IXR-10

<b>Description</b>	Options related to resolution using tunnels in the tunnel table
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">protocols bgp ipv4-unicast next-hop-resolution ipv4-next-hops tunnel-resolution</a>
<b>Tree</b>	<a href="#">tunnel-resolution</a>
<b>Configurable</b>	True

## allowed-tunnel-types *identityref*



### Note:

This command is available for the following platforms:

- 7250 IXR-6
- 7250 IXR-10

<b>Description</b>	List of allowed tunnel types
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">protocols bgp ipv4-unicast next-hop-resolution ipv4-next-hops tunnel-resolution allowed-tunnel-types</a> <i>identityref</i>
<b>Tree</b>	<a href="#">allowed-tunnel-types</a>
<b>Options</b>	<ul style="list-style-type: none"> <li>• <code>sr-isis</code> Segment routing using MPLS dataplane, programmed by IS-IS</li> <li>• <code>sr-ospfv2</code> Segment routing using MPLS dataplane, programmed by OSPFv2</li> <li>• <code>sr-ospfv3</code> Segment routing using MPLS dataplane, programmed by OSPFv3</li> </ul>



- sr-mpls  
Segment routing using MPLS dataplane, programmed by segment routing manager.
- sr-policy-mpls  
Tunnels setup using SR-POLICY.
- vxlan  
Tunnels based on VXLAN encapsulation

**Configurable** True

### mode *keyword*



**Note:**

This command is available for the following platforms:

- 7250 IXR-6
- 7250 IXR-10

**Description** Mode to control the order of tunnel resolution compared to route resolution

**Context** [network-instance name](#) *string* [protocols bgp ipv4-unicast next-hop-resolution ipv4-next-hops tunnel-resolution mode](#) *keyword*

**Tree** [mode](#)

**Default** disabled

**Options**

- prefer
- require
- disabled

**Configurable** True

### receive-ipv6-next-hops *boolean*

**Description** Enables the advertisement of the RFC 5549 capability to receive IPv4 routes with IPv6 next-hops

When set to true, BGP advertises an extended NH encoding (RFC 5549) capability to its peers. This capability indicates that local router is prepared to accept BGP routes for IPv4 NLRI with IPv6 next-hops from peers in the scope of the command. When set to false, BGP handles received IPV4 routes with IPv6 next-hops as an error and applies treat-as-withdraw.

**Context** [network-instance name](#) *string* [protocols bgp ipv4-unicast receive-ipv6-next-hops](#) *boolean*

**Tree** [receive-ipv6-next-hops](#)

**Default** false

<b>Configurable</b>	True
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### received-routes *number*

<b>Description</b>	The total number of IPv4 unicast routes received from all peers of the BGP instance
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">protocols bgp ipv4-unicast received-routes number</a>
<b>Tree</b>	<a href="#">received-routes</a>
<b>Default</b>	0
<b>Configurable</b>	False

### ipv6-unicast

<b>Description</b>	Options related to the IPv6-unicast address family
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">protocols bgp ipv6-unicast</a>
<b>Tree</b>	<a href="#">ipv6-unicast</a>
<b>Configurable</b>	True

### active-routes *number*

<b>Description</b>	The total number of received IPv6 unicast routes that are currently used for forwarding
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">protocols bgp ipv6-unicast active-routes number</a>
<b>Tree</b>	<a href="#">active-routes</a>
<b>Default</b>	0
<b>Configurable</b>	False

### admin-state *keyword*

<b>Description</b>	Administratively enable or disable the IPv6 unicast address family on all sessions
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">protocols bgp ipv6-unicast admin-state keyword</a>
<b>Tree</b>	<a href="#">admin-state</a>
<b>Default</b>	disable
<b>Options</b>	<ul style="list-style-type: none"> <li>enable</li> </ul>

	<ul style="list-style-type: none"> <li>• disable</li> </ul>
<b>Configurable</b>	True

## convergence

<b>Description</b>	Options for controlling and monitoring routing convergence of the relevant address family
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">protocols bgp ipv6-unicast convergence</a>
<b>Tree</b>	<a href="#">convergence</a>
<b>Configurable</b>	True

## converged-peers *number*

<b>Description</b>	The number of peers that have sent an EOR marker for the address family since the last BGP restart
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">protocols bgp ipv6-unicast convergence converged-peers</a> <i>number</i>
<b>Tree</b>	<a href="#">converged-peers</a>
<b>Configurable</b>	False

## convergence-state *keyword*

<b>Description</b>	Enter the convergence-state context
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">protocols bgp ipv6-unicast convergence convergence-state</a> <i>keyword</i>
<b>Tree</b>	<a href="#">convergence-state</a>
<b>Options</b>	<ul style="list-style-type: none"> <li>• waiting BGP has recently restarted and no sessions have re-established yet</li> <li>• started BGP has recently restarted and at least one session has re-established with support of the address family</li> <li>• partial BGP has recently restarted and at least one session has advertised an End-of-RIB marker for the address family.</li> <li>• 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</li> </ul>

- converged  
All non-slow peers that support the address family have advertised the End-of-RIB marker for the address family

**Configurable** False

### **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 ipv6-unicast convergence convergence-time](#) *number*

**Tree** [convergence-time](#)

**Configurable** False

### **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 ipv6-unicast convergence first-up-peer-time](#) *number*

**Tree** [first-up-peer-time](#)

**Configurable** False

### **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 ipv6-unicast convergence last-up-peer-time](#) *number*

**Tree** [last-up-peer-time](#)

**Configurable** False

### **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.

<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">protocols bgp ipv6-unicast convergence max-wait-to-advertise</a> <i>number</i>
<b>Tree</b>	<a href="#">max-wait-to-advertise</a>
<b>Range</b>	0 to 3600
<b>Default</b>	0
<b>Configurable</b>	True

### **oper-max-wait-to-advertise** *number*

<b>Description</b>	The operational value of the max-wait-to-advertise timer for the address family
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">protocols bgp ipv6-unicast convergence oper-max-wait-to-advertise</a> <i>number</i>
<b>Tree</b>	<a href="#">oper-max-wait-to-advertise</a>
<b>Range</b>	0 to 10800
<b>Configurable</b>	False

### **up-peers** *number*

<b>Description</b>	The number of BGP sessions (configured and dynamic) that support the address family and that are currently in the established state
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">protocols bgp ipv6-unicast convergence up-peers</a> <i>number</i>
<b>Tree</b>	<a href="#">up-peers</a>
<b>Configurable</b>	False

### **up-peers-when-min-expired** *number*

<b>Description</b>	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
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">protocols bgp ipv6-unicast convergence up-peers-when-min-expired</a> <i>number</i>
<b>Tree</b>	<a href="#">up-peers-when-min-expired</a>
<b>Configurable</b>	False

## multipath

<b>Description</b>	Options related to BGP multipath
<b>Context</b>	<a href="#">network-instance name</a> <a href="#">string</a> <a href="#">protocols</a> <a href="#">bgp</a> <a href="#">ipv6-unicast</a> <a href="#">multipath</a>
<b>Tree</b>	<a href="#">multipath</a>
<b>Configurable</b>	True

## allow-multiple-as *boolean*

<b>Description</b>	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
<b>Context</b>	<a href="#">network-instance name</a> <a href="#">string</a> <a href="#">protocols</a> <a href="#">bgp</a> <a href="#">ipv6-unicast</a> <a href="#">multipath</a> <a href="#">allow-multiple-as</a> <a href="#">boolean</a>
<b>Tree</b>	<a href="#">allow-multiple-as</a>
<b>Default</b>	true
<b>Configurable</b>	True

## max-paths-level-1 *number*

<b>Description</b>	The maximum number of BGP ECMP next-hops for BGP routes with an NLRI belonging to the address family of this configuration context
<b>Context</b>	<a href="#">network-instance name</a> <a href="#">string</a> <a href="#">protocols</a> <a href="#">bgp</a> <a href="#">ipv6-unicast</a> <a href="#">multipath</a> <a href="#">max-paths-level-1</a> <a href="#">number</a>
<b>Tree</b>	<a href="#">max-paths-level-1</a>
<b>Range</b>	1 to 64
<b>Default</b>	1
<b>Configurable</b>	True

## max-paths-level-2 *number*

<b>Description</b>	The maximum number of resolving ECMP next-hops per BGP next-hop associated with BGP routes having an NLRI belonging to the address family of this configuration context
<b>Context</b>	<a href="#">network-instance name</a> <a href="#">string</a> <a href="#">protocols</a> <a href="#">bgp</a> <a href="#">ipv6-unicast</a> <a href="#">multipath</a> <a href="#">max-paths-level-2</a> <a href="#">number</a>
<b>Tree</b>	<a href="#">max-paths-level-2</a>

<b>Range</b>	1 to 64
<b>Default</b>	1
<b>Configurable</b>	True

## next-hop-resolution



**Note:**

This command is available for the following platforms:

- 7250 IXR-6
- 7250 IXR-10

<b>Description</b>	Options for controlling next-hop resolution procedures
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">protocols bgp ipv6-unicast next-hop-resolution</a>
<b>Tree</b>	<a href="#">next-hop-resolution</a>
<b>Configurable</b>	True

## ipv4-next-hops



**Note:**

This command is available for the following platforms:

- 7250 IXR-6
- 7250 IXR-10

<b>Description</b>	Options related to the resolution of BGP next-hops that are IPv4 addresses
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">protocols bgp ipv6-unicast next-hop-resolution ipv4-next-hops</a>
<b>Tree</b>	<a href="#">ipv4-next-hops</a>
<b>Configurable</b>	True

## tunnel-resolution



**Note:**

This command is available for the following platforms:

- 7250 IXR-6
- 7250 IXR-10

<b>Description</b>	Options related to resolution using tunnels in the tunnel table
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<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">protocols bgp ipv6-unicast next-hop-resolution ipv4-next-hops tunnel-resolution</a>
<b>Tree</b>	<a href="#">tunnel-resolution</a>
<b>Configurable</b>	True

### allowed-tunnel-types *identityref*



**Note:**

This command is available for the following platforms:

- 7250 IXR-6
- 7250 IXR-10

<b>Description</b>	List of allowed tunnel types
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">protocols bgp ipv6-unicast next-hop-resolution ipv4-next-hops tunnel-resolution allowed-tunnel-types</a> <i>identityref</i>
<b>Tree</b>	<a href="#">allowed-tunnel-types</a>
<b>Options</b>	<ul style="list-style-type: none"> <li>• <code>sr-isis</code> Segment routing using MPLS dataplane, programmed by IS-IS</li> <li>• <code>sr-ospfv2</code> Segment routing using MPLS dataplane, programmed by OSPFv2</li> <li>• <code>sr-ospfv3</code> Segment routing using MPLS dataplane, programmed by OSPFv3</li> <li>• <code>sr-mpls</code> Segment routing using MPLS dataplane, programmed by segment routing manager.</li> <li>• <code>sr-policy-mpls</code> Tunnels setup using SR-POLICY.</li> <li>• <code>vxlan</code> Tunnels based on VXLAN encapsulation</li> </ul>
<b>Configurable</b>	True

### mode *keyword*



**Note:**

This command is available for the following platforms:

- 7250 IXR-6
- 7250 IXR-10



<b>Description</b>	Mode to control the order of tunnel resolution compared to route resolution
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">protocols bgp ipv6-unicast next-hop-resolution ipv4-next-hops tunnel-resolution mode</a> <i>keyword</i>
<b>Tree</b>	<a href="#">mode</a>
<b>Default</b>	disabled
<b>Options</b>	<ul style="list-style-type: none"> <li>• prefer</li> <li>• require</li> <li>• disabled</li> </ul>
<b>Configurable</b>	True

### received-routes *number*

<b>Description</b>	The total number of IPv6 unicast routes received from all peers of the BGP instance
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">protocols bgp ipv6-unicast received-routes</a> <i>number</i>
<b>Tree</b>	<a href="#">received-routes</a>
<b>Default</b>	0
<b>Configurable</b>	False

### local-preference *number*

<b>Description</b>	<p>The value of the local-preference attribute that is added to received routes from EBGp peers</p> <p>It is also used to encode the local preference attribute for locally generated BGP routes.</p>
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">protocols bgp local-preference</a> <i>number</i>
<b>Tree</b>	<a href="#">local-preference</a>
<b>Default</b>	100
<b>Configurable</b>	True

### maintenance-group *string*

<b>Description</b>	State field to display the maintenance group to which this bgp instance belongs to.
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">protocols bgp maintenance-group</a> <i>string</i>
<b>Tree</b>	<a href="#">maintenance-group</a>

**Configurable** False

### neighbor **peer-address** (*ipv4-address* | *ipv6-address-with-zone*)

**Description** Create a configured BGP session

**Context** [network-instance name](#) *string* [protocols bgp neighbor peer-address](#) (*ipv4-address* | *ipv6-address-with-zone*)

**Tree** [neighbor](#)

**Configurable** True

### peer-address (*ipv4-address* | *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](#) *string* [protocols bgp neighbor peer-address](#) (*ipv4-address* | *ipv6-address-with-zone*)

**Configurable** True

### 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](#) *string* [protocols bgp neighbor peer-address](#) (*ipv4-address* | *ipv6-address-with-zone*) [admin-state keyword](#)

**Tree** [admin-state](#)

**Default** enable

**Options**

- enable
- disable

**Configurable** True

### advertised-capabilities **keyword**

**Description** List of BGP capabilities advertised by the local routing device to the peer

**Context** [network-instance name](#) *string* [protocols bgp neighbor peer-address](#) (*ipv4-address* | *ipv6-address-with-zone*) [advertised-capabilities keyword](#)

**Tree** [advertised-capabilities](#)

<b>Options</b>	<ul style="list-style-type: none"> <li>• MP_BGP</li> <li>• ROUTE_REFRESH</li> <li>• EXT_NH_ENCODING</li> <li>• GRACEFUL_RESTART</li> <li>• 4-OCTET_ASN</li> <li>• ORF_SEND_EXCOMM</li> <li>• ORF_RECEIVE_EXCOMM</li> </ul>
<b>Configurable</b>	False

### as-path-options

<b>Description</b>	Options for handling the AS_PATH in received BGP routes
<b>Context</b>	<a href="#">network-instance name string protocols bgp neighbor peer-address (ipv4-address   ipv6-address-with-zone) as-path-options</a>
<b>Tree</b>	<a href="#">as-path-options</a>
<b>Configurable</b>	True

### allow-own-as *number*

<b>Description</b>	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
<b>Context</b>	<a href="#">network-instance name string protocols bgp neighbor peer-address (ipv4-address   ipv6-address-with-zone) as-path-options allow-own-as number</a>
<b>Tree</b>	<a href="#">allow-own-as</a>
<b>Configurable</b>	True

### remove-private-as

<b>Description</b>	Container with options for removing private AS numbers (2-byte and 4-byte) from the advertised AS path towards all peers
<b>Context</b>	<a href="#">network-instance name string protocols bgp neighbor peer-address (ipv4-address   ipv6-address-with-zone) as-path-options remove-private-as</a>
<b>Tree</b>	<a href="#">remove-private-as</a>
<b>Configurable</b>	True

**ignore-peer-as *boolean***

<b>Description</b>	If set to true then do not delete or replace a private AS number that is the same as the peer AS number
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">protocols bgp neighbor peer-address</a> ( <i>ipv4-address   ipv6-address-with-zone</i> ) <a href="#">as-path-options remove-private-as ignore-peer-as</a> <i>boolean</i>
<b>Tree</b>	<a href="#">ignore-peer-as</a>
<b>Default</b>	false
<b>Configurable</b>	True

**leading-only *boolean***

<b>Description</b>	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
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">protocols bgp neighbor peer-address</a> ( <i>ipv4-address   ipv6-address-with-zone</i> ) <a href="#">as-path-options remove-private-as leading-only</a> <i>boolean</i>
<b>Tree</b>	<a href="#">leading-only</a>
<b>Default</b>	false
<b>Configurable</b>	True

**mode *keyword***

<b>Description</b>	The method by which private AS numbers are removed from the advertised AS_PATH attribute
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">protocols bgp neighbor peer-address</a> ( <i>ipv4-address   ipv6-address-with-zone</i> ) <a href="#">as-path-options remove-private-as mode</a> <i>keyword</i>
<b>Tree</b>	<a href="#">mode</a>
<b>Options</b>	<ul style="list-style-type: none"> <li>• disabled Do not strip or replace any private AS numbers</li> <li>• delete Delete private AS numbers, shortening the AS path</li> <li>• replace Replace private AS numbers with the local AS number used towards the peer, maintaining the AS path length</li> </ul>
<b>Configurable</b>	True

**replace-peer-as *boolean***

<b>Description</b>	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
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">protocols bgp neighbor peer-address</a> ( <i>ipv4-address</i>   <i>ipv6-address-with-zone</i> ) <a href="#">as-path-options replace-peer-as</a> <i>boolean</i>
<b>Tree</b>	<a href="#">replace-peer-as</a>
<b>Configurable</b>	True

**authentication**

<b>Description</b>	Container with authentication options that apply to this specific peer
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">protocols bgp neighbor peer-address</a> ( <i>ipv4-address</i>   <i>ipv6-address-with-zone</i> ) <a href="#">authentication</a>
<b>Tree</b>	<a href="#">authentication</a>
<b>Configurable</b>	True

**keychain *reference***

<b>Description</b>	Reference to a keychain. The keychain type must be tcp-md5.
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">protocols bgp neighbor peer-address</a> ( <i>ipv4-address</i>   <i>ipv6-address-with-zone</i> ) <a href="#">authentication keychain</a> <i>reference</i>
<b>Tree</b>	<a href="#">keychain</a>
<b>Reference</b>	<a href="#">system authentication keychain name</a> <i>string</i> <i>string</i>
<b>Configurable</b>	True

**transmit-active *boolean***

<b>Description</b>	Reads true when the TCP segments being sent to the peer have authentication data.
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">protocols bgp neighbor peer-address</a> ( <i>ipv4-address</i>   <i>ipv6-address-with-zone</i> ) <a href="#">authentication transmit-active</a> <i>boolean</i>
<b>Tree</b>	<a href="#">transmit-active</a>
<b>Configurable</b>	False

**description *string***

<b>Description</b>	A user provided description string for the peer
<b>Context</b>	<a href="#">network-instance name string protocols bgp neighbor peer-address (ipv4-address   ipv6-address-with-zone) description string</a>
<b>Tree</b>	<a href="#">description</a>
<b>String Length</b>	1 to 255
<b>Configurable</b>	True

**discovered-by-lldp *boolean***

<b>Description</b>	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)
<b>Context</b>	<a href="#">network-instance name string protocols bgp neighbor peer-address (ipv4-address   ipv6-address-with-zone) discovered-by-lldp boolean</a>
<b>Tree</b>	<a href="#">discovered-by-lldp</a>
<b>Configurable</b>	False

**dynamic-neighbor *boolean***

<b>Description</b>	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
<b>Context</b>	<a href="#">network-instance name string protocols bgp neighbor peer-address (ipv4-address   ipv6-address-with-zone) dynamic-neighbor boolean</a>
<b>Tree</b>	<a href="#">dynamic-neighbor</a>
<b>Configurable</b>	False

**established-transitions *number***

<b>Description</b>	The total number of times the BGP FSM transitioned into the established state for this peer
<b>Context</b>	<a href="#">network-instance name string protocols bgp neighbor peer-address (ipv4-address   ipv6-address-with-zone) established-transitions number</a>
<b>Tree</b>	<a href="#">established-transitions</a>
<b>Default</b>	0
<b>Configurable</b>	False

**evpn**

<b>Description</b>	Options related to the EVPN address family
<b>Context</b>	<a href="#">network-instance name</a> <a href="#">string</a> <a href="#">protocols</a> <a href="#">bgp</a> <a href="#">neighbor</a> <a href="#">peer-address</a> ( <a href="#">ipv4-address</a>   <a href="#">ipv6-address-with-zone</a> ) <a href="#">evpn</a>
<b>Tree</b>	<a href="#">evpn</a>
<b>Configurable</b>	True

**active-routes *number***

<b>Description</b>	The number of EVPN routes received from the peer that are currently used for forwarding
<b>Context</b>	<a href="#">network-instance name</a> <a href="#">string</a> <a href="#">protocols</a> <a href="#">bgp</a> <a href="#">neighbor</a> <a href="#">peer-address</a> ( <a href="#">ipv4-address</a>   <a href="#">ipv6-address-with-zone</a> ) <a href="#">evpn</a> <a href="#">active-routes</a> <a href="#">number</a>
<b>Tree</b>	<a href="#">active-routes</a>
<b>Configurable</b>	False

**admin-state *keyword***

<b>Description</b>	Administratively enable or disable the EVPN address family on the BGP session
<b>Context</b>	<a href="#">network-instance name</a> <a href="#">string</a> <a href="#">protocols</a> <a href="#">bgp</a> <a href="#">neighbor</a> <a href="#">peer-address</a> ( <a href="#">ipv4-address</a>   <a href="#">ipv6-address-with-zone</a> ) <a href="#">evpn</a> <a href="#">admin-state</a> <a href="#">keyword</a>
<b>Tree</b>	<a href="#">admin-state</a>
<b>Options</b>	<ul style="list-style-type: none"> <li>• enable</li> <li>• disable</li> </ul>
<b>Configurable</b>	True

**advertise-ipv6-next-hops *boolean***

<b>Description</b>	<p>Enables advertisement of EVPN routes with IPv6 next-hops to peers</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 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.</p>
<b>Context</b>	<a href="#">network-instance name</a> <a href="#">string</a> <a href="#">protocols</a> <a href="#">bgp</a> <a href="#">neighbor</a> <a href="#">peer-address</a> ( <a href="#">ipv4-address</a>   <a href="#">ipv6-address-with-zone</a> ) <a href="#">evpn</a> <a href="#">advertise-ipv6-next-hops</a> <a href="#">boolean</a>
<b>Tree</b>	<a href="#">advertise-ipv6-next-hops</a>
<b>Configurable</b>	True

**oper-state *keyword***

<b>Description</b>	Enter the oper-state context
<b>Context</b>	<a href="#">network-instance name</a> <a href="#">string</a> <a href="#">protocols bgp neighbor peer-address</a> ( <a href="#">ipv4-address</a>   <a href="#">ipv6-address-with-zone</a> ) <a href="#">evpn oper-state keyword</a>
<b>Tree</b>	<a href="#">oper-state</a>
<b>Options</b>	<ul style="list-style-type: none"> <li>• up Negotiated operational state of the EVPN address family is up</li> <li>• down Negotiated operational state of the EVPN address family is down</li> </ul>
<b>Configurable</b>	False

**prefix-limit**

<b>Description</b>	Options for configuring the maximum number of EVPN routes allowed to be received from the peer
<b>Context</b>	<a href="#">network-instance name</a> <a href="#">string</a> <a href="#">protocols bgp neighbor peer-address</a> ( <a href="#">ipv4-address</a>   <a href="#">ipv6-address-with-zone</a> ) <a href="#">evpn prefix-limit</a>
<b>Tree</b>	<a href="#">prefix-limit</a>
<b>Configurable</b>	True

**max-received-routes *number***

<b>Description</b>	Maximum number of EVPN routes that will be accepted from the neighbor, counting routes accepted and rejected by import policies
<b>Context</b>	<a href="#">network-instance name</a> <a href="#">string</a> <a href="#">protocols bgp neighbor peer-address</a> ( <a href="#">ipv4-address</a>   <a href="#">ipv6-address-with-zone</a> ) <a href="#">evpn prefix-limit max-received-routes number</a>
<b>Tree</b>	<a href="#">max-received-routes</a>
<b>Range</b>	1 to 4294967295
<b>Configurable</b>	True

**warning-threshold-pct *number***

<b>Description</b>	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
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<b>Context</b>	<a href="#">network-instance name</a> <a href="#">string</a> <a href="#">protocols bgp neighbor peer-address</a> ( <a href="#">ipv4-address</a>   <a href="#">ipv6-address-with-zone</a> ) <a href="#">evpn prefix-limit</a> <a href="#">warning-threshold-pct number</a>
<b>Tree</b>	<a href="#">warning-threshold-pct</a>
<b>Range</b>	0 to 100
<b>Configurable</b>	True

### **received-routes *number***

<b>Description</b>	The number of EVPN routes received from the peer, including routes rejected by import policy
<b>Context</b>	<a href="#">network-instance name</a> <a href="#">string</a> <a href="#">protocols bgp neighbor peer-address</a> ( <a href="#">ipv4-address</a>   <a href="#">ipv6-address-with-zone</a> ) <a href="#">evpn received-routes number</a>
<b>Tree</b>	<a href="#">received-routes</a>
<b>Configurable</b>	False

### **rejected-routes *number***

<b>Description</b>	The number of EVPN routes received from the peer that were rejected by import policy
<b>Context</b>	<a href="#">network-instance name</a> <a href="#">string</a> <a href="#">protocols bgp neighbor peer-address</a> ( <a href="#">ipv4-address</a>   <a href="#">ipv6-address-with-zone</a> ) <a href="#">evpn rejected-routes number</a>
<b>Tree</b>	<a href="#">rejected-routes</a>
<b>Configurable</b>	False

### **sent-routes *number***

<b>Description</b>	The number of EVPN routes advertised as reachable to the peer
<b>Context</b>	<a href="#">network-instance name</a> <a href="#">string</a> <a href="#">protocols bgp neighbor peer-address</a> ( <a href="#">ipv4-address</a>   <a href="#">ipv6-address-with-zone</a> ) <a href="#">evpn sent-routes number</a>
<b>Tree</b>	<a href="#">sent-routes</a>
<b>Configurable</b>	False

### **export-policy *reference***

<b>Description</b>	Apply an export policy to advertised BGP routes
<b>Context</b>	<a href="#">network-instance name</a> <a href="#">string</a> <a href="#">protocols bgp neighbor peer-address</a> ( <a href="#">ipv4-address</a>   <a href="#">ipv6-address-with-zone</a> ) <a href="#">export-policy reference</a>
<b>Tree</b>	<a href="#">export-policy</a>

<b>Reference</b>	<a href="#">routing-policy</a> <a href="#">policy name</a> <a href="#">string</a> <a href="#">string</a>
<b>Configurable</b>	True

### failure-detection

<b>Description</b>	Options related to methods of detecting BGP session failure
<b>Context</b>	<a href="#">network-instance name</a> <a href="#">string</a> <a href="#">protocols</a> <a href="#">bgp</a> <a href="#">neighbor</a> <a href="#">peer-address</a> ( <a href="#">ipv4-address</a>   <a href="#">ipv6-address-with-zone</a> ) <a href="#">failure-detection</a>
<b>Tree</b>	<a href="#">failure-detection</a>
<b>Configurable</b>	True

### enable-bfd *boolean*

<b>Description</b>	The true setting enables Bi-directional Forwarding Detection on BGP sessions belonging to the peer group
<b>Context</b>	<a href="#">network-instance name</a> <a href="#">string</a> <a href="#">protocols</a> <a href="#">bgp</a> <a href="#">neighbor</a> <a href="#">peer-address</a> ( <a href="#">ipv4-address</a>   <a href="#">ipv6-address-with-zone</a> ) <a href="#">failure-detection</a> <a href="#">enable-bfd</a> <i>boolean</i>
<b>Tree</b>	<a href="#">enable-bfd</a>
<b>Configurable</b>	True

### fast-failover *boolean*

<b>Description</b>	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
<b>Context</b>	<a href="#">network-instance name</a> <a href="#">string</a> <a href="#">protocols</a> <a href="#">bgp</a> <a href="#">neighbor</a> <a href="#">peer-address</a> ( <a href="#">ipv4-address</a>   <a href="#">ipv6-address-with-zone</a> ) <a href="#">failure-detection</a> <a href="#">fast-failover</a> <i>boolean</i>
<b>Tree</b>	<a href="#">fast-failover</a>
<b>Configurable</b>	True

### graceful-restart

<b>Description</b>	Options related to router behavior as a graceful restart helper
<b>Context</b>	<a href="#">network-instance name</a> <a href="#">string</a> <a href="#">protocols</a> <a href="#">bgp</a> <a href="#">neighbor</a> <a href="#">peer-address</a> ( <a href="#">ipv4-address</a>   <a href="#">ipv6-address-with-zone</a> ) <a href="#">graceful-restart</a>
<b>Tree</b>	<a href="#">graceful-restart</a>
<b>Configurable</b>	True

**admin-state *keyword***

<b>Description</b>	Administratively enable or disable graceful restart helper for all address families
<b>Context</b>	<a href="#">network-instance name</a> <a href="#">string</a> <a href="#">protocols</a> <a href="#">bgp</a> <a href="#">neighbor</a> <a href="#">peer-address</a> ( <a href="#">ipv4-address</a>   <a href="#">ipv6-address-with-zone</a> ) <a href="#">graceful-restart</a> <a href="#">admin-state</a> <a href="#">keyword</a>
<b>Tree</b>	<a href="#">admin-state</a>
<b>Options</b>	<ul style="list-style-type: none"> <li>• enable</li> <li>• disable</li> </ul>
<b>Configurable</b>	True

**helper-active *boolean***

<b>Description</b>	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
<b>Context</b>	<a href="#">network-instance name</a> <a href="#">string</a> <a href="#">protocols</a> <a href="#">bgp</a> <a href="#">neighbor</a> <a href="#">peer-address</a> ( <a href="#">ipv4-address</a>   <a href="#">ipv6-address-with-zone</a> ) <a href="#">graceful-restart</a> <a href="#">helper-active</a> <a href="#">boolean</a>
<b>Tree</b>	<a href="#">helper-active</a>
<b>Configurable</b>	False

**last-restart-time *string***

<b>Description</b>	The last time the peer restarted
<b>Context</b>	<a href="#">network-instance name</a> <a href="#">string</a> <a href="#">protocols</a> <a href="#">bgp</a> <a href="#">neighbor</a> <a href="#">peer-address</a> ( <a href="#">ipv4-address</a>   <a href="#">ipv6-address-with-zone</a> ) <a href="#">graceful-restart</a> <a href="#">last-restart-time</a> <a href="#">string</a>
<b>Tree</b>	<a href="#">last-restart-time</a>
<b>String Length</b>	20 to 32
<b>Configurable</b>	False

**neighbor-capability**

<b>Description</b>	Container for information about the last GR capability received from the neighbor
<b>Context</b>	<a href="#">network-instance name</a> <a href="#">string</a> <a href="#">protocols</a> <a href="#">bgp</a> <a href="#">neighbor</a> <a href="#">peer-address</a> ( <a href="#">ipv4-address</a>   <a href="#">ipv6-address-with-zone</a> ) <a href="#">graceful-restart</a> <a href="#">neighbor-capability</a>
<b>Tree</b>	<a href="#">neighbor-capability</a>
<b>Configurable</b>	False

**afi-safi name keyword**

<b>Description</b>	List of AFI/SAFI TLVs that were contained in the neighbor's last GR capability
<b>Context</b>	<a href="#">network-instance name string protocols bgp neighbor peer-address (ipv4-address   ipv6-address-with-zone) graceful-restart neighbor-capability afi-safi name keyword</a>
<b>Tree</b>	<a href="#">afi-safi</a>
<b>Configurable</b>	False

**name keyword**

<b>Description</b>	Enter the name context
<b>Context</b>	<a href="#">network-instance name string protocols bgp neighbor peer-address (ipv4-address   ipv6-address-with-zone) graceful-restart neighbor-capability afi-safi name keyword</a>
<b>Options</b>	<ul style="list-style-type: none"><li>• <a href="#">ipv4-unicast</a></li><li>• <a href="#">ipv6-unicast</a></li></ul>
<b>Configurable</b>	False

**forwarding-preserved boolean**

<b>Description</b>	The F-bit setting in the AFI/SAFI TLV
<b>Context</b>	<a href="#">network-instance name string protocols bgp neighbor peer-address (ipv4-address   ipv6-address-with-zone) graceful-restart neighbor-capability afi-safi name keyword forwarding-preserved boolean</a>
<b>Tree</b>	<a href="#">forwarding-preserved</a>
<b>Configurable</b>	False

**restart-time number**

<b>Description</b>	The value of the Restart Time in the neighbor's last GR capability
<b>Context</b>	<a href="#">network-instance name string protocols bgp neighbor peer-address (ipv4-address   ipv6-address-with-zone) graceful-restart neighbor-capability restart-time number</a>
<b>Tree</b>	<a href="#">restart-time</a>
<b>Configurable</b>	False

**number-of-restarts *number***

<b>Description</b>	The number of times the peer has restarted
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">protocols bgp neighbor peer-address</a> ( <i>ipv4-address   ipv6-address-with-zone</i> ) <a href="#">graceful-restart number-of-restarts number</a>
<b>Tree</b>	<a href="#">number-of-restarts</a>
<b>Configurable</b>	False

**stale-routes-time *number***

<b>Description</b>	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.
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">protocols bgp neighbor peer-address</a> ( <i>ipv4-address   ipv6-address-with-zone</i> ) <a href="#">graceful-restart stale-routes-time number</a>
<b>Tree</b>	<a href="#">stale-routes-time</a>
<b>Range</b>	1 to 3600
<b>Units</b>	seconds
<b>Configurable</b>	True

**import-policy *reference***

<b>Description</b>	Apply an import policy to received BGP routes
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">protocols bgp neighbor peer-address</a> ( <i>ipv4-address   ipv6-address-with-zone</i> ) <a href="#">import-policy reference</a>
<b>Tree</b>	<a href="#">import-policy</a>
<b>Reference</b>	<a href="#">routing-policy policy name</a> <i>string</i> <i>string</i>
<b>Configurable</b>	True

**ipv4-unicast**

<b>Description</b>	Options related to the IPv4-unicast address family
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">protocols bgp neighbor peer-address</a> ( <i>ipv4-address   ipv6-address-with-zone</i> ) <a href="#">ipv4-unicast</a>
<b>Tree</b>	<a href="#">ipv4-unicast</a>
<b>Configurable</b>	True

**active-routes *number***

<b>Description</b>	The number of IPv4 unicast received from the peer that are currently used for forwarding
<b>Context</b>	<a href="#">network-instance name</a> <a href="#">string</a> <a href="#">protocols bgp neighbor peer-address</a> ( <a href="#">ipv4-address</a>   <a href="#">ipv6-address-with-zone</a> ) <a href="#">ipv4-unicast active-routes</a> <a href="#">number</a>
<b>Tree</b>	<a href="#">active-routes</a>
<b>Configurable</b>	False

**admin-state *keyword***

<b>Description</b>	Administratively enable or disable the IPv4 unicast address family on the BGP session
<b>Context</b>	<a href="#">network-instance name</a> <a href="#">string</a> <a href="#">protocols bgp neighbor peer-address</a> ( <a href="#">ipv4-address</a>   <a href="#">ipv6-address-with-zone</a> ) <a href="#">ipv4-unicast admin-state</a> <a href="#">keyword</a>
<b>Tree</b>	<a href="#">admin-state</a>
<b>Options</b>	<ul style="list-style-type: none"> <li>• enable</li> <li>• disable</li> </ul>
<b>Configurable</b>	True

**advertise-ipv6-next-hops *boolean***

<b>Description</b>	<p>Enables advertisement of IPv4 routes with IPv6 next-hops to the peer</p> <p>When set to true, BGP advertises IPv4-unicast routes using MP-BGP. If the local-address towards the peer is an IPv6 address and BGP is supposed to apply next-hop-self the MP_REACH_NLRI will encode the IPv6 local-address as the BGP next-hop. When set to false, BGP is required to advertise an IPv4 next-hop with every IPv4 route (and to encode that in the NEXT_HOP attribute).</p>
<b>Context</b>	<a href="#">network-instance name</a> <a href="#">string</a> <a href="#">protocols bgp neighbor peer-address</a> ( <a href="#">ipv4-address</a>   <a href="#">ipv6-address-with-zone</a> ) <a href="#">ipv4-unicast advertise-ipv6-next-hops</a> <a href="#">boolean</a>
<b>Tree</b>	<a href="#">advertise-ipv6-next-hops</a>
<b>Configurable</b>	True

**oper-state *keyword***

<b>Description</b>	Enter the oper-state context
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<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">protocols bgp neighbor peer-address</a> ( <i>ipv4-address   ipv6-address-with-zone</i> ) <a href="#">ipv4-unicast oper-state keyword</a>
<b>Tree</b>	<a href="#">oper-state</a>
<b>Options</b>	<ul style="list-style-type: none"> <li>• up Negotiated operational state of the IPv4 unicast address family is up</li> <li>• down Negotiated operational state of the IPv4 unicast address family is down</li> </ul>
<b>Configurable</b>	False

### prefix-limit

<b>Description</b>	Options for configuring the maximum number of IPv4 routes allowed to be received from the peer
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">protocols bgp neighbor peer-address</a> ( <i>ipv4-address   ipv6-address-with-zone</i> ) <a href="#">ipv4-unicast prefix-limit</a>
<b>Tree</b>	<a href="#">prefix-limit</a>
<b>Configurable</b>	True

### max-received-routes *number*

<b>Description</b>	Maximum number of IPv4 routes that will be accepted from the neighbor, counting routes accepted and rejected by import policies
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">protocols bgp neighbor peer-address</a> ( <i>ipv4-address   ipv6-address-with-zone</i> ) <a href="#">ipv4-unicast prefix-limit max-received-routes number</a>
<b>Tree</b>	<a href="#">max-received-routes</a>
<b>Range</b>	1 to 4294967295
<b>Configurable</b>	True

### warning-threshold-pct *number*

<b>Description</b>	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
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">protocols bgp neighbor peer-address</a> ( <i>ipv4-address   ipv6-address-with-zone</i> ) <a href="#">ipv4-unicast prefix-limit warning-threshold-pct number</a>
<b>Tree</b>	<a href="#">warning-threshold-pct</a>
<b>Range</b>	0 to 100

**Configurable** True

### receive-ipv6-next-hops *boolean*

**Description** Enables the advertisement of the RFC 5549 capability to receive IPv4 routes with IPv6 next-hops

When set to true, BGP advertises an extended NH encoding (RFC 5549) capability to the peer. This capability indicates that local router is prepared to accept BGP routes for IPv4 NLRI with IPv6 next-hops from the peer. When set to false, BGP handles received IPV4 routes with IPv6 next-hops as an error and applies treat-as-withdraw.

**Context** [network-instance name](#) [string protocols bgp neighbor peer-address \(ipv4-address | ipv6-address-with-zone\)](#) [ipv4-unicast receive-ipv6-next-hops boolean](#)

**Tree** [receive-ipv6-next-hops](#)

**Configurable** True

### received-routes *number*

**Description** The number of IPv4 unicast routes received from the peer, including routes rejected by import policy

**Context** [network-instance name](#) [string protocols bgp neighbor peer-address \(ipv4-address | ipv6-address-with-zone\)](#) [ipv4-unicast received-routes number](#)

**Tree** [received-routes](#)

**Configurable** False

### rejected-routes *number*

**Description** The number of IPv4 unicast routes received from the peer that were rejected by import policy

**Context** [network-instance name](#) [string protocols bgp neighbor peer-address \(ipv4-address | ipv6-address-with-zone\)](#) [ipv4-unicast rejected-routes number](#)

**Tree** [rejected-routes](#)

**Configurable** False

### sent-routes *number*

**Description** The number of IPv4 unicast routes advertised as reachable to the peer

**Context** [network-instance name](#) [string protocols bgp neighbor peer-address \(ipv4-address | ipv6-address-with-zone\)](#) [ipv4-unicast sent-routes number](#)



**Tree** [sent-routes](#)

**Configurable** False

## ipv6-unicast

**Description** Options related to the IPv6-unicast address family

**Context** [network-instance name string protocols bgp neighbor peer-address \(ipv4-address | ipv6-address-with-zone\) ipv6-unicast](#)

**Tree** [ipv6-unicast](#)

**Configurable** True

## active-routes *number*

**Description** The number of IPv6 unicast received from the peer that are currently used for forwarding

**Context** [network-instance name string protocols bgp neighbor peer-address \(ipv4-address | ipv6-address-with-zone\) ipv6-unicast active-routes number](#)

**Tree** [active-routes](#)

**Configurable** False

## admin-state *keyword*

**Description** Administratively enable or disable the IPv6 unicast address family on the BGP session

**Context** [network-instance name string protocols bgp neighbor peer-address \(ipv4-address | ipv6-address-with-zone\) ipv6-unicast admin-state keyword](#)

**Tree** [admin-state](#)

**Options**

- enable
- disable

**Configurable** True

## oper-state *keyword*

**Description** Enter the oper-state context

**Context** [network-instance name string protocols bgp neighbor peer-address \(ipv4-address | ipv6-address-with-zone\) ipv6-unicast oper-state keyword](#)

**Tree** [oper-state](#)

<b>Options</b>	<ul style="list-style-type: none"> <li>• up Negotiated operational state of the IPv6 unicast address family is up</li> <li>• down Negotiated operational state of the IPv6 unicast address family is down</li> </ul>
<b>Configurable</b>	False

### prefix-limit

<b>Description</b>	Options for configuring the maximum number of IPv6 routes allowed to be received from the peer
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">protocols bgp neighbor peer-address</a> ( <i>ipv4-address</i>   <i>ipv6-address-with-zone</i> ) <a href="#">ipv6-unicast prefix-limit</a>
<b>Tree</b>	<a href="#">prefix-limit</a>
<b>Configurable</b>	True

### max-received-routes *number*

<b>Description</b>	Maximum number of IPv6 routes that will be accepted from the neighbor, counting routes accepted and rejected by import policies
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">protocols bgp neighbor peer-address</a> ( <i>ipv4-address</i>   <i>ipv6-address-with-zone</i> ) <a href="#">ipv6-unicast prefix-limit max-received-routes number</a>
<b>Tree</b>	<a href="#">max-received-routes</a>
<b>Range</b>	1 to 4294967295
<b>Configurable</b>	True

### warning-threshold-pct *number*

<b>Description</b>	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
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">protocols bgp neighbor peer-address</a> ( <i>ipv4-address</i>   <i>ipv6-address-with-zone</i> ) <a href="#">ipv6-unicast prefix-limit warning-threshold-pct number</a>
<b>Tree</b>	<a href="#">warning-threshold-pct</a>
<b>Range</b>	0 to 100
<b>Configurable</b>	True

**received-routes *number***

<b>Description</b>	The number of IPv6 unicast routes received from the peer, including routes rejected by import policy
<b>Context</b>	<a href="#">network-instance name</a> <a href="#">string</a> <a href="#">protocols</a> <a href="#">bgp</a> <a href="#">neighbor</a> <a href="#">peer-address</a> ( <a href="#">ipv4-address</a>   <a href="#">ipv6-address-with-zone</a> ) <a href="#">ipv6-unicast</a> <a href="#">received-routes</a> <a href="#">number</a>
<b>Tree</b>	<a href="#">received-routes</a>
<b>Configurable</b>	False

**rejected-routes *number***

<b>Description</b>	The number of IPv6 unicast routes received from the peer that were rejected by import policy
<b>Context</b>	<a href="#">network-instance name</a> <a href="#">string</a> <a href="#">protocols</a> <a href="#">bgp</a> <a href="#">neighbor</a> <a href="#">peer-address</a> ( <a href="#">ipv4-address</a>   <a href="#">ipv6-address-with-zone</a> ) <a href="#">ipv6-unicast</a> <a href="#">rejected-routes</a> <a href="#">number</a>
<b>Tree</b>	<a href="#">rejected-routes</a>
<b>Configurable</b>	False

**sent-routes *number***

<b>Description</b>	The number of IPv6 unicast routes advertised as reachable to the peer
<b>Context</b>	<a href="#">network-instance name</a> <a href="#">string</a> <a href="#">protocols</a> <a href="#">bgp</a> <a href="#">neighbor</a> <a href="#">peer-address</a> ( <a href="#">ipv4-address</a>   <a href="#">ipv6-address-with-zone</a> ) <a href="#">ipv6-unicast</a> <a href="#">sent-routes</a> <a href="#">number</a>
<b>Tree</b>	<a href="#">sent-routes</a>
<b>Configurable</b>	False

**last-established *string***

<b>Description</b>	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.
<b>Context</b>	<a href="#">network-instance name</a> <a href="#">string</a> <a href="#">protocols</a> <a href="#">bgp</a> <a href="#">neighbor</a> <a href="#">peer-address</a> ( <a href="#">ipv4-address</a>   <a href="#">ipv6-address-with-zone</a> ) <a href="#">last-established</a> <a href="#">string</a>
<b>Tree</b>	<a href="#">last-established</a>
<b>String Length</b>	20 to 32
<b>Configurable</b>	False

## last-event keyword

<b>Description</b>	Enter the last-event context
<b>Context</b>	<a href="#">network-instance name</a> <a href="#">string protocols bgp neighbor peer-address</a> ( <a href="#">ipv4-address</a>   <a href="#">ipv6-address-with-zone</a> ) <a href="#">last-event keyword</a>
<b>Tree</b>	<a href="#">last-event</a>
<b>Options</b>	<ul style="list-style-type: none"><li>• none</li><li>• start</li><li>• stop</li><li>• open</li><li>• close</li><li>• openFail</li><li>• error</li><li>• connectRetry</li><li>• holdTime</li><li>• keepAlive</li><li>• recvOpen</li><li>• recvKeepAlive</li><li>• recvUpdate</li><li>• recvNotify</li><li>• startPassive</li><li>• parseError</li><li>• outOfMemory</li><li>• rtmLimitExceed</li><li>• outOfProtNHIndex</li><li>• outOfNHIndex</li><li>• labelAllocFailed</li><li>• lspldAllocFailed</li><li>• collisionResolution</li><li>• adminShutdown</li><li>• adminReset</li><li>• configChange</li><li>• maxPrefixExceed</li><li>• maxPfxExcdLog</li><li>• trackingPolMismatch</li><li>• receivedMalformedAttr</li><li>• adminResetHard</li></ul>

	<ul style="list-style-type: none"> <li>peerDamping</li> </ul>
<b>Configurable</b>	False

### **last-notification-error-code *keyword***

<b>Description</b>	The error code in the last NOTIFICATION sent to this peer.
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">protocols bgp neighbor peer-address</a> ( <i>ipv4-address   ipv6-address-with-zone</i> ) <a href="#">last-notification-error-code</a> <i>keyword</i>
<b>Tree</b>	<a href="#">last-notification-error-code</a>
<b>Options</b>	<ul style="list-style-type: none"> <li>Message Header Error</li> <li>Open Message Error</li> <li>Update Message Error</li> <li>Hold Timer Error</li> <li>Finite State Machine Error</li> <li>Cease</li> </ul>
<b>Configurable</b>	False

### **last-notification-error-subcode *keyword***

<b>Description</b>	The error subcode in the last NOTIFICATION sent to this peer.
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">protocols bgp neighbor peer-address</a> ( <i>ipv4-address   ipv6-address-with-zone</i> ) <a href="#">last-notification-error-subcode</a> <i>keyword</i>
<b>Tree</b>	<a href="#">last-notification-error-subcode</a>
<b>Options</b>	<ul style="list-style-type: none"> <li>Connection Not Synchronized</li> <li>Bad Message Length</li> <li>Bad Message Type</li> <li>Unsupported Version Number</li> <li>Bad Peer As</li> <li>Bad BGP Identifier</li> <li>Unsupported Optional Parameter</li> <li>Unacceptable Hold Time</li> <li>UPDATE Message Error subcodes</li> <li>Malformed Attribute List</li> <li>Unrecognized Well-known Attribute</li> <li>Missing Well-known Attribute</li> <li>Attribute Flags Error</li> <li>Attribute Length Error</li> </ul>

- 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

**Configurable** False

### **last-state keyword**

**Description** Previous state of the session

**Context** [network-instance name string protocols bgp neighbor peer-address \(ipv4-address | ipv6-address-with-zone\) last-state keyword](#)

**Tree** [last-state](#)

**Options**

- idle
- connect
- active
- opensent
- openconfirm
- established

**Configurable** False

### **local-as as-number number**

**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 \(ipv4-address | ipv6-address-with-zone\) local-as as-number number](#)

**Tree** [local-as](#)

**Configurable** True

**Max. Elements** 1

### **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](#) *string* [protocols bgp neighbor peer-address](#) (*ipv4-address | ipv6-address-with-zone*) [local-as as-number](#) *number*

**Range** 1 to 4294967295

**Configurable** True

### **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](#) *string* [protocols bgp neighbor peer-address](#) (*ipv4-address | ipv6-address-with-zone*) [local-as as-number](#) *number* [prepend-global-as](#) *boolean*

**Tree** [prepend-global-as](#)

**Configurable** True

### **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](#) *string* [protocols bgp neighbor peer-address](#) (*ipv4-address | ipv6-address-with-zone*) [local-as as-number](#) *number* [prepend-local-as](#) *boolean*

**Tree** [prepend-local-as](#)

**Configurable** True

### **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.

<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">protocols bgp neighbor peer-address</a> ( <i>ipv4-address   ipv6-address-with-zone</i> ) <a href="#">local-preference</a> <i>number</i>
<b>Tree</b>	<a href="#">local-preference</a>
<b>Configurable</b>	True

### **maintenance-group *string***

<b>Description</b>	State field to display the maintenance group to which this neighbor belongs to.
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">protocols bgp neighbor peer-address</a> ( <i>ipv4-address   ipv6-address-with-zone</i> ) <a href="#">maintenance-group</a> <i>string</i>
<b>Tree</b>	<a href="#">maintenance-group</a>
<b>Configurable</b>	False

### **multihop**

<b>Description</b>	Configuration parameters specifying the multihop behaviour for an EBGP peer. This is not applicable to an IBGP peer.
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">protocols bgp neighbor peer-address</a> ( <i>ipv4-address   ipv6-address-with-zone</i> ) <a href="#">multihop</a>
<b>Tree</b>	<a href="#">multihop</a>
<b>Configurable</b>	True

### **admin-state *keyword***

<b>Description</b>	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.
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">protocols bgp neighbor peer-address</a> ( <i>ipv4-address   ipv6-address-with-zone</i> ) <a href="#">multihop admin-state</a> <i>keyword</i>
<b>Tree</b>	<a href="#">admin-state</a>
<b>Options</b>	<ul style="list-style-type: none"> <li>• enable</li> <li>• disable</li> </ul>
<b>Configurable</b>	True



**maximum-hops *number***

<b>Description</b>	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.
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">protocols bgp neighbor peer-address</a> ( <i>ipv4-address   ipv6-address-with-zone</i> ) <a href="#">multihop maximum-hops number</a>
<b>Tree</b>	<a href="#">maximum-hops</a>
<b>Range</b>	1 to 255
<b>Configurable</b>	True

**next-hop-self *boolean***

<b>Description</b>	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.
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">protocols bgp neighbor peer-address</a> ( <i>ipv4-address   ipv6-address-with-zone</i> ) <a href="#">next-hop-self boolean</a>
<b>Tree</b>	<a href="#">next-hop-self</a>
<b>Configurable</b>	True

**peer-as *number***

<b>Description</b>	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.
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">protocols bgp neighbor peer-address</a> ( <i>ipv4-address   ipv6-address-with-zone</i> ) <a href="#">peer-as number</a>
<b>Tree</b>	<a href="#">peer-as</a>
<b>Range</b>	1 to 4294967295
<b>Configurable</b>	True

**peer-group *reference***

<b>Description</b>	A reference to the peer-group template to use for this BGP session
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	This is not immutable.
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">protocols bgp neighbor peer-address</a> ( <i>ipv4-address</i>   <i>ipv6-address-with-zone</i> ) <a href="#">peer-group reference</a>
<b>Tree</b>	<a href="#">peer-group</a>
<b>Reference</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">protocols bgp group group-name</a> <i>string</i>
<b>Configurable</b>	True

**peer-router-id** *string*

<b>Description</b>	The BGP identifier advertised by the peer in its OPEN message
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">protocols bgp neighbor peer-address</a> ( <i>ipv4-address</i>   <i>ipv6-address-with-zone</i> ) <a href="#">peer-router-id</a> <i>string</i>
<b>Tree</b>	<a href="#">peer-router-id</a>
<b>Configurable</b>	False

**received-afi-safi** *keyword*

<b>Description</b>	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
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">protocols bgp neighbor peer-address</a> ( <i>ipv4-address</i>   <i>ipv6-address-with-zone</i> ) <a href="#">received-afi-safi</a> <i>keyword</i>
<b>Tree</b>	<a href="#">received-afi-safi</a>
<b>Options</b>	<ul style="list-style-type: none"> <li>• <a href="#">ipv4-unicast</a></li> <li>• <a href="#">ipv6-unicast</a></li> </ul>
<b>Configurable</b>	False

**received-capabilities** *keyword*

<b>Description</b>	List of BGP capabilities received by the local routing device from the peer
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">protocols bgp neighbor peer-address</a> ( <i>ipv4-address</i>   <i>ipv6-address-with-zone</i> ) <a href="#">received-capabilities</a> <i>keyword</i>
<b>Tree</b>	<a href="#">received-capabilities</a>
<b>Options</b>	<ul style="list-style-type: none"> <li>• <a href="#">MP_BGP</a></li> <li>• <a href="#">ROUTE_REFRESH</a></li> <li>• <a href="#">EXT_NH_ENCODING</a></li> <li>• <a href="#">GRACEFUL_RESTART</a></li> <li>• <a href="#">4-OCTET_ASN</a></li> </ul>

- ORF\_SEND\_EXCOMM
- ORF\_RECEIVE\_EXCOMM
- ADD\_PATH
- LONG\_LIVED\_GR

**Configurable** False

### received-end-of-rib *keyword*

**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 | ipv6-address-with-zone*) [received-end-of-rib](#) *keyword*

**Tree** [received-end-of-rib](#)

**Options**

- ipv4-unicast
- ipv6-unicast

**Configurable** False

### 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 | ipv6-address-with-zone*) [received-messages](#)

**Tree** [received-messages](#)

**Configurable** False

### last-update-time *string*

**Description** The timestamp when the last UPDATE was received from this peer.

**Context** [network-instance name](#) *string* [protocols bgp neighbor peer-address](#) (*ipv4-address | ipv6-address-with-zone*) [received-messages](#) [last-update-time](#) *string*

**Tree** [last-update-time](#)

**String Length** 20 to 32

**Configurable** False

**malformed-updates *number***

<b>Description</b>	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)
<b>Context</b>	<a href="#">network-instance name</a> <a href="#">string</a> <a href="#">protocols bgp neighbor peer-address (ipv4-address   ipv6-address-with-zone)</a> <a href="#">received-messages malformed-updates number</a>
<b>Tree</b>	<a href="#">malformed-updates</a>
<b>Default</b>	0
<b>Configurable</b>	False

**queue-depth *number***

<b>Description</b>	The number of messages received from the peer currently queued.
<b>Context</b>	<a href="#">network-instance name</a> <a href="#">string</a> <a href="#">protocols bgp neighbor peer-address (ipv4-address   ipv6-address-with-zone)</a> <a href="#">received-messages queue-depth number</a>
<b>Tree</b>	<a href="#">queue-depth</a>
<b>Configurable</b>	False

**route-refresh *number***

<b>Description</b>	Number of BGP ROUTE_REFRESH messages received from the peer over the lifetime of its configuration or since the last clear.
<b>Context</b>	<a href="#">network-instance name</a> <a href="#">string</a> <a href="#">protocols bgp neighbor peer-address (ipv4-address   ipv6-address-with-zone)</a> <a href="#">received-messages route-refresh number</a>
<b>Tree</b>	<a href="#">route-refresh</a>
<b>Default</b>	0
<b>Configurable</b>	False

**total-messages *number***

<b>Description</b>	Total number of BGP messages received from the peer over the lifetime of its configuration or since the last clear.
<b>Context</b>	<a href="#">network-instance name</a> <a href="#">string</a> <a href="#">protocols bgp neighbor peer-address (ipv4-address   ipv6-address-with-zone)</a> <a href="#">received-messages total-messages number</a>
<b>Tree</b>	<a href="#">total-messages</a>
<b>Default</b>	0
<b>Configurable</b>	False

**total-non-updates *number***

<b>Description</b>	Number of BGP NON UPDATE messages received from the peer over the lifetime of its configuration or since the last clear.
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">protocols bgp neighbor peer-address</a> ( <i>ipv4-address   ipv6-address-with-zone</i> ) <a href="#">received-messages total-non-updates number</a>
<b>Tree</b>	<a href="#">total-non-updates</a>
<b>Configurable</b>	False

**total-updates *number***

<b>Description</b>	Number of BGP UPDATE messages received from the peer over the lifetime of its configuration or since the last clear.
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">protocols bgp neighbor peer-address</a> ( <i>ipv4-address   ipv6-address-with-zone</i> ) <a href="#">received-messages total-updates number</a>
<b>Tree</b>	<a href="#">total-updates</a>
<b>Default</b>	0
<b>Configurable</b>	False

**route-reflector**

<b>Description</b>	Container with route reflection configuration options.
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">protocols bgp neighbor peer-address</a> ( <i>ipv4-address   ipv6-address-with-zone</i> ) <a href="#">route-reflector</a>
<b>Tree</b>	<a href="#">route-reflector</a>
<b>Configurable</b>	True

**client *boolean***

<b>Description</b>	When this is set to true this BGP session is considered an RR client.
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">protocols bgp neighbor peer-address</a> ( <i>ipv4-address   ipv6-address-with-zone</i> ) <a href="#">route-reflector client boolean</a>
<b>Tree</b>	<a href="#">client</a>
<b>Configurable</b>	True

**cluster-id *string***

<b>Description</b>	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.
<b>Context</b>	<a href="#">network-instance name</a> <a href="#">string</a> <a href="#">protocols bgp neighbor peer-address</a> ( <a href="#">ipv4-address</a>   <a href="#">ipv6-address-with-zone</a> ) <a href="#">route-reflector cluster-id</a> <a href="#">string</a>
<b>Tree</b>	<a href="#">cluster-id</a>
<b>Configurable</b>	True

**send-community**

<b>Description</b>	Options for controlling the sending of BGP communities to the peer
<b>Context</b>	<a href="#">network-instance name</a> <a href="#">string</a> <a href="#">protocols bgp neighbor peer-address</a> ( <a href="#">ipv4-address</a>   <a href="#">ipv6-address-with-zone</a> ) <a href="#">send-community</a>
<b>Tree</b>	<a href="#">send-community</a>
<b>Configurable</b>	True

**large *boolean***

<b>Description</b>	The false setting causes BGP to strip all large (12 byte) BGP communities from all outbound routes advertised to the peer
<b>Context</b>	<a href="#">network-instance name</a> <a href="#">string</a> <a href="#">protocols bgp neighbor peer-address</a> ( <a href="#">ipv4-address</a>   <a href="#">ipv6-address-with-zone</a> ) <a href="#">send-community large</a> <a href="#">boolean</a>
<b>Tree</b>	<a href="#">large</a>
<b>Configurable</b>	True

**standard *boolean***

<b>Description</b>	The false setting causes BGP to strip all standard (4 byte) communities from all outbound routes advertised to the peer
<b>Context</b>	<a href="#">network-instance name</a> <a href="#">string</a> <a href="#">protocols bgp neighbor peer-address</a> ( <a href="#">ipv4-address</a>   <a href="#">ipv6-address-with-zone</a> ) <a href="#">send-community standard</a> <a href="#">boolean</a>
<b>Tree</b>	<a href="#">standard</a>
<b>Configurable</b>	True

**send-default-route**

<b>Description</b>	Options for controlling the generation of default routes towards the peer
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<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">protocols bgp neighbor peer-address</a> ( <i>ipv4-address   ipv6-address-with-zone</i> ) <a href="#">send-default-route</a>
<b>Tree</b>	<a href="#">send-default-route</a>
<b>Configurable</b>	True

### **export-policy *reference***

<b>Description</b>	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.
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">protocols bgp neighbor peer-address</a> ( <i>ipv4-address   ipv6-address-with-zone</i> ) <a href="#">send-default-route</a> <a href="#">export-policy</a> <i>reference</i>
<b>Tree</b>	<a href="#">export-policy</a>
<b>Reference</b>	<a href="#">routing-policy</a> <i>policy name</i> <i>string</i> <i>string</i>
<b>Configurable</b>	True

### **ipv4-unicast *boolean***

<b>Description</b>	Enables the sending of a synthetically generated default IPv4 route [0/0] to the peer
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">protocols bgp neighbor peer-address</a> ( <i>ipv4-address   ipv6-address-with-zone</i> ) <a href="#">send-default-route</a> <a href="#">ipv4-unicast</a> <i>boolean</i>
<b>Tree</b>	<a href="#">ipv4-unicast</a>
<b>Configurable</b>	True

### **ipv6-unicast *boolean***

<b>Description</b>	Enables the sending of a synthetically generated default IPv6 route [::/0] to the peer
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">protocols bgp neighbor peer-address</a> ( <i>ipv4-address   ipv6-address-with-zone</i> ) <a href="#">send-default-route</a> <a href="#">ipv6-unicast</a> <i>boolean</i>
<b>Tree</b>	<a href="#">ipv6-unicast</a>
<b>Configurable</b>	True

### **sent-end-of-rib *keyword***

<b>Description</b>	List of address families for which this router sent the peer an End of RIB marker
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<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">protocols bgp neighbor peer-address</a> ( <i>ipv4-address   ipv6-address-with-zone</i> ) <a href="#">sent-end-of-rib</a> <i>keyword</i>
<b>Tree</b>	<a href="#">sent-end-of-rib</a>
<b>Options</b>	<ul style="list-style-type: none"> <li>• <a href="#">ipv4-unicast</a></li> <li>• <a href="#">ipv6-unicast</a></li> </ul>
<b>Configurable</b>	False

### sent-messages

<b>Description</b>	Container for state information about BGP messages sent to the peer.
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">protocols bgp neighbor peer-address</a> ( <i>ipv4-address   ipv6-address-with-zone</i> ) <a href="#">sent-messages</a>
<b>Tree</b>	<a href="#">sent-messages</a>
<b>Configurable</b>	False

### queue-depth *number*

<b>Description</b>	The number of messages queued to be sent to the peer.
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">protocols bgp neighbor peer-address</a> ( <i>ipv4-address   ipv6-address-with-zone</i> ) <a href="#">sent-messages queue-depth</a> <i>number</i>
<b>Tree</b>	<a href="#">queue-depth</a>
<b>Configurable</b>	False

### route-refresh *number*

<b>Description</b>	Number of BGP ROUTE_REFRESH messages sent to the peer over the lifetime of its configuration or since the last clear.
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">protocols bgp neighbor peer-address</a> ( <i>ipv4-address   ipv6-address-with-zone</i> ) <a href="#">sent-messages route-refresh</a> <i>number</i>
<b>Tree</b>	<a href="#">route-refresh</a>
<b>Default</b>	0
<b>Configurable</b>	False

### total-messages *number*

<b>Description</b>	Total number of BGP messages sent to the peer over the lifetime of its configuration or since the last clear.
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<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">protocols bgp neighbor peer-address</a> ( <i>ipv4-address   ipv6-address-with-zone</i> ) <a href="#">sent-messages total-messages</a> <i>number</i>
<b>Tree</b>	<a href="#">total-messages</a>
<b>Default</b>	0
<b>Configurable</b>	False

### **total-non-updates** *number*

<b>Description</b>	Number of BGP NON UPDATE messages sent to the peer over the lifetime of its configuration or since the last clear.
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">protocols bgp neighbor peer-address</a> ( <i>ipv4-address   ipv6-address-with-zone</i> ) <a href="#">sent-messages total-non-updates</a> <i>number</i>
<b>Tree</b>	<a href="#">total-non-updates</a>
<b>Configurable</b>	False

### **total-updates** *number*

<b>Description</b>	Number of BGP UPDATE messages sent to the peer over the lifetime of its configuration or since the last clear.
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">protocols bgp neighbor peer-address</a> ( <i>ipv4-address   ipv6-address-with-zone</i> ) <a href="#">sent-messages total-updates</a> <i>number</i>
<b>Tree</b>	<a href="#">total-updates</a>
<b>Default</b>	0
<b>Configurable</b>	False

### **session-state** *keyword*

<b>Description</b>	Current state of the session
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">protocols bgp neighbor peer-address</a> ( <i>ipv4-address   ipv6-address-with-zone</i> ) <a href="#">session-state</a> <i>keyword</i>
<b>Tree</b>	<a href="#">session-state</a>
<b>Options</b>	<ul style="list-style-type: none"> <li>• idle</li> <li>• connect</li> <li>• active</li> <li>• opensent</li> <li>• openconfirm</li> <li>• established</li> </ul>
<b>Configurable</b>	False

**slow-peer keyword**

<b>Description</b>	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.
<b>Context</b>	<a href="#">network-instance name</a> <a href="#">string</a> <a href="#">protocols</a> <a href="#">bgp</a> <a href="#">neighbor</a> <a href="#">peer-address</a> ( <a href="#">ipv4-address</a>   <a href="#">ipv6-address-with-zone</a> ) <a href="#">slow-peer</a> <a href="#">keyword</a>
<b>Tree</b>	<a href="#">slow-peer</a>
<b>Options</b>	<ul style="list-style-type: none"> <li>• yes</li> <li>• no</li> <li>• unknown</li> </ul>
<b>Configurable</b>	False

**timers**

<b>Description</b>	Enter the timers context
<b>Context</b>	<a href="#">network-instance name</a> <a href="#">string</a> <a href="#">protocols</a> <a href="#">bgp</a> <a href="#">neighbor</a> <a href="#">peer-address</a> ( <a href="#">ipv4-address</a>   <a href="#">ipv6-address-with-zone</a> ) <a href="#">timers</a>
<b>Tree</b>	<a href="#">timers</a>
<b>Configurable</b>	True

**connect-retry number**

<b>Description</b>	The time interval in seconds between successive attempts to establish a session with a peer
<b>Context</b>	<a href="#">network-instance name</a> <a href="#">string</a> <a href="#">protocols</a> <a href="#">bgp</a> <a href="#">neighbor</a> <a href="#">peer-address</a> ( <a href="#">ipv4-address</a>   <a href="#">ipv6-address-with-zone</a> ) <a href="#">timers</a> <a href="#">connect-retry</a> <a href="#">number</a>
<b>Tree</b>	<a href="#">connect-retry</a>
<b>Range</b>	1 to 65535
<b>Units</b>	seconds
<b>Configurable</b>	True

**hold-time number**

<b>Description</b>	The hold-time interval in seconds that the router proposes to the peer in its OPEN message
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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.

<b>Context</b>	<a href="#">network-instance name</a> <a href="#">string</a> <a href="#">protocols</a> <a href="#">bgp</a> <a href="#">neighbor</a> <a href="#">peer-address</a> ( <a href="#">ipv4-address</a>   <a href="#">ipv6-address-with-zone</a> ) <a href="#">timers</a> <a href="#">hold-time</a> <a href="#">number</a>
<b>Tree</b>	<a href="#">hold-time</a>
<b>Range</b>	0   3 to 65535
<b>Units</b>	seconds
<b>Configurable</b>	True

### keepalive-interval *number*

<b>Description</b>	<p>The interval in seconds between successive keepalive messages sent to the peer</p> <p>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.</p>
<b>Context</b>	<a href="#">network-instance name</a> <a href="#">string</a> <a href="#">protocols</a> <a href="#">bgp</a> <a href="#">neighbor</a> <a href="#">peer-address</a> ( <a href="#">ipv4-address</a>   <a href="#">ipv6-address-with-zone</a> ) <a href="#">timers</a> <a href="#">keepalive-interval</a> <a href="#">number</a>
<b>Tree</b>	<a href="#">keepalive-interval</a>
<b>Range</b>	0 to 21845
<b>Units</b>	seconds
<b>Configurable</b>	True

### minimum-advertisement-interval *number*

<b>Description</b>	<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>
<b>Context</b>	<a href="#">network-instance name</a> <a href="#">string</a> <a href="#">protocols</a> <a href="#">bgp</a> <a href="#">neighbor</a> <a href="#">peer-address</a> ( <a href="#">ipv4-address</a>   <a href="#">ipv6-address-with-zone</a> ) <a href="#">timers</a> <a href="#">minimum-advertisement-interval</a> <a href="#">number</a>
<b>Tree</b>	<a href="#">minimum-advertisement-interval</a>
<b>Range</b>	1 to 255
<b>Units</b>	seconds
<b>Configurable</b>	True

**negotiated-hold-time *number***

<b>Description</b>	The operational hold-time 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.
<b>Context</b>	<a href="#">network-instance name</a> <a href="#">string</a> <a href="#">protocols</a> <a href="#">bgp</a> <a href="#">neighbor</a> <a href="#">peer-address</a> ( <a href="#">ipv4-address</a>   <a href="#">ipv6-address-with-zone</a> ) <a href="#">timers</a> <a href="#">negotiated-hold-time</a> <a href="#">number</a>
<b>Tree</b>	<a href="#">negotiated-hold-time</a>
<b>Configurable</b>	False

**negotiated-keepalive-interval *number***

<b>Description</b>	The operational keepalive interval 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.
<b>Context</b>	<a href="#">network-instance name</a> <a href="#">string</a> <a href="#">protocols</a> <a href="#">bgp</a> <a href="#">neighbor</a> <a href="#">peer-address</a> ( <a href="#">ipv4-address</a>   <a href="#">ipv6-address-with-zone</a> ) <a href="#">timers</a> <a href="#">negotiated-keepalive-interval</a> <a href="#">number</a>
<b>Tree</b>	<a href="#">negotiated-keepalive-interval</a>
<b>Configurable</b>	False

**next-connect-retry-time *string***

<b>Description</b>	The time when the next connect retry attempt will occur
<b>Context</b>	<a href="#">network-instance name</a> <a href="#">string</a> <a href="#">protocols</a> <a href="#">bgp</a> <a href="#">neighbor</a> <a href="#">peer-address</a> ( <a href="#">ipv4-address</a>   <a href="#">ipv6-address-with-zone</a> ) <a href="#">timers</a> <a href="#">next-connect-retry-time</a> <a href="#">string</a>
<b>Tree</b>	<a href="#">next-connect-retry-time</a>
<b>String Length</b>	20 to 32
<b>Configurable</b>	False

**trace-options**

<b>Description</b>	Debug traceoptions for BGP
<b>Context</b>	<a href="#">network-instance name</a> <a href="#">string</a> <a href="#">protocols</a> <a href="#">bgp</a> <a href="#">neighbor</a> <a href="#">peer-address</a> ( <a href="#">ipv4-address</a>   <a href="#">ipv6-address-with-zone</a> ) <a href="#">trace-options</a>
<b>Tree</b>	<a href="#">trace-options</a>
<b>Configurable</b>	True

**flag name keyword**

<b>Description</b>	Tracing parameters
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">protocols bgp neighbor peer-address</a> ( <i>ipv4-address</i>   <i>ipv6-address-with-zone</i> ) <a href="#">trace-options flag name keyword</a>
<b>Tree</b>	<a href="#">flag</a>
<b>Configurable</b>	True

**name keyword**

<b>Description</b>	Enter the name context
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">protocols bgp neighbor peer-address</a> ( <i>ipv4-address</i>   <i>ipv6-address-with-zone</i> ) <a href="#">trace-options flag name keyword</a>
<b>Options</b>	<ul style="list-style-type: none"> <li>• events Trace all BGP events.</li> <li>• packets Trace all BGP protocol packets.</li> <li>• open Trace BGP open packets.</li> <li>• keepalive Trace BGP keepalive packets.</li> <li>• graceful-restart Trace Graceful Restart events.</li> <li>• timers Trace routing protocol timer processing.</li> <li>• route Trace BGP route table manager.</li> <li>• notification Trace Bgp notification.</li> <li>• socket Trace socket info.</li> <li>• update Trace update info.</li> </ul>
<b>Configurable</b>	True

**modifier keyword**

<b>Description</b>	Enter the modifier context
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">protocols</a> <a href="#">bgp</a> <a href="#">neighbor</a> <a href="#">peer-address</a> ( <a href="#">ipv4-address</a>   <a href="#">ipv6-address-with-zone</a> ) <a href="#">trace-options</a> <a href="#">flag</a> <a href="#">name</a> <a href="#">keyword</a> <a href="#">modifier</a> <a href="#">keyword</a>
<b>Tree</b>	<a href="#">modifier</a>
<b>Options</b>	<ul style="list-style-type: none"> <li>• detail To enable detailed tracing. Includes both received and sent packets.</li> <li>• receive To enable tracing for the packets which are received.</li> <li>• send To enable tracing for the sent packets.</li> </ul>
<b>Configurable</b>	True

**transport**

<b>Description</b>	Enter the transport context
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">protocols</a> <a href="#">bgp</a> <a href="#">neighbor</a> <a href="#">peer-address</a> ( <a href="#">ipv4-address</a>   <a href="#">ipv6-address-with-zone</a> ) <a href="#">transport</a>
<b>Tree</b>	<a href="#">transport</a>
<b>Configurable</b>	True

**local-address ([ipv4-address](#) | [ipv6-address](#) | *string*)**

<b>Description</b>	<p>The local TCP endpoint of used for the BGP session</p> <p>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.</p> <p>This address must be the primary address of an interface, otherwise the session will not come up.</p>
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">protocols</a> <a href="#">bgp</a> <a href="#">neighbor</a> <a href="#">peer-address</a> ( <a href="#">ipv4-address</a>   <a href="#">ipv6-address-with-zone</a> ) <a href="#">transport</a> <a href="#">local-address</a> ( <a href="#">ipv4-address</a>   <a href="#">ipv6-address</a>   <i>string</i> )
<b>Tree</b>	<a href="#">local-address</a>
<b>Configurable</b>	True

**local-port number**

<b>Description</b>	Local TCP port used for the TCP connection to the peer
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<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">protocols bgp neighbor peer-address</a> ( <i>ipv4-address   ipv6-address-with-zone</i> ) <a href="#">transport local-port</a> <i>number</i>
<b>Tree</b>	<a href="#">local-port</a>
<b>Configurable</b>	False

### **passive-mode *boolean***

<b>Description</b>	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.
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">protocols bgp neighbor peer-address</a> ( <i>ipv4-address   ipv6-address-with-zone</i> ) <a href="#">transport passive-mode</a> <i>boolean</i>
<b>Tree</b>	<a href="#">passive-mode</a>
<b>Configurable</b>	True

### **remote-port *number***

<b>Description</b>	Remote TCP port used by the peer for its TCP connection to the local router
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">protocols bgp neighbor peer-address</a> ( <i>ipv4-address   ipv6-address-with-zone</i> ) <a href="#">transport remote-port</a> <i>number</i>
<b>Tree</b>	<a href="#">remote-port</a>
<b>Configurable</b>	False

### **tcp-mss *number***

<b>Description</b>	The maximum segment size for the BGP TCP session  If the configured tcp-mss value is higher than the discovered path MTU it has no effect and the path MTU is used as the operational TCP MSS.
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">protocols bgp neighbor peer-address</a> ( <i>ipv4-address   ipv6-address-with-zone</i> ) <a href="#">transport tcp-mss</a> <i>number</i>
<b>Tree</b>	<a href="#">tcp-mss</a>
<b>Range</b>	536 to 9446
<b>Units</b>	bytes
<b>Configurable</b>	True

**under-maintenance *boolean***

<b>Description</b>	State field to determine if this bgp neighbor is in maintenance mode.
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">protocols bgp neighbor peer-address</a> ( <i>ipv4-address   ipv6-address-with-zone</i> ) <a href="#">under-maintenance</a> <i>boolean</i>
<b>Tree</b>	<a href="#">under-maintenance</a>
<b>Configurable</b>	False

**oper-state *keyword***

<b>Description</b>	Enter the oper-state context
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">protocols bgp oper-state</a> <i>keyword</i>
<b>Tree</b>	<a href="#">oper-state</a>
<b>Options</b>	<ul style="list-style-type: none"> <li>• up Operational state of BGP is up.</li> <li>• down Operational state of BGP is down.</li> </ul>
<b>Configurable</b>	False

**preference**

<b>Description</b>	Options for controlling the route table preference of BGP routes
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">protocols bgp preference</a>
<b>Tree</b>	<a href="#">preference</a>
<b>Configurable</b>	True

**ebgp *number***

<b>Description</b>	The default route table preference for all EBGp learned routes BGP import policies can override this preference value on a route by route basis.
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">protocols bgp preference ebgp</a> <i>number</i>
<b>Tree</b>	<a href="#">ebgp</a>
<b>Default</b>	170
<b>Configurable</b>	True



**ibgp number**

<b>Description</b>	The default route table preference for all IBGP learned routes BGP import policies can override this preference value on a route by route basis.
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">protocols bgp preference</a> <a href="#">ibgp number</a>
<b>Tree</b>	<a href="#">ibgp</a>
<b>Default</b>	170
<b>Configurable</b>	True

**route-advertisement**

<b>Description</b>	Options for controlling route advertisement behavior
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">protocols bgp route-advertisement</a>
<b>Tree</b>	<a href="#">route-advertisement</a>
<b>Configurable</b>	True

**rapid-withdrawal boolean**

<b>Description</b>	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.
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">protocols bgp route-advertisement rapid-withdrawal</a> <i>boolean</i>
<b>Tree</b>	<a href="#">rapid-withdrawal</a>
<b>Default</b>	false
<b>Configurable</b>	True

**wait-for-fib-install boolean**

<b>Description</b>	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.
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">protocols bgp route-advertisement wait-for-fib-install</a> <i>boolean</i>
<b>Tree</b>	<a href="#">wait-for-fib-install</a>

<b>Default</b>	true
<b>Configurable</b>	True

### route-reflector

<b>Description</b>	Container with route reflection configuration options.
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">protocols bgp route-reflector</a>
<b>Tree</b>	<a href="#">route-reflector</a>
<b>Configurable</b>	True

### client *boolean*

<b>Description</b>	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.
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">protocols bgp route-reflector client</a> <i>boolean</i>
<b>Tree</b>	<a href="#">client</a>
<b>Default</b>	false
<b>Configurable</b>	True

### cluster-id *string*

<b>Description</b>	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.
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">protocols bgp route-reflector cluster-id</a> <i>string</i>
<b>Tree</b>	<a href="#">cluster-id</a>
<b>Configurable</b>	True

### router-id (*ipv4-address* | *ipv6-address*)

<b>Description</b>	The BGP identifier used by this BGP instance in all of its OPEN messages Any non-zero value is supported.
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">protocols bgp router-id</a> ( <i>ipv4-address</i>   <i>ipv6-address</i> )
<b>Tree</b>	<a href="#">router-id</a>
<b>Configurable</b>	True

## send-community

<b>Description</b>	Options for controlling the sending of BGP communities to all peers
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">protocols bgp send-community</a>
<b>Tree</b>	<a href="#">send-community</a>
<b>Configurable</b>	True

## large *boolean*

<b>Description</b>	The false setting causes BGP to strip all large (12 byte) BGP communities from all outbound routes advertised to peers
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">protocols bgp send-community large boolean</a>
<b>Tree</b>	<a href="#">large</a>
<b>Default</b>	true
<b>Configurable</b>	True

## standard *boolean*

<b>Description</b>	The false setting causes BGP to strip all standard (4 byte) communities from all outbound routes advertised to peers
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">protocols bgp send-community standard boolean</a>
<b>Tree</b>	<a href="#">standard</a>
<b>Default</b>	true
<b>Configurable</b>	True

## statistics

<b>Description</b>	Container for BGP statistics.
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">protocols bgp statistics</a>
<b>Tree</b>	<a href="#">statistics</a>
<b>Configurable</b>	False

## disabled-peers *number*

<b>Description</b>	The number of configured BGP peers that are administratively disabled
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">protocols bgp statistics disabled-peers number</a>

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<b>Tree</b>	<a href="#">disabled-peers</a>
<b>Configurable</b>	False

**dynamic-peers *number***

<b>Description</b>	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
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">protocols</a> <a href="#">bgp</a> <a href="#">statistics</a> <a href="#">dynamic-peers</a> <i>number</i>
<b>Tree</b>	<a href="#">dynamic-peers</a>
<b>Configurable</b>	False

**path-memory *number***

<b>Description</b>	The total number of bytes required to store the path attribute objects used by all received BGP routes
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">protocols</a> <a href="#">bgp</a> <a href="#">statistics</a> <a href="#">path-memory</a> <i>number</i>
<b>Tree</b>	<a href="#">path-memory</a>
<b>Default</b>	0
<b>Configurable</b>	False

**total-active-routes *number***

<b>Description</b>	The total number of received BGP routes that are active (installed for forwarding), summed across all address families
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">protocols</a> <a href="#">bgp</a> <a href="#">statistics</a> <a href="#">total-active-routes</a> <i>number</i>
<b>Tree</b>	<a href="#">total-active-routes</a>
<b>Default</b>	0
<b>Configurable</b>	False

**total-paths *number***

<b>Description</b>	The total number of path attribute objects used by all received BGP routes
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">protocols</a> <a href="#">bgp</a> <a href="#">statistics</a> <a href="#">total-paths</a> <i>number</i>
<b>Tree</b>	<a href="#">total-paths</a>
<b>Default</b>	0
<b>Configurable</b>	False

### **total-peers *number***

<b>Description</b>	The total number of configured BGP peers
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">protocols bgp statistics total-peers</a> <i>number</i>
<b>Tree</b>	<a href="#">total-peers</a>
<b>Configurable</b>	False

### **total-prefixes *number***

<b>Description</b>	The total number of unique NLRI contained in all received BGP routes associated with the BGP instance or the peer-group.
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">protocols bgp statistics total-prefixes</a> <i>number</i>
<b>Tree</b>	<a href="#">total-prefixes</a>
<b>Configurable</b>	False

### **total-received-routes *number***

<b>Description</b>	The total number of received BGP routes, summed across all address families
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">protocols bgp statistics total-received-routes</a> <i>number</i>
<b>Tree</b>	<a href="#">total-received-routes</a>
<b>Default</b>	0
<b>Configurable</b>	False

### **up-peers *number***

<b>Description</b>	The number of configured BGP peers that are currently in the established state
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">protocols bgp statistics up-peers</a> <i>number</i>
<b>Tree</b>	<a href="#">up-peers</a>
<b>Configurable</b>	False

### **trace-options**

<b>Description</b>	Debug traceoptions for BGP
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">protocols bgp trace-options</a>

<b>Tree</b>	<a href="#">trace-options</a>
<b>Configurable</b>	True

**flag [name keyword](#)**

<b>Description</b>	Tracing parameters
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">protocols bgp trace-options flag name keyword</a>
<b>Tree</b>	<a href="#">flag</a>
<b>Configurable</b>	True

**name [keyword](#)**

<b>Description</b>	Enter the name context
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">protocols bgp trace-options flag name keyword</a>
<b>Options</b>	<ul style="list-style-type: none"> <li>• events Trace all BGP events.</li> <li>• packets Trace all BGP protocol packets.</li> <li>• open Trace BGP open packets.</li> <li>• keepalive Trace BGP keepalive packets.</li> <li>• graceful-restart Trace Graceful Restart events.</li> <li>• timers Trace routing protocol timer processing.</li> <li>• route Trace BGP route table manager.</li> <li>• notification Trace Bgp notification.</li> <li>• socket Trace socket info.</li> <li>• update Trace update info.</li> </ul>
<b>Configurable</b>	True

**modifier *keyword***

<b>Description</b>	Enter the modifier context
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">protocols bgp trace-options flag name</a> <i>keyword</i> <a href="#">modifier</a> <i>keyword</i>
<b>Tree</b>	<a href="#">modifier</a>
<b>Options</b>	<ul style="list-style-type: none"> <li>• detail To enable detailed tracing. Includes both received and sent packets.</li> <li>• receive To enable tracing for the packets which are received.</li> <li>• send To enable tracing for the sent packets.</li> </ul>
<b>Configurable</b>	True

**transport**

<b>Description</b>	Options related to the TCP transport of BGP sessions
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">protocols bgp transport</a>
<b>Tree</b>	<a href="#">transport</a>
<b>Configurable</b>	True

**tcp-mss *number***

<b>Description</b>	<p>The maximum segment size for all BGP TCP sessions</p> <p>If the configured tcp-mss value is higher than the discovered path MTU it has no effect and the path MTU is used as the operational TCP MSS</p>
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">protocols bgp transport tcp-mss</a> <i>number</i>
<b>Tree</b>	<a href="#">tcp-mss</a>
<b>Range</b>	536 to 9446
<b>Default</b>	1024
<b>Configurable</b>	True

**under-maintenance *boolean***

<b>Description</b>	State field to determine if the bgp instance is in maintenance mode.
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">protocols bgp under-maintenance</a> <i>boolean</i>
<b>Tree</b>	<a href="#">under-maintenance</a>

<b>Configurable</b>	False
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## bgp-evpn



**Note:**

This command is available for the following platforms:

- 7220 IXR-D2
- 7220 IXR-D3
- 7220 IXR-D3L
- 7220 IXR-D2L

<b>Description</b>	Enable the bgp-evpn context
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">protocols bgp-evpn</a>
<b>Tree</b>	<a href="#">bgp-evpn</a>
<b>Configurable</b>	True

## bgp-instance [id reference](#)



**Note:**

This command is available for the following platforms:

- 7220 IXR-D2
- 7220 IXR-D3
- 7220 IXR-D3L
- 7220 IXR-D2L

<b>Description</b>	bgp evpn instances configured in net-instance
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">protocols bgp-evpn</a> <a href="#">bgp-instance id reference</a>
<b>Tree</b>	<a href="#">bgp-instance</a>
<b>Configurable</b>	True
<b>Max. Elements</b>	1



## id reference

**Note:**

This command is available for the following platforms:

- 7220 IXR-D2
- 7220 IXR-D3
- 7220 IXR-D3L
- 7220 IXR-D2L

<b>Description</b>	Enter the id context
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">protocols</a> <a href="#">bgp-evpn</a> <a href="#">bgp-instance id</a> <i>reference</i>
<b>Reference</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">protocols</a> <a href="#">bgp-vpn</a> <a href="#">bgp-instance id</a> <i>number</i>
<b>Configurable</b>	True

## admin-state keyword

**Note:**

This command is available for the following platforms:

- 7220 IXR-D2
- 7220 IXR-D3
- 7220 IXR-D3L
- 7220 IXR-D2L

<b>Description</b>	Configurable state of the bgp evpn instance.
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">protocols</a> <a href="#">bgp-evpn</a> <a href="#">bgp-instance id</a> <i>reference</i> <a href="#">admin-state</a> <i>keyword</i>
<b>Tree</b>	<a href="#">admin-state</a>
<b>Default</b>	enable
<b>Options</b>	<ul style="list-style-type: none"> <li>• enable</li> <li>• disable</li> </ul>
<b>Configurable</b>	True

## default-admin-tag *number*

**Note:**

This command is available for the following platforms:

- 7220 IXR-D2
- 7220 IXR-D3
- 7220 IXR-D3L
- 7220 IXR-D2L

<b>Description</b>	The admin-tag that can be used by an export policy to match all the bgp-evpn routes for the bgp-instance.
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">protocols</a> <a href="#">bgp-evpn</a> <a href="#">bgp-instance id</a> <i>reference</i> <a href="#">default-admin-tag</a> <i>number</i>
<b>Tree</b>	<a href="#">default-admin-tag</a>
<b>Range</b>	0 to 4294967295
<b>Default</b>	0
<b>Configurable</b>	True

## ecmp *number*

**Note:**

This command is available for the following platforms:

- 7220 IXR-D2
- 7220 IXR-D3
- 7220 IXR-D3L
- 7220 IXR-D2L

<b>Description</b>	The supported range of ECMP values for layer-2 aliasing (in mac-vrf instances) or layer-3 ecmp (in routed instances).
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">protocols</a> <a href="#">bgp-evpn</a> <a href="#">bgp-instance id</a> <i>reference</i> <a href="#">ecmp</a> <i>number</i>
<b>Tree</b>	<a href="#">ecmp</a>
<b>Range</b>	1 to 8
<b>Default</b>	1
<b>Configurable</b>	True

**encapsulation-type keyword****Note:**

This command is available for the following platforms:

- 7220 IXR-D2
- 7220 IXR-D3
- 7220 IXR-D3L
- 7220 IXR-D2L

<b>Description</b>	Encap type of the BGP EVPN instance.
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">protocols bgp-evpn bgp-instance id</a> <i>reference</i> <a href="#">encapsulation-type</a> <i>keyword</i>
<b>Tree</b>	<a href="#">encapsulation-type</a>
<b>Default</b>	vxlan
<b>Options</b>	<ul style="list-style-type: none"> <li>• vxlan</li> </ul>
<b>Configurable</b>	True

**evi number****Note:**

This command is available for the following platforms:

- 7220 IXR-D2
- 7220 IXR-D3
- 7220 IXR-D3L
- 7220 IXR-D2L

<b>Description</b>	<p>EVPN Instance identifier associated to the bgp-evpn instance.</p> <p>Used for auto-derivation of:</p> <p>["the bgp-instance route distinguisher in the format &lt;ip-address&gt;:evi (where 'ip-address' is the ipv4 address associated to the subinterface lo0.1.", "the bgp-instance route target in the format &lt;asn&gt;:&lt;evi&gt;, where 'asn' is the autonomous-system configured in the network-instance default (under / protocols/bgp/autonomous-system)."]</p> <p>In addition, the evi value is used for the EVPN Multi-Homing Designated Forwarder (DF) Election.</p>
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">protocols bgp-evpn bgp-instance id</a> <i>reference</i> <a href="#">evi number</a>
<b>Tree</b>	<a href="#">evi</a>
<b>Range</b>	1 to 65535

**Configurable** True

### oper-down-reason *keyword*



**Note:**

This command is available for the following platforms:

- 7220 IXR-D2
- 7220 IXR-D3
- 7220 IXR-D3L
- 7220 IXR-D2L

<b>Description</b>	The reason for the bgp-instance being down
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">protocols bgp-evpn bgp-instance id</a> <i>reference</i> <a href="#">oper-down-reason</a> <i>keyword</i>
<b>Tree</b>	<a href="#">oper-down-reason</a>
<b>Options</b>	<ul style="list-style-type: none"> <li>• admin-disabled</li> <li>• no-next-hop-address</li> <li>• no-evi</li> <li>• network-instance-oper-down</li> <li>• no-vxlan-interface</li> <li>• ethernet-segment-multiple-subinterfaces</li> <li>• vxlan_interface_no_source_ip_address</li> <li>• bgp-vpn-instance-oper-down</li> </ul>
<b>Configurable</b>	False

### oper-state *keyword*



**Note:**

This command is available for the following platforms:

- 7220 IXR-D2
- 7220 IXR-D3
- 7220 IXR-D3L
- 7220 IXR-D2L

<b>Description</b>	This leaf contains the operational state of bgp-instance.
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">protocols bgp-evpn bgp-instance id</a> <i>reference</i> <a href="#">oper-state</a> <i>keyword</i>

---

<b>Tree</b>	<b>oper-state</b>
<b>Options</b>	<ul style="list-style-type: none"> <li>• up Component or process is operational</li> <li>• down Component or process is not operational</li> <li>• empty Component slot is empty</li> <li>• downloading Component is downloading image into memory</li> <li>• booting Component is booting downloaded image</li> <li>• starting Component image operational, application processes starting</li> <li>• failed Component or process has failed</li> <li>• synchronizing Component is currently being synchronized</li> <li>• upgrading Component is currently being upgraded</li> <li>• low-power Component is offline due to insufficient system power</li> <li>• degraded Component or process is in a degraded state</li> <li>• warm-reboot Component or process is currently warm rebooting 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.</li> </ul>
<b>Configurable</b>	False

## routes



### Note:

This command is available for the following platforms:

- 7220 IXR-D2
- 7220 IXR-D3
- 7220 IXR-D3L
- 7220 IXR-D2L

<b>Description</b>	Enter the routes context
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">protocols</a> <a href="#">bgp-evpn</a> <a href="#">bgp-instance id</a> <i>reference</i> <a href="#">routes</a>
<b>Tree</b>	<a href="#">routes</a>
<b>Configurable</b>	True

## bridge-table



### Note:

This command is available for the following platforms:

- 7220 IXR-D2
- 7220 IXR-D3
- 7220 IXR-D3L
- 7220 IXR-D2L

<b>Description</b>	Enable the bridge-table context
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">protocols</a> <a href="#">bgp-evpn</a> <a href="#">bgp-instance id</a> <i>reference</i> <a href="#">routes</a> <a href="#">bridge-table</a>
<b>Tree</b>	<a href="#">bridge-table</a>
<b>Configurable</b>	True

## inclusive-mcast



### Note:

This command is available for the following platforms:

- 7220 IXR-D2
- 7220 IXR-D3
- 7220 IXR-D3L
- 7220 IXR-D2L

<b>Description</b>	Enter the inclusive-mcast context
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">protocols</a> <a href="#">bgp-evpn</a> <a href="#">bgp-instance id</a> <i>reference</i> <a href="#">routes</a> <a href="#">bridge-table</a> <a href="#">inclusive-mcast</a>
<b>Tree</b>	<a href="#">inclusive-mcast</a>
<b>Configurable</b>	True

## advertise *boolean*



### Note:

This command is available for the following platforms:

- 7220 IXR-D2
- 7220 IXR-D3
- 7220 IXR-D3L
- 7220 IXR-D2L

<b>Description</b>	If set to true an inclusive multicast route will be advertised in this evpn instance.
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">protocols</a> <a href="#">bgp-evpn</a> <a href="#">bgp-instance id</a> <i>reference</i> <a href="#">routes</a> <a href="#">bridge-table</a> <a href="#">inclusive-mcast</a> <a href="#">advertise</a> <i>boolean</i>
<b>Tree</b>	<a href="#">advertise</a>
<b>Default</b>	true
<b>Configurable</b>	True

## originating-ip (*ipv4-address* | *ipv6-address*)



### Note:

This command is available for the following platforms:

- 7220 IXR-D2
- 7220 IXR-D3
- 7220 IXR-D3L
- 7220 IXR-D2L

<b>Description</b>	The originating ip-address that the inclusive multicast route will be advertised with in this evpn instance
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">protocols</a> <a href="#">bgp-evpn</a> <a href="#">bgp-instance id</a> <a href="#">reference</a> <a href="#">routes</a> <a href="#">bridge-table</a> <a href="#">inclusive-mcast</a> <a href="#">originating-ip</a> ( <i>ipv4-address</i>   <i>ipv6-address</i> )
<b>Tree</b>	<a href="#">originating-ip</a>
<b>Configurable</b>	True

## mac-ip



### Note:

This command is available for the following platforms:

- 7220 IXR-D2
- 7220 IXR-D3
- 7220 IXR-D3L
- 7220 IXR-D2L

<b>Description</b>	Enter the mac-ip context
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">protocols</a> <a href="#">bgp-evpn</a> <a href="#">bgp-instance id</a> <a href="#">reference</a> <a href="#">routes</a> <a href="#">bridge-table</a> <a href="#">mac-ip</a>
<b>Tree</b>	<a href="#">mac-ip</a>
<b>Configurable</b>	True



## advertise *boolean*

**Note:**

This command is available for the following platforms:

- 7220 IXR-D2
- 7220 IXR-D3
- 7220 IXR-D3L
- 7220 IXR-D2L

<b>Description</b>	If set to true then local mac's and local mac-ip pairs will be advertised in this evpn instance
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">protocols bgp-evpn bgp-instance id</a> <i>reference</i> <a href="#">routes bridge-table mac-ip advertise</a> <i>boolean</i>
<b>Tree</b>	<a href="#">advertise</a>
<b>Default</b>	true
<b>Configurable</b>	True

## advertise-arp-nd-only-with-mac-table-entry *boolean*

**Note:**

This command is available for the following platforms:

- 7220 IXR-D2
- 7220 IXR-D3
- 7220 IXR-D3L
- 7220 IXR-D2L

<b>Description</b>	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
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">protocols bgp-evpn bgp-instance id</a> <i>reference</i> <a href="#">routes bridge-table mac-ip advertise-arp-nd-only-with-mac-table-entry</a> <i>boolean</i>
<b>Tree</b>	<a href="#">advertise-arp-nd-only-with-mac-table-entry</a>
<b>Default</b>	false
<b>Configurable</b>	True

**next-hop (keyword | ipv4-address | ipv6-address)****Note:**

This command is available for the following platforms:

- 7220 IXR-D2
- 7220 IXR-D3
- 7220 IXR-D3L
- 7220 IXR-D2L

<b>Description</b>	The ip-address that will be used as the bgp next-hop for all routes advertised in this evpn instance.
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">protocols</a> <a href="#">bgp-evpn</a> <a href="#">bgp-instance id</a> <i>reference</i> <a href="#">routes</a> <a href="#">bridge-table</a> <a href="#">next-hop</a> (keyword   ipv4-address   ipv6-address)
<b>Tree</b>	<a href="#">next-hop</a>
<b>Default</b>	use-system-ipv4-address
<b>Options</b>	<ul style="list-style-type: none"> <li>• use-system-ipv4-address</li> </ul>
<b>Configurable</b>	True

**vlan-aware-bundle-eth-tag number****Note:**

This command is available for the following platforms:

- 7220 IXR-D2
- 7220 IXR-D3
- 7220 IXR-D3L
- 7220 IXR-D2L

<b>Description</b>	<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>
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">protocols</a> <a href="#">bgp-evpn</a> <a href="#">bgp-instance id</a> <i>reference</i> <a href="#">routes</a> <a href="#">bridge-table</a> <a href="#">vlan-aware-bundle-eth-tag</a> <i>number</i>
<b>Tree</b>	<a href="#">vlan-aware-bundle-eth-tag</a>
<b>Range</b>	0 to 16777215

<b>Default</b>	0
<b>Configurable</b>	True

## route-table



### Note:

This command is available for the following platforms:

- 7220 IXR-D2
- 7220 IXR-D3
- 7220 IXR-D3L
- 7220 IXR-D2L

<b>Description</b>	Enable the route-table context
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">protocols bgp-evpn bgp-instance id</a> <i>reference</i> <a href="#">routes route-table</a>
<b>Tree</b>	<a href="#">route-table</a>
<b>Configurable</b>	True

## mac-ip



### Note:

This command is available for the following platforms:

- 7220 IXR-D2
- 7220 IXR-D3
- 7220 IXR-D3L
- 7220 IXR-D2L

<b>Description</b>	Enter the mac-ip context
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">protocols bgp-evpn bgp-instance id</a> <i>reference</i> <a href="#">routes route-table mac-ip</a>
<b>Tree</b>	<a href="#">mac-ip</a>
<b>Configurable</b>	True

## advertise-gateway-mac *boolean*

**Note:**

This command is available for the following platforms:

- 7220 IXR-D2
- 7220 IXR-D3
- 7220 IXR-D3L
- 7220 IXR-D2L

**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](#) *string* [protocols bgp-evpn bgp-instance id](#) *reference*  
[routes route-table mac-ip advertise-gateway-mac](#) *boolean*

**Tree**

[advertise-gateway-mac](#)

**Default**

false

**Configurable**

True

## vxlan-interface *reference*

**Note:**

This command is available for the following platforms:

- 7220 IXR-D2
- 7220 IXR-D3
- 7220 IXR-D3L
- 7220 IXR-D2L

**Description**

Identifier of vxlan-interface used in this bgp-instance.

**Context**

[network-instance name](#) *string* [protocols bgp-evpn bgp-instance id](#) *reference*  
[vxlan-interface](#) *reference*

**Tree**

[vxlan-interface](#)

**Reference**

[network-instance name](#) *string* [vxlan-interface name](#) *string*

**Configurable**

True

**bgp-vpn**

<b>Description</b>	Enable the bgp-vpn context
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">protocols bgp-vpn</a>
<b>Tree</b>	<a href="#">bgp-vpn</a>
<b>Configurable</b>	True

**bgp-instance id number**

<b>Description</b>	List of bgp-vpn instances configured in the network-instance. Only one instance allowed in the current release.
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">protocols bgp-vpn bgp-instance id number</a>
<b>Tree</b>	<a href="#">bgp-instance</a>
<b>Configurable</b>	True
<b>Max. Elements</b>	1

**id number**

<b>Description</b>	The index of the bgp-vpn instance
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">protocols bgp-vpn bgp-instance id number</a>
<b>Range</b>	1 to 2
<b>Configurable</b>	True

**export-policy reference**

<b>Description</b>	Apply an export policy to advertised BGP routes
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">protocols bgp-vpn bgp-instance id number export-policy reference</a>
<b>Tree</b>	<a href="#">export-policy</a>
<b>Reference</b>	<a href="#">routing-policy</a> <i>policy name string string</i>
<b>Configurable</b>	True

**import-policy reference**

<b>Description</b>	Apply an import policy to received BGP routes
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">protocols bgp-vpn bgp-instance id number import-policy reference</a>
<b>Tree</b>	<a href="#">import-policy</a>

<b>Reference</b>	<a href="#">routing-policy</a> <code>policy name string name string string</code>
<b>Configurable</b>	True

### **oper-down-reason *keyword***

<b>Description</b>	Reason for bgp-instance being down
<b>Context</b>	<a href="#">network-instance name</a> <code>string protocols bgp-vpn bgp-instance id number oper-down-reason keyword</code>
<b>Tree</b>	<a href="#">oper-down-reason</a>
<b>Options</b>	<ul style="list-style-type: none"> <li>• no-loopback-address-or-rd</li> <li>• no-autonomous-system-or-rt</li> <li>• network-instance-oper-down</li> <li>• none</li> </ul>
<b>Configurable</b>	False

### **route-distinguisher**

<b>Description</b>	Route Distinguisher (RD) of the bgp-vpn instance.
<b>Context</b>	<a href="#">network-instance name</a> <code>string protocols bgp-vpn bgp-instance id number route-distinguisher</code>
<b>Tree</b>	<a href="#">route-distinguisher</a>
<b>Configurable</b>	True

### **rd (*string* | *string* | *string* | *string*)**

<b>Description</b>	Route Distinguisher (RD) configured in the bgp-vpn instance. When used for evpn and if not configured, the RD is auto-derived with the format <ip-address>:<evi> where 'ip-address' is the ipv4 address associated to the subinterface lo0.1.
<b>Context</b>	<a href="#">network-instance name</a> <code>string protocols bgp-vpn bgp-instance id number route-distinguisher rd (string   string   string   string)</code>
<b>Tree</b>	<a href="#">rd</a>
<b>Configurable</b>	True

### **route-distinguisher-origin *keyword***

<b>Description</b>	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
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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.

<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">protocols bgp-vpn bgp-instance id</a> <i>number</i> <a href="#">route-distinguisher</a> <a href="#">route-distinguisher-origin</a> <i>keyword</i>
<b>Tree</b>	<a href="#">route-distinguisher-origin</a>
<b>Options</b>	<ul style="list-style-type: none"> <li>• auto-derived-from-evi</li> <li>• auto-derived-from-system-ip:0</li> <li>• manual</li> <li>• none</li> </ul>
<b>Configurable</b>	False

## route-target

<b>Description</b>	Route Target (RT) of the bgp-vpn instance.
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">protocols bgp-vpn bgp-instance id</a> <i>number</i> <a href="#">route-target</a>
<b>Tree</b>	<a href="#">route-target</a>
<b>Configurable</b>	True

## export-route-target-origin *keyword*

<b>Description</b>	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. 'Manual' refers to an export RT that is configured. 'None' indicates that the export RT is neither configured nor auto-derived.
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">protocols bgp-vpn bgp-instance id</a> <i>number</i> <a href="#">route-target</a> <a href="#">export-route-target-origin</a> <i>keyword</i>
<b>Tree</b>	<a href="#">export-route-target-origin</a>
<b>Options</b>	<ul style="list-style-type: none"> <li>• auto-derived-from-evi</li> <li>• manual</li> <li>• none</li> </ul>
<b>Configurable</b>	False

**export-rt (*string* | *string* | *string* | *string* | *string* | *string* | *string* | *string* | *string* | *string*)**

<b>Description</b>	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.
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">protocols</a> <a href="#">bgp-vpn</a> <a href="#">bgp-instance id</a> <i>number</i> <a href="#">route-target export-rt</a> ( <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> )
<b>Tree</b>	<a href="#">export-rt</a>
<b>Configurable</b>	True

**import-route-target-origin *keyword***

<b>Description</b>	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. 'Manual' refers to an import RT that is configured. 'None' indicates that the import RT is neither configured nor auto-derived.
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">protocols</a> <a href="#">bgp-vpn</a> <a href="#">bgp-instance id</a> <i>number</i> <a href="#">route-target import-route-target-origin</a> <i>keyword</i>
<b>Tree</b>	<a href="#">import-route-target-origin</a>
<b>Options</b>	<ul style="list-style-type: none"> <li>• auto-derived-from-evi</li> <li>• manual</li> <li>• none</li> </ul>
<b>Configurable</b>	False

**import-rt (*string* | *string* | *string* | *string* | *string* | *string* | *string* | *string* | *string* | *string*)**

<b>Description</b>	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.
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">protocols</a> <a href="#">bgp-vpn</a> <a href="#">bgp-instance id</a> <i>number</i> <a href="#">route-target import-rt</a> ( <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> )
<b>Tree</b>	<a href="#">import-rt</a>
<b>Configurable</b>	True



**isis**

<b>Description</b>	Enable the isis context
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">protocols isis</a>
<b>Tree</b>	<a href="#">isis</a>
<b>Configurable</b>	True

**instance** [name](#) *string*

<b>Description</b>	List of IS-IS protocol instances associated with this network-instance. Only a single instance is supported for now
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">protocols isis</a> <a href="#">instance name</a> <i>string</i>
<b>Tree</b>	<a href="#">instance</a>
<b>Configurable</b>	True
<b>Max. Elements</b>	1

**name** *string*

<b>Description</b>	The name of the IS-IS instance
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">protocols isis</a> <a href="#">instance name</a> <i>string</i>
<b>String Length</b>	1 to 255
<b>Configurable</b>	True

**admin-state** *keyword*

<b>Description</b>	Used to administratively enable or disable the IS-IS instance
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">protocols isis</a> <a href="#">instance name</a> <i>string</i> <a href="#">admin-state</a> <i>keyword</i>
<b>Tree</b>	<a href="#">admin-state</a>
<b>Default</b>	disable
<b>Options</b>	<ul style="list-style-type: none"> <li>• enable</li> <li>• disable</li> </ul>
<b>Configurable</b>	True

**attached-bit**

<b>Description</b>	This container provides option for handling the ATTached bit in L1 LSPs
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<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">protocols isis instance name</a> <i>string</i> <a href="#">attached-bit</a>
<b>Tree</b>	<a href="#">attached-bit</a>
<b>Configurable</b>	True

### **ignore *boolean***

<b>Description</b>	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.
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">protocols isis instance name</a> <i>string</i> <a href="#">attached-bit ignore</a> <i>boolean</i>
<b>Tree</b>	<a href="#">ignore</a>
<b>Default</b>	false
<b>Configurable</b>	True

### **suppress *boolean***

<b>Description</b>	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.
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">protocols isis instance name</a> <i>string</i> <a href="#">attached-bit suppress</a> <i>boolean</i>
<b>Tree</b>	<a href="#">suppress</a>
<b>Default</b>	false
<b>Configurable</b>	True

### **authentication**

<b>Description</b>	Container for specifying authentication options that apply to the entire IS-IS instance or to an entire level.
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">protocols isis instance name</a> <i>string</i> <a href="#">authentication</a>
<b>Tree</b>	<a href="#">authentication</a>
<b>Configurable</b>	True

### **csnp-authentication *boolean***

<b>Description</b>	When this is enabled, reject all CSNP PDUs that either have a mismatch in authentication-type or authentication-key.
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<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">protocols isis instance name</a> <i>string</i> <a href="#">authentication csnp-authentication</a> <i>boolean</i>
<b>Tree</b>	<a href="#">csnp-authentication</a>
<b>Configurable</b>	True

**hello-authentication *boolean***

<b>Description</b>	When this is enabled at the instance level, reject all IIH PDUs that either have a mismatch in authentication-type or authentication-key.  When this is enabled for a particular level, reject all LAN IIH PDUs associated with that level that have a mismatch in authentication-type or authentication-key.
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">protocols isis instance name</a> <i>string</i> <a href="#">authentication hello-authentication</a> <i>boolean</i>
<b>Tree</b>	<a href="#">hello-authentication</a>
<b>Configurable</b>	True

**keychain *reference***

<b>Description</b>	Enter the keychain context
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">protocols isis instance name</a> <i>string</i> <a href="#">authentication keychain</a> <i>reference</i>
<b>Tree</b>	<a href="#">keychain</a>
<b>Reference</b>	<a href="#">system authentication keychain name</a> <i>string</i> <a href="#">name</a> <i>string</i> <i>string</i>
<b>Configurable</b>	True

**psnp-authentication *boolean***

<b>Description</b>	When this is enabled, reject all PSNP PDUs that either have a mismatch in authentication-type or authentication-key.
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">protocols isis instance name</a> <i>string</i> <a href="#">authentication psnp-authentication</a> <i>boolean</i>
<b>Tree</b>	<a href="#">psnp-authentication</a>
<b>Configurable</b>	True

**auto-cost**

<b>Description</b>	Enter the auto-cost context
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<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">protocols isis instance name</a> <i>string</i> <a href="#">auto-cost</a>
<b>Tree</b>	<a href="#">auto-cost</a>
<b>Configurable</b>	True

### reference-bandwidth *number*

<b>Description</b>	<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: <math>\text{cost} = \text{reference-bandwidth} / \text{bandwidth}</math></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 occurs, IS-IS automatically reverts to the maximum configurable cost metric.</p> <p>If the reference bandwidth is not configured then all interfaces have a default metric of 10.</p> <p>Note: To use metrics in excess of 63, wide metrics must be deployed</p>
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">protocols isis instance name</a> <i>string</i> <a href="#">auto-cost</a> <a href="#">reference-bandwidth</a> <i>number</i>
<b>Tree</b>	<a href="#">reference-bandwidth</a>
<b>Range</b>	1 to 8000000000
<b>Units</b>	kbps
<b>Configurable</b>	True

### export-policy *reference*

<b>Description</b>	Apply an export policy to redistribute non-ISIS routes into ISIS
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">protocols isis instance name</a> <i>string</i> <a href="#">export-policy</a> <i>reference</i>
<b>Tree</b>	<a href="#">export-policy</a>
<b>Reference</b>	<a href="#">routing-policy policy name</a> <i>string</i> <a href="#">name</a> <i>string</i> <i>string</i>
<b>Configurable</b>	True

### graceful-restart

<b>Description</b>	Container for options related to IS-IS graceful restart
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">protocols isis instance name</a> <i>string</i> <a href="#">graceful-restart</a>
<b>Tree</b>	<a href="#">graceful-restart</a>

<b>Configurable</b>	True
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### helper-mode *boolean*

<b>Description</b>	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.
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">protocols isis instance name</a> <i>string</i> <a href="#">graceful-restart helper-mode</a> <i>boolean</i>
<b>Tree</b>	<a href="#">helper-mode</a>
<b>Default</b>	false
<b>Configurable</b>	True

### hostnames

<b>Description</b>	Enter the hostnames context
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">protocols isis instance name</a> <i>string</i> <a href="#">hostnames</a>
<b>Tree</b>	<a href="#">hostnames</a>
<b>Configurable</b>	False

### system-id [host-system-id](#) *string*

<b>Description</b>	List of system IDs that have discovered hostnames.
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">protocols isis instance name</a> <i>string</i> <a href="#">hostnames system-id host-system-id</a> <i>string</i>
<b>Tree</b>	<a href="#">system-id</a>
<b>Configurable</b>	False

### host-system-id *string*

<b>Description</b>	The system ID
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">protocols isis instance name</a> <i>string</i> <a href="#">hostnames system-id host-system-id</a> <i>string</i>
<b>String Length</b>	14
<b>Configurable</b>	False

**hostname *string***

<b>Description</b>	The hostname of the system.
<b>Context</b>	<a href="#">network-instance name <i>string</i></a> <a href="#">protocols isis instance name <i>string</i></a> <a href="#">hostnames system-id host-system-id <i>string</i></a> <a href="#">hostname <i>string</i></a>
<b>Tree</b>	<a href="#">hostname</a>
<b>Configurable</b>	False

**inter-level-propagation-policies**

<b>Description</b>	Container with options to control the propagation of prefixes between levels
<b>Context</b>	<a href="#">network-instance name <i>string</i></a> <a href="#">protocols isis instance name <i>string</i></a> <a href="#">inter-level-propagation-policies</a>
<b>Tree</b>	<a href="#">inter-level-propagation-policies</a>
<b>Configurable</b>	True

**level1-to-level2**

<b>Description</b>	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.
<b>Context</b>	<a href="#">network-instance name <i>string</i></a> <a href="#">protocols isis instance name <i>string</i></a> <a href="#">inter-level-propagation-policies level1-to-level2</a>
<b>Tree</b>	<a href="#">level1-to-level2</a>
<b>Configurable</b>	True

**summary-address *ip-prefix (ipv4-prefix | ipv6-prefix)***

<b>Description</b>	List of summarization prefixes
<b>Context</b>	<a href="#">network-instance name <i>string</i></a> <a href="#">protocols isis instance name <i>string</i></a> <a href="#">inter-level-propagation-policies level1-to-level2 summary-address <i>ip-prefix (ipv4-prefix   ipv6-prefix)</i></a>
<b>Tree</b>	<a href="#">summary-address</a>
<b>Configurable</b>	True

***ip-prefix (ipv4-prefix | ipv6-prefix)***

<b>Description</b>	An IP prefix advertised into L2 that summarizes one or more L1 prefixes and causes them to be suppressed
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<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">protocols isis instance name</a> <i>string</i> <a href="#">inter-level-propagation-policies level1-to-level2 summary-address ip-prefix</a> ( <i>ipv4-prefix</i>   <i>ipv6-prefix</i> )
<b>Configurable</b>	True

### route-tag *number*

<b>Description</b>	Specifies route tag value to assign to the summary route
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">protocols isis instance name</a> <i>string</i> <a href="#">inter-level-propagation-policies level1-to-level2 summary-address ip-prefix</a> ( <i>ipv4-prefix</i>   <i>ipv6-prefix</i> ) <a href="#">route-tag</a> <i>number</i>
<b>Tree</b>	<a href="#">route-tag</a>
<b>Range</b>	1 to 4294967295
<b>Configurable</b>	True

### interface [interface-name](#) *reference*

<b>Description</b>	List of IS-IS interfaces
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">protocols isis instance name</a> <i>string</i> <a href="#">interface interface-name</a> <i>reference</i>
<b>Tree</b>	<a href="#">interface</a>
<b>Configurable</b>	True

### interface-name *reference*

<b>Description</b>	Reference to a specific subinterface of the form <interface-name>.<subinterface-index>
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">protocols isis instance name</a> <i>string</i> <a href="#">interface interface-name</a> <i>reference</i>
<b>Reference</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">interface name</a> <i>string</i>
<b>Configurable</b>	True

### adjacency [neighbor-system-id](#) *string* [adjacency-level](#) *string*

<b>Description</b>	List of adjacencies formed through this interface.
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">protocols isis instance name</a> <i>string</i> <a href="#">interface interface-name</a> <i>reference</i> <a href="#">adjacency neighbor-system-id</a> <i>string</i> <a href="#">adjacency-level</a> <i>string</i>
<b>Tree</b>	<a href="#">adjacency</a>

**Configurable** False

### neighbor-system-id *string*

**Description** The neighbor router's system ID.

**Context** [network-instance name \*string\*](#) [protocols isis instance name \*string\*](#) [interface interface-name \*reference\*](#) [adjacency neighbor-system-id \*string\*](#) [adjacency-level \*string\*](#)

**String Length** 14

**Configurable** False

### 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 \*reference\*](#) [adjacency neighbor-system-id \*string\*](#) [adjacency-level \*string\*](#)

**Configurable** False

### down-reason *keyword*

**Description** The reason why the adjacency is down.

**Context** [network-instance name \*string\*](#) [protocols isis instance name \*string\*](#) [interface interface-name \*reference\*](#) [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

### last-up-down-transition *string*

**Description** The last time when the adjacency entered the up or down state.

**Context** [network-instance name](#) *string* [protocols isis instance name](#) *string* [interface interface-name](#) *reference* [adjacency neighbor-system-id](#) *string* [adjacency-level](#) *string* [last-up-down-transition](#) *string*

**Tree** [last-up-down-transition](#)

**String Length** 20 to 32

**Configurable** False

### neighbor-circuit-type *keyword*

**Description** The circuit type signalled by the neighbor.

**Context** [network-instance name](#) *string* [protocols isis instance name](#) *string* [interface interface-name](#) *reference* [adjacency neighbor-system-id](#) *string* [adjacency-level](#) *string* [neighbor-circuit-type](#) *keyword*

**Tree** [neighbor-circuit-type](#)

**Default** L1L2

**Options**

- L1  
This enum describes ISIS level 1
- L2  
This enum describes ISIS level 2
- L1L2  
This enum describes ISIS level 1-2

**Configurable** False

### neighbor-hostname *string*

**Description** The hostname of the neighbor, as learned by TLV 137.

**Context** [network-instance name](#) *string* [protocols isis instance name](#) *string* [interface interface-name](#) *reference* [adjacency neighbor-system-id](#) *string* [adjacency-level](#) *string* [neighbor-hostname](#) *string*

**Tree** [neighbor-hostname](#)

**Configurable** False

### neighbor-ipv4 *string*

**Description** The IPv4 address of the neighbor.

**Context** [network-instance name](#) *string* [protocols isis instance name](#) *string* [interface interface-name](#) *reference* [adjacency neighbor-system-id](#) *string* [adjacency-level](#) *string* [neighbor-ipv4](#) *string*

**Tree** [neighbor-ipv4](#)

**Configurable** False

### neighbor-ipv6 *string*

**Description** The IPv6 address of the neighbor.

**Context** [network-instance name](#) *string* [protocols isis instance name](#) *string* [interface interface-name](#) *reference* [adjacency neighbor-system-id](#) *string* [adjacency-level](#) *string* [neighbor-ipv6](#) *string*

**Tree** [neighbor-ipv6](#)

**Configurable** False

### neighbor-last-restart (*keyword* | *date-and-time-delta*)

**Description** The last time the neighbor restarted under protection of graceful restart.

**Context** [network-instance name](#) *string* [protocols isis instance name](#) *string* [interface interface-name](#) *reference* [adjacency neighbor-system-id](#) *string* [adjacency-level](#) *string* [neighbor-last-restart](#) (*keyword* | *date-and-time-delta*)

**Tree** [neighbor-last-restart](#)

**String Length** 20 to 32

**Options**

- never

**Configurable** False

### neighbor-priority *number*

**Description** The priority signalled by the neighbor to become the DIS on a LAN

**Context** [network-instance name](#) *string* [protocols isis instance name](#) *string* [interface interface-name](#) *reference* [adjacency neighbor-system-id](#) *string* [adjacency-level](#) *string* [neighbor-priority](#) *number*

**Tree** [neighbor-priority](#)

<b>Range</b>	0 to 127
<b>Configurable</b>	False

### neighbor-restart-capable *boolean*

<b>Description</b>	Reads true when the neighbor has signalled that it is restart capable.
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">protocols isis instance name</a> <i>string</i> <a href="#">interface interface-name</a> <i>reference</i> <a href="#">adjacency neighbor-system-id</a> <i>string</i> <a href="#">adjacency-level</a> <i>string</i> <a href="#">neighbor-restart-capable</a> <i>boolean</i>
<b>Tree</b>	<a href="#">neighbor-restart-capable</a>
<b>Configurable</b>	False

### neighbor-restart-status *keyword*

<b>Description</b>	The status of the neighbor with respect to graceful restart
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">protocols isis instance name</a> <i>string</i> <a href="#">interface interface-name</a> <i>reference</i> <a href="#">adjacency neighbor-system-id</a> <i>string</i> <a href="#">adjacency-level</a> <i>string</i> <a href="#">neighbor-restart-status</a> <i>keyword</i>
<b>Tree</b>	<a href="#">neighbor-restart-status</a>
<b>Options</b>	<ul style="list-style-type: none"> <li>• not-helping</li> <li>• helping</li> </ul>
<b>Configurable</b>	False

### neighbor-restarts *number*

<b>Description</b>	The number of times the neighbor has restarted under protection of graceful restart.
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">protocols isis instance name</a> <i>string</i> <a href="#">interface interface-name</a> <i>reference</i> <a href="#">adjacency neighbor-system-id</a> <i>string</i> <a href="#">adjacency-level</a> <i>string</i> <a href="#">neighbor-restarts</a> <i>number</i>
<b>Tree</b>	<a href="#">neighbor-restarts</a>
<b>Configurable</b>	False

### neighbor-snpa *string*

<b>Description</b>	The SNPA of the neighbor.
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">protocols isis instance name</a> <i>string</i> <a href="#">interface interface-name</a> <i>reference</i> <a href="#">adjacency neighbor-system-id</a> <i>string</i> <a href="#">adjacency-level</a> <i>string</i> <a href="#">neighbor-snpa</a> <i>string</i>

<b>Tree</b>	<a href="#">neighbor-snpa</a>
<b>String Length</b>	0 to 20
<b>Configurable</b>	False

### remaining-holdtime *number*

<b>Description</b>	The time remaining until the hold timer will expire.
<b>Context</b>	<a href="#">network-instance name string protocols isis instance name string interface interface-name reference adjacency neighbor-system-id string adjacency-level string remaining-holdtime number</a>
<b>Tree</b>	<a href="#">remaining-holdtime</a>
<b>Units</b>	seconds
<b>Configurable</b>	False

### state *keyword*

<b>Description</b>	The current state of the adjacency.
<b>Context</b>	<a href="#">network-instance name string protocols isis instance name string interface interface-name reference adjacency neighbor-system-id string adjacency-level string state keyword</a>
<b>Tree</b>	<a href="#">state</a>
<b>Options</b>	<ul style="list-style-type: none"> <li>• up This state describes that adjacency is established.</li> <li>• down This state describes that adjacency is NOT established.</li> <li>• init This state describes that adjacency is establishing.</li> <li>• failed This state describes that adjacency is failed.</li> </ul>
<b>Configurable</b>	False

### up-down-transitions *number*

<b>Description</b>	The total number of transitions from Up state to a lower state, since the last clear.
<b>Context</b>	<a href="#">network-instance name string protocols isis instance name string interface interface-name reference adjacency neighbor-system-id string adjacency-level string up-down-transitions number</a>

---

<b>Tree</b>	<a href="#">up-down-transitions</a>
<b>Default</b>	0
<b>Configurable</b>	False

### **admin-state *keyword***

<b>Description</b>	Used to administratively enable or disable the IS-IS protocol on a routed subinterface
<b>Context</b>	<a href="#">network-instance name string protocols isis instance name string interface interface-name reference admin-state keyword</a>
<b>Tree</b>	<a href="#">admin-state</a>
<b>Default</b>	enable
<b>Options</b>	<ul style="list-style-type: none"> <li>• enable</li> <li>• disable</li> </ul>
<b>Configurable</b>	True

### **authentication**

<b>Description</b>	Container for specifying authentication options that apply to an interface/level.
<b>Context</b>	<a href="#">network-instance name string protocols isis instance name string interface interface-name reference authentication</a>
<b>Tree</b>	<a href="#">authentication</a>
<b>Configurable</b>	True

### **hello-authentication *boolean***

<b>Description</b>	<p>When this is enabled at the instance level, reject all IIH PDUs that either have a mismatch in authentication-type or authentication-key.</p> <p>When this is enabled for a particular level, reject all LAN IIH PDUs associated with that level that have a mismatch in authentication-type or authentication-key.</p>
<b>Context</b>	<a href="#">network-instance name string protocols isis instance name string interface interface-name reference authentication hello-authentication boolean</a>
<b>Tree</b>	<a href="#">hello-authentication</a>
<b>Configurable</b>	True

**keychain *reference***

<b>Description</b>	Enter the keychain context
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">protocols isis instance name</a> <i>string</i> <a href="#">interface interface-name</a> <i>reference</i> <a href="#">authentication keychain</a> <i>reference</i>
<b>Tree</b>	<a href="#">keychain</a>
<b>Reference</b>	<a href="#">system authentication keychain name</a> <i>string</i> <i>string</i>
<b>Configurable</b>	True

**circuit-id *number***

<b>Description</b>	The circuit ID assigned by this IS-IS router to its interface.
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">protocols isis instance name</a> <i>string</i> <a href="#">interface interface-name</a> <i>reference</i> <a href="#">circuit-id</a> <i>number</i>
<b>Tree</b>	<a href="#">circuit-id</a>
<b>Configurable</b>	False

**circuit-type *keyword***

<b>Description</b>	Specifies the circuit type as either point-to-point or broadcast
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">protocols isis instance name</a> <i>string</i> <a href="#">interface interface-name</a> <i>reference</i> <a href="#">circuit-type</a> <i>keyword</i>
<b>Tree</b>	<a href="#">circuit-type</a>
<b>Options</b>	<ul style="list-style-type: none"> <li>point-to-point This enum describes a point-to-point interface</li> <li>broadcast This enum describes a broadcast interface</li> </ul>
<b>Configurable</b>	True

**hello-padding *keyword***

<b>Description</b>	Specifies the use of IS-IS Hello PDU padding on the interface
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">protocols isis instance name</a> <i>string</i> <a href="#">interface interface-name</a> <i>reference</i> <a href="#">hello-padding</a> <i>keyword</i>
<b>Tree</b>	<a href="#">hello-padding</a>
<b>Default</b>	disable

<b>Options</b>	<ul style="list-style-type: none"> <li>• strict Strict padding option. Hello padding is done continuously, regardless of adjacency state or interface type.</li> <li>• 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.</li> <li>• 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.</li> <li>• disable This enum disables hello PDU padding</li> </ul>
<b>Configurable</b>	True

## ipv4-unicast

<b>Description</b>	Enter the ipv4-unicast context
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">protocols isis instance name</a> <i>string</i> <a href="#">interface interface-name</a> <i>reference</i> <a href="#">ipv4-unicast</a>
<b>Tree</b>	<a href="#">ipv4-unicast</a>
<b>Configurable</b>	True

## admin-state *keyword*

<b>Description</b>	When set to true, the interface and level supports IPv4 unicast routing
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">protocols isis instance name</a> <i>string</i> <a href="#">interface interface-name</a> <i>reference</i> <a href="#">ipv4-unicast admin-state</a> <i>keyword</i>
<b>Tree</b>	<a href="#">admin-state</a>
<b>Default</b>	enable
<b>Options</b>	<ul style="list-style-type: none"> <li>• enable</li> <li>• disable</li> </ul>
<b>Configurable</b>	True

**enable-bfd *boolean***

<b>Description</b>	Enable BFD for IPv4
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">protocols isis instance name</a> <i>string</i> <a href="#">interface interface-name</a> <i>reference</i> <a href="#">ipv4-unicast enable-bfd</a> <i>boolean</i>
<b>Tree</b>	<a href="#">enable-bfd</a>
<b>Default</b>	false
<b>Configurable</b>	True

**include-bfd-tlv *boolean***

<b>Description</b>	Specifies whether a BFD-enabled TLV is included for IPv4 on this IS-IS interface.
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">protocols isis instance name</a> <i>string</i> <a href="#">interface interface-name</a> <i>reference</i> <a href="#">ipv4-unicast include-bfd-tlv</a> <i>boolean</i>
<b>Tree</b>	<a href="#">include-bfd-tlv</a>
<b>Default</b>	false
<b>Configurable</b>	True

**ipv6-unicast**

<b>Description</b>	Enter the ipv6-unicast context
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">protocols isis instance name</a> <i>string</i> <a href="#">interface interface-name</a> <i>reference</i> <a href="#">ipv6-unicast</a>
<b>Tree</b>	<a href="#">ipv6-unicast</a>
<b>Configurable</b>	True

**admin-state *keyword***

<b>Description</b>	When set to true, the interface and level supports IPv6 unicast routing
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">protocols isis instance name</a> <i>string</i> <a href="#">interface interface-name</a> <i>reference</i> <a href="#">ipv6-unicast admin-state</a> <i>keyword</i>
<b>Tree</b>	<a href="#">admin-state</a>
<b>Default</b>	enable
<b>Options</b>	<ul style="list-style-type: none"> <li>• enable</li> <li>• disable</li> </ul>
<b>Configurable</b>	True



**enable-bfd *boolean***

<b>Description</b>	Enable BFD for IPv6
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">protocols isis instance name</a> <i>string</i> <a href="#">interface interface-name</a> <i>reference</i> <a href="#">ipv6-unicast enable-bfd</a> <i>boolean</i>
<b>Tree</b>	<a href="#">enable-bfd</a>
<b>Default</b>	false
<b>Configurable</b>	True

**include-bfd-tlv *boolean***

<b>Description</b>	Specifies whether a BFD-enabled TLV is included for IPv6 on this IS-IS interface.
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">protocols isis instance name</a> <i>string</i> <a href="#">interface interface-name</a> <i>reference</i> <a href="#">ipv6-unicast include-bfd-tlv</a> <i>boolean</i>
<b>Tree</b>	<a href="#">include-bfd-tlv</a>
<b>Default</b>	false
<b>Configurable</b>	True

**ldp-synchronization****Note:**

This command is available for the following platforms:

- 7250 IXR-6
- 7250 IXR-10

<b>Description</b>	Container with configuration options and state that pertains to the operation of LDP-IGP synchronization on this interface.
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">protocols isis instance name</a> <i>string</i> <a href="#">interface interface-name</a> <i>reference</i> <a href="#">ldp-synchronization</a>
<b>Tree</b>	<a href="#">ldp-synchronization</a>
<b>Configurable</b>	True

## disable

**Note:**

This command is available for the following platforms:

- 7250 IXR-6
- 7250 IXR-10

<b>Description</b>	Disable LDP-IGP synchronization procedures on this interface, even if synchronization is enabled globally
<b>Context</b>	<a href="#">network-instance name string protocols isis instance name string interface interface-name reference ldp-synchronization disable</a>
<b>Tree</b>	<a href="#">disable</a>
<b>Configurable</b>	True

## duration *number*

**Note:**

This command is available for the following platforms:

- 7250 IXR-6
- 7250 IXR-10

<b>Description</b>	The length of time that the IGP interface has been in sync or out of sync
<b>Context</b>	<a href="#">network-instance name string protocols isis instance name string interface interface-name reference ldp-synchronization duration number</a>
<b>Tree</b>	<a href="#">duration</a>
<b>Units</b>	seconds
<b>Configurable</b>	False

## end-of-lib *boolean*

**Note:**

This command is available for the following platforms:

- 7250 IXR-6
- 7250 IXR-10

<b>Description</b>	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.
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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.

This overrides the global/instance level setting.

<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">protocols isis instance name</a> <i>string</i> <a href="#">interface interface-name</a> <i>reference</i> <a href="#">ldp-synchronization end-of-lib</a> <i>boolean</i>
<b>Tree</b>	<a href="#">end-of-lib</a>
<b>Configurable</b>	True

### hold-down-timer *number*



**Note:**

This command is available for the following platforms:

- 7250 IXR-6
- 7250 IXR-10

<b>Description</b>	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.  This overrides the global/instance level setting.
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">protocols isis instance name</a> <i>string</i> <a href="#">interface interface-name</a> <i>reference</i> <a href="#">ldp-synchronization hold-down-timer</a> <i>number</i>
<b>Tree</b>	<a href="#">hold-down-timer</a>
<b>Range</b>	1 to 1800
<b>Units</b>	seconds
<b>Configurable</b>	True

### sync-state *keyword*



**Note:**

This command is available for the following platforms:

- 7250 IXR-6
- 7250 IXR-10

<b>Description</b>	The current state of the interface with respect to LDP-IGP sync
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">protocols isis instance name</a> <i>string</i> <a href="#">interface interface-name</a> <i>reference</i> <a href="#">ldp-synchronization sync-state</a> <i>keyword</i>
<b>Tree</b>	<a href="#">sync-state</a>

<b>Options</b>	<ul style="list-style-type: none"> <li>• wait-for-LDP-adjacency The IGP is waiting for the LDP adjacency to come up. The interface is being advertised with max-metric.</li> <li>• 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.</li> <li>• 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</li> <li>• 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.</li> <li>• manual-exit A tools command was performed to exit ldp-sync. Normal operation is resumed, max-metric is removed.</li> <li>• disabled ldp-sync is not applicable on this interface</li> </ul>
<b>Configurable</b>	False

### level *level-number number*

<b>Description</b>	List of IS-IS levels supported by this interface
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">protocols isis instance name</a> <i>string</i> <a href="#">interface interface-name</a> <i>reference</i> <a href="#">level level-number</a> <i>number</i>
<b>Tree</b>	<a href="#">level</a>
<b>Configurable</b>	True
<b>Max. Elements</b>	2

### level-number *number*

<b>Description</b>	Specifies the IS-IS protocol level to which these attributes are applied.
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">protocols isis instance name</a> <i>string</i> <a href="#">interface interface-name</a> <i>reference</i> <a href="#">level level-number</a> <i>number</i>
<b>Range</b>	1 to 2
<b>Configurable</b>	True

**authentication**

<b>Description</b>	Container for specifying authentication options that apply to an interface/level.
<b>Context</b>	<a href="#">network-instance name string protocols isis instance name string interface interface-name reference level level-number number authentication</a>
<b>Tree</b>	<a href="#">authentication</a>
<b>Configurable</b>	True

**keychain reference**

<b>Description</b>	Enter the keychain context
<b>Context</b>	<a href="#">network-instance name string protocols isis instance name string interface interface-name reference level level-number number authentication keychain reference</a>
<b>Tree</b>	<a href="#">keychain</a>
<b>Reference</b>	<a href="#">system authentication keychain name string string</a>
<b>Configurable</b>	True

**disable boolean**

<b>Description</b>	Disable the Level for the interface.
<b>Context</b>	<a href="#">network-instance name string protocols isis instance name string interface interface-name reference level level-number number disable boolean</a>
<b>Tree</b>	<a href="#">disable</a>
<b>Default</b>	false
<b>Configurable</b>	True

**ipv6-unicast-metric number**

<b>Description</b>	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.
<b>Context</b>	<a href="#">network-instance name string protocols isis instance name string interface interface-name reference level level-number number ipv6-unicast-metric number</a>
<b>Tree</b>	<a href="#">ipv6-unicast-metric</a>
<b>Range</b>	1 to 16777215
<b>Configurable</b>	True

**metric number**

<b>Description</b>	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.
<b>Context</b>	<a href="#">network-instance name string protocols isis instance name string interface interface-name reference level level-number number metric number</a>
<b>Tree</b>	<a href="#">metric</a>
<b>Range</b>	1 to 16777215
<b>Configurable</b>	True

**priority number**

<b>Description</b>	ISIS neighbor priority for becoming Designated IS (LAN hello PDU only).
<b>Context</b>	<a href="#">network-instance name string protocols isis instance name string interface interface-name reference level level-number number priority number</a>
<b>Tree</b>	<a href="#">priority</a>
<b>Range</b>	0 to 127
<b>Default</b>	64
<b>Configurable</b>	True

**timers**

<b>Description</b>	Enter the timers context
<b>Context</b>	<a href="#">network-instance name string protocols isis instance name string interface interface-name reference level level-number number timers</a>
<b>Tree</b>	<a href="#">timers</a>
<b>Configurable</b>	True

**hello-interval number**

<b>Description</b>	ISIS hello-interval value. The default is 3 seconds on Designated IS interfaces and 9 seconds for non-DIS and p2p interfaces
<b>Context</b>	<a href="#">network-instance name string protocols isis instance name string interface interface-name reference level level-number number timers hello-interval number</a>
<b>Tree</b>	<a href="#">hello-interval</a>
<b>Range</b>	1 to 20000

<b>Default</b>	9
<b>Units</b>	seconds
<b>Configurable</b>	True

### hello-multiplier *number*

<b>Description</b>	<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>
<b>Context</b>	<a href="#">network-instance name string protocols isis instance name string interface interface-name reference level level-number number timers hello-multiplier number</a>
<b>Tree</b>	<a href="#">hello-multiplier</a>
<b>Range</b>	2 to 100
<b>Default</b>	3
<b>Configurable</b>	True

### oper-state *keyword*

<b>Description</b>	The operational state of the IS-IS interface. This simply tracks the operational state of the subinterface.
<b>Context</b>	<a href="#">network-instance name string protocols isis instance name string interface interface-name reference oper-state keyword</a>
<b>Tree</b>	<a href="#">oper-state</a>
<b>Options</b>	<ul style="list-style-type: none"> <li>• up Component or process is operational</li> <li>• down Component or process is not operational</li> <li>• empty Component slot is empty</li> <li>• downloading Component is downloading image into memory</li> </ul>

- 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  
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.

**Configurable** False

### **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](#) *string* [protocols isis instance name](#) *string* [interface interface-name](#) *reference* [passive](#) *boolean*

**Tree** [passive](#)

**Default** false

**Configurable** True



## segment-routing



**Note:**

This command is available for the following platforms:

- 7250 IXR-6
- 7250 IXR-10

<b>Description</b>	Container with interface-specific segment routing options
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">protocols isis instance name</a> <i>string</i> <a href="#">interface interface-name</a> <i>reference</i> <a href="#">segment-routing</a>
<b>Tree</b>	<a href="#">segment-routing</a>
<b>Configurable</b>	True

## mpls



**Note:**

This command is available for the following platforms:

- 7250 IXR-6
- 7250 IXR-10

<b>Description</b>	SR-MPLS interface options
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">protocols isis instance name</a> <i>string</i> <a href="#">interface interface-name</a> <i>reference</i> <a href="#">segment-routing mpls</a>
<b>Tree</b>	<a href="#">mpls</a>
<b>Configurable</b>	True

## ipv4-node-sid



**Note:**

This command is available for the following platforms:

- 7250 IXR-6
- 7250 IXR-10

<b>Description</b>	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.
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">protocols isis instance name</a> <i>string</i> <a href="#">interface interface-name</a> <i>reference</i> <a href="#">segment-routing mpls ipv4-node-sid</a>

<b>Tree</b>	<a href="#">ipv4-node-sid</a>
<b>Configurable</b>	True

## index *number*



### Note:

This command is available for the following platforms:

- 7250 IXR-6
- 7250 IXR-10

<b>Description</b>	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.
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">protocols isis instance name</a> <i>string</i> <a href="#">interface interface-name</a> <i>reference</i> <a href="#">segment-routing mpls ipv4-node-sid index</a> <i>number</i>
<b>Tree</b>	<a href="#">index</a>
<b>Range</b>	0 to 1048575
<b>Configurable</b>	True

## ipv6-node-sid



### Note:

This command is available for the following platforms:

- 7250 IXR-6
- 7250 IXR-10

<b>Description</b>	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.
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">protocols isis instance name</a> <i>string</i> <a href="#">interface interface-name</a> <i>reference</i> <a href="#">segment-routing mpls ipv6-node-sid</a>
<b>Tree</b>	<a href="#">ipv6-node-sid</a>
<b>Configurable</b>	True

## index *number*

**Note:**

This command is available for the following platforms:

- 7250 IXR-6
- 7250 IXR-10

<b>Description</b>	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.
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">protocols isis instance name</a> <i>string</i> <a href="#">interface interface-name</a> <i>reference</i> <a href="#">segment-routing mpls ipv6-node-sid index</a> <i>number</i>
<b>Tree</b>	<a href="#">index</a>
<b>Range</b>	0 to 1048575
<b>Configurable</b>	True

## timers

<b>Description</b>	Enter the timers context
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">protocols isis instance name</a> <i>string</i> <a href="#">interface interface-name</a> <i>reference</i> <a href="#">timers</a>
<b>Tree</b>	<a href="#">timers</a>
<b>Configurable</b>	True

## csnp-interval *number*

<b>Description</b>	The interval, specified in seconds, at which periodic CSNP packets should be transmitted by the local IS on this interface.
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">protocols isis instance name</a> <i>string</i> <a href="#">interface interface-name</a> <i>reference</i> <a href="#">timers csnp-interval</a> <i>number</i>
<b>Tree</b>	<a href="#">csnp-interval</a>
<b>Range</b>	1 to 65535
<b>Default</b>	10
<b>Units</b>	seconds
<b>Configurable</b>	True

**lsp-pacing-interval *number***

<b>Description</b>	<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 lsp-pacing-interval &lt; 100 ms and otherwise it is 1 second. For example, if the lsp-pacing-interval is 2 ms, at most 50 LSPs are sent every 100 ms. On the other hand, if the lsp-pacing-interval 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>
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">protocols isis instance name</a> <i>string</i> <a href="#">interface interface-name</a> <i>reference</i> <a href="#">timers lsp-pacing-interval</a> <i>number</i>
<b>Tree</b>	<a href="#">lsp-pacing-interval</a>
<b>Range</b>	0 to 100000
<b>Default</b>	100
<b>Units</b>	milliseconds
<b>Configurable</b>	True

**trace-options**

<b>Description</b>	Interface level debug trace options for IS-IS
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">protocols isis instance name</a> <i>string</i> <a href="#">interface interface-name</a> <i>reference</i> <a href="#">trace-options</a>
<b>Tree</b>	<a href="#">trace-options</a>
<b>Configurable</b>	True

**trace *keyword***

<b>Description</b>	List of tracing options
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">protocols isis instance name</a> <i>string</i> <a href="#">interface interface-name</a> <i>reference</i> <a href="#">trace-options</a> <a href="#">trace</a> <i>keyword</i>
<b>Tree</b>	<a href="#">trace</a>
<b>Options</b>	<ul style="list-style-type: none"> <li>• <a href="#">adjacencies</a></li> <li>• <a href="#">packets-all</a></li> <li>• <a href="#">packets-p2p-hello</a></li> <li>• <a href="#">packets-l1-hello</a></li> <li>• <a href="#">packets-l2-hello</a></li> </ul>

- packets-l1-psnp
- packets-l2-psnp
- packets-l1-csnp
- packets-l2-csnp
- packets-l1-lsp
- packets-l2-lsp

**Configurable** True

## ipv4-unicast

**Description** Enables/disables IPv4 routing in this ISIS instance.

**Context** [network-instance name string protocols isis instance name string ipv4-unicast](#)

**Tree** [ipv4-unicast](#)

**Configurable** True

## admin-state *keyword*

**Description** When set to true, the IS-IS instance supports IPv4 unicast routing

**Context** [network-instance name string protocols isis instance name string ipv4-unicast admin-state keyword](#)

**Tree** [admin-state](#)

**Default** enable

**Options**

- enable
- disable

**Configurable** True

## ipv6-unicast

**Description** Enables/disables IPv6 routing in this ISIS instance.

**Context** [network-instance name string protocols isis instance name string ipv6-unicast](#)

**Tree** [ipv6-unicast](#)

**Configurable** True

**admin-state *keyword***

<b>Description</b>	When set to true, the IS-IS instance supports IPv6 unicast routing
<b>Context</b>	<a href="#">network-instance name string protocols isis instance name string ipv6-unicast admin-state keyword</a>
<b>Tree</b>	<a href="#">admin-state</a>
<b>Default</b>	enable
<b>Options</b>	<ul style="list-style-type: none"> <li>• enable</li> <li>• disable</li> </ul>
<b>Configurable</b>	True

**multi-topology *boolean*****Note:**

This command is available for the following platforms:

- 7220 IXR-D2
- 7250 IXR-10
- 7220 IXR-D3L
- 7220 IXR-D2L
- 7220 IXR-H3
- 7220 IXR-H2
- 7220 IXR-D3
- 7250 IXR-6
- 7220 IXR-D1

<b>Description</b>	When set to true, IS-IS multi-topology TLVs are used for IPv6 routing and support for native IPv6 TLVs is disabled.
<b>Context</b>	<a href="#">network-instance name string protocols isis instance name string ipv6-unicast multi-topology boolean</a>
<b>Tree</b>	<a href="#">multi-topology</a>
<b>Default</b>	false
<b>Configurable</b>	True

## ldp-synchronization



### Note:

This command is available for the following platforms:

- 7250 IXR-6
- 7250 IXR-10

<b>Description</b>	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.
<b>Context</b>	<a href="#">network-instance name string protocols isis instance name string ldp-synchronization</a>
<b>Tree</b>	<a href="#">ldp-synchronization</a>
<b>Configurable</b>	True

## end-of-lib *boolean*



### Note:

This command is available for the following platforms:

- 7250 IXR-6
- 7250 IXR-10

<b>Description</b>	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.
<b>Context</b>	<a href="#">network-instance name string protocols isis instance name string ldp-synchronization end-of-lib boolean</a>
<b>Tree</b>	<a href="#">end-of-lib</a>
<b>Default</b>	false
<b>Configurable</b>	True

## hold-down-timer *number*



### Note:

This command is available for the following platforms:

- 7250 IXR-6
- 7250 IXR-10

<b>Description</b>	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.
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">protocols isis instance name</a> <i>string</i> <a href="#">ldp-synchronization hold-down-timer</a> <i>number</i>
<b>Tree</b>	<a href="#">hold-down-timer</a>
<b>Range</b>	1 to 1800
<b>Default</b>	60
<b>Units</b>	seconds
<b>Configurable</b>	True

### level [level-number](#) *number*

<b>Description</b>	List of IS-IS levels supported by this IS (router)
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">protocols isis instance name</a> <i>string</i> <a href="#">level level-number</a> <i>number</i>
<b>Tree</b>	<a href="#">level</a>
<b>Configurable</b>	True
<b>Max. Elements</b>	2

### level-number *number*

<b>Description</b>	Specifies the IS-IS protocol level to which these attributes are applied.
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">protocols isis instance name</a> <i>string</i> <a href="#">level level-number</a> <i>number</i>
<b>Range</b>	1 to 2
<b>Configurable</b>	True

### authentication

<b>Description</b>	Container for specifying authentication options that apply to the entire IS-IS instance or to an entire level.
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">protocols isis instance name</a> <i>string</i> <a href="#">level level-number</a> <i>number</i> <a href="#">authentication</a>
<b>Tree</b>	<a href="#">authentication</a>
<b>Configurable</b>	True



**csnp-authentication *boolean***

<b>Description</b>	When this is enabled, reject all CSNP PDUs that either have a mismatch in authentication-type or authentication-key.
<b>Context</b>	<a href="#">network-instance name string protocols isis instance name string level level-number number authentication csnp-authentication boolean</a>
<b>Tree</b>	<a href="#">csnp-authentication</a>
<b>Configurable</b>	True

**hello-authentication *boolean***

<b>Description</b>	When this is enabled at the instance level, reject all IIH PDUs that either have a mismatch in authentication-type or authentication-key. When this is enabled for a particular level, reject all LAN IIH PDUs associated with that level that have a mismatch in authentication-type or authentication-key.
<b>Context</b>	<a href="#">network-instance name string protocols isis instance name string level level-number number authentication hello-authentication boolean</a>
<b>Tree</b>	<a href="#">hello-authentication</a>
<b>Configurable</b>	True

**keychain *reference***

<b>Description</b>	Enter the keychain context
<b>Context</b>	<a href="#">network-instance name string protocols isis instance name string level level-number number authentication keychain reference</a>
<b>Tree</b>	<a href="#">keychain</a>
<b>Reference</b>	<a href="#">system authentication keychain name string string</a>
<b>Configurable</b>	True

**psnp-authentication *boolean***

<b>Description</b>	When this is enabled, reject all PSNP PDUs that either have a mismatch in authentication-type or authentication-key.
<b>Context</b>	<a href="#">network-instance name string protocols isis instance name string level level-number number authentication psnp-authentication boolean</a>
<b>Tree</b>	<a href="#">psnp-authentication</a>
<b>Configurable</b>	True

**metric-style *keyword***

<b>Description</b>	Specifies the metric style to be wide or narrow for the level
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">protocols isis instance name</a> <i>string</i> <a href="#">level level-number</a> <i>number</i> <b>metric-style</b> <i>keyword</i>
<b>Tree</b>	<a href="#">metric-style</a>
<b>Default</b>	wide
<b>Options</b>	<ul style="list-style-type: none"> <li>• narrow This enum describes narrow metric style</li> <li>• wide This enum describes wide metric style</li> </ul>
<b>Configurable</b>	True

**route-preference**

<b>Description</b>	Specify the route preference (admin distance) for IP routes associated with the level
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">protocols isis instance name</a> <i>string</i> <a href="#">level level-number</a> <i>number</i> <b>route-preference</b>
<b>Tree</b>	<a href="#">route-preference</a>
<b>Configurable</b>	True

**external *number***

<b>Description</b>	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.
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">protocols isis instance name</a> <i>string</i> <a href="#">level level-number</a> <i>number</i> <b>route-preference external</b> <i>number</i>
<b>Tree</b>	<a href="#">external</a>
<b>Range</b>	1 to 255
<b>Configurable</b>	True

**internal *number***

<b>Description</b>	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.
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<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">protocols isis instance name</a> <i>string</i> <a href="#">level level-number</a> <i>number</i> <a href="#">route-preference internal</a> <i>number</i>
<b>Tree</b>	<a href="#">internal</a>
<b>Range</b>	1 to 255
<b>Configurable</b>	True

### trace-options

<b>Description</b>	Level debug trace options for IS-IS
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">protocols isis instance name</a> <i>string</i> <a href="#">level level-number</a> <i>number</i> <a href="#">trace-options</a>
<b>Tree</b>	<a href="#">trace-options</a>
<b>Configurable</b>	True

### trace keyword

<b>Description</b>	List of tracing options
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">protocols isis instance name</a> <i>string</i> <a href="#">level level-number</a> <i>number</i> <a href="#">trace-options</a> <a href="#">trace</a> <i>keyword</i>
<b>Tree</b>	<a href="#">trace</a>
<b>Options</b>	<ul style="list-style-type: none"> <li>• <a href="#">adjacencies</a></li> <li>• <a href="#">lsdb</a></li> <li>• <a href="#">routes</a></li> <li>• <a href="#">spf</a></li> </ul>
<b>Configurable</b>	True

### level-capability keyword

<b>Description</b>	The level-capability of the intermediate system (router)
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">protocols isis instance name</a> <i>string</i> <a href="#">level-capability</a> <i>keyword</i>
<b>Tree</b>	<a href="#">level-capability</a>
<b>Default</b>	L2
<b>Options</b>	<ul style="list-style-type: none"> <li>• L1 This enum describes ISIS level 1</li> <li>• L2 This enum describes ISIS level 2</li> </ul>

- L1L2  
This enum describes ISIS level 1-2

**Configurable** True

### **level-database** *level-number number* *lsp-id string*

**Description** Link State database

**Context** [network-instance name string](#) [protocols isis instance name string](#) [level-database level-number number](#) [lsp-id string](#)

**Tree** [level-database](#)

**Configurable** False

### **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

### **lsp-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

### **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

**attached *boolean***

<b>Description</b>	Set to true in the L1 LSP when the IS has a Level 2 adjacency.
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">protocols isis instance name</a> <i>string</i> <a href="#">level-database level-number</a> <i>number</i> <a href="#">lsp-id</a> <i>string</i> <a href="#">attributes attached</a> <i>boolean</i>
<b>Tree</b>	<a href="#">attached</a>
<b>Configurable</b>	False

**level1-is-type *boolean***

<b>Description</b>	Set to true when the router participates in L1
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">protocols isis instance name</a> <i>string</i> <a href="#">level-database level-number</a> <i>number</i> <a href="#">lsp-id</a> <i>string</i> <a href="#">attributes level1-is-type</a> <i>boolean</i>
<b>Tree</b>	<a href="#">level1-is-type</a>
<b>Configurable</b>	False

**level2-is-type *boolean***

<b>Description</b>	Set to true when the router participates in L2
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">protocols isis instance name</a> <i>string</i> <a href="#">level-database level-number</a> <i>number</i> <a href="#">lsp-id</a> <i>string</i> <a href="#">attributes level2-is-type</a> <i>boolean</i>
<b>Tree</b>	<a href="#">level2-is-type</a>
<b>Configurable</b>	False

**overload *boolean***

<b>Description</b>	Set to true when the IS is in overload state and should be avoided for transit.
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">protocols isis instance name</a> <i>string</i> <a href="#">level-database level-number</a> <i>number</i> <a href="#">lsp-id</a> <i>string</i> <a href="#">attributes overload</a> <i>boolean</i>
<b>Tree</b>	<a href="#">overload</a>
<b>Configurable</b>	False

**checksum *string***

<b>Description</b>	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.
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">protocols isis instance name</a> <i>string</i> <a href="#">level-database level-number</a> <i>number</i> <a href="#">lsp-id</a> <i>string</i> <a href="#">checksum</a> <i>string</i>

<b>Tree</b>	<a href="#">checksum</a>
<b>Configurable</b>	False

**defined-tlvs**

<b>Description</b>	List of defined TLV-s contained in LSP.
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">protocols isis instance name</a> <i>string</i> <a href="#">level-database level-number</a> <i>number</i> <a href="#">lsp-id</a> <i>string</i> <a href="#">defined-tlvs</a>
<b>Tree</b>	<a href="#">defined-tlvs</a>
<b>Configurable</b>	False

**area-addresses** *string*

<b>Description</b>	Each item represents an area address advertised by the LSP.
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">protocols isis instance name</a> <i>string</i> <a href="#">level-database level-number</a> <i>number</i> <a href="#">lsp-id</a> <i>string</i> <a href="#">defined-tlvs area-addresses</a> <i>string</i>
<b>Tree</b>	<a href="#">area-addresses</a>
<b>String Length</b>	2 to 38
<b>Configurable</b>	False

**authentication**

<b>Description</b>	Authentication TLV. TLV type = 10
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">protocols isis instance name</a> <i>string</i> <a href="#">level-database level-number</a> <i>number</i> <a href="#">lsp-id</a> <i>string</i> <a href="#">defined-tlvs authentication</a>
<b>Tree</b>	<a href="#">authentication</a>
<b>Configurable</b>	False

**auth-data** *string*

<b>Description</b>	The authentication data
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">protocols isis instance name</a> <i>string</i> <a href="#">level-database level-number</a> <i>number</i> <a href="#">lsp-id</a> <i>string</i> <a href="#">defined-tlvs authentication auth-data</a> <i>string</i>
<b>Tree</b>	<a href="#">auth-data</a>
<b>Configurable</b>	False

**auth-type keyword**

<b>Description</b>	Enter the auth-type context
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">protocols isis instance name</a> <i>string</i> <a href="#">level-database level-number</a> <i>number</i> <a href="#">lsp-id</a> <i>string</i> <a href="#">defined-tlvs authentication auth-type</a> <i>keyword</i>
<b>Tree</b>	<a href="#">auth-type</a>
<b>Options</b>	<ul style="list-style-type: none"> <li>• <a href="#">cleartext</a></li> <li>• <a href="#">crypto</a></li> <li>• <a href="#">hmac-md5</a></li> </ul>
<b>Configurable</b>	False

**extended-ipv4-reachability [ipv4-prefix](#) *string***

<b>Description</b>	TLV specifying extended IPv4 Reachability information in the LSP. TLV type = 135
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">protocols isis instance name</a> <i>string</i> <a href="#">level-database level-number</a> <i>number</i> <a href="#">lsp-id</a> <i>string</i> <a href="#">defined-tlvs extended-ipv4-reachability ipv4-prefix</a> <i>string</i>
<b>Tree</b>	<a href="#">extended-ipv4-reachability</a>
<b>Configurable</b>	False

**ipv4-prefix *string***

<b>Description</b>	An IPv4 prefix that is reachable to the router.
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">protocols isis instance name</a> <i>string</i> <a href="#">level-database level-number</a> <i>number</i> <a href="#">lsp-id</a> <i>string</i> <a href="#">defined-tlvs extended-ipv4-reachability ipv4-prefix</a> <i>string</i>
<b>Configurable</b>	False

**down *boolean***

<b>Description</b>	Reads true when the IPv4 prefix was leaked down from Level2 to Level1.
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">protocols isis instance name</a> <i>string</i> <a href="#">level-database level-number</a> <i>number</i> <a href="#">lsp-id</a> <i>string</i> <a href="#">defined-tlvs extended-ipv4-reachability ipv4-prefix</a> <i>string</i> <a href="#">down</a> <i>boolean</i>
<b>Tree</b>	<a href="#">down</a>
<b>Configurable</b>	False

**metric number**

<b>Description</b>	The default metric to reach the IPv4 prefix.
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">protocols isis instance name</a> <i>string</i> <a href="#">level-database level-number</a> <i>number</i> <a href="#">lsp-id</a> <i>string</i> <a href="#">defined-tlvs extended-ipv4-reachability ipv4-prefix</a> <i>string</i> <a href="#">metric</a> <i>number</i>
<b>Tree</b>	<a href="#">metric</a>
<b>Range</b>	0 to 16777215
<b>Configurable</b>	False

**sub-tlvs**

<b>Description</b>	SubTLVs of TLV 135, TLV 235, TLV 236 and TLV 237
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">protocols isis instance name</a> <i>string</i> <a href="#">level-database level-number</a> <i>number</i> <a href="#">lsp-id</a> <i>string</i> <a href="#">defined-tlvs extended-ipv4-reachability ipv4-prefix</a> <i>string</i> <a href="#">sub-tlvs</a>
<b>Tree</b>	<a href="#">sub-tlvs</a>
<b>Configurable</b>	False

**route-tag-32bit number**

<b>Description</b>	List of 32-bit administrative tag values associated with the IPv4 prefix.
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">protocols isis instance name</a> <i>string</i> <a href="#">level-database level-number</a> <i>number</i> <a href="#">lsp-id</a> <i>string</i> <a href="#">defined-tlvs extended-ipv4-reachability ipv4-prefix</a> <i>string</i> <a href="#">sub-tlvs route-tag-32bit</a> <i>number</i>
<b>Tree</b>	<a href="#">route-tag-32bit</a>
<b>Range</b>	1 to 4294967295
<b>Configurable</b>	False

**route-tag-64bit number**

<b>Description</b>	List of 64-bit administrative tag values associated with the IPv4 prefix.
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">protocols isis instance name</a> <i>string</i> <a href="#">level-database level-number</a> <i>number</i> <a href="#">lsp-id</a> <i>string</i> <a href="#">defined-tlvs extended-ipv4-reachability ipv4-prefix</a> <i>string</i> <a href="#">sub-tlvs route-tag-64bit</a> <i>number</i>
<b>Tree</b>	<a href="#">route-tag-64bit</a>
<b>Configurable</b>	False



## segment-routing-prefix-sid



### Note:

This command is available for the following platforms:

- 7250 IXR-6
- 7250 IXR-10

<b>Description</b>	Carries a segment routing prefix SID
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">protocols isis instance name</a> <i>string</i> <a href="#">level-database level-number</a> <i>number</i> <a href="#">lsp-id</a> <i>string</i> <a href="#">defined-tlvs extended-ipv4-reachability ipv4-prefix</a> <i>string</i> <a href="#">sub-tlvs segment-routing-prefix-sid</a>
<b>Tree</b>	<a href="#">segment-routing-prefix-sid</a>
<b>Configurable</b>	False

## algorithm *keyword*



### Note:

This command is available for the following platforms:

- 7250 IXR-6
- 7250 IXR-10

<b>Description</b>	Contains the identifier of the algorithm the router uses to compute the reachability of the prefix to which the Prefix-SID is associated
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">protocols isis instance name</a> <i>string</i> <a href="#">level-database level-number</a> <i>number</i> <a href="#">lsp-id</a> <i>string</i> <a href="#">defined-tlvs extended-ipv4-reachability ipv4-prefix</a> <i>string</i> <a href="#">sub-tlvs segment-routing-prefix-sid</a> <a href="#">algorithm</a> <i>keyword</i>
<b>Tree</b>	<a href="#">algorithm</a>
<b>Options</b>	<ul style="list-style-type: none"> <li>• spf</li> <li>• strict-spf</li> </ul>
<b>Configurable</b>	False

## explicit-null *boolean*



### Note:

This command is available for the following platforms:

- 7250 IXR-6
- 7250 IXR-10

<b>Description</b>	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
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">protocols isis instance name</a> <i>string</i> <a href="#">level-database level-number</a> <i>number</i> <a href="#">lsp-id</a> <i>string</i> <a href="#">defined-tlvs extended-ipv4-reachability ipv4-prefix</a> <i>string</i> <a href="#">sub-tlvs segment-routing-prefix-sid explicit-null</a> <i>boolean</i>
<b>Tree</b>	<a href="#">explicit-null</a>
<b>Configurable</b>	False

### local *boolean*



**Note:**

This command is available for the following platforms:

- 7250 IXR-6
- 7250 IXR-10

<b>Description</b>	If set, then the value/index carried by the Prefix-SID has local significance.
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">protocols isis instance name</a> <i>string</i> <a href="#">level-database level-number</a> <i>number</i> <a href="#">lsp-id</a> <i>string</i> <a href="#">defined-tlvs extended-ipv4-reachability ipv4-prefix</a> <i>string</i> <a href="#">sub-tlvs segment-routing-prefix-sid local</a> <i>boolean</i>
<b>Tree</b>	<a href="#">local</a>
<b>Configurable</b>	False

### node-sid *boolean*



**Note:**

This command is available for the following platforms:

- 7250 IXR-6
- 7250 IXR-10

<b>Description</b>	If set the prefix SID refers to the router identified by the prefix.
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">protocols isis instance name</a> <i>string</i> <a href="#">level-database level-number</a> <i>number</i> <a href="#">lsp-id</a> <i>string</i> <a href="#">defined-tlvs extended-ipv4-reachability ipv4-prefix</a> <i>string</i> <a href="#">sub-tlvs segment-routing-prefix-sid node-sid</a> <i>boolean</i>
<b>Tree</b>	<a href="#">node-sid</a>
<b>Configurable</b>	False

## penultimate-hop-popping *boolean*

**Note:**

This command is available for the following platforms:

- 7250 IXR-6
- 7250 IXR-10

<b>Description</b>	If set the penultimate hop MUST NOT pop the Prefix-SID before delivering the packet to the node that advertised the Prefix-SID.
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">protocols isis instance name</a> <i>string</i> <a href="#">level-database level-number</a> <i>number</i> <a href="#">lsp-id</a> <i>string</i> <a href="#">defined-tlvs extended-ipv4-reachability ipv4-prefix</a> <i>string</i> <a href="#">sub-tlvs segment-routing-prefix-sid penultimate-hop-popping</a> <i>boolean</i>
<b>Tree</b>	<a href="#">penultimate-hop-popping</a>
<b>Configurable</b>	False

## re-advertised *boolean*

**Note:**

This command is available for the following platforms:

- 7250 IXR-6
- 7250 IXR-10

<b>Description</b>	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.
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">protocols isis instance name</a> <i>string</i> <a href="#">level-database level-number</a> <i>number</i> <a href="#">lsp-id</a> <i>string</i> <a href="#">defined-tlvs extended-ipv4-reachability ipv4-prefix</a> <i>string</i> <a href="#">sub-tlvs segment-routing-prefix-sid re-advertised</a> <i>boolean</i>
<b>Tree</b>	<a href="#">re-advertised</a>
<b>Configurable</b>	False

## sr-index-or-label *number*

**Note:**

This command is available for the following platforms:

- 7250 IXR-6
- 7250 IXR-10

<b>Description</b>	An index representing an offset in the SID/label space advertised by the router or else a direct encoding of an MPLS label value.
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">protocols isis instance name</a> <i>string</i> <a href="#">level-database level-number</a> <i>number</i> <a href="#">lsp-id</a> <i>string</i> <a href="#">defined-tlvs extended-ipv4-reachability ipv4-prefix</a> <i>string</i> <a href="#">sub-tlvs segment-routing-prefix-sid sr-index-or-label</a> <i>number</i>
<b>Tree</b>	<a href="#">sr-index-or-label</a>
<b>Configurable</b>	False

### value *boolean*



**Note:**

This command is available for the following platforms:

- 7250 IXR-6
- 7250 IXR-10

<b>Description</b>	If set then the Prefix-SID carries a value
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">protocols isis instance name</a> <i>string</i> <a href="#">level-database level-number</a> <i>number</i> <a href="#">lsp-id</a> <i>string</i> <a href="#">defined-tlvs extended-ipv4-reachability ipv4-prefix</a> <i>string</i> <a href="#">sub-tlvs segment-routing-prefix-sid value</a> <i>boolean</i>
<b>Tree</b>	<a href="#">value</a>
<b>Configurable</b>	False

### extended-is-reachability [neighbor](#) *string*

<b>Description</b>	Each TLV encodes the identity of an adjacent IS neighbor. TLV type = 22
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">protocols isis instance name</a> <i>string</i> <a href="#">level-database level-number</a> <i>number</i> <a href="#">lsp-id</a> <i>string</i> <a href="#">defined-tlvs extended-is-reachability neighbor</a> <i>string</i>
<b>Tree</b>	<a href="#">extended-is-reachability</a>
<b>Configurable</b>	False

### [neighbor](#) *string*

<b>Description</b>	An adjacent IS neighbor
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">protocols isis instance name</a> <i>string</i> <a href="#">level-database level-number</a> <i>number</i> <a href="#">lsp-id</a> <i>string</i> <a href="#">defined-tlvs extended-is-reachability neighbor</a> <i>string</i>
<b>String Length</b>	17

**Configurable** False

### 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 extended-is-reachability neighbor](#) *string* [default-metric](#) *number*

**Tree** [default-metric](#)

**Range** 0 to 16777215

**Configurable** False

### sub-tlvs

**Description** SubTLVs of TLV 22 and TLV 222

**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](#)

**Tree** [sub-tlvs](#)

**Configurable** False

### ipv4-interface-address *string*

**Description** The IPv4 address of the interface to the neighbor. Sub-TLV = 6.

**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 ipv4-interface-address](#) *string*

**Tree** [ipv4-interface-address](#)

**Configurable** False

### ipv4-neighbor-address *string*

**Description** The IPv4 address of the neighbor. Sub-TLV = 8.

**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 ipv4-neighbor-address](#) *string*

**Tree** [ipv4-neighbor-address](#)

**Configurable** False

**ipv6-interface-address *string***

<b>Description</b>	The IPv6 address of the interface to the neighbor. Sub-TLV = 12.
<b>Context</b>	<a href="#">network-instance name <i>string</i></a> <a href="#">protocols isis instance name <i>string</i></a> <a href="#">level-database level-number <i>number</i></a> <a href="#">lsp-id <i>string</i></a> <a href="#">defined-tlvs extended-is-reachability neighbor <i>string</i></a> <a href="#">sub-tlvs ipv6-interface-address <i>string</i></a>
<b>Tree</b>	<a href="#">ipv6-interface-address</a>
<b>Configurable</b>	False

**ipv6-neighbor-address *string***

<b>Description</b>	The IPv4 address of the neighbor. Sub-TLV = 13.
<b>Context</b>	<a href="#">network-instance name <i>string</i></a> <a href="#">protocols isis instance name <i>string</i></a> <a href="#">level-database level-number <i>number</i></a> <a href="#">lsp-id <i>string</i></a> <a href="#">defined-tlvs extended-is-reachability neighbor <i>string</i></a> <a href="#">sub-tlvs ipv6-neighbor-address <i>string</i></a>
<b>Tree</b>	<a href="#">ipv6-neighbor-address</a>
<b>Configurable</b>	False

**link-msd****Note:**

This command is available for the following platforms:

- 7250 IXR-6
- 7250 IXR-10

<b>Description</b>	The maximum segment depth of the link to the neighbor. Sub-TLV = 15.
<b>Context</b>	<a href="#">network-instance name <i>string</i></a> <a href="#">protocols isis instance name <i>string</i></a> <a href="#">level-database level-number <i>number</i></a> <a href="#">lsp-id <i>string</i></a> <a href="#">defined-tlvs extended-is-reachability neighbor <i>string</i></a> <a href="#">sub-tlvs link-msd</a>
<b>Tree</b>	<a href="#">link-msd</a>
<b>Configurable</b>	False

**msd-info** *msd-type (keyword | number) msd-value number***Note:**

This command is available for the following platforms:

- 7250 IXR-6
- 7250 IXR-10

<b>Description</b>	List of MSD entries
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">protocols isis instance name</a> <i>string</i> <a href="#">level-database level-number</a> <i>number</i> <a href="#">lsp-id</a> <i>string</i> <a href="#">defined-tlvs extended-is-reachability neighbor</a> <i>string</i> <a href="#">sub-tlvs link-msd msd-info msd-type (keyword   number) msd-value</a> <i>number</i>
<b>Tree</b>	<a href="#">msd-info</a>
<b>Configurable</b>	False

**msd-type** *(keyword | number)***Note:**

This command is available for the following platforms:

- 7250 IXR-6
- 7250 IXR-10

<b>Description</b>	MSD type
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">protocols isis instance name</a> <i>string</i> <a href="#">level-database level-number</a> <i>number</i> <a href="#">lsp-id</a> <i>string</i> <a href="#">defined-tlvs extended-is-reachability neighbor</a> <i>string</i> <a href="#">sub-tlvs link-msd msd-info msd-type (keyword   number) msd-value</a> <i>number</i>
<b>Range</b>	2 to 254
<b>Options</b>	<ul style="list-style-type: none"> <li>• <a href="#">base-mpls-imposition-msd</a></li> </ul>
<b>Configurable</b>	False

**msd-value** *number***Note:**

This command is available for the following platforms:

- 7250 IXR-6
- 7250 IXR-10

<b>Description</b>	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
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">protocols isis instance name</a> <i>string</i> <a href="#">level-database level-number</a> <i>number</i> <a href="#">lsp-id</a> <i>string</i> <a href="#">defined-tlvs extended-is-reachability neighbor</a> <i>string</i> <a href="#">sub-tlvs link-msd msd-info msd-type</a> ( <i>keyword</i>   <i>number</i> ) <a href="#">msd-value</a> <i>number</i>
<b>Configurable</b>	False

### segment-routing-adjacency-sid [sr-index-or-label](#) *number*



**Note:**

This command is available for the following platforms:

- 7250 IXR-6
- 7250 IXR-10

<b>Description</b>	List of Adj-SID sub-TLVs associated with the neighbor. Sub-TLV = 31.
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">protocols isis instance name</a> <i>string</i> <a href="#">level-database level-number</a> <i>number</i> <a href="#">lsp-id</a> <i>string</i> <a href="#">defined-tlvs extended-is-reachability neighbor</a> <i>string</i> <a href="#">sub-tlvs segment-routing-adjacency-sid sr-index-or-label</a> <i>number</i>
<b>Tree</b>	<a href="#">segment-routing-adjacency-sid</a>
<b>Configurable</b>	False

### sr-index-or-label *number*



**Note:**

This command is available for the following platforms:

- 7250 IXR-6
- 7250 IXR-10

<b>Description</b>	An index representing an offset in the SID/label space advertised by the router or else a direct encoding of an MPLS label value.
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">protocols isis instance name</a> <i>string</i> <a href="#">level-database level-number</a> <i>number</i> <a href="#">lsp-id</a> <i>string</i> <a href="#">defined-tlvs extended-is-reachability neighbor</a> <i>string</i> <a href="#">sub-tlvs segment-routing-adjacency-sid sr-index-or-label</a> <i>number</i>
<b>Configurable</b>	False



## adj-set *boolean*

**Note:**

This command is available for the following platforms:

- 7250 IXR-6
- 7250 IXR-10

<b>Description</b>	When set, the S-Flag indicates that the Adj-SID refers to a set of adjacencies.
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">protocols isis instance name</a> <i>string</i> <a href="#">level-database level-number</a> <i>number</i> <a href="#">lsp-id</a> <i>string</i> <a href="#">defined-tlvs extended-is-reachability neighbor</a> <i>string</i> <a href="#">sub-tlvs segment-routing-adjacency-sid sr-index-or-label</a> <i>number</i> <b>adj-set</b> <i>boolean</i>
<b>Tree</b>	<a href="#">adj-set</a>
<b>Configurable</b>	False

## backup *boolean*

**Note:**

This command is available for the following platforms:

- 7250 IXR-6
- 7250 IXR-10

<b>Description</b>	If set, the Adj-SID is eligible for protection
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">protocols isis instance name</a> <i>string</i> <a href="#">level-database level-number</a> <i>number</i> <a href="#">lsp-id</a> <i>string</i> <a href="#">defined-tlvs extended-is-reachability neighbor</a> <i>string</i> <a href="#">sub-tlvs segment-routing-adjacency-sid sr-index-or-label</a> <i>number</i> <b>backup</b> <i>boolean</i>
<b>Tree</b>	<a href="#">backup</a>
<b>Configurable</b>	False

## ipv6-family *boolean*

**Note:**

This command is available for the following platforms:

- 7250 IXR-6
- 7250 IXR-10

<b>Description</b>	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.
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<b>Context</b>	<code>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></code>
<b>Tree</b>	<code>ipv6-family</code>
<b>Configurable</b>	False

## local *boolean*



### Note:

This command is available for the following platforms:

- 7250 IXR-6
- 7250 IXR-10

<b>Description</b>	If set, then the value/index carried by the Adj-SID has local significance.
<b>Context</b>	<code>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></code>
<b>Tree</b>	<code>local</code>
<b>Configurable</b>	False

## persistent *boolean*



### Note:

This command is available for the following platforms:

- 7250 IXR-6
- 7250 IXR-10

<b>Description</b>	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
<b>Context</b>	<code>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></code>
<b>Tree</b>	<code>persistent</code>
<b>Configurable</b>	False

**value *boolean*****Note:**

This command is available for the following platforms:

- 7250 IXR-6
- 7250 IXR-10

<b>Description</b>	If set then the Adj-SID carries a value
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">protocols isis instance name</a> <i>string</i> <a href="#">level-database level-number</a> <i>number</i> <a href="#">lsp-id</a> <i>string</i> <a href="#">defined-tlvs extended-is-reachability neighbor</a> <i>string</i> <a href="#">sub-tlvs segment-routing-adjacency-sid sr-index-or-label</a> <i>number</i> <b>value</b> <i>boolean</i>
<b>Tree</b>	<a href="#">value</a>
<b>Configurable</b>	False

**weight *number*****Note:**

This command is available for the following platforms:

- 7250 IXR-6
- 7250 IXR-10

<b>Description</b>	The value represents the weight of the Adj-SID for the purpose of load balancing
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">protocols isis instance name</a> <i>string</i> <a href="#">level-database level-number</a> <i>number</i> <a href="#">lsp-id</a> <i>string</i> <a href="#">defined-tlvs extended-is-reachability neighbor</a> <i>string</i> <a href="#">sub-tlvs segment-routing-adjacency-sid sr-index-or-label</a> <i>number</i> <b>weight</b> <i>number</i>
<b>Tree</b>	<a href="#">weight</a>
<b>Configurable</b>	False

**segment-routing-lan-adjacency-sid [sr-index-or-label](#) *number*****Note:**

This command is available for the following platforms:

- 7250 IXR-6
- 7250 IXR-10

<b>Description</b>	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.
--------------------	--

<b>Context</b>	<code>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></code>
<b>Tree</b>	<code>segment-routing-lan-adjacency-sid</code>
<b>Configurable</b>	False

### sr-index-or-label *number*



**Note:**

This command is available for the following platforms:

- 7250 IXR-6
- 7250 IXR-10

<b>Description</b>	An index representing an offset in the SID/label space advertised by the router or else a direct encoding of an MPLS label value.
<b>Context</b>	<code>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></code>
<b>Configurable</b>	False

### adj-set *boolean*



**Note:**

This command is available for the following platforms:

- 7250 IXR-6
- 7250 IXR-10

<b>Description</b>	When set, the S-Flag indicates that the Adj-SID refers to a set of adjacencies.
<b>Context</b>	<code>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></code>
<b>Tree</b>	<code>adj-set</code>
<b>Configurable</b>	False

## backup *boolean*

**Note:**

This command is available for the following platforms:

- 7250 IXR-6
- 7250 IXR-10

<b>Description</b>	If set, the Adj-SID is eligible for protection
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">protocols isis instance name</a> <i>string</i> <a href="#">level-database level-number</a> <i>number</i> <a href="#">lsp-id</a> <i>string</i> <a href="#">defined-tlvs extended-is-reachability neighbor</a> <i>string</i> <a href="#">sub-tlvs segment-routing-lan-adjacency-sid sr-index-or-label</a> <i>number</i> <b>backup</b> <i>boolean</i>
<b>Tree</b>	<a href="#">backup</a>
<b>Configurable</b>	False

## ipv6-family *boolean*

**Note:**

This command is available for the following platforms:

- 7250 IXR-6
- 7250 IXR-10

<b>Description</b>	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.
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">protocols isis instance name</a> <i>string</i> <a href="#">level-database level-number</a> <i>number</i> <a href="#">lsp-id</a> <i>string</i> <a href="#">defined-tlvs extended-is-reachability neighbor</a> <i>string</i> <a href="#">sub-tlvs segment-routing-lan-adjacency-sid sr-index-or-label</a> <i>number</i> <b>ipv6-family</b> <i>boolean</i>
<b>Tree</b>	<a href="#">ipv6-family</a>
<b>Configurable</b>	False

## local *boolean*

**Note:**

This command is available for the following platforms:

- 7250 IXR-6
- 7250 IXR-10

<b>Description</b>	If set, then the value/index carried by the Adj-SID has local significance.
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<b>Context</b>	<code>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></code>
<b>Tree</b>	<code>local</code>
<b>Configurable</b>	False

## neighbor-system-id *string*



### Note:

This command is available for the following platforms:

- 7250 IXR-6
- 7250 IXR-10

<b>Description</b>	IS-IS system-ID of the LAN neighbor
<b>Context</b>	<code>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></code>
<b>Tree</b>	<code>neighbor-system-id</code>
<b>String Length</b>	14
<b>Configurable</b>	False

## persistent *boolean*



### Note:

This command is available for the following platforms:

- 7250 IXR-6
- 7250 IXR-10

<b>Description</b>	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
<b>Context</b>	<code>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></code>
<b>Tree</b>	<code>persistent</code>
<b>Configurable</b>	False

**value *boolean*****Note:**

This command is available for the following platforms:

- 7250 IXR-6
- 7250 IXR-10

<b>Description</b>	If set then the Adj-SID carries a value
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">protocols isis instance name</a> <i>string</i> <a href="#">level-database level-number</a> <i>number</i> <a href="#">lsp-id</a> <i>string</i> <a href="#">defined-tlvs extended-is-reachability neighbor</a> <i>string</i> <a href="#">sub-tlvs segment-routing-lan-adjacency-sid sr-index-or-label</a> <i>number</i> <a href="#">value</a> <i>boolean</i>
<b>Tree</b>	<a href="#">value</a>
<b>Configurable</b>	False

**weight *number*****Note:**

This command is available for the following platforms:

- 7250 IXR-6
- 7250 IXR-10

<b>Description</b>	The value represents the weight of the Adj-SID for the purpose of load balancing
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">protocols isis instance name</a> <i>string</i> <a href="#">level-database level-number</a> <i>number</i> <a href="#">lsp-id</a> <i>string</i> <a href="#">defined-tlvs extended-is-reachability neighbor</a> <i>string</i> <a href="#">sub-tlvs segment-routing-lan-adjacency-sid sr-index-or-label</a> <i>number</i> <a href="#">weight</a> <i>number</i>
<b>Tree</b>	<a href="#">weight</a>
<b>Configurable</b>	False

**hostname *string***

<b>Description</b>	Host name that advertised this LSP.
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">protocols isis instance name</a> <i>string</i> <a href="#">level-database level-number</a> <i>number</i> <a href="#">lsp-id</a> <i>string</i> <a href="#">defined-tlvs hostname</a> <i>string</i>
<b>Tree</b>	<a href="#">hostname</a>
<b>Configurable</b>	False

**ipv4-external-reachability ipv4-prefix *string***

<b>Description</b>	TLV specifying external IPv4 Reachability information in the LSP. External reachability is typically routing information learned from another protocol. TLV type = 130
<b>Context</b>	<a href="#">network-instance name <i>string</i></a> <a href="#">protocols isis instance name <i>string</i></a> <a href="#">level-database level-number <i>number</i></a> <a href="#">lsp-id <i>string</i></a> <a href="#">defined-tlvs ipv4-external-reachability ipv4-prefix <i>string</i></a>
<b>Tree</b>	<a href="#">ipv4-external-reachability</a>
<b>Configurable</b>	False

**ipv4-prefix *string***

<b>Description</b>	An IPv4 prefix that is reachable to the router.
<b>Context</b>	<a href="#">network-instance name <i>string</i></a> <a href="#">protocols isis instance name <i>string</i></a> <a href="#">level-database level-number <i>number</i></a> <a href="#">lsp-id <i>string</i></a> <a href="#">defined-tlvs ipv4-external-reachability ipv4-prefix <i>string</i></a>
<b>Configurable</b>	False

**default-metric *number***

<b>Description</b>	The default metric to reach the IPv4 prefix.
<b>Context</b>	<a href="#">network-instance name <i>string</i></a> <a href="#">protocols isis instance name <i>string</i></a> <a href="#">level-database level-number <i>number</i></a> <a href="#">lsp-id <i>string</i></a> <a href="#">defined-tlvs ipv4-external-reachability ipv4-prefix <i>string</i></a> <a href="#">default-metric <i>number</i></a>
<b>Tree</b>	<a href="#">default-metric</a>
<b>Range</b>	0 to 63
<b>Configurable</b>	False

**default-metric-type *keyword***

<b>Description</b>	The default metric type: internal or external.
<b>Context</b>	<a href="#">network-instance name <i>string</i></a> <a href="#">protocols isis instance name <i>string</i></a> <a href="#">level-database level-number <i>number</i></a> <a href="#">lsp-id <i>string</i></a> <a href="#">defined-tlvs ipv4-external-reachability ipv4-prefix <i>string</i></a> <a href="#">default-metric-type <i>keyword</i></a>
<b>Tree</b>	<a href="#">default-metric-type</a>
<b>Options</b>	<ul style="list-style-type: none"> <li>internal</li> </ul> <p>This enum describes internal route type</p>



- external  
This enum describes external route type

**Configurable** False

### 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 ipv4-external-reachability ipv4-prefix](#) *string* [down](#) *boolean*

**Tree** [down](#)

**Configurable** False

### 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

### 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

### 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*

<b>Configurable</b>	False
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### default-metric *number*

<b>Description</b>	The default metric to reach the IPv4 prefix.
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">protocols isis instance name</a> <i>string</i> <a href="#">level-database level-number</a> <i>number</i> <a href="#">lsp-id</a> <i>string</i> <a href="#">defined-tlvs ipv4-internal-reachability ipv4-prefix</a> <i>string</i> <a href="#">default-metric</a> <i>number</i>
<b>Tree</b>	<a href="#">default-metric</a>
<b>Range</b>	0 to 63
<b>Configurable</b>	False

### default-metric-type *keyword*

<b>Description</b>	The default metric type: internal or external.
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">protocols isis instance name</a> <i>string</i> <a href="#">level-database level-number</a> <i>number</i> <a href="#">lsp-id</a> <i>string</i> <a href="#">defined-tlvs ipv4-internal-reachability ipv4-prefix</a> <i>string</i> <a href="#">default-metric-type</a> <i>keyword</i>
<b>Tree</b>	<a href="#">default-metric-type</a>
<b>Options</b>	<ul style="list-style-type: none"> <li>• <code>internal</code> This enum describes internal route type</li> <li>• <code>external</code> This enum describes external route type</li> </ul>
<b>Configurable</b>	False

### down *boolean*

<b>Description</b>	Reads true when the IPv4 prefix was leaked down from Level2 to Level1.
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">protocols isis instance name</a> <i>string</i> <a href="#">level-database level-number</a> <i>number</i> <a href="#">lsp-id</a> <i>string</i> <a href="#">defined-tlvs ipv4-internal-reachability ipv4-prefix</a> <i>string</i> <a href="#">down</a> <i>boolean</i>
<b>Tree</b>	<a href="#">down</a>
<b>Configurable</b>	False

### ipv6-interface-addresses (*ipv4-address* | *ipv6-address*)

<b>Description</b>	Each item represents an IPv6 address configured on an interface in this IS-IS instance.
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<b>Context</b>	<code>network-instance name string protocols isis instance name string level-database level-number number lsp-id string defined-tlvs ipv6-interface-addresses (ipv4-address   ipv6-address)</code>
<b>Tree</b>	<code>ipv6-interface-addresses</code>
<b>Configurable</b>	False

### **ipv6-reachability ipv6-prefix string**

<b>Description</b>	TLV specifying IPv6 Reachability information in the LSP. TLV type = 236
<b>Context</b>	<code>network-instance name string protocols isis instance name string level-database level-number number lsp-id string defined-tlvs ipv6-reachability ipv6-prefix string</code>
<b>Tree</b>	<code>ipv6-reachability</code>
<b>Configurable</b>	False

### **ipv6-prefix string**

<b>Description</b>	An IPv6 prefix that is reachable to the router.
<b>Context</b>	<code>network-instance name string protocols isis instance name string level-database level-number number lsp-id string defined-tlvs ipv6-reachability ipv6-prefix string</code>
<b>Configurable</b>	False

### **down boolean**

<b>Description</b>	Reads true when the IPv6 prefix was leaked down from Level2 to Level1.
<b>Context</b>	<code>network-instance name string protocols isis instance name string level-database level-number number lsp-id string defined-tlvs ipv6-reachability ipv6-prefix string down boolean</code>
<b>Tree</b>	<code>down</code>
<b>Configurable</b>	False

### **external boolean**

<b>Description</b>	Reads true when the IPv6 prefix reachability is external (learned from another protocol).
<b>Context</b>	<code>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</code>
<b>Tree</b>	<code>external</code>

**Configurable** False

### **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

### **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

### **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 ipv6-reachability ipv6-prefix](#) *string* [sub-tlvs route-tag-32bit](#) *number*

**Tree** [route-tag-32bit](#)

**Range** 1 to 4294967295

**Configurable** False

### **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 ipv6-reachability ipv6-prefix](#) *string* [sub-tlvs route-tag-64bit](#) *number*

**Tree** [route-tag-64bit](#)

**Configurable** False

## segment-routing-prefix-sid



### Note:

This command is available for the following platforms:

- 7250 IXR-6
- 7250 IXR-10

<b>Description</b>	Carries a segment routing prefix SID
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">protocols isis instance name</a> <i>string</i> <a href="#">level-database level-number</a> <i>number</i> <a href="#">lsp-id</a> <i>string</i> <a href="#">defined-tlvs ipv6-reachability ipv6-prefix</a> <i>string</i> <a href="#">sub-tlvs segment-routing-prefix-sid</a>
<b>Tree</b>	<a href="#">segment-routing-prefix-sid</a>
<b>Configurable</b>	False

## algorithm *keyword*



### Note:

This command is available for the following platforms:

- 7250 IXR-6
- 7250 IXR-10

<b>Description</b>	Contains the identifier of the algorithm the router uses to compute the reachability of the prefix to which the Prefix-SID is associated
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">protocols isis instance name</a> <i>string</i> <a href="#">level-database level-number</a> <i>number</i> <a href="#">lsp-id</a> <i>string</i> <a href="#">defined-tlvs ipv6-reachability ipv6-prefix</a> <i>string</i> <a href="#">sub-tlvs segment-routing-prefix-sid</a> <a href="#">algorithm</a> <i>keyword</i>
<b>Tree</b>	<a href="#">algorithm</a>
<b>Options</b>	<ul style="list-style-type: none"> <li>• spf</li> <li>• strict-spf</li> </ul>
<b>Configurable</b>	False

## explicit-null *boolean*



### Note:

This command is available for the following platforms:

- 7250 IXR-6
- 7250 IXR-10

<b>Description</b>	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
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">protocols isis instance name</a> <i>string</i> <a href="#">level-database level-number</a> <i>number</i> <a href="#">lsp-id</a> <i>string</i> <a href="#">defined-tlvs ipv6-reachability ipv6-prefix</a> <i>string</i> <a href="#">sub-tlvs segment-routing-prefix-sid explicit-null</a> <i>boolean</i>
<b>Tree</b>	<a href="#">explicit-null</a>
<b>Configurable</b>	False

## local *boolean*



### Note:

This command is available for the following platforms:

- 7250 IXR-6
- 7250 IXR-10

<b>Description</b>	If set, then the value/index carried by the Prefix-SID has local significance.
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">protocols isis instance name</a> <i>string</i> <a href="#">level-database level-number</a> <i>number</i> <a href="#">lsp-id</a> <i>string</i> <a href="#">defined-tlvs ipv6-reachability ipv6-prefix</a> <i>string</i> <a href="#">sub-tlvs segment-routing-prefix-sid local</a> <i>boolean</i>
<b>Tree</b>	<a href="#">local</a>
<b>Configurable</b>	False

## node-sid *boolean*



### Note:

This command is available for the following platforms:

- 7250 IXR-6
- 7250 IXR-10

<b>Description</b>	If set the prefix SID refers to the router identified by the prefix.
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">protocols isis instance name</a> <i>string</i> <a href="#">level-database level-number</a> <i>number</i> <a href="#">lsp-id</a> <i>string</i> <a href="#">defined-tlvs ipv6-reachability ipv6-prefix</a> <i>string</i> <a href="#">sub-tlvs segment-routing-prefix-sid node-sid</a> <i>boolean</i>
<b>Tree</b>	<a href="#">node-sid</a>
<b>Configurable</b>	False

## penultimate-hop-popping *boolean*

**Note:**

This command is available for the following platforms:

- 7250 IXR-6
- 7250 IXR-10

<b>Description</b>	If set the penultimate hop MUST NOT pop the Prefix-SID before delivering the packet to the node that advertised the Prefix-SID.
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">protocols isis instance name</a> <i>string</i> <a href="#">level-database level-number</a> <i>number</i> <a href="#">lsp-id</a> <i>string</i> <a href="#">defined-tlvs ipv6-reachability ipv6-prefix</a> <i>string</i> <a href="#">sub-tlvs segment-routing-prefix-sid penultimate-hop-popping</a> <i>boolean</i>
<b>Tree</b>	<a href="#">penultimate-hop-popping</a>
<b>Configurable</b>	False

## re-advertised *boolean*

**Note:**

This command is available for the following platforms:

- 7250 IXR-6
- 7250 IXR-10

<b>Description</b>	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.
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">protocols isis instance name</a> <i>string</i> <a href="#">level-database level-number</a> <i>number</i> <a href="#">lsp-id</a> <i>string</i> <a href="#">defined-tlvs ipv6-reachability ipv6-prefix</a> <i>string</i> <a href="#">sub-tlvs segment-routing-prefix-sid re-advertised</a> <i>boolean</i>
<b>Tree</b>	<a href="#">re-advertised</a>
<b>Configurable</b>	False

## sr-index-or-label *number*

**Note:**

This command is available for the following platforms:

- 7250 IXR-6
- 7250 IXR-10

<b>Description</b>	An index representing an offset in the SID/label space advertised by the router or else a direct encoding of an MPLS label value.
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<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">protocols isis instance name</a> <i>string</i> <a href="#">level-database level-number</a> <i>number</i> <a href="#">lsp-id</a> <i>string</i> <a href="#">defined-tlvs ipv6-reachability ipv6-prefix</a> <i>string</i> <a href="#">sub-tlvs segment-routing-prefix-sid</a> <a href="#">sr-index-or-label</a> <i>number</i>
<b>Tree</b>	<a href="#">sr-index-or-label</a>
<b>Configurable</b>	False

### value *boolean*



**Note:**

This command is available for the following platforms:

- 7250 IXR-6
- 7250 IXR-10

<b>Description</b>	If set then the Prefix-SID carries a value
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">protocols isis instance name</a> <i>string</i> <a href="#">level-database level-number</a> <i>number</i> <a href="#">lsp-id</a> <i>string</i> <a href="#">defined-tlvs ipv6-reachability ipv6-prefix</a> <i>string</i> <a href="#">sub-tlvs segment-routing-prefix-sid</a> <a href="#">value</a> <i>boolean</i>
<b>Tree</b>	<a href="#">value</a>
<b>Configurable</b>	False

### is-reachability [neighbor](#) *string*

<b>Description</b>	Each TLV encodes the identity of an adjacent IS neighbor. TLV type = 2
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">protocols isis instance name</a> <i>string</i> <a href="#">level-database level-number</a> <i>number</i> <a href="#">lsp-id</a> <i>string</i> <a href="#">defined-tlvs is-reachability neighbor</a> <i>string</i>
<b>Tree</b>	<a href="#">is-reachability</a>
<b>Configurable</b>	False

### neighbor *string*

<b>Description</b>	An adjacent IS neighbor
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">protocols isis instance name</a> <i>string</i> <a href="#">level-database level-number</a> <i>number</i> <a href="#">lsp-id</a> <i>string</i> <a href="#">defined-tlvs is-reachability neighbor</a> <i>string</i>
<b>String Length</b>	17
<b>Configurable</b>	False



**default-metric *number***

<b>Description</b>	The default metric to reach this adjacent neighbor.
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">protocols isis instance name</a> <i>string</i> <a href="#">level-database level-number</a> <i>number</i> <a href="#">lsp-id</a> <i>string</i> <a href="#">defined-tlvs is-reachability neighbor</a> <i>string</i> <a href="#">default-metric</a> <i>number</i>
<b>Tree</b>	<a href="#">default-metric</a>
<b>Range</b>	0 to 63
<b>Configurable</b>	False

**default-metric-type *keyword***

<b>Description</b>	The default metric type: internal or external.
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">protocols isis instance name</a> <i>string</i> <a href="#">level-database level-number</a> <i>number</i> <a href="#">lsp-id</a> <i>string</i> <a href="#">defined-tlvs is-reachability neighbor</a> <i>string</i> <a href="#">default-metric-type</a> <i>keyword</i>
<b>Tree</b>	<a href="#">default-metric-type</a>
<b>Options</b>	<ul style="list-style-type: none"> <li>• internal</li> <li>• external</li> </ul>
<b>Configurable</b>	False

**mt-ipv4-reachability [ipv4-prefix](#) *string***

<b>Description</b>	TLV specifying multi-topology IPv4 reachability information in the LSP. TLV type = 235
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">protocols isis instance name</a> <i>string</i> <a href="#">level-database level-number</a> <i>number</i> <a href="#">lsp-id</a> <i>string</i> <a href="#">defined-tlvs mt-ipv4-reachability ipv4-prefix</a> <i>string</i>
<b>Tree</b>	<a href="#">mt-ipv4-reachability</a>
<b>Configurable</b>	False

**ipv4-prefix *string***

<b>Description</b>	An IPv4 prefix that is reachable to the router.
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">protocols isis instance name</a> <i>string</i> <a href="#">level-database level-number</a> <i>number</i> <a href="#">lsp-id</a> <i>string</i> <a href="#">defined-tlvs mt-ipv4-reachability ipv4-prefix</a> <i>string</i>
<b>Configurable</b>	False

**down *boolean***

<b>Description</b>	Reads true when the IPv4 prefix was leaked down from Level2 to Level1.
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">protocols isis instance name</a> <i>string</i> <a href="#">level-database level-number</a> <i>number</i> <a href="#">lsp-id</a> <i>string</i> <a href="#">defined-tlvs mt-ipv4-reachability ipv4-prefix</a> <i>string</i> <b>down</b> <i>boolean</i>
<b>Tree</b>	<a href="#">down</a>
<b>Configurable</b>	False

**metric *number***

<b>Description</b>	The default metric to reach the IPv4 prefix.
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">protocols isis instance name</a> <i>string</i> <a href="#">level-database level-number</a> <i>number</i> <a href="#">lsp-id</a> <i>string</i> <a href="#">defined-tlvs mt-ipv4-reachability ipv4-prefix</a> <i>string</i> <b>metric</b> <i>number</i>
<b>Tree</b>	<a href="#">metric</a>
<b>Range</b>	1 to 16777215
<b>Configurable</b>	False

**mt-id *number***

<b>Description</b>	A multi-topology ID.
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">protocols isis instance name</a> <i>string</i> <a href="#">level-database level-number</a> <i>number</i> <a href="#">lsp-id</a> <i>string</i> <a href="#">defined-tlvs mt-ipv4-reachability ipv4-prefix</a> <i>string</i> <b>mt-id</b> <i>number</i>
<b>Tree</b>	<a href="#">mt-id</a>
<b>Range</b>	0 to 4095
<b>Configurable</b>	False

**sub-tlvs**

<b>Description</b>	SubTLVs of TLV 135, TLV 235, TLV 236 and TLV 237
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">protocols isis instance name</a> <i>string</i> <a href="#">level-database level-number</a> <i>number</i> <a href="#">lsp-id</a> <i>string</i> <a href="#">defined-tlvs mt-ipv4-reachability ipv4-prefix</a> <i>string</i> <b>sub-tlvs</b>
<b>Tree</b>	<a href="#">sub-tlvs</a>
<b>Configurable</b>	False

**route-tag-32bit number**

<b>Description</b>	List of 32-bit administrative tag values associated with the IPv4 prefix.
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">protocols isis instance name</a> <i>string</i> <a href="#">level-database level-number</a> <i>number</i> <a href="#">lsp-id</a> <i>string</i> <a href="#">defined-tlvs mt-ipv4-reachability ipv4-prefix</a> <i>string</i> <a href="#">sub-tlvs route-tag-32bit</a> <i>number</i>
<b>Tree</b>	<a href="#">route-tag-32bit</a>
<b>Range</b>	1 to 4294967295
<b>Configurable</b>	False

**route-tag-64bit number**

<b>Description</b>	List of 64-bit administrative tag values associated with the IPv4 prefix.
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">protocols isis instance name</a> <i>string</i> <a href="#">level-database level-number</a> <i>number</i> <a href="#">lsp-id</a> <i>string</i> <a href="#">defined-tlvs mt-ipv4-reachability ipv4-prefix</a> <i>string</i> <a href="#">sub-tlvs route-tag-64bit</a> <i>number</i>
<b>Tree</b>	<a href="#">route-tag-64bit</a>
<b>Configurable</b>	False

**segment-routing-prefix-sid****Note:**

This command is available for the following platforms:

- 7250 IXR-6
- 7250 IXR-10

<b>Description</b>	Carries a segment routing prefix SID
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">protocols isis instance name</a> <i>string</i> <a href="#">level-database level-number</a> <i>number</i> <a href="#">lsp-id</a> <i>string</i> <a href="#">defined-tlvs mt-ipv4-reachability ipv4-prefix</a> <i>string</i> <a href="#">sub-tlvs segment-routing-prefix-sid</a>
<b>Tree</b>	<a href="#">segment-routing-prefix-sid</a>
<b>Configurable</b>	False

## algorithm *keyword*

**Note:**

This command is available for the following platforms:

- 7250 IXR-6
- 7250 IXR-10

<b>Description</b>	Contains the identifier of the algorithm the router uses to compute the reachability of the prefix to which the Prefix-SID is associated
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">protocols isis instance name</a> <i>string</i> <a href="#">level-database level-number</a> <i>number</i> <a href="#">lsp-id</a> <i>string</i> <a href="#">defined-tlvs mt-ipv4-reachability ipv4-prefix</a> <i>string</i> <a href="#">sub-tlvs segment-routing-prefix-sid</a> <a href="#">algorithm</a> <i>keyword</i>
<b>Tree</b>	<a href="#">algorithm</a>
<b>Options</b>	<ul style="list-style-type: none"> <li>• <code>spf</code></li> <li>• <code>strict-spf</code></li> </ul>
<b>Configurable</b>	False

## explicit-null *boolean*

**Note:**

This command is available for the following platforms:

- 7250 IXR-6
- 7250 IXR-10

<b>Description</b>	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
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">protocols isis instance name</a> <i>string</i> <a href="#">level-database level-number</a> <i>number</i> <a href="#">lsp-id</a> <i>string</i> <a href="#">defined-tlvs mt-ipv4-reachability ipv4-prefix</a> <i>string</i> <a href="#">sub-tlvs segment-routing-prefix-sid</a> <a href="#">explicit-null</a> <i>boolean</i>
<b>Tree</b>	<a href="#">explicit-null</a>
<b>Configurable</b>	False

## local *boolean*

**Note:**

This command is available for the following platforms:

- 7250 IXR-6
- 7250 IXR-10

<b>Description</b>	If set, then the value/index carried by the Prefix-SID has local significance.
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">protocols isis instance name</a> <i>string</i> <a href="#">level-database level-number</a> <i>number</i> <a href="#">lsp-id</a> <i>string</i> <a href="#">defined-tlvs mt-ipv4-reachability ipv4-prefix</a> <i>string</i> <a href="#">sub-tlvs segment-routing-prefix-sid local</a> <i>boolean</i>
<b>Tree</b>	<a href="#">local</a>
<b>Configurable</b>	False

### **node-sid *boolean***



**Note:**

This command is available for the following platforms:

- 7250 IXR-6
- 7250 IXR-10

<b>Description</b>	If set the prefix SID refers to the router identified by the prefix.
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">protocols isis instance name</a> <i>string</i> <a href="#">level-database level-number</a> <i>number</i> <a href="#">lsp-id</a> <i>string</i> <a href="#">defined-tlvs mt-ipv4-reachability ipv4-prefix</a> <i>string</i> <a href="#">sub-tlvs segment-routing-prefix-sid node-sid</a> <i>boolean</i>
<b>Tree</b>	<a href="#">node-sid</a>
<b>Configurable</b>	False

### **penultimate-hop-popping *boolean***



**Note:**

This command is available for the following platforms:

- 7250 IXR-6
- 7250 IXR-10

<b>Description</b>	If set the penultimate hop MUST NOT pop the Prefix-SID before delivering the packet to the node that advertised the Prefix-SID.
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">protocols isis instance name</a> <i>string</i> <a href="#">level-database level-number</a> <i>number</i> <a href="#">lsp-id</a> <i>string</i> <a href="#">defined-tlvs mt-ipv4-reachability ipv4-prefix</a> <i>string</i> <a href="#">sub-tlvs segment-routing-prefix-sid penultimate-hop-popping</a> <i>boolean</i>
<b>Tree</b>	<a href="#">penultimate-hop-popping</a>
<b>Configurable</b>	False

**re-advertised *boolean*****Note:**

This command is available for the following platforms:

- 7250 IXR-6
- 7250 IXR-10

<b>Description</b>	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.
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">protocols isis instance name</a> <i>string</i> <a href="#">level-database level-number</a> <i>number</i> <a href="#">lsp-id</a> <i>string</i> <a href="#">defined-tlvs mt-ipv4-reachability ipv4-prefix</a> <i>string</i> <a href="#">sub-tlvs segment-routing-prefix-sid</a> <a href="#">re-advertised</a> <i>boolean</i>
<b>Tree</b>	<a href="#">re-advertised</a>
<b>Configurable</b>	False

**sr-index-or-label *number*****Note:**

This command is available for the following platforms:

- 7250 IXR-6
- 7250 IXR-10

<b>Description</b>	An index representing an offset in the SID/label space advertised by the router or else a direct encoding of an MPLS label value.
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">protocols isis instance name</a> <i>string</i> <a href="#">level-database level-number</a> <i>number</i> <a href="#">lsp-id</a> <i>string</i> <a href="#">defined-tlvs mt-ipv4-reachability ipv4-prefix</a> <i>string</i> <a href="#">sub-tlvs segment-routing-prefix-sid</a> <a href="#">sr-index-or-label</a> <i>number</i>
<b>Tree</b>	<a href="#">sr-index-or-label</a>
<b>Configurable</b>	False

**value *boolean*****Note:**

This command is available for the following platforms:

- 7250 IXR-6
- 7250 IXR-10

<b>Description</b>	If set then the Prefix-SID carries a value
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<b>Context</b>	<code>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 value <i>boolean</i></code>
<b>Tree</b>	<code>value</code>
<b>Configurable</b>	False

### **mt-ipv6-reachability *ipv6-prefix string***

<b>Description</b>	TLV specifying IPv6 Reachability information in the LSP. TLV type = 237
<b>Context</b>	<code>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></code>
<b>Tree</b>	<code>mt-ipv6-reachability</code>
<b>Configurable</b>	False

### **ipv6-prefix *string***

<b>Description</b>	An IPv6 prefix that is reachable to the router.
<b>Context</b>	<code>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></code>
<b>Configurable</b>	False

### **down *boolean***

<b>Description</b>	Reads true when the IPv6 prefix was leaked down from Level2 to Level1.
<b>Context</b>	<code>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></code>
<b>Tree</b>	<code>down</code>
<b>Configurable</b>	False

### **external *boolean***

<b>Description</b>	Reads true when the IPv6 prefix reachability is external (learned from another protocol).
<b>Context</b>	<code>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></code>
<b>Tree</b>	<code>external</code>

**Configurable** False

### **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 mt-ipv6-reachability ipv6-prefix string](#) [metric number](#)

**Tree** [metric](#)

**Range** 1 to 16777215

**Configurable** False

### **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-ipv6-reachability ipv6-prefix string](#) [mt-id number](#)

**Tree** [mt-id](#)

**Range** 0 to 4095

**Configurable** False

### **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-ipv6-reachability ipv6-prefix string](#) [sub-tlvs](#)

**Tree** [sub-tlvs](#)

**Configurable** False

### **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-ipv6-reachability ipv6-prefix string](#) [sub-tlvs route-tag-32bit number](#)

**Tree** [route-tag-32bit](#)

**Range** 1 to 4294967295



**Configurable** False

### 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

### segment-routing-prefix-sid



**Note:**

This command is available for the following platforms:

- 7250 IXR-6
- 7250 IXR-10

**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

### algorithm *keyword*



**Note:**

This command is available for the following platforms:

- 7250 IXR-6
- 7250 IXR-10

**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`

	<ul style="list-style-type: none"> <li>strict-spf</li> </ul>
<b>Configurable</b>	False

### explicit-null *boolean*



**Note:**

This command is available for the following platforms:

- 7250 IXR-6
- 7250 IXR-10

<b>Description</b>	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
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">protocols isis instance name</a> <i>string</i> <a href="#">level-database level-number</a> <i>number</i> <a href="#">lsp-id</a> <i>string</i> <a href="#">defined-tlvs mt-ipv6-reachability ipv6-prefix</a> <i>string</i> <a href="#">sub-tlvs segment-routing-prefix-sid explicit-null</a> <i>boolean</i>
<b>Tree</b>	<a href="#">explicit-null</a>
<b>Configurable</b>	False

### local *boolean*



**Note:**

This command is available for the following platforms:

- 7250 IXR-6
- 7250 IXR-10

<b>Description</b>	If set, then the value/index carried by the Prefix-SID has local significance.
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">protocols isis instance name</a> <i>string</i> <a href="#">level-database level-number</a> <i>number</i> <a href="#">lsp-id</a> <i>string</i> <a href="#">defined-tlvs mt-ipv6-reachability ipv6-prefix</a> <i>string</i> <a href="#">sub-tlvs segment-routing-prefix-sid local</a> <i>boolean</i>
<b>Tree</b>	<a href="#">local</a>
<b>Configurable</b>	False

**node-sid *boolean*****Note:**

This command is available for the following platforms:

- 7250 IXR-6
- 7250 IXR-10

<b>Description</b>	If set the prefix SID refers to the router identified by the prefix.
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">protocols isis instance name</a> <i>string</i> <a href="#">level-database level-number</a> <i>number</i> <a href="#">lsp-id</a> <i>string</i> <a href="#">defined-tlvs mt-ipv6-reachability ipv6-prefix</a> <i>string</i> <a href="#">sub-tlvs segment-routing-prefix-sid</a> <a href="#">node-sid</a> <i>boolean</i>
<b>Tree</b>	<a href="#">node-sid</a>
<b>Configurable</b>	False

**penultimate-hop-popping *boolean*****Note:**

This command is available for the following platforms:

- 7250 IXR-6
- 7250 IXR-10

<b>Description</b>	If set the penultimate hop MUST NOT pop the Prefix-SID before delivering the packet to the node that advertised the Prefix-SID.
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">protocols isis instance name</a> <i>string</i> <a href="#">level-database level-number</a> <i>number</i> <a href="#">lsp-id</a> <i>string</i> <a href="#">defined-tlvs mt-ipv6-reachability ipv6-prefix</a> <i>string</i> <a href="#">sub-tlvs segment-routing-prefix-sid</a> <a href="#">penultimate-hop-popping</a> <i>boolean</i>
<b>Tree</b>	<a href="#">penultimate-hop-popping</a>
<b>Configurable</b>	False

**re-advertised *boolean*****Note:**

This command is available for the following platforms:

- 7250 IXR-6
- 7250 IXR-10

<b>Description</b>	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.
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<b>Context</b>	<code>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></code>
<b>Tree</b>	<code>re-advertised</code>
<b>Configurable</b>	False

### sr-index-or-label *number*



**Note:**

This command is available for the following platforms:

- 7250 IXR-6
- 7250 IXR-10

<b>Description</b>	An index representing an offset in the SID/label space advertised by the router or else a direct encoding of an MPLS label value.
<b>Context</b>	<code>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></code>
<b>Tree</b>	<code>sr-index-or-label</code>
<b>Configurable</b>	False

### value *boolean*



**Note:**

This command is available for the following platforms:

- 7250 IXR-6
- 7250 IXR-10

<b>Description</b>	If set then the Prefix-SID carries a value
<b>Context</b>	<code>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></code>
<b>Tree</b>	<code>value</code>
<b>Configurable</b>	False

**mt-is-reachability neighbor string**

<b>Description</b>	Each TLV encodes the identity of an adjacent IS neighbor in a specific topology. TLV type = 222
<b>Context</b>	<a href="#">network-instance name string</a> <a href="#">protocols isis instance name string</a> <a href="#">level-database level-number number</a> <a href="#">lsp-id string</a> <a href="#">defined-tlvs mt-is-reachability neighbor string</a>
<b>Tree</b>	<a href="#">mt-is-reachability</a>
<b>Configurable</b>	False

**neighbor string**

<b>Description</b>	An adjacent IS neighbor
<b>Context</b>	<a href="#">network-instance name string</a> <a href="#">protocols isis instance name string</a> <a href="#">level-database level-number number</a> <a href="#">lsp-id string</a> <a href="#">defined-tlvs mt-is-reachability neighbor string</a>
<b>String Length</b>	17
<b>Configurable</b>	False

**default-metric number**

<b>Description</b>	The default metric to reach this adjacent neighbor.
<b>Context</b>	<a href="#">network-instance name string</a> <a href="#">protocols isis instance name string</a> <a href="#">level-database level-number number</a> <a href="#">lsp-id string</a> <a href="#">defined-tlvs mt-is-reachability neighbor string</a> <a href="#">default-metric number</a>
<b>Tree</b>	<a href="#">default-metric</a>
<b>Range</b>	1 to 16777215
<b>Configurable</b>	False

**mt-id number**

<b>Description</b>	A multi-topology ID.
<b>Context</b>	<a href="#">network-instance name string</a> <a href="#">protocols isis instance name string</a> <a href="#">level-database level-number number</a> <a href="#">lsp-id string</a> <a href="#">defined-tlvs mt-is-reachability neighbor string</a> <a href="#">mt-id number</a>
<b>Tree</b>	<a href="#">mt-id</a>
<b>Range</b>	0 to 4095
<b>Configurable</b>	False

**sub-tlvs**

<b>Description</b>	SubTLVs of TLV 22 and TLV 222
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">protocols isis instance name</a> <i>string</i> <a href="#">level-database level-number</a> <i>number</i> <a href="#">lsp-id</a> <i>string</i> <a href="#">defined-tlvs mt-is-reachability neighbor</a> <i>string</i> <a href="#">sub-tlvs</a>
<b>Tree</b>	<a href="#">sub-tlvs</a>
<b>Configurable</b>	False

**ipv4-interface-address *string***

<b>Description</b>	The IPv4 address of the interface to the neighbor. Sub-TLV = 6.
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">protocols isis instance name</a> <i>string</i> <a href="#">level-database level-number</a> <i>number</i> <a href="#">lsp-id</a> <i>string</i> <a href="#">defined-tlvs mt-is-reachability neighbor</a> <i>string</i> <a href="#">sub-tlvs ipv4-interface-address</a> <i>string</i>
<b>Tree</b>	<a href="#">ipv4-interface-address</a>
<b>Configurable</b>	False

**ipv4-neighbor-address *string***

<b>Description</b>	The IPv4 address of the neighbor. Sub-TLV = 8.
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">protocols isis instance name</a> <i>string</i> <a href="#">level-database level-number</a> <i>number</i> <a href="#">lsp-id</a> <i>string</i> <a href="#">defined-tlvs mt-is-reachability neighbor</a> <i>string</i> <a href="#">sub-tlvs ipv4-neighbor-address</a> <i>string</i>
<b>Tree</b>	<a href="#">ipv4-neighbor-address</a>
<b>Configurable</b>	False

**ipv6-interface-address *string***

<b>Description</b>	The IPv6 address of the interface to the neighbor. Sub-TLV = 12.
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">protocols isis instance name</a> <i>string</i> <a href="#">level-database level-number</a> <i>number</i> <a href="#">lsp-id</a> <i>string</i> <a href="#">defined-tlvs mt-is-reachability neighbor</a> <i>string</i> <a href="#">sub-tlvs ipv6-interface-address</a> <i>string</i>
<b>Tree</b>	<a href="#">ipv6-interface-address</a>
<b>Configurable</b>	False

**ipv6-neighbor-address *string***

<b>Description</b>	The IPv4 address of the neighbor. Sub-TLV = 13.
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<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">protocols isis instance name</a> <i>string</i> <a href="#">level-database level-number</a> <i>number</i> <a href="#">lsp-id</a> <i>string</i> <a href="#">defined-tlvs mt-is-reachability neighbor</a> <i>string</i> <a href="#">sub-tlvs ipv6-neighbor-address</a> <i>string</i>
<b>Tree</b>	<a href="#">ipv6-neighbor-address</a>
<b>Configurable</b>	False

## link-msd



### Note:

This command is available for the following platforms:

- 7250 IXR-6
- 7250 IXR-10

<b>Description</b>	The maximum segment depth of the link to the neighbor. Sub-TLV = 15.
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">protocols isis instance name</a> <i>string</i> <a href="#">level-database level-number</a> <i>number</i> <a href="#">lsp-id</a> <i>string</i> <a href="#">defined-tlvs mt-is-reachability neighbor</a> <i>string</i> <a href="#">sub-tlvs link-msd</a>
<b>Tree</b>	<a href="#">link-msd</a>
<b>Configurable</b>	False

## msd-info [msd-type \(keyword | number\)](#) [msd-value](#) *number*



### Note:

This command is available for the following platforms:

- 7250 IXR-6
- 7250 IXR-10

<b>Description</b>	List of MSD entries
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">protocols isis instance name</a> <i>string</i> <a href="#">level-database level-number</a> <i>number</i> <a href="#">lsp-id</a> <i>string</i> <a href="#">defined-tlvs mt-is-reachability neighbor</a> <i>string</i> <a href="#">sub-tlvs link-msd msd-info msd-type (keyword   number)</a> <a href="#">msd-value</a> <i>number</i>
<b>Tree</b>	<a href="#">msd-info</a>
<b>Configurable</b>	False

**msd-type (keyword | number)****Note:**

This command is available for the following platforms:

- 7250 IXR-6
- 7250 IXR-10

<b>Description</b>	MSD type
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">protocols isis instance name</a> <i>string</i> <a href="#">level-database level-number</a> <i>number</i> <a href="#">lsp-id</a> <i>string</i> <a href="#">defined-tlvs mt-is-reachability neighbor</a> <i>string</i> <a href="#">sub-tlvs link-msd msd-info msd-type</a> ( <i>keyword   number</i> ) <a href="#">msd-value</a> <i>number</i>
<b>Range</b>	2 to 254
<b>Options</b>	<ul style="list-style-type: none"> <li>• base-mpls-imposition-msd</li> </ul>
<b>Configurable</b>	False

**msd-value number****Note:**

This command is available for the following platforms:

- 7250 IXR-6
- 7250 IXR-10

<b>Description</b>	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
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">protocols isis instance name</a> <i>string</i> <a href="#">level-database level-number</a> <i>number</i> <a href="#">lsp-id</a> <i>string</i> <a href="#">defined-tlvs mt-is-reachability neighbor</a> <i>string</i> <a href="#">sub-tlvs link-msd msd-info msd-type</a> ( <i>keyword   number</i> ) <a href="#">msd-value</a> <i>number</i>
<b>Configurable</b>	False

**segment-routing-adjacency-sid sr-index-or-label number****Note:**

This command is available for the following platforms:

- 7250 IXR-6
- 7250 IXR-10

<b>Description</b>	List of Adj-SID sub-TLVs associated with the neighbor. Sub-TLV = 31.
--------------------	--



<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">protocols isis instance name</a> <i>string</i> <a href="#">level-database level-number</a> <i>number</i> <a href="#">lsp-id</a> <i>string</i> <a href="#">defined-tlvs mt-is-reachability neighbor</a> <i>string</i> <a href="#">sub-tlvs segment-routing-adjacency-sid sr-index-or-label</a> <i>number</i>
<b>Tree</b>	<a href="#">segment-routing-adjacency-sid</a>
<b>Configurable</b>	False

### **sr-index-or-label** *number*



**Note:**

This command is available for the following platforms:

- 7250 IXR-6
- 7250 IXR-10

<b>Description</b>	An index representing an offset in the SID/label space advertised by the router or else a direct encoding of an MPLS label value.
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">protocols isis instance name</a> <i>string</i> <a href="#">level-database level-number</a> <i>number</i> <a href="#">lsp-id</a> <i>string</i> <a href="#">defined-tlvs mt-is-reachability neighbor</a> <i>string</i> <a href="#">sub-tlvs segment-routing-adjacency-sid sr-index-or-label</a> <i>number</i>
<b>Configurable</b>	False

### **adj-set** *boolean*



**Note:**

This command is available for the following platforms:

- 7250 IXR-6
- 7250 IXR-10

<b>Description</b>	When set, the S-Flag indicates that the Adj-SID refers to a set of adjacencies.
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">protocols isis instance name</a> <i>string</i> <a href="#">level-database level-number</a> <i>number</i> <a href="#">lsp-id</a> <i>string</i> <a href="#">defined-tlvs mt-is-reachability neighbor</a> <i>string</i> <a href="#">sub-tlvs segment-routing-adjacency-sid sr-index-or-label</a> <i>number</i> <a href="#">adj-set</a> <i>boolean</i>
<b>Tree</b>	<a href="#">adj-set</a>
<b>Configurable</b>	False

**backup *boolean*****Note:**

This command is available for the following platforms:

- 7250 IXR-6
- 7250 IXR-10

<b>Description</b>	If set, the Adj-SID is eligible for protection
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">protocols isis instance name</a> <i>string</i> <a href="#">level-database level-number</a> <i>number</i> <a href="#">lsp-id</a> <i>string</i> <a href="#">defined-tlvs mt-is-reachability neighbor</a> <i>string</i> <a href="#">sub-tlvs segment-routing-adjacency-sid sr-index-or-label number</a> <a href="#">backup</a> <i>boolean</i>
<b>Tree</b>	<a href="#">backup</a>
<b>Configurable</b>	False

**ipv6-family *boolean*****Note:**

This command is available for the following platforms:

- 7250 IXR-6
- 7250 IXR-10

<b>Description</b>	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.
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">protocols isis instance name</a> <i>string</i> <a href="#">level-database level-number</a> <i>number</i> <a href="#">lsp-id</a> <i>string</i> <a href="#">defined-tlvs mt-is-reachability neighbor</a> <i>string</i> <a href="#">sub-tlvs segment-routing-adjacency-sid sr-index-or-label number</a> <a href="#">ipv6-family</a> <i>boolean</i>
<b>Tree</b>	<a href="#">ipv6-family</a>
<b>Configurable</b>	False

**local *boolean*****Note:**

This command is available for the following platforms:

- 7250 IXR-6
- 7250 IXR-10

<b>Description</b>	If set, then the value/index carried by the Adj-SID has local significance.
--------------------	---

<b>Context</b>	<code>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> local <i>boolean</i></code>
<b>Tree</b>	<code>local</code>
<b>Configurable</b>	False

## persistent *boolean*



### Note:

This command is available for the following platforms:

- 7250 IXR-6
- 7250 IXR-10

<b>Description</b>	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
<b>Context</b>	<code>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> persistent <i>boolean</i></code>
<b>Tree</b>	<code>persistent</code>
<b>Configurable</b>	False

## value *boolean*



### Note:

This command is available for the following platforms:

- 7250 IXR-6
- 7250 IXR-10

<b>Description</b>	If set then the Adj-SID carries a value
<b>Context</b>	<code>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> value <i>boolean</i></code>
<b>Tree</b>	<code>value</code>
<b>Configurable</b>	False

**weight *number*****Note:**

This command is available for the following platforms:

- 7250 IXR-6
- 7250 IXR-10

<b>Description</b>	The value represents the weight of the Adj-SID for the purpose of load balancing
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">protocols isis instance name</a> <i>string</i> <a href="#">level-database level-number</a> <i>number</i> <a href="#">lsp-id</a> <i>string</i> <a href="#">defined-tlvs mt-is-reachability neighbor</a> <i>string</i> <a href="#">sub-tlvs segment-routing-adjacency-sid sr-index-or-label</a> <i>number</i> <a href="#">weight</a> <i>number</i>
<b>Tree</b>	<a href="#">weight</a>
<b>Configurable</b>	False

**segment-routing-lan-adjacency-sid [sr-index-or-label](#) *number*****Note:**

This command is available for the following platforms:

- 7250 IXR-6
- 7250 IXR-10

<b>Description</b>	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.
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">protocols isis instance name</a> <i>string</i> <a href="#">level-database level-number</a> <i>number</i> <a href="#">lsp-id</a> <i>string</i> <a href="#">defined-tlvs mt-is-reachability neighbor</a> <i>string</i> <a href="#">sub-tlvs segment-routing-lan-adjacency-sid sr-index-or-label</a> <i>number</i>
<b>Tree</b>	<a href="#">segment-routing-lan-adjacency-sid</a>
<b>Configurable</b>	False

**sr-index-or-label *number*****Note:**

This command is available for the following platforms:

- 7250 IXR-6
- 7250 IXR-10

<b>Description</b>	An index representing an offset in the SID/label space advertised by the router or else a direct encoding of an MPLS label value.
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">protocols isis instance name</a> <i>string</i> <a href="#">level-database level-number</a> <i>number</i> <a href="#">lsp-id</a> <i>string</i> <a href="#">defined-tlvs mt-is-reachability neighbor</a> <i>string</i> <a href="#">sub-tlvs segment-routing-lan-adjacency-sid sr-index-or-label</a> <i>number</i>
<b>Configurable</b>	False

## adj-set *boolean*



### Note:

This command is available for the following platforms:

- 7250 IXR-6
- 7250 IXR-10

<b>Description</b>	When set, the S-Flag indicates that the Adj-SID refers to a set of adjacencies.
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">protocols isis instance name</a> <i>string</i> <a href="#">level-database level-number</a> <i>number</i> <a href="#">lsp-id</a> <i>string</i> <a href="#">defined-tlvs mt-is-reachability neighbor</a> <i>string</i> <a href="#">sub-tlvs segment-routing-lan-adjacency-sid sr-index-or-label</a> <i>number</i> <a href="#">adj-set</a> <i>boolean</i>
<b>Tree</b>	<a href="#">adj-set</a>
<b>Configurable</b>	False

## backup *boolean*



### Note:

This command is available for the following platforms:

- 7250 IXR-6
- 7250 IXR-10

<b>Description</b>	If set, the Adj-SID is eligible for protection
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">protocols isis instance name</a> <i>string</i> <a href="#">level-database level-number</a> <i>number</i> <a href="#">lsp-id</a> <i>string</i> <a href="#">defined-tlvs mt-is-reachability neighbor</a> <i>string</i> <a href="#">sub-tlvs segment-routing-lan-adjacency-sid sr-index-or-label</a> <i>number</i> <a href="#">backup</a> <i>boolean</i>
<b>Tree</b>	<a href="#">backup</a>
<b>Configurable</b>	False

## ipv6-family *boolean*

**Note:**

This command is available for the following platforms:

- 7250 IXR-6
- 7250 IXR-10

<b>Description</b>	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.
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">protocols isis instance name</a> <i>string</i> <a href="#">level-database level-number</a> <i>number</i> <a href="#">lsp-id</a> <i>string</i> <a href="#">defined-tlvs mt-is-reachability neighbor</a> <i>string</i> <a href="#">sub-tlvs segment-routing-lan-adjacency-sid sr-index-or-label</a> <i>number</i> <a href="#">ipv6-family</a> <i>boolean</i>
<b>Tree</b>	<a href="#">ipv6-family</a>
<b>Configurable</b>	False

## local *boolean*

**Note:**

This command is available for the following platforms:

- 7250 IXR-6
- 7250 IXR-10

<b>Description</b>	If set, then the value/index carried by the Adj-SID has local significance.
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">protocols isis instance name</a> <i>string</i> <a href="#">level-database level-number</a> <i>number</i> <a href="#">lsp-id</a> <i>string</i> <a href="#">defined-tlvs mt-is-reachability neighbor</a> <i>string</i> <a href="#">sub-tlvs segment-routing-lan-adjacency-sid sr-index-or-label</a> <i>number</i> <a href="#">local</a> <i>boolean</i>
<b>Tree</b>	<a href="#">local</a>
<b>Configurable</b>	False

## neighbor-system-id *string*

**Note:**

This command is available for the following platforms:

- 7250 IXR-6
- 7250 IXR-10

<b>Description</b>	IS-IS system-ID of the LAN neighbor
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<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">protocols isis instance name</a> <i>string</i> <a href="#">level-database level-number</a> <i>number</i> <a href="#">lsp-id</a> <i>string</i> <a href="#">defined-tlvs mt-is-reachability neighbor</a> <i>string</i> <a href="#">sub-tlvs segment-routing-lan-adjacency-sid sr-index-or-label</a> <i>number</i> <a href="#">neighbor-system-id</a> <i>string</i>
<b>Tree</b>	<a href="#">neighbor-system-id</a>
<b>String Length</b>	14
<b>Configurable</b>	False

### **persistent** *boolean*



**Note:**

This command is available for the following platforms:

- 7250 IXR-6
- 7250 IXR-10

<b>Description</b>	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
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">protocols isis instance name</a> <i>string</i> <a href="#">level-database level-number</a> <i>number</i> <a href="#">lsp-id</a> <i>string</i> <a href="#">defined-tlvs mt-is-reachability neighbor</a> <i>string</i> <a href="#">sub-tlvs segment-routing-lan-adjacency-sid sr-index-or-label</a> <i>number</i> <a href="#">persistent</a> <i>boolean</i>
<b>Tree</b>	<a href="#">persistent</a>
<b>Configurable</b>	False

### **value** *boolean*



**Note:**

This command is available for the following platforms:

- 7250 IXR-6
- 7250 IXR-10

<b>Description</b>	If set then the Adj-SID carries a value
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">protocols isis instance name</a> <i>string</i> <a href="#">level-database level-number</a> <i>number</i> <a href="#">lsp-id</a> <i>string</i> <a href="#">defined-tlvs mt-is-reachability neighbor</a> <i>string</i> <a href="#">sub-tlvs segment-routing-lan-adjacency-sid sr-index-or-label</a> <i>number</i> <a href="#">value</a> <i>boolean</i>
<b>Tree</b>	<a href="#">value</a>
<b>Configurable</b>	False

## weight *number*

**Note:**

This command is available for the following platforms:

- 7250 IXR-6
- 7250 IXR-10

<b>Description</b>	The value represents the weight of the Adj-SID for the purpose of load balancing
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">protocols isis instance name</a> <i>string</i> <a href="#">level-database level-number</a> <i>number</i> <a href="#">lsp-id</a> <i>string</i> <a href="#">defined-tlvs mt-is-reachability neighbor</a> <i>string</i> <a href="#">sub-tlvs segment-routing-lan-adjacency-sid sr-index-or-label</a> <i>number</i> <a href="#">weight</a> <i>number</i>
<b>Tree</b>	<a href="#">weight</a>
<b>Configurable</b>	False

## multi-topology

<b>Description</b>	The Multi-Topology TLV, type 229.
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">protocols isis instance name</a> <i>string</i> <a href="#">level-database level-number</a> <i>number</i> <a href="#">lsp-id</a> <i>string</i> <a href="#">defined-tlvs multi-topology</a>
<b>Tree</b>	<a href="#">multi-topology</a>
<b>Configurable</b>	False

## topology [mt-id](#) *number*

<b>Description</b>	The list of multi-topology IDs that the router is participating in
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">protocols isis instance name</a> <i>string</i> <a href="#">level-database level-number</a> <i>number</i> <a href="#">lsp-id</a> <i>string</i> <a href="#">defined-tlvs multi-topology topology mt-id</a> <i>number</i>
<b>Tree</b>	<a href="#">topology</a>
<b>Configurable</b>	False

## mt-id *number*

<b>Description</b>	A multi-topology ID.
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">protocols isis instance name</a> <i>string</i> <a href="#">level-database level-number</a> <i>number</i> <a href="#">lsp-id</a> <i>string</i> <a href="#">defined-tlvs multi-topology topology mt-id</a> <i>number</i>



<b>Range</b>	0 to 4095
<b>Configurable</b>	False

**attached *boolean***

<b>Description</b>	Reads true when the topology is attached to Level 2
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">protocols isis instance name</a> <i>string</i> <a href="#">level-database level-number</a> <i>number</i> <a href="#">lsp-id</a> <i>string</i> <a href="#">defined-tlvs multi-topology topology mt-id</a> <i>number</i> <b>attached</b> <i>boolean</i>
<b>Tree</b>	<a href="#">attached</a>
<b>Configurable</b>	False

**overload *boolean***

<b>Description</b>	Reads true when the topology is in overload state.
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">protocols isis instance name</a> <i>string</i> <a href="#">level-database level-number</a> <i>number</i> <a href="#">lsp-id</a> <i>string</i> <a href="#">defined-tlvs multi-topology topology mt-id</a> <i>number</i> <b>overload</b> <i>boolean</i>
<b>Tree</b>	<a href="#">overload</a>
<b>Configurable</b>	False

**nlpid *keyword***

<b>Description</b>	Each item represents a network layer protocol supported by the IS-IS Instance.
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">protocols isis instance name</a> <i>string</i> <a href="#">level-database level-number</a> <i>number</i> <a href="#">lsp-id</a> <i>string</i> <a href="#">defined-tlvs nlpid</a> <i>keyword</i>
<b>Tree</b>	<a href="#">nlpid</a>
<b>Options</b>	<ul style="list-style-type: none"> <li>• IPv4 NLPID 0xCC corresponding to IPv4</li> <li>• IPv6 NLPID 0x8E corresponding to IPv6</li> <li>• CLNS NLPID 0x81 corresponding to CLNS</li> </ul>
<b>Configurable</b>	False

**purge-oi string**

<b>Description</b>	This indicates System ID that originated a purge.
<b>Context</b>	<a href="#">network-instance name string</a> <a href="#">protocols isis instance name string</a> <a href="#">level-database level-number number</a> <a href="#">lsp-id string</a> <a href="#">defined-tlvs purge-oi string</a>
<b>Tree</b>	<a href="#">purge-oi</a>
<b>String Length</b>	14
<b>Configurable</b>	False

**router-capability**

<b>Description</b>	Allows a router to announce its capabilities within an IS-IS level or the entire routing domain. TLV = 242.
<b>Context</b>	<a href="#">network-instance name string</a> <a href="#">protocols isis instance name string</a> <a href="#">level-database level-number number</a> <a href="#">lsp-id string</a> <a href="#">defined-tlvs router-capability</a>
<b>Tree</b>	<a href="#">router-capability</a>
<b>Configurable</b>	False

**leaked-down boolean**

<b>Description</b>	When true, the TLV was leaked down from Level 2 to Level 1 and must not be leaked back up to L2
<b>Context</b>	<a href="#">network-instance name string</a> <a href="#">protocols isis instance name string</a> <a href="#">level-database level-number number</a> <a href="#">lsp-id string</a> <a href="#">defined-tlvs router-capability leaked-down boolean</a>
<b>Tree</b>	<a href="#">leaked-down</a>
<b>Configurable</b>	False

**router-id string**

<b>Description</b>	Router ID indicating the source of the TLV
<b>Context</b>	<a href="#">network-instance name string</a> <a href="#">protocols isis instance name string</a> <a href="#">level-database level-number number</a> <a href="#">lsp-id string</a> <a href="#">defined-tlvs router-capability router-id string</a>
<b>Tree</b>	<a href="#">router-id</a>
<b>Configurable</b>	False

**scope-is-domain-wide *boolean***

<b>Description</b>	When true, the TLV MUST be flooded across the entire routing domain. When false, the TLV MUST NOT be leaked between levels.
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">protocols isis instance name</a> <i>string</i> <a href="#">level-database level-number</a> <i>number</i> <a href="#">lsp-id</a> <i>string</i> <a href="#">defined-tlvs router-capability scope-is-domain-wide</a> <i>boolean</i>
<b>Tree</b>	<a href="#">scope-is-domain-wide</a>
<b>Configurable</b>	False

**sub-tlvs**

<b>Description</b>	Sub-TLVs of TLV 242
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">protocols isis instance name</a> <i>string</i> <a href="#">level-database level-number</a> <i>number</i> <a href="#">lsp-id</a> <i>string</i> <a href="#">defined-tlvs router-capability sub-tlvs</a>
<b>Tree</b>	<a href="#">sub-tlvs</a>
<b>Configurable</b>	False

**node-msd****Note:**

This command is available for the following platforms:

- 7250 IXR-6
- 7250 IXR-10

<b>Description</b>	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
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">protocols isis instance name</a> <i>string</i> <a href="#">level-database level-number</a> <i>number</i> <a href="#">lsp-id</a> <i>string</i> <a href="#">defined-tlvs router-capability sub-tlvs node-msd</a>
<b>Tree</b>	<a href="#">node-msd</a>
<b>Configurable</b>	False

**msd-info** *msd-type (keyword | number) msd-value number***Note:**

This command is available for the following platforms:

- 7250 IXR-6
- 7250 IXR-10

<b>Description</b>	List of MSD entries
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">protocols isis instance name</a> <i>string</i> <a href="#">level-database level-number</a> <i>number</i> <a href="#">lsp-id</a> <i>string</i> <a href="#">defined-tlvs router-capability sub-tlvs node-msd msd-info msd-type</a> <i>(keyword   number)</i> <a href="#">msd-value</a> <i>number</i>
<b>Tree</b>	<a href="#">msd-info</a>
<b>Configurable</b>	False

**msd-type** *(keyword | number)***Note:**

This command is available for the following platforms:

- 7250 IXR-6
- 7250 IXR-10

<b>Description</b>	MSD type
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">protocols isis instance name</a> <i>string</i> <a href="#">level-database level-number</a> <i>number</i> <a href="#">lsp-id</a> <i>string</i> <a href="#">defined-tlvs router-capability sub-tlvs node-msd msd-info msd-type</a> <i>(keyword   number)</i> <a href="#">msd-value</a> <i>number</i>
<b>Range</b>	2 to 254
<b>Options</b>	<ul style="list-style-type: none"> <li>• <a href="#">base-mpls-imposition-msd</a></li> </ul>
<b>Configurable</b>	False

**msd-value** *number***Note:**

This command is available for the following platforms:

- 7250 IXR-6
- 7250 IXR-10

<b>Description</b>	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
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">protocols isis instance name</a> <i>string</i> <a href="#">level-database level-number</a> <i>number</i> <a href="#">lsp-id</a> <i>string</i> <a href="#">defined-tlvs router-capability sub-tlvs node-msd msd-info msd-type</a> ( <i>keyword</i>   <i>number</i> ) <a href="#">msd-value</a> <i>number</i>
<b>Configurable</b>	False

## sr-algorithm



### Note:

This command is available for the following platforms:

- 7250 IXR-6
- 7250 IXR-10

<b>Description</b>	Advertises the IGP algorithms that the router is using
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">protocols isis instance name</a> <i>string</i> <a href="#">level-database level-number</a> <i>number</i> <a href="#">lsp-id</a> <i>string</i> <a href="#">defined-tlvs router-capability sub-tlvs sr-algorithm</a>
<b>Tree</b>	<a href="#">sr-algorithm</a>
<b>Configurable</b>	False

## algorithm *number*



### Note:

This command is available for the following platforms:

- 7250 IXR-6
- 7250 IXR-10

<b>Description</b>	List of algorithm types supported by the router. Algorithm 0 should always be in the list
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">protocols isis instance name</a> <i>string</i> <a href="#">level-database level-number</a> <i>number</i> <a href="#">lsp-id</a> <i>string</i> <a href="#">defined-tlvs router-capability sub-tlvs sr-algorithm algorithm</a> <i>number</i>
<b>Tree</b>	<a href="#">algorithm</a>
<b>Configurable</b>	False

## sr-capabilities



### Note:

This command is available for the following platforms:

- 7250 IXR-6
- 7250 IXR-10

<b>Description</b>	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.
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">protocols isis instance name</a> <i>string</i> <a href="#">level-database level-number</a> <i>number</i> <a href="#">lsp-id</a> <i>string</i> <a href="#">defined-tlvs router-capability sub-tlvs sr-capabilities</a>
<b>Tree</b>	<a href="#">sr-capabilities</a>
<b>Configurable</b>	False

## ipv4-support *boolean*



### Note:

This command is available for the following platforms:

- 7250 IXR-6
- 7250 IXR-10

<b>Description</b>	When true, the router is capable of processing SR-MPLS-encapsulated IPv4 packets on all interfaces
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">protocols isis instance name</a> <i>string</i> <a href="#">level-database level-number</a> <i>number</i> <a href="#">lsp-id</a> <i>string</i> <a href="#">defined-tlvs router-capability sub-tlvs sr-capabilities ipv4-support</a> <i>boolean</i>
<b>Tree</b>	<a href="#">ipv4-support</a>
<b>Configurable</b>	False

## ipv6-support *boolean*



### Note:

This command is available for the following platforms:

- 7250 IXR-6
- 7250 IXR-10

<b>Description</b>	When true, the router is capable of processing SR-MPLS-encapsulated IPv6 packets on all interfaces
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<b>Context</b>	<code>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></code>
<b>Tree</b>	<code>ipv6-support</code>
<b>Configurable</b>	False

### **srgb-descriptor sr-index-or-label *number range number***



**Note:**

This command is available for the following platforms:

- 7250 IXR-6
- 7250 IXR-10

<b>Description</b>	List of Segment Routing Global Block descriptors
<b>Context</b>	<code>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></code>
<b>Tree</b>	<code>srgb-descriptor</code>
<b>Configurable</b>	False

### **sr-index-or-label *number***



**Note:**

This command is available for the following platforms:

- 7250 IXR-6
- 7250 IXR-10

<b>Description</b>	An index representing the first value of the SRGB. The meaning (index or label) is determined from the length of the sub-tlv.
<b>Context</b>	<code>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></code>
<b>Configurable</b>	False

## range *number*

**Note:**

This command is available for the following platforms:

- 7250 IXR-6
- 7250 IXR-10

<b>Description</b>	The number of SRGB elements
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">protocols isis instance name</a> <i>string</i> <a href="#">level-database level-number</a> <i>number</i> <a href="#">lsp-id</a> <i>string</i> <a href="#">defined-tlvs router-capability sub-tlvs sr-capabilities srgb-descriptor sr-index-or-label</a> <i>number</i> <a href="#">range</a> <i>number</i>
<b>Range</b>	1 to 16777215
<b>Configurable</b>	False

## sr-local-block

**Note:**

This command is available for the following platforms:

- 7250 IXR-6
- 7250 IXR-10

<b>Description</b>	Used to advertise the range of labels the node has reserved for local SIDs.
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">protocols isis instance name</a> <i>string</i> <a href="#">level-database level-number</a> <i>number</i> <a href="#">lsp-id</a> <i>string</i> <a href="#">defined-tlvs router-capability sub-tlvs sr-local-block</a>
<b>Tree</b>	<a href="#">sr-local-block</a>
<b>Configurable</b>	False

## srlb-descriptor [sr-index-or-label](#) *number* [range](#) *number*

**Note:**

This command is available for the following platforms:

- 7250 IXR-6
- 7250 IXR-10

<b>Description</b>	List of Segment Routing Local Block descriptors
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">protocols isis instance name</a> <i>string</i> <a href="#">level-database level-number</a> <i>number</i> <a href="#">lsp-id</a> <i>string</i> <a href="#">defined-tlvs router-capability sub-tlvs sr-local-block srlb-descriptor sr-index-or-label</a> <i>number</i> <a href="#">range</a> <i>number</i>



<b>Tree</b>	<a href="#">srlb-descriptor</a>
<b>Configurable</b>	False

### sr-index-or-label *number*



**Note:**

This command is available for the following platforms:

- 7250 IXR-6
- 7250 IXR-10

<b>Description</b>	An index representing the first value of the SRLB. The meaning (index or label) is determined from the length of the sub-tlv.
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">protocols isis instance name</a> <i>string</i> <a href="#">level-database level-number</a> <i>number</i> <a href="#">lsp-id</a> <i>string</i> <a href="#">defined-tlvs router-capability sub-tlvs sr-local-block srlb-descriptor sr-index-or-label</a> <i>number range number</i>
<b>Configurable</b>	False

### range *number*



**Note:**

This command is available for the following platforms:

- 7250 IXR-6
- 7250 IXR-10

<b>Description</b>	The number of SRLB elements
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">protocols isis instance name</a> <i>string</i> <a href="#">level-database level-number</a> <i>number</i> <a href="#">lsp-id</a> <i>string</i> <a href="#">defined-tlvs router-capability sub-tlvs sr-local-block srlb-descriptor sr-index-or-label</a> <i>number range number</i>
<b>Range</b>	1 to 16777215
<b>Configurable</b>	False

### te-router-id *string*

<b>Description</b>	A single stable address that can always be referenced in a path that will be reachable from multiple hops away. TLV = 134.
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">protocols isis instance name</a> <i>string</i> <a href="#">level-database level-number</a> <i>number</i> <a href="#">lsp-id</a> <i>string</i> <a href="#">defined-tlvs te-router-id</a> <i>string</i>
<b>Tree</b>	<a href="#">te-router-id</a>
<b>Configurable</b>	False

### maximum-area-addresses *number*

<b>Description</b>	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.
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">protocols isis instance name</a> <i>string</i> <a href="#">level-database level-number</a> <i>number</i> <a href="#">lsp-id</a> <i>string</i> <a href="#">maximum-area-addresses</a> <i>number</i>
<b>Tree</b>	<a href="#">maximum-area-addresses</a>
<b>Configurable</b>	False

### pdu-length *number*

<b>Description</b>	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.
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">protocols isis instance name</a> <i>string</i> <a href="#">level-database level-number</a> <i>number</i> <a href="#">lsp-id</a> <i>string</i> <a href="#">pdu-length</a> <i>number</i>
<b>Tree</b>	<a href="#">pdu-length</a>
<b>Configurable</b>	False

### pdu-type *number*

<b>Description</b>	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.
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">protocols isis instance name</a> <i>string</i> <a href="#">level-database level-number</a> <i>number</i> <a href="#">lsp-id</a> <i>string</i> <a href="#">pdu-type</a> <i>number</i>
<b>Tree</b>	<a href="#">pdu-type</a>
<b>Configurable</b>	False

### pkt-version *number*

<b>Description</b>	The value indicates the version of the ISIS protocol that has generated the Packet.
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">protocols isis instance name</a> <i>string</i> <a href="#">level-database level-number</a> <i>number</i> <a href="#">lsp-id</a> <i>string</i> <a href="#">pkt-version</a> <i>number</i>
<b>Tree</b>	<a href="#">pkt-version</a>
<b>Configurable</b>	False

**remaining-lifetime *number***

<b>Description</b>	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.
<b>Context</b>	<a href="#">network-instance name string protocols isis instance name string level-database level-number number lsp-id string remaining-lifetime number</a>
<b>Tree</b>	<a href="#">remaining-lifetime</a>
<b>Range</b>	0 to 65535
<b>Units</b>	seconds
<b>Configurable</b>	False

**sequence-number *string***

<b>Description</b>	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.
<b>Context</b>	<a href="#">network-instance name string protocols isis instance name string level-database level-number number lsp-id string sequence-number string</a>
<b>Tree</b>	<a href="#">sequence-number</a>
<b>Configurable</b>	False

**system-id-len *number***

<b>Description</b>	The value indicates the length of the system-id as used by the originator.
<b>Context</b>	<a href="#">network-instance name string protocols isis instance name string level-database level-number number lsp-id string system-id-len number</a>
<b>Tree</b>	<a href="#">system-id-len</a>
<b>Configurable</b>	False

**undefined-tlvs *string***

<b>Description</b>	Undefined TLV-s as contents of the LSP.
<b>Context</b>	<a href="#">network-instance name string protocols isis instance name string level-database level-number number lsp-id string undefined-tlvs string</a>
<b>Tree</b>	<a href="#">undefined-tlvs</a>

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<b>String Length</b>	27 to 9190
<b>Configurable</b>	False

**version number**

<b>Description</b>	The value indicates the version of the ISIS protocol that has generated the LSP
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">protocols isis instance name</a> <i>string</i> <a href="#">level-database level-number</a> <i>number</i> <a href="#">lsp-id</a> <i>string</i> <b>version number</b>
<b>Tree</b>	<a href="#">version</a>
<b>Configurable</b>	False

**max-ecmp-paths number**

<b>Description</b>	The maximum number of ECMP next-hops to program into the FIB for every IP prefix
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">protocols isis instance name</a> <i>string</i> <b>max-ecmp-paths</b> <i>number</i>
<b>Tree</b>	<a href="#">max-ecmp-paths</a>
<b>Range</b>	1 to 64
<b>Default</b>	1
<b>Configurable</b>	True

**net string**

<b>Description</b>	ISIS network entity title (NET)
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">protocols isis instance name</a> <i>string</i> <b>net</b> <i>string</i>
<b>Tree</b>	<a href="#">net</a>
<b>Configurable</b>	True
<b>Max. Elements</b>	1

**oper-area-id string**

<b>Description</b>	The list of area IDs associated with this IS router
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">protocols isis instance name</a> <i>string</i> <b>oper-area-id</b> <i>string</i>
<b>Tree</b>	<a href="#">oper-area-id</a>
<b>String Length</b>	2 to 38

**Configurable** False

### **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**

- 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  
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.

**Configurable** False

**oper-system-id *string***

<b>Description</b>	The ID for this instance of the Integrated IS-IS protocol.
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">protocols isis instance name</a> <i>string</i> <a href="#">oper-system-id</a> <i>string</i>
<b>Tree</b>	<a href="#">oper-system-id</a>
<b>String Length</b>	14
<b>Configurable</b>	False

**overload**

<b>Description</b>	Specifies isis routing instance behavior regarding overload
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">protocols isis instance name</a> <i>string</i> <a href="#">overload</a>
<b>Tree</b>	<a href="#">overload</a>
<b>Configurable</b>	True

**advertise-external *boolean***

<b>Description</b>	When set to true, external (non-ISIS) routes continue to be advertised when the router is in overload.
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">protocols isis instance name</a> <i>string</i> <a href="#">overload</a> <a href="#">advertise-external</a> <i>boolean</i>
<b>Tree</b>	<a href="#">advertise-external</a>
<b>Default</b>	false
<b>Configurable</b>	True

**advertise-interlevel *boolean***

<b>Description</b>	When set to true, L1->L2 and L2->L1 inter-level routes continue to be advertised when the router is in overload.
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">protocols isis instance name</a> <i>string</i> <a href="#">overload</a> <a href="#">advertise-interlevel</a> <i>boolean</i>
<b>Tree</b>	<a href="#">advertise-interlevel</a>
<b>Default</b>	false
<b>Configurable</b>	True

**immediate**

<b>Description</b>	Options for advertising an overloaded state immediately
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">protocols isis instance name</a> <i>string</i> <a href="#">overload immediate</a>
<b>Tree</b>	<a href="#">immediate</a>
<b>Configurable</b>	True

**max-metric *boolean***

<b>Description</b>	When set to true transit links are advertised with a wide metric of 0xfffffe and a narrow metric of 0x3f
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">protocols isis instance name</a> <i>string</i> <a href="#">overload immediate max-metric</a> <i>boolean</i>
<b>Tree</b>	<a href="#">max-metric</a>
<b>Default</b>	false
<b>Configurable</b>	True

**set-bit *boolean***

<b>Description</b>	When set to true, the Overload bit is set
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">protocols isis instance name</a> <i>string</i> <a href="#">overload immediate set-bit</a> <i>boolean</i>
<b>Tree</b>	<a href="#">set-bit</a>
<b>Default</b>	false
<b>Configurable</b>	True

**instance-is-in-overload *boolean***

<b>Description</b>	When set to true the IS-IS instance is currently in overload state.
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">protocols isis instance name</a> <i>string</i> <a href="#">overload instance-is-in-overload</a> <i>boolean</i>
<b>Tree</b>	<a href="#">instance-is-in-overload</a>
<b>Configurable</b>	False

**on-boot**

<b>Description</b>	Options for advertising an overloaded state whenever the IS-IS process restarts
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<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">protocols isis instance name</a> <i>string</i> <a href="#">overload on-boot</a>
<b>Tree</b>	<a href="#">on-boot</a>
<b>Configurable</b>	True

**max-metric *boolean***

<b>Description</b>	When set to true transit links are advertised with a wide metric of 0xfffffe and a narrow metric of 0x3f
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">protocols isis instance name</a> <i>string</i> <a href="#">overload on-boot max-metric</a> <i>boolean</i>
<b>Tree</b>	<a href="#">max-metric</a>
<b>Configurable</b>	True

**set-bit *boolean***

<b>Description</b>	When set to true, the Overload bit is set
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">protocols isis instance name</a> <i>string</i> <a href="#">overload on-boot set-bit</a> <i>boolean</i>
<b>Tree</b>	<a href="#">set-bit</a>
<b>Configurable</b>	True

**timeout *number***

<b>Description</b>	Specifies the time that the router should remain in overload state after the IS-IS process restarts
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">protocols isis instance name</a> <i>string</i> <a href="#">overload on-boot timeout</a> <i>number</i>
<b>Tree</b>	<a href="#">timeout</a>
<b>Range</b>	60 to 1800
<b>Units</b>	seconds
<b>Configurable</b>	True

**poi-tlv *boolean***

<b>Description</b>	When set to true, a TLV is added to purge to record the system ID of the IS generating the purge.
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">protocols isis instance name</a> <i>string</i> <a href="#">poi-tlv</a> <i>boolean</i>



<b>Tree</b>	<a href="#">poi-tlv</a>
<b>Default</b>	false
<b>Configurable</b>	True

### restarting-neighbor-list

<b>Description</b>	The list of neighbors that have restarted recently and that are currently being helped.
<b>Context</b>	<a href="#">network-instance name string protocols isis instance name string restarting-neighbor-list</a>
<b>Tree</b>	<a href="#">restarting-neighbor-list</a>
<b>Configurable</b>	False

### neighbor [system-id string](#)

<b>Description</b>	The list of neighbors that have restarted recently and that are currently being helped.
<b>Context</b>	<a href="#">network-instance name string protocols isis instance name string restarting-neighbor-list neighbor system-id string</a>
<b>Tree</b>	<a href="#">neighbor</a>
<b>Configurable</b>	False

### system-id [string](#)

<b>Description</b>	The neighbor router's system ID.
<b>Context</b>	<a href="#">network-instance name string protocols isis instance name string restarting-neighbor-list neighbor system-id string</a>
<b>String Length</b>	14
<b>Configurable</b>	False

### hostname [string](#)

<b>Description</b>	The hostname of the neighbor, as learned by TLV 137.
<b>Context</b>	<a href="#">network-instance name string protocols isis instance name string restarting-neighbor-list neighbor system-id string hostname string</a>
<b>Tree</b>	<a href="#">hostname</a>
<b>Configurable</b>	False

## segment-routing



### Note:

This command is available for the following platforms:

- 7250 IXR-6
- 7250 IXR-10

<b>Description</b>	Enter the segment-routing context
<b>Context</b>	<a href="#">network-instance name string protocols isis instance name string segment-routing</a>
<b>Tree</b>	<a href="#">segment-routing</a>
<b>Configurable</b>	True

## mpls



### Note:

This command is available for the following platforms:

- 7250 IXR-6
- 7250 IXR-10

<b>Description</b>	Context used to configure SR-MPLS options
<b>Context</b>	<a href="#">network-instance name string protocols isis instance name string segment-routing mpls</a>
<b>Tree</b>	<a href="#">mpls</a>
<b>Configurable</b>	True

## statistics

<b>Description</b>	Instance level statistics
<b>Context</b>	<a href="#">network-instance name string protocols isis instance name string statistics</a>
<b>Tree</b>	<a href="#">statistics</a>
<b>Configurable</b>	False

## last-partial-spf *string*

<b>Description</b>	The elapsed time since the last time a partial SPF run was run on either the L1 or L2 LSDB
<b>Context</b>	<a href="#">network-instance name string protocols isis instance name string statistics last-partial-spf string</a>

<b>Tree</b>	<a href="#">last-partial-spf</a>
<b>String Length</b>	20 to 32
<b>Configurable</b>	False

**last-spf string**

<b>Description</b>	The elapsed time since the last time a full SPF run was run on either the L1 or L2 LSDB
<b>Context</b>	<a href="#">network-instance name string protocols isis instance name string statistics last-spf string</a>
<b>Tree</b>	<a href="#">last-spf</a>
<b>String Length</b>	20 to 32
<b>Configurable</b>	False

**partial-spf-runs number**

<b>Description</b>	The number of times a partial SPF run has been performed on either the L1 or L2 LSDB since the IS-IS manager restarted
<b>Context</b>	<a href="#">network-instance name string protocols isis instance name string statistics partial-spf-runs number</a>
<b>Tree</b>	<a href="#">partial-spf-runs</a>
<b>Default</b>	0
<b>Configurable</b>	False

**pdu pdu-name keyword**

<b>Description</b>	List of PDUs processed by the IS-IS instance since the IS-IS manager restarted
<b>Context</b>	<a href="#">network-instance name string protocols isis instance name string statistics pdu pdu-name keyword</a>
<b>Tree</b>	<a href="#">pdu</a>
<b>Configurable</b>	False

**pdu-name keyword**

<b>Description</b>	The PDU type that was processed
<b>Context</b>	<a href="#">network-instance name string protocols isis instance name string statistics pdu pdu-name keyword</a>

<b>Options</b>	<ul style="list-style-type: none"> <li>• LSP Link State PDU</li> <li>• IIH IS-to-IS Hello PDU</li> <li>• CSNP Complete Sequence Number PDU</li> <li>• PSNP Partial Sequence Number PDU</li> <li>• Unknown Unknown PDU type</li> </ul>
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<b>Configurable</b>	False
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### dropped *number*

<b>Description</b>	The number of PDUs that were received and dropped
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">protocols isis instance name</a> <i>string</i> <a href="#">statistics pdu pdu-name</a> <i>keyword</i> <a href="#">dropped number</a>
<b>Tree</b>	<a href="#">dropped</a>
<b>Default</b>	0
<b>Configurable</b>	False

### processed *number*

<b>Description</b>	The number of PDUs that were received and processed
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">protocols isis instance name</a> <i>string</i> <a href="#">statistics pdu pdu-name</a> <i>keyword</i> <a href="#">processed number</a>
<b>Tree</b>	<a href="#">processed</a>
<b>Default</b>	0
<b>Configurable</b>	False

### received *number*

<b>Description</b>	The number of PDUs that were received
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">protocols isis instance name</a> <i>string</i> <a href="#">statistics pdu pdu-name</a> <i>keyword</i> <a href="#">received number</a>
<b>Tree</b>	<a href="#">received</a>
<b>Default</b>	0

<b>Configurable</b>	False
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### retransmitted *number*

<b>Description</b>	The number of PDUs that were retransmitted
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">protocols isis instance name</a> <i>string</i> <a href="#">statistics pdu pdu-name</a> <i>keyword</i> <a href="#">retransmitted number</a>
<b>Tree</b>	<a href="#">retransmitted</a>
<b>Default</b>	0
<b>Configurable</b>	False

### sent *number*

<b>Description</b>	The number of PDUs that were transmitted
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">protocols isis instance name</a> <i>string</i> <a href="#">statistics pdu pdu-name</a> <i>keyword</i> <a href="#">sent number</a>
<b>Tree</b>	<a href="#">sent</a>
<b>Default</b>	0
<b>Configurable</b>	False

### spf-runs *number*

<b>Description</b>	The number of times a full SPF run has been performed on either the L1 or L2 LSDB since the IS-IS manager restarted
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">protocols isis instance name</a> <i>string</i> <a href="#">statistics spf-runs</a> <i>number</i>
<b>Tree</b>	<a href="#">spf-runs</a>
<b>Default</b>	0
<b>Configurable</b>	False

### timers

<b>Description</b>	Container for IS-IS timers applicable at the instance level
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">protocols isis instance name</a> <i>string</i> <a href="#">timers</a>
<b>Tree</b>	<a href="#">timers</a>
<b>Configurable</b>	True

**Isp-generation**

<b>Description</b>	Container with options for specifying LSP generation timer values
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">protocols isis instance name</a> <i>string</i> <a href="#">timers lsp-generation</a>
<b>Tree</b>	<a href="#">lsp-generation</a>
<b>Configurable</b>	True

**initial-wait *number***

<b>Description</b>	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
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">protocols isis instance name</a> <i>string</i> <a href="#">timers lsp-generation initial-wait</a> <i>number</i>
<b>Tree</b>	<a href="#">initial-wait</a>
<b>Range</b>	10 to 100000
<b>Default</b>	10
<b>Units</b>	milliseconds
<b>Configurable</b>	True

**max-wait *number***

<b>Description</b>	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
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">protocols isis instance name</a> <i>string</i> <a href="#">timers lsp-generation max-wait</a> <i>number</i>
<b>Tree</b>	<a href="#">max-wait</a>
<b>Range</b>	10 to 120000
<b>Default</b>	5000
<b>Units</b>	milliseconds
<b>Configurable</b>	True

**second-wait *number***

<b>Description</b>	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
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">protocols isis instance name</a> <i>string</i> <a href="#">timers lsp-generation second-wait</a> <i>number</i>
<b>Tree</b>	<a href="#">second-wait</a>
<b>Range</b>	10 to 100000
<b>Default</b>	1000
<b>Units</b>	milliseconds
<b>Configurable</b>	True

**lsp-lifetime *number***

<b>Description</b>	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.
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">protocols isis instance name</a> <i>string</i> <a href="#">timers lsp-lifetime</a> <i>number</i>
<b>Tree</b>	<a href="#">lsp-lifetime</a>
<b>Range</b>	350 to 65535
<b>Default</b>	1200
<b>Units</b>	seconds
<b>Configurable</b>	True

**lsp-refresh**

<b>Description</b>	Configure LSP refresh timers.
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">protocols isis instance name</a> <i>string</i> <a href="#">timers lsp-refresh</a>
<b>Tree</b>	<a href="#">lsp-refresh</a>
<b>Configurable</b>	True

**half-lifetime *boolean***

<b>Description</b>	When set to true, the LSP refresh interval is half the lsp-lifetime
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">protocols isis instance name</a> <i>string</i> <a href="#">timers lsp-refresh half-lifetime</a> <i>boolean</i>

<b>Tree</b>	<a href="#">half-lifetime</a>
<b>Default</b>	true
<b>Configurable</b>	True

### **interval number**

<b>Description</b>	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.
<b>Context</b>	<a href="#">network-instance name string protocols isis instance name string timers lsp-refresh interval number</a>
<b>Tree</b>	<a href="#">interval</a>
<b>Range</b>	150 to 65535
<b>Default</b>	600
<b>Units</b>	seconds
<b>Configurable</b>	True

### **spf**

<b>Description</b>	Container with options for specifying SPF timer values
<b>Context</b>	<a href="#">network-instance name string protocols isis instance name string timers spf</a>
<b>Tree</b>	<a href="#">spf</a>
<b>Configurable</b>	True

### **initial-wait number**

<b>Description</b>	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
<b>Context</b>	<a href="#">network-instance name string protocols isis instance name string timers spf initial-wait number</a>
<b>Tree</b>	<a href="#">initial-wait</a>
<b>Range</b>	10 to 100000
<b>Default</b>	1000
<b>Units</b>	milliseconds
<b>Configurable</b>	True



**max-wait *number***

<b>Description</b>	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
<b>Context</b>	<a href="#">network-instance name string protocols isis instance name string timers spf max-wait number</a>
<b>Tree</b>	<a href="#">max-wait</a>
<b>Range</b>	10 to 120000
<b>Default</b>	10000
<b>Units</b>	milliseconds
<b>Configurable</b>	True

**second-wait *number***

<b>Description</b>	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
<b>Context</b>	<a href="#">network-instance name string protocols isis instance name string timers spf second-wait number</a>
<b>Tree</b>	<a href="#">second-wait</a>
<b>Range</b>	10 to 100000
<b>Default</b>	1000
<b>Units</b>	milliseconds
<b>Configurable</b>	True

**trace-options**

<b>Description</b>	Instance level debug trace options for IS-IS
<b>Context</b>	<a href="#">network-instance name string protocols isis instance name string trace-options</a>
<b>Tree</b>	<a href="#">trace-options</a>
<b>Configurable</b>	True

**trace keyword**

<b>Description</b>	List of tracing options
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">protocols isis instance name</a> <i>string</i> <a href="#">trace-options trace keyword</a>
<b>Tree</b>	<a href="#">trace</a>
<b>Options</b>	<ul style="list-style-type: none"> <li>• <a href="#">adjacencies</a></li> <li>• <a href="#">graceful-restart</a></li> <li>• <a href="#">interfaces</a></li> <li>• <a href="#">packets-all</a></li> <li>• <a href="#">packets-p2p-hello</a></li> <li>• <a href="#">packets-l1-hello</a></li> <li>• <a href="#">packets-l2-hello</a></li> <li>• <a href="#">packets-l1-psnp</a></li> <li>• <a href="#">packets-l2-psnp</a></li> <li>• <a href="#">packets-l1-csnp</a></li> <li>• <a href="#">packets-l2-csnp</a></li> <li>• <a href="#">packets-l1-lsp</a></li> <li>• <a href="#">packets-l2-lsp</a></li> <li>• <a href="#">routes</a></li> <li>• <a href="#">summary-addresses</a></li> </ul>
<b>Configurable</b>	True

**transport**

<b>Description</b>	Enter the transport context
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">protocols isis instance name</a> <i>string</i> <a href="#">transport</a>
<b>Tree</b>	<a href="#">transport</a>
<b>Configurable</b>	True

**lsp-mtu-size number**

<b>Description</b>	Sets the maximum size of LSPs generated by this router
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">protocols isis instance name</a> <i>string</i> <a href="#">transport lsp-mtu-size number</a>
<b>Tree</b>	<a href="#">lsp-mtu-size</a>
<b>Range</b>	490 to 9490

<b>Default</b>	1492
<b>Units</b>	bytes
<b>Configurable</b>	True

## ldp



### Note:

This command is available for the following platforms:

- 7250 IXR-6
- 7250 IXR-10

<b>Description</b>	Container for LDP configuration and state.
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">protocols ldp</a>
<b>Tree</b>	<a href="#">ldp</a>
<b>Configurable</b>	True

## admin-state *keyword*



### Note:

This command is available for the following platforms:

- 7250 IXR-6
- 7250 IXR-10

<b>Description</b>	Administratively enable or disable LDP.
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">protocols ldp admin-state</a> <i>keyword</i>
<b>Tree</b>	<a href="#">admin-state</a>
<b>Default</b>	disable
<b>Options</b>	<ul style="list-style-type: none"> <li>• enable</li> <li>• disable</li> </ul>
<b>Configurable</b>	True

## discovery



### Note:

This command is available for the following platforms:

- 7250 IXR-6
- 7250 IXR-10

<b>Description</b>	Neighbor discovery configuration and operational state.
<b>Context</b>	<a href="#">network-instance name</a> <a href="#">string</a> <a href="#">protocols ldp discovery</a>
<b>Tree</b>	<a href="#">discovery</a>
<b>Configurable</b>	True

## interfaces



### Note:

This command is available for the following platforms:

- 7250 IXR-6
- 7250 IXR-10

<b>Description</b>	The complete set of interfaces used for LDP Basic Discovery.
<b>Context</b>	<a href="#">network-instance name</a> <a href="#">string</a> <a href="#">protocols ldp discovery interfaces</a>
<b>Tree</b>	<a href="#">interfaces</a>
<b>Configurable</b>	True

## hello-holdtime *number*



### Note:

This command is available for the following platforms:

- 7250 IXR-6
- 7250 IXR-10

<b>Description</b>	The time interval for which a LDP link Hello adjacency is maintained in the absence of link Hello messages from the LDP neighbor
<b>Context</b>	<a href="#">network-instance name</a> <a href="#">string</a> <a href="#">protocols ldp discovery interfaces hello-holdtime</a> <i>number</i>
<b>Tree</b>	<a href="#">hello-holdtime</a>
<b>Range</b>	15 to 3600
<b>Default</b>	15

<b>Units</b>	seconds
<b>Configurable</b>	True

### hello-interval *number*



**Note:**

This command is available for the following platforms:

- 7250 IXR-6
- 7250 IXR-10

<b>Description</b>	The interval between consecutive LDP link Hello messages used in basic LDP discovery
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">protocols</a> <a href="#">ldp</a> <a href="#">discovery</a> <a href="#">interfaces</a> <a href="#">hello-interval</a> <i>number</i>
<b>Tree</b>	<a href="#">hello-interval</a>
<b>Range</b>	5 to 1200
<b>Default</b>	5
<b>Units</b>	seconds
<b>Configurable</b>	True

### interface *name reference*



**Note:**

This command is available for the following platforms:

- 7250 IXR-6
- 7250 IXR-10

<b>Description</b>	List of LDP interfaces used for LDP Basic Discovery.
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">protocols</a> <a href="#">ldp</a> <a href="#">discovery</a> <a href="#">interfaces</a> <a href="#">interface</a> <i>name reference</i>
<b>Tree</b>	<a href="#">interface</a>
<b>Configurable</b>	True

## name *reference*

**Note:**

This command is available for the following platforms:

- 7250 IXR-6
- 7250 IXR-10

<b>Description</b>	Reference to a specific subinterface that is bound to the network instance
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">protocols ldp discovery interfaces interface name</a> <i>reference</i>
<b>Reference</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">interface name</a> <i>string</i>
<b>Configurable</b>	True

## hello-holdtime *number*

**Note:**

This command is available for the following platforms:

- 7250 IXR-6
- 7250 IXR-10

<b>Description</b>	The time interval for which a LDP link Hello adjacency is maintained in the absence of link Hello messages from the LDP neighbor
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">protocols ldp discovery interfaces interface name</a> <i>reference</i> <a href="#">hello-holdtime</a> <i>number</i>
<b>Tree</b>	<a href="#">hello-holdtime</a>
<b>Range</b>	15 to 3600
<b>Default</b>	15
<b>Units</b>	seconds
<b>Configurable</b>	True

## hello-interval *number*

**Note:**

This command is available for the following platforms:

- 7250 IXR-6
- 7250 IXR-10

<b>Description</b>	The interval between consecutive LDP link Hello messages used in basic LDP discovery
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">protocols ldp discovery interfaces interface name</a> <i>reference</i> <a href="#">hello-interval</a> <i>number</i>
<b>Tree</b>	<a href="#">hello-interval</a>
<b>Range</b>	5 to 1200
<b>Default</b>	5
<b>Units</b>	seconds
<b>Configurable</b>	True

## ipv4



### Note:

This command is available for the following platforms:

- 7250 IXR-6
- 7250 IXR-10

<b>Description</b>	Enter the ipv4 context
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">protocols ldp discovery interfaces interface name</a> <i>reference</i> <a href="#">ipv4</a>
<b>Tree</b>	<a href="#">ipv4</a>
<b>Configurable</b>	True

## admin-state *keyword*



### Note:

This command is available for the following platforms:

- 7250 IXR-6
- 7250 IXR-10

<b>Description</b>	Administratively enable or disable LDP discovery for IPv4 on a particular interface.
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">protocols ldp discovery interfaces interface name</a> <i>reference</i> <a href="#">ipv4 admin-state</a> <i>keyword</i>
<b>Tree</b>	<a href="#">admin-state</a>
<b>Default</b>	enable
<b>Options</b>	<ul style="list-style-type: none"> <li>• enable</li> <li>• disable</li> </ul>

**Configurable** True

## hello-adjacencies



**Note:**

This command is available for the following platforms:

- 7250 IXR-6
- 7250 IXR-10

**Description** Container with a list of hello adjacencies.

**Context** [network-instance name \*string\* protocols ldp discovery interfaces interface name \*reference\* ipv4 hello-adjacencies](#)

**Tree** [hello-adjacencies](#)

**Configurable** False

## adjacency [lsr-id \*reference\* label-space-id \*reference\*](#)



**Note:**

This command is available for the following platforms:

- 7250 IXR-6
- 7250 IXR-10

**Description** List of hello adjacencies.

**Context** [network-instance name \*string\* protocols ldp discovery interfaces interface name \*reference\* ipv4 hello-adjacencies adjacency lsr-id \*reference\* label-space-id \*reference\*](#)

**Tree** [adjacency](#)

**Configurable** False

## lsr-id *reference*



**Note:**

This command is available for the following platforms:

- 7250 IXR-6
- 7250 IXR-10

**Description** The LSR ID of the peer, as a portion of the peer LDP ID.



<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">protocols ldp discovery interfaces interface name</a> <i>reference</i> <a href="#">ipv4 hello-adjacencies adjacency lsr-id</a> <i>reference</i> <a href="#">label-space-id</a> <i>reference</i>
<b>Reference</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">protocols ldp peers peer lsr-id</a> <i>string</i> <a href="#">label-space-id</a> <i>number</i>
<b>Configurable</b>	False

## label-space-id *reference*



### Note:

This command is available for the following platforms:

- 7250 IXR-6
- 7250 IXR-10

<b>Description</b>	The Label Space ID of the peer, as a portion of the peer LDP ID.
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">protocols ldp discovery interfaces interface name</a> <i>reference</i> <a href="#">ipv4 hello-adjacencies adjacency lsr-id</a> <i>reference</i> <a href="#">label-space-id</a> <i>reference</i>
<b>Reference</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">protocols ldp peers peer lsr-id</a> <i>string</i> <a href="#">label-space-id</a> <i>number</i>
<b>Configurable</b>	False

## hello-holdtime



### Note:

This command is available for the following platforms:

- 7250 IXR-6
- 7250 IXR-10

<b>Description</b>	Container for hello holdtime state information.
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">protocols ldp discovery interfaces interface name</a> <i>reference</i> <a href="#">ipv4 hello-adjacencies adjacency lsr-id</a> <i>reference</i> <a href="#">label-space-id</a> <i>reference</i> <a href="#">hello-holdtime</a>
<b>Tree</b>	<a href="#">hello-holdtime</a>
<b>Configurable</b>	False

## negotiated *number*

**Note:**

This command is available for the following platforms:

- 7250 IXR-6
- 7250 IXR-10

<b>Description</b>	The holdtime negotiated between this LSR and the adjacent LSR.
<b>Context</b>	<a href="#">network-instance name</a> <a href="#">string</a> <a href="#">protocols ldp discovery interfaces interface name</a> <a href="#">reference</a> <a href="#">ipv4 hello-adjacencies adjacency lsr-id</a> <a href="#">reference</a> <a href="#">label-space-id</a> <a href="#">reference</a> <a href="#">hello-holdtime negotiated</a> <a href="#">number</a>
<b>Tree</b>	<a href="#">negotiated</a>
<b>Units</b>	seconds
<b>Configurable</b>	False

## neighbor-proposed *number*

**Note:**

This command is available for the following platforms:

- 7250 IXR-6
- 7250 IXR-10

<b>Description</b>	The holdtime value learned from the adjacent LSR.
<b>Context</b>	<a href="#">network-instance name</a> <a href="#">string</a> <a href="#">protocols ldp discovery interfaces interface name</a> <a href="#">reference</a> <a href="#">ipv4 hello-adjacencies adjacency lsr-id</a> <a href="#">reference</a> <a href="#">label-space-id</a> <a href="#">reference</a> <a href="#">hello-holdtime neighbor-proposed</a> <a href="#">number</a>
<b>Tree</b>	<a href="#">neighbor-proposed</a>
<b>Units</b>	seconds
<b>Configurable</b>	False

## remaining *number*

**Note:**

This command is available for the following platforms:

- 7250 IXR-6
- 7250 IXR-10

<b>Description</b>	The time remaining until the holdtime timer expires.
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<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">protocols ldp discovery interfaces interface name</a> <i>reference</i> <a href="#">ipv4 hello-adjacencies adjacency lsr-id</a> <i>reference</i> <a href="#">label-space-id</a> <i>reference</i> <a href="#">hello-holdtime remaining</a> <i>number</i>
<b>Tree</b>	<a href="#">remaining</a>
<b>Units</b>	seconds
<b>Configurable</b>	False

## hello-received *number*



### Note:

This command is available for the following platforms:

- 7250 IXR-6
- 7250 IXR-10

<b>Description</b>	The number of Hello messages received.
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">protocols ldp discovery interfaces interface name</a> <i>reference</i> <a href="#">ipv4 hello-adjacencies adjacency lsr-id</a> <i>reference</i> <a href="#">label-space-id</a> <i>reference</i> <a href="#">hello-received</a> <i>number</i>
<b>Tree</b>	<a href="#">hello-received</a>
<b>Default</b>	0
<b>Configurable</b>	False

## hello-sent *number*



### Note:

This command is available for the following platforms:

- 7250 IXR-6
- 7250 IXR-10

<b>Description</b>	The number of Hello messages sent.
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">protocols ldp discovery interfaces interface name</a> <i>reference</i> <a href="#">ipv4 hello-adjacencies adjacency lsr-id</a> <i>reference</i> <a href="#">label-space-id</a> <i>reference</i> <a href="#">hello-sent</a> <i>number</i>
<b>Tree</b>	<a href="#">hello-sent</a>
<b>Default</b>	0
<b>Configurable</b>	False

## local-address *string*

**Note:**

This command is available for the following platforms:

- 7250 IXR-6
- 7250 IXR-10

<b>Description</b>	Local address of the hello adjacency.
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">protocols ldp discovery interfaces interface name</a> <i>reference</i> <a href="#">ipv4 hello-adjacencies adjacency lsr-id</a> <i>reference</i> <a href="#">label-space-id</a> <i>reference</i> <a href="#">local-address</a> <i>string</i>
<b>Tree</b>	<a href="#">local-address</a>
<b>Configurable</b>	False

## remote-address *string*

**Note:**

This command is available for the following platforms:

- 7250 IXR-6
- 7250 IXR-10

<b>Description</b>	Remote address of the hello adjacency.
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">protocols ldp discovery interfaces interface name</a> <i>reference</i> <a href="#">ipv4 hello-adjacencies adjacency lsr-id</a> <i>reference</i> <a href="#">label-space-id</a> <i>reference</i> <a href="#">remote-address</a> <i>string</i>
<b>Tree</b>	<a href="#">remote-address</a>
<b>Configurable</b>	False

## last-oper-state-change *string*

**Note:**

This command is available for the following platforms:

- 7250 IXR-6
- 7250 IXR-10

<b>Description</b>	The last time when the IPv4 oper-state changed.
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">protocols ldp discovery interfaces interface name</a> <i>reference</i> <a href="#">ipv4 last-oper-state-change</a> <i>string</i>
<b>Tree</b>	<a href="#">last-oper-state-change</a>

<b>String Length</b>	20 to 32
<b>Configurable</b>	False

### oper-down-reason *keyword*



**Note:**

This command is available for the following platforms:

- 7250 IXR-6
- 7250 IXR-10

<b>Description</b>	Reason for the LDP interface being down from an IPv4 perspective.
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">protocols ldp discovery interfaces interface name</a> <i>reference</i> <a href="#">ipv4 oper-down-reason keyword</a>
<b>Tree</b>	<a href="#">oper-down-reason</a>
<b>Options</b>	<ul style="list-style-type: none"> <li>• ldp-interface-admin-down</li> <li>• ldp-instance-oper-down</li> <li>• network-instance-subinterface-down</li> <li>• out-of-resources</li> <li>• unknown</li> </ul>
<b>Configurable</b>	False

### oper-state *keyword*



**Note:**

This command is available for the following platforms:

- 7250 IXR-6
- 7250 IXR-10

<b>Description</b>	Operational state of IPv4 on the LDP interface
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">protocols ldp discovery interfaces interface name</a> <i>reference</i> <a href="#">ipv4 oper-state keyword</a>
<b>Tree</b>	<a href="#">oper-state</a>
<b>Options</b>	<ul style="list-style-type: none"> <li>• up</li> <li>• down</li> </ul>
<b>Configurable</b>	False

## statistics



### Note:

This command is available for the following platforms:

- 7250 IXR-6
- 7250 IXR-10

<b>Description</b>	Statistics objects.
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">protocols ldp discovery interfaces interface name</a> <i>reference</i> <a href="#">ipv4 statistics</a>
<b>Tree</b>	<a href="#">statistics</a>
<b>Configurable</b>	False

## hello-message-errors



### Note:

This command is available for the following platforms:

- 7250 IXR-6
- 7250 IXR-10

<b>Description</b>	Counters for received Hello message errors
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">protocols ldp discovery interfaces interface name</a> <i>reference</i> <a href="#">ipv4 statistics hello-message-errors</a>
<b>Tree</b>	<a href="#">hello-message-errors</a>
<b>Configurable</b>	False

## bad-message-length *number*



### Note:

This command is available for the following platforms:

- 7250 IXR-6
- 7250 IXR-10

<b>Description</b>	The number of Hello messages received with a bad message length
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">protocols ldp discovery interfaces interface name</a> <i>reference</i> <a href="#">ipv4 statistics hello-message-errors bad-message-length</a> <i>number</i>
<b>Tree</b>	<a href="#">bad-message-length</a>
<b>Default</b>	0

**Configurable** False

## bad-pdu-length *number*



**Note:**

This command is available for the following platforms:

- 7250 IXR-6
- 7250 IXR-10

<b>Description</b>	The number of Hello messages received with a bad PDU length
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">protocols ldp discovery interfaces interface name</a> <i>reference</i> <a href="#">ipv4 statistics hello-message-errors bad-pdu-length</a> <i>number</i>
<b>Tree</b>	<a href="#">bad-pdu-length</a>
<b>Default</b>	0
<b>Configurable</b>	False

## bad-protocol-version *number*



**Note:**

This command is available for the following platforms:

- 7250 IXR-6
- 7250 IXR-10

<b>Description</b>	The number of Hello messages received with a bad protocol version
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">protocols ldp discovery interfaces interface name</a> <i>reference</i> <a href="#">ipv4 statistics hello-message-errors bad-protocol-version</a> <i>number</i>
<b>Tree</b>	<a href="#">bad-protocol-version</a>
<b>Default</b>	0
<b>Configurable</b>	False

## malformed-tlv-value *number*



**Note:**

This command is available for the following platforms:

- 7250 IXR-6
- 7250 IXR-10

<b>Description</b>	The number of Hello messages received with a malformed TLV value
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">protocols ldp discovery interfaces interface name</a> <i>reference</i> <a href="#">ipv4 statistics hello-message-errors malformed-tlv-value</a> <i>number</i>
<b>Tree</b>	<a href="#">malformed-tlv-value</a>
<b>Default</b>	0
<b>Configurable</b>	False

### hello-received *number*



**Note:**

This command is available for the following platforms:

- 7250 IXR-6
- 7250 IXR-10

<b>Description</b>	The number of Hello messages received.
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">protocols ldp discovery interfaces interface name</a> <i>reference</i> <a href="#">ipv4 statistics hello-received</a> <i>number</i>
<b>Tree</b>	<a href="#">hello-received</a>
<b>Default</b>	0
<b>Configurable</b>	False

### hello-sent *number*



**Note:**

This command is available for the following platforms:

- 7250 IXR-6
- 7250 IXR-10

<b>Description</b>	The number of Hello messages sent.
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">protocols ldp discovery interfaces interface name</a> <i>reference</i> <a href="#">ipv4 statistics hello-sent</a> <i>number</i>
<b>Tree</b>	<a href="#">hello-sent</a>
<b>Default</b>	0
<b>Configurable</b>	False



## trace-options



### Note:

This command is available for the following platforms:

- 7250 IXR-6
- 7250 IXR-10

<b>Description</b>	Configure event/packet tracing for one specific LDP interface.
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">protocols ldp discovery interfaces interface name</a> <i>reference</i> <a href="#">ipv4 trace-options</a>
<b>Tree</b>	<a href="#">trace-options</a>
<b>Configurable</b>	True

## trace *keyword*



### Note:

This command is available for the following platforms:

- 7250 IXR-6
- 7250 IXR-10

<b>Description</b>	Specifies the trace information to be captured.
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">protocols ldp discovery interfaces interface name</a> <i>reference</i> <a href="#">ipv4 trace-options trace</a> <i>keyword</i>
<b>Tree</b>	<a href="#">trace</a>
<b>Options</b>	<ul style="list-style-type: none"> <li>• all Trace all events and packets</li> <li>• events-discovery Trace session related events</li> <li>• messages-hello Trace Hello packets</li> <li>• messages-hello-detail Trace LDP Hello packets with detailed output</li> </ul>
<b>Configurable</b>	True

## trace-options



### Note:

This command is available for the following platforms:

- 7250 IXR-6
- 7250 IXR-10

<b>Description</b>	Configure event/packet tracing for all LDP interfaces.
<b>Context</b>	<a href="#">network-instance name</a> <a href="#">string</a> <a href="#">protocols</a> <a href="#">ldp</a> <a href="#">discovery</a> <a href="#">interfaces</a> <a href="#">trace-options</a>
<b>Tree</b>	<a href="#">trace-options</a>
<b>Configurable</b>	True

## trace *keyword*



### Note:

This command is available for the following platforms:

- 7250 IXR-6
- 7250 IXR-10

<b>Description</b>	Specifies the trace information to be captured.
<b>Context</b>	<a href="#">network-instance name</a> <a href="#">string</a> <a href="#">protocols</a> <a href="#">ldp</a> <a href="#">discovery</a> <a href="#">interfaces</a> <a href="#">trace-options</a> <a href="#">trace</a> <i>keyword</i>
<b>Tree</b>	<a href="#">trace</a>
<b>Options</b>	<ul style="list-style-type: none"> <li>• all Trace all events and packets</li> <li>• events-discovery Trace session related events</li> <li>• messages-hello Trace Hello packets</li> <li>• messages-hello-detail Trace LDP Hello packets with detailed output</li> </ul>
<b>Configurable</b>	True

## graceful-restart



### Note:

This command is available for the following platforms:

- 7250 IXR-6
- 7250 IXR-10

<b>Description</b>	Attributes for graceful restart.
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">protocols ldp graceful-restart</a>
<b>Tree</b>	<a href="#">graceful-restart</a>
<b>Configurable</b>	True

## helper-enable *boolean*



### Note:

This command is available for the following platforms:

- 7250 IXR-6
- 7250 IXR-10

<b>Description</b>	Enable or disable graceful restart as a helper.
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">protocols ldp graceful-restart helper-enable</a> <i>boolean</i>
<b>Tree</b>	<a href="#">helper-enable</a>
<b>Default</b>	false
<b>Configurable</b>	True

## max-reconnect-time *number*



### Note:

This command is available for the following platforms:

- 7250 IXR-6
- 7250 IXR-10

<b>Description</b>	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.
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">protocols ldp graceful-restart max-reconnect-time</a> <i>number</i>
<b>Tree</b>	<a href="#">max-reconnect-time</a>

<b>Range</b>	10 to 1800
<b>Default</b>	120
<b>Units</b>	seconds
<b>Configurable</b>	True

### max-recovery-time *number*



**Note:**

This command is available for the following platforms:

- 7250 IXR-6
- 7250 IXR-10

<b>Description</b>	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.
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">protocols ldp graceful-restart max-recovery-time</a> <i>number</i>
<b>Tree</b>	<a href="#">max-recovery-time</a>
<b>Range</b>	30 to 3600
<b>Default</b>	120
<b>Units</b>	seconds
<b>Configurable</b>	True

### ipv4



**Note:**

This command is available for the following platforms:

- 7250 IXR-6
- 7250 IXR-10

<b>Description</b>	Container for configuration and state related to the IPv4 address family.
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">protocols ldp ipv4</a>
<b>Tree</b>	<a href="#">ipv4</a>
<b>Configurable</b>	True

## bindings



### Note:

This command is available for the following platforms:

- 7250 IXR-6
- 7250 IXR-10

<b>Description</b>	LDP address and label binding information.
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">protocols ldp ipv4 bindings</a>
<b>Tree</b>	<a href="#">bindings</a>
<b>Configurable</b>	False

## advertised-address



### Note:

This command is available for the following platforms:

- 7250 IXR-6
- 7250 IXR-10

<b>Description</b>	Enter the advertised-address context
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">protocols ldp ipv4 bindings advertised-address</a>
<b>Tree</b>	<a href="#">advertised-address</a>
<b>Configurable</b>	False

## peer [lsr-id](#) *reference* [label-space-id](#) *reference*



### Note:

This command is available for the following platforms:

- 7250 IXR-6
- 7250 IXR-10

<b>Description</b>	List of LDP peers towards which IPv4 address bindings have been sent.
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">protocols ldp ipv4 bindings advertised-address</a> <a href="#">peer lsr-id</a> <i>reference</i> <a href="#">label-space-id</a> <i>reference</i>
<b>Tree</b>	<a href="#">peer</a>
<b>Configurable</b>	False

## lsr-id reference

**Note:**

This command is available for the following platforms:

- 7250 IXR-6
- 7250 IXR-10

<b>Description</b>	The LSR ID of the peer, as a portion of the peer LDP ID.
<b>Context</b>	<a href="#">network-instance name</a> <a href="#">string</a> <a href="#">protocols</a> <a href="#">ldp</a> <a href="#">ipv4</a> <a href="#">bindings</a> <a href="#">advertised-address</a> <a href="#">peer</a> <a href="#">lsr-id reference</a> <a href="#">label-space-id reference</a>
<b>Reference</b>	<a href="#">network-instance name</a> <a href="#">string</a> <a href="#">protocols</a> <a href="#">ldp</a> <a href="#">peers</a> <a href="#">peer</a> <a href="#">lsr-id</a> <a href="#">string</a> <a href="#">label-space-id</a> <a href="#">number</a>
<b>Configurable</b>	False

## label-space-id reference

**Note:**

This command is available for the following platforms:

- 7250 IXR-6
- 7250 IXR-10

<b>Description</b>	The Label Space ID of the peer, as a portion of the peer LDP ID.
<b>Context</b>	<a href="#">network-instance name</a> <a href="#">string</a> <a href="#">protocols</a> <a href="#">ldp</a> <a href="#">ipv4</a> <a href="#">bindings</a> <a href="#">advertised-address</a> <a href="#">peer</a> <a href="#">lsr-id reference</a> <a href="#">label-space-id reference</a>
<b>Reference</b>	<a href="#">network-instance name</a> <a href="#">string</a> <a href="#">protocols</a> <a href="#">ldp</a> <a href="#">peers</a> <a href="#">peer</a> <a href="#">lsr-id</a> <a href="#">string</a> <a href="#">label-space-id</a> <a href="#">number</a>
<b>Configurable</b>	False

## ip-address string

**Note:**

This command is available for the following platforms:

- 7250 IXR-6
- 7250 IXR-10

<b>Description</b>	The list of IPv4 address bindings sent to the peer
<b>Context</b>	<a href="#">network-instance name</a> <a href="#">string</a> <a href="#">protocols</a> <a href="#">ldp</a> <a href="#">ipv4</a> <a href="#">bindings</a> <a href="#">advertised-address</a> <a href="#">peer</a> <a href="#">lsr-id reference</a> <a href="#">label-space-id reference</a> <a href="#">ip-address</a> <a href="#">string</a>
<b>Tree</b>	<a href="#">ip-address</a>

**Configurable** False

## advertised-prefix-fecs [fec string](#) [lsr-id reference](#) [label-space-id reference](#)



**Note:**

This command is available for the following platforms:

- 7250 IXR-6
- 7250 IXR-10

**Description** List of IPv4 FEC-label bindings advertised to LDP peers.

**Context** [network-instance name string](#) [protocols ldp ipv4 bindings advertised-prefix-fecs fec string](#) [lsr-id reference](#) [label-space-id reference](#)

**Tree** [advertised-prefix-fecs](#)

**Configurable** False

## fec string



**Note:**

This command is available for the following platforms:

- 7250 IXR-6
- 7250 IXR-10

**Description** The prefix FEC value in the FEC-label binding, advertised in a Label Mapping message sent to a peer.

**Context** [network-instance name string](#) [protocols ldp ipv4 bindings advertised-prefix-fecs fec string](#) [lsr-id reference](#) [label-space-id reference](#)

**Configurable** False

## lsr-id reference



**Note:**

This command is available for the following platforms:

- 7250 IXR-6
- 7250 IXR-10

**Description** The LSR ID of the peer, as a portion of the peer LDP ID.

**Context** [network-instance name string](#) [protocols ldp ipv4 bindings advertised-prefix-fecs fec string](#) [lsr-id reference](#) [label-space-id reference](#)

<b>Reference</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">protocols ldp peers peer lsr-id</a> <i>string</i> <a href="#">label-space-id</a> <i>number</i>
<b>Configurable</b>	False

### label-space-id *reference*



**Note:**

This command is available for the following platforms:

- 7250 IXR-6
- 7250 IXR-10

<b>Description</b>	The Label Space ID of the peer, as a portion of the peer LDP ID.
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">protocols ldp ipv4 bindings advertised-prefix-fecs fec</a> <i>string</i> <a href="#">lsr-id reference</a> <a href="#">label-space-id reference</a>
<b>Reference</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">protocols ldp peers peer lsr-id</a> <i>string</i> <a href="#">label-space-id</a> <i>number</i>
<b>Configurable</b>	False

### egress-lsr-fec *boolean*



**Note:**

This command is available for the following platforms:

- 7250 IXR-6
- 7250 IXR-10

<b>Description</b>	When set true, the router is the egress LSR for the FEC (the FEC is locally originated).
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">protocols ldp ipv4 bindings advertised-prefix-fecs fec</a> <i>string</i> <a href="#">lsr-id reference</a> <a href="#">label-space-id reference</a> <a href="#">egress-lsr-fec</a> <i>boolean</i>
<b>Tree</b>	<a href="#">egress-lsr-fec</a>
<b>Configurable</b>	False



**label (*number* | *keyword*)****Note:**

This command is available for the following platforms:

- 7250 IXR-6
- 7250 IXR-10

<b>Description</b>	Advertised label value.
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">protocols ldp ipv4 bindings advertised-prefix-fecs fec</a> <i>string</i> <a href="#">lsr-id reference label-space-id reference label (<i>number</i>   <i>keyword</i>)</a>
<b>Tree</b>	<a href="#">label</a>
<b>Range</b>	16 to 1048575
<b>Options</b>	<ul style="list-style-type: none"> <li>• IPV4_EXPLICIT_NULL</li> <li>• IPV6_EXPLICIT_NULL</li> <li>• IMPLICIT_NULL</li> </ul>
<b>Configurable</b>	False

**label-status *keyword*****Note:**

This command is available for the following platforms:

- 7250 IXR-6
- 7250 IXR-10

<b>Description</b>	Enter the label-status context
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">protocols ldp ipv4 bindings advertised-prefix-fecs fec</a> <i>string</i> <a href="#">lsr-id reference label-space-id reference label-status keyword</a>
<b>Tree</b>	<a href="#">label-status</a>
<b>Options</b>	<ul style="list-style-type: none"> <li>• released</li> <li>• withdrawn</li> <li>• withdraw-pending</li> </ul>
<b>Configurable</b>	False

**label-type *keyword*****Note:**

This command is available for the following platforms:

- 7250 IXR-6
- 7250 IXR-10

<b>Description</b>	The label type of the advertised label.
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">protocols ldp ipv4 bindings advertised-prefix-fecs fec</a> <i>string</i> <a href="#">lsr-id reference</a> <a href="#">label-space-id reference</a> <a href="#">label-type keyword</a>
<b>Tree</b>	<a href="#">label-type</a>
<b>Options</b>	<ul style="list-style-type: none"> <li>• pop An advertised label that is programmed with a POP operation.</li> <li>• swap An advertised label that is programmed with a SWAP operation.</li> </ul>
<b>Configurable</b>	False

**received-address****Note:**

This command is available for the following platforms:

- 7250 IXR-6
- 7250 IXR-10

<b>Description</b>	Enter the received-address context
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">protocols ldp ipv4 bindings received-address</a>
<b>Tree</b>	<a href="#">received-address</a>
<b>Configurable</b>	False

**peer [lsr-id reference](#) [label-space-id reference](#)****Note:**

This command is available for the following platforms:

- 7250 IXR-6
- 7250 IXR-10

<b>Description</b>	List of LDP peers from which IPv4 address bindings have been received.
--------------------	--

<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">protocols ldp ipv4 bindings received-address</a> <a href="#">peer lsr-id</a> <i>reference</i> <a href="#">label-space-id</a> <i>reference</i>
<b>Tree</b>	<a href="#">peer</a>
<b>Configurable</b>	False

### lsr-id *reference*



**Note:**

This command is available for the following platforms:

- 7250 IXR-6
- 7250 IXR-10

<b>Description</b>	The LSR ID of the peer, as a portion of the peer LDP ID.
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">protocols ldp ipv4 bindings received-address</a> <a href="#">peer lsr-id</a> <i>reference</i> <a href="#">label-space-id</a> <i>reference</i>
<b>Reference</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">protocols ldp peers peer lsr-id</a> <i>string</i> <a href="#">label-space-id</a> <i>number</i>
<b>Configurable</b>	False

### label-space-id *reference*



**Note:**

This command is available for the following platforms:

- 7250 IXR-6
- 7250 IXR-10

<b>Description</b>	The Label Space ID of the peer, as a portion of the peer LDP ID.
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">protocols ldp ipv4 bindings received-address</a> <a href="#">peer lsr-id</a> <i>reference</i> <a href="#">label-space-id</a> <i>reference</i>
<b>Reference</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">protocols ldp peers peer lsr-id</a> <i>string</i> <a href="#">label-space-id</a> <i>number</i>
<b>Configurable</b>	False

## ip-address *string*

**Note:**

This command is available for the following platforms:

- 7250 IXR-6
- 7250 IXR-10

<b>Description</b>	The list of IPv4 address bindings received from the peer
<b>Context</b>	<a href="#">network-instance name</a> <a href="#">string</a> <a href="#">protocols</a> <a href="#">ldp</a> <a href="#">ipv4</a> <a href="#">bindings</a> <a href="#">received-address</a> <a href="#">peer</a> <a href="#">lsr-id</a> <a href="#">reference</a> <a href="#">label-space-id</a> <a href="#">reference</a> <a href="#">ip-address</a> <a href="#">string</a>
<b>Tree</b>	<a href="#">ip-address</a>
<b>Configurable</b>	False

## received-prefix-fecs [fec](#) *string* [lsr-id](#) [reference](#) [label-space-id](#) [reference](#)

**Note:**

This command is available for the following platforms:

- 7250 IXR-6
- 7250 IXR-10

<b>Description</b>	List of IPv4 FEC-label bindings received from LDP peers.
<b>Context</b>	<a href="#">network-instance name</a> <a href="#">string</a> <a href="#">protocols</a> <a href="#">ldp</a> <a href="#">ipv4</a> <a href="#">bindings</a> <a href="#">received-prefix-fecs</a> <a href="#">fec</a> <a href="#">string</a> <a href="#">lsr-id</a> <a href="#">reference</a> <a href="#">label-space-id</a> <a href="#">reference</a>
<b>Tree</b>	<a href="#">received-prefix-fecs</a>
<b>Configurable</b>	False

## fec *string*

**Note:**

This command is available for the following platforms:

- 7250 IXR-6
- 7250 IXR-10

<b>Description</b>	The prefix FEC value in the FEC-label binding, learned in a Label Mapping message received from a peer.
<b>Context</b>	<a href="#">network-instance name</a> <a href="#">string</a> <a href="#">protocols</a> <a href="#">ldp</a> <a href="#">ipv4</a> <a href="#">bindings</a> <a href="#">received-prefix-fecs</a> <a href="#">fec</a> <a href="#">string</a> <a href="#">lsr-id</a> <a href="#">reference</a> <a href="#">label-space-id</a> <a href="#">reference</a>
<b>Configurable</b>	False

## lsr-id reference



### Note:

This command is available for the following platforms:

- 7250 IXR-6
- 7250 IXR-10

<b>Description</b>	The LSR ID of the peer, as a portion of the peer LDP ID.
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">protocols ldp ipv4 bindings received-prefix-fecs fec</a> <i>string</i> <a href="#">lsr-id reference</a> <a href="#">label-space-id reference</a>
<b>Reference</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">protocols ldp peers peer lsr-id</a> <i>string</i> <a href="#">label-space-id</a> <i>number</i>
<b>Configurable</b>	False

## label-space-id reference



### Note:

This command is available for the following platforms:

- 7250 IXR-6
- 7250 IXR-10

<b>Description</b>	The Label Space ID of the peer, as a portion of the peer LDP ID.
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">protocols ldp ipv4 bindings received-prefix-fecs fec</a> <i>string</i> <a href="#">lsr-id reference</a> <a href="#">label-space-id reference</a>
<b>Reference</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">protocols ldp peers peer lsr-id</a> <i>string</i> <a href="#">label-space-id</a> <i>number</i>
<b>Configurable</b>	False

## ingress-lsr-fec boolean



### Note:

This command is available for the following platforms:

- 7250 IXR-6
- 7250 IXR-10

<b>Description</b>	When set true, the router is an ingress LSR for the FEC.
--------------------	--

<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">protocols ldp ipv4 bindings received-prefix-fecs fec</a> <i>string</i> <a href="#">lsr-id</a> <i>reference</i> <a href="#">label-space-id</a> <i>reference</i> <a href="#">ingress-lsr-fec</a> <i>boolean</i>
<b>Tree</b>	<a href="#">ingress-lsr-fec</a>
<b>Configurable</b>	False

## label (*number* | *keyword*)



### Note:

This command is available for the following platforms:

- 7250 IXR-6
- 7250 IXR-10

<b>Description</b>	Received label value.
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">protocols ldp ipv4 bindings received-prefix-fecs fec</a> <i>string</i> <a href="#">lsr-id</a> <i>reference</i> <a href="#">label-space-id</a> <i>reference</i> <a href="#">label</a> ( <i>number</i>   <i>keyword</i> )
<b>Tree</b>	<a href="#">label</a>
<b>Range</b>	16 to 1048575
<b>Options</b>	<ul style="list-style-type: none"> <li>• IPV4_EXPLICIT_NULL</li> <li>• IPV6_EXPLICIT_NULL</li> <li>• IMPLICIT_NULL</li> </ul>
<b>Configurable</b>	False

## next-hop [index](#) *number*



### Note:

This command is available for the following platforms:

- 7250 IXR-6
- 7250 IXR-10

<b>Description</b>	List of ECMP next-hops towards the LDP peer
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">protocols ldp ipv4 bindings received-prefix-fecs fec</a> <i>string</i> <a href="#">lsr-id</a> <i>reference</i> <a href="#">label-space-id</a> <i>reference</i> <a href="#">next-hop</a> <a href="#">index</a> <i>number</i>
<b>Tree</b>	<a href="#">next-hop</a>
<b>Configurable</b>	False

## index *number*

**Note:**

This command is available for the following platforms:

- 7250 IXR-6
- 7250 IXR-10

<b>Description</b>	Label ID index entry
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">protocols ldp ipv4 bindings received-prefix-fecs fec</a> <i>string</i> <a href="#">lsr-id reference</a> <a href="#">label-space-id reference</a> <a href="#">next-hop index number</a>
<b>Configurable</b>	False

## interface *string*

**Note:**

This command is available for the following platforms:

- 7250 IXR-6
- 7250 IXR-10

<b>Description</b>	The outgoing interface towards the LDP peer
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">protocols ldp ipv4 bindings received-prefix-fecs fec</a> <i>string</i> <a href="#">lsr-id reference</a> <a href="#">label-space-id reference</a> <a href="#">next-hop index number</a> <a href="#">interface</a> <i>string</i>
<b>Tree</b>	<a href="#">interface</a>
<b>String Length</b>	5 to 25
<b>Configurable</b>	False

## next-hop (*ipv4-address* | *ipv6-address*)

**Note:**

This command is available for the following platforms:

- 7250 IXR-6
- 7250 IXR-10

<b>Description</b>	The IP next-hop towards the LDP peer
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">protocols ldp ipv4 bindings received-prefix-fecs fec</a> <i>string</i> <a href="#">lsr-id reference</a> <a href="#">label-space-id reference</a> <a href="#">next-hop index number</a> <a href="#">next-hop</a> ( <i>ipv4-address</i>   <i>ipv6-address</i> )

<b>Tree</b>	<a href="#">next-hop</a>
<b>Configurable</b>	False

### not-used-reason *keyword*



**Note:**

This command is available for the following platforms:

- 7250 IXR-6
- 7250 IXR-10

<b>Description</b>	The reason why the label mapping is not being used in the dataplane.
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">protocols ldp ipv4 bindings received-prefix-fecs fec</a> <i>string</i> <a href="#">lsr-id reference</a> <a href="#">label-space-id reference</a> <b>not-used-reason</b> <i>keyword</i>
<b>Tree</b>	<a href="#">not-used-reason</a>
<b>Options</b>	<ul style="list-style-type: none"> <li>• non-ipv4-host-fec The received FEC is not a /32 IPv4 FEC prefix.</li> <li>• exceeds-multipath-limit The LDP multipath ECMP limit has been reached</li> <li>• exceeds-fec-limit The FEC limit has been reached</li> <li>• fec-unresolved The IP prefix FEC is unused because there is no resolving route matching the IP prefix</li> </ul>
<b>Configurable</b>	False

### used-in-forwarding *boolean*



**Note:**

This command is available for the following platforms:

- 7250 IXR-6
- 7250 IXR-10

<b>Description</b>	Reads true if the label is used in forwarding and has been programmed for a push operation.
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">protocols ldp ipv4 bindings received-prefix-fecs fec</a> <i>string</i> <a href="#">lsr-id reference</a> <a href="#">label-space-id reference</a> <b>used-in-forwarding</b> <i>boolean</i>



<b>Tree</b>	<a href="#">used-in-forwarding</a>
<b>Configurable</b>	False

## fec-resolution



### Note:

This command is available for the following platforms:

- 7250 IXR-6
- 7250 IXR-10

<b>Description</b>	Container with options for controlling IPv4 prefix FEC resolution
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">protocols ldp ipv4 fec-resolution</a>
<b>Tree</b>	<a href="#">fec-resolution</a>
<b>Configurable</b>	True

## longest-prefix *boolean*



### Note:

This command is available for the following platforms:

- 7250 IXR-6
- 7250 IXR-10

<b>Description</b>	<p>When this is set to true IPv4 prefix FECs can be resolved by less-specific IPv4 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 prefix FECs can only be resolved by routes that are an exact match of the FEC in terms of prefix length.</p>
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">protocols ldp ipv4 fec-resolution longest-prefix</a> <i>boolean</i>
<b>Tree</b>	<a href="#">longest-prefix</a>
<b>Default</b>	false
<b>Configurable</b>	True

**last-oper-state-change *string*****Note:**

This command is available for the following platforms:

- 7250 IXR-6
- 7250 IXR-10

<b>Description</b>	The last time that the IPv4 oper-state changed.
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">protocols ldp ipv4 last-oper-state-change</a> <i>string</i>
<b>Tree</b>	<a href="#">last-oper-state-change</a>
<b>String Length</b>	20 to 32
<b>Configurable</b>	False

**oper-down-reason *keyword*****Note:**

This command is available for the following platforms:

- 7250 IXR-6
- 7250 IXR-10

<b>Description</b>	The reason for the LDP for IPv4 being operationally down
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">protocols ldp ipv4 oper-down-reason</a> <i>keyword</i>
<b>Tree</b>	<a href="#">oper-down-reason</a>
<b>Options</b>	<ul style="list-style-type: none"> <li>• ldp-admin-disabled</li> <li>• mpls-admin-disabled</li> <li>• no-system-ipv4-address System IPv4 address is used as the LSR ID. If this dependency is missing LDP is down.</li> <li>• net-instance-mgr-down</li> <li>• label-block-unavailable</li> <li>• no-resource Memory allocation failure</li> <li>• unknown Other failure reason</li> </ul>
<b>Configurable</b>	False

**oper-state keyword****Note:**

This command is available for the following platforms:

- 7250 IXR-6
- 7250 IXR-10

<b>Description</b>	The operational state of LDP for IPv4
<b>Context</b>	<a href="#">network-instance name</a> <a href="#">string protocols ldp ipv4 oper-state keyword</a>
<b>Tree</b>	<a href="#">oper-state</a>
<b>Options</b>	<ul style="list-style-type: none"> <li>• up Component or process is operational</li> <li>• down Component or process is not operational</li> <li>• empty Component slot is empty</li> <li>• downloading Component is downloading image into memory</li> <li>• booting Component is booting downloaded image</li> <li>• starting Component image operational, application processes starting</li> <li>• failed Component or process has failed</li> <li>• synchronizing Component is currently being synchronized</li> <li>• upgrading Component is currently being upgraded</li> <li>• low-power Component is offline due to insufficient system power</li> <li>• degraded Component or process is in a degraded state</li> <li>• warm-reboot Component or process is currently warm rebooting 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.</li> </ul>

**Configurable** False

## oper-up-to-down-transitions *number*



**Note:**

This command is available for the following platforms:

- 7250 IXR-6
- 7250 IXR-10

**Description** The number of times the oper state for IPv4 has transitioned from up to down

**Context** [network-instance name string protocols ldp ipv4 oper-up-to-down-transitions number](#)

**Tree** [oper-up-to-down-transitions](#)

**Configurable** False

## lsr-id *string*



**Note:**

This command is available for the following platforms:

- 7250 IXR-6
- 7250 IXR-10

**Description** Returns the value that is being used as the LDP LSR ID. Currently, this is always the router ID of the default network-instance.

**Context** [network-instance name string protocols ldp lsr-id string](#)

**Tree** [lsr-id](#)

**Configurable** False

## multipath



**Note:**

This command is available for the following platforms:

- 7250 IXR-6
- 7250 IXR-10

**Description** Container with options to configure load-balancing over equal-cost paths

**Context** [network-instance name string protocols ldp multipath](#)

**Tree** [multipath](#)

**Configurable** True

## max-paths *number*



**Note:**

This command is available for the following platforms:

- 7250 IXR-6
- 7250 IXR-10

<b>Description</b>	Specifies the maximum number of next-hops used for load-balancing toward towards a given FEC
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">protocols ldp multipath max-paths</a> <i>number</i>
<b>Tree</b>	<a href="#">max-paths</a>
<b>Range</b>	1 to 64
<b>Default</b>	1
<b>Configurable</b>	True

## peers



**Note:**

This command is available for the following platforms:

- 7250 IXR-6
- 7250 IXR-10

<b>Description</b>	Configuration and state related to peers
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">protocols ldp peers</a>
<b>Tree</b>	<a href="#">peers</a>
<b>Configurable</b>	True

## peer [lsr-id](#) *string* [label-space-id](#) *number*



**Note:**

This command is available for the following platforms:

- 7250 IXR-6
- 7250 IXR-10

<b>Description</b>	List of peers.
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<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">protocols ldp peers peer lsr-id</a> <i>string</i> <a href="#">label-space-id</a> <i>number</i>
<b>Tree</b>	<a href="#">peer</a>
<b>Configurable</b>	True

### lsr-id *string*



**Note:**

This command is available for the following platforms:

- 7250 IXR-6
- 7250 IXR-10

<b>Description</b>	The LSR ID of the peer, to identify the globally unique LSR. This is the first four octets of the LDP ID. This leaf is used together with the leaf 'label-space-id' to form the LDP ID.
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">protocols ldp peers peer lsr-id</a> <i>string</i> <a href="#">label-space-id</a> <i>number</i>
<b>Configurable</b>	True

### label-space-id *number*



**Note:**

This command is available for the following platforms:

- 7250 IXR-6
- 7250 IXR-10

<b>Description</b>	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.
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">protocols ldp peers peer lsr-id</a> <i>string</i> <a href="#">label-space-id</a> <i>number</i>
<b>Configurable</b>	True

## end-of-lib



### Note:

This command is available for the following platforms:

- 7250 IXR-6
- 7250 IXR-10

<b>Description</b>	Container with state information pertaining to sent and received End of LIB markers.
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">protocols ldp peers peer lsr-id</a> <i>string</i> <a href="#">label-space-id</a> <i>number</i> <a href="#">end-of-lib</a>
<b>Tree</b>	<a href="#">end-of-lib</a>
<b>Configurable</b>	False

## ipv4-prefix-fecs



### Note:

This command is available for the following platforms:

- 7250 IXR-6
- 7250 IXR-10

<b>Description</b>	Enter the ipv4-prefix-fecs context
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">protocols ldp peers peer lsr-id</a> <i>string</i> <a href="#">label-space-id</a> <i>number</i> <a href="#">end-of-lib</a> <a href="#">ipv4-prefix-fecs</a>
<b>Tree</b>	<a href="#">ipv4-prefix-fecs</a>
<b>Configurable</b>	False

## received *boolean*



### Note:

This command is available for the following platforms:

- 7250 IXR-6
- 7250 IXR-10

<b>Description</b>	When this is true, an End-of-LIB marker was received from the LDP peer
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">protocols ldp peers peer lsr-id</a> <i>string</i> <a href="#">label-space-id</a> <i>number</i> <a href="#">end-of-lib</a> <a href="#">ipv4-prefix-fecs</a> <a href="#">received</a> <i>boolean</i>
<b>Tree</b>	<a href="#">received</a>
<b>Configurable</b>	False

**sent *boolean*****Note:**

This command is available for the following platforms:

- 7250 IXR-6
- 7250 IXR-10

<b>Description</b>	When this is true, an End-of-LIB marker was sent to the LDP peer
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">protocols ldp peers peer lsr-id</a> <i>string</i> <a href="#">label-space-id</a> <i>number</i> <a href="#">end-of-lib ipv4-prefix-fecs</a> <a href="#">sent</a> <i>boolean</i>
<b>Tree</b>	<a href="#">sent</a>
<b>Configurable</b>	False

**fec-limit *number*****Note:**

This command is available for the following platforms:

- 7250 IXR-6
- 7250 IXR-10

<b>Description</b>	The maximum number of FECs of all types combined that will be accepted from the peer. The value 0 implies no limit.
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">protocols ldp peers peer lsr-id</a> <i>string</i> <a href="#">label-space-id</a> <i>number</i> <a href="#">fec-limit</a> <i>number</i>
<b>Tree</b>	<a href="#">fec-limit</a>
<b>Default</b>	0
<b>Configurable</b>	True

**fec-limit-exceeded *boolean*****Note:**

This command is available for the following platforms:

- 7250 IXR-6
- 7250 IXR-10

<b>Description</b>	Reads true when the peer has sent more FECs than the configured limit.
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<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">protocols ldp peers peer lsr-id</a> <i>string</i> <a href="#">label-space-id</a> <i>number</i> <a href="#">fec-limit-exceeded</a> <i>boolean</i>
<b>Tree</b>	<a href="#">fec-limit-exceeded</a>
<b>Configurable</b>	False

## graceful-restart



### Note:

This command is available for the following platforms:

- 7250 IXR-6
- 7250 IXR-10

<b>Description</b>	Graceful restart operational state.
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">protocols ldp peers peer lsr-id</a> <i>string</i> <a href="#">label-space-id</a> <i>number</i> <a href="#">graceful-restart</a>
<b>Tree</b>	<a href="#">graceful-restart</a>
<b>Configurable</b>	False

## peer-reconnect-time *number*



### Note:

This command is available for the following platforms:

- 7250 IXR-6
- 7250 IXR-10

<b>Description</b>	The requested reconnect time.
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">protocols ldp peers peer lsr-id</a> <i>string</i> <a href="#">label-space-id</a> <i>number</i> <a href="#">graceful-restart</a> <a href="#">peer-reconnect-time</a> <i>number</i>
<b>Tree</b>	<a href="#">peer-reconnect-time</a>
<b>Range</b>	10 to 1800
<b>Units</b>	seconds
<b>Configurable</b>	False

**peer-recovery-time *number*****Note:**

This command is available for the following platforms:

- 7250 IXR-6
- 7250 IXR-10

<b>Description</b>	The requested recovery time.
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">protocols ldp peers peer lsr-id</a> <i>string</i> <a href="#">label-space-id</a> <i>number</i> <a href="#">graceful-restart peer-recovery-time</a> <i>number</i>
<b>Tree</b>	<a href="#">peer-recovery-time</a>
<b>Range</b>	30 to 3600
<b>Default</b>	120
<b>Units</b>	seconds
<b>Configurable</b>	False

**peer-restarting *boolean*****Note:**

This command is available for the following platforms:

- 7250 IXR-6
- 7250 IXR-10

<b>Description</b>	If true, the peer is currently in the process of restarting
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">protocols ldp peers peer lsr-id</a> <i>string</i> <a href="#">label-space-id</a> <i>number</i> <a href="#">graceful-restart peer-restarting</a> <i>boolean</i>
<b>Tree</b>	<a href="#">peer-restarting</a>
<b>Configurable</b>	False

**label-advertisement-mode****Note:**

This command is available for the following platforms:

- 7250 IXR-6
- 7250 IXR-10

<b>Description</b>	Label advertisement mode state.
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<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">protocols ldp peers peer lsr-id</a> <i>string</i> <a href="#">label-space-id</a> <i>number</i> <a href="#">label-advertisement-mode</a>
<b>Tree</b>	<a href="#">label-advertisement-mode</a>
<b>Configurable</b>	False

### negotiated *keyword*



**Note:**

This command is available for the following platforms:

- 7250 IXR-6
- 7250 IXR-10

<b>Description</b>	Negotiated Label Advertisement Mode.
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">protocols ldp peers peer lsr-id</a> <i>string</i> <a href="#">label-space-id</a> <i>number</i> <a href="#">label-advertisement-mode</a> <a href="#">negotiated</a> <i>keyword</i>
<b>Tree</b>	<a href="#">negotiated</a>
<b>Options</b>	<ul style="list-style-type: none"> <li>• <a href="#">downstream-unsolicited</a> Downstream Unsolicited</li> <li>• <a href="#">downstream-on-demand</a> Downstream on Demand</li> </ul>
<b>Configurable</b>	False

### last-oper-state-change *string*



**Note:**

This command is available for the following platforms:

- 7250 IXR-6
- 7250 IXR-10

<b>Description</b>	Last time the peer state changed.
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">protocols ldp peers peer lsr-id</a> <i>string</i> <a href="#">label-space-id</a> <i>number</i> <a href="#">last-oper-state-change</a> <i>string</i>
<b>Tree</b>	<a href="#">last-oper-state-change</a>
<b>String Length</b>	20 to 32
<b>Configurable</b>	False

## overload



### Note:

This command is available for the following platforms:

- 7250 IXR-6
- 7250 IXR-10

<b>Description</b>	Overload state of the session
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">protocols ldp peers peer lsr-id</a> <i>string</i> <a href="#">label-space-id</a> <i>number</i> <a href="#">overload</a>
<b>Tree</b>	<a href="#">overload</a>
<b>Configurable</b>	False

## local-router-is-overloaded *boolean*



### Note:

This command is available for the following platforms:

- 7250 IXR-6
- 7250 IXR-10

<b>Description</b>	This router transmitted an overload TLV requesting that the peer stop advertising new FECs
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">protocols ldp peers peer lsr-id</a> <i>string</i> <a href="#">label-space-id</a> <i>number</i> <a href="#">overload local-router-is-overloaded</a> <i>boolean</i>
<b>Tree</b>	<a href="#">local-router-is-overloaded</a>
<b>Configurable</b>	False

## peer-is-overloaded *boolean*



### Note:

This command is available for the following platforms:

- 7250 IXR-6
- 7250 IXR-10

<b>Description</b>	The peer has sent an overload TLV to this router requesting that we stop advertising new FECs
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">protocols ldp peers peer lsr-id</a> <i>string</i> <a href="#">label-space-id</a> <i>number</i> <a href="#">overload peer-is-overloaded</a> <i>boolean</i>
<b>Tree</b>	<a href="#">peer-is-overloaded</a>

**Configurable** False

## received-capabilities



**Note:**

This command is available for the following platforms:

- 7250 IXR-6
- 7250 IXR-10

**Description** Capabilities signalled by the peer

**Context** [network-instance name](#) *string* [protocols](#) [ldp](#) [peers](#) [peer](#) [lsr-id](#) *string* [label-space-id](#) *number* [received-capabilities](#)

**Tree** [received-capabilities](#)

**Configurable** False

## dual-stack-capability *boolean*



**Note:**

This command is available for the following platforms:

- 7250 IXR-6
- 7250 IXR-10

**Description** Dual stack capability. TLV 0x0701

**Context** [network-instance name](#) *string* [protocols](#) [ldp](#) [peers](#) [peer](#) [lsr-id](#) *string* [label-space-id](#) *number* [received-capabilities](#) [dual-stack-capability](#) *boolean*

**Tree** [dual-stack-capability](#)

**Configurable** False

## dynamic-capability *boolean*



**Note:**

This command is available for the following platforms:

- 7250 IXR-6
- 7250 IXR-10

**Description** Dynamic capability advertisement capability. Indicates support for Capability messages. TLV 0x0506

<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">protocols ldp peers peer lsr-id</a> <i>string</i> <a href="#">label-space-id</a> <i>number</i> <a href="#">received-capabilities</a> <a href="#">dynamic-capability</a> <i>boolean</i>
<b>Tree</b>	<a href="#">dynamic-capability</a>
<b>Configurable</b>	False

### entropy-label-capability *boolean*



**Note:**

This command is available for the following platforms:

- 7250 IXR-6
- 7250 IXR-10

<b>Description</b>	Entropy label capability. TLV 0x0206
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">protocols ldp peers peer lsr-id</a> <i>string</i> <a href="#">label-space-id</a> <i>number</i> <a href="#">received-capabilities</a> <a href="#">entropy-label-capability</a> <i>boolean</i>
<b>Tree</b>	<a href="#">entropy-label-capability</a>
<b>Configurable</b>	False

### graceful-restart-capability *boolean*



**Note:**

This command is available for the following platforms:

- 7250 IXR-6
- 7250 IXR-10

<b>Description</b>	Fault tolerance protection TLV 0x0503
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">protocols ldp peers peer lsr-id</a> <i>string</i> <a href="#">label-space-id</a> <i>number</i> <a href="#">received-capabilities</a> <a href="#">graceful-restart-capability</a> <i>boolean</i>
<b>Tree</b>	<a href="#">graceful-restart-capability</a>
<b>Configurable</b>	False

### make-before-break-capability *boolean*



**Note:**

This command is available for the following platforms:

- 7250 IXR-6
- 7250 IXR-10

<b>Description</b>	Make before break capability. TLV 0x050A
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">protocols ldp peers peer lsr-id</a> <i>string</i> <a href="#">label-space-id</a> <i>number</i> <a href="#">received-capabilities</a> <a href="#">make-before-break-capability</a> <i>boolean</i>
<b>Tree</b>	<a href="#">make-before-break-capability</a>
<b>Configurable</b>	False

### multipoint-to-multipoint-capability *boolean*



**Note:**

This command is available for the following platforms:

- 7250 IXR-6
- 7250 IXR-10

<b>Description</b>	Multipoint to multipoint FEC capability. TLV 0x0509
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">protocols ldp peers peer lsr-id</a> <i>string</i> <a href="#">label-space-id</a> <i>number</i> <a href="#">received-capabilities</a> <a href="#">multipoint-to-multipoint-capability</a> <i>boolean</i>
<b>Tree</b>	<a href="#">multipoint-to-multipoint-capability</a>
<b>Configurable</b>	False

### nokia-vendor-overload-capability *boolean*



**Note:**

This command is available for the following platforms:

- 7250 IXR-6
- 7250 IXR-10

<b>Description</b>	Overload capability
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">protocols ldp peers peer lsr-id</a> <i>string</i> <a href="#">label-space-id</a> <i>number</i> <a href="#">received-capabilities</a> <a href="#">nokia-vendor-overload-capability</a> <i>boolean</i>
<b>Tree</b>	<a href="#">nokia-vendor-overload-capability</a>
<b>Configurable</b>	False

## point-to-multipoint-capability *boolean*



### Note:

This command is available for the following platforms:

- 7250 IXR-6
- 7250 IXR-10

<b>Description</b>	Point to multipoint FEC capability. TLV 0x0508
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">protocols ldp peers peer lsr-id</a> <i>string</i> <a href="#">label-space-id</a> <i>number</i> <a href="#">received-capabilities point-to-multipoint-capability</a> <i>boolean</i>
<b>Tree</b>	<a href="#">point-to-multipoint-capability</a>
<b>Configurable</b>	False

## state-advertisement-control



### Note:

This command is available for the following platforms:

- 7250 IXR-6
- 7250 IXR-10

<b>Description</b>	State advertisement control capability. TLV 0x050D
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">protocols ldp peers peer lsr-id</a> <i>string</i> <a href="#">label-space-id</a> <i>number</i> <a href="#">received-capabilities state-advertisement-control</a>
<b>Tree</b>	<a href="#">state-advertisement-control</a>
<b>Configurable</b>	False

## ipv4-prefix-disable *boolean*



### Note:

This command is available for the following platforms:

- 7250 IXR-6
- 7250 IXR-10

<b>Description</b>	Indicates desire to not receive IPv4 prefix FECs
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">protocols ldp peers peer lsr-id</a> <i>string</i> <a href="#">label-space-id</a> <i>number</i> <a href="#">received-capabilities state-advertisement-control ipv4-prefix-disable</a> <i>boolean</i>
<b>Tree</b>	<a href="#">ipv4-prefix-disable</a>
<b>Configurable</b>	False



**ipv6-prefix-disable *boolean*****Note:**

This command is available for the following platforms:

- 7250 IXR-6
- 7250 IXR-10

<b>Description</b>	Indicates desire to not receive IPv6 prefix FECs
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">protocols ldp peers peer lsr-id</a> <i>string</i> <a href="#">label-space-id number</a> <a href="#">received-capabilities state-advertisement-control ipv6-prefix-disable</a> <i>boolean</i>
<b>Tree</b>	<a href="#">ipv6-prefix-disable</a>
<b>Configurable</b>	False

**p2p-pseudowire-fec-128-disable *boolean*****Note:**

This command is available for the following platforms:

- 7250 IXR-6
- 7250 IXR-10

<b>Description</b>	Indicates desire to not receive P2P PW FEC 128 FECs
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">protocols ldp peers peer lsr-id</a> <i>string</i> <a href="#">label-space-id number</a> <a href="#">received-capabilities state-advertisement-control p2p-pseudowire-fec-128-disable</a> <i>boolean</i>
<b>Tree</b>	<a href="#">p2p-pseudowire-fec-128-disable</a>
<b>Configurable</b>	False

**p2p-pseudowire-fec-129-disable *boolean*****Note:**

This command is available for the following platforms:

- 7250 IXR-6
- 7250 IXR-10

<b>Description</b>	Indicates desire to not receive P2P PW FEC 129 FECs
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">protocols ldp peers peer lsr-id</a> <i>string</i> <a href="#">label-space-id number</a> <a href="#">received-capabilities state-advertisement-control p2p-pseudowire-fec-129-disable</a> <i>boolean</i>

<b>Tree</b>	<a href="#">p2p-pseudowire-fec-129-disable</a>
<b>Configurable</b>	False

### unrecognized-notification-capability *boolean*



**Note:**

This command is available for the following platforms:

- 7250 IXR-6
- 7250 IXR-10

<b>Description</b>	Unrecognized notification capability. TLV 0x0603
<b>Context</b>	<a href="#">network-instance name <i>string</i> protocols ldp peers peer lsr-id <i>string</i> label-space-id <i>number</i> received-capabilities unrecognized-notification-capability <i>boolean</i></a>
<b>Tree</b>	<a href="#">unrecognized-notification-capability</a>
<b>Configurable</b>	False

### session-holdtime



**Note:**

This command is available for the following platforms:

- 7250 IXR-6
- 7250 IXR-10

<b>Description</b>	Session holdtime state.
<b>Context</b>	<a href="#">network-instance name <i>string</i> protocols ldp peers peer lsr-id <i>string</i> label-space-id <i>number</i> session-holdtime</a>
<b>Tree</b>	<a href="#">session-holdtime</a>
<b>Configurable</b>	False

### negotiated *number*



**Note:**

This command is available for the following platforms:

- 7250 IXR-6
- 7250 IXR-10

<b>Description</b>	Negotiated holdtime.
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<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">protocols ldp peers peer lsr-id</a> <i>string</i> <a href="#">label-space-id</a> <i>number</i> <a href="#">session-holdtime negotiated</a> <i>number</i>
<b>Tree</b>	<a href="#">negotiated</a>
<b>Units</b>	seconds
<b>Configurable</b>	False

### peer-proposed *number*



**Note:**

This command is available for the following platforms:

- 7250 IXR-6
- 7250 IXR-10

<b>Description</b>	Peer holdtime.
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">protocols ldp peers peer lsr-id</a> <i>string</i> <a href="#">label-space-id</a> <i>number</i> <a href="#">session-holdtime peer-proposed</a> <i>number</i>
<b>Tree</b>	<a href="#">peer-proposed</a>
<b>Units</b>	seconds
<b>Configurable</b>	False

### remaining *number*



**Note:**

This command is available for the following platforms:

- 7250 IXR-6
- 7250 IXR-10

<b>Description</b>	Remaining holdtime.
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">protocols ldp peers peer lsr-id</a> <i>string</i> <a href="#">label-space-id</a> <i>number</i> <a href="#">session-holdtime remaining</a> <i>number</i>
<b>Tree</b>	<a href="#">remaining</a>
<b>Units</b>	seconds
<b>Configurable</b>	False

**session-state keyword****Note:**

This command is available for the following platforms:

- 7250 IXR-6
- 7250 IXR-10

<b>Description</b>	Representing the operational status of the LDP session.
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">protocols ldp peers peer lsr-id</a> <i>string</i> <a href="#">label-space-id</a> <i>number</i> <a href="#">session-state</a> <i>keyword</i>
<b>Tree</b>	<a href="#">session-state</a>
<b>Options</b>	<ul style="list-style-type: none"> <li>• non-existent NON EXISTENT state. Transport disconnected.</li> <li>• initialized INITIALIZED state.</li> <li>• openrec OPENREC state.</li> <li>• opensent OPENSENT state.</li> <li>• operational OPERATIONAL state.</li> </ul>
<b>Configurable</b>	False

**statistics****Note:**

This command is available for the following platforms:

- 7250 IXR-6
- 7250 IXR-10

<b>Description</b>	Statistics objects.
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">protocols ldp peers peer lsr-id</a> <i>string</i> <a href="#">label-space-id</a> <i>number</i> <a href="#">statistics</a>
<b>Tree</b>	<a href="#">statistics</a>
<b>Configurable</b>	False

## address-statistics



### Note:

This command is available for the following platforms:

- 7250 IXR-6
- 7250 IXR-10

<b>Description</b>	Enter the address-statistics context
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">protocols ldp peers peer lsr-id</a> <i>string</i> <a href="#">label-space-id</a> <i>number</i> <a href="#">statistics address-statistics</a>
<b>Tree</b>	<a href="#">address-statistics</a>
<b>Configurable</b>	False

## ipv4



### Note:

This command is available for the following platforms:

- 7250 IXR-6
- 7250 IXR-10

<b>Description</b>	Enter the ipv4 context
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">protocols ldp peers peer lsr-id</a> <i>string</i> <a href="#">label-space-id</a> <i>number</i> <a href="#">statistics address-statistics ipv4</a>
<b>Tree</b>	<a href="#">ipv4</a>
<b>Configurable</b>	False

## advertised-addresses *number*



### Note:

This command is available for the following platforms:

- 7250 IXR-6
- 7250 IXR-10

<b>Description</b>	The number of IPv4 addresses advertised to a peer.
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">protocols ldp peers peer lsr-id</a> <i>string</i> <a href="#">label-space-id</a> <i>number</i> <a href="#">statistics address-statistics ipv4 advertised-addresses</a> <i>number</i>
<b>Tree</b>	<a href="#">advertised-addresses</a>
<b>Default</b>	0

<b>Configurable</b>	False
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## received-addresses *number*



**Note:**

This command is available for the following platforms:

- 7250 IXR-6
- 7250 IXR-10

<b>Description</b>	The number of IPv4 addresses received from a peer.
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">protocols ldp peers peer lsr-id</a> <i>string</i> <a href="#">label-space-id</a> <i>number</i> <a href="#">statistics address-statistics ipv4 received-addresses</a> <i>number</i>
<b>Tree</b>	<a href="#">received-addresses</a>
<b>Default</b>	0
<b>Configurable</b>	False

## fec-statistics



**Note:**

This command is available for the following platforms:

- 7250 IXR-6
- 7250 IXR-10

<b>Description</b>	Enter the fec-statistics context
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">protocols ldp peers peer lsr-id</a> <i>string</i> <a href="#">label-space-id</a> <i>number</i> <a href="#">statistics fec-statistics</a>
<b>Tree</b>	<a href="#">fec-statistics</a>
<b>Configurable</b>	False

## ipv4-prefix



**Note:**

This command is available for the following platforms:

- 7250 IXR-6
- 7250 IXR-10

<b>Description</b>	Enter the ipv4-prefix context
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<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">protocols ldp peers peer lsr-id</a> <i>string</i> <a href="#">label-space-id</a> <i>number</i> <a href="#">statistics fec-statistics ipv4-prefix</a>
<b>Tree</b>	<a href="#">ipv4-prefix</a>
<b>Configurable</b>	False

### advertised-fecs *number*



**Note:**

This command is available for the following platforms:

- 7250 IXR-6
- 7250 IXR-10

<b>Description</b>	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.
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">protocols ldp peers peer lsr-id</a> <i>string</i> <a href="#">label-space-id</a> <i>number</i> <a href="#">statistics fec-statistics ipv4-prefix advertised-fecs</a> <i>number</i>
<b>Tree</b>	<a href="#">advertised-fecs</a>
<b>Default</b>	0
<b>Configurable</b>	False

### received-fecs *number*



**Note:**

This command is available for the following platforms:

- 7250 IXR-6
- 7250 IXR-10

<b>Description</b>	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.
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">protocols ldp peers peer lsr-id</a> <i>string</i> <a href="#">label-space-id</a> <i>number</i> <a href="#">statistics fec-statistics ipv4-prefix received-fecs</a> <i>number</i>
<b>Tree</b>	<a href="#">received-fecs</a>
<b>Default</b>	0
<b>Configurable</b>	False

## received-messages



### Note:

This command is available for the following platforms:

- 7250 IXR-6
- 7250 IXR-10

<b>Description</b>	Inbound statistics.
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">protocols ldp peers peer lsr-id</a> <i>string</i> <a href="#">label-space-id</a> <i>number</i> <a href="#">statistics received-messages</a>
<b>Tree</b>	<a href="#">received-messages</a>
<b>Configurable</b>	False

## address *number*



### Note:

This command is available for the following platforms:

- 7250 IXR-6
- 7250 IXR-10

<b>Description</b>	The number of address messages sent or received.
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">protocols ldp peers peer lsr-id</a> <i>string</i> <a href="#">label-space-id</a> <i>number</i> <a href="#">statistics received-messages address</a> <i>number</i>
<b>Tree</b>	<a href="#">address</a>
<b>Default</b>	0
<b>Configurable</b>	False

## address-withdraw *number*



### Note:

This command is available for the following platforms:

- 7250 IXR-6
- 7250 IXR-10

<b>Description</b>	The number of address-withdraw messages sent or received.
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">protocols ldp peers peer lsr-id</a> <i>string</i> <a href="#">label-space-id</a> <i>number</i> <a href="#">statistics received-messages address-withdraw</a> <i>number</i>
<b>Tree</b>	<a href="#">address-withdraw</a>



<b>Default</b>	0
<b>Configurable</b>	False

### capability *number*



**Note:**

This command is available for the following platforms:

- 7250 IXR-6
- 7250 IXR-10

<b>Description</b>	The number of messages sent or received.
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">protocols</a> <a href="#">ldp</a> <a href="#">peers</a> <a href="#">peer</a> <a href="#">lsr-id</a> <i>string</i> <a href="#">label-space-id</a> <i>number</i> <a href="#">statistics</a> <a href="#">received-messages</a> <a href="#">capability</a> <i>number</i>
<b>Tree</b>	<a href="#">capability</a>
<b>Default</b>	0
<b>Configurable</b>	False

### initialization *number*



**Note:**

This command is available for the following platforms:

- 7250 IXR-6
- 7250 IXR-10

<b>Description</b>	The number of initialization messages sent or received.
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">protocols</a> <a href="#">ldp</a> <a href="#">peers</a> <a href="#">peer</a> <a href="#">lsr-id</a> <i>string</i> <a href="#">label-space-id</a> <i>number</i> <a href="#">statistics</a> <a href="#">received-messages</a> <a href="#">initialization</a> <i>number</i>
<b>Tree</b>	<a href="#">initialization</a>
<b>Default</b>	0
<b>Configurable</b>	False

### keepalive *number*



**Note:**

This command is available for the following platforms:

- 7250 IXR-6
- 7250 IXR-10

<b>Description</b>	The number of keepalive messages sent or received.
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">protocols ldp peers peer lsr-id</a> <i>string</i> <a href="#">label-space-id</a> <i>number</i> <a href="#">statistics received-messages keepalive</a> <i>number</i>
<b>Tree</b>	<a href="#">keepalive</a>
<b>Default</b>	0
<b>Configurable</b>	False

### label-abort-request *number*



**Note:**

This command is available for the following platforms:

- 7250 IXR-6
- 7250 IXR-10

<b>Description</b>	The number of label-abort-request messages sent or received.
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">protocols ldp peers peer lsr-id</a> <i>string</i> <a href="#">label-space-id</a> <i>number</i> <a href="#">statistics received-messages label-abort-request</a> <i>number</i>
<b>Tree</b>	<a href="#">label-abort-request</a>
<b>Default</b>	0
<b>Configurable</b>	False

### label-mapping *number*



**Note:**

This command is available for the following platforms:

- 7250 IXR-6
- 7250 IXR-10

<b>Description</b>	The number of label-mapping messages sent or received.
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">protocols ldp peers peer lsr-id</a> <i>string</i> <a href="#">label-space-id</a> <i>number</i> <a href="#">statistics received-messages label-mapping</a> <i>number</i>
<b>Tree</b>	<a href="#">label-mapping</a>
<b>Default</b>	0
<b>Configurable</b>	False

## label-release *number*

**Note:**

This command is available for the following platforms:

- 7250 IXR-6
- 7250 IXR-10

<b>Description</b>	The number of label-release messages sent or received.
<b>Context</b>	<a href="#">network-instance name</a> <a href="#">string</a> <a href="#">protocols</a> <a href="#">ldp</a> <a href="#">peers</a> <a href="#">peer</a> <a href="#">lsr-id</a> <a href="#">string</a> <a href="#">label-space-id</a> <a href="#">number</a> <a href="#">statistics</a> <a href="#">received-messages</a> <a href="#">label-release</a> <a href="#">number</a>
<b>Tree</b>	<a href="#">label-release</a>
<b>Default</b>	0
<b>Configurable</b>	False

## label-request *number*

**Note:**

This command is available for the following platforms:

- 7250 IXR-6
- 7250 IXR-10

<b>Description</b>	The number of label-request messages sent or received.
<b>Context</b>	<a href="#">network-instance name</a> <a href="#">string</a> <a href="#">protocols</a> <a href="#">ldp</a> <a href="#">peers</a> <a href="#">peer</a> <a href="#">lsr-id</a> <a href="#">string</a> <a href="#">label-space-id</a> <a href="#">number</a> <a href="#">statistics</a> <a href="#">received-messages</a> <a href="#">label-request</a> <a href="#">number</a>
<b>Tree</b>	<a href="#">label-request</a>
<b>Default</b>	0
<b>Configurable</b>	False

## label-withdraw *number*

**Note:**

This command is available for the following platforms:

- 7250 IXR-6
- 7250 IXR-10

<b>Description</b>	The number of label-withdraw messages sent or received.
<b>Context</b>	<a href="#">network-instance name</a> <a href="#">string</a> <a href="#">protocols</a> <a href="#">ldp</a> <a href="#">peers</a> <a href="#">peer</a> <a href="#">lsr-id</a> <a href="#">string</a> <a href="#">label-space-id</a> <a href="#">number</a> <a href="#">statistics</a> <a href="#">received-messages</a> <a href="#">label-withdraw</a> <a href="#">number</a>

<b>Tree</b>	<a href="#">label-withdraw</a>
<b>Default</b>	0
<b>Configurable</b>	False

### notification *number*



**Note:**

This command is available for the following platforms:

- 7250 IXR-6
- 7250 IXR-10

<b>Description</b>	The number of messages sent or received.
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">protocols</a> <a href="#">ldp</a> <a href="#">peers</a> <a href="#">peer</a> <a href="#">lsr-id</a> <i>string</i> <a href="#">label-space-id</a> <i>number</i> <a href="#">statistics</a> <a href="#">received-messages</a> <a href="#">notification</a> <i>number</i>
<b>Tree</b>	<a href="#">notification</a>
<b>Default</b>	0
<b>Configurable</b>	False

### total-messages *number*



**Note:**

This command is available for the following platforms:

- 7250 IXR-6
- 7250 IXR-10

<b>Description</b>	The number of messages sent or received.
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">protocols</a> <a href="#">ldp</a> <a href="#">peers</a> <a href="#">peer</a> <a href="#">lsr-id</a> <i>string</i> <a href="#">label-space-id</a> <i>number</i> <a href="#">statistics</a> <a href="#">received-messages</a> <a href="#">total-messages</a> <i>number</i>
<b>Tree</b>	<a href="#">total-messages</a>
<b>Default</b>	0
<b>Configurable</b>	False

## sent-messages



### Note:

This command is available for the following platforms:

- 7250 IXR-6
- 7250 IXR-10

<b>Description</b>	Outbound statistics.
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">protocols</a> <a href="#">ldp</a> <a href="#">peers</a> <a href="#">peer</a> <a href="#">lsr-id</a> <i>string</i> <a href="#">label-space-id</a> <i>number</i> <a href="#">statistics</a> <a href="#">sent-messages</a>
<b>Tree</b>	<a href="#">sent-messages</a>
<b>Configurable</b>	False

## address *number*



### Note:

This command is available for the following platforms:

- 7250 IXR-6
- 7250 IXR-10

<b>Description</b>	The number of address messages sent or received.
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">protocols</a> <a href="#">ldp</a> <a href="#">peers</a> <a href="#">peer</a> <a href="#">lsr-id</a> <i>string</i> <a href="#">label-space-id</a> <i>number</i> <a href="#">statistics</a> <a href="#">sent-messages</a> <a href="#">address</a> <i>number</i>
<b>Tree</b>	<a href="#">address</a>
<b>Default</b>	0
<b>Configurable</b>	False

## address-withdraw *number*



### Note:

This command is available for the following platforms:

- 7250 IXR-6
- 7250 IXR-10

<b>Description</b>	The number of address-withdraw messages sent or received.
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">protocols</a> <a href="#">ldp</a> <a href="#">peers</a> <a href="#">peer</a> <a href="#">lsr-id</a> <i>string</i> <a href="#">label-space-id</a> <i>number</i> <a href="#">statistics</a> <a href="#">sent-messages</a> <a href="#">address-withdraw</a> <i>number</i>
<b>Tree</b>	<a href="#">address-withdraw</a>

<b>Default</b>	0
<b>Configurable</b>	False

### capability *number*



**Note:**

This command is available for the following platforms:

- 7250 IXR-6
- 7250 IXR-10

<b>Description</b>	The number of messages sent or received.
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">protocols ldp peers peer lsr-id</a> <i>string</i> <a href="#">label-space-id</a> <i>number</i> <a href="#">statistics sent-messages</a> <a href="#">capability</a> <i>number</i>
<b>Tree</b>	<a href="#">capability</a>
<b>Default</b>	0
<b>Configurable</b>	False

### initialization *number*



**Note:**

This command is available for the following platforms:

- 7250 IXR-6
- 7250 IXR-10

<b>Description</b>	The number of initialization messages sent or received.
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">protocols ldp peers peer lsr-id</a> <i>string</i> <a href="#">label-space-id</a> <i>number</i> <a href="#">statistics sent-messages</a> <a href="#">initialization</a> <i>number</i>
<b>Tree</b>	<a href="#">initialization</a>
<b>Default</b>	0
<b>Configurable</b>	False

### keepalive *number*



**Note:**

This command is available for the following platforms:

- 7250 IXR-6
- 7250 IXR-10

<b>Description</b>	The number of keepalive messages sent or received.
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">protocols ldp peers peer lsr-id</a> <i>string</i> <a href="#">label-space-id</a> <i>number</i> <a href="#">statistics sent-messages</a> <a href="#">keepalive</a> <i>number</i>
<b>Tree</b>	<a href="#">keepalive</a>
<b>Default</b>	0
<b>Configurable</b>	False

### label-abort-request *number*



**Note:**

This command is available for the following platforms:

- 7250 IXR-6
- 7250 IXR-10

<b>Description</b>	The number of label-abort-request messages sent or received.
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">protocols ldp peers peer lsr-id</a> <i>string</i> <a href="#">label-space-id</a> <i>number</i> <a href="#">statistics sent-messages</a> <a href="#">label-abort-request</a> <i>number</i>
<b>Tree</b>	<a href="#">label-abort-request</a>
<b>Default</b>	0
<b>Configurable</b>	False

### label-mapping *number*



**Note:**

This command is available for the following platforms:

- 7250 IXR-6
- 7250 IXR-10

<b>Description</b>	The number of label-mapping messages sent or received.
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">protocols ldp peers peer lsr-id</a> <i>string</i> <a href="#">label-space-id</a> <i>number</i> <a href="#">statistics sent-messages</a> <a href="#">label-mapping</a> <i>number</i>
<b>Tree</b>	<a href="#">label-mapping</a>
<b>Default</b>	0
<b>Configurable</b>	False

## label-release *number*

**Note:**

This command is available for the following platforms:

- 7250 IXR-6
- 7250 IXR-10

<b>Description</b>	The number of label-release messages sent or received.
<b>Context</b>	<a href="#">network-instance name</a> <a href="#">string</a> <a href="#">protocols</a> <a href="#">ldp</a> <a href="#">peers</a> <a href="#">peer</a> <a href="#">lsr-id</a> <a href="#">string</a> <a href="#">label-space-id</a> <a href="#">number</a> <a href="#">statistics</a> <a href="#">sent-messages</a> <a href="#">label-release</a> <a href="#">number</a>
<b>Tree</b>	<a href="#">label-release</a>
<b>Default</b>	0
<b>Configurable</b>	False

## label-request *number*

**Note:**

This command is available for the following platforms:

- 7250 IXR-6
- 7250 IXR-10

<b>Description</b>	The number of label-request messages sent or received.
<b>Context</b>	<a href="#">network-instance name</a> <a href="#">string</a> <a href="#">protocols</a> <a href="#">ldp</a> <a href="#">peers</a> <a href="#">peer</a> <a href="#">lsr-id</a> <a href="#">string</a> <a href="#">label-space-id</a> <a href="#">number</a> <a href="#">statistics</a> <a href="#">sent-messages</a> <a href="#">label-request</a> <a href="#">number</a>
<b>Tree</b>	<a href="#">label-request</a>
<b>Default</b>	0
<b>Configurable</b>	False

## label-withdraw *number*

**Note:**

This command is available for the following platforms:

- 7250 IXR-6
- 7250 IXR-10

<b>Description</b>	The number of label-withdraw messages sent or received.
<b>Context</b>	<a href="#">network-instance name</a> <a href="#">string</a> <a href="#">protocols</a> <a href="#">ldp</a> <a href="#">peers</a> <a href="#">peer</a> <a href="#">lsr-id</a> <a href="#">string</a> <a href="#">label-space-id</a> <a href="#">number</a> <a href="#">statistics</a> <a href="#">sent-messages</a> <a href="#">label-withdraw</a> <a href="#">number</a>



<b>Tree</b>	<a href="#">label-withdraw</a>
<b>Default</b>	0
<b>Configurable</b>	False

### notification *number*



**Note:**

This command is available for the following platforms:

- 7250 IXR-6
- 7250 IXR-10

<b>Description</b>	The number of messages sent or received.
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">protocols</a> <a href="#">ldp</a> <a href="#">peers</a> <a href="#">peer</a> <a href="#">lsr-id</a> <i>string</i> <a href="#">label-space-id</a> <i>number</i> <a href="#">statistics</a> <a href="#">sent-messages</a> <a href="#">notification</a> <i>number</i>
<b>Tree</b>	<a href="#">notification</a>
<b>Default</b>	0
<b>Configurable</b>	False

### total-messages *number*



**Note:**

This command is available for the following platforms:

- 7250 IXR-6
- 7250 IXR-10

<b>Description</b>	The number of messages sent or received.
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">protocols</a> <a href="#">ldp</a> <a href="#">peers</a> <a href="#">peer</a> <a href="#">lsr-id</a> <i>string</i> <a href="#">label-space-id</a> <i>number</i> <a href="#">statistics</a> <a href="#">sent-messages</a> <a href="#">total-messages</a> <i>number</i>
<b>Tree</b>	<a href="#">total-messages</a>
<b>Default</b>	0
<b>Configurable</b>	False

## tcp-transport



### Note:

This command is available for the following platforms:

- 7250 IXR-6
- 7250 IXR-10

<b>Description</b>	Enter the tcp-transport context
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">protocols ldp peers peer lsr-id</a> <i>string</i> <a href="#">label-space-id</a> <i>number</i> <a href="#">tcp-transport</a>
<b>Tree</b>	<a href="#">tcp-transport</a>
<b>Configurable</b>	True

## local-address *string*



### Note:

This command is available for the following platforms:

- 7250 IXR-6
- 7250 IXR-10

<b>Description</b>	Local address.
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">protocols ldp peers peer lsr-id</a> <i>string</i> <a href="#">label-space-id</a> <i>number</i> <a href="#">tcp-transport local-address</a> <i>string</i>
<b>Tree</b>	<a href="#">local-address</a>
<b>Configurable</b>	False

## local-port *number*



### Note:

This command is available for the following platforms:

- 7250 IXR-6
- 7250 IXR-10

<b>Description</b>	Local port number.
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">protocols ldp peers peer lsr-id</a> <i>string</i> <a href="#">label-space-id</a> <i>number</i> <a href="#">tcp-transport local-port</a> <i>number</i>
<b>Tree</b>	<a href="#">local-port</a>
<b>Range</b>	0 to 65535

<b>Configurable</b>	False
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### remote-address *string*



**Note:**

This command is available for the following platforms:

- 7250 IXR-6
- 7250 IXR-10

<b>Description</b>	Remote address.
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">protocols ldp peers peer lsr-id</a> <i>string</i> <a href="#">label-space-id</a> <i>number</i> <a href="#">tcp-transport remote-address</a> <i>string</i>
<b>Tree</b>	<a href="#">remote-address</a>
<b>Configurable</b>	False

### remote-port *number*



**Note:**

This command is available for the following platforms:

- 7250 IXR-6
- 7250 IXR-10

<b>Description</b>	Remote port number.
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">protocols ldp peers peer lsr-id</a> <i>string</i> <a href="#">label-space-id</a> <i>number</i> <a href="#">tcp-transport remote-port</a> <i>number</i>
<b>Tree</b>	<a href="#">remote-port</a>
<b>Range</b>	0 to 65535
<b>Configurable</b>	False

### trace-options



**Note:**

This command is available for the following platforms:

- 7250 IXR-6
- 7250 IXR-10

<b>Description</b>	Configure event/packet tracing for one specific session.
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<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">protocols ldp peers peer lsr-id</a> <i>string</i> <a href="#">label-space-id</a> <i>number</i> <a href="#">trace-options</a>
<b>Tree</b>	<a href="#">trace-options</a>
<b>Configurable</b>	True

### trace keyword



**Note:**

This command is available for the following platforms:

- 7250 IXR-6
- 7250 IXR-10

<b>Description</b>	Specifies the trace information to be captured.
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">protocols ldp peers peer lsr-id</a> <i>string</i> <a href="#">label-space-id</a> <i>number</i> <a href="#">trace-options</a> <a href="#">trace</a> <i>keyword</i>
<b>Tree</b>	<a href="#">trace</a>
<b>Options</b>	<ul style="list-style-type: none"> <li>• all Trace all events and packets</li> <li>• events-all Trace all events</li> <li>• events-session Trace session related events</li> <li>• events-binding Trace binding related events</li> <li>• messages-all Trace all LDP messages</li> <li>• messages-all-detail Trace all LDP messages with detailed output</li> <li>• messages-initialization Trace LDP Initialization packets</li> <li>• messages-initialization-detail Trace LDP Initialization packets with detailed output</li> <li>• messages-keepalive Trace LDP Keepalive packets</li> <li>• messages-label Trace LDP Label Mapping, Label Request, Label Abort Request, Label Withdraw and Label Release packets</li> </ul>

- messages-label-detail  
Trace LDP Label Mapping, Label Request, Label Abort Request, Label Withdraw and Label Release packets with detailed output

**Configurable** True

### session-keepalive-holdtime *number*



**Note:**

This command is available for the following platforms:

- 7250 IXR-6
- 7250 IXR-10

<b>Description</b>	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.
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">protocols ldp peers session-keepalive-holdtime</a> <i>number</i>
<b>Tree</b>	<a href="#">session-keepalive-holdtime</a>
<b>Range</b>	45 to 3600
<b>Default</b>	180
<b>Units</b>	seconds
<b>Configurable</b>	True

### session-keepalive-interval *number*



**Note:**

This command is available for the following platforms:

- 7250 IXR-6
- 7250 IXR-10

<b>Description</b>	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.
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">protocols ldp peers session-keepalive-interval</a> <i>number</i>
<b>Tree</b>	<a href="#">session-keepalive-interval</a>
<b>Range</b>	15 to 1200
<b>Default</b>	60
<b>Units</b>	seconds

<b>Configurable</b>	True
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## trace-options



**Note:**

This command is available for the following platforms:

- 7250 IXR-6
- 7250 IXR-10

<b>Description</b>	Configure event/packet tracing for all sessions (configured and dynamic).
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">protocols ldp peers trace-options</a>
<b>Tree</b>	<a href="#">trace-options</a>
<b>Configurable</b>	True

## trace keyword



**Note:**

This command is available for the following platforms:

- 7250 IXR-6
- 7250 IXR-10

<b>Description</b>	Specifies the trace information to be captured.
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">protocols ldp peers trace-options trace keyword</a>
<b>Tree</b>	<a href="#">trace</a>
<b>Options</b>	<ul style="list-style-type: none"> <li>• all Trace all events and packets</li> <li>• events-all Trace all events</li> <li>• events-session Trace session related events</li> <li>• events-binding Trace binding related events</li> <li>• messages-all Trace all LDP messages</li> <li>• messages-all-detail Trace all LDP messages with detailed output</li> </ul>

- `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

**Configurable** True

## statistics



**Note:**

This command is available for the following platforms:

- 7250 IXR-6
- 7250 IXR-10

**Description** LDP instance level statistics

**Context** [network-instance name](#) *string* [protocols ldp statistics](#)

**Tree** [statistics](#)

**Configurable** False

## fec-statistics



**Note:**

This command is available for the following platforms:

- 7250 IXR-6
- 7250 IXR-10

**Description** Enter the fec-statistics context

**Context** [network-instance name](#) *string* [protocols ldp statistics fec-statistics](#)

**Tree** [fec-statistics](#)

**Configurable** False

## ipv4-prefix



### Note:

This command is available for the following platforms:

- 7250 IXR-6
- 7250 IXR-10

<b>Description</b>	Enter the ipv4-prefix context
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">protocols ldp statistics fec-statistics</a> <a href="#">ipv4-prefix</a>
<b>Tree</b>	<a href="#">ipv4-prefix</a>
<b>Configurable</b>	False

## advertised-fecs *number*



### Note:

This command is available for the following platforms:

- 7250 IXR-6
- 7250 IXR-10

<b>Description</b>	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.
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">protocols ldp statistics fec-statistics</a> <a href="#">ipv4-prefix</a> <a href="#">advertised-fecs</a> <i>number</i>
<b>Tree</b>	<a href="#">advertised-fecs</a>
<b>Default</b>	0
<b>Configurable</b>	False

## received-fecs *number*



### Note:

This command is available for the following platforms:

- 7250 IXR-6
- 7250 IXR-10

<b>Description</b>	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.
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<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">protocols ldp statistics fec-statistics ipv4-prefix received-fecs</a> <i>number</i>
<b>Tree</b>	<a href="#">received-fecs</a>
<b>Default</b>	0
<b>Configurable</b>	False

## protocol-errors



### Note:

This command is available for the following platforms:

- 7250 IXR-6
- 7250 IXR-10

<b>Description</b>	Enter the protocol-errors context
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">protocols ldp statistics protocol-errors</a>
<b>Tree</b>	<a href="#">protocol-errors</a>
<b>Configurable</b>	False

## bad-ldp-identifier *number*



### Note:

This command is available for the following platforms:

- 7250 IXR-6
- 7250 IXR-10

<b>Description</b>	The number of notification messages sent to advise of a bad LDP identifier
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">protocols ldp statistics protocol-errors bad-ldp-identifier</a> <i>number</i>
<b>Tree</b>	<a href="#">bad-ldp-identifier</a>
<b>Default</b>	0
<b>Configurable</b>	False

**bad-message-length *number*****Note:**

This command is available for the following platforms:

- 7250 IXR-6
- 7250 IXR-10

<b>Description</b>	The number of notification messages sent to advise of a bad message length
<b>Context</b>	<a href="#">network-instance name</a> <a href="#">string</a> <a href="#">protocols</a> <a href="#">ldp</a> <a href="#">statistics</a> <a href="#">protocol-errors</a> <a href="#">bad-message-length</a> <i>number</i>
<b>Tree</b>	<a href="#">bad-message-length</a>
<b>Default</b>	0
<b>Configurable</b>	False

**bad-pdu-length *number*****Note:**

This command is available for the following platforms:

- 7250 IXR-6
- 7250 IXR-10

<b>Description</b>	The number of notification messages sent to advise of a bad PDU length
<b>Context</b>	<a href="#">network-instance name</a> <a href="#">string</a> <a href="#">protocols</a> <a href="#">ldp</a> <a href="#">statistics</a> <a href="#">protocol-errors</a> <a href="#">bad-pdu-length</a> <i>number</i>
<b>Tree</b>	<a href="#">bad-pdu-length</a>
<b>Default</b>	0
<b>Configurable</b>	False

**bad-protocol-version *number*****Note:**

This command is available for the following platforms:

- 7250 IXR-6
- 7250 IXR-10

<b>Description</b>	The number of notification messages sent to advise of a bad protocol version
<b>Context</b>	<a href="#">network-instance name</a> <a href="#">string</a> <a href="#">protocols</a> <a href="#">ldp</a> <a href="#">statistics</a> <a href="#">protocol-errors</a> <a href="#">bad-protocol-version</a> <i>number</i>

<b>Tree</b>	<a href="#">bad-protocol-version</a>
<b>Default</b>	0
<b>Configurable</b>	False

### bad-tlv-length *number*



**Note:**

This command is available for the following platforms:

- 7250 IXR-6
- 7250 IXR-10

<b>Description</b>	The number of notification messages sent to advise of a bad TLV length
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">protocols</a> <a href="#">ldp</a> <a href="#">statistics</a> <a href="#">protocol-errors</a> <a href="#">bad-tlv-length</a> <i>number</i>
<b>Tree</b>	<a href="#">bad-tlv-length</a>
<b>Default</b>	0
<b>Configurable</b>	False

### malformed-tlv-value *number*



**Note:**

This command is available for the following platforms:

- 7250 IXR-6
- 7250 IXR-10

<b>Description</b>	The number of notification messages sent to advise of a malformed TLV value
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">protocols</a> <a href="#">ldp</a> <a href="#">statistics</a> <a href="#">protocol-errors</a> <a href="#">malformed-tlv-value</a> <i>number</i>
<b>Tree</b>	<a href="#">malformed-tlv-value</a>
<b>Default</b>	0
<b>Configurable</b>	False

**missing-message-parameters *number*****Note:**

This command is available for the following platforms:

- 7250 IXR-6
- 7250 IXR-10

<b>Description</b>	The number of notification messages sent to advise of missing mandatory parameters
<b>Context</b>	<a href="#">network-instance name</a> <a href="#">string</a> <a href="#">protocols ldp statistics protocol-errors missing-message-parameters</a> <i>number</i>
<b>Tree</b>	<a href="#">missing-message-parameters</a>
<b>Default</b>	0
<b>Configurable</b>	False

**session-rejected-bad-keepalive-time *number*****Note:**

This command is available for the following platforms:

- 7250 IXR-6
- 7250 IXR-10

<b>Description</b>	The number of notification messages sent to advise that a TCP connection was closed because the requested keepalive time is not acceptable
<b>Context</b>	<a href="#">network-instance name</a> <a href="#">string</a> <a href="#">protocols ldp statistics protocol-errors session-rejected-bad-keepalive-time</a> <i>number</i>
<b>Tree</b>	<a href="#">session-rejected-bad-keepalive-time</a>
<b>Default</b>	0
<b>Configurable</b>	False

**session-rejected-no-hello *number*****Note:**

This command is available for the following platforms:

- 7250 IXR-6
- 7250 IXR-10

<b>Description</b>	The number of notification messages sent to advise that a TCP connection was closed because there was no matching Hello adjacency
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<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">protocols ldp statistics protocol-errors session-rejected-no-hello</a> <i>number</i>
<b>Tree</b>	<a href="#">session-rejected-no-hello</a>
<b>Default</b>	0
<b>Configurable</b>	False

### session-rejected-parameters-adv-mode *number*



**Note:**

This command is available for the following platforms:

- 7250 IXR-6
- 7250 IXR-10

<b>Description</b>	The number of notification messages sent to advise that a TCP connection was closed because the requested label advertisement mode is not acceptable
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">protocols ldp statistics protocol-errors session-rejected-parameters-adv-mode</a> <i>number</i>
<b>Tree</b>	<a href="#">session-rejected-parameters-adv-mode</a>
<b>Default</b>	0
<b>Configurable</b>	False

### session-rejected-parameters-label-range *number*



**Note:**

This command is available for the following platforms:

- 7250 IXR-6
- 7250 IXR-10

<b>Description</b>	The number of notification messages sent to advise that a TCP connection was closed because the requested label range is not acceptable
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">protocols ldp statistics protocol-errors session-rejected-parameters-label-range</a> <i>number</i>
<b>Tree</b>	<a href="#">session-rejected-parameters-label-range</a>
<b>Default</b>	0
<b>Configurable</b>	False

**session-rejected-parameters-max-pdu-length *number*****Note:**

This command is available for the following platforms:

- 7250 IXR-6
- 7250 IXR-10

<b>Description</b>	The number of notification messages sent to advise that a TCP connection was closed because the requested Maximum PDU Length is not acceptable
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">protocols ldp statistics protocol-errors session-rejected-parameters-max-pdu-length</a> <i>number</i>
<b>Tree</b>	<a href="#">session-rejected-parameters-max-pdu-length</a>
<b>Default</b>	0
<b>Configurable</b>	False

**unknown-message-type *number*****Note:**

This command is available for the following platforms:

- 7250 IXR-6
- 7250 IXR-10

<b>Description</b>	The number of notification messages sent to advise of an unknown message type
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">protocols ldp statistics protocol-errors unknown-message-type</a> <i>number</i>
<b>Tree</b>	<a href="#">unknown-message-type</a>
<b>Default</b>	0
<b>Configurable</b>	False

**unknown-tlv *number*****Note:**

This command is available for the following platforms:

- 7250 IXR-6
- 7250 IXR-10

<b>Description</b>	The number of notification messages sent to advise of an unknown TLV
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<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">protocols ldp statistics protocol-errors unknown-tlv</a> <i>number</i>
<b>Tree</b>	<a href="#">unknown-tlv</a>
<b>Default</b>	0
<b>Configurable</b>	False

### unsupported-address-family *number*



**Note:**

This command is available for the following platforms:

- 7250 IXR-6
- 7250 IXR-10

<b>Description</b>	The number of notification messages sent to advise that a TCP connection was closed because the FEC type is not IPv4
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">protocols ldp statistics protocol-errors unsupported-address-family</a> <i>number</i>
<b>Tree</b>	<a href="#">unsupported-address-family</a>
<b>Default</b>	0
<b>Configurable</b>	False

### sessions-terminated-holdtime-expiry *number*



**Note:**

This command is available for the following platforms:

- 7250 IXR-6
- 7250 IXR-10

<b>Description</b>	The total number of LDP sessions that were terminated due to keepalive holdtime expiry.
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">protocols ldp statistics sessions-terminated-holdtime-expiry</a> <i>number</i>
<b>Tree</b>	<a href="#">sessions-terminated-holdtime-expiry</a>
<b>Configurable</b>	False

**total-discovery-interfaces *number*****Note:**

This command is available for the following platforms:

- 7250 IXR-6
- 7250 IXR-10

<b>Description</b>	The total number of IP subinterfaces on which basic LDP discovery is active.
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">protocols ldp statistics total-discovery-interfaces</a> <i>number</i>
<b>Tree</b>	<a href="#">total-discovery-interfaces</a>
<b>Configurable</b>	False

**total-hello-adjacencies *number*****Note:**

This command is available for the following platforms:

- 7250 IXR-6
- 7250 IXR-10

<b>Description</b>	The total number of hello adjacencies that have been formed.
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">protocols ldp statistics total-hello-adjacencies</a> <i>number</i>
<b>Tree</b>	<a href="#">total-hello-adjacencies</a>
<b>Configurable</b>	False

**total-peers *number*****Note:**

This command is available for the following platforms:

- 7250 IXR-6
- 7250 IXR-10

<b>Description</b>	The total number of LDP TCP sessions that are established.
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">protocols ldp statistics total-peers</a> <i>number</i>
<b>Tree</b>	<a href="#">total-peers</a>
<b>Configurable</b>	False



## linux

<b>Description</b>	Enable the linux context
<b>Context</b>	<a href="#">network-instance name</a> <a href="#">string</a> <a href="#">protocols</a> <a href="#">linux</a>
<b>Tree</b>	<a href="#">linux</a>
<b>Configurable</b>	True

## export-neighbors *boolean*

<b>Description</b>	Export neighbors to linux routing table
<b>Context</b>	<a href="#">network-instance name</a> <a href="#">string</a> <a href="#">protocols</a> <a href="#">linux</a> <a href="#">export-neighbors</a> <a href="#">boolean</a>
<b>Tree</b>	<a href="#">export-neighbors</a>
<b>Default</b>	true
<b>Configurable</b>	True

## export-routes *boolean*

<b>Description</b>	Export routes to linux routing table
<b>Context</b>	<a href="#">network-instance name</a> <a href="#">string</a> <a href="#">protocols</a> <a href="#">linux</a> <a href="#">export-routes</a> <a href="#">boolean</a>
<b>Tree</b>	<a href="#">export-routes</a>
<b>Default</b>	false
<b>Configurable</b>	True

## import-routes *boolean*

<b>Description</b>	Import routes from linux routing table
<b>Context</b>	<a href="#">network-instance name</a> <a href="#">string</a> <a href="#">protocols</a> <a href="#">linux</a> <a href="#">import-routes</a> <a href="#">boolean</a>
<b>Tree</b>	<a href="#">import-routes</a>
<b>Default</b>	false
<b>Configurable</b>	True

## ospf

<b>Description</b>	Top-level configuration and operational state for Open Shortest Path First (OSPF)
<b>Context</b>	<a href="#">network-instance name</a> <a href="#">string</a> <a href="#">protocols</a> <a href="#">ospf</a>
<b>Tree</b>	<a href="#">ospf</a>

<b>Configurable</b>	True
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### instance *name string*

<b>Description</b>	List of OSPF protocol instances associated with this network-instance.
<b>Context</b>	<a href="#">network-instance name string protocols ospf instance name string</a>
<b>Tree</b>	<a href="#">instance</a>
<b>Configurable</b>	True
<b>Max. Elements</b>	3

### name *string*

<b>Description</b>	The name of the OSPF instance
<b>Context</b>	<a href="#">network-instance name string protocols ospf instance name string</a>
<b>String Length</b>	1 to 255
<b>Configurable</b>	True

### address-family *identityref*

<b>Description</b>	The address family that this instance supports. Only valid for OSPFv3.
<b>Context</b>	<a href="#">network-instance name string protocols ospf instance name string address-family identityref</a>
<b>Tree</b>	<a href="#">address-family</a>
<b>Options</b>	<ul style="list-style-type: none"> <li>• ipv6-unicast IPv6 unicast address family</li> <li>• ipv4-unicast IPv4 unicast address family</li> </ul>
<b>Configurable</b>	True

### admin-state *keyword*

<b>Description</b>	Used to administratively enable or disable the OSPF instance
<b>Context</b>	<a href="#">network-instance name string protocols ospf instance name string admin-state keyword</a>
<b>Tree</b>	<a href="#">admin-state</a>
<b>Default</b>	disable
<b>Options</b>	<ul style="list-style-type: none"> <li>• enable</li> </ul>

	<ul style="list-style-type: none"> <li>• disable</li> </ul>
<b>Configurable</b>	True

### advertise-router-capability *keyword*

<b>Description</b>	Scope to advertise router-capability.
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">protocols ospf instance name</a> <i>string</i> <a href="#">advertise-router-capability</a> <i>keyword</i>
<b>Tree</b>	<a href="#">advertise-router-capability</a>
<b>Options</b>	<ul style="list-style-type: none"> <li>• false</li> <li>• link</li> <li>• area</li> <li>• as</li> </ul>
<b>Configurable</b>	True

### area [area-id](#)

<b>Description</b>	The OSPF areas within which the local system exists
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">protocols ospf instance name</a> <i>string</i> <a href="#">area area-id</a>
<b>Tree</b>	<a href="#">area</a>
<b>Configurable</b>	True

### area-id

<b>Description</b>	The area identifier as a dotted-quad.
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">protocols ospf instance name</a> <i>string</i> <a href="#">area area-id</a>
<b>Configurable</b>	True

### active-interfaces *number*

<b>Description</b>	The number of active interfaces in this area.
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">protocols ospf instance name</a> <i>string</i> <a href="#">area area-id</a> <a href="#">active-interfaces</a> <i>number</i>
<b>Tree</b>	<a href="#">active-interfaces</a>
<b>Configurable</b>	False

**advertise-router-capability *boolean***

<b>Description</b>	Allow router advertisement capabilities
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">protocols ospf instance name</a> <i>string</i> <a href="#">area area-id</a> <a href="#">advertise-router-capability</a> <i>boolean</i>
<b>Tree</b>	<a href="#">advertise-router-capability</a>
<b>Default</b>	true
<b>Configurable</b>	True

**area-bdr-rtr-count**

<b>Description</b>	The total number of area border routers reachable within this area.
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">protocols ospf instance name</a> <i>string</i> <a href="#">area area-id</a> <a href="#">area-bdr-rtr-count</a>
<b>Tree</b>	<a href="#">area-bdr-rtr-count</a>
<b>Configurable</b>	False

**area-range [ip-prefix-mask](#) (*ipv4-prefix* | *ipv6-prefix*)**

<b>Description</b>	Enter the area-range context
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">protocols ospf instance name</a> <i>string</i> <a href="#">area area-id</a> <a href="#">area-range</a> <a href="#">ip-prefix-mask</a> ( <i>ipv4-prefix</i>   <i>ipv6-prefix</i> )
<b>Tree</b>	<a href="#">area-range</a>
<b>Configurable</b>	True

**[ip-prefix-mask](#) (*ipv4-prefix* | *ipv6-prefix*)**

<b>Description</b>	The ip-prefix with host bits set to 0
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">protocols ospf instance name</a> <i>string</i> <a href="#">area area-id</a> <a href="#">area-range</a> <a href="#">ip-prefix-mask</a> ( <i>ipv4-prefix</i>   <i>ipv6-prefix</i> )
<b>Configurable</b>	True

**advertise *boolean***

<b>Description</b>	Advertise summarized range of addresses to other areas
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">protocols ospf instance name</a> <i>string</i> <a href="#">area area-id</a> <a href="#">area-range</a> <a href="#">ip-prefix-mask</a> ( <i>ipv4-prefix</i>   <i>ipv6-prefix</i> ) <a href="#">advertise</a> <i>boolean</i>
<b>Tree</b>	<a href="#">advertise</a>

<b>Default</b>	true
<b>Configurable</b>	True

### as-bdr-rtr-count

<b>Description</b>	The total number of autonomous system border routers reachable within this area.
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">protocols ospf instance name</a> <i>string</i> <a href="#">area area-id</a> <a href="#">as-bdr-rtr-count</a>
<b>Tree</b>	<a href="#">as-bdr-rtr-count</a>
<b>Configurable</b>	False

### blackhole-aggregate *boolean*

<b>Description</b>	Enables the creation of a blackhole for generated aggregates
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">protocols ospf instance name</a> <i>string</i> <a href="#">area area-id</a> <a href="#">blackhole-aggregate</a> <i>boolean</i>
<b>Tree</b>	<a href="#">blackhole-aggregate</a>
<b>Default</b>	true
<b>Configurable</b>	True

### export-policy *reference*

<b>Description</b>	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.
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">protocols ospf instance name</a> <i>string</i> <a href="#">area area-id</a> <a href="#">export-policy</a> <i>reference</i>
<b>Tree</b>	<a href="#">export-policy</a>
<b>Reference</b>	<a href="#">routing-policy policy name</a> <i>stringname</i> <i>string</i> <i>string</i>
<b>Configurable</b>	True

### full-spf-runs

<b>Description</b>	The total number of times that complete SPF has been run on the router since OSPF was last enabled.
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">protocols ospf instance name</a> <i>string</i> <a href="#">area area-id</a> <a href="#">full-spf-runs</a>

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<b>Tree</b>	<a href="#">full-spf-runs</a>
<b>Configurable</b>	False

### interface [interface-name](#) *reference*

<b>Description</b>	List of OSPF interfaces
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">protocols ospf instance name</a> <i>string</i> <a href="#">area area-id</a> <a href="#">interface interface-name</a> <i>reference</i>
<b>Tree</b>	<a href="#">interface</a>
<b>Configurable</b>	True

### interface-name *reference*

<b>Description</b>	Router logical interface name.
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">protocols ospf instance name</a> <i>string</i> <a href="#">area area-id</a> <a href="#">interface interface-name</a> <i>reference</i>
<b>Reference</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">interface name</a> <i>string</i>
<b>Configurable</b>	True

### admin-state *keyword*

<b>Description</b>	Administrative state of the OSPF
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">protocols ospf instance name</a> <i>string</i> <a href="#">area area-id</a> <a href="#">interface interface-name</a> <i>reference</i> <a href="#">admin-state</a> <i>keyword</i>
<b>Tree</b>	<a href="#">admin-state</a>
<b>Default</b>	enable
<b>Options</b>	<ul style="list-style-type: none"> <li>• enable</li> <li>• disable</li> </ul>
<b>Configurable</b>	True

### advertise-router-capability *boolean*

<b>Description</b>	Allow router advertisement capabilities
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">protocols ospf instance name</a> <i>string</i> <a href="#">area area-id</a> <a href="#">interface interface-name</a> <i>reference</i> <a href="#">advertise-router-capability</a> <i>boolean</i>
<b>Tree</b>	<a href="#">advertise-router-capability</a>
<b>Default</b>	true

<b>Configurable</b>	True
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### advertise-subnet *boolean*

<b>Description</b>	Advertise point-to-point interfaces as subnet routes
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">protocols ospf instance name</a> <i>string</i> <a href="#">area area-id interface interface-name</a> <i>reference</i> <a href="#">advertise-subnet</a> <i>boolean</i>
<b>Tree</b>	<a href="#">advertise-subnet</a>
<b>Default</b>	true
<b>Configurable</b>	True

### authentication

<b>Description</b>	Container with authentication options that apply to all peers in this peer-group
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">protocols ospf instance name</a> <i>string</i> <a href="#">area area-id interface interface-name</a> <i>reference</i> <a href="#">authentication</a>
<b>Tree</b>	<a href="#">authentication</a>
<b>Configurable</b>	True

### keychain *reference*

<b>Description</b>	Reference to a keychain. The keychain type must be ospf
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">protocols ospf instance name</a> <i>string</i> <a href="#">area area-id interface interface-name</a> <i>reference</i> <a href="#">authentication keychain</a> <i>reference</i>
<b>Tree</b>	<a href="#">keychain</a>
<b>Reference</b>	<a href="#">system authentication keychain name</a> <i>string</i> <i>string</i>
<b>Configurable</b>	True

### bad-packets

<b>Description</b>	Bad packets counters
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">protocols ospf instance name</a> <i>string</i> <a href="#">area area-id interface interface-name</a> <i>reference</i> <a href="#">bad-packets</a>
<b>Tree</b>	<a href="#">bad-packets</a>
<b>Configurable</b>	False

## auth-failures

<b>Description</b>	The total number of OSPF packets received with an invalid authorization key since admin-state was last set to 'enabled'.
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">protocols ospf instance name</a> <i>string</i> <a href="#">area area-id interface interface-name</a> <i>reference</i> <a href="#">bad-packets auth-failures</a>
<b>Tree</b>	<a href="#">auth-failures</a>
<b>Configurable</b>	False

## bad-area

<b>Description</b>	The total number of OSPF packets received with an area mismatch since admin-state was last set to 'enabled'.
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">protocols ospf instance name</a> <i>string</i> <a href="#">area area-id interface interface-name</a> <i>reference</i> <a href="#">bad-packets bad-area</a>
<b>Tree</b>	<a href="#">bad-area</a>
<b>Configurable</b>	False

## bad-auth-type

<b>Description</b>	The total number of OSPF packets received with an invalid authorization type since admin-state was last set to 'enabled'.
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">protocols ospf instance name</a> <i>string</i> <a href="#">area area-id interface interface-name</a> <i>reference</i> <a href="#">bad-packets bad-auth-type</a>
<b>Tree</b>	<a href="#">bad-auth-type</a>
<b>Configurable</b>	False

## bad-checksum

<b>Description</b>	The count of LS-as received with bad checksums.
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">protocols ospf instance name</a> <i>string</i> <a href="#">area area-id interface interface-name</a> <i>reference</i> <a href="#">bad-packets bad-checksum</a>
<b>Tree</b>	<a href="#">bad-checksum</a>
<b>Configurable</b>	False

## bad-dead-interval

<b>Description</b>	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'.
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<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">protocols ospf instance name</a> <i>string</i> <a href="#">area area-id interface interface-name</a> <i>reference</i> <a href="#">bad-packets</a> <a href="#">bad-dead-interval</a>
<b>Tree</b>	<a href="#">bad-dead-interval</a>
<b>Configurable</b>	False

## bad-dest-address

<b>Description</b>	The total number of OSPF packets received with the incorrect IP destination address since admin-state was last set to 'enabled'.
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">protocols ospf instance name</a> <i>string</i> <a href="#">area area-id interface interface-name</a> <i>reference</i> <a href="#">bad-packets</a> <a href="#">bad-dest-address</a>
<b>Tree</b>	<a href="#">bad-dest-address</a>
<b>Configurable</b>	False

## bad-hello-interval

<b>Description</b>	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'.
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">protocols ospf instance name</a> <i>string</i> <a href="#">area area-id interface interface-name</a> <i>reference</i> <a href="#">bad-packets</a> <a href="#">bad-hello-interval</a>
<b>Tree</b>	<a href="#">bad-hello-interval</a>
<b>Configurable</b>	False

## bad-length

<b>Description</b>	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'.
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">protocols ospf instance name</a> <i>string</i> <a href="#">area area-id interface interface-name</a> <i>reference</i> <a href="#">bad-packets</a> <a href="#">bad-length</a>
<b>Tree</b>	<a href="#">bad-length</a>
<b>Configurable</b>	False

## bad-neighbors

<b>Description</b>	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'.
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<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">protocols ospf instance name</a> <i>string</i> <a href="#">area area-id interface interface-name</a> <i>reference</i> <a href="#">bad-packets</a> <a href="#">bad-neighbors</a>
<b>Tree</b>	<a href="#">bad-neighbors</a>
<b>Configurable</b>	False

## bad-network

<b>Description</b>	The total number of OSPF packets received with invalid network or mask since admin-state was last set to 'enabled'.
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">protocols ospf instance name</a> <i>string</i> <a href="#">area area-id interface interface-name</a> <i>reference</i> <a href="#">bad-packets</a> <a href="#">bad-network</a>
<b>Tree</b>	<a href="#">bad-network</a>
<b>Configurable</b>	False

## bad-options

<b>Description</b>	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'.
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">protocols ospf instance name</a> <i>string</i> <a href="#">area area-id interface interface-name</a> <i>reference</i> <a href="#">bad-packets</a> <a href="#">bad-options</a>
<b>Tree</b>	<a href="#">bad-options</a>
<b>Configurable</b>	False

## bad-packet-type

<b>Description</b>	The total number of OSPF packets received with an invalid OSPF packet type since admin-state was last set to 'enabled'.
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">protocols ospf instance name</a> <i>string</i> <a href="#">area area-id interface interface-name</a> <i>reference</i> <a href="#">bad-packets</a> <a href="#">bad-packet-type</a>
<b>Tree</b>	<a href="#">bad-packet-type</a>
<b>Configurable</b>	False

## bad-version

<b>Description</b>	The total number of OSPF packets received with bad OSPF version numbers since admin-state was last set to 'enabled'.
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">protocols ospf instance name</a> <i>string</i> <a href="#">area area-id interface interface-name</a> <i>reference</i> <a href="#">bad-packets</a> <a href="#">bad-version</a>

<b>Tree</b>	<a href="#">bad-version</a>
<b>Configurable</b>	False

### bad-virtual-link

<b>Description</b>	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'.
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">protocols ospf instance name</a> <i>string</i> <a href="#">area area-id</a> <a href="#">interface interface-name</a> <i>reference</i> <a href="#">bad-packets</a> <a href="#">bad-virtual-link</a>
<b>Tree</b>	<a href="#">bad-virtual-link</a>
<b>Configurable</b>	False

### bdr-id

<b>Description</b>	The value of BDR-id indicates the router ID of the backup designated router.
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">protocols ospf instance name</a> <i>string</i> <a href="#">area area-id</a> <a href="#">interface interface-name</a> <i>reference</i> <a href="#">bdr-id</a>
<b>Tree</b>	<a href="#">bdr-id</a>
<b>Configurable</b>	False

### dead-interval *number*

<b>Description</b>	Time OSPF waits without receiving Hello packets before declaring a neighbor down
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">protocols ospf instance name</a> <i>string</i> <a href="#">area area-id</a> <a href="#">interface interface-name</a> <i>reference</i> <a href="#">dead-interval</a> <i>number</i>
<b>Tree</b>	<a href="#">dead-interval</a>
<b>Range</b>	2 to 65535
<b>Default</b>	40
<b>Units</b>	seconds
<b>Configurable</b>	True

### dr-id

<b>Description</b>	The value of DR-id indicates the router ID of the designated router.
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">protocols ospf instance name</a> <i>string</i> <a href="#">area area-id</a> <a href="#">interface interface-name</a> <i>reference</i> <a href="#">dr-id</a>
<b>Tree</b>	<a href="#">dr-id</a>

**Configurable** False

## 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](#) *string* [protocols ospf instance name](#) *string* [area area-id interface interface-name](#) *reference* [events](#)

**Tree** [events](#)

**Configurable** False

## failure-detection

**Description** Options related to methods of detecting BGP session failure

**Context** [network-instance name](#) *string* [protocols ospf instance name](#) *string* [area area-id interface interface-name](#) *reference* [failure-detection](#)

**Tree** [failure-detection](#)

**Configurable** True

## enable-bfd *boolean*

**Description** Enables the use of BFD for liveliness detection

**Context** [network-instance name](#) *string* [protocols ospf instance name](#) *string* [area area-id interface interface-name](#) *reference* [failure-detection enable-bfd](#) *boolean*

**Tree** [enable-bfd](#)

**Default** false

**Configurable** True

## hello-interval *number*

**Description** Time between OSPF Hellos of this interface

**Context** [network-instance name](#) *string* [protocols ospf instance name](#) *string* [area area-id interface interface-name](#) *reference* [hello-interval](#) *number*

**Tree** [hello-interval](#)

**Range** 1 to 65535

**Default** 10

**Units** seconds

**Configurable** True

**interface-type keyword**

<b>Description</b>	Interface type to broadcast or point-to-point
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">protocols ospf instance name</a> <i>string</i> <a href="#">area area-id</a> <a href="#">interface interface-name</a> <i>reference</i> <b>interface-type</b> <i>keyword</i>
<b>Tree</b>	<a href="#">interface-type</a>
<b>Options</b>	<ul style="list-style-type: none"> <li>• broadcast</li> <li>• point-to-point</li> </ul>
<b>Configurable</b>	True

**last-enabled-time**

<b>Description</b>	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.
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">protocols ospf instance name</a> <i>string</i> <a href="#">area area-id</a> <a href="#">interface interface-name</a> <i>reference</i> <b>last-enabled-time</b>
<b>Tree</b>	<a href="#">last-enabled-time</a>
<b>Configurable</b>	False

**last-event-time string**

<b>Description</b>	The value of last-event-time indicates the value of sys-up-time when an event was last associated with this OSPF interface.
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">protocols ospf instance name</a> <i>string</i> <a href="#">area area-id</a> <a href="#">interface interface-name</a> <i>reference</i> <b>last-event-time</b> <i>string</i>
<b>Tree</b>	<a href="#">last-event-time</a>
<b>String Length</b>	20 to 32
<b>Configurable</b>	False

**ldp-synchronization****Note:**

This command is available for the following platforms:

- 7250 IXR-6
- 7250 IXR-10

<b>Description</b>	Container with configuration options and state that pertains to the operation of LDP-IGP synchronization on this interface.
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<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">protocols ospf instance name</a> <i>string</i> <a href="#">area area-id interface interface-name</a> <i>reference</i> <a href="#">ldp-synchronization</a>
<b>Tree</b>	<a href="#">ldp-synchronization</a>
<b>Configurable</b>	True

## disable



### Note:

This command is available for the following platforms:

- 7250 IXR-6
- 7250 IXR-10

<b>Description</b>	Disable LDP-IGP synchronization procedures on this interface, even if synchronization is enabled globally
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">protocols ospf instance name</a> <i>string</i> <a href="#">area area-id interface interface-name</a> <i>reference</i> <a href="#">ldp-synchronization disable</a>
<b>Tree</b>	<a href="#">disable</a>
<b>Configurable</b>	True

## duration *number*



### Note:

This command is available for the following platforms:

- 7250 IXR-6
- 7250 IXR-10

<b>Description</b>	The length of time that the IGP interface has been in sync or out of sync
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">protocols ospf instance name</a> <i>string</i> <a href="#">area area-id interface interface-name</a> <i>reference</i> <a href="#">ldp-synchronization duration</a> <i>number</i>
<b>Tree</b>	<a href="#">duration</a>
<b>Units</b>	seconds
<b>Configurable</b>	False

**end-of-lib *boolean*****Note:**

This command is available for the following platforms:

- 7250 IXR-6
- 7250 IXR-10

**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.

This overrides the global/instance level setting.

**Context**

[network-instance name](#) *string* [protocols ospf instance name](#) *string* [area area-id interface interface-name](#) *reference* [ldp-synchronization end-of-lib](#) *boolean*

**Tree**

[end-of-lib](#)

**Configurable**

True

**hold-down-timer *number*****Note:**

This command is available for the following platforms:

- 7250 IXR-6
- 7250 IXR-10

**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.

This overrides the global/instance level setting.

**Context**

[network-instance name](#) *string* [protocols ospf instance name](#) *string* [area area-id interface interface-name](#) *reference* [ldp-synchronization hold-down-timer](#) *number*

**Tree**

[hold-down-timer](#)

**Range**

1 to 1800

**Units**

seconds

**Configurable**

True

## sync-state keyword

**Note:**

This command is available for the following platforms:

- 7250 IXR-6
- 7250 IXR-10

<b>Description</b>	The current state of the interface with respect to LDP-IGP sync
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">protocols ospf instance name</a> <i>string</i> <a href="#">area area-id interface interface-name</a> <i>reference</i> <a href="#">ldp-synchronization sync-state</a> <i>keyword</i>
<b>Tree</b>	<a href="#">sync-state</a>
<b>Options</b>	<ul style="list-style-type: none"> <li>• wait-for-LDP-adjacency The IGP is waiting for the LDP adjacency to come up. The interface is being advertised with max-metric.</li> <li>• 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.</li> <li>• 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</li> <li>• 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.</li> <li>• manual-exit A tools command was performed to exit ldp-sync. Normal operation is resumed, max-metric is removed.</li> <li>• disabled ldp-sync is not applicable on this interface</li> </ul>
<b>Configurable</b>	False

## link-lsa-cksum-sum string

<b>Description</b>	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.
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">protocols ospf instance name</a> <i>string</i> <a href="#">area area-id interface interface-name</a> <i>reference</i> <a href="#">link-lsa-cksum-sum</a> <i>string</i>
<b>Tree</b>	<a href="#">link-lsa-cksum-sum</a>



**Configurable** False

## 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](#) *string* [protocols ospf instance name](#) *string* [area area-id](#) [interface interface-name](#) *reference* [link-lsa-count](#)

**Tree** [link-lsa-count](#)

**Configurable** False

## 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](#) *string* [protocols ospf instance name](#) *string* [area area-id](#) [interface interface-name](#) *reference* [local-ip-address \(ipv4-address | ipv6-address\)](#)

**Tree** [local-ip-address](#)

**Configurable** False

## lsa-filter-out *keyword*

**Description** LSA flooding reduction

**Context** [network-instance name](#) *string* [protocols ospf instance name](#) *string* [area area-id](#) [interface interface-name](#) *reference* [lsa-filter-out keyword](#)

**Tree** [lsa-filter-out](#)

**Default** none

**Options**

- none
- all
- except-own-rtrlsa
- except-own-rtrlsa-and-defaults

**Configurable** True

## lsa-totals

**Description** The number of LSAs of each type in this interface's database

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<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">protocols ospf instance name</a> <i>string</i> <a href="#">area area-id</a> <a href="#">interface interface-name</a> <i>reference</i> <a href="#">lsa-totals</a>
<b>Tree</b>	<a href="#">lsa-totals</a>
<b>Configurable</b>	False

**e-link-lsa**

<b>Description</b>	The number of extended link LSAs in this interface's database.
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">protocols ospf instance name</a> <i>string</i> <a href="#">area area-id</a> <a href="#">interface interface-name</a> <i>reference</i> <a href="#">lsa-totals</a> <a href="#">e-link-lsa</a>
<b>Tree</b>	<a href="#">e-link-lsa</a>
<b>Configurable</b>	False

**link-lsa**

<b>Description</b>	The number of link LSAs in this interface's database.
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">protocols ospf instance name</a> <i>string</i> <a href="#">area area-id</a> <a href="#">interface interface-name</a> <i>reference</i> <a href="#">lsa-totals</a> <a href="#">link-lsa</a>
<b>Tree</b>	<a href="#">link-lsa</a>
<b>Configurable</b>	False

**link-opaque-lsa**

<b>Description</b>	The number of link opaque LSAs in this interface's database.
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">protocols ospf instance name</a> <i>string</i> <a href="#">area area-id</a> <a href="#">interface interface-name</a> <i>reference</i> <a href="#">lsa-totals</a> <a href="#">link-opaque-lsa</a>
<b>Tree</b>	<a href="#">link-opaque-lsa</a>
<b>Configurable</b>	False

**router-info-lsa**

<b>Description</b>	The number of link scoped router information LSAs in this interface's AS database.
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">protocols ospf instance name</a> <i>string</i> <a href="#">area area-id</a> <a href="#">interface interface-name</a> <i>reference</i> <a href="#">lsa-totals</a> <a href="#">router-info-lsa</a>
<b>Tree</b>	<a href="#">router-info-lsa</a>
<b>Configurable</b>	False

**metric number**

<b>Description</b>	Explicit route cost metric that is applied to the interface
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">protocols ospf instance name</a> <i>string</i> <a href="#">area area-id interface interface-name</a> <i>reference</i> <a href="#">metric number</a>
<b>Tree</b>	<a href="#">metric</a>
<b>Configurable</b>	True

**mtu number**

<b>Description</b>	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.
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">protocols ospf instance name</a> <i>string</i> <a href="#">area area-id interface interface-name</a> <i>reference</i> <a href="#">mtu number</a>
<b>Tree</b>	<a href="#">mtu</a>
<b>Range</b>	512 to 9486
<b>Configurable</b>	True

**neighbor [router-id](#)**

<b>Description</b>	List of neighbors associated with this OSPF interface
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">protocols ospf instance name</a> <i>string</i> <a href="#">area area-id interface interface-name</a> <i>reference</i> <a href="#">neighbor router-id</a>
<b>Tree</b>	<a href="#">neighbor</a>
<b>Configurable</b>	False

**router-id**

<b>Description</b>	The router-id advertised by the neighbor
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">protocols ospf instance name</a> <i>string</i> <a href="#">area area-id interface interface-name</a> <i>reference</i> <a href="#">neighbor router-id</a>
<b>Configurable</b>	False

**address ([ipv4-address](#) | [ipv6-address-with-zone](#))**

<b>Description</b>	The value of address indicates the IP address of the neighbor associated with the local link.
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<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">protocols ospf instance name</a> <i>string</i> <a href="#">area area-id</a> <a href="#">interface interface-name</a> <i>reference</i> <a href="#">neighbor router-id address</a> ( <i>ipv4-address   ipv6-address-with-zone</i> )
<b>Tree</b>	<a href="#">address</a>
<b>Configurable</b>	False

### adjacency-state *identityref*

<b>Description</b>	Current OSPF Neighbor state
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">protocols ospf instance name</a> <i>string</i> <a href="#">area area-id</a> <a href="#">interface interface-name</a> <i>reference</i> <a href="#">neighbor router-id adjacency-state identityref</a>
<b>Tree</b>	<a href="#">adjacency-state</a>
<b>Options</b>	<ul style="list-style-type: none"> <li>• down <p>The initial state of a neighbor, indicating that no recent information has been received from the neighbor.</p> </li> <li>• attempt <p>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.</p> </li> <li>• init <p>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.</p> </li> <li>• two-way <p>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.</p> </li> <li>• exstart <p>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.</p> </li> <li>• exchange <p>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.</p> </li> <li>• loading <p>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.</p> </li> </ul>

- full

The neighboring routers are fully adjacent such that both LSDBs are synchronized. The adjacency will appear in Router and Network LSAs

**Configurable** False

### backup-designated-router

**Description** Advertised backup designated router

**Context** [network-instance name](#) *string* [protocols ospf instance name](#) *string* [area area-id interface interface-name](#) *reference* [neighbor router-id backup-designated-router](#)

**Tree** [backup-designated-router](#)

**Configurable** False

### dead-time *number*

**Description** The remaining number of seconds remaining in the neighbor's dead time interval

**Context** [network-instance name](#) *string* [protocols ospf instance name](#) *string* [area area-id interface interface-name](#) *reference* [neighbor router-id dead-time number](#)

**Tree** [dead-time](#)

**Configurable** False

### designated-router

**Description** Advertised designated router

**Context** [network-instance name](#) *string* [protocols ospf instance name](#) *string* [area area-id interface interface-name](#) *reference* [neighbor router-id designated-router](#)

**Tree** [designated-router](#)

**Configurable** False

### last-established-time *number*

**Description** Time then OSPF neighbor was last established

**Context** [network-instance name](#) *string* [protocols ospf instance name](#) *string* [area area-id interface interface-name](#) *reference* [neighbor router-id last-established-time number](#)

**Tree** [last-established-time](#)

**Configurable** False

**last-event-time**

<b>Description</b>	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.
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">protocols ospf instance name</a> <i>string</i> <a href="#">area area-id</a> <a href="#">interface interface-name</a> <i>reference</i> <a href="#">neighbor router-id</a> <a href="#">last-event-time</a>
<b>Tree</b>	<a href="#">last-event-time</a>
<b>Configurable</b>	False

**last-restart-time**

<b>Description</b>	The value of last-restart-time indicates the last time the neighbor attempted restart.
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">protocols ospf instance name</a> <i>string</i> <a href="#">area area-id</a> <a href="#">interface interface-name</a> <i>reference</i> <a href="#">neighbor router-id</a> <a href="#">last-restart-time</a>
<b>Tree</b>	<a href="#">last-restart-time</a>
<b>Configurable</b>	False

**optional-capabilities**

<b>Description</b>	Advertised Optional Capabilities
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">protocols ospf instance name</a> <i>string</i> <a href="#">area area-id</a> <a href="#">interface interface-name</a> <i>reference</i> <a href="#">neighbor router-id</a> <a href="#">optional-capabilities</a>
<b>Tree</b>	<a href="#">optional-capabilities</a>
<b>Configurable</b>	False

**priority *number***

<b>Description</b>	Router priority advertised by neighbor
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">protocols ospf instance name</a> <i>string</i> <a href="#">area area-id</a> <a href="#">interface interface-name</a> <i>reference</i> <a href="#">neighbor router-id</a> <a href="#">priority</a> <i>number</i>
<b>Tree</b>	<a href="#">priority</a>
<b>Configurable</b>	False

**restart-helper-age *number***

<b>Description</b>	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.
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<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">protocols ospf instance name</a> <i>string</i> <a href="#">area area-id interface interface-name</a> <i>reference</i> <a href="#">neighbor router-id restart-helper-age</a> <i>number</i>
<b>Tree</b>	<a href="#">restart-helper-age</a>
<b>Range</b>	0 to 1800
<b>Units</b>	seconds
<b>Configurable</b>	False

### **restart-helper-exit-rc** *keyword*

<b>Description</b>	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.
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">protocols ospf instance name</a> <i>string</i> <a href="#">area area-id interface interface-name</a> <i>reference</i> <a href="#">neighbor router-id restart-helper-exit-rc</a> <i>keyword</i>
<b>Tree</b>	<a href="#">restart-helper-exit-rc</a>
<b>Options</b>	<ul style="list-style-type: none"> <li>• none</li> <li>• in-progress</li> <li>• completed</li> <li>• timed-out</li> <li>• topology-changed</li> <li>• bfd-down</li> </ul>
<b>Configurable</b>	False

### **restart-helper-status** *keyword*

<b>Description</b>	The value of restart-helper-status indicates whether the router is acting as a graceful restart helper for the neighbor.
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">protocols ospf instance name</a> <i>string</i> <a href="#">area area-id interface interface-name</a> <i>reference</i> <a href="#">neighbor router-id restart-helper-status</a> <i>keyword</i>
<b>Tree</b>	<a href="#">restart-helper-status</a>
<b>Options</b>	<ul style="list-style-type: none"> <li>• not-helping</li> <li>• helping</li> </ul>
<b>Configurable</b>	False

**restart-reason (*number* | *keyword*)**

<b>Description</b>	The value of restart-reason indicates the OSPF neighbor's graceful restart reason.
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">protocols ospf instance name</a> <i>string</i> <a href="#">area area-id</a> <a href="#">interface interface-name</a> <i>reference</i> <a href="#">neighbor router-id</a> <b>restart-reason</b> ( <i>number</i>   <i>keyword</i> )
<b>Tree</b>	<a href="#">restart-reason</a>
<b>Range</b>	4 to 4294967295
<b>Options</b>	<ul style="list-style-type: none"> <li>• unknown</li> <li>• sw-restart</li> <li>• sw-reload</li> <li>• switch-red</li> </ul>
<b>Configurable</b>	False

**retransmission-queue-length *number***

<b>Description</b>	Enter the retransmission-queue-length context
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">protocols ospf instance name</a> <i>string</i> <a href="#">area area-id</a> <a href="#">interface interface-name</a> <i>reference</i> <a href="#">neighbor router-id</a> <b>retransmission-queue-length</b> <i>number</i>
<b>Tree</b>	<a href="#">retransmission-queue-length</a>
<b>Configurable</b>	False

**state-changes *number***

<b>Description</b>	The total numer of OSPF state changes
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">protocols ospf instance name</a> <i>string</i> <a href="#">area area-id</a> <a href="#">interface interface-name</a> <i>reference</i> <a href="#">neighbor router-id</a> <b>state-changes</b> <i>number</i>
<b>Tree</b>	<a href="#">state-changes</a>
<b>Configurable</b>	False

**statistics**

<b>Description</b>	Enter the statistics context
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">protocols ospf instance name</a> <i>string</i> <a href="#">area area-id</a> <a href="#">interface interface-name</a> <i>reference</i> <a href="#">neighbor router-id</a> <b>statistics</b>



**Tree** [statistics](#)

**Configurable** False

## 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](#) *string* [protocols ospf instance name](#) *string* [area area-id interface interface-name](#) *reference* [neighbor router-id](#) [statistics bad-mtu](#)

**Tree** [bad-mtu](#)

**Configurable** False

## 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](#) *string* [protocols ospf instance name](#) *string* [area area-id interface interface-name](#) *reference* [neighbor router-id](#) [statistics bad-nbr-states](#)

**Tree** [bad-nbr-states](#)

**Configurable** False

## 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](#) *string* [protocols ospf instance name](#) *string* [area area-id interface interface-name](#) *reference* [neighbor router-id](#) [statistics bad-packets](#)

**Tree** [bad-packets](#)

**Configurable** False

## 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'.

<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">protocols ospf instance name</a> <i>string</i> <a href="#">area area-id interface interface-name</a> <i>reference</i> <a href="#">neighbor router-id</a> <a href="#">statistics bad-seq-nums</a>
<b>Tree</b>	<a href="#">bad-seq-nums</a>
<b>Configurable</b>	False

## duplicates

<b>Description</b>	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'.
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">protocols ospf instance name</a> <i>string</i> <a href="#">area area-id interface interface-name</a> <i>reference</i> <a href="#">neighbor router-id</a> <a href="#">statistics duplicates</a>
<b>Tree</b>	<a href="#">duplicates</a>
<b>Configurable</b>	False

## events

<b>Description</b>	The value of events indicates the number of times this neighbor relationship has changed state, or an error has occurred.
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">protocols ospf instance name</a> <i>string</i> <a href="#">area area-id interface interface-name</a> <i>reference</i> <a href="#">neighbor router-id</a> <a href="#">statistics events</a>
<b>Tree</b>	<a href="#">events</a>
<b>Configurable</b>	False

## Isa-install-failed

<b>Description</b>	The value of Isa-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'.
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">protocols ospf instance name</a> <i>string</i> <a href="#">area area-id interface interface-name</a> <i>reference</i> <a href="#">neighbor router-id</a> <a href="#">statistics Isa-install-failed</a>
<b>Tree</b>	<a href="#">Isa-install-failed</a>
<b>Configurable</b>	False

## lsa-not-in-lsdb

<b>Description</b>	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'.
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">protocols ospf instance name</a> <i>string</i> <a href="#">area area-id interface interface-name</a> <i>reference</i> <a href="#">neighbor router-id statistics lsa-not-in-lsdb</a>
<b>Tree</b>	<a href="#">lsa-not-in-lsdb</a>
<b>Configurable</b>	False

## num-restarts

<b>Description</b>	The value of num-restarts indicates the number of times the neighbor has attempted restart.
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">protocols ospf instance name</a> <i>string</i> <a href="#">area area-id interface interface-name</a> <i>reference</i> <a href="#">neighbor router-id statistics num-restarts</a>
<b>Tree</b>	<a href="#">num-restarts</a>
<b>Configurable</b>	False

## option-mismatches

<b>Description</b>	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'.
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">protocols ospf instance name</a> <i>string</i> <a href="#">area area-id interface interface-name</a> <i>reference</i> <a href="#">neighbor router-id statistics option-mismatches</a>
<b>Tree</b>	<a href="#">option-mismatches</a>
<b>Configurable</b>	False

## up-time *number*

<b>Description</b>	The value of up-time indicates the uninterrupted time, in hundredths of seconds, the adjacency to this neighbour has been up.
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">protocols ospf instance name</a> <i>string</i> <a href="#">area area-id interface interface-name</a> <i>reference</i> <a href="#">neighbor router-id up-time</a> <i>number</i>
<b>Tree</b>	<a href="#">up-time</a>
<b>Range</b>	0 to 2147483647
<b>Units</b>	centiseconds

**Configurable** False

## 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](#) *string* [protocols ospf instance name](#) *string* [area area-id](#) [interface interface-name](#) *reference* [neighbor-count](#)

**Tree** [neighbor-count](#)

**Configurable** False

## oper-state keyword

**Description** The OSPF interface state.

**Context** [network-instance name](#) *string* [protocols ospf instance name](#) *string* [area area-id](#) [interface interface-name](#) *reference* [oper-state](#) *keyword*

**Tree** [oper-state](#)

**Options**

- down
- loopback
- waiting
- point-to-point
- designated-router
- backup-designated-router
- other-designated-router

**Configurable** False

## packets

**Description** Packet counters

**Context** [network-instance name](#) *string* [protocols ospf instance name](#) *string* [area area-id](#) [interface interface-name](#) *reference* [packets](#)

**Tree** [packets](#)

**Configurable** False

## discarded

**Description** The total number of OSPF packets discarded since admin-state was last set to 'enabled'.

<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">protocols ospf instance name</a> <i>string</i> <a href="#">area area-id interface interface-name</a> <i>reference</i> <a href="#">packets discarded</a>
<b>Tree</b>	<a href="#">discarded</a>
<b>Configurable</b>	False

### retransmits

<b>Description</b>	The total number of OSPF retransmits since admin-state was last set to 'enabled'.
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">protocols ospf instance name</a> <i>string</i> <a href="#">area area-id interface interface-name</a> <i>reference</i> <a href="#">packets retransmits</a>
<b>Tree</b>	<a href="#">retransmits</a>
<b>Configurable</b>	False

### rx-db-description

<b>Description</b>	The total number of OSPF database description packets received since admin-state was last set to 'enabled'.
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">protocols ospf instance name</a> <i>string</i> <a href="#">area area-id interface interface-name</a> <i>reference</i> <a href="#">packets rx-db-description</a>
<b>Tree</b>	<a href="#">rx-db-description</a>
<b>Configurable</b>	False

### rx-hello

<b>Description</b>	The total number of OSPF hello packets received since admin-state was last set to 'enabled'.
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">protocols ospf instance name</a> <i>string</i> <a href="#">area area-id interface interface-name</a> <i>reference</i> <a href="#">packets rx-hello</a>
<b>Tree</b>	<a href="#">rx-hello</a>
<b>Configurable</b>	False

### rx-ls-ack

<b>Description</b>	The total number of link state acknowledgements received since admin-state was last set to 'enabled'.
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">protocols ospf instance name</a> <i>string</i> <a href="#">area area-id interface interface-name</a> <i>reference</i> <a href="#">packets rx-ls-ack</a>
<b>Tree</b>	<a href="#">rx-ls-ack</a>

**Configurable** False

### 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](#) *string* [protocols ospf instance name](#) *string* [area area-id interface interface-name](#) *reference* [packets rx-ls-request](#)

**Tree** [rx-ls-request](#)

**Configurable** False

### 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](#) *string* [protocols ospf instance name](#) *string* [area area-id interface interface-name](#) *reference* [packets rx-ls-update](#)

**Tree** [rx-ls-update](#)

**Configurable** False

### 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](#) *reference* [packets rx-total](#)

**Tree** [rx-total](#)

**Configurable** False

### 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](#) *reference* [packets tx-db-description](#)

**Tree** [tx-db-description](#)

**Configurable** False

## tx-hello

<b>Description</b>	The total number of OSPF hello packets transmitted since admin-state was last set to 'enabled'.
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">protocols ospf instance name</a> <i>string</i> <a href="#">area area-id</a> <a href="#">interface interface-name</a> <i>reference</i> <a href="#">packets tx-hello</a>
<b>Tree</b>	<a href="#">tx-hello</a>
<b>Configurable</b>	False

## tx-ls-ack

<b>Description</b>	The total number of OSPF link state acknowledgements transmitted since admin-state was last set to 'enabled'.
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">protocols ospf instance name</a> <i>string</i> <a href="#">area area-id</a> <a href="#">interface interface-name</a> <i>reference</i> <a href="#">packets tx-ls-ack</a>
<b>Tree</b>	<a href="#">tx-ls-ack</a>
<b>Configurable</b>	False

## tx-ls-request

<b>Description</b>	The total number of OSPF link state requests (LS-rs) transmitted since admin-state was last set to 'enabled'.
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">protocols ospf instance name</a> <i>string</i> <a href="#">area area-id</a> <a href="#">interface interface-name</a> <i>reference</i> <a href="#">packets tx-ls-request</a>
<b>Tree</b>	<a href="#">tx-ls-request</a>
<b>Configurable</b>	False

## tx-ls-update

<b>Description</b>	The total number of OSPF link state updates (LS-us) transmitted since admin-state was last set to 'enabled'.
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">protocols ospf instance name</a> <i>string</i> <a href="#">area area-id</a> <a href="#">interface interface-name</a> <i>reference</i> <a href="#">packets tx-ls-update</a>
<b>Tree</b>	<a href="#">tx-ls-update</a>
<b>Configurable</b>	False

## tx-total

<b>Description</b>	The total number of OSPF packets transmitted since admin-state was last set to 'enabled'.
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<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">protocols ospf instance name</a> <i>string</i> <a href="#">area area-id interface interface-name</a> <i>reference</i> <a href="#">packets tx-total</a>
<b>Tree</b>	<a href="#">tx-total</a>
<b>Configurable</b>	False

**passive *boolean***

<b>Description</b>	Allow interface to be advertised as an OSPF interface without running the OSPF protocol
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">protocols ospf instance name</a> <i>string</i> <a href="#">area area-id interface interface-name</a> <i>reference</i> <a href="#">passive</a> <i>boolean</i>
<b>Tree</b>	<a href="#">passive</a>
<b>Configurable</b>	True

**priority *number***

<b>Description</b>	Priority of the interface to apply in the designated router election on the subnet
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">protocols ospf instance name</a> <i>string</i> <a href="#">area area-id interface interface-name</a> <i>reference</i> <a href="#">priority</a> <i>number</i>
<b>Tree</b>	<a href="#">priority</a>
<b>Range</b>	0 to 255
<b>Default</b>	1
<b>Configurable</b>	True

**retransmit-interval *number***

<b>Description</b>	Time before OSPF retransmits an unacknowledged LSA to a neighbor
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">protocols ospf instance name</a> <i>string</i> <a href="#">area area-id interface interface-name</a> <i>reference</i> <a href="#">retransmit-interval</a> <i>number</i>
<b>Tree</b>	<a href="#">retransmit-interval</a>
<b>Range</b>	1 to 1800
<b>Default</b>	5
<b>Units</b>	seconds
<b>Configurable</b>	True



## trace-options

<b>Description</b>	Enter the trace-options context
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">protocols ospf instance name</a> <i>string</i> <a href="#">area area-id interface interface-name</a> <i>reference</i> <a href="#">trace-options</a>
<b>Tree</b>	<a href="#">trace-options</a>
<b>Configurable</b>	True

## trace

<b>Description</b>	Tracing parameter flags
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">protocols ospf instance name</a> <i>string</i> <a href="#">area area-id interface interface-name</a> <i>reference</i> <a href="#">trace-options trace</a>
<b>Tree</b>	<a href="#">trace</a>
<b>Configurable</b>	True

## adjacencies

<b>Description</b>	Enable tracing all BGP events.
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">protocols ospf instance name</a> <i>string</i> <a href="#">area area-id interface interface-name</a> <i>reference</i> <a href="#">trace-options trace adjacencies</a>
<b>Tree</b>	<a href="#">adjacencies</a>
<b>Configurable</b>	True

## interfaces

<b>Description</b>	Enable tracing all interface events.
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">protocols ospf instance name</a> <i>string</i> <a href="#">area area-id interface interface-name</a> <i>reference</i> <a href="#">trace-options trace interfaces</a>
<b>Tree</b>	<a href="#">interfaces</a>
<b>Configurable</b>	True

## packet

<b>Description</b>	Trace OSPF Packet types Only one type can be enabled at a time
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">protocols ospf instance name</a> <i>string</i> <a href="#">area area-id interface interface-name</a> <i>reference</i> <a href="#">trace-options trace packet</a>
<b>Tree</b>	<a href="#">packet</a>

**Configurable** True

## detail

**Description** To enable detailed tracing. Includes both received and sent packets.  
**Context** [network-instance name](#) *string* [protocols ospf instance name](#) *string* [area area-id interface interface-name](#) *reference* [trace-options trace packet detail](#)  
**Tree** [detail](#)  
**Configurable** True

## modifier keyword

**Description** Enter the modifier context  
**Context** [network-instance name](#) *string* [protocols ospf instance name](#) *string* [area area-id interface interface-name](#) *reference* [trace-options trace packet modifier keyword](#)  
**Tree** [modifier](#)  
**Options**

- 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

## type keyword

**Description** Enter the type context  
**Context** [network-instance name](#) *string* [protocols ospf instance name](#) *string* [area area-id interface interface-name](#) *reference* [trace-options trace packet type keyword](#)  
**Tree** [type](#)  
**Options**

- 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

### transit-delay *number*

**Description** Time required to transmit an LSA on the interface, virtual link, or sham link

**Context** [network-instance name string protocols ospf instance name string area area-id interface interface-name reference transit-delay number](#)

**Tree** [transit-delay](#)

**Range** 1 to 1800

**Default** 1

**Units** seconds

**Configurable** True

### type *keyword*

**Description** The value of type indicates the operational OSPF interface type.

**Context** [network-instance name string protocols ospf instance name string area area-id interface interface-name reference type keyword](#)

**Tree** [type](#)

**Options**

- broadcast
- point-to-point

**Configurable** False

### last-spf-run-time

**Description** The sys-up-time when intra-area SPF was last run on this area.

**Context** [network-instance name string protocols ospf instance name string area area-id last-spf-run-time](#)

**Tree** [last-spf-run-time](#)

**Configurable** False

### lsa-filter-totals

**Description** The number of LSAs not sent due to area policy.

**Context** [network-instance name](#) *string* [protocols ospf instance name](#) *string* [area area-id](#) [lsa-filter-totals](#)

**Tree** [lsa-filter-totals](#)

**Configurable** False

### export-filtered

**Description** The number of LSAs not sent due to area export policy.

**Context** [network-instance name](#) *string* [protocols ospf instance name](#) *string* [area area-id](#) [lsa-filter-totals](#) [export-filtered](#)

**Tree** [export-filtered](#)

**Configurable** False

### import-filtered

**Description** The number of LSAs not sent due to area import policy.

**Context** [network-instance name](#) *string* [protocols ospf instance name](#) *string* [area area-id](#) [lsa-filter-totals](#) [import-filtered](#)

**Tree** [import-filtered](#)

**Configurable** False

### lsa-totals

**Description** The number of LSAs of each type in this area's database

**Context** [network-instance name](#) *string* [protocols ospf instance name](#) *string* [area area-id](#) [lsa-totals](#)

**Tree** [lsa-totals](#)

**Configurable** False

### area-opaque-lsa

**Description** The number of NSSA LSAs in this area's link-state database.

<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">protocols ospf instance name</a> <i>string</i> <a href="#">area area-id</a> <a href="#">lsa-totals area-opaque-lsa</a>
<b>Tree</b>	<a href="#">area-opaque-lsa</a>
<b>Configurable</b>	False

### asbr-summary-lsa

<b>Description</b>	The number of ASBR summary LSAs in this area's link-state database.
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">protocols ospf instance name</a> <i>string</i> <a href="#">area area-id</a> <a href="#">lsa-totals asbr-summary-lsa</a>
<b>Tree</b>	<a href="#">asbr-summary-lsa</a>
<b>Configurable</b>	False

### e-inter-area-prefix-lsa

<b>Description</b>	The number of OSPFv3 E-inter-area-prefix LSAs in this area's link-state database.
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">protocols ospf instance name</a> <i>string</i> <a href="#">area area-id</a> <a href="#">lsa-totals e-inter-area-prefix-lsa</a>
<b>Tree</b>	<a href="#">e-inter-area-prefix-lsa</a>
<b>Configurable</b>	False

### e-inter-area-router-lsa

<b>Description</b>	The number of OSPFv3 E-inter-area-router LSAs in this area's link-state database.
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">protocols ospf instance name</a> <i>string</i> <a href="#">area area-id</a> <a href="#">lsa-totals e-inter-area-router-lsa</a>
<b>Tree</b>	<a href="#">e-inter-area-router-lsa</a>
<b>Configurable</b>	False

### e-intra-area-prefix-lsa

<b>Description</b>	The number of OSPFv3 E-intra-area-prefix LSAs in this area's link-state database.
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">protocols ospf instance name</a> <i>string</i> <a href="#">area area-id</a> <a href="#">lsa-totals e-intra-area-prefix-lsa</a>
<b>Tree</b>	<a href="#">e-intra-area-prefix-lsa</a>
<b>Configurable</b>	False

### e-network-lsa

<b>Description</b>	The number of OSPFv3 E-network LSAs in this area's link-state database.
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">protocols ospf instance name</a> <i>string</i> <a href="#">area area-id</a> <a href="#">lsa-totals e-network-lsa</a>
<b>Tree</b>	<a href="#">e-network-lsa</a>
<b>Configurable</b>	False

### e-nssa-lsa

<b>Description</b>	The number of OSPFv3 E-NSSA LSAs in this area's link-state database.
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">protocols ospf instance name</a> <i>string</i> <a href="#">area area-id</a> <a href="#">lsa-totals e-nssa-lsa</a>
<b>Tree</b>	<a href="#">e-nssa-lsa</a>
<b>Configurable</b>	False

### e-router-lsa

<b>Description</b>	The number of OSPFv3 E-router LSAs in this area's link-state database.
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">protocols ospf instance name</a> <i>string</i> <a href="#">area area-id</a> <a href="#">lsa-totals e-router-lsa</a>
<b>Tree</b>	<a href="#">e-router-lsa</a>
<b>Configurable</b>	False

### inter-area-prefix-lsa

<b>Description</b>	The number of OSPFv3 inter-area-prefix LSAs in this area's link-state database.
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">protocols ospf instance name</a> <i>string</i> <a href="#">area area-id</a> <a href="#">lsa-totals inter-area-prefix-lsa</a>
<b>Tree</b>	<a href="#">inter-area-prefix-lsa</a>
<b>Configurable</b>	False

### inter-area-router-lsa

<b>Description</b>	The number of OSPFv3 inter-area-router LSAs in this area's link-state database.
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<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">protocols ospf instance name</a> <i>string</i> <a href="#">area area-id</a> <a href="#">lsa-totals inter-area-router-lsa</a>
<b>Tree</b>	<a href="#">inter-area-router-lsa</a>
<b>Configurable</b>	False

### intra-area-prefix-lsa

<b>Description</b>	The number of OSPFv3 intra-area-prefix LSAs in this area's link-state database.
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">protocols ospf instance name</a> <i>string</i> <a href="#">area area-id</a> <a href="#">lsa-totals intra-area-prefix-lsa</a>
<b>Tree</b>	<a href="#">intra-area-prefix-lsa</a>
<b>Configurable</b>	False

### network-lsa

<b>Description</b>	The number of network LSAs in this area's link-state database.
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">protocols ospf instance name</a> <i>string</i> <a href="#">area area-id</a> <a href="#">lsa-totals network-lsa</a>
<b>Tree</b>	<a href="#">network-lsa</a>
<b>Configurable</b>	False

### network-summary-lsa

<b>Description</b>	The number of network summary LSAs in this area's link-state database.
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">protocols ospf instance name</a> <i>string</i> <a href="#">area area-id</a> <a href="#">lsa-totals network-summary-lsa</a>
<b>Tree</b>	<a href="#">network-summary-lsa</a>
<b>Configurable</b>	False

### nssa-lsa

<b>Description</b>	The number of NSSA LSAs in this area's link-state database.
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">protocols ospf instance name</a> <i>string</i> <a href="#">area area-id</a> <a href="#">lsa-totals nssa-lsa</a>
<b>Tree</b>	<a href="#">nssa-lsa</a>
<b>Configurable</b>	False

**router-info-lsa**

<b>Description</b>	The number of OSPFv3 router-info LSAs in this area's link-state database.
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">protocols ospf instance name</a> <i>string</i> <a href="#">area area-id</a> <a href="#">lsa-totals router-info-lsa</a>
<b>Tree</b>	<a href="#">router-info-lsa</a>
<b>Configurable</b>	False

**router-lsa**

<b>Description</b>	The number of router LSAs in this area's link-state database.
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">protocols ospf instance name</a> <i>string</i> <a href="#">area area-id</a> <a href="#">lsa-totals router-lsa</a>
<b>Tree</b>	<a href="#">router-lsa</a>
<b>Configurable</b>	False

**total**

<b>Description</b>	The number of area scope LSAs within this area.
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">protocols ospf instance name</a> <i>string</i> <a href="#">area area-id</a> <a href="#">lsa-totals total</a>
<b>Tree</b>	<a href="#">total</a>
<b>Configurable</b>	False

**total-lsa-cksum-sum** *string*

<b>Description</b>	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.
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">protocols ospf instance name</a> <i>string</i> <a href="#">area area-id</a> <a href="#">lsa-totals total-lsa-cksum-sum</a> <i>string</i>
<b>Tree</b>	<a href="#">total-lsa-cksum-sum</a>
<b>Configurable</b>	False

**unknown-lsa**

<b>Description</b>	The number of unknown LSA advertisements in this area's link-state database.
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<b>Context</b>	<code>network-instance name string protocols ospf instance name string area area-id lsa-totals unknown-lsa</code>
<b>Tree</b>	<code>unknown-lsa</code>
<b>Configurable</b>	False

## nssa

<b>Description</b>	<p>This command creates the context to configure the associated OSPF or OSPF3 area as Not So Stubby Area (NSSA).</p> <p>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 it learns throughout its area and via an ABR to the entire OSPF or OSPF3 domain.</p>
<b>Context</b>	<code>network-instance name string protocols ospf instance name string area area-id nssa</code>
<b>Tree</b>	<code>nssa</code>
<b>Configurable</b>	True

## area-range `ip-prefix-mask (ipv4-prefix | ipv6-prefix)`

<b>Description</b>	Enter the area-range context
<b>Context</b>	<code>network-instance name string protocols ospf instance name string area area-id nssa area-range ip-prefix-mask (ipv4-prefix   ipv6-prefix)</code>
<b>Tree</b>	<code>area-range</code>
<b>Configurable</b>	True

## ip-prefix-mask `(ipv4-prefix | ipv6-prefix)`

<b>Description</b>	The ip-prefix with host bits set to 0
<b>Context</b>	<code>network-instance name string protocols ospf instance name string area area-id nssa area-range ip-prefix-mask (ipv4-prefix   ipv6-prefix)</code>
<b>Configurable</b>	True

## advertise *boolean*

<b>Description</b>	Advertise summarized range of addresses to other areas
<b>Context</b>	<code>network-instance name string protocols ospf instance name string area area-id nssa area-range ip-prefix-mask (ipv4-prefix   ipv6-prefix) advertise boolean</code>

<b>Tree</b>	<a href="#">advertise</a>
<b>Default</b>	true
<b>Configurable</b>	True

### originate-default-route

<b>Description</b>	Enter the originate-default-route context
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">protocols ospf instance name</a> <i>string</i> <a href="#">area area-id nssa originate-default-route</a>
<b>Tree</b>	<a href="#">originate-default-route</a>
<b>Configurable</b>	True

### adjacency-check *boolean*

<b>Description</b>	Default route to remove if there is no adjacency
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">protocols ospf instance name</a> <i>string</i> <a href="#">area area-id nssa originate-default-route adjacency-check</a> <i>boolean</i>
<b>Tree</b>	<a href="#">adjacency-check</a>
<b>Default</b>	true
<b>Configurable</b>	True

### type-nssa *boolean*

<b>Description</b>	Generate a default route using NSSA-LSA type
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">protocols ospf instance name</a> <i>string</i> <a href="#">area area-id nssa originate-default-route type-nssa</a> <i>boolean</i>
<b>Tree</b>	<a href="#">type-nssa</a>
<b>Default</b>	false
<b>Configurable</b>	True

### redistribute-external *boolean*

<b>Description</b>	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
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">protocols ospf instance name</a> <i>string</i> <a href="#">area area-id nssa redistribute-external</a> <i>boolean</i>
<b>Tree</b>	<a href="#">redistribute-external</a>

<b>Default</b>	true
<b>Configurable</b>	True

### summaries *boolean*

<b>Description</b>	Enables sending summary (type 3) advertisements into a stub area or Not So Stubby Area (NSSA) on an Area Border Router (ABR)
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">protocols ospf instance name</a> <i>string</i> <a href="#">area area-id nssa summaries</a> <i>boolean</i>
<b>Tree</b>	<a href="#">summaries</a>
<b>Default</b>	true
<b>Configurable</b>	True

### stub

<b>Description</b>	Enable the stub context
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">protocols ospf instance name</a> <i>string</i> <a href="#">area area-id stub</a>
<b>Tree</b>	<a href="#">stub</a>
<b>Configurable</b>	True

### default-metric *number*

<b>Description</b>	Defines the default OSPF metric for associated stub area
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">protocols ospf instance name</a> <i>string</i> <a href="#">area area-id stub default-metric</a> <i>number</i>
<b>Tree</b>	<a href="#">default-metric</a>
<b>Range</b>	1 to 65535
<b>Default</b>	1
<b>Configurable</b>	True

### summaries *boolean*

<b>Description</b>	Enables sending summary (type 3) advertisements into a stub area or Not So Stubby Area (NSSA) on an Area Border Router (ABR)
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">protocols ospf instance name</a> <i>string</i> <a href="#">area area-id stub summaries</a> <i>boolean</i>
<b>Tree</b>	<a href="#">summaries</a>

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<b>Default</b>	true
<b>Configurable</b>	True

### **area-border-router *boolean***

<b>Description</b>	This indicates whether this router is an area border router.
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">protocols ospf instance name</a> <i>string</i> <a href="#">area-border-router</a> <i>boolean</i>
<b>Tree</b>	<a href="#">area-border-router</a>
<b>Configurable</b>	False

### **as-border-router *boolean***

<b>Description</b>	This indicates whether this router is an AS border router.
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">protocols ospf instance name</a> <i>string</i> <a href="#">as-border-router</a> <i>boolean</i>
<b>Tree</b>	<a href="#">as-border-router</a>
<b>Configurable</b>	False

### **asbr**

<b>Description</b>	Configure the router as an ASBR (Autonomous System Boundary Router)
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">protocols ospf instance name</a> <i>string</i> <a href="#">asbr</a>
<b>Tree</b>	<a href="#">asbr</a>
<b>Configurable</b>	True

### **trace-path (*number* | *keyword*)**

<b>Description</b>	Domain identity
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">protocols ospf instance name</a> <i>string</i> <a href="#">asbr</a> <a href="#">trace-path</a> ( <i>number</i>   <i>keyword</i> )
<b>Tree</b>	<a href="#">trace-path</a>
<b>Range</b>	0 to 31
<b>Default</b>	none
<b>Options</b>	<ul style="list-style-type: none"> <li>• none</li> </ul>
<b>Configurable</b>	True

**backbone-router *boolean***

<b>Description</b>	This indicates whether or not this router is configured as an OSPF back bone router.
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">protocols ospf instance name</a> <i>string</i> <a href="#">backbone-router</a> <i>boolean</i>
<b>Tree</b>	<a href="#">backbone-router</a>
<b>Configurable</b>	False

**export-limit**

<b>Description</b>	Enter the export-limit context
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">protocols ospf instance name</a> <i>string</i> <a href="#">export-limit</a>
<b>Tree</b>	<a href="#">export-limit</a>
<b>Configurable</b>	True

**log-percent *number***

<b>Description</b>	Export limit at which warning a log message and SNMP notification are sent
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">protocols ospf instance name</a> <i>string</i> <a href="#">export-limit log-percent</a> <i>number</i>
<b>Tree</b>	<a href="#">log-percent</a>
<b>Range</b>	1 to 100
<b>Configurable</b>	True

**number *number***

<b>Description</b>	Maximum number of routes or prefixes to be exported into IGP instance from route table
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">protocols ospf instance name</a> <i>string</i> <a href="#">export-limit number</a> <i>number</i>
<b>Tree</b>	<a href="#">number</a>
<b>Range</b>	1 to 4294967295
<b>Configurable</b>	True

**export-policy *reference***

<b>Description</b>	Apply an export policy to redistribute routes into OSPF
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">protocols ospf instance name</a> <i>string</i> <a href="#">export-policy reference</a>
<b>Tree</b>	<a href="#">export-policy</a>
<b>Reference</b>	<a href="#">routing-policy policy name</a> <i>string</i> <i>string</i>
<b>Configurable</b>	True

**extern-lsa-cksum-sum *string***

<b>Description</b>	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.
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">protocols ospf instance name</a> <i>string</i> <a href="#">extern-lsa-cksum-sum</a> <i>string</i>
<b>Tree</b>	<a href="#">extern-lsa-cksum-sum</a>
<b>Configurable</b>	False

**extern-lsa-count**

<b>Description</b>	The value of extern-lsa-count indicates the number of external LS-as (LS type 0x4005) in the link-state database
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">protocols ospf instance name</a> <i>string</i> <a href="#">extern-lsa-count</a>
<b>Tree</b>	<a href="#">extern-lsa-count</a>
<b>Configurable</b>	False

**external-db-overflow**

<b>Description</b>	Enable the external-db-overflow context
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">protocols ospf instance name</a> <i>string</i> <a href="#">external-db-overflow</a>
<b>Tree</b>	<a href="#">external-db-overflow</a>
<b>Configurable</b>	True

### **interval number**

<b>Description</b>	Enter the interval context
<b>Context</b>	<a href="#">network-instance name string protocols ospf instance name string external-db-overflow interval number</a>
<b>Tree</b>	<a href="#">interval</a>
<b>Range</b>	0 to 2147483647
<b>Default</b>	0
<b>Units</b>	seconds
<b>Configurable</b>	True

### **limit number**

<b>Description</b>	Enter the limit context
<b>Context</b>	<a href="#">network-instance name string protocols ospf instance name string external-db-overflow limit number</a>
<b>Tree</b>	<a href="#">limit</a>
<b>Range</b>	0 to 2147483647
<b>Default</b>	0
<b>Configurable</b>	True

### **external-preference number**

<b>Description</b>	Configure the route preference associated with OSPF external routes
<b>Context</b>	<a href="#">network-instance name string protocols ospf instance name string external-preference number</a>
<b>Tree</b>	<a href="#">external-preference</a>
<b>Default</b>	150
<b>Configurable</b>	True

### **graceful-restart**

<b>Description</b>	Container for options related to OSPF graceful restart
<b>Context</b>	<a href="#">network-instance name string protocols ospf instance name string graceful-restart</a>
<b>Tree</b>	<a href="#">graceful-restart</a>
<b>Configurable</b>	True

**helper-mode *boolean***

<b>Description</b>	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.
<b>Context</b>	<a href="#">network-instance name <i>string</i> protocols ospf instance name <i>string</i> graceful-restart helper-mode <i>boolean</i></a>
<b>Tree</b>	<a href="#">helper-mode</a>
<b>Default</b>	false
<b>Configurable</b>	True

**strict-lsa-checking *boolean***

<b>Description</b>	Enter the strict-lsa-checking context
<b>Context</b>	<a href="#">network-instance name <i>string</i> protocols ospf instance name <i>string</i> graceful-restart strict-lsa-checking <i>boolean</i></a>
<b>Tree</b>	<a href="#">strict-lsa-checking</a>
<b>Default</b>	false
<b>Configurable</b>	True

**instance-id *number***

<b>Description</b>	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.
<b>Context</b>	<a href="#">network-instance name <i>string</i> protocols ospf instance name <i>string</i> instance-id <i>number</i></a>
<b>Tree</b>	<a href="#">instance-id</a>
<b>Range</b>	0 to 255
<b>Configurable</b>	True

**last-disabled-reason *string***

<b>Description</b>	Reason why the disabled state was entered the last time.
<b>Context</b>	<a href="#">network-instance name <i>string</i> protocols ospf instance name <i>string</i> last-disabled-reason <i>string</i></a>
<b>Tree</b>	<a href="#">last-disabled-reason</a>
<b>String Length</b>	0 to 20



<b>Configurable</b>	False
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### **last-enabled-time *string***

<b>Description</b>	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', the OSPF counters are stopped when admin-state is reset to 'enabled', the counters are reset to zero.
<b>Context</b>	<a href="#">network-instance name <i>string</i></a> <a href="#">protocols ospf instance name <i>string</i></a> <a href="#">last-enabled-time <i>string</i></a>
<b>Tree</b>	<a href="#">last-enabled-time</a>
<b>String Length</b>	20 to 32
<b>Configurable</b>	False

### **last-overflow-entered-time *string***

<b>Description</b>	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.
<b>Context</b>	<a href="#">network-instance name <i>string</i></a> <a href="#">protocols ospf instance name <i>string</i></a> <a href="#">last-overflow-entered-time <i>string</i></a>
<b>Tree</b>	<a href="#">last-overflow-entered-time</a>
<b>String Length</b>	20 to 32
<b>Configurable</b>	False

### **last-overflow-exit-time *string***

<b>Description</b>	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.
<b>Context</b>	<a href="#">network-instance name <i>string</i></a> <a href="#">protocols ospf instance name <i>string</i></a> <a href="#">last-overflow-exit-time <i>string</i></a>
<b>Tree</b>	<a href="#">last-overflow-exit-time</a>
<b>String Length</b>	20 to 32
<b>Configurable</b>	False

**last-overload-enter-code *keyword***

<b>Description</b>	The value of last-overload-enter-code indicates the condition which caused OSPF to get into overload.
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">protocols ospf instance name</a> <i>string</i> <a href="#">last-overload-enter-code</a> <i>keyword</i>
<b>Tree</b>	<a href="#">last-overload-enter-code</a>
<b>Options</b>	<ul style="list-style-type: none"> <li>• none</li> <li>• spf-failed</li> <li>• boot-overload</li> <li>• manual-overload</li> <li>• sfm-overload</li> <li>• fib-add-fail</li> <li>• rtm-add-fail</li> <li>• rtr-adv-lsa-limit</li> </ul>
<b>Configurable</b>	False

**last-overload-entered-time *string***

<b>Description</b>	The value of last-overload-entrd-time indicates the time at which the system last went into overload state.
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">protocols ospf instance name</a> <i>string</i> <a href="#">last-overload-entered-time</a> <i>string</i>
<b>Tree</b>	<a href="#">last-overload-entered-time</a>
<b>String Length</b>	20 to 32
<b>Configurable</b>	False

**last-overload-exit-code *keyword***

<b>Description</b>	The value of last-overload-exit-code indicates the reason why OSPF came out of overload state the last time, since reset.
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">protocols ospf instance name</a> <i>string</i> <a href="#">last-overload-exit-code</a> <i>keyword</i>
<b>Tree</b>	<a href="#">last-overload-exit-code</a>
<b>Options</b>	<ul style="list-style-type: none"> <li>• none</li> <li>• bgp-sig-recv</li> <li>• timer-expired</li> <li>• manual-exit</li> </ul>

	<ul style="list-style-type: none"> <li>• sfm-overload-done</li> </ul>
<b>Configurable</b>	False

### last-overload-exit-time *string*

<b>Description</b>	The value of last-overload-exit-time indicates the time at which the system last came out of overload state.
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">protocols ospf instance name</a> <i>string</i> <a href="#">last-overload-exit-time</a> <i>string</i>
<b>Tree</b>	<a href="#">last-overload-exit-time</a>
<b>String Length</b>	20 to 32
<b>Configurable</b>	False

### ldp-synchronization



**Note:**

This command is available for the following platforms:

- 7250 IXR-6
- 7250 IXR-10

<b>Description</b>	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.
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">protocols ospf instance name</a> <i>string</i> <a href="#">ldp-synchronization</a>
<b>Tree</b>	<a href="#">ldp-synchronization</a>
<b>Configurable</b>	True

### end-of-lib *boolean*



**Note:**

This command is available for the following platforms:

- 7250 IXR-6
- 7250 IXR-10

<b>Description</b>	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.
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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.

<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">protocols ospf instance name</a> <i>string</i> <a href="#">ldp-synchronization end-of-lib</a> <i>boolean</i>
<b>Tree</b>	<a href="#">end-of-lib</a>
<b>Default</b>	false
<b>Configurable</b>	True

## hold-down-timer *number*



### Note:

This command is available for the following platforms:

- 7250 IXR-6
- 7250 IXR-10

<b>Description</b>	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.
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">protocols ospf instance name</a> <i>string</i> <a href="#">ldp-synchronization hold-down-timer</a> <i>number</i>
<b>Tree</b>	<a href="#">hold-down-timer</a>
<b>Range</b>	1 to 1800
<b>Default</b>	60
<b>Units</b>	seconds
<b>Configurable</b>	True

## lsa-totals

<b>Description</b>	The number of LSAs of each type in this instance's AS database
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">protocols ospf instance name</a> <i>string</i> <a href="#">lsa-totals</a>
<b>Tree</b>	<a href="#">lsa-totals</a>
<b>Configurable</b>	False

## as-external-lsa

<b>Description</b>	The number of AS External LSAs in this instance's AS database.
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">protocols ospf instance name</a> <i>string</i> <a href="#">lsa-totals as-external-lsa</a>

<b>Tree</b>	<a href="#">as-external-lsa</a>
<b>Configurable</b>	False

### as-opaque-lsa

<b>Description</b>	The number of AS opaque LSAs in this instance's AS database.
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">protocols ospf instance name</a> <i>string</i> <a href="#">lsa-totals as-opaque-lsa</a>
<b>Tree</b>	<a href="#">as-opaque-lsa</a>
<b>Configurable</b>	False

### e-as-external-lsa

<b>Description</b>	The number of extended AS External LSAs in this instance's AS database.
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">protocols ospf instance name</a> <i>string</i> <a href="#">lsa-totals e-as-external-lsa</a>
<b>Tree</b>	<a href="#">e-as-external-lsa</a>
<b>Configurable</b>	False

### router-info-lsa

<b>Description</b>	The number of AS scoped router information LSAs in this instance's AS database.
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">protocols ospf instance name</a> <i>string</i> <a href="#">lsa-totals router-info-lsa</a>
<b>Tree</b>	<a href="#">router-info-lsa</a>
<b>Configurable</b>	False

### max-ecmp-paths *number*

<b>Description</b>	The maximum number of ECMP next-hops to program into the FIB for every IP prefix
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">protocols ospf instance name</a> <i>string</i> <a href="#">max-ecmp-paths</a> <i>number</i>
<b>Tree</b>	<a href="#">max-ecmp-paths</a>
<b>Range</b>	1 to 64
<b>Default</b>	1
<b>Configurable</b>	True

**new-lsas-originated**

<b>Description</b>	The number of new link-state advertisements that have been originated. This number is incremented each time the router originates a new LSA.
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">protocols ospf instance name</a> <i>string</i> <a href="#">new-lsas-originated</a>
<b>Tree</b>	<a href="#">new-lsas-originated</a>
<b>Configurable</b>	False

**new-lsas-received**

<b>Description</b>	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.
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">protocols ospf instance name</a> <i>string</i> <a href="#">new-lsas-received</a>
<b>Tree</b>	<a href="#">new-lsas-received</a>
<b>Configurable</b>	False

**opaque-lsa-support *boolean***

<b>Description</b>	The value of opaque-lsa-support indicates the router's support for opaque LSA types. this object is valid only when version is 'version2'.
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">protocols ospf instance name</a> <i>string</i> <a href="#">opaque-lsa-support</a> <i>boolean</i>
<b>Tree</b>	<a href="#">opaque-lsa-support</a>
<b>Configurable</b>	False

**oper-state *keyword***

<b>Description</b>	Used to report operational state of the OSPF instance
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">protocols ospf instance name</a> <i>string</i> <a href="#">oper-state</a> <i>keyword</i>
<b>Tree</b>	<a href="#">oper-state</a>
<b>Options</b>	<ul style="list-style-type: none"> <li>• enable</li> <li>• disable</li> </ul>
<b>Configurable</b>	False

**overflow *boolean***

<b>Description</b>	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.
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">protocols ospf instance name</a> <i>string</i> <a href="#">overflow boolean</a>
<b>Tree</b>	<a href="#">overflow</a>
<b>Configurable</b>	False

**overload**

<b>Description</b>	Enter the overload context
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">protocols ospf instance name</a> <i>string</i> <a href="#">overload</a>
<b>Tree</b>	<a href="#">overload</a>
<b>Configurable</b>	True

**active *boolean***

<b>Description</b>	Enter the active context
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">protocols ospf instance name</a> <i>string</i> <a href="#">overload active boolean</a>
<b>Tree</b>	<a href="#">active</a>
<b>Default</b>	false
<b>Configurable</b>	True

**overload-include-ext-1 *boolean***

<b>Description</b>	Enter the overload-include-ext-1 context
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">protocols ospf instance name</a> <i>string</i> <a href="#">overload overload-include-ext-1 boolean</a>
<b>Tree</b>	<a href="#">overload-include-ext-1</a>
<b>Default</b>	false
<b>Configurable</b>	True

**overload-include-ext-2 *boolean***

<b>Description</b>	Enter the overload-include-ext-2 context
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<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">protocols ospf instance name</a> <i>string</i> <a href="#">overload</a> <a href="#">overload-include-ext-2</a> <i>boolean</i>
<b>Tree</b>	<a href="#">overload-include-ext-2</a>
<b>Default</b>	false
<b>Configurable</b>	True

### **overload-include-stub** *boolean*

<b>Description</b>	Enter the overload-include-stub context
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">protocols ospf instance name</a> <i>string</i> <a href="#">overload</a> <a href="#">overload-include-stub</a> <i>boolean</i>
<b>Tree</b>	<a href="#">overload-include-stub</a>
<b>Default</b>	false
<b>Configurable</b>	True

### **overload-on-boot**

<b>Description</b>	Enable the overload-on-boot context
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">protocols ospf instance name</a> <i>string</i> <a href="#">overload</a> <a href="#">overload-on-boot</a>
<b>Tree</b>	<a href="#">overload-on-boot</a>
<b>Configurable</b>	True

### **timeout** *number*

<b>Description</b>	Enter the timeout context
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">protocols ospf instance name</a> <i>string</i> <a href="#">overload</a> <a href="#">overload-on-boot</a> <a href="#">timeout</a> <i>number</i>
<b>Tree</b>	<a href="#">timeout</a>
<b>Range</b>	60 to 1800
<b>Default</b>	60
<b>Units</b>	seconds
<b>Configurable</b>	True

### **rtr-adv-lsa-limit**

<b>Description</b>	Enter the rtr-adv-lsa-limit context
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<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">protocols ospf instance name</a> <i>string</i> <a href="#">overload</a> <a href="#">rtr-adv-lsa-limit</a>
<b>Tree</b>	<a href="#">rtr-adv-lsa-limit</a>
<b>Configurable</b>	True

**log-only *boolean***

<b>Description</b>	Enter the log-only context
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">protocols ospf instance name</a> <i>string</i> <a href="#">overload</a> <a href="#">rtr-adv-lsa-limit</a> <a href="#">log-only</a> <i>boolean</i>
<b>Tree</b>	<a href="#">log-only</a>
<b>Configurable</b>	True

**max-lsa-count *number***

<b>Description</b>	Enter the max-lsa-count context
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">protocols ospf instance name</a> <i>string</i> <a href="#">overload</a> <a href="#">rtr-adv-lsa-limit</a> <a href="#">max-lsa-count</a> <i>number</i>
<b>Tree</b>	<a href="#">max-lsa-count</a>
<b>Range</b>	1 to 4294967295
<b>Configurable</b>	True

**overload-timeout *number***

<b>Description</b>	Enter the overload-timeout context
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">protocols ospf instance name</a> <i>string</i> <a href="#">overload</a> <a href="#">rtr-adv-lsa-limit</a> <a href="#">overload-timeout</a> <i>number</i>
<b>Tree</b>	<a href="#">overload-timeout</a>
<b>Range</b>	1 to 1800
<b>Configurable</b>	True

**warning-threshold *number***

<b>Description</b>	Enter the warning-threshold context
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">protocols ospf instance name</a> <i>string</i> <a href="#">overload</a> <a href="#">rtr-adv-lsa-limit</a> <a href="#">warning-threshold</a> <i>number</i>
<b>Tree</b>	<a href="#">warning-threshold</a>
<b>Range</b>	0 to 100

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<b>Default</b>	0
<b>Configurable</b>	True

### overload-rem-interval *number*

<b>Description</b>	The value of overload-rem-interval 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.
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">protocols ospf instance name</a> <i>string</i> <a href="#">overload-rem-interval</a> <i>number</i>
<b>Tree</b>	<a href="#">overload-rem-interval</a>
<b>Range</b>	0 to 65535
<b>Units</b>	seconds
<b>Configurable</b>	False

### overload-state *keyword*

<b>Description</b>	The value of overload-oper-state indicates whether or not the OSPF application is presently in overload state or not.
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">protocols ospf instance name</a> <i>string</i> <a href="#">overload-state</a> <i>keyword</i>
<b>Tree</b>	<a href="#">overload-state</a>
<b>Options</b>	<ul style="list-style-type: none"> <li>• overload</li> <li>• no-overload</li> </ul>
<b>Configurable</b>	False

### ovld-lsa-limit-rem-interval *number*

<b>Description</b>	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.
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">protocols ospf instance name</a> <i>string</i> <a href="#">ovld-lsa-limit-rem-interval</a> <i>number</i>
<b>Tree</b>	<a href="#">ovld-lsa-limit-rem-interval</a>
<b>Range</b>	0 to 65535
<b>Units</b>	seconds
<b>Configurable</b>	False

**preference *number***

<b>Description</b>	Sets the route preference for OSPF sourced routes
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">protocols ospf instance name</a> <i>string</i> <a href="#">preference</a> <i>number</i>
<b>Tree</b>	<a href="#">preference</a>
<b>Range</b>	1 to 255
<b>Default</b>	10
<b>Configurable</b>	True

**reference-bandwidth *number***

<b>Description</b>	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: $\text{cost} = \text{reference-bandwidth} / \text{bandwidth}$  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, OSPF automatically reverts to the maximum configurable cost metric.
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">protocols ospf instance name</a> <i>string</i> <a href="#">reference-bandwidth</a> <i>number</i>
<b>Tree</b>	<a href="#">reference-bandwidth</a>
<b>Range</b>	1 to 8000000000
<b>Default</b>	400000000
<b>Units</b>	kbps
<b>Configurable</b>	True

**router-id**

<b>Description</b>	Enter the router-id context
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">protocols ospf instance name</a> <i>string</i> <a href="#">router-id</a>
<b>Tree</b>	<a href="#">router-id</a>
<b>Configurable</b>	True

**routes-submitted**

<b>Description</b>	The value of routes-submitted indicates the number of routes submitted to the route table manager (RTM) by this instance of OSPF.
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">protocols ospf instance name</a> <i>string</i> <a href="#">routes-submitted</a>
<b>Tree</b>	<a href="#">routes-submitted</a>
<b>Configurable</b>	False

**spf**

<b>Description</b>	SPF related information
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">protocols ospf instance name</a> <i>string</i> <a href="#">spf</a>
<b>Tree</b>	<a href="#">spf</a>
<b>Configurable</b>	False

**avg-spf-run-interval *number***

<b>Description</b>	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.
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">protocols ospf instance name</a> <i>string</i> <a href="#">spf avg-spf-run-interval</a> <i>number</i>
<b>Tree</b>	<a href="#">avg-spf-run-interval</a>
<b>Range</b>	0 to 2147483647
<b>Units</b>	centiseconds
<b>Configurable</b>	False

**ext-spf-runs**

<b>Description</b>	The total number of times that only the external portion of the SPF has been run since OSPF was last enabled.
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">protocols ospf instance name</a> <i>string</i> <a href="#">spf ext-spf-runs</a>
<b>Tree</b>	<a href="#">ext-spf-runs</a>
<b>Configurable</b>	False

**full-spf-runs**

<b>Description</b>	The total number of times that complete SPF has been run on the router since OSPF was last enabled.
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">protocols ospf instance name</a> <i>string</i> <a href="#">spf full-spf-runs</a>
<b>Tree</b>	<a href="#">full-spf-runs</a>
<b>Configurable</b>	False

**incremental-ext-spf-runs**

<b>Description</b>	The total number of incremental SPF runs triggered by new or updated external LS-as.
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">protocols ospf instance name</a> <i>string</i> <a href="#">spf incremental-ext-spf-runs</a>
<b>Tree</b>	<a href="#">incremental-ext-spf-runs</a>
<b>Configurable</b>	False

**incremental-inter-spf-runs**

<b>Description</b>	The total number of incremental SPF runs triggered by new or updated inter-area prefix or inter-area router LS-as.
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">protocols ospf instance name</a> <i>string</i> <a href="#">spf incremental-inter-spf-runs</a>
<b>Tree</b>	<a href="#">incremental-inter-spf-runs</a>
<b>Configurable</b>	False

**last-ext-spf**

<b>Description</b>	Information about the last external SPF run
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">protocols ospf instance name</a> <i>string</i> <a href="#">spf last-ext-spf</a>
<b>Tree</b>	<a href="#">last-ext-spf</a>
<b>Configurable</b>	False

**interval *number***

<b>Description</b>	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.
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<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">protocols ospf instance name</a> <i>string</i> <a href="#">spf last-ext-spf interval</a> <i>number</i>
<b>Tree</b>	<a href="#">interval</a>
<b>Range</b>	0 to 2147483647
<b>Units</b>	centiseconds
<b>Configurable</b>	False

**run-time** *string*

<b>Description</b>	The value of last-ext-spf-run-time indicates the value of sys-up-time when the external OSPF dijkstra (SPF) was last run.
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">protocols ospf instance name</a> <i>string</i> <a href="#">spf last-ext-spf run-time</a> <i>string</i>
<b>Tree</b>	<a href="#">run-time</a>
<b>String Length</b>	20 to 32
<b>Configurable</b>	False

**last-full-spf**

<b>Description</b>	Information about the last full SPF run
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">protocols ospf instance name</a> <i>string</i> <a href="#">spf last-full-spf</a>
<b>Tree</b>	<a href="#">last-full-spf</a>
<b>Configurable</b>	False

**extern-spf-time** *number*

<b>Description</b>	Time it took, in hundredths of seconds, to complete the external LSA calculations.
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">protocols ospf instance name</a> <i>string</i> <a href="#">spf last-full-spf extern-spf-time</a> <i>number</i>
<b>Tree</b>	<a href="#">extern-spf-time</a>
<b>Range</b>	0 to 2147483647
<b>Units</b>	centiseconds
<b>Configurable</b>	False

**inter-spf-time *number***

<b>Description</b>	Time it took, in hundredths of seconds, to complete the inter-area SPF calculations.
<b>Context</b>	<a href="#">network-instance name <i>string</i> protocols ospf instance name <i>string</i> spf last-full-spf inter-spf-time <i>number</i></a>
<b>Tree</b>	<a href="#">inter-spf-time</a>
<b>Range</b>	0 to 2147483647
<b>Units</b>	centiseconds
<b>Configurable</b>	False

**intra-spf-time *number***

<b>Description</b>	Time it took, in hundredths of seconds, to complete the intra-area SPF calculations.
<b>Context</b>	<a href="#">network-instance name <i>string</i> protocols ospf instance name <i>string</i> spf last-full-spf intra-spf-time <i>number</i></a>
<b>Tree</b>	<a href="#">intra-spf-time</a>
<b>Range</b>	0 to 2147483647
<b>Units</b>	centiseconds
<b>Configurable</b>	False

**rtm-update-time *number***

<b>Description</b>	Time it took, in hundredths of seconds, to complete the RTM updates.
<b>Context</b>	<a href="#">network-instance name <i>string</i> protocols ospf instance name <i>string</i> spf last-full-spf rtm-update-time <i>number</i></a>
<b>Tree</b>	<a href="#">rtm-update-time</a>
<b>Range</b>	0 to 2147483647
<b>Units</b>	centiseconds
<b>Configurable</b>	False

**run-time *string***

<b>Description</b>	The value of last-full-spf-run-time indicates the time at which the system last performed a full dijkstra (SPF) run.
<b>Context</b>	<a href="#">network-instance name <i>string</i> protocols ospf instance name <i>string</i> spf last-full-spf run-time <i>string</i></a>
<b>Tree</b>	<a href="#">run-time</a>

<b>String Length</b>	20 to 32
<b>Configurable</b>	False

### **total-time *number***

<b>Description</b>	Time it took, in hundredths of seconds, to complete the last SPF run completely.
<b>Context</b>	<a href="#">network-instance name string protocols ospf instance name string spf last-full-spf total-time number</a>
<b>Tree</b>	<a href="#">total-time</a>
<b>Range</b>	0 to 2147483647
<b>Units</b>	centiseconds
<b>Configurable</b>	False

### **max-spf-run-interval *number***

<b>Description</b>	The value of max-spf-run-interval indicates the maximum time, in hundredths of seconds, used to perform a total SPF calculation.
<b>Context</b>	<a href="#">network-instance name string protocols ospf instance name string spf max-spf-run-interval number</a>
<b>Tree</b>	<a href="#">max-spf-run-interval</a>
<b>Range</b>	0 to 2147483647
<b>Units</b>	centiseconds
<b>Configurable</b>	False

### **min-spf-run-interval *number***

<b>Description</b>	The value of min-spf-run-interval indicates the minimum time, in hundredths of seconds, used to perform a total SPF calculation.
<b>Context</b>	<a href="#">network-instance name string protocols ospf instance name string spf min-spf-run-interval number</a>
<b>Tree</b>	<a href="#">min-spf-run-interval</a>
<b>Range</b>	0 to 2147483647
<b>Units</b>	centiseconds
<b>Configurable</b>	False



**spf-attempts-failed**

<b>Description</b>	The number of times an attempt to run SPF has failed because SPF runs have been stopped as a result of insufficient memory resources.
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">protocols ospf instance name</a> <i>string</i> <a href="#">spf spf-attempts-failed</a>
<b>Tree</b>	<a href="#">spf-attempts-failed</a>
<b>Configurable</b>	False

**timers**

<b>Description</b>	Enter the timers context
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">protocols ospf instance name</a> <i>string</i> <a href="#">timers</a>
<b>Tree</b>	<a href="#">timers</a>
<b>Configurable</b>	True

**incremental-spf-wait *number***

<b>Description</b>	Delay time before an incremental SPF calculation is started
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">protocols ospf instance name</a> <i>string</i> <a href="#">timers incremental-spf-wait</a> <i>number</i>
<b>Tree</b>	<a href="#">incremental-spf-wait</a>
<b>Range</b>	0 to 1000
<b>Default</b>	1000
<b>Configurable</b>	True

**lsa-accumulate *number***

<b>Description</b>	Delay time for accumulating multiple LSAs before advertising them to neighbors
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">protocols ospf instance name</a> <i>string</i> <a href="#">timers lsa-accumulate</a> <i>number</i>
<b>Tree</b>	<a href="#">lsa-accumulate</a>
<b>Range</b>	0 to 1000
<b>Default</b>	1000
<b>Configurable</b>	True

**Isa-arrival *number***

<b>Description</b>	Minimum delay between receipt of the same LSAs arriving from neighbors
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">protocols ospf instance name</a> <i>string</i> <a href="#">timers isa-arrival number</a>
<b>Tree</b>	<a href="#">isa-arrival</a>
<b>Range</b>	0 to 600000
<b>Default</b>	1000
<b>Configurable</b>	True

**Isa-generate**

<b>Description</b>	Enter the isa-generate context
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">protocols ospf instance name</a> <i>string</i> <a href="#">timers isa-generate</a>
<b>Tree</b>	<a href="#">isa-generate</a>
<b>Configurable</b>	True

**Isa-initial-wait *number***

<b>Description</b>	First waiting period between link state advertisements LSA originates
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">protocols ospf instance name</a> <i>string</i> <a href="#">timers isa-generate isa-initial-wait number</a>
<b>Tree</b>	<a href="#">isa-initial-wait</a>
<b>Range</b>	10 to 600000
<b>Default</b>	5000
<b>Units</b>	milliseconds
<b>Configurable</b>	True

**Isa-second-wait *number***

<b>Description</b>	Hold time between the first and second LSA generation
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">protocols ospf instance name</a> <i>string</i> <a href="#">timers isa-generate isa-second-wait number</a>
<b>Tree</b>	<a href="#">isa-second-wait</a>
<b>Range</b>	10 to 600000
<b>Default</b>	5000
<b>Units</b>	milliseconds

<b>Configurable</b>	True
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### **max-lsa-wait *number***

<b>Description</b>	Maximum time between two consecutive occurrences of an LSA being generated
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">protocols ospf instance name</a> <i>string</i> <a href="#">timers lsa-generate max-lsa-wait</a> <i>number</i>
<b>Tree</b>	<a href="#">max-lsa-wait</a>
<b>Range</b>	10 to 600000
<b>Default</b>	5000
<b>Units</b>	milliseconds
<b>Configurable</b>	True

### **redistribute-delay *number***

<b>Description</b>	Hold down timer for external routes that are redistributed in OSPF
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">protocols ospf instance name</a> <i>string</i> <a href="#">timers redistribute-delay</a> <i>number</i>
<b>Tree</b>	<a href="#">redistribute-delay</a>
<b>Range</b>	0 to 1000
<b>Default</b>	1000
<b>Configurable</b>	True

### **spf-wait**

<b>Description</b>	Enter the spf-wait context
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">protocols ospf instance name</a> <i>string</i> <a href="#">timers spf-wait</a>
<b>Tree</b>	<a href="#">spf-wait</a>
<b>Configurable</b>	True

### **spf-initial-wait *number***

<b>Description</b>	Initial SPF calculation delay after a topology change
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">protocols ospf instance name</a> <i>string</i> <a href="#">timers spf-wait spf-initial-wait</a> <i>number</i>
<b>Tree</b>	<a href="#">spf-initial-wait</a>

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<b>Range</b>	10 to 100000
<b>Default</b>	1000
<b>Units</b>	milliseconds
<b>Configurable</b>	True

### **spf-max-wait *number***

<b>Description</b>	Maximum interval between two consecutive SPF calculations
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">protocols ospf instance name</a> <i>string</i> <a href="#">timers spf-wait spf-max-wait</a> <i>number</i>
<b>Tree</b>	<a href="#">spf-max-wait</a>
<b>Range</b>	10 to 120000
<b>Default</b>	10000
<b>Units</b>	milliseconds
<b>Configurable</b>	True

### **spf-second-wait *number***

<b>Description</b>	Hold time between the first and second SPF calculation
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">protocols ospf instance name</a> <i>string</i> <a href="#">timers spf-wait spf-second-wait</a> <i>number</i>
<b>Tree</b>	<a href="#">spf-second-wait</a>
<b>Range</b>	10 to 100000
<b>Default</b>	1000
<b>Units</b>	milliseconds
<b>Configurable</b>	True

### **total-exported-routes**

<b>Description</b>	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.
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">protocols ospf instance name</a> <i>string</i> <a href="#">total-exported-routes</a>
<b>Tree</b>	<a href="#">total-exported-routes</a>
<b>Configurable</b>	False

## trace-options

<b>Description</b>	Enter the trace-options context
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">protocols ospf instance name</a> <i>string</i> <a href="#">trace-options</a>
<b>Tree</b>	<a href="#">trace-options</a>
<b>Configurable</b>	True

## trace

<b>Description</b>	Tracing parameter flags
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">protocols ospf instance name</a> <i>string</i> <a href="#">trace-options trace</a>
<b>Tree</b>	<a href="#">trace</a>
<b>Configurable</b>	True

## adjacencies

<b>Description</b>	Enable tracing all BGP events.
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">protocols ospf instance name</a> <i>string</i> <a href="#">trace-options trace adjacencies</a>
<b>Tree</b>	<a href="#">adjacencies</a>
<b>Configurable</b>	True

## graceful-restart

<b>Description</b>	Enable tracing all graceful-restart events.
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">protocols ospf instance name</a> <i>string</i> <a href="#">trace-options trace graceful-restart</a>
<b>Tree</b>	<a href="#">graceful-restart</a>
<b>Configurable</b>	True

## interfaces

<b>Description</b>	Enable tracing all interface events.
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">protocols ospf instance name</a> <i>string</i> <a href="#">trace-options trace interfaces</a>
<b>Tree</b>	<a href="#">interfaces</a>

**Configurable** True

## lsdb

**Description** Trace OSPF LSDB events Only one type can be enabled at a time  
**Context** [network-instance name string protocols ospf instance name string trace-options trace lsdb](#)  
**Tree** [lsdb](#)  
**Configurable** True

## link-state-id *string*

**Description** Enter the link-state-id context  
**Context** [network-instance name string protocols ospf instance name string trace-options trace lsdb link-state-id string](#)  
**Tree** [link-state-id](#)  
**Configurable** True

## router-id *string*

**Description** Enter the router-id context  
**Context** [network-instance name string protocols ospf instance name string trace-options trace lsdb router-id string](#)  
**Tree** [router-id](#)  
**Configurable** True

## type *keyword*

**Description** Enter the type context  
**Context** [network-instance name string protocols ospf instance name string trace-options trace lsdb type keyword](#)  
**Tree** [type](#)  
**Options**

- 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

## 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

## 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

## 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

### **modifier keyword**

**Description** Enter the modifier context

**Context** [network-instance name string protocols ospf instance name string trace-options trace packet modifier keyword](#)

**Tree** [modifier](#)

- Options**
- 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

### **type keyword**

**Description** Enter the type context

**Context** [network-instance name string protocols ospf instance name string trace-options trace packet type keyword](#)

**Tree** [type](#)

- Options**
- 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



<b>Configurable</b>	True
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## routes

<b>Description</b>	Enable the routes context
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">protocols ospf instance name</a> <i>string</i> <a href="#">trace-options trace routes</a>
<b>Tree</b>	<a href="#">routes</a>
<b>Configurable</b>	True

## dest-address (*ipv4-address* | *ipv6-address*)

<b>Description</b>	Enter the dest-address context
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">protocols ospf instance name</a> <i>string</i> <a href="#">trace-options trace routes dest-address</a> ( <i>ipv4-address</i>   <i>ipv6-address</i> )
<b>Tree</b>	<a href="#">dest-address</a>
<b>Configurable</b>	True

## spf

<b>Description</b>	Enable the spf context
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">protocols ospf instance name</a> <i>string</i> <a href="#">trace-options trace spf</a>
<b>Tree</b>	<a href="#">spf</a>
<b>Configurable</b>	True

## dest-address (*ipv4-address* | *ipv6-address*)

<b>Description</b>	Enter the dest-address context
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">protocols ospf instance name</a> <i>string</i> <a href="#">trace-options trace spf dest-address</a> ( <i>ipv4-address</i>   <i>ipv6-address</i> )
<b>Tree</b>	<a href="#">dest-address</a>
<b>Configurable</b>	True

## version *identityref*

<b>Description</b>	The version that this ospf instance supports.
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<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">protocols ospf instance name</a> <i>string</i> <a href="#">version identityref</a>
<b>Tree</b>	<a href="#">version</a>
<b>Options</b>	<ul style="list-style-type: none"> <li>ospf-v2 Version 2 of the OSPF protocol</li> <li>ospf-v3 Version 3 of the OSPF protocol</li> </ul>
<b>Configurable</b>	True

## route-table

<b>Description</b>	Enter the route-table context
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">route-table</a>
<b>Tree</b>	<a href="#">route-table</a>
<b>Configurable</b>	False

## ipv4-unicast

<b>Description</b>	The container for the IPv4 unicast routing table of the network instance.
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">route-table ipv4-unicast</a>
<b>Tree</b>	<a href="#">ipv4-unicast</a>
<b>Configurable</b>	False

## route [ipv4-prefix](#) *string* [route-type](#) *identityref* [route-owner](#) *string* [id](#) *number*

<b>Description</b>	Enter the route list instance
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">route-table ipv4-unicast route</a> <a href="#">ipv4-prefix</a> <i>string</i> <a href="#">route-type</a> <i>identityref</i> <a href="#">route-owner</a> <i>string</i> <a href="#">id</a> <i>number</i>
<b>Tree</b>	<a href="#">route</a>
<b>Configurable</b>	False

## ipv4-prefix *string*

<b>Description</b>	The IPv4 prefix associated with the route.
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">route-table ipv4-unicast route</a> <a href="#">ipv4-prefix</a> <i>string</i> <a href="#">route-type</a> <i>identityref</i> <a href="#">route-owner</a> <i>string</i> <a href="#">id</a> <i>number</i>
<b>Configurable</b>	False

**route-type *identityref***

<b>Description</b>	The type of the IP route
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">route-table</a> <a href="#">ipv4-unicast route</a> <a href="#">ipv4-prefix</a> <i>string</i> <a href="#">route-type</a> <i>identityref</i> <a href="#">route-owner</a> <i>string</i> <a href="#">id</a> <i>number</i>
<b>Options</b>	<ul style="list-style-type: none"> <li>• <b>aggregate</b> Locally configured aggregate route</li> <li>• <b>arp-nd</b> IP route added by ARP ND.</li> <li>• <b>bgp</b> Border Gateway Protocol version 4</li> <li>• <b>bgp-evpn</b> BGP Ethernet VPN (EVPN)</li> <li>• <b>dhcp</b> IP (default) route added by DHCP.</li> <li>• <b>gribi</b> A gRIBI route</li> <li>• <b>host</b> A host route</li> <li>• <b>isis</b> IS-IS</li> <li>• <b>local</b> A directly connected route</li> <li>• <b>linux</b> IP route added by the linux kernel.</li> <li>• <b>ndk1</b> Route added by an agent application using the NDK</li> <li>• <b>ndk2</b> Route added by an agent application using the NDK</li> <li>• <b>ospfv2</b> OSPFv2</li> <li>• <b>ospfv3</b> OSPFv3</li> <li>• <b>static</b> Locally configured static route</li> </ul>
<b>Configurable</b>	False

**route-owner *string***

<b>Description</b>	The application name of the owner of the IP route
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">route-table</a> <a href="#">ipv4-unicast route</a> <a href="#">ipv4-prefix</a> <i>string</i> <a href="#">route-type</a> <a href="#">identityref</a> <a href="#">route-owner</a> <i>string</i> <a href="#">id</a> <i>number</i>
<b>Configurable</b>	False

**id *number***

<b>Description</b>	An owner-assigned index value that is unique for each of the routes for a given prefix.
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">route-table</a> <a href="#">ipv4-unicast route</a> <a href="#">ipv4-prefix</a> <i>string</i> <a href="#">route-type</a> <a href="#">identityref</a> <a href="#">route-owner</a> <i>string</i> <a href="#">id</a> <i>number</i>
<b>Configurable</b>	False

**active *boolean***

<b>Description</b>	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.
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">route-table</a> <a href="#">ipv4-unicast route</a> <a href="#">ipv4-prefix</a> <i>string</i> <a href="#">route-type</a> <a href="#">identityref</a> <a href="#">route-owner</a> <i>string</i> <a href="#">id</a> <i>number</i> <a href="#">active</a> <i>boolean</i>
<b>Tree</b>	<a href="#">active</a>
<b>Configurable</b>	False

**fib-programming**

<b>Description</b>	Container for state related to the FIB programming of the route
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">route-table</a> <a href="#">ipv4-unicast route</a> <a href="#">ipv4-prefix</a> <i>string</i> <a href="#">route-type</a> <a href="#">identityref</a> <a href="#">route-owner</a> <i>string</i> <a href="#">id</a> <i>number</i> <a href="#">fib-programming</a>
<b>Tree</b>	<a href="#">fib-programming</a>
<b>Configurable</b>	False

**failed-slots *number***

<b>Description</b>	The list of slot IDs corresponding to the linecards that did not successfully program the route due to the FIB table being full
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<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">route-table</a> <a href="#">ipv4-unicast route</a> <a href="#">ipv4-prefix</a> <i>string</i> <a href="#">route-type</a> <a href="#">identityref</a> <a href="#">route-owner</a> <i>string</i> <a href="#">id</a> <i>number</i> <a href="#">fib-programming</a> <a href="#">failed-slots</a> <i>number</i>
<b>Tree</b>	<a href="#">failed-slots</a>
<b>Range</b>	1 to 8
<b>Configurable</b>	False

**status keyword**

<b>Description</b>	The status of the FIB programming
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">route-table</a> <a href="#">ipv4-unicast route</a> <a href="#">ipv4-prefix</a> <i>string</i> <a href="#">route-type</a> <a href="#">identityref</a> <a href="#">route-owner</a> <i>string</i> <a href="#">id</a> <i>number</i> <a href="#">fib-programming</a> <a href="#">status</a> <i>keyword</i>
<b>Tree</b>	<a href="#">status</a>
<b>Options</b>	<ul style="list-style-type: none"> <li>• success The route was downloaded to the linecards and all of them have sent an acknowledgement that covers the route.</li> <li>• failed The route was not programmed into the FIB table of one or more linecards due to the FIB table being full.</li> <li>• pending The route was downloaded to the linecards but some of them have not sent an acknowledgement yet.</li> </ul>
<b>Configurable</b>	False

**last-app-update string**

<b>Description</b>	The date and time of the last update of this route by the owning application or protocol.
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">route-table</a> <a href="#">ipv4-unicast route</a> <a href="#">ipv4-prefix</a> <i>string</i> <a href="#">route-type</a> <a href="#">identityref</a> <a href="#">route-owner</a> <i>string</i> <a href="#">id</a> <i>number</i> <a href="#">last-app-update</a> <i>string</i>
<b>Tree</b>	<a href="#">last-app-update</a>
<b>String Length</b>	20 to 32
<b>Configurable</b>	False

**metric *number***

<b>Description</b>	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.
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">route-table</a> <a href="#">ipv4-unicast route</a> <a href="#">ipv4-prefix</a> <i>string</i> <a href="#">route-type</a> <a href="#">identityref</a> <a href="#">route-owner</a> <i>string</i> <a href="#">id</a> <i>number</i> <a href="#">metric</a> <i>number</i>
<b>Tree</b>	<a href="#">metric</a>
<b>Configurable</b>	False

**next-hop-group *reference***

<b>Description</b>	The next-hop-group indirection object used by this route.
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">route-table</a> <a href="#">ipv4-unicast route</a> <a href="#">ipv4-prefix</a> <i>string</i> <a href="#">route-type</a> <a href="#">identityref</a> <a href="#">route-owner</a> <i>string</i> <a href="#">id</a> <i>number</i> <a href="#">next-hop-group</a> <i>reference</i>
<b>Tree</b>	<a href="#">next-hop-group</a>
<b>Reference</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">route-table</a> <a href="#">next-hop-group</a> <i>index</i> <i>number</i>
<b>Configurable</b>	False

**preference *number***

<b>Description</b>	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.
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">route-table</a> <a href="#">ipv4-unicast route</a> <a href="#">ipv4-prefix</a> <i>string</i> <a href="#">route-type</a> <a href="#">identityref</a> <a href="#">route-owner</a> <i>string</i> <a href="#">id</a> <i>number</i> <a href="#">preference</a> <i>number</i>
<b>Tree</b>	<a href="#">preference</a>
<b>Configurable</b>	False

**resilient-hash *boolean***

<b>Description</b>	Set to true if the route is covered by a resilient-hash-prefix entry
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">route-table</a> <a href="#">ipv4-unicast route</a> <a href="#">ipv4-prefix</a> <i>string</i> <a href="#">route-type</a> <a href="#">identityref</a> <a href="#">route-owner</a> <i>string</i> <a href="#">id</a> <i>number</i> <a href="#">resilient-hash</a> <i>boolean</i>
<b>Tree</b>	<a href="#">resilient-hash</a>
<b>Configurable</b>	False

**route-summary**

<b>Description</b>	Route summary information
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">route-table</a> <a href="#">ipv4-unicast</a> <a href="#">route-summary</a>
<b>Tree</b>	<a href="#">route-summary</a>
<b>Configurable</b>	False

**route-type** [ip-route-type-name](#) *identityref*

<b>Description</b>	Enter the route-type list instance
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">route-table</a> <a href="#">ipv4-unicast</a> <a href="#">route-summary</a> <a href="#">route-type</a> <a href="#">ip-route-type-name</a> <i>identityref</i>
<b>Tree</b>	<a href="#">route-type</a>
<b>Configurable</b>	False

**ip-route-type-name** *identityref*

<b>Description</b>	IP route type
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">route-table</a> <a href="#">ipv4-unicast</a> <a href="#">route-summary</a> <a href="#">route-type</a> <a href="#">ip-route-type-name</a> <i>identityref</i>
<b>Options</b>	<ul style="list-style-type: none"> <li>• aggregate Locally configured aggregate route</li> <li>• arp-nd IP route added by ARP ND.</li> <li>• bgp Border Gateway Protocol version 4</li> <li>• bgp-evpn BGP Ethernet VPN (EVPN)</li> <li>• dhcp IP (default) route added by DHCP.</li> <li>• gribi A gRIBI route</li> <li>• host A host route</li> <li>• isis IS-IS</li> <li>• local A directly connected route</li> </ul>

- 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

### **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](#) *string* [route-table ipv4-unicast route-summary route-type ip-route-type-name](#) *identityref* [active-routes number](#)

**Tree** [active-routes](#)

**Configurable** False

### **statistics**

**Description** Enter the statistics context

**Context** [network-instance name](#) *string* [route-table ipv4-unicast statistics](#)

**Tree** [statistics](#)

**Configurable** False

### **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](#) *string* [route-table ipv4-unicast statistics active-routes number](#)

**Tree** [active-routes](#)

**Configurable** False



### active-routes-with-ecmp *number*

<b>Description</b>	The total number of prefixes, belonging to this address family, that have an active route in the FIB with multiple ECMP next-hops.
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">route-table</a> <a href="#">ipv4-unicast statistics active-routes-with-ecmp</a> <i>number</i>
<b>Tree</b>	<a href="#">active-routes-with-ecmp</a>
<b>Configurable</b>	False

### fib-failed-routes *number*

<b>Description</b>	The total number of prefixes, belonging to this address family, that were not installed successfully because datapath resources were unavailable.
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">route-table</a> <a href="#">ipv4-unicast statistics fib-failed-routes</a> <i>number</i>
<b>Tree</b>	<a href="#">fib-failed-routes</a>
<b>Configurable</b>	False

### resilient-hash-routes *number*

<b>Description</b>	The total number of prefixes, belonging to this address family, with an active route in the FIB that have resilient hash support.
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">route-table</a> <a href="#">ipv4-unicast statistics resilient-hash-routes</a> <i>number</i>
<b>Tree</b>	<a href="#">resilient-hash-routes</a>
<b>Configurable</b>	False

### total-routes *number*

<b>Description</b>	The total number of routes, active and inactive, belonging to this address family, that are present in the routing table.
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">route-table</a> <a href="#">ipv4-unicast statistics total-routes</a> <i>number</i>
<b>Tree</b>	<a href="#">total-routes</a>
<b>Default</b>	0
<b>Configurable</b>	False

**ipv6-unicast**

<b>Description</b>	The container for the IPv6 unicast routing table of the network instance.
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">route-table</a> <a href="#">ipv6-unicast</a>
<b>Tree</b>	<a href="#">ipv6-unicast</a>
<b>Configurable</b>	False

**route** [ipv6-prefix](#) *string* [route-type](#) *identityref* [route-owner](#) *string* *id* *number*

<b>Description</b>	Enter the route list instance
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">route-table</a> <a href="#">ipv6-unicast</a> <a href="#">route</a> <a href="#">ipv6-prefix</a> <i>string</i> <a href="#">route-type</a> <i>identityref</i> <a href="#">route-owner</a> <i>string</i> <i>id</i> <i>number</i>
<b>Tree</b>	<a href="#">route</a>
<b>Configurable</b>	False

**ipv6-prefix** *string*

<b>Description</b>	The IPv6 prefix associated with the route.
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">route-table</a> <a href="#">ipv6-unicast</a> <a href="#">route</a> <a href="#">ipv6-prefix</a> <i>string</i> <a href="#">route-type</a> <i>identityref</i> <a href="#">route-owner</a> <i>string</i> <i>id</i> <i>number</i>
<b>Configurable</b>	False

**route-type** *identityref*

<b>Description</b>	The type of the IP route
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">route-table</a> <a href="#">ipv6-unicast</a> <a href="#">route</a> <a href="#">ipv6-prefix</a> <i>string</i> <a href="#">route-type</a> <i>identityref</i> <a href="#">route-owner</a> <i>string</i> <i>id</i> <i>number</i>
<b>Options</b>	<ul style="list-style-type: none"> <li>• <b>aggregate</b> Locally configured aggregate route</li> <li>• <b>arp-nd</b> IP route added by ARP ND.</li> <li>• <b>bgp</b> Border Gateway Protocol version 4</li> <li>• <b>bgp-evpn</b> BGP Ethernet VPN (EVPN)</li> <li>• <b>dhcp</b> IP (default) route added by DHCP.</li> </ul>

- 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

### **route-owner *string***

**Description** The application name of the owner of the IP route

**Context** [network-instance name](#) *string* [route-table](#) [ipv6-unicast route](#) [ipv6-prefix](#) *string* [route-type](#) [identityref](#) [route-owner](#) *string* [id](#) *number*

**Configurable** False

### **id *number***

**Description** An owner-assigned index value that is unique for each of the routes for a given prefix.

**Context** [network-instance name](#) *string* [route-table](#) [ipv6-unicast route](#) [ipv6-prefix](#) *string* [route-type](#) [identityref](#) [route-owner](#) *string* [id](#) *number*

**Configurable** False

**active *boolean***

<b>Description</b>	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.
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">route-table</a> <a href="#">ipv6-unicast route</a> <a href="#">ipv6-prefix</a> <i>string</i> <a href="#">route-type</a> <a href="#">identityref</a> <a href="#">route-owner</a> <i>string</i> <a href="#">id</a> <i>number</i> <a href="#">active</a> <i>boolean</i>
<b>Tree</b>	<a href="#">active</a>
<b>Configurable</b>	False

**fib-programming**

<b>Description</b>	Container for state related to the FIB programming of the route
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">route-table</a> <a href="#">ipv6-unicast route</a> <a href="#">ipv6-prefix</a> <i>string</i> <a href="#">route-type</a> <a href="#">identityref</a> <a href="#">route-owner</a> <i>string</i> <a href="#">id</a> <i>number</i> <a href="#">fib-programming</a>
<b>Tree</b>	<a href="#">fib-programming</a>
<b>Configurable</b>	False

**failed-slots *number***

<b>Description</b>	The list of slot IDs corresponding to the linecards that did not successfully program the route due to the FIB table being full
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">route-table</a> <a href="#">ipv6-unicast route</a> <a href="#">ipv6-prefix</a> <i>string</i> <a href="#">route-type</a> <a href="#">identityref</a> <a href="#">route-owner</a> <i>string</i> <a href="#">id</a> <i>number</i> <a href="#">fib-programming</a> <a href="#">failed-slots</a> <i>number</i>
<b>Tree</b>	<a href="#">failed-slots</a>
<b>Range</b>	1 to 8
<b>Configurable</b>	False

**status *keyword***

<b>Description</b>	The status of the FIB programming
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">route-table</a> <a href="#">ipv6-unicast route</a> <a href="#">ipv6-prefix</a> <i>string</i> <a href="#">route-type</a> <a href="#">identityref</a> <a href="#">route-owner</a> <i>string</i> <a href="#">id</a> <i>number</i> <a href="#">fib-programming</a> <a href="#">status</a> <i>keyword</i>
<b>Tree</b>	<a href="#">status</a>
<b>Options</b>	<ul style="list-style-type: none"> <li>• success</li> </ul> <p>The route was downloaded to the linecards and all of them have sent an acknowledgement that covers the route.</p>

- failed  
The route was not programmed into the FIB table of one or more linecards due to the FIB table being full.
- pending  
The route was downloaded to the linecards but some of them have not sent an acknowledgement yet.

**Configurable** False

### **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 \*string\*](#) [route-table ipv6-unicast route ipv6-prefix \*string\*](#) [route-type \*identityref\*](#) [route-owner \*string\*](#) [id \*number\*](#) [last-app-update \*string\*](#)

**Tree** [last-app-update](#)

**String Length** 20 to 32

**Configurable** False

### **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 \*string\*](#) [route-table ipv6-unicast route ipv6-prefix \*string\*](#) [route-type \*identityref\*](#) [route-owner \*string\*](#) [id \*number\*](#) [metric \*number\*](#)

**Tree** [metric](#)

**Configurable** False

### **next-hop-group *reference***

**Description** The next-hop-group indirection object used by this route.

**Context** [network-instance name \*string\*](#) [route-table ipv6-unicast route ipv6-prefix \*string\*](#) [route-type \*identityref\*](#) [route-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

**preference *number***

<b>Description</b>	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.
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">route-table</a> <a href="#">ipv6-unicast route</a> <a href="#">ipv6-prefix</a> <i>string</i> <a href="#">route-type</a> <a href="#">identityref</a> <a href="#">route-owner</a> <i>string</i> <a href="#">id</a> <i>number</i> <a href="#">preference</a> <i>number</i>
<b>Tree</b>	<a href="#">preference</a>
<b>Configurable</b>	False

**resilient-hash *boolean***

<b>Description</b>	Set to true if the route is covered by a resilient-hash-prefix entry
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">route-table</a> <a href="#">ipv6-unicast route</a> <a href="#">ipv6-prefix</a> <i>string</i> <a href="#">route-type</a> <a href="#">identityref</a> <a href="#">route-owner</a> <i>string</i> <a href="#">id</a> <i>number</i> <a href="#">resilient-hash</a> <i>boolean</i>
<b>Tree</b>	<a href="#">resilient-hash</a>
<b>Configurable</b>	False

**route-summary**

<b>Description</b>	Route summary information
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">route-table</a> <a href="#">ipv6-unicast</a> <a href="#">route-summary</a>
<b>Tree</b>	<a href="#">route-summary</a>
<b>Configurable</b>	False

**route-type [ip-route-type-name](#) *identityref***

<b>Description</b>	Enter the route-type list instance
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">route-table</a> <a href="#">ipv6-unicast</a> <a href="#">route-summary</a> <a href="#">route-type</a> <a href="#">ip-route-type-name</a> <i>identityref</i>
<b>Tree</b>	<a href="#">route-type</a>
<b>Configurable</b>	False

**[ip-route-type-name](#) *identityref***

<b>Description</b>	IP route type
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">route-table</a> <a href="#">ipv6-unicast</a> <a href="#">route-summary</a> <a href="#">route-type</a> <a href="#">ip-route-type-name</a> <i>identityref</i>

**Options**

- aggregate  
Locally configured aggregate route
- arp-nd  
IP route added by ARP ND.
- bgp  
Border Gateway Protocol version 4
- bgp-evpn  
BGP Ethernet VPN (EVPN)
- 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

**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

<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">route-table</a> <a href="#">ipv6-unicast</a> <a href="#">route-summary</a> <a href="#">route-type</a> <a href="#">ip-route-type-name</a> <a href="#">identityref</a> <a href="#">active-routes</a> <i>number</i>
<b>Tree</b>	<a href="#">active-routes</a>
<b>Configurable</b>	False

## statistics

<b>Description</b>	Enter the statistics context
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">route-table</a> <a href="#">ipv6-unicast</a> <a href="#">statistics</a>
<b>Tree</b>	<a href="#">statistics</a>
<b>Configurable</b>	False

## active-routes *number*

<b>Description</b>	The total number of prefixes, belonging to this address family, with an active route in the FIB.
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">route-table</a> <a href="#">ipv6-unicast</a> <a href="#">statistics</a> <a href="#">active-routes</a> <i>number</i>
<b>Tree</b>	<a href="#">active-routes</a>
<b>Configurable</b>	False

## active-routes-with-ecmp *number*

<b>Description</b>	The total number of prefixes, belonging to this address family, that have an active route in the FIB with multiple ECMP next-hops.
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">route-table</a> <a href="#">ipv6-unicast</a> <a href="#">statistics</a> <a href="#">active-routes-with-ecmp</a> <i>number</i>
<b>Tree</b>	<a href="#">active-routes-with-ecmp</a>
<b>Configurable</b>	False

## fib-failed-routes *number*

<b>Description</b>	The total number of prefixes, belonging to this address family, that were not installed successfully because datapath resources were unavailable.
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">route-table</a> <a href="#">ipv6-unicast</a> <a href="#">statistics</a> <a href="#">fib-failed-routes</a> <i>number</i>
<b>Tree</b>	<a href="#">fib-failed-routes</a>
<b>Configurable</b>	False



**resilient-hash-routes *number***

<b>Description</b>	The total number of prefixes, belonging to this address family, with an active route in the FIB that have resilient hash support.
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">route-table</a> <a href="#">ipv6-unicast</a> <a href="#">statistics</a> <a href="#">resilient-hash-routes</a> <i>number</i>
<b>Tree</b>	<a href="#">resilient-hash-routes</a>
<b>Configurable</b>	False

**total-routes *number***

<b>Description</b>	The total number of routes, active and inactive, belonging to this address family, that are present in the routing table.
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">route-table</a> <a href="#">ipv6-unicast</a> <a href="#">statistics</a> <a href="#">total-routes</a> <i>number</i>
<b>Tree</b>	<a href="#">total-routes</a>
<b>Default</b>	0
<b>Configurable</b>	False

**mpls**

<b>Description</b>	The container for the MPLS routing table of the network instance.
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">route-table</a> <a href="#">mpls</a>
<b>Tree</b>	<a href="#">mpls</a>
<b>Configurable</b>	False

**label-entry [label-value](#) *number***

<b>Description</b>	Enter the label-entry list instance
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">route-table</a> <a href="#">mpls</a> <a href="#">label-entry</a> <a href="#">label-value</a> <i>number</i>
<b>Tree</b>	<a href="#">label-entry</a>
<b>Configurable</b>	False

**label-value *number***

<b>Description</b>	The MPLS label value
--------------------	----------------------

<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">route-table</a> <a href="#">mpls</a> <a href="#">label-entry</a> <a href="#">label-value</a> <a href="#">number</a>
<b>Range</b>	16 to 1048575
<b>Configurable</b>	False

### **entry-type** *identityref*

<b>Description</b>	The entry type of the MPLS FIB entry.
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">route-table</a> <a href="#">mpls</a> <a href="#">label-entry</a> <a href="#">label-value</a> <a href="#">number</a> <a href="#">entry-type</a> <i>identityref</i>
<b>Tree</b>	<a href="#">entry-type</a>
<b>Options</b>	<ul style="list-style-type: none"> <li>• <a href="#">ldp</a> Label distribution protocol</li> <li>• <a href="#">static-mpls</a> Locally configured static MPLS route.</li> </ul>
<b>Configurable</b>	False

### **last-app-update** *string*

<b>Description</b>	The date and time of the last update of this MPLS label entry by the owning application or protocol.
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">route-table</a> <a href="#">mpls</a> <a href="#">label-entry</a> <a href="#">label-value</a> <a href="#">number</a> <a href="#">last-app-update</a> <i>string</i>
<b>Tree</b>	<a href="#">last-app-update</a>
<b>String Length</b>	20 to 32
<b>Configurable</b>	False

### **next-hop-group** *reference*

<b>Description</b>	The next-hop-group indirection object used by this route. Applicable only if the operation is SWAP.
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">route-table</a> <a href="#">mpls</a> <a href="#">label-entry</a> <a href="#">label-value</a> <a href="#">number</a> <a href="#">next-hop-group</a> <i>reference</i>
<b>Tree</b>	<a href="#">next-hop-group</a>
<b>Reference</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">route-table</a> <a href="#">next-hop-group</a> <a href="#">index</a> <i>number</i>
<b>Configurable</b>	False

**next-network-instance *reference***

<b>Description</b>	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
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">route-table</a> <a href="#">mpls</a> <a href="#">label-entry</a> <a href="#">label-value</a> <i>number</i> <a href="#">next-network-instance</a> <i>reference</i>
<b>Tree</b>	<a href="#">next-network-instance</a>
<b>Reference</b>	<a href="#">network-instance name</a> <i>string</i>
<b>Configurable</b>	False

**operation *keyword***

<b>Description</b>	The forwarding operation associated with the MPLS label entry.
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">route-table</a> <a href="#">mpls</a> <a href="#">label-entry</a> <a href="#">label-value</a> <i>number</i> <a href="#">operation</a> <i>keyword</i>
<b>Tree</b>	<a href="#">operation</a>
<b>Options</b>	<ul style="list-style-type: none"> <li>• pop</li> <li>• swap</li> </ul>
<b>Configurable</b>	False

**statistics**

<b>Description</b>	Enter the statistics context
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">route-table</a> <a href="#">mpls</a> <a href="#">statistics</a>
<b>Tree</b>	<a href="#">statistics</a>
<b>Configurable</b>	False

**active-entries *number***

<b>Description</b>	The total number of MPLS entries that are active in the FIB.
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">route-table</a> <a href="#">mpls</a> <a href="#">statistics</a> <a href="#">active-entries</a> <i>number</i>
<b>Tree</b>	<a href="#">active-entries</a>
<b>Default</b>	0
<b>Configurable</b>	False

**next-hop *index number***

<b>Description</b>	Enter the next-hop list instance
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">route-table</a> <a href="#">next-hop</a> <a href="#">index number</a>
<b>Tree</b>	<a href="#">next-hop</a>
<b>Configurable</b>	False

**index *number***

<b>Description</b>	A system-wide unique identifier of a next-hop object (system allocated).
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">route-table</a> <a href="#">next-hop</a> <a href="#">index number</a>
<b>Configurable</b>	False

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

<b>Description</b>	The next-hop IP address. Only populated when the next-hop type is indirect or tunnel or static-mpls. For a VXLAN tunnel this is the destination VTEP address.
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">route-table</a> <a href="#">next-hop</a> <a href="#">index number</a> <a href="#">ip-address</a> ( <i>ipv4-address</i>   <i>ipv6-address</i> )
<b>Tree</b>	<a href="#">ip-address</a>
<b>Configurable</b>	False

**mpls**

<b>Description</b>	Enter the mpls context
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">route-table</a> <a href="#">next-hop</a> <a href="#">index number</a> <a href="#">mpls</a>
<b>Tree</b>	<a href="#">mpls</a>
<b>Configurable</b>	False

**pushed-mpls-label-stack (*number* | *keyword*)**

<b>Description</b>	The list of MPLS labels to push onto the packet when forwarding to this particular next-hop.
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">route-table</a> <a href="#">next-hop</a> <a href="#">index number</a> <a href="#">mpls</a> <a href="#">pushed-mpls-label-stack</a> ( <i>number</i>   <i>keyword</i> )
<b>Tree</b>	<a href="#">pushed-mpls-label-stack</a>
<b>Range</b>	16 to 1048575

<b>Options</b>	<ul style="list-style-type: none"> <li>• IPV4_EXPLICIT_NULL</li> <li>• IPV6_EXPLICIT_NULL</li> <li>• IMPLICIT_NULL</li> </ul>
----------------	---

**Configurable** False

**Max. Elements** 1

## resolving-route

**Description** Enter the resolving-route context

**Context** [network-instance name](#) [string](#) [route-table](#) [next-hop](#) [index](#) [number](#) [resolving-route](#)

**Tree** [resolving-route](#)

**Configurable** False

## ip-prefix (*ipv4-prefix* | *ipv6-prefix*)

**Description** The prefix of the resolving route.

**Context** [network-instance name](#) [string](#) [route-table](#) [next-hop](#) [index](#) [number](#) [resolving-route](#) [ip-prefix](#) (*ipv4-prefix* | *ipv6-prefix*)

**Tree** [ip-prefix](#)

**Configurable** False

## route-owner *string*

**Description** The application name of the owner of the resolving route.

**Context** [network-instance name](#) [string](#) [route-table](#) [next-hop](#) [index](#) [number](#) [resolving-route](#) [route-owner](#) *string*

**Tree** [route-owner](#)

**Configurable** False

## route-type *identityref*

**Description** The type of the resolving route.

**Context** [network-instance name](#) [string](#) [route-table](#) [next-hop](#) [index](#) [number](#) [resolving-route](#) [route-type](#) *identityref*

**Tree** [route-type](#)

**Options**

- aggregate  
Locally configured aggregate route
- arp-nd  
IP route added by ARP ND.
- bgp  
Border Gateway Protocol version 4
- bgp-evpn  
BGP Ethernet VPN (EVPN)
- 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

**resolving-tunnel****Description**

Enter the resolving-tunnel context

**Context**

[network-instance name](#) *string* [route-table](#) [next-hop](#) [index](#) *number* [resolving-tunnel](#)

<b>Tree</b>	<a href="#">resolving-tunnel</a>
<b>Configurable</b>	False

### **ip-prefix (*ipv4-prefix* | *ipv6-prefix*)**

<b>Description</b>	The prefix of the resolving tunnel.
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">route-table</a> <a href="#">next-hop index</a> <i>number</i> <a href="#">resolving-tunnel</a> <a href="#">ip-prefix (<i>ipv4-prefix</i>   <i>ipv6-prefix</i>)</a>
<b>Tree</b>	<a href="#">ip-prefix</a>
<b>Configurable</b>	False

### **tunnel-owner *string***

<b>Description</b>	The application name of the owner of the resolving tunnel.
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">route-table</a> <a href="#">next-hop index</a> <i>number</i> <a href="#">resolving-tunnel</a> <a href="#">tunnel-owner</a> <i>string</i>
<b>Tree</b>	<a href="#">tunnel-owner</a>
<b>Configurable</b>	False

### **tunnel-type *identityref***

<b>Description</b>	The type of the tunnel.
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">route-table</a> <a href="#">next-hop index</a> <i>number</i> <a href="#">resolving-tunnel</a> <a href="#">tunnel-type</a> <i>identityref</i>
<b>Tree</b>	<a href="#">tunnel-type</a>
<b>Options</b>	<ul style="list-style-type: none"> <li>• <a href="#">sr-isis</a> Segment routing using MPLS dataplane, programmed by IS-IS</li> <li>• <a href="#">sr-ospfv2</a> Segment routing using MPLS dataplane, programmed by OSPFv2</li> <li>• <a href="#">sr-ospfv3</a> Segment routing using MPLS dataplane, programmed by OSPFv3</li> <li>• <a href="#">sr-mpls</a> Segment routing using MPLS dataplane, programmed by segment routing manager.</li> <li>• <a href="#">sr-policy-mpls</a> Tunnels setup using SR-POLICY.</li> </ul>

	<ul style="list-style-type: none"> <li>• vxlan Tunnels based on VXLAN encapsulation</li> </ul>
<b>Configurable</b>	False

### subinterface *reference*

<b>Description</b>	The next-hop interface. Only populated when the next-hop type is direct.
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">route-table</a> <i>string</i> <a href="#">next-hop index</a> <i>number</i> <a href="#">subinterface</a> <i>reference</i>
<b>Tree</b>	<a href="#">subinterface</a>
<b>Reference</b>	<a href="#">interface name</a> <i>stringname</i> <i>string</i> <i>string</i> <a href="#">subinterface index</a> <i>number</i> <a href="#">index number</a> <i>number</i> <a href="#">name</a> <i>string</i> <i>string</i>
<b>Configurable</b>	False

### type *identityref*

<b>Description</b>	The next-hop type used by the datapath.
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">route-table</a> <i>string</i> <a href="#">next-hop index</a> <i>number</i> <a href="#">type</a> <i>identityref</i>
<b>Tree</b>	<a href="#">type</a>
<b>Options</b>	<ul style="list-style-type: none"> <li>• extract Next-hop will cause matching packets to be delivered to the CPM.</li> <li>• direct Next-hop was resolved by a local route - i.e. it is an address on a connected subnet.</li> <li>• discard Next-hop will cause matching packets to be dropped without ICMP generation.</li> <li>• reject Next-hop will cause matching packets to be dropped with ICMP generation.</li> <li>• indirect Next-hop was resolved by a non-local route - i.e. it is not an address on a connected subnet.</li> <li>• mpls An MPLS label will be pushed when forwarding to this next-hop.</li> <li>• tunnel Next-hop is a tunnel.</li> </ul>



- broadcast  
Next-hop will cause matching subnet-bradcast packets to be delivered to the control plane.

**Configurable** False

## vxlan

**Description** Enter the vxlan context

**Context** [network-instance name](#) *string* [route-table](#) [next-hop](#) [index](#) [number](#) [vxlan](#)

**Tree** [vxlan](#)

**Configurable** False

## destination-mac *string*

**Description** VXLAN inner ethernet destination mac-address.

**Context** [network-instance name](#) *string* [route-table](#) [next-hop](#) [index](#) [number](#) [vxlan](#)  
[destination-mac](#) *string*

**Tree** [destination-mac](#)

**Configurable** False

## source-mac *string*

**Description** VXLAN inner ethernet source mac-address.

**Context** [network-instance name](#) *string* [route-table](#) [next-hop](#) [index](#) [number](#) [vxlan](#)  
[source-mac](#) *string*

**Tree** [source-mac](#)

**Configurable** False

## vni *number*

**Description** VXLAN Network Identifier of the destination.

**Context** [network-instance name](#) *string* [route-table](#) [next-hop](#) [index](#) [number](#) [vxlan](#) [vni](#)  
[number](#)

**Tree** [vni](#)

**Range** 1 to 16777215

**Configurable** False

**next-hop-group *index number***

<b>Description</b>	Enter the next-hop-group list instance
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">route-table</a> <a href="#">next-hop-group</a> <i>index number</i>
<b>Tree</b>	<a href="#">next-hop-group</a>
<b>Configurable</b>	False

**index *number***

<b>Description</b>	A system-wide unique identifier of a next-hop-group indirection object (system allocated).
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">route-table</a> <a href="#">next-hop-group</a> <i>index number</i>
<b>Configurable</b>	False

**backup-next-hop-group *reference***

<b>Description</b>	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.
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">route-table</a> <a href="#">next-hop-group</a> <i>index number</i> <a href="#">backup-next-hop-group</a> <i>reference</i>
<b>Tree</b>	<a href="#">backup-next-hop-group</a>
<b>Reference</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">route-table</a> <a href="#">next-hop-group</a> <i>index number</i>
<b>Configurable</b>	False

**fib-programming**

<b>Description</b>	Enter the fib-programming context
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">route-table</a> <a href="#">next-hop-group</a> <i>index number</i> <a href="#">fib-programming</a>
<b>Tree</b>	<a href="#">fib-programming</a>
<b>Configurable</b>	False

**next-hop *id number***

<b>Description</b>	Enter the next-hop list instance
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">route-table</a> <a href="#">next-hop-group</a> <i>index number</i> <a href="#">next-hop</a> <i>id number</i>
<b>Tree</b>	<a href="#">next-hop</a>

**Configurable** False

### **id number**

**Description** A unique identifier of a next-hop member (system allocated).

**Context** [network-instance name](#) *string* [route-table](#) [next-hop-group](#) [index](#) *number* [next-hop id](#) *number*

**Range** 0 to 1023

**Configurable** False

### **fib-programming**

**Description** Enter the fib-programming context

**Context** [network-instance name](#) *string* [route-table](#) [next-hop-group](#) [index](#) *number* [next-hop id](#) *number* [fib-programming](#)

**Tree** [fib-programming](#)

**Configurable** False

### **next-hop reference**

**Description** Enter the next-hop context

**Context** [network-instance name](#) *string* [route-table](#) [next-hop-group](#) [index](#) *number* [next-hop id](#) *number* [next-hop reference](#)

**Tree** [next-hop](#)

**Reference** [network-instance name](#) *string* [route-table](#) [next-hop](#) [index](#) *number*

**Configurable** False

### **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* [next-hop id](#) *number* [resolved](#) *keyword*

**Tree** [resolved](#)

**Options**

- true
- false
- not-applicable

**Configurable** False

## weight number

**Description** The actual weight applied to the next-hop within the group. This may differ from the configured weight because the datapath normalizes the weight and expresses it as a percentage. Traffic is balanced across the next-hops within the group in the proportion of weight.

If there are two next-hops in the NHG, N1 with a weight of W1 and N2 with a weight of W2 such that  $W1 = n \times W2$ , then N1 should ideally have n times as many hash buckets as N2. However, since fractional hash buckets do not exist and there are only 128 hash buckets in total for a given level of ECMP, the actual weight of a next-hop may differ from the ratio expected by taking the configured weight of the next-hop and dividing it by the sum of all the configured weights.

**Context** [network-instance name](#) *string* [route-table next-hop-group index](#) *number* [next-hop id](#) *number* **weight** *number*

**Tree** [weight](#)

**Range** 0 to 100

**Configurable** False

## 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](#) *string* **router-id** *string*

**Tree** [router-id](#)

**Configurable** True

## segment-routing



**Note:**

This command is available for the following platforms:

- 7250 IXR-6
- 7250 IXR-10

**Description** Container with segment routing configuration options

**Context** [network-instance name](#) *string* **segment-routing**

**Tree** [segment-routing](#)

**Configurable** True

## mpls



### Note:

This command is available for the following platforms:

- 7250 IXR-6
- 7250 IXR-10

<b>Description</b>	Adding this container activates datapath support for SR-MPLS
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">segment-routing mpls</a>
<b>Tree</b>	<a href="#">mpls</a>
<b>Configurable</b>	True

## sid-database



### Note:

This command is available for the following platforms:

- 7250 IXR-6
- 7250 IXR-10

<b>Description</b>	Database of all known prefix SIDs, local and remote.
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">segment-routing mpls sid-database</a>
<b>Tree</b>	<a href="#">sid-database</a>
<b>Configurable</b>	False

**prefix-sid** [prefix](#) (*ipv4-prefix* | *ipv6-prefix*) [sid-label-value](#) *number* [protocol](#) *keyword*  
[protocol-instance](#) *number* [protocol-multi-topology](#) *number* [algorithm](#) *number*



### Note:

This command is available for the following platforms:

- 7250 IXR-6
- 7250 IXR-10

<b>Description</b>	List of prefix SIDs
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">segment-routing mpls sid-database</a> <a href="#">prefix-sid</a> <a href="#">prefix</a> ( <i>ipv4-prefix</i>   <i>ipv6-prefix</i> ) <a href="#">sid-label-value</a> <i>number</i> <a href="#">protocol</a> <i>keyword</i> <a href="#">protocol-instance</a> <i>number</i> <a href="#">protocol-multi-topology</a> <i>number</i> <a href="#">algorithm</a> <i>number</i>
<b>Tree</b>	<a href="#">prefix-sid</a>

**Configurable** False

### **prefix (*ipv4-prefix* | *ipv6-prefix*)**



**Note:**

This command is available for the following platforms:

- 7250 IXR-6
- 7250 IXR-10

**Description** The IPv4 or IPv6 prefix associated with the SID.

**Context** [network-instance name](#) *string* [segment-routing mpls sid-database prefix-sid prefix \(\*ipv4-prefix\* | \*ipv6-prefix\*\) sid-label-value](#) *number* [protocol keyword protocol-instance](#) *number* [protocol-multi-topology](#) *number* [algorithm](#) *number*

**Configurable** False

### **sid-label-value *number***



**Note:**

This command is available for the following platforms:

- 7250 IXR-6
- 7250 IXR-10

**Description** The MPLS label value associated with the SID.

**Context** [network-instance name](#) *string* [segment-routing mpls sid-database prefix-sid prefix \(\*ipv4-prefix\* | \*ipv6-prefix\*\) sid-label-value](#) *number* [protocol keyword protocol-instance](#) *number* [protocol-multi-topology](#) *number* [algorithm](#) *number*

**Range** 16 to 1048575

**Configurable** False

### **protocol *keyword***



**Note:**

This command is available for the following platforms:

- 7250 IXR-6
- 7250 IXR-10

**Description** The protocol that provided the prefix SID

<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">segment-routing mpls sid-database prefix-sid prefix</a> ( <i>ipv4-prefix   ipv6-prefix</i> ) <a href="#">sid-label-value</a> <i>number</i> <a href="#">protocol keyword</a> <a href="#">protocol-instance</a> <i>number</i> <a href="#">protocol-multi-topology</a> <i>number</i> <a href="#">algorithm</a> <i>number</i>
<b>Options</b>	<ul style="list-style-type: none"> <li>isis</li> <li>direct</li> </ul>
<b>Configurable</b>	False

### protocol-instance *number*



**Note:**

This command is available for the following platforms:

- 7250 IXR-6
- 7250 IXR-10

<b>Description</b>	The instance ID that provided the prefix SID
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">segment-routing mpls sid-database prefix-sid prefix</a> ( <i>ipv4-prefix   ipv6-prefix</i> ) <a href="#">sid-label-value</a> <i>number</i> <a href="#">protocol keyword</a> <a href="#">protocol-instance</a> <i>number</i> <a href="#">protocol-multi-topology</a> <i>number</i> <a href="#">algorithm</a> <i>number</i>
<b>Configurable</b>	False

### protocol-multi-topology *number*



**Note:**

This command is available for the following platforms:

- 7250 IXR-6
- 7250 IXR-10

<b>Description</b>	The multi-topology ID that provided the prefix SID
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">segment-routing mpls sid-database prefix-sid prefix</a> ( <i>ipv4-prefix   ipv6-prefix</i> ) <a href="#">sid-label-value</a> <i>number</i> <a href="#">protocol keyword</a> <a href="#">protocol-instance</a> <i>number</i> <a href="#">protocol-multi-topology</a> <i>number</i> <a href="#">algorithm</a> <i>number</i>
<b>Range</b>	0 to 4095
<b>Configurable</b>	False

**algorithm *number*****Note:**

This command is available for the following platforms:

- 7250 IXR-6
- 7250 IXR-10

<b>Description</b>	Contains the identifier of the algorithm the router uses to compute the reachability of the prefix to which the Prefix-SID is associated
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">segment-routing mpls sid-database prefix-sid prefix</a> ( <i>ipv4-prefix   ipv6-prefix</i> ) <a href="#">sid-label-value</a> <i>number</i> <a href="#">protocol keyword</a> <a href="#">protocol-instance</a> <i>number</i> <a href="#">protocol-multi-topology</a> <i>number</i> <a href="#">algorithm</a> <i>number</i>
<b>Configurable</b>	False

**active *boolean*****Note:**

This command is available for the following platforms:

- 7250 IXR-6
- 7250 IXR-10

<b>Description</b>	When false, the prefix SID is inactive.
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">segment-routing mpls sid-database prefix-sid prefix</a> ( <i>ipv4-prefix   ipv6-prefix</i> ) <a href="#">sid-label-value</a> <i>number</i> <a href="#">protocol keyword</a> <a href="#">protocol-instance</a> <i>number</i> <a href="#">protocol-multi-topology</a> <i>number</i> <a href="#">algorithm</a> <i>number</i> <a href="#">active</a> <i>boolean</i>
<b>Tree</b>	<a href="#">active</a>
<b>Configurable</b>	False

**inactive-reason *keyword*****Note:**

This command is available for the following platforms:

- 7250 IXR-6
- 7250 IXR-10

<b>Description</b>	The reason for the prefix SID being inactive
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">segment-routing mpls sid-database prefix-sid prefix</a> ( <i>ipv4-prefix   ipv6-prefix</i> ) <a href="#">sid-label-value</a> <i>number</i> <a href="#">protocol keyword</a>



	<a href="#">protocol-instance</a> <i>number</i> <a href="#">protocol-multi-topology</a> <i>number</i> <a href="#">algorithm</a> <i>number</i> <a href="#">inactive-reason</a> <i>keyword</i>
<b>Tree</b>	<a href="#">inactive-reason</a>
<b>Options</b>	<ul style="list-style-type: none"> <li>prefix-conflict prefix-conflict occurs when there are multiple entries in the SID database for the same (prefix, protocol-instance, protocol-multi-topology, algorithm). All the conflicting entries become inactive except for the one with the smallest sid-index per draft-ietf-spring-conflict-resolution.</li> <li>global-sid-conflict sid-conflict occurs when the same sid has been assigned to different prefixes after first eliminating inactive entries due to prefix-conflict. All entries involved in a sid-conflict that do not have the absolute lowest 'preference' value become inactive. In SRL implementation local-prefix-sid entries 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 per draft-ietf-spring-conflict-resolution.</li> <li>sid-index-out-of-range SID index + SRGB base exceeds the available label range</li> <li>fib-programming-failed</li> </ul>
<b>Configurable</b>	False

## isis



### Note:

This command is available for the following platforms:

- 7250 IXR-6
- 7250 IXR-10

<b>Description</b>	State information about prefix SIDs known to IS-IS
<b>Context</b>	<a href="#">network-instance</a> <i>name</i> <i>string</i> <a href="#">segment-routing</a> <a href="#">mpls</a> <a href="#">sid-database</a> <a href="#">prefix-sid</a> <a href="#">prefix</a> ( <i>ipv4-prefix</i>   <i>ipv6-prefix</i> ) <a href="#">sid-label-value</a> <i>number</i> <a href="#">protocol</a> <i>keyword</i> <a href="#">protocol-instance</a> <i>number</i> <a href="#">protocol-multi-topology</a> <i>number</i> <a href="#">algorithm</a> <i>number</i> <a href="#">isis</a>
<b>Tree</b>	<a href="#">isis</a>
<b>Configurable</b>	False

**source-router *system-id string level-number number*****Note:**

This command is available for the following platforms:

- 7250 IXR-6
- 7250 IXR-10

<b>Description</b>	The ISIS routers that provided the prefix SID. (Multiple in the case of redistribution.)
<b>Context</b>	<a href="#">network-instance name string segment-routing mpls sid-database prefix-sid prefix (ipv4-prefix   ipv6-prefix) sid-label-value number protocol keyword protocol-instance number protocol-multi-topology number algorithm number isis source-router system-id string level-number number</a>
<b>Tree</b>	<a href="#">source-router</a>
<b>Configurable</b>	False

**system-id *string*****Note:**

This command is available for the following platforms:

- 7250 IXR-6
- 7250 IXR-10

<b>Description</b>	The system-id of an ISIS router that originated or redistributed the prefix SID
<b>Context</b>	<a href="#">network-instance name string segment-routing mpls sid-database prefix-sid prefix (ipv4-prefix   ipv6-prefix) sid-label-value number protocol keyword protocol-instance number protocol-multi-topology number algorithm number isis source-router system-id string level-number number</a>
<b>String Length</b>	14
<b>Configurable</b>	False

**level-number *number*****Note:**

This command is available for the following platforms:

- 7250 IXR-6
- 7250 IXR-10

<b>Description</b>	The level of the LSP that advertises the prefix SID
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<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">segment-routing mpls sid-database prefix-sid prefix</a> ( <i>ipv4-prefix   ipv6-prefix</i> ) <a href="#">sid-label-value</a> <i>number</i> <a href="#">protocol keyword</a> <a href="#">protocol-instance</a> <i>number</i> <a href="#">protocol-multi-topology</a> <i>number</i> <a href="#">algorithm</a> <i>number</i> <a href="#">isis source-router system-id</a> <i>string</i> <a href="#">level-number</a> <i>number</i>
<b>Range</b>	1 to 2
<b>Configurable</b>	False

## flags



### Note:

This command is available for the following platforms:

- 7250 IXR-6
- 7250 IXR-10

<b>Description</b>	Flags that characterize the prefix SID
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">segment-routing mpls sid-database prefix-sid prefix</a> ( <i>ipv4-prefix   ipv6-prefix</i> ) <a href="#">sid-label-value</a> <i>number</i> <a href="#">protocol keyword</a> <a href="#">protocol-instance</a> <i>number</i> <a href="#">protocol-multi-topology</a> <i>number</i> <a href="#">algorithm</a> <i>number</i> <a href="#">isis source-router system-id</a> <i>string</i> <a href="#">level-number</a> <i>number</i> <a href="#">flags</a>
<b>Tree</b>	<a href="#">flags</a>
<b>Configurable</b>	False

## explicit-null *boolean*



### Note:

This command is available for the following platforms:

- 7250 IXR-6
- 7250 IXR-10

<b>Description</b>	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
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">segment-routing mpls sid-database prefix-sid prefix</a> ( <i>ipv4-prefix   ipv6-prefix</i> ) <a href="#">sid-label-value</a> <i>number</i> <a href="#">protocol keyword</a> <a href="#">protocol-instance</a> <i>number</i> <a href="#">protocol-multi-topology</a> <i>number</i> <a href="#">algorithm</a> <i>number</i> <a href="#">isis source-router system-id</a> <i>string</i> <a href="#">level-number</a> <i>number</i> <a href="#">flags</a> <a href="#">explicit-null</a> <i>boolean</i>
<b>Tree</b>	<a href="#">explicit-null</a>
<b>Configurable</b>	False

## local *boolean*

**Note:**

This command is available for the following platforms:

- 7250 IXR-6
- 7250 IXR-10

<b>Description</b>	If set, then the value/index carried by the Prefix-SID has local significance.
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">segment-routing mpls sid-database prefix-sid prefix</a> ( <i>ipv4-prefix</i>   <i>ipv6-prefix</i> ) <a href="#">sid-label-value</a> <i>number</i> <a href="#">protocol keyword</a> <a href="#">protocol-instance</a> <i>number</i> <a href="#">protocol-multi-topology</a> <i>number</i> <a href="#">algorithm</a> <i>number</i> <a href="#">isis source-router system-id</a> <i>string</i> <a href="#">level-number</a> <i>number</i> <a href="#">flags</a> <a href="#">local</a> <i>boolean</i>
<b>Tree</b>	<a href="#">local</a>
<b>Configurable</b>	False

## node-sid *boolean*

**Note:**

This command is available for the following platforms:

- 7250 IXR-6
- 7250 IXR-10

<b>Description</b>	If set the prefix SID refers to the router identified by the prefix.
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">segment-routing mpls sid-database prefix-sid prefix</a> ( <i>ipv4-prefix</i>   <i>ipv6-prefix</i> ) <a href="#">sid-label-value</a> <i>number</i> <a href="#">protocol keyword</a> <a href="#">protocol-instance</a> <i>number</i> <a href="#">protocol-multi-topology</a> <i>number</i> <a href="#">algorithm</a> <i>number</i> <a href="#">isis source-router system-id</a> <i>string</i> <a href="#">level-number</a> <i>number</i> <a href="#">flags</a> <a href="#">node-sid</a> <i>boolean</i>
<b>Tree</b>	<a href="#">node-sid</a>
<b>Configurable</b>	False

## penultimate-hop-popping *boolean*

**Note:**

This command is available for the following platforms:

- 7250 IXR-6
- 7250 IXR-10

<b>Description</b>	If set the penultimate hop MUST NOT pop the Prefix-SID before delivering the packet to the node that advertised the Prefix-SID.
--------------------	---

<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">segment-routing mpls sid-database prefix-sid prefix</a> ( <i>ipv4-prefix   ipv6-prefix</i> ) <a href="#">sid-label-value</a> <i>number</i> <a href="#">protocol keyword</a> <a href="#">protocol-instance</a> <i>number</i> <a href="#">protocol-multi-topology</a> <i>number</i> <a href="#">algorithm</a> <i>number</i> <a href="#">isis source-router system-id</a> <i>string</i> <a href="#">level-number</a> <i>number</i> <a href="#">flags penultimate-hop-popping</a> <i>boolean</i>
<b>Tree</b>	<a href="#">penultimate-hop-popping</a>
<b>Configurable</b>	False

### re-advertised *boolean*



**Note:**

This command is available for the following platforms:

- 7250 IXR-6
- 7250 IXR-10

<b>Description</b>	If set the prefix to which this Prefix-SID is attached was propagated from another level or from another protocol.
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">segment-routing mpls sid-database prefix-sid prefix</a> ( <i>ipv4-prefix   ipv6-prefix</i> ) <a href="#">sid-label-value</a> <i>number</i> <a href="#">protocol keyword</a> <a href="#">protocol-instance</a> <i>number</i> <a href="#">protocol-multi-topology</a> <i>number</i> <a href="#">algorithm</a> <i>number</i> <a href="#">isis source-router system-id</a> <i>string</i> <a href="#">level-number</a> <i>number</i> <a href="#">flags re-advertised</a> <i>boolean</i>
<b>Tree</b>	<a href="#">re-advertised</a>
<b>Configurable</b>	False

### local-system *boolean*



**Note:**

This command is available for the following platforms:

- 7250 IXR-6
- 7250 IXR-10

<b>Description</b>	True when the system ID belongs to the local system.
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">segment-routing mpls sid-database prefix-sid prefix</a> ( <i>ipv4-prefix   ipv6-prefix</i> ) <a href="#">sid-label-value</a> <i>number</i> <a href="#">protocol keyword</a> <a href="#">protocol-instance</a> <i>number</i> <a href="#">protocol-multi-topology</a> <i>number</i> <a href="#">algorithm</a> <i>number</i> <a href="#">isis source-router system-id</a> <i>string</i> <a href="#">level-number</a> <i>number</i> <a href="#">local-system</a> <i>boolean</i>
<b>Tree</b>	<a href="#">local-system</a>
<b>Configurable</b>	False

## segment-routing-policies



### Note:

This command is available for the following platforms:

- 7250 IXR-6
- 7250 IXR-10

<b>Description</b>	Container with segment routing policies
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">segment-routing</a> <a href="#">segment-routing-policies</a>
<b>Tree</b>	<a href="#">segment-routing-policies</a>
<b>Configurable</b>	True

## named-paths



### Note:

This command is available for the following platforms:

- 7250 IXR-6
- 7250 IXR-10

<b>Description</b>	Named paths used to specify SR policy segment lists
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">segment-routing</a> <a href="#">segment-routing-policies</a> <a href="#">named-paths</a>
<b>Tree</b>	<a href="#">named-paths</a>
<b>Configurable</b>	True

## path [named-path-name](#) *string*



### Note:

This command is available for the following platforms:

- 7250 IXR-6
- 7250 IXR-10

<b>Description</b>	Enter the path list instance
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">segment-routing</a> <a href="#">segment-routing-policies</a> <a href="#">named-paths</a> <a href="#">path</a> <a href="#">named-path-name</a> <i>string</i>
<b>Tree</b>	<a href="#">path</a>
<b>Configurable</b>	True

**named-path-name *string*****Note:**

This command is available for the following platforms:

- 7250 IXR-6
- 7250 IXR-10

<b>Description</b>	A unique name to identify the named path
<b>Context</b>	<a href="#">network-instance name <i>string</i></a> <a href="#">segment-routing</a> <a href="#">segment-routing-policies</a> <a href="#">named-paths path</a> <a href="#">named-path-name <i>string</i></a>
<b>String Length</b>	1 to 255
<b>Configurable</b>	True

**hop *index number*****Note:**

This command is available for the following platforms:

- 7250 IXR-6
- 7250 IXR-10

<b>Description</b>	Enter the hop list instance
<b>Context</b>	<a href="#">network-instance name <i>string</i></a> <a href="#">segment-routing</a> <a href="#">segment-routing-policies</a> <a href="#">named-paths path</a> <a href="#">named-path-name <i>string</i></a> <a href="#">hop <i>index number</i></a>
<b>Tree</b>	<a href="#">hop</a>
<b>Configurable</b>	True

**index *number*****Note:**

This command is available for the following platforms:

- 7250 IXR-6
- 7250 IXR-10

<b>Description</b>	The index number of the hop. Hops are processed in ascending sequence.
<b>Context</b>	<a href="#">network-instance name <i>string</i></a> <a href="#">segment-routing</a> <a href="#">segment-routing-policies</a> <a href="#">named-paths path</a> <a href="#">named-path-name <i>string</i></a> <a href="#">hop <i>index number</i></a>
<b>Range</b>	1 to 15
<b>Configurable</b>	True

## hop-type keyword



### Note:

This command is available for the following platforms:

- 7250 IXR-6
- 7250 IXR-10

<b>Description</b>	Enter the hop-type context
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">segment-routing</a> <a href="#">segment-routing-policies</a> <a href="#">named-paths path</a> <a href="#">named-path-name</a> <i>string</i> <a href="#">hop index</a> <i>number</i> <a href="#">hop-type</a> <i>keyword</i>
<b>Tree</b>	<a href="#">hop-type</a>
<b>Options</b>	<ul style="list-style-type: none"> <li>• <b>strict</b> <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> <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. Note that the endpoint of a 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 this to SR policy manager and the adjacency SID or node SID of the final configured hop is omitted from the datapath programming.</p> </li> <li>• <b>loose</b> <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.</p> <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 this to SR policy manager and the adjacency SID or node SID of the final configured hop is omitted from the datapath programming.</p> </li> </ul>



**Configurable** True

## ip-address (*ipv4-address* | *ipv6-address*)



**Note:**

This command is available for the following platforms:

- 7250 IXR-6
- 7250 IXR-10

**Description** An IPv4 or IPv6 address that is a hop to be visited on the way to the destination

**Context** [network-instance name](#) *string* [segment-routing](#) [segment-routing-policies](#) [named-paths path](#) [named-path-name](#) *string* [hop index](#) *number* [ip-address](#) (*ipv4-address* | *ipv6-address*)

**Tree** [ip-address](#)

**Configurable** True

## policy-database



**Note:**

This command is available for the following platforms:

- 7250 IXR-6
- 7250 IXR-10

**Description** Enter the policy-database context

**Context** [network-instance name](#) *string* [segment-routing](#) [segment-routing-policies](#) [policy-database](#)

**Tree** [policy-database](#)

**Configurable** False

## policy *color number* [endpoint](#) (*ipv4-address* | *ipv6-address*)



**Note:**

This command is available for the following platforms:

- 7250 IXR-6
- 7250 IXR-10

**Description** Enter the policy list instance

<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">segment-routing</a> <a href="#">segment-routing-policies</a> <a href="#">policy-database</a> <a href="#">policy</a> <a href="#">color</a> <i>number</i> <a href="#">endpoint</a> ( <a href="#">ipv4-address</a>   <a href="#">ipv6-address</a> )
<b>Tree</b>	<a href="#">policy</a>
<b>Configurable</b>	False

### color *number*



**Note:**

This command is available for the following platforms:

- 7250 IXR-6
- 7250 IXR-10

<b>Description</b>	Color associated with the SR policy
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">segment-routing</a> <a href="#">segment-routing-policies</a> <a href="#">policy-database</a> <a href="#">policy</a> <a href="#">color</a> <i>number</i> <a href="#">endpoint</a> ( <a href="#">ipv4-address</a>   <a href="#">ipv6-address</a> )
<b>Range</b>	0 to 4294967295
<b>Configurable</b>	False

### endpoint ([ipv4-address](#) | [ipv6-address](#))



**Note:**

This command is available for the following platforms:

- 7250 IXR-6
- 7250 IXR-10

<b>Description</b>	Policy endpoint IP address
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">segment-routing</a> <a href="#">segment-routing-policies</a> <a href="#">policy-database</a> <a href="#">policy</a> <a href="#">color</a> <i>number</i> <a href="#">endpoint</a> ( <a href="#">ipv4-address</a>   <a href="#">ipv6-address</a> )
<b>Configurable</b>	False

### candidate-path [candidate-path-index](#) *number*



**Note:**

This command is available for the following platforms:

- 7250 IXR-6
- 7250 IXR-10

<b>Description</b>	SR policy candidate paths. This list includes local static policies, but only those that have both a color and endpoint.
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">segment-routing</a> <a href="#">segment-routing-policies</a> <a href="#">policy-database</a> <a href="#">policy</a> <a href="#">color</a> <i>number</i> <a href="#">endpoint</a> ( <a href="#">ipv4-address</a>   <a href="#">ipv6-address</a> ) <a href="#">candidate-path</a> <a href="#">candidate-path-index</a> <i>number</i>
<b>Tree</b>	<a href="#">candidate-path</a>
<b>Configurable</b>	False

### candidate-path-index *number*



**Note:**

This command is available for the following platforms:

- 7250 IXR-6
- 7250 IXR-10

<b>Description</b>	Index to enumerate the different candidate paths for a (color, endpoint).
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">segment-routing</a> <a href="#">segment-routing-policies</a> <a href="#">policy-database</a> <a href="#">policy</a> <a href="#">color</a> <i>number</i> <a href="#">endpoint</a> ( <a href="#">ipv4-address</a>   <a href="#">ipv6-address</a> ) <a href="#">candidate-path</a> <a href="#">candidate-path-index</a> <i>number</i>
<b>Configurable</b>	False

### discriminator *number*



**Note:**

This command is available for the following platforms:

- 7250 IXR-6
- 7250 IXR-10

<b>Description</b>	Candidate path distinguisher
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">segment-routing</a> <a href="#">segment-routing-policies</a> <a href="#">policy-database</a> <a href="#">policy</a> <a href="#">color</a> <i>number</i> <a href="#">endpoint</a> ( <a href="#">ipv4-address</a>   <a href="#">ipv6-address</a> ) <a href="#">candidate-path</a> <a href="#">candidate-path-index</a> <i>number</i> <a href="#">discriminator</a> <i>number</i>
<b>Tree</b>	<a href="#">discriminator</a>
<b>Configurable</b>	False

## last-oper-change *string*

**Note:**

This command is available for the following platforms:

- 7250 IXR-6
- 7250 IXR-10

<b>Description</b>	Enter the last-oper-change context
<b>Context</b>	<a href="#">network-instance name</a> <a href="#">string</a> <a href="#">segment-routing</a> <a href="#">segment-routing-policies</a> <a href="#">policy-database</a> <a href="#">policy color</a> <a href="#">number</a> <a href="#">endpoint (ipv4-address   ipv6-address)</a> <a href="#">candidate-path</a> <a href="#">candidate-path-index</a> <a href="#">number</a> <a href="#">last-oper-change</a> <a href="#">string</a>
<b>Tree</b>	<a href="#">last-oper-change</a>
<b>String Length</b>	20 to 32
<b>Configurable</b>	False

## oper-state *keyword*

**Note:**

This command is available for the following platforms:

- 7250 IXR-6
- 7250 IXR-10

<b>Description</b>	SR policy operational state
<b>Context</b>	<a href="#">network-instance name</a> <a href="#">string</a> <a href="#">segment-routing</a> <a href="#">segment-routing-policies</a> <a href="#">policy-database</a> <a href="#">policy color</a> <a href="#">number</a> <a href="#">endpoint (ipv4-address   ipv6-address)</a> <a href="#">candidate-path</a> <a href="#">candidate-path-index</a> <a href="#">number</a> <a href="#">oper-state</a> <a href="#">keyword</a>
<b>Tree</b>	<a href="#">oper-state</a>
<b>Options</b>	<ul style="list-style-type: none"> <li>• primary The policy is up and operational as a primary policy.</li> <li>• standby The policy is up and operational as a standby policy.</li> <li>• inactive The policy is currently inactive but it could become active without operator intervention.</li> <li>• down The policy is down and it cannot become active without operator intervention.</li> </ul>
<b>Configurable</b>	False

## oper-state-transitions *number*

**Note:**

This command is available for the following platforms:

- 7250 IXR-6
- 7250 IXR-10

<b>Description</b>	Enter the oper-state-transitions context
<b>Context</b>	<a href="#">network-instance name</a> <a href="#">string</a> <a href="#">segment-routing</a> <a href="#">segment-routing-policies</a> <a href="#">policy-database</a> <a href="#">policy color</a> <a href="#">number</a> <a href="#">endpoint (ipv4-address   ipv6-address)</a> <a href="#">candidate-path</a> <a href="#">candidate-path-index</a> <a href="#">number</a> <b>oper-state-transitions</b> <a href="#">number</a>
<b>Tree</b>	<a href="#">oper-state-transitions</a>
<b>Default</b>	0
<b>Configurable</b>	False

## originator *string*

**Note:**

This command is available for the following platforms:

- 7250 IXR-6
- 7250 IXR-10

<b>Description</b>	Identifier (concatenation of ASN and node-address) of the node that signalled/instantiated the candidate path on headend
<b>Context</b>	<a href="#">network-instance name</a> <a href="#">string</a> <a href="#">segment-routing</a> <a href="#">segment-routing-policies</a> <a href="#">policy-database</a> <a href="#">policy color</a> <a href="#">number</a> <a href="#">endpoint (ipv4-address   ipv6-address)</a> <a href="#">candidate-path</a> <a href="#">candidate-path-index</a> <a href="#">number</a> <b>originator</b> <a href="#">string</a>
<b>Tree</b>	<a href="#">originator</a>
<b>Configurable</b>	False

## policy-down-reason *identityref*

**Note:**

This command is available for the following platforms:

- 7250 IXR-6
- 7250 IXR-10

<b>Description</b>	Enter the policy-down-reason context
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<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">segment-routing</a> <a href="#">segment-routing-policies</a> <a href="#">policy-database</a> <a href="#">policy color</a> <i>number</i> <a href="#">endpoint</a> ( <a href="#">ipv4-address</a>   <a href="#">ipv6-address</a> ) <a href="#">candidate-path</a> <a href="#">candidate-path-index</a> <i>number</i> <a href="#">policy-down-reason</a> <i>identityref</i>
<b>Tree</b>	<a href="#">policy-down-reason</a>
<b>Options</b>	<ul style="list-style-type: none"> <li>• <a href="#">policy-admin-down</a> Policy is administrately down</li> <li>• <a href="#">no-segment-lists</a> Policy has no segment lists defined</li> </ul>
<b>Configurable</b>	False

### **policy-inactive-reason** *identityref*



**Note:**

This command is available for the following platforms:

- 7250 IXR-6
- 7250 IXR-10

<b>Description</b>	Enter the policy-inactive-reason context
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">segment-routing</a> <a href="#">segment-routing-policies</a> <a href="#">policy-database</a> <a href="#">policy color</a> <i>number</i> <a href="#">endpoint</a> ( <a href="#">ipv4-address</a>   <a href="#">ipv6-address</a> ) <a href="#">candidate-path</a> <a href="#">candidate-path-index</a> <i>number</i> <a href="#">policy-inactive-reason</a> <i>identityref</i>
<b>Tree</b>	<a href="#">policy-inactive-reason</a>
<b>Options</b>	<ul style="list-style-type: none"> <li>• <a href="#">preference</a> Higher preference policy exists</li> <li>• <a href="#">no-valid-segment-list</a> Policy has no valid segment lists.</li> <li>• <a href="#">up-segment-lists-below-threshold</a> Policy has a protection-policy and the number of segment lists that are operationally up is below the minimum threshold.</li> <li>• <a href="#">revert-pending</a> Policy is viable but it is being kept inactive until the revert timer expires.</li> <li>• <a href="#">invalid-binding-sid</a> Policy has a binding SID that could not be programmed</li> </ul>
<b>Configurable</b>	False

## preference *number*

**Note:**

This command is available for the following platforms:

- 7250 IXR-6
- 7250 IXR-10

<b>Description</b>	Candidate path preference
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">segment-routing</a> <a href="#">segment-routing-policies</a> <a href="#">policy-database</a> <a href="#">policy color</a> <i>number</i> <a href="#">endpoint</a> ( <i>ipv4-address</i>   <i>ipv6-address</i> ) <a href="#">candidate-path</a> <a href="#">candidate-path-index</a> <i>number</i> <a href="#">preference</a> <i>number</i>
<b>Tree</b>	<a href="#">preference</a>
<b>Range</b>	1 to 65535
<b>Configurable</b>	False

## protocol-origin *keyword*

**Note:**

This command is available for the following platforms:

- 7250 IXR-6
- 7250 IXR-10

<b>Description</b>	Instantiation mechanism used to create the candidate path
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">segment-routing</a> <a href="#">segment-routing-policies</a> <a href="#">policy-database</a> <a href="#">policy color</a> <i>number</i> <a href="#">endpoint</a> ( <i>ipv4-address</i>   <i>ipv6-address</i> ) <a href="#">candidate-path</a> <a href="#">candidate-path-index</a> <i>number</i> <a href="#">protocol-origin</a> <i>keyword</i>
<b>Tree</b>	<a href="#">protocol-origin</a>
<b>Options</b>	<ul style="list-style-type: none"> <li>• <code>pcep</code> PCEP used as signalling mechanism for the candidate path</li> <li>• <code>bgp</code> BGP used as signalling mechanism for the candidate path</li> <li>• <code>local</code> Management interface used for candidate path instantiation</li> </ul>
<b>Configurable</b>	False

**segment-list** `segment-list-index` *number***Note:**

This command is available for the following platforms:

- 7250 IXR-6
- 7250 IXR-10

<b>Description</b>	Enter the segment-list list instance
<b>Context</b>	<code>network-instance name</code> <i>string</i> <code>segment-routing</code> <code>segment-routing-policies</code> <code>policy-database</code> <code>policy</code> <code>color</code> <i>number</i> <code>endpoint</code> ( <i>ipv4-address</i>   <i>ipv6-address</i> ) <code>candidate-path</code> <code>candidate-path-index</code> <i>number</i> <code>segment-list</code> <code>segment-list-index</code> <i>number</i>
<b>Tree</b>	<code>segment-list</code>
<b>Configurable</b>	False

**segment-list-index** *number***Note:**

This command is available for the following platforms:

- 7250 IXR-6
- 7250 IXR-10

<b>Description</b>	Index to enumerate the different segment lists.
<b>Context</b>	<code>network-instance name</code> <i>string</i> <code>segment-routing</code> <code>segment-routing-policies</code> <code>policy-database</code> <code>policy</code> <code>color</code> <i>number</i> <code>endpoint</code> ( <i>ipv4-address</i>   <i>ipv6-address</i> ) <code>candidate-path</code> <code>candidate-path-index</code> <i>number</i> <code>segment-list</code> <code>segment-list-index</code> <i>number</i>
<b>Range</b>	1 to 32
<b>Configurable</b>	False

**last-oper-change** *string***Note:**

This command is available for the following platforms:

- 7250 IXR-6
- 7250 IXR-10

<b>Description</b>	Enter the last-oper-change context
<b>Context</b>	<code>network-instance name</code> <i>string</i> <code>segment-routing</code> <code>segment-routing-policies</code> <code>policy-database</code> <code>policy</code> <code>color</code> <i>number</i> <code>endpoint</code> ( <i>ipv4-address</i>   <i>ipv6-address</i> )



	<a href="#">candidate-path</a> <a href="#">candidate-path-index</a> <i>number</i> <a href="#">segment-list</a> <a href="#">segment-list-index</a> <i>number</i> <a href="#">last-oper-change</a> <i>string</i>
<b>Tree</b>	<a href="#">last-oper-change</a>
<b>String Length</b>	20 to 32
<b>Configurable</b>	False

## oper-state *keyword*



### Note:

This command is available for the following platforms:

- 7250 IXR-6
- 7250 IXR-10

<b>Description</b>	Segment list operational state
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">segment-routing</a> <a href="#">segment-routing-policies</a> <a href="#">policy-database</a> <a href="#">policy color</a> <i>number</i> <a href="#">endpoint</a> ( <a href="#">ipv4-address</a>   <a href="#">ipv6-address</a> ) <a href="#">candidate-path</a> <a href="#">candidate-path-index</a> <i>number</i> <a href="#">segment-list</a> <a href="#">segment-list-index</a> <i>number</i> <a href="#">oper-state</a> <i>keyword</i>
<b>Tree</b>	<a href="#">oper-state</a>
<b>Options</b>	<ul style="list-style-type: none"> <li>• up The segment-list is up and operational.</li> <li>• inactive The segment-list is currently inactive but it could become active without operator intervention.</li> <li>• down The segment-list is down and it cannot become active without operator intervention.</li> </ul>
<b>Configurable</b>	False

## oper-state-transitions *number*



### Note:

This command is available for the following platforms:

- 7250 IXR-6
- 7250 IXR-10

<b>Description</b>	Enter the oper-state-transitions context
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">segment-routing</a> <a href="#">segment-routing-policies</a> <a href="#">policy-database</a> <a href="#">policy color</a> <i>number</i> <a href="#">endpoint</a> ( <a href="#">ipv4-address</a>   <a href="#">ipv6-address</a> )

	<a href="#">candidate-path</a> <a href="#">candidate-path-index</a> <i>number</i> <a href="#">segment-list</a> <a href="#">segment-list-index</a> <i>number</i> <a href="#">oper-state-transitions</a> <i>number</i>
<b>Tree</b>	<a href="#">oper-state-transitions</a>
<b>Default</b>	0
<b>Configurable</b>	False

## seamless-bfd



### Note:

This command is available for the following platforms:

- 7250 IXR-6
- 7250 IXR-10

<b>Description</b>	Enter the seamless-bfd context
<b>Context</b>	<a href="#">network-instance</a> <i>name</i> <i>string</i> <a href="#">segment-routing</a> <a href="#">segment-routing-policies</a> <a href="#">policy-database</a> <a href="#">policy</a> <a href="#">color</a> <i>number</i> <a href="#">endpoint</a> ( <i>ipv4-address</i>   <i>ipv6-address</i> ) <a href="#">candidate-path</a> <a href="#">candidate-path-index</a> <i>number</i> <a href="#">segment-list</a> <a href="#">segment-list-index</a> <i>number</i> <a href="#">seamless-bfd</a>
<b>Tree</b>	<a href="#">seamless-bfd</a>
<b>Configurable</b>	False

## hold-down-time-remaining *number*



### Note:

This command is available for the following platforms:

- 7250 IXR-6
- 7250 IXR-10

<b>Description</b>	The time remaining until the hold-down timer expires for this segment-list
<b>Context</b>	<a href="#">network-instance</a> <i>name</i> <i>string</i> <a href="#">segment-routing</a> <a href="#">segment-routing-policies</a> <a href="#">policy-database</a> <a href="#">policy</a> <a href="#">color</a> <i>number</i> <a href="#">endpoint</a> ( <i>ipv4-address</i>   <i>ipv6-address</i> ) <a href="#">candidate-path</a> <a href="#">candidate-path-index</a> <i>number</i> <a href="#">segment-list</a> <a href="#">segment-list-index</a> <i>number</i> <a href="#">seamless-bfd</a> <a href="#">hold-down-time-remaining</a> <i>number</i>
<b>Tree</b>	<a href="#">hold-down-time-remaining</a>
<b>Configurable</b>	False

**hold-down-timer-active *boolean*****Note:**

This command is available for the following platforms:

- 7250 IXR-6
- 7250 IXR-10

<b>Description</b>	Reads true when the hold-down timer is active for this segment-list
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">segment-routing</a> <a href="#">segment-routing-policies</a> <a href="#">policy-database</a> <a href="#">policy color</a> <i>number</i> <a href="#">endpoint</a> ( <i>ipv4-address</i>   <i>ipv6-address</i> ) <a href="#">candidate-path</a> <a href="#">candidate-path-index</a> <i>number</i> <a href="#">segment-list</a> <a href="#">segment-list-index</a> <i>number</i> <a href="#">seamless-bfd</a> <a href="#">hold-down-timer-active</a> <i>boolean</i>
<b>Tree</b>	<a href="#">hold-down-timer-active</a>
<b>Configurable</b>	False

**session-state *keyword*****Note:**

This command is available for the following platforms:

- 7250 IXR-6
- 7250 IXR-10

<b>Description</b>	Enter the session-state context
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">segment-routing</a> <a href="#">segment-routing-policies</a> <a href="#">policy-database</a> <a href="#">policy color</a> <i>number</i> <a href="#">endpoint</a> ( <i>ipv4-address</i>   <i>ipv6-address</i> ) <a href="#">candidate-path</a> <a href="#">candidate-path-index</a> <i>number</i> <a href="#">segment-list</a> <a href="#">segment-list-index</a> <i>number</i> <a href="#">seamless-bfd</a> <a href="#">session-state</a> <i>keyword</i>
<b>Tree</b>	<a href="#">session-state</a>
<b>Options</b>	<ul style="list-style-type: none"> <li>• up</li> <li>• down</li> </ul>
<b>Configurable</b>	False

**segment [segment-index](#) *number*****Note:**

This command is available for the following platforms:

- 7250 IXR-6
- 7250 IXR-10

<b>Description</b>	Enter the segment list instance
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">segment-routing</a> <a href="#">segment-routing-policies</a> <a href="#">policy-database</a> <a href="#">policy</a> <a href="#">color</a> <i>number</i> <a href="#">endpoint</a> ( <a href="#">ipv4-address</a>   <a href="#">ipv6-address</a> ) <a href="#">candidate-path</a> <a href="#">candidate-path-index</a> <i>number</i> <a href="#">segment-list</a> <a href="#">segment-list-index</a> <i>number</i> <a href="#">segment</a> <a href="#">segment-index</a> <i>number</i>
<b>Tree</b>	<a href="#">segment</a>
<b>Configurable</b>	False

## segment-index *number*



### Note:

This command is available for the following platforms:

- 7250 IXR-6
- 7250 IXR-10

<b>Description</b>	Index to enumerate the different segments in a segment-list
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">segment-routing</a> <a href="#">segment-routing-policies</a> <a href="#">policy-database</a> <a href="#">policy</a> <a href="#">color</a> <i>number</i> <a href="#">endpoint</a> ( <a href="#">ipv4-address</a>   <a href="#">ipv6-address</a> ) <a href="#">candidate-path</a> <a href="#">candidate-path-index</a> <i>number</i> <a href="#">segment-list</a> <a href="#">segment-list-index</a> <i>number</i> <a href="#">segment</a> <a href="#">segment-index</a> <i>number</i>
<b>Configurable</b>	False

## segment-type-a



### Note:

This command is available for the following platforms:

- 7250 IXR-6
- 7250 IXR-10

<b>Description</b>	Segment identified by MPLS label
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">segment-routing</a> <a href="#">segment-routing-policies</a> <a href="#">policy-database</a> <a href="#">policy</a> <a href="#">color</a> <i>number</i> <a href="#">endpoint</a> ( <a href="#">ipv4-address</a>   <a href="#">ipv6-address</a> ) <a href="#">candidate-path</a> <a href="#">candidate-path-index</a> <i>number</i> <a href="#">segment-list</a> <a href="#">segment-list-index</a> <i>number</i> <a href="#">segment</a> <a href="#">segment-index</a> <i>number</i> <a href="#">segment-type-a</a>
<b>Tree</b>	<a href="#">segment-type-a</a>
<b>Configurable</b>	False

**sid-value *number*****Note:**

This command is available for the following platforms:

- 7250 IXR-6
- 7250 IXR-10

<b>Description</b>	MPLS label value
<b>Context</b>	<a href="#">network-instance name</a> <a href="#">string</a> <a href="#">segment-routing</a> <a href="#">segment-routing-policies</a> <a href="#">policy-database</a> <a href="#">policy</a> <a href="#">color</a> <a href="#">number</a> <a href="#">endpoint</a> ( <a href="#">ipv4-address</a>   <a href="#">ipv6-address</a> ) <a href="#">candidate-path</a> <a href="#">candidate-path-index</a> <a href="#">number</a> <a href="#">segment-list</a> <a href="#">segment-list-index</a> <a href="#">number</a> <a href="#">segment</a> <a href="#">segment-index</a> <a href="#">number</a> <a href="#">segment-type-a</a> <a href="#">sid-value</a> <a href="#">number</a>
<b>Tree</b>	<a href="#">sid-value</a>
<b>Range</b>	16 to 1048575
<b>Configurable</b>	False

**segment-list-down-reason *identityref*****Note:**

This command is available for the following platforms:

- 7250 IXR-6
- 7250 IXR-10

<b>Description</b>	Enter the segment-list-down-reason context
<b>Context</b>	<a href="#">network-instance name</a> <a href="#">string</a> <a href="#">segment-routing</a> <a href="#">segment-routing-policies</a> <a href="#">policy-database</a> <a href="#">policy</a> <a href="#">color</a> <a href="#">number</a> <a href="#">endpoint</a> ( <a href="#">ipv4-address</a>   <a href="#">ipv6-address</a> ) <a href="#">candidate-path</a> <a href="#">candidate-path-index</a> <a href="#">number</a> <a href="#">segment-list</a> <a href="#">segment-list-index</a> <a href="#">number</a> <a href="#">segment-list-down-reason</a> <a href="#">identityref</a>
<b>Tree</b>	<a href="#">segment-list-down-reason</a>
<b>Options</b>	<ul style="list-style-type: none"> <li>• <a href="#">segment-list-admin-down</a> Segment list is administrately down</li> </ul>
<b>Configurable</b>	False

## segment-list-inactive-reason *identityref*



### Note:

This command is available for the following platforms:

- 7250 IXR-6
- 7250 IXR-10

<b>Description</b>	Enter the segment-list-inactive-reason context
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">segment-routing</a> <a href="#">segment-routing-policies</a> <a href="#">policy-database</a> <a href="#">policy</a> <a href="#">color</a> <i>number</i> <a href="#">endpoint</a> ( <a href="#">ipv4-address</a>   <a href="#">ipv6-address</a> ) <a href="#">candidate-path</a> <a href="#">candidate-path-index</a> <i>number</i> <a href="#">segment-list</a> <a href="#">segment-list-index</a> <i>number</i> <a href="#">segment-list-inactive-reason</a> <i>identityref</i>
<b>Tree</b>	<a href="#">segment-list-inactive-reason</a>
<b>Options</b>	<ul style="list-style-type: none"> <li>• <a href="#">unresolved-first-segment</a> The first segment in the segment list is unknown or unreachable.</li> <li>• <a href="#">sbfd-session-down</a> Policy has a protection-policy with seamless BFD enabled and the Sbfd session that is associated with the segment list is down (or in hold-down).</li> </ul>
<b>Configurable</b>	False

## statistics



### Note:

This command is available for the following platforms:

- 7250 IXR-6
- 7250 IXR-10

<b>Description</b>	Enter the statistics context
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">segment-routing</a> <a href="#">segment-routing-policies</a> <a href="#">policy-database</a> <a href="#">policy</a> <a href="#">color</a> <i>number</i> <a href="#">endpoint</a> ( <a href="#">ipv4-address</a>   <a href="#">ipv6-address</a> ) <a href="#">candidate-path</a> <a href="#">candidate-path-index</a> <i>number</i> <a href="#">segment-list</a> <a href="#">segment-list-index</a> <i>number</i> <a href="#">statistics</a>
<b>Tree</b>	<a href="#">statistics</a>
<b>Configurable</b>	False

**out-octets *number*****Note:**

This command is available for the following platforms:

- 7250 IXR-6
- 7250 IXR-10

<b>Description</b>	Number of octets forwarded by the segment-list
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">segment-routing</a> <a href="#">segment-routing-policies</a> <a href="#">policy-database</a> <a href="#">policy</a> <a href="#">color</a> <a href="#">number</a> <a href="#">endpoint</a> ( <a href="#">ipv4-address</a>   <a href="#">ipv6-address</a> ) <a href="#">candidate-path</a> <a href="#">candidate-path-index</a> <a href="#">number</a> <a href="#">segment-list</a> <a href="#">segment-list-index</a> <a href="#">number</a> <a href="#">statistics</a> <a href="#">out-octets</a> <a href="#">number</a>
<b>Tree</b>	<a href="#">out-octets</a>
<b>Default</b>	0
<b>Units</b>	byte
<b>Configurable</b>	False

**out-packets *number*****Note:**

This command is available for the following platforms:

- 7250 IXR-6
- 7250 IXR-10

<b>Description</b>	Number of packets forwarded by the segment-list
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">segment-routing</a> <a href="#">segment-routing-policies</a> <a href="#">policy-database</a> <a href="#">policy</a> <a href="#">color</a> <a href="#">number</a> <a href="#">endpoint</a> ( <a href="#">ipv4-address</a>   <a href="#">ipv6-address</a> ) <a href="#">candidate-path</a> <a href="#">candidate-path-index</a> <a href="#">number</a> <a href="#">segment-list</a> <a href="#">segment-list-index</a> <a href="#">number</a> <a href="#">statistics</a> <a href="#">out-packets</a> <a href="#">number</a>
<b>Tree</b>	<a href="#">out-packets</a>
<b>Default</b>	0
<b>Configurable</b>	False

**standby-available *boolean*****Note:**

This command is available for the following platforms:

- 7250 IXR-6
- 7250 IXR-10

<b>Description</b>	Set to true when this (primary) SR policy is protected by a pre-programmed standby SR policy. This is only possible if a protection-policy of type active-standby is bound to this policy
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">segment-routing</a> <a href="#">segment-routing-policies</a> <a href="#">policy-database</a> <a href="#">policy</a> <a href="#">color</a> <i>number</i> <a href="#">endpoint</a> ( <i>ipv4-address</i>   <i>ipv6-address</i> ) <a href="#">candidate-path</a> <a href="#">candidate-path-index</a> <i>number</i> <b>standby-available</b> <i>boolean</i>
<b>Tree</b>	<a href="#">standby-available</a>
<b>Configurable</b>	False

**statistics****Note:**

This command is available for the following platforms:

- 7250 IXR-6
- 7250 IXR-10

<b>Description</b>	Enter the statistics context
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">segment-routing</a> <a href="#">segment-routing-policies</a> <a href="#">policy-database</a> <a href="#">policy</a> <a href="#">color</a> <i>number</i> <a href="#">endpoint</a> ( <i>ipv4-address</i>   <i>ipv6-address</i> ) <a href="#">candidate-path</a> <a href="#">candidate-path-index</a> <i>number</i> <b>statistics</b>
<b>Tree</b>	<a href="#">statistics</a>
<b>Configurable</b>	False

**in-labeled-octets *number*****Note:**

This command is available for the following platforms:

- 7250 IXR-6
- 7250 IXR-10

<b>Description</b>	Number of octets in labeled packets matching the policy
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">segment-routing</a> <a href="#">segment-routing-policies</a> <a href="#">policy-database</a> <a href="#">policy</a> <a href="#">color</a> <i>number</i> <a href="#">endpoint</a> ( <i>ipv4-address</i>   <i>ipv6-address</i> )



	<a href="#">candidate-path</a> <a href="#">candidate-path-index</a> <i>number</i> <a href="#">statistics</a> <a href="#">in-labeled-octets</a> <i>number</i>
<b>Tree</b>	<a href="#">in-labeled-octets</a>
<b>Default</b>	0
<b>Units</b>	byte
<b>Configurable</b>	False

### in-labeled-packets *number*



**Note:**

This command is available for the following platforms:

- 7250 IXR-6
- 7250 IXR-10

<b>Description</b>	Number of labeled packets matching the policy
<b>Context</b>	<a href="#">network-instance</a> <i>name</i> <a href="#">string</a> <a href="#">segment-routing</a> <a href="#">segment-routing-policies</a> <a href="#">policy-database</a> <a href="#">policy</a> <a href="#">color</a> <i>number</i> <a href="#">endpoint</a> ( <a href="#">ipv4-address</a>   <a href="#">ipv6-address</a> ) <a href="#">candidate-path</a> <a href="#">candidate-path-index</a> <i>number</i> <a href="#">statistics</a> <a href="#">in-labeled-packets</a> <i>number</i>
<b>Tree</b>	<a href="#">in-labeled-packets</a>
<b>Default</b>	0
<b>Configurable</b>	False

### in-octets *number*



**Note:**

This command is available for the following platforms:

- 7250 IXR-6
- 7250 IXR-10

<b>Description</b>	Number of octets in unlabeled packets matching the policy
<b>Context</b>	<a href="#">network-instance</a> <i>name</i> <a href="#">string</a> <a href="#">segment-routing</a> <a href="#">segment-routing-policies</a> <a href="#">policy-database</a> <a href="#">policy</a> <a href="#">color</a> <i>number</i> <a href="#">endpoint</a> ( <a href="#">ipv4-address</a>   <a href="#">ipv6-address</a> ) <a href="#">candidate-path</a> <a href="#">candidate-path-index</a> <i>number</i> <a href="#">statistics</a> <a href="#">in-octets</a> <i>number</i>
<b>Tree</b>	<a href="#">in-octets</a>
<b>Default</b>	0
<b>Units</b>	byte
<b>Configurable</b>	False

## in-packets *number*

**Note:**

This command is available for the following platforms:

- 7250 IXR-6
- 7250 IXR-10

<b>Description</b>	Number of unlabeled packets matching the policy that were subsequently forwarded
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">segment-routing</a> <a href="#">segment-routing-policies</a> <a href="#">policy-database</a> <a href="#">policy color</a> <i>number</i> <a href="#">endpoint (ipv4-address   ipv6-address)</a> <a href="#">candidate-path</a> <a href="#">candidate-path-index</a> <i>number</i> <a href="#">statistics in-packets</a> <i>number</i>
<b>Tree</b>	<a href="#">in-packets</a>
<b>Default</b>	0
<b>Configurable</b>	False

## out-octets *number*

**Note:**

This command is available for the following platforms:

- 7250 IXR-6
- 7250 IXR-10

<b>Description</b>	Number of octets forwarded by the policy
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">segment-routing</a> <a href="#">segment-routing-policies</a> <a href="#">policy-database</a> <a href="#">policy color</a> <i>number</i> <a href="#">endpoint (ipv4-address   ipv6-address)</a> <a href="#">candidate-path</a> <a href="#">candidate-path-index</a> <i>number</i> <a href="#">statistics out-octets</a> <i>number</i>
<b>Tree</b>	<a href="#">out-octets</a>
<b>Default</b>	0
<b>Units</b>	byte
<b>Configurable</b>	False

**out-packets *number*****Note:**

This command is available for the following platforms:

- 7250 IXR-6
- 7250 IXR-10

<b>Description</b>	Number of packets forwarded by the policy
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">segment-routing</a> <a href="#">segment-routing-policies</a> <a href="#">policy-database</a> <a href="#">policy color</a> <i>number</i> <a href="#">endpoint</a> ( <i>ipv4-address</i>   <i>ipv6-address</i> ) <a href="#">candidate-path</a> <a href="#">candidate-path-index</a> <i>number</i> <a href="#">statistics</a> <a href="#">out-packets</a> <i>number</i>
<b>Tree</b>	<a href="#">out-packets</a>
<b>Default</b>	0
<b>Configurable</b>	False

**protection-policies****Note:**

This command is available for the following platforms:

- 7250 IXR-6
- 7250 IXR-10

<b>Description</b>	Container with protection policies
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">segment-routing</a> <a href="#">segment-routing-policies</a> <a href="#">protection-policies</a>
<b>Tree</b>	<a href="#">protection-policies</a>
<b>Configurable</b>	True

**policy [protection-policy-name](#) *string*****Note:**

This command is available for the following platforms:

- 7250 IXR-6
- 7250 IXR-10

<b>Description</b>	Enter the policy list instance
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">segment-routing</a> <a href="#">segment-routing-policies</a> <a href="#">protection-policies</a> <a href="#">policy</a> <a href="#">protection-policy-name</a> <i>string</i>
<b>Tree</b>	<a href="#">policy</a>

<b>Configurable</b>	True
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### protection-policy-name *string*



**Note:**

This command is available for the following platforms:

- 7250 IXR-6
- 7250 IXR-10

<b>Description</b>	A unique identifying name for the protection policy
<b>Context</b>	<a href="#">network-instance name <i>string</i></a> <a href="#">segment-routing</a> <a href="#">segment-routing-policies</a> <a href="#">protection-policies</a> <a href="#">policy</a> <a href="#">protection-policy-name <i>string</i></a>
<b>String Length</b>	1 to 255
<b>Configurable</b>	True

### hold-down-timer *number*



**Note:**

This command is available for the following platforms:

- 7250 IXR-6
- 7250 IXR-10

<b>Description</b>	Sets the value of a per-SBFD session timer that is started whenever the session transitions from up to down. If the SBFD session comes back up again while the timer is still running the SBFD session is held down and the segment list remains invalid until the timer expires.
<b>Context</b>	<a href="#">network-instance name <i>string</i></a> <a href="#">segment-routing</a> <a href="#">segment-routing-policies</a> <a href="#">protection-policies</a> <a href="#">policy</a> <a href="#">protection-policy-name <i>string</i></a> <a href="#">hold-down-timer <i>number</i></a>
<b>Tree</b>	<a href="#">hold-down-timer</a>
<b>Default</b>	3
<b>Units</b>	seconds
<b>Configurable</b>	True

**min-segment-list-threshold *number*****Note:**

This command is available for the following platforms:

- 7250 IXR-6
- 7250 IXR-10

<b>Description</b>	Sets a value for the minimum number of segment lists that must be operational in order for a policy to be operational. A value of 1 means that the policy will remain operational until the last segment list goes down or inactive.
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">segment-routing</a> <a href="#">segment-routing-policies</a> <a href="#">protection-policies</a> <a href="#">policy</a> <a href="#">protection-policy-name</a> <i>string</i> <b>min-segment-list-threshold</b> <i>number</i>
<b>Tree</b>	<a href="#">min-segment-list-threshold</a>
<b>Range</b>	1 to 32
<b>Default</b>	1
<b>Configurable</b>	True

**mode *keyword*****Note:**

This command is available for the following platforms:

- 7250 IXR-6
- 7250 IXR-10

<b>Description</b>	The mode of the protection policy
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">segment-routing</a> <a href="#">segment-routing-policies</a> <a href="#">protection-policies</a> <a href="#">policy</a> <a href="#">protection-policy-name</a> <i>string</i> <b>mode</b> <i>keyword</i>
<b>Tree</b>	<a href="#">mode</a>
<b>Default</b>	ecmp
<b>Options</b>	<ul style="list-style-type: none"> <li>• <b>ecmp</b> <p>All of the segment lists of the the best policy for the endpoint or (color, endpoint) are programmed into the datapath as active ECMP paths. If one of these ECMP paths experiences failure then fast failover is available by re-spraying the affected traffic flows to the remaining ECMP paths. There is no fast failover to a pre-programmed standby policy when the last of the ECMP paths fails.</p> </li> <li>• <b>active-standby</b> <p>The first segment list of the the best policy for the endpoint (or color +endpoint) is programmed into the datapath as a primary path and</p> </li> </ul>

the first segment list of the next best policy for the endpoint (or color+endpoint) is programmed into the datapath as a standby path. If the primary path experiences failure then fast failover is available by diverting the affected traffic flows to the standby path.

**Configurable** True

## revert-timer *number*



### Note:

This command is available for the following platforms:

- 7250 IXR-6
- 7250 IXR-10

<b>Description</b>	Sets the value of a per-policy timer that is started whenever a policy transitions to up state and because of its preference it should take over as the primary path for the endpoint or color+endpoint, replacing the current primary path. While the timer is running the primary designate policy stays inactive for reason revert-pending; when the timer expires the policy becomes the actual primary policy and traffic reverts to using the operational segment lists of the new primary policy.
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">segment-routing</a> <a href="#">segment-routing-policies</a> <a href="#">protection-policies</a> <a href="#">policy</a> <a href="#">protection-policy-name</a> <i>string</i> <b>revert-timer</b> <i>number</i>
<b>Tree</b>	<a href="#">revert-timer</a>
<b>Default</b>	10
<b>Units</b>	seconds
<b>Configurable</b>	True

## seamless-bfd *boolean*



### Note:

This command is available for the following platforms:

- 7250 IXR-6
- 7250 IXR-10

<b>Description</b>	When set to true, this node attempts to setup a seamless BFD session on every segment-list of every SR policy that uses this protection-policy and that is a primary or standby for the endpoint or color+endpoint. The transition of any such SBFDF session from up to down is a fast trigger for diverting traffic away from the associated segment-list.
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When set to false traffic is diverted away from a segment list only when the segment list becomes inactive or down due to an unresolved first segment or an administrative disable (of the policy or a segment list).

<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">segment-routing</a> <a href="#">segment-routing-policies</a> <a href="#">protection-policies</a> <a href="#">policy</a> <a href="#">protection-policy-name</a> <i>string</i> <a href="#">seamless-bfd</a> <i>boolean</i>
<b>Tree</b>	<a href="#">seamless-bfd</a>
<b>Default</b>	true
<b>Configurable</b>	True

## static-policies



### Note:

This command is available for the following platforms:

- 7250 IXR-6
- 7250 IXR-10

<b>Description</b>	Enter the static-policies context
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">segment-routing</a> <a href="#">segment-routing-policies</a> <a href="#">static-policies</a>
<b>Tree</b>	<a href="#">static-policies</a>
<b>Configurable</b>	True

## policy [static-policy-name](#) *string*



### Note:

This command is available for the following platforms:

- 7250 IXR-6
- 7250 IXR-10

<b>Description</b>	Enter the policy list instance
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">segment-routing</a> <a href="#">segment-routing-policies</a> <a href="#">static-policies</a> <a href="#">policy</a> <a href="#">static-policy-name</a> <i>string</i>
<b>Tree</b>	<a href="#">policy</a>
<b>Configurable</b>	True

**static-policy-name *string*****Note:**

This command is available for the following platforms:

- 7250 IXR-6
- 7250 IXR-10

<b>Description</b>	Policy name
<b>Context</b>	<a href="#">network-instance name <i>string</i></a> <a href="#">segment-routing segment-routing-policies static-policies policy static-policy-name <i>string</i></a>
<b>String Length</b>	1 to 255
<b>Configurable</b>	True

**admin-state *keyword*****Note:**

This command is available for the following platforms:

- 7250 IXR-6
- 7250 IXR-10

<b>Description</b>	SR policy administrative state
<b>Context</b>	<a href="#">network-instance name <i>string</i></a> <a href="#">segment-routing segment-routing-policies static-policies policy static-policy-name <i>string</i></a> <a href="#">admin-state <i>keyword</i></a>
<b>Tree</b>	<a href="#">admin-state</a>
<b>Default</b>	enable
<b>Options</b>	<ul style="list-style-type: none"> <li>• enable</li> <li>• disable</li> </ul>
<b>Configurable</b>	True

**color *number*****Note:**

This command is available for the following platforms:

- 7250 IXR-6
- 7250 IXR-10

<b>Description</b>	Color associated with the policy.
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<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">segment-routing</a> <a href="#">segment-routing-policies</a> <a href="#">static-policies</a> <a href="#">policy</a> <a href="#">static-policy-name</a> <i>string</i> <a href="#">color</a> <i>number</i>
<b>Tree</b>	<a href="#">color</a>
<b>Range</b>	1 to 4294967295
<b>Configurable</b>	True

### description *string*



**Note:**

This command is available for the following platforms:

- 7250 IXR-6
- 7250 IXR-10

<b>Description</b>	Description of the policy
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">segment-routing</a> <a href="#">segment-routing-policies</a> <a href="#">static-policies</a> <a href="#">policy</a> <a href="#">static-policy-name</a> <i>string</i> <a href="#">description</a> <i>string</i>
<b>Tree</b>	<a href="#">description</a>
<b>String Length</b>	1 to 255
<b>Configurable</b>	True

### endpoint (*ipv4-address* | *ipv6-address*)



**Note:**

This command is available for the following platforms:

- 7250 IXR-6
- 7250 IXR-10

<b>Description</b>	Policy endpoint IP address
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">segment-routing</a> <a href="#">segment-routing-policies</a> <a href="#">static-policies</a> <a href="#">policy</a> <a href="#">static-policy-name</a> <i>string</i> <a href="#">endpoint</a> ( <i>ipv4-address</i>   <i>ipv6-address</i> )
<b>Tree</b>	<a href="#">endpoint</a>
<b>Configurable</b>	True

## last-oper-change *string*



### Note:

This command is available for the following platforms:

- 7250 IXR-6
- 7250 IXR-10

<b>Description</b>	Enter the last-oper-change context
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">segment-routing</a> <a href="#">segment-routing-policies</a> <a href="#">static-policies</a> <a href="#">policy</a> <a href="#">static-policy-name</a> <i>string</i> <a href="#">last-oper-change</a> <i>string</i>
<b>Tree</b>	<a href="#">last-oper-change</a>
<b>String Length</b>	20 to 32
<b>Configurable</b>	False

## oper-state *keyword*



### Note:

This command is available for the following platforms:

- 7250 IXR-6
- 7250 IXR-10

<b>Description</b>	SR policy operational state
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">segment-routing</a> <a href="#">segment-routing-policies</a> <a href="#">static-policies</a> <a href="#">policy</a> <a href="#">static-policy-name</a> <i>string</i> <a href="#">oper-state</a> <i>keyword</i>
<b>Tree</b>	<a href="#">oper-state</a>
<b>Options</b>	<ul style="list-style-type: none"> <li>• primary The policy is up and operational as a primary policy.</li> <li>• standby The policy is up and operational as a standby policy.</li> <li>• inactive The policy is currently inactive but it could become active without operator intervention.</li> <li>• down The policy is down and it cannot become active without operator intervention.</li> </ul>
<b>Configurable</b>	False

## oper-state-transitions *number*

**Note:**

This command is available for the following platforms:

- 7250 IXR-6
- 7250 IXR-10

<b>Description</b>	Enter the oper-state-transitions context
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">segment-routing</a> <a href="#">segment-routing-policies</a> <a href="#">static-policies</a> <a href="#">policy</a> <a href="#">static-policy-name</a> <i>string</i> <a href="#">oper-state-transitions</a> <i>number</i>
<b>Tree</b>	<a href="#">oper-state-transitions</a>
<b>Default</b>	0
<b>Configurable</b>	False

## policy-down-reason *identityref*

**Note:**

This command is available for the following platforms:

- 7250 IXR-6
- 7250 IXR-10

<b>Description</b>	Enter the policy-down-reason context
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">segment-routing</a> <a href="#">segment-routing-policies</a> <a href="#">static-policies</a> <a href="#">policy</a> <a href="#">static-policy-name</a> <i>string</i> <a href="#">policy-down-reason</a> <i>identityref</i>
<b>Tree</b>	<a href="#">policy-down-reason</a>
<b>Options</b>	<ul style="list-style-type: none"> <li>• <a href="#">policy-admin-down</a> Policy is administrately down</li> <li>• <a href="#">no-segment-lists</a> Policy has no segment lists defined</li> </ul>
<b>Configurable</b>	False

## policy-inactive-reason *identityref*

**Note:**

This command is available for the following platforms:

- 7250 IXR-6
- 7250 IXR-10

<b>Description</b>	Enter the policy-inactive-reason context
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">segment-routing</a> <a href="#">segment-routing-policies</a> <a href="#">static-policies</a> <a href="#">policy</a> <a href="#">static-policy-name</a> <i>string</i> <a href="#">policy-inactive-reason</a> <i>identityref</i>
<b>Tree</b>	<a href="#">policy-inactive-reason</a>
<b>Options</b>	<ul style="list-style-type: none"> <li>• preference Higher preference policy exists</li> <li>• no-valid-segment-list Policy has no valid segment lists.</li> <li>• up-segment-lists-below-threshold Policy has a protection-policy and the number of segment lists that are operationally up is below the minimum threshold.</li> <li>• revert-pending Policy is viable but it is being kept inactive until the revert timer expires.</li> <li>• invalid-binding-sid Policy has a binding SID that could not be programmed</li> </ul>
<b>Configurable</b>	False

## preference *number*



### Note:

This command is available for the following platforms:

- 7250 IXR-6
- 7250 IXR-10

<b>Description</b>	When there are multiple policies (static or otherwise) for the same endpoint or (color, endpoint) the one with the lowest numerical preference value is selected to be the primary policy. The policy with the next lowest numerical preference is selected to be the secondary policy.
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">segment-routing</a> <a href="#">segment-routing-policies</a> <a href="#">static-policies</a> <a href="#">policy</a> <a href="#">static-policy-name</a> <i>string</i> <a href="#">preference</a> <i>number</i>
<b>Tree</b>	<a href="#">preference</a>
<b>Range</b>	1 to 65535
<b>Default</b>	100
<b>Configurable</b>	True

## protection-policy *reference*

**Note:**

This command is available for the following platforms:

- 7250 IXR-6
- 7250 IXR-10

<b>Description</b>	Enter the protection-policy context
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">segment-routing</a> <a href="#">segment-routing-policies</a> <a href="#">static-policies</a> <a href="#">policy</a> <a href="#">static-policy-name</a> <i>string</i> <a href="#">protection-policy</a> <i>reference</i>
<b>Tree</b>	<a href="#">protection-policy</a>
<b>Reference</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">segment-routing</a> <a href="#">segment-routing-policies</a> <a href="#">protection-policies</a> <a href="#">policy</a> <a href="#">protection-policy-name</a> <i>string</i>
<b>Configurable</b>	True

## re-optimization-timer *number*

**Note:**

This command is available for the following platforms:

- 7250 IXR-6
- 7250 IXR-10

<b>Description</b>	<p>An optional timer that is started when the policy becomes active and fires periodically at the specified interval. When the timer expires, the system determines whether there is a better path for any of the policy's segment lists, and if there is a better path the datapath is immediately updated with the new stack of pushed labels. This is only applicable to segment lists that have been specified using named paths that consist of IP hops</p> <p>The default value of 0 disables the timer. In this situation topology changes do not affect the stack of MPLS labels (list of SIDs) used for segment lists that correspond to named paths; the stack of labels will remain the same until the next time the policy transitions from down to up (and then it will be based on the topology that is current at that time)</p>
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">segment-routing</a> <a href="#">segment-routing-policies</a> <a href="#">static-policies</a> <a href="#">policy</a> <a href="#">static-policy-name</a> <i>string</i> <a href="#">re-optimization-timer</a> <i>number</i>
<b>Tree</b>	<a href="#">re-optimization-timer</a>
<b>Default</b>	0
<b>Configurable</b>	True

**segment-list** `segment-list-index` *number***Note:**

This command is available for the following platforms:

- 7250 IXR-6
- 7250 IXR-10

<b>Description</b>	Enter the segment-list list instance
<b>Context</b>	<code>network-instance name</code> <i>string</i> <code>segment-routing</code> <code>segment-routing-policies</code> <code>static-policies</code> <code>policy</code> <code>static-policy-name</code> <i>string</i> <code>segment-list</code> <code>segment-list-index</code> <i>number</i>
<b>Tree</b>	<code>segment-list</code>
<b>Configurable</b>	True

**segment-list-index** *number***Note:**

This command is available for the following platforms:

- 7250 IXR-6
- 7250 IXR-10

<b>Description</b>	Index to enumerate the different segment lists for a static policy.
<b>Context</b>	<code>network-instance name</code> <i>string</i> <code>segment-routing</code> <code>segment-routing-policies</code> <code>static-policies</code> <code>policy</code> <code>static-policy-name</code> <i>string</i> <code>segment-list</code> <code>segment-list-index</code> <i>number</i>
<b>Range</b>	1 to 32
<b>Configurable</b>	True

**admin-state** *keyword***Note:**

This command is available for the following platforms:

- 7250 IXR-6
- 7250 IXR-10

<b>Description</b>	Used to administratively enable or disable a segment list
<b>Context</b>	<code>network-instance name</code> <i>string</i> <code>segment-routing</code> <code>segment-routing-policies</code> <code>static-policies</code> <code>policy</code> <code>static-policy-name</code> <i>string</i> <code>segment-list</code> <code>segment-list-index</code> <i>number</i> <code>admin-state</code> <i>keyword</i>

<b>Tree</b>	<a href="#">admin-state</a>
<b>Default</b>	enable
<b>Options</b>	<ul style="list-style-type: none"> <li>• enable</li> <li>• disable</li> </ul>
<b>Configurable</b>	True

## last-oper-change *string*



### Note:

This command is available for the following platforms:

- 7250 IXR-6
- 7250 IXR-10

<b>Description</b>	Enter the last-oper-change context
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">segment-routing</a> <a href="#">segment-routing-policies</a> <a href="#">static-policies</a> <a href="#">policy</a> <a href="#">static-policy-name</a> <i>string</i> <a href="#">segment-list</a> <a href="#">segment-list-index</a> <i>number</i> <a href="#">last-oper-change</a> <i>string</i>
<b>Tree</b>	<a href="#">last-oper-change</a>
<b>String Length</b>	20 to 32
<b>Configurable</b>	False

## named-path *reference*



### Note:

This command is available for the following platforms:

- 7250 IXR-6
- 7250 IXR-10

<b>Description</b>	Enter the named-path context
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">segment-routing</a> <a href="#">segment-routing-policies</a> <a href="#">static-policies</a> <a href="#">policy</a> <a href="#">static-policy-name</a> <i>string</i> <a href="#">segment-list</a> <a href="#">segment-list-index</a> <i>number</i> <a href="#">named-path</a> <i>reference</i>
<b>Tree</b>	<a href="#">named-path</a>
<b>Reference</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">segment-routing</a> <a href="#">segment-routing-policies</a> <a href="#">named-paths</a> <a href="#">path</a> <a href="#">named-path-name</a> <i>string</i>
<b>Configurable</b>	True

**oper-state keyword****Note:**

This command is available for the following platforms:

- 7250 IXR-6
- 7250 IXR-10

<b>Description</b>	Segment list operational state
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">segment-routing</a> <a href="#">segment-routing-policies</a> <a href="#">static-policies</a> <a href="#">policy</a> <a href="#">static-policy-name</a> <i>string</i> <a href="#">segment-list</a> <a href="#">segment-list-index</a> <i>number</i> <b>oper-state</b> <i>keyword</i>
<b>Tree</b>	<a href="#">oper-state</a>
<b>Options</b>	<ul style="list-style-type: none"> <li>• up The segment-list is up and operational.</li> <li>• inactive The segment-list is currently inactive but it could become active without operator intervention.</li> <li>• down The segment-list is down and it cannot become active without operator intervention.</li> </ul>
<b>Configurable</b>	False

**oper-state-transitions number****Note:**

This command is available for the following platforms:

- 7250 IXR-6
- 7250 IXR-10

<b>Description</b>	Enter the oper-state-transitions context
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">segment-routing</a> <a href="#">segment-routing-policies</a> <a href="#">static-policies</a> <a href="#">policy</a> <a href="#">static-policy-name</a> <i>string</i> <a href="#">segment-list</a> <a href="#">segment-list-index</a> <i>number</i> <b>oper-state-transitions</b> <i>number</i>
<b>Tree</b>	<a href="#">oper-state-transitions</a>
<b>Default</b>	0
<b>Configurable</b>	False



## seamless-bfd

**Note:**

This command is available for the following platforms:

- 7250 IXR-6
- 7250 IXR-10

<b>Description</b>	Enter the seamless-bfd context
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">segment-routing</a> <a href="#">segment-routing-policies</a> <a href="#">static-policies</a> <a href="#">policy</a> <a href="#">static-policy-name</a> <i>string</i> <a href="#">segment-list</a> <a href="#">segment-list-index</a> <i>number</i> <a href="#">seamless-bfd</a>
<b>Tree</b>	<a href="#">seamless-bfd</a>
<b>Configurable</b>	False

## hold-down-time-remaining *number*

**Note:**

This command is available for the following platforms:

- 7250 IXR-6
- 7250 IXR-10

<b>Description</b>	The time remaining until the hold-down timer expires for this segment-list
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">segment-routing</a> <a href="#">segment-routing-policies</a> <a href="#">static-policies</a> <a href="#">policy</a> <a href="#">static-policy-name</a> <i>string</i> <a href="#">segment-list</a> <a href="#">segment-list-index</a> <i>number</i> <a href="#">seamless-bfd</a> <a href="#">hold-down-time-remaining</a> <i>number</i>
<b>Tree</b>	<a href="#">hold-down-time-remaining</a>
<b>Configurable</b>	False

## hold-down-timer-active *boolean*

**Note:**

This command is available for the following platforms:

- 7250 IXR-6
- 7250 IXR-10

<b>Description</b>	Reads true when the hold-down timer is active for this segment-list
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">segment-routing</a> <a href="#">segment-routing-policies</a> <a href="#">static-policies</a> <a href="#">policy</a> <a href="#">static-policy-name</a> <i>string</i> <a href="#">segment-list</a> <a href="#">segment-list-index</a> <i>number</i> <a href="#">seamless-bfd</a> <a href="#">hold-down-timer-active</a> <i>boolean</i>

<b>Tree</b>	<a href="#">hold-down-timer-active</a>
<b>Configurable</b>	False

### session-state *keyword*



**Note:**

This command is available for the following platforms:

- 7250 IXR-6
- 7250 IXR-10

<b>Description</b>	Enter the session-state context
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">segment-routing</a> <a href="#">segment-routing-policies</a> <a href="#">static-policies</a> <a href="#">policy</a> <a href="#">static-policy-name</a> <i>string</i> <a href="#">segment-list</a> <a href="#">segment-list-index</a> <i>number</i> <a href="#">seamless-bfd</a> <a href="#">session-state</a> <i>keyword</i>
<b>Tree</b>	<a href="#">session-state</a>
<b>Options</b>	<ul style="list-style-type: none"> <li>• up</li> <li>• down</li> </ul>
<b>Configurable</b>	False

### segment [segment-index](#) *number*



**Note:**

This command is available for the following platforms:

- 7250 IXR-6
- 7250 IXR-10

<b>Description</b>	Enter the segment list instance
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">segment-routing</a> <a href="#">segment-routing-policies</a> <a href="#">static-policies</a> <a href="#">policy</a> <a href="#">static-policy-name</a> <i>string</i> <a href="#">segment-list</a> <a href="#">segment-list-index</a> <i>number</i> <a href="#">segment</a> <a href="#">segment-index</a> <i>number</i>
<b>Tree</b>	<a href="#">segment</a>
<b>Configurable</b>	True

## segment-index *number*

**Note:**

This command is available for the following platforms:

- 7250 IXR-6
- 7250 IXR-10

<b>Description</b>	Index to enumerate the different segments in a segment-list
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">segment-routing</a> <a href="#">segment-routing-policies</a> <a href="#">static-policies</a> <a href="#">policy</a> <a href="#">static-policy-name</a> <i>string</i> <a href="#">segment-list</a> <a href="#">segment-list-index</a> <i>number</i> <a href="#">segment</a> <a href="#">segment-index</a> <i>number</i>
<b>Configurable</b>	True

## segment-type-a

**Note:**

This command is available for the following platforms:

- 7250 IXR-6
- 7250 IXR-10

<b>Description</b>	Segment identified by MPLS label
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">segment-routing</a> <a href="#">segment-routing-policies</a> <a href="#">static-policies</a> <a href="#">policy</a> <a href="#">static-policy-name</a> <i>string</i> <a href="#">segment-list</a> <a href="#">segment-list-index</a> <i>number</i> <a href="#">segment</a> <a href="#">segment-index</a> <i>number</i> <a href="#">segment-type-a</a>
<b>Tree</b>	<a href="#">segment-type-a</a>
<b>Configurable</b>	True

## sid-value *number*

**Note:**

This command is available for the following platforms:

- 7250 IXR-6
- 7250 IXR-10

<b>Description</b>	MPLS label value
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">segment-routing</a> <a href="#">segment-routing-policies</a> <a href="#">static-policies</a> <a href="#">policy</a> <a href="#">static-policy-name</a> <i>string</i> <a href="#">segment-list</a> <a href="#">segment-list-index</a> <i>number</i> <a href="#">segment</a> <a href="#">segment-index</a> <i>number</i> <a href="#">segment-type-a</a> <a href="#">sid-value</a> <i>number</i>
<b>Tree</b>	<a href="#">sid-value</a>

<b>Range</b>	16 to 1048575
<b>Configurable</b>	True

### segment-list-down-reason *identityref*



**Note:**

This command is available for the following platforms:

- 7250 IXR-6
- 7250 IXR-10

<b>Description</b>	Enter the segment-list-down-reason context
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">segment-routing</a> <a href="#">segment-routing-policies</a> <a href="#">static-policies</a> <a href="#">policy</a> <a href="#">static-policy-name</a> <i>string</i> <a href="#">segment-list</a> <a href="#">segment-list-index</a> <i>number</i> <a href="#">segment-list-down-reason</a> <i>identityref</i>
<b>Tree</b>	<a href="#">segment-list-down-reason</a>
<b>Options</b>	<ul style="list-style-type: none"> <li>• segment-list-admin-down Segment list is administrately down</li> </ul>
<b>Configurable</b>	False

### segment-list-inactive-reason *identityref*



**Note:**

This command is available for the following platforms:

- 7250 IXR-6
- 7250 IXR-10

<b>Description</b>	Enter the segment-list-inactive-reason context
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">segment-routing</a> <a href="#">segment-routing-policies</a> <a href="#">static-policies</a> <a href="#">policy</a> <a href="#">static-policy-name</a> <i>string</i> <a href="#">segment-list</a> <a href="#">segment-list-index</a> <i>number</i> <a href="#">segment-list-inactive-reason</a> <i>identityref</i>
<b>Tree</b>	<a href="#">segment-list-inactive-reason</a>
<b>Options</b>	<ul style="list-style-type: none"> <li>• unresolved-first-segment The first segment in the segment list is unknown or unreachable.</li> <li>• sbfd-session-down Policy has a protection-policy with seamless BFD enabled and the Sbfd session that is associated with the segment list is down (or in hold-down).</li> </ul>
<b>Configurable</b>	False

## statistics



### Note:

This command is available for the following platforms:

- 7250 IXR-6
- 7250 IXR-10

<b>Description</b>	Enter the statistics context
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">segment-routing</a> <a href="#">segment-routing-policies</a> <a href="#">static-policies</a> <a href="#">policy</a> <a href="#">static-policy-name</a> <i>string</i> <a href="#">segment-list</a> <a href="#">segment-list-index</a> <i>number</i> <a href="#">statistics</a>
<b>Tree</b>	<a href="#">statistics</a>
<b>Configurable</b>	False

## out-octets *number*



### Note:

This command is available for the following platforms:

- 7250 IXR-6
- 7250 IXR-10

<b>Description</b>	Number of octets forwarded by the segment-list
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">segment-routing</a> <a href="#">segment-routing-policies</a> <a href="#">static-policies</a> <a href="#">policy</a> <a href="#">static-policy-name</a> <i>string</i> <a href="#">segment-list</a> <a href="#">segment-list-index</a> <i>number</i> <a href="#">statistics</a> <a href="#">out-octets</a> <i>number</i>
<b>Tree</b>	<a href="#">out-octets</a>
<b>Default</b>	0
<b>Units</b>	byte
<b>Configurable</b>	False

## out-packets *number*



### Note:

This command is available for the following platforms:

- 7250 IXR-6
- 7250 IXR-10

<b>Description</b>	Number of packets forwarded by the segment-list
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<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">segment-routing</a> <a href="#">segment-routing-policies</a> <a href="#">static-policies</a> <a href="#">policy</a> <a href="#">static-policy-name</a> <i>string</i> <a href="#">segment-list</a> <a href="#">segment-list-index</a> <i>number</i> <a href="#">statistics</a> <a href="#">out-packets</a> <i>number</i>
<b>Tree</b>	<a href="#">out-packets</a>
<b>Default</b>	0
<b>Configurable</b>	False

## standby-available *boolean*



### Note:

This command is available for the following platforms:

- 7250 IXR-6
- 7250 IXR-10

<b>Description</b>	Set to true when this (primary) SR policy is protected by a pre-programmed standby SR policy. This is only possible if a protection-policy of type active-standby is bound to this policy
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">segment-routing</a> <a href="#">segment-routing-policies</a> <a href="#">static-policies</a> <a href="#">policy</a> <a href="#">static-policy-name</a> <i>string</i> <a href="#">standby-available</a> <i>boolean</i>
<b>Tree</b>	<a href="#">standby-available</a>
<b>Configurable</b>	False

## statistics



### Note:

This command is available for the following platforms:

- 7250 IXR-6
- 7250 IXR-10

<b>Description</b>	Enter the statistics context
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">segment-routing</a> <a href="#">segment-routing-policies</a> <a href="#">static-policies</a> <a href="#">policy</a> <a href="#">static-policy-name</a> <i>string</i> <a href="#">statistics</a>
<b>Tree</b>	<a href="#">statistics</a>
<b>Configurable</b>	False

**in-labeled-octets *number*****Note:**

This command is available for the following platforms:

- 7250 IXR-6
- 7250 IXR-10

<b>Description</b>	Number of octets in labeled packets matching the policy
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">segment-routing</a> <a href="#">segment-routing-policies</a> <a href="#">static-policies</a> <a href="#">policy</a> <a href="#">static-policy-name</a> <i>string</i> <a href="#">statistics</a> <a href="#">in-labeled-octets</a> <i>number</i>
<b>Tree</b>	<a href="#">in-labeled-octets</a>
<b>Default</b>	0
<b>Units</b>	byte
<b>Configurable</b>	False

**in-labeled-packets *number*****Note:**

This command is available for the following platforms:

- 7250 IXR-6
- 7250 IXR-10

<b>Description</b>	Number of labeled packets matching the policy
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">segment-routing</a> <a href="#">segment-routing-policies</a> <a href="#">static-policies</a> <a href="#">policy</a> <a href="#">static-policy-name</a> <i>string</i> <a href="#">statistics</a> <a href="#">in-labeled-packets</a> <i>number</i>
<b>Tree</b>	<a href="#">in-labeled-packets</a>
<b>Default</b>	0
<b>Configurable</b>	False

**in-octets *number*****Note:**

This command is available for the following platforms:

- 7250 IXR-6
- 7250 IXR-10

<b>Description</b>	Number of octets in unlabeled packets matching the policy
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<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">segment-routing</a> <a href="#">segment-routing-policies</a> <a href="#">static-policies</a> <a href="#">policy</a> <a href="#">static-policy-name</a> <i>string</i> <a href="#">statistics</a> <a href="#">in-octets</a> <i>number</i>
<b>Tree</b>	<a href="#">in-octets</a>
<b>Default</b>	0
<b>Units</b>	byte
<b>Configurable</b>	False

### **in-packets** *number*



**Note:**

This command is available for the following platforms:

- 7250 IXR-6
- 7250 IXR-10

<b>Description</b>	Number of unlabeled packets matching the policy that were subsequently forwarded
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">segment-routing</a> <a href="#">segment-routing-policies</a> <a href="#">static-policies</a> <a href="#">policy</a> <a href="#">static-policy-name</a> <i>string</i> <a href="#">statistics</a> <a href="#">in-packets</a> <i>number</i>
<b>Tree</b>	<a href="#">in-packets</a>
<b>Default</b>	0
<b>Configurable</b>	False

### **out-octets** *number*



**Note:**

This command is available for the following platforms:

- 7250 IXR-6
- 7250 IXR-10

<b>Description</b>	Number of octets forwarded by the policy
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">segment-routing</a> <a href="#">segment-routing-policies</a> <a href="#">static-policies</a> <a href="#">policy</a> <a href="#">static-policy-name</a> <i>string</i> <a href="#">statistics</a> <a href="#">out-octets</a> <i>number</i>
<b>Tree</b>	<a href="#">out-octets</a>
<b>Default</b>	0
<b>Units</b>	byte
<b>Configurable</b>	False



**out-packets *number*****Note:**

This command is available for the following platforms:

- 7250 IXR-6
- 7250 IXR-10

<b>Description</b>	Number of packets forwarded by the policy
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">segment-routing</a> <a href="#">segment-routing-policies</a> <a href="#">static-policies</a> <a href="#">policy</a> <a href="#">static-policy-name</a> <i>string</i> <a href="#">statistics</a> <a href="#">out-packets</a> <i>number</i>
<b>Tree</b>	<a href="#">out-packets</a>
<b>Default</b>	0
<b>Configurable</b>	False

**static-routes**

<b>Description</b>	Enable the static-routes context
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">static-routes</a>
<b>Tree</b>	<a href="#">static-routes</a>
<b>Configurable</b>	True

**route *prefix (ipv4-prefix | ipv6-prefix)***

<b>Description</b>	Enter the route list instance
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">static-routes</a> <a href="#">route prefix (ipv4-prefix   ipv6-prefix)</a>
<b>Tree</b>	<a href="#">route</a>
<b>Configurable</b>	True
<b>Max. Elements</b>	16384

**prefix (*ipv4-prefix | ipv6-prefix*)**

<b>Description</b>	Enter the prefix context
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">static-routes</a> <a href="#">route prefix (ipv4-prefix   ipv6-prefix)</a>
<b>Configurable</b>	True

**admin-state *keyword***

<b>Description</b>	Used to disable the static route.
<b>Context</b>	<a href="#">network-instance name</a> <a href="#">string</a> <a href="#">static-routes route prefix</a> ( <a href="#">ipv4-prefix</a>   <a href="#">ipv6-prefix</a> ) <a href="#">admin-state keyword</a>
<b>Tree</b>	<a href="#">admin-state</a>
<b>Default</b>	enable
<b>Options</b>	<ul style="list-style-type: none"> <li>• enable</li> <li>• disable</li> </ul>
<b>Configurable</b>	True

**installed *boolean***

<b>Description</b>	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
<b>Context</b>	<a href="#">network-instance name</a> <a href="#">string</a> <a href="#">static-routes route prefix</a> ( <a href="#">ipv4-prefix</a>   <a href="#">ipv6-prefix</a> ) <a href="#">installed boolean</a>
<b>Tree</b>	<a href="#">installed</a>
<b>Configurable</b>	False

**metric *number***

<b>Description</b>	IGP metric of the static route.
<b>Context</b>	<a href="#">network-instance name</a> <a href="#">string</a> <a href="#">static-routes route prefix</a> ( <a href="#">ipv4-prefix</a>   <a href="#">ipv6-prefix</a> ) <a href="#">metric number</a>
<b>Tree</b>	<a href="#">metric</a>
<b>Default</b>	1
<b>Configurable</b>	True

**next-hop-group *reference***

<b>Description</b>	Enter the next-hop-group context
<b>Context</b>	<a href="#">network-instance name</a> <a href="#">string</a> <a href="#">static-routes route prefix</a> ( <a href="#">ipv4-prefix</a>   <a href="#">ipv6-prefix</a> ) <a href="#">next-hop-group reference</a>
<b>Tree</b>	<a href="#">next-hop-group</a>
<b>Reference</b>	<a href="#">network-instance name</a> <a href="#">string</a> <a href="#">next-hop-groups group name</a> <a href="#">string</a>

<b>Configurable</b>	True
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### preference *number*

<b>Description</b>	Route preference with lower values indicating a higher degree of preference.
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">static-routes route prefix (ipv4-prefix   ipv6-prefix)</a> <a href="#">preference number</a>
<b>Tree</b>	<a href="#">preference</a>
<b>Range</b>	0 to 255
<b>Default</b>	5
<b>Configurable</b>	True

### system-ipv4-address

<b>Description</b>	Container for displaying information about the system IPv4 address of the default network-instance
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">system-ipv4-address</a>
<b>Tree</b>	<a href="#">system-ipv4-address</a>
<b>Configurable</b>	False

### oper-down-reason *keyword*

<b>Description</b>	The reason why the default network instance does not have a system IPv4 address
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">system-ipv4-address oper-down-reason keyword</a>
<b>Tree</b>	<a href="#">oper-down-reason</a>
<b>Options</b>	<ul style="list-style-type: none"> <li>• system-interface-not-bound</li> <li>• system-interface-has-no-ipv4-address</li> </ul>
<b>Configurable</b>	False

### oper-state *keyword*

<b>Description</b>	The operational state of the system IPv4 address binding
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">system-ipv4-address oper-state keyword</a>
<b>Tree</b>	<a href="#">oper-state</a>

<b>Options</b>	<ul style="list-style-type: none"> <li>• up Component or process is operational</li> <li>• down Component or process is not operational</li> <li>• empty Component slot is empty</li> <li>• downloading Component is downloading image into memory</li> <li>• booting Component is booting downloaded image</li> <li>• starting Component image operational, application processes starting</li> <li>• failed Component or process has failed</li> <li>• synchronizing Component is currently being synchronized</li> <li>• upgrading Component is currently being upgraded</li> <li>• low-power Component is offline due to insufficient system power</li> <li>• degraded Component or process is in a degraded state</li> <li>• warm-reboot Component or process is currently warm rebooting  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.</li> </ul>
<b>Configurable</b>	False

## system-ipv6-address

<b>Description</b>	Container for displaying information about the system IPv6 address of the default network-instance
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">system-ipv6-address</a>
<b>Tree</b>	<a href="#">system-ipv6-address</a>
<b>Configurable</b>	False

**oper-down-reason *keyword***

<b>Description</b>	The reason why the default network instance does not have a system IPv6 address
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">system-ipv6-address</a> <a href="#">oper-down-reason keyword</a>
<b>Tree</b>	<a href="#">oper-down-reason</a>
<b>Options</b>	<ul style="list-style-type: none"> <li>• system-interface-not-bound</li> <li>• system-interface-has-no-ipv6-address</li> </ul>
<b>Configurable</b>	False

**oper-state *keyword***

<b>Description</b>	The operational state of the system IPv6 address binding
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">system-ipv6-address</a> <a href="#">oper-state keyword</a>
<b>Tree</b>	<a href="#">oper-state</a>
<b>Options</b>	<ul style="list-style-type: none"> <li>• up Component or process is operational</li> <li>• down Component or process is not operational</li> <li>• empty Component slot is empty</li> <li>• downloading Component is downloading image into memory</li> <li>• booting Component is booting downloaded image</li> <li>• starting Component image operational, application processes starting</li> <li>• failed Component or process has failed</li> <li>• synchronizing Component is currently being synchronized</li> <li>• upgrading Component is currently being upgraded</li> <li>• low-power Component is offline due to insufficient system power</li> </ul>

- degraded  
Component or process is in a degraded state
- warm-reboot  
Component or process is currently warm rebooting  
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.

**Configurable** False

## 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](#) *string* [tcp](#)

**Tree** [tcp](#)

**Configurable** False

## 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](#) *string* [tcp connection local-address \(ipv4-address | ipv6-address\)](#) [local-port number](#) [remote-address \(ipv4-address | ipv6-address\)](#) [remote-port number](#)

**Tree** [connection](#)

**Configurable** False

## local-address ([ipv4-address](#) | [ipv6-address](#))

**Description** The local IP address for this TCP connection.

**Context** [network-instance name](#) *string* [tcp connection local-address \(ipv4-address | ipv6-address\)](#) [local-port number](#) [remote-address \(ipv4-address | ipv6-address\)](#) [remote-port number](#)

**Configurable** False

**local-port number**

<b>Description</b>	The local port number for this TCP connection.
<b>Context</b>	<a href="#">network-instance name</a> <a href="#">string</a> <a href="#">tcp connection</a> <a href="#">local-address (ipv4-address   ipv6-address)</a> <a href="#">local-port number</a> <a href="#">remote-address (ipv4-address   ipv6-address)</a> <a href="#">remote-port number</a>
<b>Range</b>	0 to 65535
<b>Configurable</b>	False

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

<b>Description</b>	The remote IP address for this TCP connection.
<b>Context</b>	<a href="#">network-instance name</a> <a href="#">string</a> <a href="#">tcp connection</a> <a href="#">local-address (ipv4-address   ipv6-address)</a> <a href="#">local-port number</a> <a href="#">remote-address (ipv4-address   ipv6-address)</a> <a href="#">remote-port number</a>
<b>Configurable</b>	False

**remote-port number**

<b>Description</b>	The remote port number for this TCP connection.
<b>Context</b>	<a href="#">network-instance name</a> <a href="#">string</a> <a href="#">tcp connection</a> <a href="#">local-address (ipv4-address   ipv6-address)</a> <a href="#">local-port number</a> <a href="#">remote-address (ipv4-address   ipv6-address)</a> <a href="#">remote-port number</a>
<b>Range</b>	0 to 65535
<b>Configurable</b>	False

**process-id number**

<b>Description</b>	The process ID of the application that owns the socket.
<b>Context</b>	<a href="#">network-instance name</a> <a href="#">string</a> <a href="#">tcp connection</a> <a href="#">local-address (ipv4-address   ipv6-address)</a> <a href="#">local-port number</a> <a href="#">remote-address (ipv4-address   ipv6-address)</a> <a href="#">remote-port number</a> <a href="#">process-id number</a>
<b>Tree</b>	<a href="#">process-id</a>
<b>Configurable</b>	False

**session-state keyword**

<b>Description</b>	The state of this TCP connection.
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<b>Context</b>	<code>network-instance name string tcp connection local-address (ipv4-address   ipv6-address) local-port number remote-address (ipv4-address   ipv6-address) remote-port number session-state keyword</code>
<b>Tree</b>	<code>session-state</code>
<b>Options</b>	<ul style="list-style-type: none"> <li>• closed</li> <li>• syn-sent</li> <li>• syn-received</li> <li>• established</li> <li>• fin-wait1</li> <li>• fin-wait2</li> <li>• close-wait</li> <li>• last-ack</li> <li>• closing</li> <li>• time-wait</li> <li>• delete-tcb</li> </ul>
<b>Configurable</b>	False

### **listening-application local-address (ipv4-address | ipv6-address) local-port number**

<b>Description</b>	List of applications that are listening on a particular TCP port bound to the network-instance.
<b>Context</b>	<code>network-instance name string tcp listening-application local-address (ipv4-address   ipv6-address) local-port number</code>
<b>Tree</b>	<code>listening-application</code>
<b>Configurable</b>	False

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

<b>Description</b>	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.
<b>Context</b>	<code>network-instance name string tcp listening-application local-address (ipv4-address   ipv6-address) local-port number</code>
<b>Configurable</b>	False

### **local-port number**

<b>Description</b>	The local port number accepted by the application.
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<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">tcp listening-application</a> <a href="#">local-address</a> ( <i>ipv4-address   ipv6-address</i> ) <a href="#">local-port</a> <i>number</i>
<b>Range</b>	0 to 65535
<b>Configurable</b>	False

### **process-id** *number*

<b>Description</b>	The process ID of the application that owns the socket.
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">tcp listening-application</a> <a href="#">local-address</a> ( <i>ipv4-address   ipv6-address</i> ) <a href="#">local-port</a> <i>number</i> <a href="#">process-id</a> <i>number</i>
<b>Tree</b>	<a href="#">process-id</a>
<b>Configurable</b>	False

### **statistics**

<b>Description</b>	Enter the statistics context
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">tcp statistics</a>
<b>Tree</b>	<a href="#">statistics</a>
<b>Configurable</b>	False

### **active-opens** *number*

<b>Description</b>	The total number of times that TCP connections have made a direct transition to the SYN-SENT state from the CLOSED state.
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">tcp statistics</a> <a href="#">active-opens</a> <i>number</i>
<b>Tree</b>	<a href="#">active-opens</a>
<b>Default</b>	0
<b>Configurable</b>	False

### **attempt-fails** *number*

<b>Description</b>	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.
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">tcp statistics</a> <a href="#">attempt-fails</a> <i>number</i>
<b>Tree</b>	<a href="#">attempt-fails</a>
<b>Default</b>	0

<b>Configurable</b>	False
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### **established-resets *number***

<b>Description</b>	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.
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">tcp statistics established-resets</a> <i>number</i>
<b>Tree</b>	<a href="#">established-resets</a>
<b>Default</b>	0
<b>Configurable</b>	False

### **in-checksum-errors *number***

<b>Description</b>	The total number of segments that are received as bad TCP checksum errors.
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">tcp statistics in-checksum-errors</a> <i>number</i>
<b>Tree</b>	<a href="#">in-checksum-errors</a>
<b>Default</b>	0
<b>Configurable</b>	False

### **in-error-segments *number***

<b>Description</b>	The total number of segments received in error (e.g., bad TCP checksums).
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">tcp statistics in-error-segments</a> <i>number</i>
<b>Tree</b>	<a href="#">in-error-segments</a>
<b>Default</b>	0
<b>Configurable</b>	False

### **in-segments *number***

<b>Description</b>	The total number of segments received, including those received in error. This count includes segments received on currently established connections.
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">tcp statistics in-segments</a> <i>number</i>
<b>Tree</b>	<a href="#">in-segments</a>
<b>Default</b>	0
<b>Configurable</b>	False

**out-rst-segments *number***

<b>Description</b>	The total number of TCP segments sent containing the RST flag.
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">tcp statistics out-rst-segments</a> <i>number</i>
<b>Tree</b>	<a href="#">out-rst-segments</a>
<b>Default</b>	0
<b>Configurable</b>	False

**out-segments *number***

<b>Description</b>	The total number of segments sent, including those on current connections but excluding those containing only retransmitted octets.
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">tcp statistics out-segments</a> <i>number</i>
<b>Tree</b>	<a href="#">out-segments</a>
<b>Default</b>	0
<b>Configurable</b>	False

**passive-opens *number***

<b>Description</b>	The total number of times TCP connections have made a direct transition to the SYN-RCVD state from the LISTEN state.
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">tcp statistics passive-opens</a> <i>number</i>
<b>Tree</b>	<a href="#">passive-opens</a>
<b>Default</b>	0
<b>Configurable</b>	False

**retransmitted-segments *number***

<b>Description</b>	The total number of segments retransmitted; that is, the number of TCP segments transmitted containing one or more previously transmitted octets.
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">tcp statistics retransmitted-segments</a> <i>number</i>
<b>Tree</b>	<a href="#">retransmitted-segments</a>
<b>Default</b>	0
<b>Configurable</b>	False

**tunnel-table**

<b>Description</b>	Enter the tunnel-table context
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">tunnel-table</a>
<b>Tree</b>	<a href="#">tunnel-table</a>
<b>Configurable</b>	False

**ipv4**

<b>Description</b>	The container for the IPv4 tunnels associated with the network instance.
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">tunnel-table</a> <a href="#">ipv4</a>
<b>Tree</b>	<a href="#">ipv4</a>
<b>Configurable</b>	False

**statistics**

<b>Description</b>	Enter the statistics context
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">tunnel-table</a> <a href="#">ipv4</a> <a href="#">statistics</a>
<b>Tree</b>	<a href="#">statistics</a>
<b>Configurable</b>	False

**active-tunnels *number***

<b>Description</b>	The total number of tunnels, belonging to this address family, that are active.
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">tunnel-table</a> <a href="#">ipv4</a> <a href="#">statistics</a> <a href="#">active-tunnels</a> <i>number</i>
<b>Tree</b>	<a href="#">active-tunnels</a>
<b>Configurable</b>	False

**inactive-tunnels *number***

<b>Description</b>	The total number of tunnels, belonging to this address family, that are inactive (not programmed).
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">tunnel-table</a> <a href="#">ipv4</a> <a href="#">statistics</a> <a href="#">inactive-tunnels</a> <i>number</i>
<b>Tree</b>	<a href="#">inactive-tunnels</a>
<b>Configurable</b>	False

**total-tunnels *number***

<b>Description</b>	The total number of tunnels, active and inactive, belonging to this address family
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">tunnel-table</a> <a href="#">ipv4</a> <a href="#">statistics</a> <a href="#">total-tunnels number</a>
<b>Tree</b>	<a href="#">total-tunnels</a>
<b>Default</b>	0
<b>Configurable</b>	False

**tunnel [ipv4-prefix](#) *string* [type](#) [identityref](#) [owner](#) *string* [id](#) *number***

<b>Description</b>	Enter the tunnel list instance
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">tunnel-table</a> <a href="#">ipv4</a> <a href="#">tunnel</a> <a href="#">ipv4-prefix</a> <i>string</i> <a href="#">type</a> <a href="#">identityref</a> <a href="#">owner</a> <i>string</i> <a href="#">id</a> <i>number</i>
<b>Tree</b>	<a href="#">tunnel</a>
<b>Configurable</b>	False

**[ipv4-prefix](#) *string***

<b>Description</b>	The IPv4 prefix associated with the endpoint of the tunnel.
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">tunnel-table</a> <a href="#">ipv4</a> <a href="#">tunnel</a> <a href="#">ipv4-prefix</a> <i>string</i> <a href="#">type</a> <a href="#">identityref</a> <a href="#">owner</a> <i>string</i> <a href="#">id</a> <i>number</i>
<b>Configurable</b>	False

**[type](#) [identityref](#)**

<b>Description</b>	The tunnel (encapsulation) type
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">tunnel-table</a> <a href="#">ipv4</a> <a href="#">tunnel</a> <a href="#">ipv4-prefix</a> <i>string</i> <a href="#">type</a> <a href="#">identityref</a> <a href="#">owner</a> <i>string</i> <a href="#">id</a> <i>number</i>
<b>Options</b>	<ul style="list-style-type: none"> <li>• <a href="#">sr-isis</a> Segment routing using MPLS dataplane, programmed by IS-IS</li> <li>• <a href="#">sr-ospfv2</a> Segment routing using MPLS dataplane, programmed by OSPFv2</li> <li>• <a href="#">sr-ospfv3</a> Segment routing using MPLS dataplane, programmed by OSPFv3</li> </ul>

- sr-mpls  
Segment routing using MPLS dataplane, programmed by segment routing manager.
- sr-policy-mpls  
Tunnels setup using SR-POLICY.
- vxlan  
Tunnels based on VXLAN encapsulation

**Configurable** False

### **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

### **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

### **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**

- vxlan
- mpls

**Configurable** False

### **fib-programming**

**Description** Container for state related to the FIB programming of the tunnel

<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">tunnel-table ipv4 tunnel ipv4-prefix</a> <i>string type identityref</i> <a href="#">owner</a> <i>string</i> <a href="#">id number</a> <a href="#">fib-programming</a>
<b>Tree</b>	<a href="#">fib-programming</a>
<b>Configurable</b>	False

### not-programmed-reason *keyword*

<b>Description</b>	The reason why the tunnel is not programmed
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">tunnel-table ipv4 tunnel ipv4-prefix</a> <i>string type identityref</i> <a href="#">owner</a> <i>string</i> <a href="#">id number</a> <a href="#">fib-programming</a> <a href="#">not-programmed-reason</a> <i>keyword</i>
<b>Tree</b>	<a href="#">not-programmed-reason</a>
<b>Options</b>	<ul style="list-style-type: none"> <li>• <a href="#">out-of-tunnel-resources</a></li> </ul>
<b>Configurable</b>	False

### status *keyword*

<b>Description</b>	The status of the tunnel programming
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">tunnel-table ipv4 tunnel ipv4-prefix</a> <i>string type identityref</i> <a href="#">owner</a> <i>string</i> <a href="#">id number</a> <a href="#">fib-programming</a> <a href="#">status</a> <i>keyword</i>
<b>Tree</b>	<a href="#">status</a>
<b>Options</b>	<ul style="list-style-type: none"> <li>• <a href="#">active</a> The tunnel is active and programmed into the datapath.</li> <li>• <a href="#">inactive</a> The tunnel is inactive and not programmed into the datapath.</li> </ul>
<b>Configurable</b>	False

### last-app-update *string*

<b>Description</b>	The date and time of the last update of this tunnel by the owning application or protocol.
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">tunnel-table ipv4 tunnel ipv4-prefix</a> <i>string type identityref</i> <a href="#">owner</a> <i>string</i> <a href="#">id number</a> <a href="#">last-app-update</a> <i>string</i>
<b>Tree</b>	<a href="#">last-app-update</a>
<b>String Length</b>	20 to 32
<b>Configurable</b>	False

**metric *number***

<b>Description</b>	The metric of the tunnel.
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">tunnel-table ipv4 tunnel ipv4-prefix</a> <i>string</i> <a href="#">type identityref owner</a> <i>string</i> <a href="#">id number</a> <a href="#">metric number</a>
<b>Tree</b>	<a href="#">metric</a>
<b>Configurable</b>	False

**next-hop-group *reference***

<b>Description</b>	Leaf reference to a next-hop-group that has the direct next-hops towards the tunnel far-end
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">tunnel-table ipv4 tunnel ipv4-prefix</a> <i>string</i> <a href="#">type identityref owner</a> <i>string</i> <a href="#">id number</a> <a href="#">next-hop-group reference</a>
<b>Tree</b>	<a href="#">next-hop-group</a>
<b>Reference</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">route-table next-hop-group index</a> <i>number</i>
<b>Configurable</b>	False

**preference *number***

<b>Description</b>	The tunnel table preference.
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">tunnel-table ipv4 tunnel ipv4-prefix</a> <i>string</i> <a href="#">type identityref owner</a> <i>string</i> <a href="#">id number</a> <a href="#">preference number</a>
<b>Tree</b>	<a href="#">preference</a>
<b>Configurable</b>	False

**vxlan**

<b>Description</b>	Enter the vxlan context
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">tunnel-table ipv4 tunnel ipv4-prefix</a> <i>string</i> <a href="#">type identityref owner</a> <i>string</i> <a href="#">id number</a> <a href="#">vxlan</a>
<b>Tree</b>	<a href="#">vxlan</a>
<b>Configurable</b>	False

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

<b>Description</b>	The IP address that identifies the remote VXLAN Termination Endpoint (VTEP).
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<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">tunnel-table ipv4 tunnel ipv4-prefix</a> <i>string</i> <a href="#">type identityref owner</a> <i>string</i> <a href="#">id number vxlan destination-address</a> ( <a href="#">ipv4-address</a>   <a href="#">ipv6-address</a> )
<b>Tree</b>	<a href="#">destination-address</a>
<b>Configurable</b>	False

### **destination-udp-port *number***

<b>Description</b>	The destination UDP port number written into the outer IP/UDP header of VXLAN packets associated with this tunnel and originated by this router.
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">tunnel-table ipv4 tunnel ipv4-prefix</a> <i>string</i> <a href="#">type identityref owner</a> <i>string</i> <a href="#">id number vxlan destination-udp-port</a> <i>number</i>
<b>Tree</b>	<a href="#">destination-udp-port</a>
<b>Configurable</b>	False

### **source-address ([ipv4-address](#) | [ipv6-address](#))**

<b>Description</b>	The IP address that identifies the local VXLAN Termination Endpoint (VTEP).
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">tunnel-table ipv4 tunnel ipv4-prefix</a> <i>string</i> <a href="#">type identityref owner</a> <i>string</i> <a href="#">id number vxlan source-address</a> ( <a href="#">ipv4-address</a>   <a href="#">ipv6-address</a> )
<b>Tree</b>	<a href="#">source-address</a>
<b>Configurable</b>	False

### **time-to-live *number***

<b>Description</b>	The Time To Live (TTL) value written into the outer IP header of VXLAN packets associated with this tunnel and originated by this router.
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">tunnel-table ipv4 tunnel ipv4-prefix</a> <i>string</i> <a href="#">type identityref owner</a> <i>string</i> <a href="#">id number vxlan time-to-live</a> <i>number</i>
<b>Tree</b>	<a href="#">time-to-live</a>
<b>Configurable</b>	False

### **tunnel-summary**

<b>Description</b>	Tunnel summary information
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">tunnel-table ipv4 tunnel-summary</a>
<b>Tree</b>	<a href="#">tunnel-summary</a>
<b>Configurable</b>	False

**tunnel-type** *type identityref*

<b>Description</b>	Enter the tunnel-type list instance
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">tunnel-table ipv4</a> <a href="#">tunnel-summary</a> <a href="#">tunnel-type type identityref</a>
<b>Tree</b>	<a href="#">tunnel-type</a>
<b>Configurable</b>	False

**type** *identityref*

<b>Description</b>	Tunneling encapsulation format
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">tunnel-table ipv4</a> <a href="#">tunnel-summary</a> <a href="#">tunnel-type type identityref</a>
<b>Options</b>	<ul style="list-style-type: none"> <li>• <a href="#">sr-isis</a> Segment routing using MPLS dataplane, programmed by IS-IS</li> <li>• <a href="#">sr-ospfv2</a> Segment routing using MPLS dataplane, programmed by OSPFv2</li> <li>• <a href="#">sr-ospfv3</a> Segment routing using MPLS dataplane, programmed by OSPFv3</li> <li>• <a href="#">sr-mpls</a> Segment routing using MPLS dataplane, programmed by segment routing manager.</li> <li>• <a href="#">sr-policy-mpls</a> Tunnels setup using SR-POLICY.</li> <li>• <a href="#">vxlan</a> Tunnels based on VXLAN encapsulation</li> </ul>
<b>Configurable</b>	False

**active-tunnels** *number*

<b>Description</b>	The total number of tunnels, using this encapsulation type, that are active.
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">tunnel-table ipv4</a> <a href="#">tunnel-summary</a> <a href="#">tunnel-type type identityref</a> <a href="#">active-tunnels number</a>
<b>Tree</b>	<a href="#">active-tunnels</a>
<b>Configurable</b>	False

**inactive-tunnels *number***

<b>Description</b>	The total number of tunnels, using this encapsulation type, that are inactive (not programmed).
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">tunnel-table ipv4</a> <a href="#">tunnel-summary tunnel-type type</a> <a href="#">identityref inactive-tunnels</a> <i>number</i>
<b>Tree</b>	<a href="#">inactive-tunnels</a>
<b>Configurable</b>	False

**total-tunnels *number***

<b>Description</b>	The total number of tunnels, active and inactive, using this encapsulation type.
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">tunnel-table ipv4</a> <a href="#">tunnel-summary tunnel-type type</a> <a href="#">identityref total-tunnels</a> <i>number</i>
<b>Tree</b>	<a href="#">total-tunnels</a>
<b>Default</b>	0
<b>Configurable</b>	False

**ipv6**

<b>Description</b>	The container for the IPv6 tunnels associated with the network instance.
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">tunnel-table ipv6</a>
<b>Tree</b>	<a href="#">ipv6</a>
<b>Configurable</b>	False

**statistics**

<b>Description</b>	Enter the statistics context
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">tunnel-table ipv6</a> <a href="#">statistics</a>
<b>Tree</b>	<a href="#">statistics</a>
<b>Configurable</b>	False

**active-tunnels *number***

<b>Description</b>	The total number of tunnels, belonging to this address family, that are active.
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">tunnel-table ipv6</a> <a href="#">statistics active-tunnels</a> <i>number</i>

<b>Tree</b>	<a href="#">active-tunnels</a>
<b>Configurable</b>	False

### **inactive-tunnels *number***

<b>Description</b>	The total number of tunnels, belonging to this address family, that are inactive (not programmed).
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">tunnel-table</a> <a href="#">ipv6</a> <a href="#">statistics</a> <a href="#">inactive-tunnels number</a>
<b>Tree</b>	<a href="#">inactive-tunnels</a>
<b>Configurable</b>	False

### **total-tunnels *number***

<b>Description</b>	The total number of tunnels, active and inactive, belonging to this address family
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">tunnel-table</a> <a href="#">ipv6</a> <a href="#">statistics</a> <a href="#">total-tunnels number</a>
<b>Tree</b>	<a href="#">total-tunnels</a>
<b>Default</b>	0
<b>Configurable</b>	False

### **tunnel [ipv6-prefix](#) *string* [type](#) [identityref](#) [owner](#) *string* [id](#) *number***

<b>Description</b>	Enter the tunnel list instance
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">tunnel-table</a> <a href="#">ipv6</a> <a href="#">tunnel</a> <a href="#">ipv6-prefix</a> <i>string</i> <a href="#">type</a> <a href="#">identityref</a> <a href="#">owner</a> <i>string</i> <a href="#">id</a> <i>number</i>
<b>Tree</b>	<a href="#">tunnel</a>
<b>Configurable</b>	False

### **ipv6-prefix *string***

<b>Description</b>	The IPv6 prefix associated with the endpoint of the tunnel.
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">tunnel-table</a> <a href="#">ipv6</a> <a href="#">tunnel</a> <a href="#">ipv6-prefix</a> <i>string</i> <a href="#">type</a> <a href="#">identityref</a> <a href="#">owner</a> <i>string</i> <a href="#">id</a> <i>number</i>
<b>Configurable</b>	False

**type *identityref***

<b>Description</b>	The tunnel (encapsulation) type
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">tunnel-table ipv6 tunnel ipv6-prefix</a> <i>string</i> <a href="#">type identityref</a> <a href="#">owner</a> <i>string</i> <a href="#">id</a> <i>number</i>
<b>Options</b>	<ul style="list-style-type: none"> <li>• <code>sr-isis</code> Segment routing using MPLS dataplane, programmed by IS-IS</li> <li>• <code>sr-ospfv2</code> Segment routing using MPLS dataplane, programmed by OSPFv2</li> <li>• <code>sr-ospfv3</code> Segment routing using MPLS dataplane, programmed by OSPFv3</li> <li>• <code>sr-mpls</code> Segment routing using MPLS dataplane, programmed by segment routing manager.</li> <li>• <code>sr-policy-mpls</code> Tunnels setup using SR-POLICY.</li> <li>• <code>vxlan</code> Tunnels based on VXLAN encapsulation</li> </ul>
<b>Configurable</b>	False

**owner *string***

<b>Description</b>	The name of the application that submitted the tunnel to TTM
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">tunnel-table ipv6 tunnel ipv6-prefix</a> <i>string</i> <a href="#">type identityref</a> <a href="#">owner</a> <i>string</i> <a href="#">id</a> <i>number</i>
<b>Configurable</b>	False

**id *number***

<b>Description</b>	An owner-assigned index value that is unique for each of the tunnels terminating at a particular prefix.
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">tunnel-table ipv6 tunnel ipv6-prefix</a> <i>string</i> <a href="#">type identityref</a> <a href="#">owner</a> <i>string</i> <a href="#">id</a> <i>number</i>
<b>Configurable</b>	False

**encapsulation-type *keyword***

<b>Description</b>	The type of encapsulation used by the tunnel.
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<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">tunnel-table ipv6 tunnel ipv6-prefix</a> <i>string type</i> <a href="#">identityref owner</a> <i>string</i> <a href="#">id number</a> <a href="#">encapsulation-type</a> <i>keyword</i>
<b>Tree</b>	<a href="#">encapsulation-type</a>
<b>Options</b>	<ul style="list-style-type: none"> <li>• vxlan</li> <li>• mpls</li> </ul>
<b>Configurable</b>	False

## fib-programming

<b>Description</b>	Container for state related to the FIB programming of the tunnel
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">tunnel-table ipv6 tunnel ipv6-prefix</a> <i>string type</i> <a href="#">identityref owner</a> <i>string</i> <a href="#">id number</a> <a href="#">fib-programming</a>
<b>Tree</b>	<a href="#">fib-programming</a>
<b>Configurable</b>	False

## not-programmed-reason *keyword*

<b>Description</b>	The reason why the tunnel is not programmed
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">tunnel-table ipv6 tunnel ipv6-prefix</a> <i>string type</i> <a href="#">identityref owner</a> <i>string</i> <a href="#">id number</a> <a href="#">fib-programming not-programmed-reason</a> <i>keyword</i>
<b>Tree</b>	<a href="#">not-programmed-reason</a>
<b>Options</b>	<ul style="list-style-type: none"> <li>• out-of-tunnel-resources</li> </ul>
<b>Configurable</b>	False

## status *keyword*

<b>Description</b>	The status of the tunnel programming
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">tunnel-table ipv6 tunnel ipv6-prefix</a> <i>string type</i> <a href="#">identityref owner</a> <i>string</i> <a href="#">id number</a> <a href="#">fib-programming status</a> <i>keyword</i>
<b>Tree</b>	<a href="#">status</a>
<b>Options</b>	<ul style="list-style-type: none"> <li>• active The tunnel is active and programmed into the datapath.</li> <li>• inactive The tunnel is inactive and not programmed into the datapath.</li> </ul>
<b>Configurable</b>	False

**last-app-update *string***

<b>Description</b>	The date and time of the last update of this tunnel by the owning application or protocol.
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">tunnel-table ipv6 tunnel ipv6-prefix</a> <i>string type identityref</i> <a href="#">owner</a> <i>string</i> <a href="#">id</a> <i>number</i> <a href="#">last-app-update</a> <i>string</i>
<b>Tree</b>	<a href="#">last-app-update</a>
<b>String Length</b>	20 to 32
<b>Configurable</b>	False

**metric *number***

<b>Description</b>	The metric of the tunnel.
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">tunnel-table ipv6 tunnel ipv6-prefix</a> <i>string type identityref</i> <a href="#">owner</a> <i>string</i> <a href="#">id</a> <i>number</i> <a href="#">metric</a> <i>number</i>
<b>Tree</b>	<a href="#">metric</a>
<b>Configurable</b>	False

**next-hop-group *reference***

<b>Description</b>	Leaf reference to a next-hop-group that has the direct next-hops towards the tunnel far-end
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">tunnel-table ipv6 tunnel ipv6-prefix</a> <i>string type identityref</i> <a href="#">owner</a> <i>string</i> <a href="#">id</a> <i>number</i> <a href="#">next-hop-group</a> <i>reference</i>
<b>Tree</b>	<a href="#">next-hop-group</a>
<b>Reference</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">route-table next-hop-group index</a> <i>number</i>
<b>Configurable</b>	False

**preference *number***

<b>Description</b>	The tunnel table preference.
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">tunnel-table ipv6 tunnel ipv6-prefix</a> <i>string type identityref</i> <a href="#">owner</a> <i>string</i> <a href="#">id</a> <i>number</i> <a href="#">preference</a> <i>number</i>
<b>Tree</b>	<a href="#">preference</a>
<b>Configurable</b>	False

**vxlan**

<b>Description</b>	Enter the vxlan context
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">tunnel-table</a> <i>ipv6</i> <a href="#">tunnel</a> <i>ipv6-prefix</i> <i>string</i> <i>type</i> <a href="#">identityref</a> <i>owner</i> <i>string</i> <i>id</i> <i>number</i> <a href="#">vxlan</a>
<b>Tree</b>	<a href="#">vxlan</a>
<b>Configurable</b>	False

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

<b>Description</b>	The IP address that identifies the remote VXLAN Termination Endpoint (VTEP).
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">tunnel-table</a> <i>ipv6</i> <a href="#">tunnel</a> <i>ipv6-prefix</i> <i>string</i> <i>type</i> <a href="#">identityref</a> <i>owner</i> <i>string</i> <i>id</i> <i>number</i> <a href="#">vxlan</a> <a href="#">destination-address</a> ( <i>ipv4-address</i>   <i>ipv6-address</i> )
<b>Tree</b>	<a href="#">destination-address</a>
<b>Configurable</b>	False

**destination-udp-port *number***

<b>Description</b>	The destination UDP port number written into the outer IP/UDP header of VXLAN packets associated with this tunnel and originated by this router.
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">tunnel-table</a> <i>ipv6</i> <a href="#">tunnel</a> <i>ipv6-prefix</i> <i>string</i> <i>type</i> <a href="#">identityref</a> <i>owner</i> <i>string</i> <i>id</i> <i>number</i> <a href="#">vxlan</a> <a href="#">destination-udp-port</a> <i>number</i>
<b>Tree</b>	<a href="#">destination-udp-port</a>
<b>Configurable</b>	False

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

<b>Description</b>	The IP address that identifies the local VXLAN Termination Endpoint (VTEP).
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">tunnel-table</a> <i>ipv6</i> <a href="#">tunnel</a> <i>ipv6-prefix</i> <i>string</i> <i>type</i> <a href="#">identityref</a> <i>owner</i> <i>string</i> <i>id</i> <i>number</i> <a href="#">vxlan</a> <a href="#">source-address</a> ( <i>ipv4-address</i>   <i>ipv6-address</i> )
<b>Tree</b>	<a href="#">source-address</a>
<b>Configurable</b>	False

**time-to-live *number***

<b>Description</b>	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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<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">tunnel-table ipv6 tunnel ipv6-prefix</a> <i>string</i> <a href="#">type identityref</a> <a href="#">owner</a> <i>string</i> <a href="#">id</a> <i>number</i> <a href="#">vxlan</a> <a href="#">time-to-live</a> <i>number</i>
<b>Tree</b>	<a href="#">time-to-live</a>
<b>Configurable</b>	False

## tunnel-summary

<b>Description</b>	Tunnel summary information
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">tunnel-table ipv6 tunnel-summary</a>
<b>Tree</b>	<a href="#">tunnel-summary</a>
<b>Configurable</b>	False

## tunnel-type [type identityref](#)

<b>Description</b>	Enter the tunnel-type list instance
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">tunnel-table ipv6 tunnel-summary tunnel-type</a> <a href="#">type identityref</a>
<b>Tree</b>	<a href="#">tunnel-type</a>
<b>Configurable</b>	False

## [type identityref](#)

<b>Description</b>	Tunneling encapsulation format
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">tunnel-table ipv6 tunnel-summary tunnel-type</a> <a href="#">type identityref</a>
<b>Options</b>	<ul style="list-style-type: none"> <li>• <a href="#">sr-isis</a> Segment routing using MPLS dataplane, programmed by IS-IS</li> <li>• <a href="#">sr-ospfv2</a> Segment routing using MPLS dataplane, programmed by OSPFv2</li> <li>• <a href="#">sr-ospfv3</a> Segment routing using MPLS dataplane, programmed by OSPFv3</li> <li>• <a href="#">sr-mpls</a> Segment routing using MPLS dataplane, programmed by segment routing manager.</li> <li>• <a href="#">sr-policy-mpls</a> Tunnels setup using SR-POLICY.</li> </ul>

- vxlan  
Tunnels based on VXLAN encapsulation

**Configurable** False

### **active-tunnels *number***

**Description** The total number of tunnels, using this encapsulation type, that are active.

**Context** [network-instance name](#) *string* [tunnel-table ipv6 tunnel-summary tunnel-type type](#) [identityref active-tunnels number](#)

**Tree** [active-tunnels](#)

**Configurable** False

### **inactive-tunnels *number***

**Description** The total number of tunnels, using this encapsulation type, that are inactive (not programmed).

**Context** [network-instance name](#) *string* [tunnel-table ipv6 tunnel-summary tunnel-type type](#) [identityref inactive-tunnels number](#)

**Tree** [inactive-tunnels](#)

**Configurable** False

### **total-tunnels *number***

**Description** The total number of tunnels, active and inactive, using this encapsulation type.

**Context** [network-instance name](#) *string* [tunnel-table ipv6 tunnel-summary tunnel-type type](#) [identityref total-tunnels number](#)

**Tree** [total-tunnels](#)

**Default** 0

**Configurable** False

### **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](#) *string* [type identityref](#)

**Tree** [type](#)

**Default** default

<b>Options</b>	<ul style="list-style-type: none"> <li>• <b>host</b> A special routing instances that refers to the hosts network instance (i.e. the network namespace of PID 1)</li> <li>• <b>default</b> A special routing instance which acts as the 'default' routing instance for a network device.</li> <li>• <b>ip-vrf</b> A private Layer 3 only routing instance.</li> <li>• <b>mac-vrf</b> A private Layer 2 only switching instance.</li> </ul>
<b>Configurable</b>	True

## udp

<b>Description</b>	State for UDP datagrams routed using the route tables of this network instance.
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">udp</a>
<b>Tree</b>	<a href="#">udp</a>
<b>Configurable</b>	False

## listening-application [local-address \(ipv4-address | ipv6-address\)](#) [local-port](#) *number*

<b>Description</b>	List of applications that are listening on a particular UDP port bound to the network-instance.
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">udp</a> <a href="#">listening-application</a> <a href="#">local-address (ipv4-address   ipv6-address)</a> <a href="#">local-port</a> <i>number</i>
<b>Tree</b>	<a href="#">listening-application</a>
<b>Configurable</b>	False

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

<b>Description</b>	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.
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">udp</a> <a href="#">listening-application</a> <a href="#">local-address (ipv4-address   ipv6-address)</a> <a href="#">local-port</a> <i>number</i>
<b>Configurable</b>	False

**local-port *number***

<b>Description</b>	The local port number accepted by the application.
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">udp listening-application</a> <a href="#">local-address</a> ( <i>ipv4-address   ipv6-address</i> ) <a href="#">local-port</a> <i>number</i>
<b>Range</b>	0 to 65535
<b>Configurable</b>	False

**process-id *number***

<b>Description</b>	The process ID of the application that owns the socket.
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">udp listening-application</a> <a href="#">local-address</a> ( <i>ipv4-address   ipv6-address</i> ) <a href="#">local-port</a> <i>number</i> <a href="#">process-id</a> <i>number</i>
<b>Tree</b>	<a href="#">process-id</a>
<b>Configurable</b>	False

**statistics**

<b>Description</b>	Enter the statistics context
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">udp statistics</a>
<b>Tree</b>	<a href="#">statistics</a>
<b>Configurable</b>	False

**ignored-multicast-packets *number***

<b>Description</b>	The total number of ignored multicast UDP datagrams.
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">udp statistics</a> <a href="#">ignored-multicast-packets</a> <i>number</i>
<b>Tree</b>	<a href="#">ignored-multicast-packets</a>
<b>Default</b>	0
<b>Configurable</b>	False

**in-checksum-errors *number***

<b>Description</b>	Increased when a received UDP packet has an invalid checksum.
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">udp statistics</a> <a href="#">in-checksum-errors</a> <i>number</i>
<b>Tree</b>	<a href="#">in-checksum-errors</a>
<b>Default</b>	0

<b>Configurable</b>	False
---------------------	-------

### **in-error-packets *number***

<b>Description</b>	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.
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">udp statistics in-error-packets</a> <i>number</i>
<b>Tree</b>	<a href="#">in-error-packets</a>
<b>Default</b>	0
<b>Configurable</b>	False

### **in-no-open-ports-packets *number***

<b>Description</b>	The total number of received UDP datagrams for which there was no application at the destination port.
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">udp statistics in-no-open-ports-packets</a> <i>number</i>
<b>Tree</b>	<a href="#">in-no-open-ports-packets</a>
<b>Default</b>	0
<b>Configurable</b>	False

### **in-packets *number***

<b>Description</b>	The total number of UDP datagrams delivered to UDP users.
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">udp statistics in-packets</a> <i>number</i>
<b>Tree</b>	<a href="#">in-packets</a>
<b>Default</b>	0
<b>Configurable</b>	False

### **out-packets *number***

<b>Description</b>	The total number of UDP datagrams sent from this network instance.
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">udp statistics out-packets</a> <i>number</i>
<b>Tree</b>	<a href="#">out-packets</a>
<b>Default</b>	0
<b>Configurable</b>	False

**receive-buffer-errors *number***

<b>Description</b>	Increased when memory cannot be allocated to process an incoming UDP packet.
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">udp statistics</a> <a href="#">receive-buffer-errors</a> <i>number</i>
<b>Tree</b>	<a href="#">receive-buffer-errors</a>
<b>Default</b>	0
<b>Configurable</b>	False

**send-buffer-errors *number***

<b>Description</b>	Increased when memory cannot be allocated to send a UDP packet.
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">udp statistics</a> <a href="#">send-buffer-errors</a> <i>number</i>
<b>Tree</b>	<a href="#">send-buffer-errors</a>
<b>Default</b>	0
<b>Configurable</b>	False

**vxlan-interface [name](#) *string*****Note:**

This command is available for the following platforms:

- 7220 IXR-D2
- 7220 IXR-D3
- 7220 IXR-D3L
- 7220 IXR-D2L

<b>Description</b>	List of vxlan-interfaces used by this network-instance
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">vxlan-interface name</a> <i>string</i>
<b>Tree</b>	<a href="#">vxlan-interface</a>
<b>Configurable</b>	True
<b>Max. Elements</b>	1

**name *string*****Note:**

This command is available for the following platforms:

- 7220 IXR-D2
- 7220 IXR-D3
- 7220 IXR-D3L
- 7220 IXR-D2L

<b>Description</b>	Identifier of vxlan-interface used in this network-instance
<b>Context</b>	<a href="#">network-instance name <i>string</i></a> <a href="#">vxlan-interface name <i>string</i></a>
<b>String Length</b>	8 to 17
<b>Configurable</b>	True

**oper-down-reason *keyword*****Note:**

This command is available for the following platforms:

- 7220 IXR-D2
- 7220 IXR-D3
- 7220 IXR-D3L
- 7220 IXR-D2L

<b>Description</b>	The reason for the vxlan-interface being down in the network-instance
<b>Context</b>	<a href="#">network-instance name <i>string</i></a> <a href="#">vxlan-interface name <i>string</i></a> <a href="#">oper-down-reason <i>keyword</i></a>
<b>Tree</b>	<a href="#">oper-down-reason</a>
<b>Options</b>	<ul style="list-style-type: none"> <li>• vxlan-tunnel-down</li> <li>• net-inst-down</li> <li>• vxlan-if-default-net-inst-source-address-missing</li> <li>• vxlan-if-default-net-inst-source-if-down</li> <li>• vrf-type-mismatch</li> </ul>
<b>Configurable</b>	False

## oper-state *keyword*



### Note:

This command is available for the following platforms:

- 7220 IXR-D2
- 7220 IXR-D3
- 7220 IXR-D3L
- 7220 IXR-D2L

<b>Description</b>	The operational state of this vxlan-interface.
<b>Context</b>	<code>network-instance name string vxlan-interface name string oper-state keyword</code>
<b>Tree</b>	<code>oper-state</code>
<b>Options</b>	<ul style="list-style-type: none"> <li>• up Component or process is operational</li> <li>• down Component or process is not operational</li> <li>• empty Component slot is empty</li> <li>• downloading Component is downloading image into memory</li> <li>• booting Component is booting downloaded image</li> <li>• starting Component image operational, application processes starting</li> <li>• failed Component or process has failed</li> <li>• synchronizing Component is currently being synchronized</li> <li>• upgrading Component is currently being upgraded</li> <li>• low-power Component is offline due to insufficient system power</li> <li>• degraded Component or process is in a degraded state</li> </ul>



- warm-reboot

Component or process is currently warm rebooting

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.

**Configurable**

False

## 7 platform

```

platform
+ chassis
- clei-code string
- failure-reason string
- hw-mac-address string
- last-boot-type string
- last-booted string
- last-change string
- manufactured-date string
- oper-state keyword
- part-number string
+ power
- control
- allocated number
- peak number
- used number
- fabric
- allocated number
- peak number
- used number
- fan-tray
- allocated number
- peak number
- used number
- linecard
- allocated number
- peak number
- used number
- total
- allocated number
- capacity number
- peak number
- used number
- removable boolean
- serial-number string
- slots number
- type string
- control slot 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
    - read-per-second decimal-number
    - transfers-per-second decimal-number
    - utilization number
    - written-per-second decimal-number
  - type keyword
- failure-reason string
- last-booted string

```

```

- last-change string
- locator-state keyword
- manufactured-date string
- memory
  - free number
  - physical number
  - reserved number
  - utilization number
- oper-state keyword
- part-number string
- power
  - allocated-power number
  - used-power number
- process pid number
  - args string
  - cpu-utilization number
  - memory-usage number
  - memory-utilization number
  - name string
  - start-time string
- removable boolean
- role keyword
- serial-number string
- software-version string
- temperature
  - alarm-status boolean
  - instant number
  - margin number
- type string
+ fabric slot number
+ admin-state keyword
- clei-code string
- failure-reason string
- last-booted string
- last-change string
- locator-state keyword
- manufactured-date string
- oper-state keyword
- part-number string
- power
  - allocated-power number
  - used-power number
- removable boolean
- serial-number string
- temperature
  - alarm-status boolean
  - instant number
  - margin number
- type string
- fan-tray id number
- clei-code string
- failure-reason string
- last-booted string
- last-change string
- locator-state keyword
- manufactured-date string
- oper-reason keyword
- oper-state keyword
- part-number string
- power
  - allocated-power number
  - used-power number
- removable boolean
- serial-number string
- speed number
- type string

```

```

+ linecard slot number
+ admin-state keyword
- 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
- datapath
- asic
  - resource name identityref
  - free-entries number
  - used-entries number
  - used-percent number
- xdp
  - resource name identityref
  - free-entries number
  - used-entries number
  - used-percent number
+ fabric
- availability number
- utilization-egress number
- utilization-ingress number
- mtu
  - resource name identityref
  - free number
  - used number
+ pipeline index number
- datapath
  - xdp
    - resource name identityref
    - free-entries number
    - used-entries number
    - used-percent number
- qos
  - resource name identityref
  - free number
  - used number
- tcam
  - resource name identityref
  - free number
  - programmed number
  - reserved number
- last-booted string
- last-change string
- locator-state keyword
- manufactured-date string
- oper-state keyword
- part-number string
- power
  - allocated-power number
  - used-power number
- removable boolean
- serial-number string
- software-version string
- temperature

```

```

- alarm-status boolean
- instant number
- margin number
- type string
- power-supply id number
- capacity number
- clei-code string
- failure-reason string
- input
- current decimal-number
- power decimal-number
- voltage decimal-number
- last-booted string
- last-change string
- manufactured-date string
- oper-reason keyword
- oper-state keyword
- part-number string
- removable boolean
- serial-number string
- temperature
- alarm-status boolean
- instant number
- 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
+ falling-threshold-log number
+ rising-threshold-log number
+ xdp
+ resource name identityref
+ falling-threshold-log number
+ rising-threshold-log 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

```

## 7.1 platform Descriptions

### platform

<b>Description</b>	Enclosing container for platform components
<b>Context</b>	<a href="#">platform</a>
<b>Tree</b>	<a href="#">platform</a>
<b>Configurable</b>	True

### chassis

<b>Description</b>	Top-level container for chassis configuration and state
<b>Context</b>	<a href="#">platform chassis</a>
<b>Tree</b>	<a href="#">chassis</a>
<b>Configurable</b>	True

### clei-code *string*

<b>Description</b>	The Common Language Identification Code for this component
<b>Context</b>	<a href="#">platform chassis clei-code <i>string</i></a>
<b>Tree</b>	<a href="#">clei-code</a>
<b>Configurable</b>	False

### failure-reason *string*

<b>Description</b>	The reason the component transitioned to a failed state Field is empty if the component is not currently in a failure state
<b>Context</b>	<a href="#">platform chassis failure-reason <i>string</i></a>
<b>Tree</b>	<a href="#">failure-reason</a>
<b>Configurable</b>	False

**hw-mac-address *string***

<b>Description</b>	The chassis MAC address Read from hardware, or derived from the systems UUID
<b>Context</b>	<a href="#">platform chassis hw-mac-address <i>string</i></a>
<b>Tree</b>	<a href="#">hw-mac-address</a>
<b>Configurable</b>	False

**last-boot-type *string***

<b>Description</b>	The type of boot the chassis initialized from This field indicates what type of reboot occurred, whether it be warm, normal, or otherwise.
<b>Context</b>	<a href="#">platform chassis last-boot-type <i>string</i></a>
<b>Tree</b>	<a href="#">last-boot-type</a>
<b>Configurable</b>	False

**last-booted *string***

<b>Description</b>	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
<b>Context</b>	<a href="#">platform chassis last-booted <i>string</i></a>
<b>Tree</b>	<a href="#">last-booted</a>
<b>String Length</b>	20 to 32
<b>Configurable</b>	False

**last-change *string***

<b>Description</b>	The date and time this component last changed state
<b>Context</b>	<a href="#">platform chassis last-change <i>string</i></a>
<b>Tree</b>	<a href="#">last-change</a>
<b>String Length</b>	20 to 32
<b>Configurable</b>	False



**manufactured-date *string***

<b>Description</b>	The date this component was manufactured
<b>Context</b>	<a href="#">platform chassis manufactured-date <i>string</i></a>
<b>Tree</b>	<a href="#">manufactured-date</a>
<b>Configurable</b>	False

**oper-state *keyword***

<b>Description</b>	The operational state of this component
<b>Context</b>	<a href="#">platform chassis oper-state <i>keyword</i></a>
<b>Tree</b>	<a href="#">oper-state</a>
<b>Options</b>	<ul style="list-style-type: none"> <li>• up Component or process is operational</li> <li>• down Component or process is not operational</li> <li>• empty Component slot is empty</li> <li>• downloading Component is downloading image into memory</li> <li>• booting Component is booting downloaded image</li> <li>• starting Component image operational, application processes starting</li> <li>• failed Component or process has failed</li> <li>• synchronizing Component is currently being synchronized</li> <li>• upgrading Component is currently being upgraded</li> <li>• low-power Component is offline due to insufficient system power</li> <li>• degraded Component or process is in a degraded state</li> <li>• warm-reboot Component or process is currently warm rebooting Component or process is currently warm rebooting This state is set during a warm reboot immediately following initiation of the reboot,</li> </ul>

continuing after startup until the system has completed audit. In this state the system will not accept configuration changes.

**Configurable** False

### part-number *string*

**Description** Part number for this component  
**Context** [platform chassis part-number string](#)  
**Tree** [part-number](#)  
**Configurable** False

### power

**Description** Top-level container for chassis-wide power state  
**Context** [platform chassis power](#)  
**Tree** [power](#)  
**Configurable** True

### control



**Note:**

This command is available for the following platforms:

- 7250 IXR-6
- 7250 IXR-10

**Description** Top-level container for power usage of control modules  
**Context** [platform chassis power control](#)  
**Tree** [control](#)  
**Configurable** False

### allocated *number*



**Note:**

This command is available for the following platforms:

- 7250 IXR-6
- 7250 IXR-10

<b>Description</b>	Allocated power
<b>Context</b>	<a href="#">platform chassis power control allocated</a> <i>number</i>
<b>Tree</b>	<a href="#">allocated</a>
<b>Configurable</b>	False

### peak *number*



**Note:**

This command is available for the following platforms:

- 7250 IXR-6
- 7250 IXR-10

<b>Description</b>	Peak power used
<b>Context</b>	<a href="#">platform chassis power control peak</a> <i>number</i>
<b>Tree</b>	<a href="#">peak</a>
<b>Configurable</b>	False

### used *number*



**Note:**

This command is available for the following platforms:

- 7250 IXR-6
- 7250 IXR-10

<b>Description</b>	Used power
<b>Context</b>	<a href="#">platform chassis power control used</a> <i>number</i>
<b>Tree</b>	<a href="#">used</a>
<b>Configurable</b>	False

### fabric



**Note:**

This command is available for the following platforms:

- 7250 IXR-6
- 7250 IXR-10

<b>Description</b>	Top-level container for power usage of fabric modules
--------------------	---

<b>Context</b>	<a href="#">platform chassis power fabric</a>
<b>Tree</b>	<a href="#">fabric</a>
<b>Configurable</b>	False

### allocated *number*



**Note:**

This command is available for the following platforms:

- 7250 IXR-6
- 7250 IXR-10

<b>Description</b>	Allocated power
<b>Context</b>	<a href="#">platform chassis power fabric allocated <i>number</i></a>
<b>Tree</b>	<a href="#">allocated</a>
<b>Configurable</b>	False

### peak *number*



**Note:**

This command is available for the following platforms:

- 7250 IXR-6
- 7250 IXR-10

<b>Description</b>	Peak power used
<b>Context</b>	<a href="#">platform chassis power fabric peak <i>number</i></a>
<b>Tree</b>	<a href="#">peak</a>
<b>Configurable</b>	False

### used *number*



**Note:**

This command is available for the following platforms:

- 7250 IXR-6
- 7250 IXR-10

<b>Description</b>	Used power
<b>Context</b>	<a href="#">platform chassis power fabric used <i>number</i></a>

<b>Tree</b>	<a href="#">used</a>
<b>Configurable</b>	False

## fan-tray



### Note:

This command is available for the following platforms:

- 7250 IXR-6
- 7250 IXR-10

<b>Description</b>	Top-level container for power usage of fan-trays
<b>Context</b>	<a href="#">platform chassis power fan-tray</a>
<b>Tree</b>	<a href="#">fan-tray</a>
<b>Configurable</b>	False

## allocated *number*



### Note:

This command is available for the following platforms:

- 7250 IXR-6
- 7250 IXR-10

<b>Description</b>	Allocated power
<b>Context</b>	<a href="#">platform chassis power fan-tray allocated <i>number</i></a>
<b>Tree</b>	<a href="#">allocated</a>
<b>Configurable</b>	False

## peak *number*



### Note:

This command is available for the following platforms:

- 7250 IXR-6
- 7250 IXR-10

<b>Description</b>	Peak power used
<b>Context</b>	<a href="#">platform chassis power fan-tray peak <i>number</i></a>
<b>Tree</b>	<a href="#">peak</a>

<b>Configurable</b>	False
---------------------	-------

## used *number*



**Note:**

This command is available for the following platforms:

- 7250 IXR-6
- 7250 IXR-10

<b>Description</b>	Used power
<b>Context</b>	<a href="#">platform chassis power fan-tray used number</a>
<b>Tree</b>	<a href="#">used</a>
<b>Configurable</b>	False

## linecard



**Note:**

This command is available for the following platforms:

- 7250 IXR-6
- 7250 IXR-10

<b>Description</b>	Top-level container for power usage of linecard modules
<b>Context</b>	<a href="#">platform chassis power linecard</a>
<b>Tree</b>	<a href="#">linecard</a>
<b>Configurable</b>	False

## allocated *number*



**Note:**

This command is available for the following platforms:

- 7250 IXR-6
- 7250 IXR-10

<b>Description</b>	Allocated power
<b>Context</b>	<a href="#">platform chassis power linecard allocated number</a>
<b>Tree</b>	<a href="#">allocated</a>
<b>Configurable</b>	False

**peak *number*****Note:**

This command is available for the following platforms:

- 7250 IXR-6
- 7250 IXR-10

<b>Description</b>	Peak power used
<b>Context</b>	<a href="#">platform chassis power linecard peak number</a>
<b>Tree</b>	<a href="#">peak</a>
<b>Configurable</b>	False

**used *number*****Note:**

This command is available for the following platforms:

- 7250 IXR-6
- 7250 IXR-10

<b>Description</b>	Used power
<b>Context</b>	<a href="#">platform chassis power linecard used number</a>
<b>Tree</b>	<a href="#">used</a>
<b>Configurable</b>	False

**total**

<b>Description</b>	Top-level container for total power usage and capacity
<b>Context</b>	<a href="#">platform chassis power total</a>
<b>Tree</b>	<a href="#">total</a>
<b>Configurable</b>	False

**allocated *number*****Note:**

This command is available for the following platforms:

- 7250 IXR-6
- 7250 IXR-10

<b>Description</b>	Allocated power
<b>Context</b>	<a href="#">platform chassis power total allocated number</a>
<b>Tree</b>	<a href="#">allocated</a>
<b>Configurable</b>	False

**capacity *number***

<b>Description</b>	Total power capacity provided by all power supplies
<b>Context</b>	<a href="#">platform chassis power total capacity number</a>
<b>Tree</b>	<a href="#">capacity</a>
<b>Configurable</b>	False

**peak *number***

<b>Description</b>	Peak power used
<b>Context</b>	<a href="#">platform chassis power total peak number</a>
<b>Tree</b>	<a href="#">peak</a>
<b>Configurable</b>	False

**used *number***

<b>Description</b>	Used power
<b>Context</b>	<a href="#">platform chassis power total used number</a>
<b>Tree</b>	<a href="#">used</a>
<b>Configurable</b>	False

**removable *boolean***

<b>Description</b>	Details if this component can be removed from the system
<b>Context</b>	<a href="#">platform chassis removable boolean</a>



<b>Tree</b>	<a href="#">removable</a>
<b>Configurable</b>	False

**serial-number *string***

<b>Description</b>	The serial number for this component
<b>Context</b>	<a href="#">platform chassis serial-number <i>string</i></a>
<b>Tree</b>	<a href="#">serial-number</a>
<b>Configurable</b>	False

**slots *number***

<b>Description</b>	The number of line card slots supported by the chassis
<b>Context</b>	<a href="#">platform chassis slots <i>number</i></a>
<b>Tree</b>	<a href="#">slots</a>
<b>Configurable</b>	False

**type *string***

<b>Description</b>	The chassis type
<b>Context</b>	<a href="#">platform chassis type <i>string</i></a>
<b>Tree</b>	<a href="#">type</a>
<b>Configurable</b>	False

**control *slot string***

<b>Description</b>	Top-level container for control module configuration and state
<b>Context</b>	<a href="#">platform control slot <i>string</i></a>
<b>Tree</b>	<a href="#">control</a>
<b>Configurable</b>	False

**slot *string***

<b>Description</b>	Slot identifier for the control module This is set to 'A' for systems without removable control modules.
<b>Context</b>	<a href="#">platform control slot <i>string</i></a>

**Configurable** False

### **cgroup name string**

**Description** List of cgroups present in the system  
**Context** [platform control slot string cgroup name string](#)  
**Tree** [cgroup](#)  
**Configurable** False

### **name string**

**Description** Name of the cgroup, as defined by its directory location in the filesystem  
**Context** [platform control slot string cgroup name string](#)  
**Configurable** False

### **cpuacct-statistics**

**Description** Top-level container for cgroup cpuacct statistics  
**Context** [platform control slot string cgroup name string cpuacct-statistics](#)  
**Tree** [cpuacct-statistics](#)  
**Configurable** False

### **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

### **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

## 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

## 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

## anon-thp number

**Description** Amount of memory used in anonymous mappings backed by transparent hugepages.

**Context** [platform control slot](#) *string* [cgroup name](#) *string* [memory-statistics](#) [anon-thp number](#)

**Tree** [anon-thp](#)

**Units** bytes

**Configurable** False

## current number

**Description** The total amount of memory currently being used by the cgroup and its descendants. Read from memory.current

**Context** [platform control slot](#) *string* [cgroup name](#) *string* [memory-statistics](#) [current number](#)

**Tree** [current](#)

**Units** bytes

**Configurable** False

**current-swap *number***

<b>Description</b>	The total amount of swap currently being used by the cgroup and its descendants. Read from memory.swap.current
<b>Context</b>	<a href="#">platform control slot</a> <i>string</i> <a href="#">cgroup name</a> <i>string</i> <a href="#">memory-statistics current-swap number</a>
<b>Tree</b>	<a href="#">current-swap</a>
<b>Units</b>	bytes
<b>Configurable</b>	False

**file *number***

<b>Description</b>	Amount of memory used to cache filesystem data, including tmpfs and shared memory.
<b>Context</b>	<a href="#">platform control slot</a> <i>string</i> <a href="#">cgroup name</a> <i>string</i> <a href="#">memory-statistics file number</a>
<b>Tree</b>	<a href="#">file</a>
<b>Units</b>	bytes
<b>Configurable</b>	False

**file-dirty *number***

<b>Description</b>	Amount of cached filesystem data that was modified but not yet written back to disk.
<b>Context</b>	<a href="#">platform control slot</a> <i>string</i> <a href="#">cgroup name</a> <i>string</i> <a href="#">memory-statistics file-dirty number</a>
<b>Tree</b>	<a href="#">file-dirty</a>
<b>Units</b>	bytes
<b>Configurable</b>	False

**file-writeback *number***

<b>Description</b>	Amount of cached filesystem data that was modified and is currently being written back to disk.
<b>Context</b>	<a href="#">platform control slot</a> <i>string</i> <a href="#">cgroup name</a> <i>string</i> <a href="#">memory-statistics file-writeback number</a>
<b>Tree</b>	<a href="#">file-writeback</a>
<b>Units</b>	bytes
<b>Configurable</b>	False

**kernel-stack *number***

<b>Description</b>	Amount of memory allocated to kernel stacks.
<b>Context</b>	<a href="#">platform control slot</a> <i>string</i> <a href="#">cgroup name</a> <i>string</i> <a href="#">memory-statistics kernel-stack number</a>
<b>Tree</b>	<a href="#">kernel-stack</a>
<b>Units</b>	bytes
<b>Configurable</b>	False

**memory-events**

<b>Description</b>	Top-level container for cgroup memory events
<b>Context</b>	<a href="#">platform control slot</a> <i>string</i> <a href="#">cgroup name</a> <i>string</i> <a href="#">memory-statistics memory-events</a>
<b>Tree</b>	<a href="#">memory-events</a>
<b>Configurable</b>	False

**high *number***

<b>Description</b>	The number of times processes of the cgroup are throttled and routed to perform direct memory reclaim because the high memory boundary was exceeded.
<b>Context</b>	<a href="#">platform control slot</a> <i>string</i> <a href="#">cgroup name</a> <i>string</i> <a href="#">memory-statistics memory-events high number</a>
<b>Tree</b>	<a href="#">high</a>
<b>Configurable</b>	False

**low *number***

<b>Description</b>	The number of times the cgroup is reclaimed due to high memory pressure even though its usage is under the low boundary.
<b>Context</b>	<a href="#">platform control slot</a> <i>string</i> <a href="#">cgroup name</a> <i>string</i> <a href="#">memory-statistics memory-events low number</a>
<b>Tree</b>	<a href="#">low</a>
<b>Configurable</b>	False

**max number**

<b>Description</b>	The number of times the cgroup's memory usage was about to go over the max boundary.
<b>Context</b>	<a href="#">platform control slot</a> <i>string</i> <a href="#">cgroup name</a> <i>string</i> <a href="#">memory-statistics</a> <a href="#">memory-events</a> <a href="#">max</a> <i>number</i>
<b>Tree</b>	<a href="#">max</a>
<b>Configurable</b>	False

**oom number**

<b>Description</b>	The number of time the cgroup's memory usage was reached the limit and allocation was about to fail.
<b>Context</b>	<a href="#">platform control slot</a> <i>string</i> <a href="#">cgroup name</a> <i>string</i> <a href="#">memory-statistics</a> <a href="#">memory-events</a> <a href="#">oom</a> <i>number</i>
<b>Tree</b>	<a href="#">oom</a>
<b>Configurable</b>	False

**oom\_kill number**

<b>Description</b>	The number of processes belonging to this cgroup killed by any kind of OOM killer.
<b>Context</b>	<a href="#">platform control slot</a> <i>string</i> <a href="#">cgroup name</a> <i>string</i> <a href="#">memory-statistics</a> <a href="#">memory-events</a> <a href="#">oom_kill</a> <i>number</i>
<b>Tree</b>	<a href="#">oom_kill</a>
<b>Configurable</b>	False

**slab number**

<b>Description</b>	Amount of memory used for storing in-kernel data structures.
<b>Context</b>	<a href="#">platform control slot</a> <i>string</i> <a href="#">cgroup name</a> <i>string</i> <a href="#">memory-statistics</a> <a href="#">slab</a> <i>number</i>
<b>Tree</b>	<a href="#">slab</a>
<b>Units</b>	bytes
<b>Configurable</b>	False

**sock number**

<b>Description</b>	Amount of memory used in network transmission buffers.
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<b>Context</b>	<a href="#">platform control slot</a> <i>string</i> <a href="#">cgroup name</a> <i>string</i> <a href="#">memory-statistics sock number</a>
<b>Tree</b>	<a href="#">sock</a>
<b>Units</b>	bytes
<b>Configurable</b>	False

**clei-code** *string*

<b>Description</b>	The Common Language Identification Code for this component
<b>Context</b>	<a href="#">platform control slot</a> <i>string</i> <a href="#">clei-code</a> <i>string</i>
<b>Tree</b>	<a href="#">clei-code</a>
<b>Configurable</b>	False

**cpu index** (*keyword* | *number*)

<b>Description</b>	List of all CPUs in the system
<b>Context</b>	<a href="#">platform control slot</a> <i>string</i> <a href="#">cpu index</a> ( <i>keyword</i>   <i>number</i> )
<b>Tree</b>	<a href="#">cpu</a>
<b>Configurable</b>	False

**index** (*keyword* | *number*)

<b>Description</b>	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.
<b>Context</b>	<a href="#">platform control slot</a> <i>string</i> <a href="#">cpu index</a> ( <i>keyword</i>   <i>number</i> )
<b>Options</b>	<ul style="list-style-type: none"> <li>all Index value indicating all CPUs in the system</li> </ul>
<b>Configurable</b>	False

**architecture** *keyword*

<b>Description</b>	Architecture supported by the CPU
<b>Context</b>	<a href="#">platform control slot</a> <i>string</i> <a href="#">cpu index</a> ( <i>keyword</i>   <i>number</i> ) <a href="#">architecture</a> <i>keyword</i>
<b>Tree</b>	<a href="#">architecture</a>

<b>Options</b>	• x86_64
<b>Configurable</b>	False

### hardware-interrupt

<b>Description</b>	Time spent servicing hardware interrupts
<b>Context</b>	<a href="#">platform control slot</a> <i>string</i> <a href="#">cpu index</a> ( <i>keyword</i>   <i>number</i> ) <a href="#">hardware-interrupt</a>
<b>Tree</b>	<a href="#">hardware-interrupt</a>
<b>Configurable</b>	False

### average-1 *number*

<b>Description</b>	The arithmetic mean value of this statistic over the last minute
<b>Context</b>	<a href="#">platform control slot</a> <i>string</i> <a href="#">cpu index</a> ( <i>keyword</i>   <i>number</i> ) <a href="#">hardware-interrupt</a> <a href="#">average-1</a> <i>number</i>
<b>Tree</b>	<a href="#">average-1</a>
<b>Range</b>	0 to 100
<b>Configurable</b>	False

### average-15 *number*

<b>Description</b>	The arithmetic mean value of this statistic over the last fifteen minutes
<b>Context</b>	<a href="#">platform control slot</a> <i>string</i> <a href="#">cpu index</a> ( <i>keyword</i>   <i>number</i> ) <a href="#">hardware-interrupt</a> <a href="#">average-15</a> <i>number</i>
<b>Tree</b>	<a href="#">average-15</a>
<b>Range</b>	0 to 100
<b>Configurable</b>	False

### average-5 *number*

<b>Description</b>	The arithmetic mean value of this statistic over the last five minutes
<b>Context</b>	<a href="#">platform control slot</a> <i>string</i> <a href="#">cpu index</a> ( <i>keyword</i>   <i>number</i> ) <a href="#">hardware-interrupt</a> <a href="#">average-5</a> <i>number</i>
<b>Tree</b>	<a href="#">average-5</a>
<b>Range</b>	0 to 100
<b>Configurable</b>	False



**instant *number***

<b>Description</b>	The instantaneous percentage value
<b>Context</b>	<a href="#">platform control slot</a> <i>string</i> <a href="#">cpu index</a> ( <i>keyword</i>   <i>number</i> ) <a href="#">hardware-interrupt</a> <i>instant number</i>
<b>Tree</b>	<a href="#">instant</a>
<b>Range</b>	0 to 100
<b>Configurable</b>	False

**idle**

<b>Description</b>	Time spent idle
<b>Context</b>	<a href="#">platform control slot</a> <i>string</i> <a href="#">cpu index</a> ( <i>keyword</i>   <i>number</i> ) <a href="#">idle</a> <i>idle</i>
<b>Tree</b>	<a href="#">idle</a>
<b>Configurable</b>	False

**average-1 *number***

<b>Description</b>	The arithmetic mean value of this statistic over the last minute
<b>Context</b>	<a href="#">platform control slot</a> <i>string</i> <a href="#">cpu index</a> ( <i>keyword</i>   <i>number</i> ) <a href="#">idle</a> <i>average-1 number</i>
<b>Tree</b>	<a href="#">average-1</a>
<b>Range</b>	0 to 100
<b>Configurable</b>	False

**average-15 *number***

<b>Description</b>	The arithmetic mean value of this statistic over the last fifteen minutes
<b>Context</b>	<a href="#">platform control slot</a> <i>string</i> <a href="#">cpu index</a> ( <i>keyword</i>   <i>number</i> ) <a href="#">idle</a> <i>average-15 number</i>
<b>Tree</b>	<a href="#">average-15</a>
<b>Range</b>	0 to 100
<b>Configurable</b>	False

**average-5 *number***

<b>Description</b>	The arithmetic mean value of this statistic over the last five minutes
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<b>Context</b>	<a href="#">platform control slot string cpu index (keyword   number) idle average-5 number</a>
<b>Tree</b>	<a href="#">average-5</a>
<b>Range</b>	0 to 100
<b>Configurable</b>	False

**instant number**

<b>Description</b>	The instantaneous percentage value
<b>Context</b>	<a href="#">platform control slot string cpu index (keyword   number) idle instant number</a>
<b>Tree</b>	<a href="#">instant</a>
<b>Range</b>	0 to 100
<b>Configurable</b>	False

**iowait**

<b>Description</b>	Time spent idle, waiting for an outstanding disk I/O request
<b>Context</b>	<a href="#">platform control slot string cpu index (keyword   number) iowait</a>
<b>Tree</b>	<a href="#">iowait</a>
<b>Configurable</b>	False

**average-1 number**

<b>Description</b>	The arithmetic mean value of this statistic over the last minute
<b>Context</b>	<a href="#">platform control slot string cpu index (keyword   number) iowait average-1 number</a>
<b>Tree</b>	<a href="#">average-1</a>
<b>Range</b>	0 to 100
<b>Configurable</b>	False

**average-15 number**

<b>Description</b>	The arithmetic mean value of this statistic over the last fifteen minutes
<b>Context</b>	<a href="#">platform control slot string cpu index (keyword   number) iowait average-15 number</a>
<b>Tree</b>	<a href="#">average-15</a>
<b>Range</b>	0 to 100

**Configurable** False

### **average-5 number**

**Description** The arithmetic mean value of this statistic over the last five minutes

**Context** [platform control slot string cpu index \(keyword | number\) iowait average-5 number](#)

**Tree** [average-5](#)

**Range** 0 to 100

**Configurable** False

### **instant number**

**Description** The instantaneous percentage value

**Context** [platform control slot string cpu index \(keyword | number\) iowait instant number](#)

**Tree** [instant](#)

**Range** 0 to 100

**Configurable** False

### **nice**

**Description** Time spent running low-priority (niced) user processes

**Context** [platform control slot string cpu index \(keyword | number\) nice](#)

**Tree** [nice](#)

**Configurable** False

### **average-1 number**

**Description** The arithmetic mean value of this statistic over the last minute

**Context** [platform control slot string cpu index \(keyword | number\) nice average-1 number](#)

**Tree** [average-1](#)

**Range** 0 to 100

**Configurable** False

**average-15 number**

<b>Description</b>	The arithmetic mean value of this statistic over the last fifteen minutes
<b>Context</b>	<a href="#">platform control slot</a> <i>string</i> <a href="#">cpu index</a> ( <i>keyword   number</i> ) <a href="#">nice</a> <a href="#">average-15 number</a>
<b>Tree</b>	<a href="#">average-15</a>
<b>Range</b>	0 to 100
<b>Configurable</b>	False

**average-5 number**

<b>Description</b>	The arithmetic mean value of this statistic over the last five minutes
<b>Context</b>	<a href="#">platform control slot</a> <i>string</i> <a href="#">cpu index</a> ( <i>keyword   number</i> ) <a href="#">nice</a> <a href="#">average-5 number</a>
<b>Tree</b>	<a href="#">average-5</a>
<b>Range</b>	0 to 100
<b>Configurable</b>	False

**instant number**

<b>Description</b>	The instantaneous percentage value
<b>Context</b>	<a href="#">platform control slot</a> <i>string</i> <a href="#">cpu index</a> ( <i>keyword   number</i> ) <a href="#">nice</a> <a href="#">instant number</a>
<b>Tree</b>	<a href="#">instant</a>
<b>Range</b>	0 to 100
<b>Configurable</b>	False

**software-interrupt**

<b>Description</b>	Time spent servicing software interrupts
<b>Context</b>	<a href="#">platform control slot</a> <i>string</i> <a href="#">cpu index</a> ( <i>keyword   number</i> ) <a href="#">software-interrupt</a>
<b>Tree</b>	<a href="#">software-interrupt</a>
<b>Configurable</b>	False

**average-1 number**

<b>Description</b>	The arithmetic mean value of this statistic over the last minute
<b>Context</b>	<a href="#">platform control slot</a> <i>string</i> <a href="#">cpu index</a> ( <i>keyword   number</i> ) <a href="#">software-interrupt</a> <a href="#">average-1 number</a>

<b>Tree</b>	<a href="#">average-1</a>
<b>Range</b>	0 to 100
<b>Configurable</b>	False

### **average-15 number**

<b>Description</b>	The arithmetic mean value of this statistic over the last fifteen minutes
<b>Context</b>	<a href="#">platform control slot</a> <i>string</i> <a href="#">cpu index</a> ( <i>keyword   number</i> ) <a href="#">software-interrupt</a> <a href="#">average-15 number</a>
<b>Tree</b>	<a href="#">average-15</a>
<b>Range</b>	0 to 100
<b>Configurable</b>	False

### **average-5 number**

<b>Description</b>	The arithmetic mean value of this statistic over the last five minutes
<b>Context</b>	<a href="#">platform control slot</a> <i>string</i> <a href="#">cpu index</a> ( <i>keyword   number</i> ) <a href="#">software-interrupt</a> <a href="#">average-5 number</a>
<b>Tree</b>	<a href="#">average-5</a>
<b>Range</b>	0 to 100
<b>Configurable</b>	False

### **instant number**

<b>Description</b>	The instantaneous percentage value
<b>Context</b>	<a href="#">platform control slot</a> <i>string</i> <a href="#">cpu index</a> ( <i>keyword   number</i> ) <a href="#">software-interrupt</a> <a href="#">instant number</a>
<b>Tree</b>	<a href="#">instant</a>
<b>Range</b>	0 to 100
<b>Configurable</b>	False

### **speed decimal-number**

<b>Description</b>	Capable speed of the CPU
<b>Context</b>	<a href="#">platform control slot</a> <i>string</i> <a href="#">cpu index</a> ( <i>keyword   number</i> ) <a href="#">speed decimal-number</a>
<b>Tree</b>	<a href="#">speed</a>

<b>Units</b>	gigahertz
<b>Configurable</b>	False

## system

<b>Description</b>	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.
<b>Context</b>	<a href="#">platform control slot</a> <i>string</i> <a href="#">cpu index</a> ( <i>keyword</i>   <i>number</i> ) <a href="#">system</a>
<b>Tree</b>	<a href="#">system</a>
<b>Configurable</b>	False

## average-1 number

<b>Description</b>	The arithmetic mean value of this statistic over the last minute
<b>Context</b>	<a href="#">platform control slot</a> <i>string</i> <a href="#">cpu index</a> ( <i>keyword</i>   <i>number</i> ) <a href="#">system average-1 number</a>
<b>Tree</b>	<a href="#">average-1</a>
<b>Range</b>	0 to 100
<b>Configurable</b>	False

## average-15 number

<b>Description</b>	The arithmetic mean value of this statistic over the last fifteen minutes
<b>Context</b>	<a href="#">platform control slot</a> <i>string</i> <a href="#">cpu index</a> ( <i>keyword</i>   <i>number</i> ) <a href="#">system average-15 number</a>
<b>Tree</b>	<a href="#">average-15</a>
<b>Range</b>	0 to 100
<b>Configurable</b>	False

## average-5 number

<b>Description</b>	The arithmetic mean value of this statistic over the last five minutes
<b>Context</b>	<a href="#">platform control slot</a> <i>string</i> <a href="#">cpu index</a> ( <i>keyword</i>   <i>number</i> ) <a href="#">system average-5 number</a>
<b>Tree</b>	<a href="#">average-5</a>
<b>Range</b>	0 to 100

**Configurable** False

### **instant *number***

**Description** The instantaneous percentage value

**Context** [platform control slot string cpu index \(keyword | number\) system instant number](#)

**Tree** [instant](#)

**Range** 0 to 100

**Configurable** False

### **total**

**Description** Total CPU utilization

**Context** [platform control slot string cpu index \(keyword | number\) total](#)

**Tree** [total](#)

**Configurable** False

### **average-1 *number***

**Description** The arithmetic mean value of this statistic over the last minute

**Context** [platform control slot string cpu index \(keyword | number\) total average-1 number](#)

**Tree** [average-1](#)

**Range** 0 to 100

**Configurable** False

### **average-15 *number***

**Description** The arithmetic mean value of this statistic over the last fifteen minutes

**Context** [platform control slot string cpu index \(keyword | number\) total average-15 number](#)

**Tree** [average-15](#)

**Range** 0 to 100

**Configurable** False

**average-5 number**

<b>Description</b>	The arithmetic mean value of this statistic over the last five minutes
<b>Context</b>	<a href="#">platform control slot</a> <i>string</i> <a href="#">cpu index</a> ( <i>keyword   number</i> ) <a href="#">total average-5 number</a>
<b>Tree</b>	<a href="#">average-5</a>
<b>Range</b>	0 to 100
<b>Configurable</b>	False

**instant number**

<b>Description</b>	The instantaneous percentage value
<b>Context</b>	<a href="#">platform control slot</a> <i>string</i> <a href="#">cpu index</a> ( <i>keyword   number</i> ) <a href="#">total instant number</a>
<b>Tree</b>	<a href="#">instant</a>
<b>Range</b>	0 to 100
<b>Configurable</b>	False

**type string**

<b>Description</b>	Model name of the CPU
<b>Context</b>	<a href="#">platform control slot</a> <i>string</i> <a href="#">cpu index</a> ( <i>keyword   number</i> ) <a href="#">type string</a>
<b>Tree</b>	<a href="#">type</a>
<b>Configurable</b>	False

**user**

<b>Description</b>	Time spent executing at the user level This can otherwise be known as application or user space time.
<b>Context</b>	<a href="#">platform control slot</a> <i>string</i> <a href="#">cpu index</a> ( <i>keyword   number</i> ) <a href="#">user</a>
<b>Tree</b>	<a href="#">user</a>
<b>Configurable</b>	False

**average-1 number**

<b>Description</b>	The arithmetic mean value of this statistic over the last minute
<b>Context</b>	<a href="#">platform control slot</a> <i>string</i> <a href="#">cpu index</a> ( <i>keyword   number</i> ) <a href="#">user average-1 number</a>



<b>Tree</b>	<a href="#">average-1</a>
<b>Range</b>	0 to 100
<b>Configurable</b>	False

### **average-15 number**

<b>Description</b>	The arithmetic mean value of this statistic over the last fifteen minutes
<b>Context</b>	<a href="#">platform control slot string cpu index (keyword   number) user average-15 number</a>
<b>Tree</b>	<a href="#">average-15</a>
<b>Range</b>	0 to 100
<b>Configurable</b>	False

### **average-5 number**

<b>Description</b>	The arithmetic mean value of this statistic over the last five minutes
<b>Context</b>	<a href="#">platform control slot string cpu index (keyword   number) user average-5 number</a>
<b>Tree</b>	<a href="#">average-5</a>
<b>Range</b>	0 to 100
<b>Configurable</b>	False

### **instant number**

<b>Description</b>	The instantaneous percentage value
<b>Context</b>	<a href="#">platform control slot string cpu index (keyword   number) user instant number</a>
<b>Tree</b>	<a href="#">instant</a>
<b>Range</b>	0 to 100
<b>Configurable</b>	False

### **disk name string**

<b>Description</b>	List of disks present in the system
<b>Context</b>	<a href="#">platform control slot string disk name string</a>
<b>Tree</b>	<a href="#">disk</a>
<b>Configurable</b>	False

**name *string***

<b>Description</b>	Name of the disk, as defined by its physical location in the system
<b>Context</b>	<a href="#">platform control slot</a> <i>string</i> <a href="#">disk name</a> <i>string</i>
<b>Configurable</b>	False

**model-number *string***

<b>Description</b>	Model name of the disk
<b>Context</b>	<a href="#">platform control slot</a> <i>string</i> <a href="#">disk name</a> <i>string</i> <a href="#">model-number</a> <i>string</i>
<b>Tree</b>	<a href="#">model-number</a>
<b>Configurable</b>	False

**partition [name](#) *string***

<b>Description</b>	List of partitions available on this disk
<b>Context</b>	<a href="#">platform control slot</a> <i>string</i> <a href="#">disk name</a> <i>string</i> <a href="#">partition name</a> <i>string</i>
<b>Tree</b>	<a href="#">partition</a>
<b>Configurable</b>	False

**name *string***

<b>Description</b>	Name of the partition
<b>Context</b>	<a href="#">platform control slot</a> <i>string</i> <a href="#">disk name</a> <i>string</i> <a href="#">partition name</a> <i>string</i>
<b>Configurable</b>	False

**free *number***

<b>Description</b>	Space free on the partition
<b>Context</b>	<a href="#">platform control slot</a> <i>string</i> <a href="#">disk name</a> <i>string</i> <a href="#">partition name</a> <i>string</i> <a href="#">free</a> <i>number</i>
<b>Tree</b>	<a href="#">free</a>
<b>Units</b>	bytes
<b>Configurable</b>	False

**mount-point *string***

<b>Description</b>	Path to where this partition is mounted
<b>Context</b>	<a href="#">platform control slot</a> <i>string</i> <a href="#">disk name</a> <i>string</i> <a href="#">partition name</a> <i>string</i> <a href="#">mount-point</a> <i>string</i>
<b>Tree</b>	<a href="#">mount-point</a>
<b>Configurable</b>	False

**mount-status *keyword***

<b>Description</b>	Current mount status of this partition
<b>Context</b>	<a href="#">platform control slot</a> <i>string</i> <a href="#">disk name</a> <i>string</i> <a href="#">partition name</a> <i>string</i> <a href="#">mount-status</a> <i>keyword</i>
<b>Tree</b>	<a href="#">mount-status</a>
<b>Options</b>	<ul style="list-style-type: none"> <li>• ro Partition is currently mounted read-only</li> <li>• rw Partition is currently mounted read-write</li> </ul>
<b>Configurable</b>	False

**percent-used *number***

<b>Description</b>	Percentage of the partition in use
<b>Context</b>	<a href="#">platform control slot</a> <i>string</i> <a href="#">disk name</a> <i>string</i> <a href="#">partition name</a> <i>string</i> <a href="#">percent-used</a> <i>number</i>
<b>Tree</b>	<a href="#">percent-used</a>
<b>Range</b>	0 to 100
<b>Configurable</b>	False

**size *number***

<b>Description</b>	Size of the partition
<b>Context</b>	<a href="#">platform control slot</a> <i>string</i> <a href="#">disk name</a> <i>string</i> <a href="#">partition name</a> <i>string</i> <a href="#">size</a> <i>number</i>
<b>Tree</b>	<a href="#">size</a>
<b>Units</b>	bytes
<b>Configurable</b>	False

**used number**

<b>Description</b>	Space used on the partition
<b>Context</b>	<a href="#">platform control slot</a> <i>string</i> <a href="#">disk name</a> <i>string</i> <a href="#">partition name</a> <i>string</i> <a href="#">used number</a>
<b>Tree</b>	<a href="#">used</a>
<b>Units</b>	bytes
<b>Configurable</b>	False

**uuid string**

<b>Description</b>	UUID of the partition
<b>Context</b>	<a href="#">platform control slot</a> <i>string</i> <a href="#">disk name</a> <i>string</i> <a href="#">partition name</a> <i>string</i> <a href="#">uuid</a> <i>string</i>
<b>Tree</b>	<a href="#">uuid</a>
<b>Configurable</b>	False

**serial-number string**

<b>Description</b>	Serial number of the disk
<b>Context</b>	<a href="#">platform control slot</a> <i>string</i> <a href="#">disk name</a> <i>string</i> <a href="#">serial-number</a> <i>string</i>
<b>Tree</b>	<a href="#">serial-number</a>
<b>Configurable</b>	False

**size number**

<b>Description</b>	Total size of the disk
<b>Context</b>	<a href="#">platform control slot</a> <i>string</i> <a href="#">disk name</a> <i>string</i> <a href="#">size</a> <i>number</i>
<b>Tree</b>	<a href="#">size</a>
<b>Configurable</b>	False

**statistics**

<b>Description</b>	Top-level container for disk statistics
<b>Context</b>	<a href="#">platform control slot</a> <i>string</i> <a href="#">disk name</a> <i>string</i> <a href="#">statistics</a>
<b>Tree</b>	<a href="#">statistics</a>
<b>Configurable</b>	False

**read-per-second *decimal-number***

<b>Description</b>	Indicates the amount of data read from the device per second
<b>Context</b>	<a href="#">platform control slot</a> <i>string</i> <a href="#">disk name</a> <i>string</i> <a href="#">statistics read-per-second</a> <i>decimal-number</i>
<b>Tree</b>	<a href="#">read-per-second</a>
<b>Units</b>	bytes
<b>Configurable</b>	False

**transfers-per-second *decimal-number***

<b>Description</b>	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.
<b>Context</b>	<a href="#">platform control slot</a> <i>string</i> <a href="#">disk name</a> <i>string</i> <a href="#">statistics transfers-per-second</a> <i>decimal-number</i>
<b>Tree</b>	<a href="#">transfers-per-second</a>
<b>Configurable</b>	False

**utilization *number***

<b>Description</b>	The current tps utilization of the disk, expressed as a percentage
<b>Context</b>	<a href="#">platform control slot</a> <i>string</i> <a href="#">disk name</a> <i>string</i> <a href="#">statistics utilization</a> <i>number</i>
<b>Tree</b>	<a href="#">utilization</a>
<b>Range</b>	0 to 100
<b>Configurable</b>	False

**written-per-second *decimal-number***

<b>Description</b>	Indicates the amount of data written to the device per second
<b>Context</b>	<a href="#">platform control slot</a> <i>string</i> <a href="#">disk name</a> <i>string</i> <a href="#">statistics written-per-second</a> <i>decimal-number</i>
<b>Tree</b>	<a href="#">written-per-second</a>
<b>Units</b>	bytes
<b>Configurable</b>	False

**type keyword**

<b>Description</b>	Type of disk
<b>Context</b>	<a href="#">platform control slot</a> <i>string</i> <a href="#">disk name</a> <i>string</i> <a href="#">type keyword</a>
<b>Tree</b>	<a href="#">type</a>
<b>Options</b>	<ul style="list-style-type: none"> <li>• compactflash</li> <li>• ssd</li> <li>• hdd</li> <li>• usb</li> </ul>
<b>Configurable</b>	False

**failure-reason string**

<b>Description</b>	The reason the component transitioned to a failed state Field is empty if the component is not currently in a failure state
<b>Context</b>	<a href="#">platform control slot</a> <i>string</i> <a href="#">failure-reason</a> <i>string</i>
<b>Tree</b>	<a href="#">failure-reason</a>
<b>Configurable</b>	False

**last-booted string**

<b>Description</b>	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
<b>Context</b>	<a href="#">platform control slot</a> <i>string</i> <a href="#">last-booted</a> <i>string</i>
<b>Tree</b>	<a href="#">last-booted</a>
<b>String Length</b>	20 to 32
<b>Configurable</b>	False

**last-change string**

<b>Description</b>	The date and time this component last changed state
<b>Context</b>	<a href="#">platform control slot</a> <i>string</i> <a href="#">last-change</a> <i>string</i>
<b>Tree</b>	<a href="#">last-change</a>
<b>String Length</b>	20 to 32
<b>Configurable</b>	False

**locator-state *keyword***

<b>Description</b>	Details if the locator LED is active on this component
<b>Context</b>	<a href="#">platform control slot</a> <i>string</i> <a href="#">locator-state</a> <i>keyword</i>
<b>Tree</b>	<a href="#">locator-state</a>
<b>Default</b>	inactive
<b>Options</b>	<ul style="list-style-type: none"> <li>• active Locator LED is currently active</li> <li>• inactive Locator LED is currently inactive</li> </ul>
<b>Configurable</b>	False

**manufactured-date *string***

<b>Description</b>	The date this component was manufactured
<b>Context</b>	<a href="#">platform control slot</a> <i>string</i> <a href="#">manufactured-date</a> <i>string</i>
<b>Tree</b>	<a href="#">manufactured-date</a>
<b>Configurable</b>	False

**memory**

<b>Description</b>	Top-level container for system memory state
<b>Context</b>	<a href="#">platform control slot</a> <i>string</i> <a href="#">memory</a>
<b>Tree</b>	<a href="#">memory</a>
<b>Configurable</b>	False

**free *number***

<b>Description</b>	Memory available for system use
<b>Context</b>	<a href="#">platform control slot</a> <i>string</i> <a href="#">memory</a> <i>free</i> <i>number</i>
<b>Tree</b>	<a href="#">free</a>
<b>Units</b>	bytes
<b>Configurable</b>	False

**physical number**

<b>Description</b>	Total physical memory available on this component
<b>Context</b>	<a href="#">platform control slot</a> <i>string</i> <a href="#">memory physical number</a>
<b>Tree</b>	<a href="#">physical</a>
<b>Units</b>	bytes
<b>Configurable</b>	False

**reserved number**

<b>Description</b>	Memory reserved for system use
<b>Context</b>	<a href="#">platform control slot</a> <i>string</i> <a href="#">memory reserved number</a>
<b>Tree</b>	<a href="#">reserved</a>
<b>Units</b>	bytes
<b>Configurable</b>	False

**utilization number**

<b>Description</b>	Total memory utilized
<b>Context</b>	<a href="#">platform control slot</a> <i>string</i> <a href="#">memory utilization number</a>
<b>Tree</b>	<a href="#">utilization</a>
<b>Range</b>	0 to 100
<b>Configurable</b>	False

**oper-state keyword**

<b>Description</b>	The operational state of this component
<b>Context</b>	<a href="#">platform control slot</a> <i>string</i> <a href="#">oper-state keyword</a>
<b>Tree</b>	<a href="#">oper-state</a>
<b>Options</b>	<ul style="list-style-type: none"> <li>• up Component or process is operational</li> <li>• down Component or process is not operational</li> <li>• empty Component slot is empty</li> <li>• downloading Component is downloading image into memory</li> </ul>



- 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  
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.

**Configurable** False

### **part-number *string***

**Description** Part number for this component  
**Context** [platform control slot \*string\* part-number \*string\*](#)  
**Tree** [part-number](#)  
**Configurable** False

### **power**

**Description** State related to power consumption and allocation for this component  
**Context** [platform control slot \*string\* power](#)  
**Tree** [power](#)  
**Configurable** False

**allocated-power *number*****Note:**

This command is available for the following platforms:

- 7250 IXR-6
- 7250 IXR-10

<b>Description</b>	The power budget allocated to this component
<b>Context</b>	<a href="#">platform control slot</a> <i>string</i> <a href="#">power allocated-power</a> <i>number</i>
<b>Tree</b>	<a href="#">allocated-power</a>
<b>Units</b>	watts
<b>Configurable</b>	False

**used-power *number***

<b>Description</b>	The power in use by this component
<b>Context</b>	<a href="#">platform control slot</a> <i>string</i> <a href="#">power used-power</a> <i>number</i>
<b>Tree</b>	<a href="#">used-power</a>
<b>Units</b>	watts
<b>Configurable</b>	False

**process [pid](#) *number***

<b>Description</b>	List of system processes
<b>Context</b>	<a href="#">platform control slot</a> <i>string</i> <a href="#">process pid</a> <i>number</i>
<b>Tree</b>	<a href="#">process</a>
<b>Configurable</b>	False

**pid *number***

<b>Description</b>	The process ID
<b>Context</b>	<a href="#">platform control slot</a> <i>string</i> <a href="#">process pid</a> <i>number</i>
<b>Configurable</b>	False

**args *string***

<b>Description</b>	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
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list with the argument name and parameter together. Flag arguments, i.e., those without a parameter should also be in their own list element.

<b>Context</b>	<a href="#">platform control slot string process pid number args string</a>
<b>Tree</b>	<a href="#">args</a>
<b>Configurable</b>	False

### **cpu-utilization *number***

<b>Description</b>	The percentage of CPU that is being used by the process
<b>Context</b>	<a href="#">platform control slot string process pid number cpu-utilization number</a>
<b>Tree</b>	<a href="#">cpu-utilization</a>
<b>Range</b>	0 to 100
<b>Configurable</b>	False

### **memory-usage *number***

<b>Description</b>	Kilobytes allocated and still in use by the process
<b>Context</b>	<a href="#">platform control slot string process pid number memory-usage number</a>
<b>Tree</b>	<a href="#">memory-usage</a>
<b>Units</b>	kilobytes
<b>Configurable</b>	False

### **memory-utilization *number***

<b>Description</b>	The percentage of RAM that is being used by the process
<b>Context</b>	<a href="#">platform control slot string process pid number memory-utilization number</a>
<b>Tree</b>	<a href="#">memory-utilization</a>
<b>Range</b>	0 to 100
<b>Configurable</b>	False

### **name *string***

<b>Description</b>	The process name
<b>Context</b>	<a href="#">platform control slot string process pid number name string</a>
<b>Tree</b>	<a href="#">name</a>
<b>Configurable</b>	False

**start-time *string***

<b>Description</b>	The time at which this process started
<b>Context</b>	<a href="#">platform control slot string process pid number start-time string</a>
<b>Tree</b>	<a href="#">start-time</a>
<b>String Length</b>	20 to 32
<b>Configurable</b>	False

**removable *boolean***

<b>Description</b>	Details if this component can be removed from the system
<b>Context</b>	<a href="#">platform control slot string removable boolean</a>
<b>Tree</b>	<a href="#">removable</a>
<b>Configurable</b>	False

**role *keyword*****Note:**

This command is available for the following platforms:

- 7250 IXR-6
- 7250 IXR-10

<b>Description</b>	Control module role, detailing active or standby state This field is not present on systems without removable control modules.
<b>Context</b>	<a href="#">platform control slot string role keyword</a>
<b>Tree</b>	<a href="#">role</a>
<b>Options</b>	<ul style="list-style-type: none"> <li>• active</li> <li>• standby</li> </ul>
<b>Configurable</b>	False

**serial-number *string***

<b>Description</b>	The serial number for this component
<b>Context</b>	<a href="#">platform control slot string serial-number string</a>
<b>Tree</b>	<a href="#">serial-number</a>
<b>Configurable</b>	False

**software-version *string***

<b>Description</b>	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.
<b>Context</b>	<a href="#">platform control slot</a> <i>string</i> <a href="#">software-version</a> <i>string</i>
<b>Tree</b>	<a href="#">software-version</a>
<b>Configurable</b>	False

**temperature**

<b>Description</b>	State related to temperature for this component
<b>Context</b>	<a href="#">platform control slot</a> <i>string</i> <a href="#">temperature</a>
<b>Tree</b>	<a href="#">temperature</a>
<b>Configurable</b>	False

**alarm-status *boolean***

<b>Description</b>	Indicates if a temperature sensor of this component is currently in an alarm state An alarm state is triggered if the margin field 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.
<b>Context</b>	<a href="#">platform control slot</a> <i>string</i> <a href="#">temperature</a> <a href="#">alarm-status</a> <i>boolean</i>
<b>Tree</b>	<a href="#">alarm-status</a>
<b>Configurable</b>	False

**instant *number***

<b>Description</b>	Represents the highest 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.
<b>Context</b>	<a href="#">platform control slot</a> <i>string</i> <a href="#">temperature</a> <a href="#">instant</a> <i>number</i>
<b>Tree</b>	<a href="#">instant</a>
<b>Configurable</b>	False

## margin *number*

<b>Description</b>	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.
<b>Context</b>	<a href="#">platform control slot</a> <i>string</i> <a href="#">temperature margin</a> <i>number</i>
<b>Tree</b>	<a href="#">margin</a>
<b>Configurable</b>	False

## type *string*

<b>Description</b>	Control module type, as translated from the components EEPROM
<b>Context</b>	<a href="#">platform control slot</a> <i>string</i> <a href="#">type</a> <i>string</i>
<b>Tree</b>	<a href="#">type</a>
<b>Configurable</b>	False

## fabric slot *number*

**Note:**

This command is available for the following platforms:

- 7250 IXR-6
- 7250 IXR-10

<b>Description</b>	Top-level container for fabric configuration and state
<b>Context</b>	<a href="#">platform fabric slot</a> <i>number</i>
<b>Tree</b>	<a href="#">fabric</a>
<b>Configurable</b>	True

## slot *number*

**Note:**

This command is available for the following platforms:

- 7250 IXR-6
- 7250 IXR-10

<b>Description</b>	Numeric identifier for the fabric module
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<b>Context</b>	<a href="#">platform fabric slot number</a>
<b>Range</b>	1 to 255
<b>Configurable</b>	True

### admin-state *keyword*



**Note:**

This command is available for the following platforms:

- 7250 IXR-6
- 7250 IXR-10

<b>Description</b>	The administrative state of this component
<b>Context</b>	<a href="#">platform fabric slot number admin-state keyword</a>
<b>Tree</b>	<a href="#">admin-state</a>
<b>Default</b>	enable
<b>Options</b>	<ul style="list-style-type: none"> <li>• enable</li> <li>• disable</li> </ul>
<b>Configurable</b>	True

### clei-code *string*



**Note:**

This command is available for the following platforms:

- 7250 IXR-6
- 7250 IXR-10

<b>Description</b>	The Common Language Identification Code for this component
<b>Context</b>	<a href="#">platform fabric slot number clei-code string</a>
<b>Tree</b>	<a href="#">clei-code</a>
<b>Configurable</b>	False

**failure-reason *string*****Note:**

This command is available for the following platforms:

- 7250 IXR-6
- 7250 IXR-10

<b>Description</b>	The reason the component transitioned to a failed state Field is empty if the component is not currently in a failure state
<b>Context</b>	<a href="#">platform fabric slot number failure-reason string</a>
<b>Tree</b>	<a href="#">failure-reason</a>
<b>Configurable</b>	False

**last-booted *string*****Note:**

This command is available for the following platforms:

- 7250 IXR-6
- 7250 IXR-10

<b>Description</b>	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
<b>Context</b>	<a href="#">platform fabric slot number last-booted string</a>
<b>Tree</b>	<a href="#">last-booted</a>
<b>String Length</b>	20 to 32
<b>Configurable</b>	False

**last-change *string*****Note:**

This command is available for the following platforms:

- 7250 IXR-6
- 7250 IXR-10

<b>Description</b>	The date and time this component last changed state
<b>Context</b>	<a href="#">platform fabric slot number last-change string</a>



<b>Tree</b>	<a href="#">last-change</a>
<b>String Length</b>	20 to 32
<b>Configurable</b>	False

### locator-state *keyword*



**Note:**

This command is available for the following platforms:

- 7250 IXR-6
- 7250 IXR-10

<b>Description</b>	Details if the locator LED is active on this component
<b>Context</b>	<a href="#">platform fabric slot number locator-state keyword</a>
<b>Tree</b>	<a href="#">locator-state</a>
<b>Default</b>	inactive
<b>Options</b>	<ul style="list-style-type: none"> <li>• active Locator LED is currently active</li> <li>• inactive Locator LED is currently inactive</li> </ul>
<b>Configurable</b>	False

### manufactured-date *string*



**Note:**

This command is available for the following platforms:

- 7250 IXR-6
- 7250 IXR-10

<b>Description</b>	The date this component was manufactured
<b>Context</b>	<a href="#">platform fabric slot number manufactured-date string</a>
<b>Tree</b>	<a href="#">manufactured-date</a>
<b>Configurable</b>	False

**oper-state keyword****Note:**

This command is available for the following platforms:

- 7250 IXR-6
- 7250 IXR-10

<b>Description</b>	The operational state of this component
<b>Context</b>	<a href="#">platform fabric slot number oper-state keyword</a>
<b>Tree</b>	<a href="#">oper-state</a>
<b>Options</b>	<ul style="list-style-type: none"> <li>• up Component or process is operational</li> <li>• down Component or process is not operational</li> <li>• empty Component slot is empty</li> <li>• downloading Component is downloading image into memory</li> <li>• booting Component is booting downloaded image</li> <li>• starting Component image operational, application processes starting</li> <li>• failed Component or process has failed</li> <li>• synchronizing Component is currently being synchronized</li> <li>• upgrading Component is currently being upgraded</li> <li>• low-power Component is offline due to insufficient system power</li> <li>• degraded Component or process is in a degraded state</li> <li>• warm-reboot Component or process is currently warm rebooting 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.</li> </ul>

**Configurable** False

### part-number *string*



**Note:**

This command is available for the following platforms:

- 7250 IXR-6
- 7250 IXR-10

**Description** Part number for this component  
**Context** [platform fabric slot number part-number string](#)  
**Tree** [part-number](#)  
**Configurable** False

### power



**Note:**

This command is available for the following platforms:

- 7250 IXR-6
- 7250 IXR-10

**Description** State related to power consumption and allocation for this component  
**Context** [platform fabric slot number power](#)  
**Tree** [power](#)  
**Configurable** False

### allocated-power *number*



**Note:**

This command is available for the following platforms:

- 7250 IXR-6
- 7250 IXR-10

**Description** The power budget allocated to this component  
**Context** [platform fabric slot number power allocated-power number](#)  
**Tree** [allocated-power](#)  
**Units** watts

**Configurable** False

### used-power *number*



**Note:**

This command is available for the following platforms:

- 7250 IXR-6
- 7250 IXR-10

**Description** The power in use by this component

**Context** [platform fabric slot number power used-power number](#)

**Tree** [used-power](#)

**Units** watts

**Configurable** False

### removable *boolean*



**Note:**

This command is available for the following platforms:

- 7250 IXR-6
- 7250 IXR-10

**Description** Details if this component can be removed from the system

**Context** [platform fabric slot number removable boolean](#)

**Tree** [removable](#)

**Configurable** False

### serial-number *string*



**Note:**

This command is available for the following platforms:

- 7250 IXR-6
- 7250 IXR-10

**Description** The serial number for this component

**Context** [platform fabric slot number serial-number string](#)

**Tree** [serial-number](#)

**Configurable** False

## temperature



**Note:**

This command is available for the following platforms:

- 7250 IXR-6
- 7250 IXR-10

**Description** State related to temperature for this component

**Context** [platform fabric slot number temperature](#)

**Tree** [temperature](#)

**Configurable** False

## alarm-status *boolean*



**Note:**

This command is available for the following platforms:

- 7250 IXR-6
- 7250 IXR-10

**Description** Indicates if a temperature sensor of this component is currently in an alarm state

An alarm state is triggered if the margin field is  $\leq 2$  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 boolean](#)

**Tree** [alarm-status](#)

**Configurable** False

## instant *number*



**Note:**

This command is available for the following platforms:

- 7250 IXR-6
- 7250 IXR-10

**Description** Represents the highest 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.

<b>Context</b>	<a href="#">platform fabric slot number temperature instant number</a>
<b>Tree</b>	<a href="#">instant</a>
<b>Configurable</b>	False

## margin *number*



### Note:

This command is available for the following platforms:

- 7250 IXR-6
- 7250 IXR-10

<b>Description</b>	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.
--------------------	--

<b>Context</b>	<a href="#">platform fabric slot number temperature margin number</a>
<b>Tree</b>	<a href="#">margin</a>
<b>Configurable</b>	False

## type *string*



### Note:

This command is available for the following platforms:

- 7250 IXR-6
- 7250 IXR-10

<b>Description</b>	Fabric module type, as translated from the components EEPROM
<b>Context</b>	<a href="#">platform fabric slot number type string</a>
<b>Tree</b>	<a href="#">type</a>
<b>Configurable</b>	False

## fan-tray *id number*

<b>Description</b>	Top-level container for fan module configuration and state
<b>Context</b>	<a href="#">platform fan-tray id number</a>

---

<b>Tree</b>	<a href="#">fan-tray</a>
<b>Configurable</b>	False

**id number**

<b>Description</b>	Numeric identifier for the fan tray
<b>Context</b>	<a href="#">platform fan-tray id number</a>
<b>Range</b>	1 to 255
<b>Configurable</b>	False

**clei-code string**

<b>Description</b>	The Common Language Identification Code for this component
<b>Context</b>	<a href="#">platform fan-tray id number clei-code string</a>
<b>Tree</b>	<a href="#">clei-code</a>
<b>Configurable</b>	False

**failure-reason string**

<b>Description</b>	The reason the component transitioned to a failed state Field is empty if the component is not currently in a failure state
<b>Context</b>	<a href="#">platform fan-tray id number failure-reason string</a>
<b>Tree</b>	<a href="#">failure-reason</a>
<b>Configurable</b>	False

**last-booted string**

<b>Description</b>	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
<b>Context</b>	<a href="#">platform fan-tray id number last-booted string</a>
<b>Tree</b>	<a href="#">last-booted</a>
<b>String Length</b>	20 to 32
<b>Configurable</b>	False

**last-change *string***

<b>Description</b>	The date and time this component last changed state
<b>Context</b>	<a href="#">platform fan-tray id</a> <i>number</i> <a href="#">last-change</a> <i>string</i>
<b>Tree</b>	<a href="#">last-change</a>
<b>String Length</b>	20 to 32
<b>Configurable</b>	False

**locator-state *keyword***

<b>Description</b>	Details if the locator LED is active on this component
<b>Context</b>	<a href="#">platform fan-tray id</a> <i>number</i> <a href="#">locator-state</a> <i>keyword</i>
<b>Tree</b>	<a href="#">locator-state</a>
<b>Default</b>	inactive
<b>Options</b>	<ul style="list-style-type: none"> <li>• active Locator LED is currently active</li> <li>• inactive Locator LED is currently inactive</li> </ul>
<b>Configurable</b>	False

**manufactured-date *string***

<b>Description</b>	The date this component was manufactured
<b>Context</b>	<a href="#">platform fan-tray id</a> <i>number</i> <a href="#">manufactured-date</a> <i>string</i>
<b>Tree</b>	<a href="#">manufactured-date</a>
<b>Configurable</b>	False

**oper-reason *keyword***

<b>Description</b>	Indicates the reason for the current state of this fan tray
<b>Context</b>	<a href="#">platform fan-tray id</a> <i>number</i> <a href="#">oper-reason</a> <i>keyword</i>
<b>Tree</b>	<a href="#">oper-reason</a>
<b>Options</b>	<ul style="list-style-type: none"> <li>• fault Hardware fault detected</li> <li>• eeprom-invalid EEPROM of this fan tray is either invalid or corrupt</li> </ul>



- airflow-mismatch  
The detected airflow of this fan tray does not match the system-calculated airflow direction  
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

### oper-state keyword

<b>Description</b>	The operational state of this component
<b>Context</b>	<a href="#">platform fan-tray id number oper-state keyword</a>
<b>Tree</b>	<a href="#">oper-state</a>
<b>Options</b>	<ul style="list-style-type: none"> <li>• up Component or process is operational</li> <li>• down Component or process is not operational</li> <li>• empty Component slot is empty</li> <li>• downloading Component is downloading image into memory</li> <li>• booting Component is booting downloaded image</li> <li>• starting Component image operational, application processes starting</li> <li>• failed Component or process has failed</li> <li>• synchronizing Component is currently being synchronized</li> <li>• upgrading Component is currently being upgraded</li> <li>• low-power Component is offline due to insufficient system power</li> <li>• degraded Component or process is in a degraded state</li> </ul>

- warm-reboot

Component or process is currently warm rebooting

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.

**Configurable** False

### part-number *string*

**Description** Part number for this component

**Context** [platform fan-tray id](#) *number part-number string*

**Tree** [part-number](#)

**Configurable** False

### power



**Note:**

This command is available for the following platforms:

- 7250 IXR-6
- 7250 IXR-10

**Description** State related to power consumption and allocation for this component

**Context** [platform fan-tray id](#) *number power*

**Tree** [power](#)

**Configurable** False

### allocated-power *number*



**Note:**

This command is available for the following platforms:

- 7250 IXR-6
- 7250 IXR-10

**Description** The power budget allocated to this component

**Context** [platform fan-tray id](#) *number power allocated-power number*

**Tree** [allocated-power](#)

**Units** watts

<b>Configurable</b>	False
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### used-power *number*



**Note:**

This command is available for the following platforms:

- 7250 IXR-6
- 7250 IXR-10

<b>Description</b>	The power in use by this component
<b>Context</b>	<a href="#">platform fan-tray id number power used-power number</a>
<b>Tree</b>	<a href="#">used-power</a>
<b>Units</b>	watts
<b>Configurable</b>	False

### removable *boolean*

<b>Description</b>	Details if this component can be removed from the system
<b>Context</b>	<a href="#">platform fan-tray id number removable boolean</a>
<b>Tree</b>	<a href="#">removable</a>
<b>Configurable</b>	False

### serial-number *string*

<b>Description</b>	The serial number for this component
<b>Context</b>	<a href="#">platform fan-tray id number serial-number string</a>
<b>Tree</b>	<a href="#">serial-number</a>
<b>Configurable</b>	False

### speed *number*

<b>Description</b>	The current speed of the fan tray
<b>Context</b>	<a href="#">platform fan-tray id number speed number</a>
<b>Tree</b>	<a href="#">speed</a>
<b>Range</b>	0 to 100
<b>Configurable</b>	False

**type *string***

<b>Description</b>	Fan tray type, as translated from the components EEPROM
<b>Context</b>	<a href="#">platform fan-tray id</a> <i>number</i> <a href="#">type</a> <i>string</i>
<b>Tree</b>	<a href="#">type</a>
<b>Configurable</b>	False

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

<b>Description</b>	Top-level container for linecard configuration and state
<b>Context</b>	<a href="#">platform linecard slot</a> <i>number</i>
<b>Tree</b>	<a href="#">linecard</a>
<b>Configurable</b>	True

**slot *number***

<b>Description</b>	Numeric identifier for the linecard
<b>Context</b>	<a href="#">platform linecard slot</a> <i>number</i>
<b>Range</b>	1 to 8
<b>Configurable</b>	True

**admin-state *keyword*****Note:**

This command is available for the following platforms:

- 7250 IXR-6
- 7250 IXR-10

<b>Description</b>	The administrative state of this component
<b>Context</b>	<a href="#">platform linecard slot</a> <i>number</i> <a href="#">admin-state</a> <i>keyword</i>
<b>Tree</b>	<a href="#">admin-state</a>
<b>Default</b>	enable
<b>Options</b>	<ul style="list-style-type: none"> <li>• enable</li> <li>• disable</li> </ul>
<b>Configurable</b>	True

**clei-code *string***

<b>Description</b>	The Common Language Identification Code for this component
<b>Context</b>	<a href="#">platform linecard slot number clei-code string</a>
<b>Tree</b>	<a href="#">clei-code</a>
<b>Configurable</b>	False

**failure-reason *string***

<b>Description</b>	The reason the component transitioned to a failed state Field is empty if the component is not currently in a failure state
<b>Context</b>	<a href="#">platform linecard slot number failure-reason string</a>
<b>Tree</b>	<a href="#">failure-reason</a>
<b>Configurable</b>	False

**forwarding-complex *name keyword***

<b>Description</b>	List of forwarding complexes on the linecard
<b>Context</b>	<a href="#">platform linecard slot number forwarding-complex name keyword</a>
<b>Tree</b>	<a href="#">forwarding-complex</a>
<b>Configurable</b>	True

**name *keyword***

<b>Description</b>	The identifier of the forwarding complex
<b>Context</b>	<a href="#">platform linecard slot number forwarding-complex name keyword</a>
<b>Options</b>	<ul style="list-style-type: none"> <li>• 0</li> <li>• 1</li> </ul>
<b>Configurable</b>	True

**acl**

<b>Description</b>	Enter the acl context
<b>Context</b>	<a href="#">platform linecard slot number forwarding-complex name keyword acl</a>
<b>Tree</b>	<a href="#">acl</a>
<b>Configurable</b>	False

**resource name *identityref***

<b>Description</b>	Enter the resource list instance
<b>Context</b>	<a href="#">platform linecard slot number forwarding-complex name keyword acl resource name <i>identityref</i></a>
<b>Tree</b>	<a href="#">resource</a>
<b>Configurable</b>	False

**name *identityref***

<b>Description</b>	The name of the ACL resource
<b>Context</b>	<a href="#">platform linecard slot number forwarding-complex name keyword acl resource name <i>identityref</i></a>
<b>Options</b>	<ul style="list-style-type: none"> <li>• <a href="#">input-ipv4-filter-instances</a> 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.</li> <li>• <a href="#">input-ipv4-filter-instances-routed</a> 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.</li> <li>• <a href="#">input-ipv4-filter-instances-bridged</a> 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.</li> <li>• <a href="#">input-ipv6-filter-instances</a> 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.</li> <li>• <a href="#">input-ipv6-filter-instances-routed</a> 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.</li> </ul>

- `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.

**Configurable** False

### **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

### **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

### **buffer-memory**



**Note:**

This command is available for the following platforms:

- 7220 IXR-D2
- 7250 IXR-10
- 7220 IXR-D3L
- 7220 IXR-D2L
- 7220 IXR-H3
- 7220 IXR-H2
- 7220 IXR-D3
- 7250 IXR-6

**Description** Container for utilization statistics of the packet buffer memory

<b>Context</b>	<a href="#">platform linecard slot <i>number</i> forwarding-complex name keyword buffer-memory</a>
<b>Tree</b>	<a href="#">buffer-memory</a>
<b>Configurable</b>	True

## dram



### Note:

This command is available for the following platforms:

- 7250 IXR-6
- 7250 IXR-10

<b>Description</b>	Container for utilization statistics of the DRAM memory.
<b>Context</b>	<a href="#">platform linecard slot <i>number</i> forwarding-complex name keyword buffer-memory dram</a>
<b>Tree</b>	<a href="#">dram</a>
<b>Configurable</b>	False

## used *number*



### Note:

This command is available for the following platforms:

- 7250 IXR-6
- 7250 IXR-10

<b>Description</b>	Used DRAM memory
<b>Context</b>	<a href="#">platform linecard slot <i>number</i> forwarding-complex name keyword buffer-memory dram used <i>number</i></a>
<b>Tree</b>	<a href="#">used</a>
<b>Range</b>	0 to 100
<b>Configurable</b>	False



**free number****Note:**

This command is available for the following platforms:

- 7220 IXR-D2
- 7220 IXR-D3L
- 7220 IXR-D2L
- 7220 IXR-H3
- 7220 IXR-H2
- 7220 IXR-D3

<b>Description</b>	Available buffer memory, which equals the total memory less the used memory and the reserved memory.
<b>Context</b>	<a href="#">platform linecard slot number forwarding-complex name keyword buffer-memory free number</a>
<b>Tree</b>	<a href="#">free</a>
<b>Units</b>	bytes
<b>Configurable</b>	False

**reserved number****Note:**

This command is available for the following platforms:

- 7220 IXR-D2
- 7220 IXR-D3L
- 7220 IXR-D2L
- 7220 IXR-H3
- 7220 IXR-H2
- 7220 IXR-D3

<b>Description</b>	Reserved for internal purposes.
<b>Context</b>	<a href="#">platform linecard slot number forwarding-complex name keyword buffer-memory reserved number</a>
<b>Tree</b>	<a href="#">reserved</a>
<b>Units</b>	bytes
<b>Configurable</b>	False

## sram

**Note:**

This command is available for the following platforms:

- 7250 IXR-6
- 7250 IXR-10

<b>Description</b>	Container for utilization statistics of the on-chip SRAM memory.
<b>Context</b>	<a href="#">platform linecard slot number forwarding-complex name keyword buffer-memory sram</a>
<b>Tree</b>	<a href="#">sram</a>
<b>Configurable</b>	False

## free number

**Note:**

This command is available for the following platforms:

- 7250 IXR-6
- 7250 IXR-10

<b>Description</b>	Available SRAM memory
<b>Context</b>	<a href="#">platform linecard slot number forwarding-complex name keyword buffer-memory sram free number</a>
<b>Tree</b>	<a href="#">free</a>
<b>Units</b>	bytes
<b>Configurable</b>	False

## used number

**Note:**

This command is available for the following platforms:

- 7250 IXR-6
- 7250 IXR-10

<b>Description</b>	Used SRAM memory
<b>Context</b>	<a href="#">platform linecard slot number forwarding-complex name keyword buffer-memory sram used number</a>
<b>Tree</b>	<a href="#">used</a>

<b>Units</b>	bytes
<b>Configurable</b>	False

### used *number*



**Note:**

This command is available for the following platforms:

- 7220 IXR-D2
- 7220 IXR-D3L
- 7220 IXR-D2L
- 7220 IXR-H3
- 7220 IXR-H2
- 7220 IXR-D3

<b>Description</b>	Used buffer memory, excluding reserved memory.
<b>Context</b>	<a href="#">platform linecard slot number forwarding-complex name keyword buffer-memory used number</a>
<b>Tree</b>	<a href="#">used</a>
<b>Units</b>	bytes
<b>Configurable</b>	False

### datapath

<b>Description</b>	Container for monitoring datapath resources of a particular forwarding complex
<b>Context</b>	<a href="#">platform linecard slot number forwarding-complex name keyword datapath</a>
<b>Tree</b>	<a href="#">datapath</a>
<b>Configurable</b>	False

### asic

<b>Description</b>	Container for monitoring ASIC-specific datapath resources
<b>Context</b>	<a href="#">platform linecard slot number forwarding-complex name keyword datapath asic</a>
<b>Tree</b>	<a href="#">asic</a>
<b>Configurable</b>	False

**resource name *identityref***

<b>Description</b>	List of ASIC-specific datapath resources.
<b>Context</b>	<a href="#">platform linecard slot number forwarding-complex name keyword datapath asic resource name <i>identityref</i></a>
<b>Tree</b>	<a href="#">resource</a>
<b>Configurable</b>	False

**name *identityref***

<b>Description</b>	The name of the ASIC-specific datapath resource
<b>Context</b>	<a href="#">platform linecard slot number forwarding-complex name keyword datapath asic resource name <i>identityref</i></a>
<b>Options</b>	<ul style="list-style-type: none"> <li>ip-lpm-ipv4-routes           <p>Trident3: 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.</p> <p>Trident3: 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. Tomahawk3: Reports the number of IPv4 routes installed in the FIB. Free entries is the Minimum Guaranteed Capacity returned by the BCM SDK.</p> </li> <li>ip-lpm-ipv6-shorter-routes           <p>Trident3: 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.</p> <p>Trident3: 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. Tomahawk3: 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.</p> </li> <li>ip-lpm-ipv6-longer-routes           <p>Trident3: 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</p> </li> </ul>

types of routes consume those entries). In ALPM mode, free entries is based on the Minimum Guaranteed Capacity returned by the BCM SDK.

Trident3: 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.

Tomahawk3: 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

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.

- underlay-ecmp-groups

Underlay ECMP group resources.

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.

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.

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.

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.

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.  
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.  
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.  
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.  
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.  
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  
L1 ECMP group resources.  
L1 ECMP group resources. ECMP FEC resources are divided into L1 ECMP FEC resources and L2 ECMP FEC resources. This counts the number of entries used in the L1 partition.
- level-2-ecmp-groups  
L2 ECMP group resources.  
L2 ECMP group resources. ECMP FEC resources are divided into L1 ECMP FEC resources and L2 ECMP FEC resources. This counts the number of entries used in the L2 partition.

- **level-1-ecmp-members**  
L1 ECMP member resources.  
L1 ECMP member resources. ECMP FEC member resources are divided into L1 and L2 resources. This counts the number of entries used in the L1 partition.
- **level-2-ecmp-members**  
L2 ECMP member resources.  
L2 ECMP member resources. ECMP FEC member resources are divided into L1 and L2 resources. This counts the number of entries used in the L2 partition.
- **level-1-non-ecmp-fecs**  
L1 non-ECMP FEC resources.  
L1 non-ECMP FEC resources. Non-ECMP FEC resources are divided into L1 and L2 resources. This counts the number of entries used in the L1 partition.
- **level-2-non-ecmp-fecs**  
L2 non-ECMP FEC resources.  
L2 non-ECMP FEC resources. Non-ECMP FEC resources are divided into L1 and L2 resources. This counts the number of entries used in the L2 partition.

**Configurable** False

### **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

### **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

**used-percent *number***

<b>Description</b>	The percentage of the resource that is currently used
<b>Context</b>	<a href="#">platform</a> <a href="#">linecard slot <i>number</i></a> <a href="#">forwarding-complex name</a> <a href="#">keyword</a> <a href="#">datapath</a> <a href="#">asic resource name</a> <a href="#">identityref</a> <a href="#">used-percent</a> <a href="#">number</a>
<b>Tree</b>	<a href="#">used-percent</a>
<b>Range</b>	0 to 100
<b>Configurable</b>	False

**xdp**

<b>Description</b>	Container for monitoring datapath resources that are generic in concept.
<b>Context</b>	<a href="#">platform</a> <a href="#">linecard slot <i>number</i></a> <a href="#">forwarding-complex name</a> <a href="#">keyword</a> <a href="#">datapath</a> <a href="#">xdp</a>
<b>Tree</b>	<a href="#">xdp</a>
<b>Configurable</b>	False

**resource [name](#) *identityref***

<b>Description</b>	List of generic datapath resources.
<b>Context</b>	<a href="#">platform</a> <a href="#">linecard slot <i>number</i></a> <a href="#">forwarding-complex name</a> <a href="#">keyword</a> <a href="#">datapath</a> <a href="#">xdp resource name</a> <a href="#">identityref</a>
<b>Tree</b>	<a href="#">resource</a>
<b>Configurable</b>	False

**name *identityref***

<b>Description</b>	The name of the XDP datapath resource
<b>Context</b>	<a href="#">platform</a> <a href="#">linecard slot <i>number</i></a> <a href="#">forwarding-complex name</a> <a href="#">keyword</a> <a href="#">datapath</a> <a href="#">xdp resource name</a> <a href="#">identityref</a>
<b>Options</b>	<ul style="list-style-type: none"> <li>arp-nd-entries IPv4 ARP and IPv6 neighbor discovery resources. IPv4 ARP and IPv6 neighbor discovery resources. Each IPv4 ARP and each IPv6 neighbor entry counts as 1 used resource against a total that is platform dependent. This does not consider underlying ASIC resources.</li> <li>ip-hosts IP host route resources. IP host route resources. Trident3: Reports the number of entries used in the IP host table. Every local host /32 route, ARP entry and IPv4</li> </ul>



subnet broadcast address requires 1 entry. In non-ALPM operation every remote /32 route also requires 1 entry. Every local host /128 route, and ND entry requires 2 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

IP host route resources. Trident3: 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. In non-ALPM operation every remote /32 route also requires 1 entry. Every local host /128 route, and ND entry requires 2 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 Tomahawk3: Reports the number of entries used in the IP host table. Every ARP entry and IPv4 subnet broadcast address requires 1 entry. Every ND entry requires 2 entries.

- ip-lpm-routes

IP longest prefix match route resources.

IP longest prefix match route resources. Jericho2: Reports the percentage utilization of the KAPS1 or KAPS2 table, whichever is higher. These tables are used for storing longest-prefix-match IPv4 and IPv6 routes.

IP longest prefix match route resources. Jericho2: Reports the percentage utilization of the KAPS1 or KAPS2 table, whichever is higher. These tables are used for storing longest-prefix-match IPv4 and IPv6 routes. Trident3 and Tomahawk3: Reports the used and free number of half-wide entries in the hardware LPM table. An IPv4 route (or index to IPv4 ALPM lookup) requires a half-wide entry. An IPv6 route (or index to IPv6 ALPM lookup) that is /64 or less requires a single-wide entry (2 half-wide entries). An IPv6 route (or index to IPv6 ALPM lookup) that is more than /64 requires a double-wide entry (4 half-wide entries).

- mac-addresses

MAC address resources.

MAC address resources. Reports the used number of entries, where 1 entry = 1 MAC address. Free entries reflects the total number of entries remaining in shared + dedicated UFT banks

- direct-next-hops

Direct next-hop resources.

Direct next-hop resources. Reports the number of entries, where 1 entry is used for every next-hop of an IP or MPLS route that is resolved directly to a local interface. This does not consider underlying ASIC resources.

- indirect-next-hops

Indirect next-hop resources.

Indirect next-hop resources. Reports the number of entries, where 1 entry is used for every next-hop of an IP route that is resolved by a non-local route. This does not consider underlying ASIC resources.

- tunnel-next-hops  
Tunnel next-hop resources.  
Tunnel next-hop resources. Reports the number of tunnel next-hop entries. For EVPN routes resolved by VXLAN, 1 entry is used for every <vni, vtep> pair. When a BGP IP route is resolved by an MPLS tunnel, 1 entry is used for every BGP next-hop of the route. This does not consider underlying ASIC resources.
- ecmp-groups  
ECMP group resources.  
ECMP group resources. Jericho2: Reports the used number of ECMP FECs, adding L1 ECMP FECs and L2 ECMP FECs.  
ECMP group resources. Jericho2: Reports the used number of ECMP FECs, adding L1 ECMP FECs and L2 ECMP FECs. Trident3: Reports the used number of ECMP groups, adding overlay and underlay ECMP groups.  
ECMP group resources. Jericho2: Reports the used number of ECMP FECs, adding L1 ECMP FECs and L2 ECMP FECs. Trident3: Reports the used number of ECMP groups, adding overlay and underlay ECMP groups. Tomahawk3: Reports used number of ECMP groups.
- ecmp-members  
ECMP member resources.  
ECMP member resources. Jericho2: Reports the used number of ECMP member FECs, adding L1 ECMP member FECs and L2 ECMP member FECs.  
ECMP member resources. Jericho2: Reports the used number of ECMP member FECs, adding L1 ECMP member FECs and L2 ECMP member FECs. Trident3: Reports the used number of ECMP members, adding overlay and underlay ECMP members.  
ECMP member resources. Jericho2: Reports the used number of ECMP member FECs, adding L1 ECMP member FECs and L2 ECMP member FECs. Trident3: Reports the used number of ECMP members, adding overlay and underlay ECMP members. Tomahawk3: Reports used number of ECMP members.
- egress-next-hops  
Egress next-hop resources.  
Egress next-hop resources. Trident3: 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.  
Egress next-hop resources. Trident3: 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. Tomahawk3: 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.  
LAG group resources. Reports the number of LAG resources used, including DGPP LAGs.
- lag-members  
LAG member resources.  
LAG member resources. Reports the number of LAG member resources used, including DGPP LAG members.
- subinterfaces  
Subinterface resources.  
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  
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  
One resource is used for every MPLS ILM entry that performs either a 'swap' or a 'pop' operation.
- tunnels  
Tunnel resources. One tunnel resource is used per VXLAN or MPLS tunnel endpoint.  
Tunnel resources. One tunnel resource is used per VXLAN or MPLS tunnel endpoint. On TD3 systems this equates to a DVP resource.

**Configurable** False

### **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

### **used-entries *number***

**Description** The number of entries that are currently used

<b>Context</b>	<a href="#">platform linecard slot <i>number</i> forwarding-complex name keyword datapath xdp resource name identityref used-entries number</a>
<b>Tree</b>	<a href="#">used-entries</a>
<b>Configurable</b>	False

### used-percent *number*

<b>Description</b>	The percentage of the resource that is currently used
<b>Context</b>	<a href="#">platform linecard slot <i>number</i> forwarding-complex name keyword datapath xdp resource name identityref used-percent number</a>
<b>Tree</b>	<a href="#">used-percent</a>
<b>Range</b>	0 to 100
<b>Configurable</b>	False

### fabric



**Note:**

This command is available for the following platforms:

- 7250 IXR-6
- 7250 IXR-10

<b>Description</b>	Top-level container for fabric configuration and state
<b>Context</b>	<a href="#">platform linecard slot <i>number</i> forwarding-complex name keyword fabric</a>
<b>Tree</b>	<a href="#">fabric</a>
<b>Configurable</b>	True

### availability *number*



**Note:**

This command is available for the following platforms:

- 7250 IXR-6
- 7250 IXR-10

<b>Description</b>	Details the percentage bandwidth available to the fabric for the line card
<b>Context</b>	<a href="#">platform linecard slot <i>number</i> forwarding-complex name keyword fabric availability number</a>
<b>Tree</b>	<a href="#">availability</a>

<b>Range</b>	0 to 100
<b>Configurable</b>	False

### utilization-egress *number*



**Note:**

This command is available for the following platforms:

- 7250 IXR-6
- 7250 IXR-10

<b>Description</b>	Provides the linecard bandwidth utilization from the switch fabric
<b>Context</b>	<a href="#">platform linecard slot <i>number</i> forwarding-complex name keyword fabric utilization-egress <i>number</i></a>
<b>Tree</b>	<a href="#">utilization-egress</a>
<b>Configurable</b>	False

### utilization-ingress *number*



**Note:**

This command is available for the following platforms:

- 7250 IXR-6
- 7250 IXR-10

<b>Description</b>	Provides the linecard bandwidth utilization into the switch fabric
<b>Context</b>	<a href="#">platform linecard slot <i>number</i> forwarding-complex name keyword fabric utilization-ingress <i>number</i></a>
<b>Tree</b>	<a href="#">utilization-ingress</a>
<b>Configurable</b>	False

### mtu



**Note:**

This command is available for the following platforms:

- 7250 IXR-6
- 7250 IXR-10

<b>Description</b>	Enter the mtu context
<b>Context</b>	<a href="#">platform linecard slot <i>number</i> forwarding-complex name keyword mtu</a>

<b>Tree</b>	<a href="#">mtu</a>
<b>Configurable</b>	False

### resource name *identityref*



**Note:**

This command is available for the following platforms:

- 7250 IXR-6
- 7250 IXR-10

<b>Description</b>	Enter the resource list instance
<b>Context</b>	<a href="#">platform linecard slot number forwarding-complex name keyword mtu resource name identityref</a>
<b>Tree</b>	<a href="#">resource</a>
<b>Configurable</b>	False

### name *identityref*



**Note:**

This command is available for the following platforms:

- 7250 IXR-6
- 7250 IXR-10

<b>Description</b>	The name of the MTU resource
<b>Context</b>	<a href="#">platform linecard slot number forwarding-complex name keyword mtu resource name identityref</a>
<b>Options</b>	<ul style="list-style-type: none"> <li>• 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.</li> <li>• 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.</li> <li>• 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.</li> </ul>
<b>Configurable</b>	False

**free number****Note:**

This command is available for the following platforms:

- 7250 IXR-6
- 7250 IXR-10

<b>Description</b>	The number of resources that are unused and available
<b>Context</b>	<a href="#">platform</a> <a href="#">linecard slot number forwarding-complex name</a> <i>keyword</i> <a href="#">mtu resource name identityref free number</a>
<b>Tree</b>	<a href="#">free</a>
<b>Configurable</b>	False

**used number****Note:**

This command is available for the following platforms:

- 7250 IXR-6
- 7250 IXR-10

<b>Description</b>	The number of resources that are in use
<b>Context</b>	<a href="#">platform</a> <a href="#">linecard slot number forwarding-complex name</a> <i>keyword</i> <a href="#">mtu resource name identityref used number</a>
<b>Tree</b>	<a href="#">used</a>
<b>Configurable</b>	False

**pipeline index number****Note:**

This command is available for the following platforms:

- 7220 IXR-H2
- 7220 IXR-H3

<b>Description</b>	List of pipelines that make up one forwarding complex.
<b>Context</b>	<a href="#">platform</a> <a href="#">linecard slot number forwarding-complex name</a> <i>keyword</i> <a href="#">pipeline index number</a>
<b>Tree</b>	<a href="#">pipeline</a>
<b>Configurable</b>	True

## index number



### Note:

This command is available for the following platforms:

- 7220 IXR-H2
- 7220 IXR-H3

<b>Description</b>	The pipeline number.
<b>Context</b>	<a href="#">platform linecard slot number forwarding-complex name keyword pipeline index number</a>
<b>Range</b>	0 to 7
<b>Configurable</b>	True

## datapath



### Note:

This command is available for the following platforms:

- 7220 IXR-H2
- 7220 IXR-H3

<b>Description</b>	Container for monitoring datapath resources of a particular pipeline
<b>Context</b>	<a href="#">platform linecard slot number forwarding-complex name keyword pipeline index number datapath</a>
<b>Tree</b>	<a href="#">datapath</a>
<b>Configurable</b>	False

## xdp



### Note:

This command is available for the following platforms:

- 7220 IXR-H2
- 7220 IXR-H3

<b>Description</b>	Container for monitoring datapath resources that are generic in concept. At the pipeline level only one XDP resource is currently reported: [ <a href="#">subinterfaces</a> ]
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<b>Context</b>	<a href="#">platform linecard slot number forwarding-complex name keyword pipeline index number datapath xdp</a>
<b>Tree</b>	<a href="#">xdp</a>
<b>Configurable</b>	False

### resource [name identityref](#)



**Note:**

This command is available for the following platforms:

- 7220 IXR-H2
- 7220 IXR-H3

<b>Description</b>	List of generic datapath resources.
<b>Context</b>	<a href="#">platform linecard slot number forwarding-complex name keyword pipeline index number datapath xdp resource name identityref</a>
<b>Tree</b>	<a href="#">resource</a>
<b>Configurable</b>	False

### name [identityref](#)



**Note:**

This command is available for the following platforms:

- 7220 IXR-H2
- 7220 IXR-H3

<b>Description</b>	The name of the XDP datapath resource
<b>Context</b>	<a href="#">platform linecard slot number forwarding-complex name keyword pipeline index number datapath xdp resource name identityref</a>
<b>Options</b>	<ul style="list-style-type: none"> <li>• arp-nd-entries IPv4 ARP and IPv6 neighbor discovery resources. IPv4 ARP and IPv6 neighbor discovery resources. Each IPv4 ARP and each IPv6 neighbor entry counts as 1 used resource against a total that is platform dependent. This does not consider underlying ASIC resources.</li> <li>• ip-hosts IP host route resources. IP host route resources. Trident3: 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. In non-ALPM operation every remote /32 route also requires 1 entry. Every local host /128 route, and ND entry requires 2 entries. In non-ALPM operation every remote /128</li> </ul>

route also requires 2 entries. Free entries reflects the total number of entries remaining in shared + dedicated UFT banks

IP host route resources. Trident3: 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. In non-ALPM operation every remote /32 route also requires 1 entry. Every local host /128 route, and ND entry requires 2 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 Tomahawk3: Reports the number of entries used in the IP host table. Every ARP entry and IPv4 subnet broadcast address requires 1 entry. Every ND entry requires 2 entries.

- ip-lpm-routes

IP longest prefix match route resources.

IP longest prefix match route resources. Jericho2: Reports the percentage utilization of the KAPS1 or KAPS2 table, whichever is higher. These tables are used for storing longest-prefix-match IPv4 and IPv6 routes.

IP longest prefix match route resources. Jericho2: Reports the percentage utilization of the KAPS1 or KAPS2 table, whichever is higher. These tables are used for storing longest-prefix-match IPv4 and IPv6 routes. Trident3 and Tomahawk3: Reports the used and free number of half-wide entries in the hardware LPM table. An IPv4 route (or index to IPv4 ALPM lookup) requires a half-wide entry. An IPv6 route (or index to IPv6 ALPM lookup) that is /64 or less requires a single-wide entry (2 half-wide entries). An IPv6 route (or index to IPv6 ALPM lookup) that is more than /64 requires a double-wide entry (4 half-wide entries).

- mac-addresses

MAC address resources.

MAC address resources. Reports the used number of entries, where 1 entry = 1 MAC address. Free entries reflects the total number of entries remaining in shared + dedicated UFT banks

- direct-next-hops

Direct next-hop resources.

Direct next-hop resources. Reports the number of entries, where 1 entry is used for every next-hop of an IP or MPLS route that is resolved directly to a local interface. This does not consider underlying ASIC resources.

- indirect-next-hops

Indirect next-hop resources.

Indirect next-hop resources. Reports the number of entries, where 1 entry is used for every next-hop of an IP route that is resolved by a non-local route. This does not consider underlying ASIC resources.

- tunnel-next-hops  
Tunnel next-hop resources.  
Tunnel next-hop resources. Reports the number of tunnel next-hop entries. For EVPN routes resolved by VXLAN, 1 entry is used for every <vni, vtep> pair. When a BGP IP route is resolved by an MPLS tunnel, 1 entry is used for every BGP next-hop of the route. This does not consider underlying ASIC resources.
- ecmp-groups  
ECMP group resources.  
ECMP group resources. Jericho2: Reports the used number of ECMP FECs, adding L1 ECMP FECs and L2 ECMP FECs.  
ECMP group resources. Jericho2: Reports the used number of ECMP FECs, adding L1 ECMP FECs and L2 ECMP FECs. Trident3: Reports the used number of ECMP groups, adding overlay and underlay ECMP groups.  
ECMP group resources. Jericho2: Reports the used number of ECMP FECs, adding L1 ECMP FECs and L2 ECMP FECs. Trident3: Reports the used number of ECMP groups, adding overlay and underlay ECMP groups. Tomahawk3: Reports used number of ECMP groups.
- ecmp-members  
ECMP member resources.  
ECMP member resources. Jericho2: Reports the used number of ECMP member FECs, adding L1 ECMP member FECs and L2 ECMP member FECs.  
ECMP member resources. Jericho2: Reports the used number of ECMP member FECs, adding L1 ECMP member FECs and L2 ECMP member FECs. Trident3: Reports the used number of ECMP members, adding overlay and underlay ECMP members.  
ECMP member resources. Jericho2: Reports the used number of ECMP member FECs, adding L1 ECMP member FECs and L2 ECMP member FECs. Trident3: Reports the used number of ECMP members, adding overlay and underlay ECMP members. Tomahawk3: Reports used number of ECMP members.
- egress-next-hops  
Egress next-hop resources.  
Egress next-hop resources. Trident3: 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.  
Egress next-hop resources. Trident3: 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. Tomahawk3: 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.  
LAG group resources. Reports the number of LAG resources used, including DGPP LAGs.
- lag-members  
LAG member resources.  
LAG member resources. Reports the number of LAG member resources used, including DGPP LAG members.
- subinterfaces  
Subinterface resources.  
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  
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  
One resource is used for every MPLS ILM entry that performs either a 'swap' or a 'pop' operation.
- tunnels  
Tunnel resources. One tunnel resource is used per VXLAN or MPLS tunnel endpoint.  
Tunnel resources. One tunnel resource is used per VXLAN or MPLS tunnel endpoint. On TD3 systems this equates to a DVP resource.

**Configurable** False

### free-entries *number*



**Note:**

This command is available for the following platforms:

- 7220 IXR-H2
- 7220 IXR-H3

<b>Description</b>	The number of entries that are currently free
<b>Context</b>	<a href="#">platform</a> <a href="#">linecard slot</a> <i>number</i> <a href="#">forwarding-complex name</a> <i>keyword</i> <a href="#">pipeline index</a> <i>number</i> <a href="#">datapath xdp resource name</a> <i>identityref</i> <a href="#">free-entries</a> <i>number</i>
<b>Tree</b>	<a href="#">free-entries</a>
<b>Configurable</b>	False

**used-entries *number*****Note:**

This command is available for the following platforms:

- 7220 IXR-H2
- 7220 IXR-H3

<b>Description</b>	The number of entries that are currently used
<b>Context</b>	<a href="#">platform</a> <a href="#">linecard slot <i>number</i></a> <a href="#">forwarding-complex name <i>keyword</i></a> <a href="#">pipeline index <i>number</i></a> <a href="#">datapath xdp resource name <i>identityref</i></a> <a href="#">used-entries <i>number</i></a>
<b>Tree</b>	<a href="#">used-entries</a>
<b>Configurable</b>	False

**used-percent *number*****Note:**

This command is available for the following platforms:

- 7220 IXR-H2
- 7220 IXR-H3

<b>Description</b>	The percentage of the resource that is currently used
<b>Context</b>	<a href="#">platform</a> <a href="#">linecard slot <i>number</i></a> <a href="#">forwarding-complex name <i>keyword</i></a> <a href="#">pipeline index <i>number</i></a> <a href="#">datapath xdp resource name <i>identityref</i></a> <a href="#">used-percent <i>number</i></a>
<b>Tree</b>	<a href="#">used-percent</a>
<b>Range</b>	0 to 100
<b>Configurable</b>	False

**qos****Note:**

This command is available for the following platforms:

- 7250 IXR-6
- 7250 IXR-10

<b>Description</b>	Enter the qos context
<b>Context</b>	<a href="#">platform</a> <a href="#">linecard slot <i>number</i></a> <a href="#">forwarding-complex name <i>keyword</i></a> <a href="#">qos</a>
<b>Tree</b>	<a href="#">qos</a>

**Configurable** False

### resource *name identityref*



**Note:**

This command is available for the following platforms:

- 7250 IXR-6
- 7250 IXR-10

<b>Description</b>	Enter the resource list instance
<b>Context</b>	<a href="#">platform linecard slot number forwarding-complex name keyword qos resource name identityref</a>
<b>Tree</b>	<a href="#">resource</a>
<b>Configurable</b>	False

### name *identityref*



**Note:**

This command is available for the following platforms:

- 7250 IXR-6
- 7250 IXR-10

<b>Description</b>	The name of the QoS resource
<b>Context</b>	<a href="#">platform linecard slot number forwarding-complex name keyword qos resource name identityref</a>
<b>Options</b>	<ul style="list-style-type: none"> <li>• 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 of the 7250 IXR IMM. There are 16 of these resources and one is always used by the combination of the default IPv4 DSCP classifier and the default IPv6 DSCP classifier.</li> <li>• 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 of the 7250 IXR IMM. There are 32 of these resources.</li> <li>• 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 of the 7250 IXR IMM. There are 32 of these resources.</li> </ul>

<b>Configurable</b>	False
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### free *number*



**Note:**

This command is available for the following platforms:

- 7250 IXR-6
- 7250 IXR-10

<b>Description</b>	The number of resources that are unused and available
<b>Context</b>	<a href="#">platform</a> <a href="#">linecard</a> <a href="#">slot</a> <a href="#">number</a> <a href="#">forwarding-complex</a> <a href="#">name</a> <a href="#">keyword</a> <a href="#">qos</a> <a href="#">resource</a> <a href="#">name</a> <a href="#">identityref</a> <a href="#">free</a> <a href="#">number</a>
<b>Tree</b>	<a href="#">free</a>
<b>Configurable</b>	False

### used *number*



**Note:**

This command is available for the following platforms:

- 7250 IXR-6
- 7250 IXR-10

<b>Description</b>	The number of resources that are in use
<b>Context</b>	<a href="#">platform</a> <a href="#">linecard</a> <a href="#">slot</a> <a href="#">number</a> <a href="#">forwarding-complex</a> <a href="#">name</a> <a href="#">keyword</a> <a href="#">qos</a> <a href="#">resource</a> <a href="#">name</a> <a href="#">identityref</a> <a href="#">used</a> <a href="#">number</a>
<b>Tree</b>	<a href="#">used</a>
<b>Configurable</b>	False

### tcam

<b>Description</b>	Enter the tcam context
<b>Context</b>	<a href="#">platform</a> <a href="#">linecard</a> <a href="#">slot</a> <a href="#">number</a> <a href="#">forwarding-complex</a> <a href="#">name</a> <a href="#">keyword</a> <a href="#">tcam</a>
<b>Tree</b>	<a href="#">tcam</a>
<b>Configurable</b>	False

**resource name *identityref***

<b>Description</b>	Enter the resource list instance
<b>Context</b>	<a href="#">platform linecard slot number forwarding-complex name keyword tcam resource name <i>identityref</i></a>
<b>Tree</b>	<a href="#">resource</a>
<b>Configurable</b>	False

**name *identityref***

<b>Description</b>	The name of the TCAM resource
<b>Context</b>	<a href="#">platform linecard slot number forwarding-complex name keyword tcam resource name <i>identityref</i></a>
<b>Options</b>	<ul style="list-style-type: none"> <li>• if-input-ipv4 Resource pool of TCAM entries used by IPv4 ACLs applied as subinterface-input filers</li> <li>• if-output-ipv4 Resource pool of TCAM entries used by IPv4 ACLs applied as subinterface-output filers</li> <li>• if-input-ipv6 Resource pool of TCAM entries used by IPv6 ACLs applied as subinterface-input filers</li> <li>• if-output-ipv6 Resource pool of TCAM entries used by IPv6 ACLs applied as subinterface-output filers</li> <li>• cpm-capture-ipv4 Resource pool of TCAM entries used by IPv4 cpm-filter ACLs and capture-filter ACLs</li> <li>• cpm-capture-ipv6 Resource pool of TCAM entries used by IPv6 cpm-filter ACLs and capture-filter ACLs</li> <li>• system-capture-ipv4 Resource pool of TCAM entries used by IPv4 capture-filter ACLs and IPv4 system-filter ACLs</li> <li>• system-capture-ipv6 Resource pool of TCAM entries used by IPv6 capture-filter ACLs and IPv6 system-filter ACLs</li> <li>• capture-ipv4 Resource pool of TCAM entries used by IPv4 capture-filter ACLs</li> </ul>



	<ul style="list-style-type: none"> <li>capture-ipv6 Resource pool of TCAM entries used by IPv6 capture-filter ACLs</li> <li>if-output-cpm-ipv4 Resource pool of TCAM entries used by IPv4 egress ACLs and cpm-filter ACLs</li> <li>if-output-cpm-ipv6 Resource pool of TCAM entries used by IPv6 egress ACLs and cpm-filter ACLs</li> </ul>
<b>Configurable</b>	False

**free number**

<b>Description</b>	The number of available, unused TCAM entries remaining in this resource pool
<b>Context</b>	<a href="#">platform linecard slot number forwarding-complex name keyword tcam resource name identityref free number</a>
<b>Tree</b>	<a href="#">free</a>
<b>Configurable</b>	False

**programmed number**

<b>Description</b>	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.
<b>Context</b>	<a href="#">platform linecard slot number forwarding-complex name keyword tcam resource name identityref programmed number</a>
<b>Tree</b>	<a href="#">programmed</a>
<b>Configurable</b>	False

**reserved number**

<b>Description</b>	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.
<b>Context</b>	<a href="#">platform linecard slot number forwarding-complex name keyword tcam resource name identityref reserved number</a>
<b>Tree</b>	<a href="#">reserved</a>
<b>Configurable</b>	False

**last-booted *string***

<b>Description</b>	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
<b>Context</b>	<a href="#">platform linecard slot number last-booted string</a>
<b>Tree</b>	<a href="#">last-booted</a>
<b>String Length</b>	20 to 32
<b>Configurable</b>	False

**last-change *string***

<b>Description</b>	The date and time this component last changed state
<b>Context</b>	<a href="#">platform linecard slot number last-change string</a>
<b>Tree</b>	<a href="#">last-change</a>
<b>String Length</b>	20 to 32
<b>Configurable</b>	False

**locator-state *keyword*****Note:**

This command is available for the following platforms:

- 7250 IXR-6
- 7250 IXR-10

<b>Description</b>	Details if the locator LED is active on this component
<b>Context</b>	<a href="#">platform linecard slot number locator-state keyword</a>
<b>Tree</b>	<a href="#">locator-state</a>
<b>Default</b>	inactive
<b>Options</b>	<ul style="list-style-type: none"> <li>• active Locator LED is currently active</li> <li>• inactive Locator LED is currently inactive</li> </ul>
<b>Configurable</b>	False

**manufactured-date *string***

<b>Description</b>	The date this component was manufactured
<b>Context</b>	<a href="#">platform</a> <a href="#">linecard slot</a> <a href="#">number</a> <a href="#">manufactured-date</a> <a href="#">string</a>
<b>Tree</b>	<a href="#">manufactured-date</a>
<b>Configurable</b>	False

**oper-state *keyword***

<b>Description</b>	The operational state of this component
<b>Context</b>	<a href="#">platform</a> <a href="#">linecard slot</a> <a href="#">number</a> <a href="#">oper-state</a> <a href="#">keyword</a>
<b>Tree</b>	<a href="#">oper-state</a>
<b>Options</b>	<ul style="list-style-type: none"> <li>• up Component or process is operational</li> <li>• down Component or process is not operational</li> <li>• empty Component slot is empty</li> <li>• downloading Component is downloading image into memory</li> <li>• booting Component is booting downloaded image</li> <li>• starting Component image operational, application processes starting</li> <li>• failed Component or process has failed</li> <li>• synchronizing Component is currently being synchronized</li> <li>• upgrading Component is currently being upgraded</li> <li>• low-power Component is offline due to insufficient system power</li> <li>• degraded Component or process is in a degraded state</li> <li>• warm-reboot Component or process is currently warm rebooting Component or process is currently warm rebooting This state is set during a warm reboot immediately following initiation of the reboot,</li> </ul>

continuing after startup until the system has completed audit. In this state the system will not accept configuration changes.

**Configurable** False

### part-number *string*

**Description** Part number for this component  
**Context** [platform linecard slot number part-number string](#)  
**Tree** [part-number](#)  
**Configurable** False

### power



**Note:**

This command is available for the following platforms:

- 7250 IXR-6
- 7250 IXR-10

**Description** State related to power consumption and allocation for this component  
**Context** [platform linecard slot number power](#)  
**Tree** [power](#)  
**Configurable** False

### allocated-power *number*



**Note:**

This command is available for the following platforms:

- 7250 IXR-6
- 7250 IXR-10

**Description** The power budget allocated to this component  
**Context** [platform linecard slot number power allocated-power number](#)  
**Tree** [allocated-power](#)  
**Units** watts  
**Configurable** False

**used-power *number*****Note:**

This command is available for the following platforms:

- 7250 IXR-6
- 7250 IXR-10

<b>Description</b>	The power in use by this component
<b>Context</b>	<a href="#">platform linecard slot number power used-power number</a>
<b>Tree</b>	<a href="#">used-power</a>
<b>Units</b>	watts
<b>Configurable</b>	False

**removable *boolean***

<b>Description</b>	Details if this component can be removed from the system
<b>Context</b>	<a href="#">platform linecard slot number removable boolean</a>
<b>Tree</b>	<a href="#">removable</a>
<b>Configurable</b>	False

**serial-number *string***

<b>Description</b>	The serial number for this component
<b>Context</b>	<a href="#">platform linecard slot number serial-number string</a>
<b>Tree</b>	<a href="#">serial-number</a>
<b>Configurable</b>	False

**software-version *string***

<b>Description</b>	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.
<b>Context</b>	<a href="#">platform linecard slot number software-version string</a>
<b>Tree</b>	<a href="#">software-version</a>
<b>Configurable</b>	False

## temperature



### Note:

This command is available for the following platforms:

- 7250 IXR-6
- 7250 IXR-10

<b>Description</b>	State related to temperature for this component
<b>Context</b>	<a href="#">platform linecard slot number temperature</a>
<b>Tree</b>	<a href="#">temperature</a>
<b>Configurable</b>	False

## alarm-status *boolean*



### Note:

This command is available for the following platforms:

- 7250 IXR-6
- 7250 IXR-10

<b>Description</b>	Indicates if a temperature sensor of this component is currently in an alarm state  An alarm state is triggered if the margin field is $\leq 2$ 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.
<b>Context</b>	<a href="#">platform linecard slot number temperature alarm-status boolean</a>
<b>Tree</b>	<a href="#">alarm-status</a>
<b>Configurable</b>	False

## instant *number*



### Note:

This command is available for the following platforms:

- 7250 IXR-6
- 7250 IXR-10

<b>Description</b>	Represents the highest 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.
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<b>Context</b>	<a href="#">platform linecard slot number temperature instant number</a>
<b>Tree</b>	<a href="#">instant</a>
<b>Configurable</b>	False

## margin *number*



### Note:

This command is available for the following platforms:

- 7250 IXR-6
- 7250 IXR-10

<b>Description</b>	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.
<b>Context</b>	<a href="#">platform linecard slot number temperature margin number</a>
<b>Tree</b>	<a href="#">margin</a>
<b>Configurable</b>	False

## type *string*

<b>Description</b>	Linecard type, as translated from the components EEPROM
<b>Context</b>	<a href="#">platform linecard slot number type string</a>
<b>Tree</b>	<a href="#">type</a>
<b>Configurable</b>	False

## power-supply *id number*

<b>Description</b>	Top-level container for power supply module configuration and state
<b>Context</b>	<a href="#">platform power-supply id number</a>
<b>Tree</b>	<a href="#">power-supply</a>
<b>Configurable</b>	False

## id *number*

<b>Description</b>	Numeric identifier for the power supply module
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<b>Context</b>	<a href="#">platform power-supply id number</a>
<b>Range</b>	1 to 255
<b>Configurable</b>	False

**capacity number**

<b>Description</b>	The total capacity the power supply module can provide
<b>Context</b>	<a href="#">platform power-supply id number capacity number</a>
<b>Tree</b>	<a href="#">capacity</a>
<b>Units</b>	watts
<b>Configurable</b>	False

**clei-code string**

<b>Description</b>	The Common Language Identification Code for this component
<b>Context</b>	<a href="#">platform power-supply id number clei-code string</a>
<b>Tree</b>	<a href="#">clei-code</a>
<b>Configurable</b>	False

**failure-reason string**

<b>Description</b>	The reason the component transitioned to a failed state Field is empty if the component is not currently in a failure state
<b>Context</b>	<a href="#">platform power-supply id number failure-reason string</a>
<b>Tree</b>	<a href="#">failure-reason</a>
<b>Configurable</b>	False

**input**

<b>Description</b>	Top-level container for power-supply input state
<b>Context</b>	<a href="#">platform power-supply id number input</a>
<b>Tree</b>	<a href="#">input</a>
<b>Configurable</b>	False



**current *decimal-number***

<b>Description</b>	Current input amperage for the power-supply
<b>Context</b>	<a href="#">platform power-supply id number input current decimal-number</a>
<b>Tree</b>	<a href="#">current</a>
<b>Units</b>	amps
<b>Configurable</b>	False

**power *decimal-number***

<b>Description</b>	Current input power for the power-supply
<b>Context</b>	<a href="#">platform power-supply id number input power decimal-number</a>
<b>Tree</b>	<a href="#">power</a>
<b>Units</b>	watts
<b>Configurable</b>	False

**voltage *decimal-number***

<b>Description</b>	Current input voltage for the power-supply
<b>Context</b>	<a href="#">platform power-supply id number input voltage decimal-number</a>
<b>Tree</b>	<a href="#">voltage</a>
<b>Units</b>	volts
<b>Configurable</b>	False

**last-booted *string***

<b>Description</b>	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
<b>Context</b>	<a href="#">platform power-supply id number last-booted string</a>
<b>Tree</b>	<a href="#">last-booted</a>
<b>String Length</b>	20 to 32
<b>Configurable</b>	False

**last-change *string***

<b>Description</b>	The date and time this component last changed state
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<b>Context</b>	<a href="#">platform power-supply id</a> <i>number last-change string</i>
<b>Tree</b>	<a href="#">last-change</a>
<b>String Length</b>	20 to 32
<b>Configurable</b>	False

### **manufactured-date *string***

<b>Description</b>	The date this component was manufactured
<b>Context</b>	<a href="#">platform power-supply id</a> <i>number manufactured-date string</i>
<b>Tree</b>	<a href="#">manufactured-date</a>
<b>Configurable</b>	False

### **oper-reason *keyword***

<b>Description</b>	Indicates the reason for the current state of the component
<b>Context</b>	<a href="#">platform power-supply id</a> <i>number oper-reason keyword</i>
<b>Tree</b>	<a href="#">oper-reason</a>
<b>Options</b>	<ul style="list-style-type: none"> <li>• no-input/fault No power input, or other hardware fault detected</li> <li>• eeprom-invalid EEPROM of this power supply is either invalid or corrupt</li> <li>• airflow-mismatch The detected airflow of this power supply does not match the system-calculated airflow direction  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</li> </ul>
<b>Configurable</b>	False

### **oper-state *keyword***

<b>Description</b>	The operational state of this component
<b>Context</b>	<a href="#">platform power-supply id</a> <i>number oper-state keyword</i>
<b>Tree</b>	<a href="#">oper-state</a>

<b>Options</b>	<ul style="list-style-type: none"> <li>• up Component or process is operational</li> <li>• down Component or process is not operational</li> <li>• empty Component slot is empty</li> <li>• downloading Component is downloading image into memory</li> <li>• booting Component is booting downloaded image</li> <li>• starting Component image operational, application processes starting</li> <li>• failed Component or process has failed</li> <li>• synchronizing Component is currently being synchronized</li> <li>• upgrading Component is currently being upgraded</li> <li>• low-power Component is offline due to insufficient system power</li> <li>• degraded Component or process is in a degraded state</li> <li>• warm-reboot Component or process is currently warm rebooting 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.</li> </ul>
<b>Configurable</b>	False

### **part-number *string***

<b>Description</b>	Part number for this component
<b>Context</b>	<a href="#">platform power-supply id</a> <i>number</i> <a href="#">part-number</a> <i>string</i>
<b>Tree</b>	<a href="#">part-number</a>
<b>Configurable</b>	False

**removable *boolean***

<b>Description</b>	Details if this component can be removed from the system
<b>Context</b>	<a href="#">platform power-supply id</a> <i>number removable boolean</i>
<b>Tree</b>	<a href="#">removable</a>
<b>Configurable</b>	False

**serial-number *string***

<b>Description</b>	The serial number for this component
<b>Context</b>	<a href="#">platform power-supply id</a> <i>number serial-number string</i>
<b>Tree</b>	<a href="#">serial-number</a>
<b>Configurable</b>	False

**temperature**

<b>Description</b>	State related to temperature for this component
<b>Context</b>	<a href="#">platform power-supply id</a> <i>number temperature</i>
<b>Tree</b>	<a href="#">temperature</a>
<b>Configurable</b>	False

**alarm-status *boolean***

<b>Description</b>	Indicates if the temperature of this component is currently in an alarm state
<b>Context</b>	<a href="#">platform power-supply id</a> <i>number temperature alarm-status boolean</i>
<b>Tree</b>	<a href="#">alarm-status</a>
<b>Configurable</b>	False

**instant *number***

<b>Description</b>	The current temperature of this component
<b>Context</b>	<a href="#">platform power-supply id</a> <i>number temperature instant number</i>
<b>Tree</b>	<a href="#">instant</a>
<b>Configurable</b>	False

**type *string***

<b>Description</b>	Power-supply type, as translated from the components EEPROM
<b>Context</b>	<a href="#">platform power-supply id number type string</a>
<b>Tree</b>	<a href="#">type</a>
<b>Configurable</b>	False

**redundancy****Note:**

This command is available for the following platforms:

- 7250 IXR-6
- 7250 IXR-10

<b>Description</b>	Top-level container for platform redundancy
<b>Context</b>	<a href="#">platform redundancy</a>
<b>Tree</b>	<a href="#">redundancy</a>
<b>Configurable</b>	True

**active-module *keyword*****Note:**

This command is available for the following platforms:

- 7250 IXR-6
- 7250 IXR-10

<b>Description</b>	Control module currently active
<b>Context</b>	<a href="#">platform redundancy active-module keyword</a>
<b>Tree</b>	<a href="#">active-module</a>
<b>Options</b>	<ul style="list-style-type: none"> <li>• A</li> <li>• B</li> </ul>
<b>Configurable</b>	False

**failover-time *string*****Note:**

This command is available for the following platforms:

- 7250 IXR-6
- 7250 IXR-10

<b>Description</b>	Date and time of the last control module failover
<b>Context</b>	<a href="#">platform redundancy failover-time <i>string</i></a>
<b>Tree</b>	<a href="#">failover-time</a>
<b>String Length</b>	20 to 32
<b>Configurable</b>	False

**synchronization****Note:**

This command is available for the following platforms:

- 7250 IXR-6
- 7250 IXR-10

<b>Description</b>	Top-level container for redundancy synchronization
<b>Context</b>	<a href="#">platform redundancy synchronization</a>
<b>Tree</b>	<a href="#">synchronization</a>
<b>Configurable</b>	True

**last-synchronization *string*****Note:**

This command is available for the following platforms:

- 7250 IXR-6
- 7250 IXR-10

<b>Description</b>	Last date and time a synchronization of system files occurred
<b>Context</b>	<a href="#">platform redundancy synchronization last-synchronization <i>string</i></a>
<b>Tree</b>	<a href="#">last-synchronization</a>
<b>String Length</b>	20 to 32
<b>Configurable</b>	False

## overlay



### Note:

This command is available for the following platforms:

- 7250 IXR-6
- 7250 IXR-10

<b>Description</b>	Top-level container for overlay synchronization
<b>Context</b>	<a href="#">platform redundancy synchronization overlay</a>
<b>Tree</b>	<a href="#">overlay</a>
<b>Configurable</b>	True

## last-synchronization *string*



### Note:

This command is available for the following platforms:

- 7250 IXR-6
- 7250 IXR-10

<b>Description</b>	Last date and time a synchronization of the overlay occurred
<b>Context</b>	<a href="#">platform redundancy synchronization overlay last-synchronization string</a>
<b>Tree</b>	<a href="#">last-synchronization</a>
<b>String Length</b>	20 to 32
<b>Configurable</b>	False

## next-synchronization *string*



### Note:

This command is available for the following platforms:

- 7250 IXR-6
- 7250 IXR-10

<b>Description</b>	Next date and time a synchronization of the overlay will occur
<b>Context</b>	<a href="#">platform redundancy synchronization overlay next-synchronization string</a>
<b>Tree</b>	<a href="#">next-synchronization</a>
<b>String Length</b>	20 to 32
<b>Configurable</b>	False

## synchronization-frequency *number*



### Note:

This command is available for the following platforms:

- 7250 IXR-6
- 7250 IXR-10

<b>Description</b>	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.
<b>Context</b>	<a href="#">platform redundancy synchronization overlay synchronization-frequency number</a>
<b>Tree</b>	<a href="#">synchronization-frequency</a>
<b>Range</b>	30 to 65535
<b>Default</b>	60
<b>Units</b>	seconds
<b>Configurable</b>	True

## state *keyword*



### Note:

This command is available for the following platforms:

- 7250 IXR-6
- 7250 IXR-10

<b>Description</b>	Current synchronization status
<b>Context</b>	<a href="#">platform redundancy synchronization state keyword</a>
<b>Tree</b>	<a href="#">state</a>
<b>Options</b>	<ul style="list-style-type: none"> <li>• synchronized Standby control module is ready and synchronized</li> <li>• synchronizing Standby control module is currently synchronizing</li> <li>• not-ready Standby control module is not synchronized</li> </ul>
<b>Configurable</b>	False



## resource-management

<b>Description</b>	Container for managing resources in a system-wide context
<b>Context</b>	<a href="#">platform resource-management</a>
<b>Tree</b>	<a href="#">resource-management</a>
<b>Configurable</b>	True

## tcam

<b>Description</b>	Container for managing the allocation of TCAM banks to different applications.
<b>Context</b>	<a href="#">platform resource-management tcam</a>
<b>Tree</b>	<a href="#">tcam</a>
<b>Configurable</b>	True

## unified-forwarding-resources



### Note:

This command is available for the following platforms:

- 7220 IXR-D2
- 7220 IXR-D3L
- 7220 IXR-D2L
- 7220 IXR-H3
- 7220 IXR-H2
- 7220 IXR-D3
- 7220 IXR-D1

<b>Description</b>	Container for managing Broadcom-specific UFT resources.
<b>Context</b>	<a href="#">platform resource-management unified-forwarding-resources</a>
<b>Tree</b>	<a href="#">unified-forwarding-resources</a>
<b>Configurable</b>	True

## allocated-extra-ip-host-entries *number*



### Note:

This command is available for the following platforms:

- 7220 IXR-D2
- 7220 IXR-D3L
- 7220 IXR-D2L
- 7220 IXR-H3
- 7220 IXR-H2
- 7220 IXR-D3
- 7220 IXR-D1

<b>Description</b>	The extra number of host entries that have been allocated from UFT shared banks.
<b>Context</b>	<a href="#">platform resource-management unified-forwarding-resources allocated-extra-ip-host-entries</a> <i>number</i>
<b>Tree</b>	<a href="#">allocated-extra-ip-host-entries</a>
<b>Range</b>	0 to 262144
<b>Configurable</b>	False

## allocated-extra-mac-entries *number*



### Note:

This command is available for the following platforms:

- 7220 IXR-D2
- 7220 IXR-D3L
- 7220 IXR-D2L
- 7220 IXR-H3
- 7220 IXR-H2
- 7220 IXR-D3
- 7220 IXR-D1

<b>Description</b>	The extra number of MAC address entries that have been allocated from UFT shared banks.
<b>Context</b>	<a href="#">platform resource-management unified-forwarding-resources allocated-extra-mac-entries</a> <i>number</i>
<b>Tree</b>	<a href="#">allocated-extra-mac-entries</a>
<b>Range</b>	0 to 262144
<b>Configurable</b>	False

## alpm keyword

**Note:**

This command is available for the following platforms:

- 7220 IXR-D2
- 7220 IXR-D3L
- 7220 IXR-D2L
- 7220 IXR-D3
- 7220 IXR-D1

<b>Description</b>	Controls the ALPM mode. If this is set to disabled then no UFT banks are allocated to ALPM. If this is set to enabled then 4 UFT shared banks are allocated to ALPM. 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.
<b>Context</b>	<a href="#">platform resource-management unified-forwarding-resources alpm keyword</a>
<b>Tree</b>	<a href="#">alpm</a>
<b>Default</b>	disabled
<b>Options</b>	<ul style="list-style-type: none"> <li>• disabled</li> <li>• enabled</li> <li>• high-scale</li> </ul>
<b>Configurable</b>	True

## ipv6-128bit-lpm-entries *number*

**Note:**

This command is available for the following platforms:

- 7220 IXR-D2
- 7220 IXR-D3L
- 7220 IXR-D2L
- 7220 IXR-H3
- 7220 IXR-H2
- 7220 IXR-D3
- 7220 IXR-D1

<b>Description</b>	Sets the value for num_ipv6_lpm_128b_entries, which affects IP FIB scale.
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	H2/H3 range: 0-1024 D1 range: 0-4096 D2/D3 range: 0-8192
<b>Context</b>	<a href="#">platform resource-management unified-forwarding-resources ipv6-128bit-lpm-entries</a> <i>number</i>
<b>Tree</b>	<a href="#">ipv6-128bit-lpm-entries</a>
<b>Range</b>	0 to 8192
<b>Configurable</b>	True

## requested-extra-ip-host-entries *number*



### Note:

This command is available for the following platforms:

- 7220 IXR-D2
- 7220 IXR-D3L
- 7220 IXR-D2L
- 7220 IXR-D3
- 7220 IXR-D1

<b>Description</b>	<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: <math>\min(N/X, P-A)</math></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> <p>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.</p>
<b>Context</b>	<a href="#">platform resource-management unified-forwarding-resources requested-extra-ip-host-entries</a> <i>number</i>
<b>Tree</b>	<a href="#">requested-extra-ip-host-entries</a>
<b>Range</b>	0 to 262144
<b>Configurable</b>	True

**xdp-restart-required *boolean*****Note:**

This command is available for the following platforms:

- 7220 IXR-D2
- 7220 IXR-D3L
- 7220 IXR-D2L
- 7220 IXR-H3
- 7220 IXR-H2
- 7220 IXR-D3
- 7220 IXR-D1

<b>Description</b>	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.
<b>Context</b>	<a href="#">platform resource-management unified-forwarding-resources xdp-restart-required <i>boolean</i></a>
<b>Tree</b>	<a href="#">xdp-restart-required</a>
<b>Configurable</b>	False

**resource-monitoring**

<b>Description</b>	Enter the resource-monitoring context
<b>Context</b>	<a href="#">platform resource-monitoring</a>
<b>Tree</b>	<a href="#">resource-monitoring</a>
<b>Configurable</b>	True

**acl**

<b>Description</b>	Enter the acl context
<b>Context</b>	<a href="#">platform resource-monitoring acl</a>
<b>Tree</b>	<a href="#">acl</a>
<b>Configurable</b>	True

**resource name *identityref***

<b>Description</b>	Enter the resource list instance
<b>Context</b>	<a href="#">platform resource-monitoring acl resource name <i>identityref</i></a>

**Tree** [resource](#)

**Configurable** True

### name *identityref*

**Description** The name of the ACL resource

**Context** [platform resource-monitoring acl resource name identityref](#)

**Options**

- [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-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-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.

**Configurable** True

**falling-threshold-log *number***

<b>Description</b>	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
<b>Context</b>	<a href="#">platform resource-monitoring acl resource name <i>identityref</i> falling-threshold-log <i>number</i></a>
<b>Tree</b>	<a href="#">falling-threshold-log</a>
<b>Range</b>	0 to 100
<b>Default</b>	70
<b>Configurable</b>	True

**rising-threshold-log *number***

<b>Description</b>	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
<b>Context</b>	<a href="#">platform resource-monitoring acl resource name <i>identityref</i> rising-threshold-log <i>number</i></a>
<b>Tree</b>	<a href="#">rising-threshold-log</a>
<b>Range</b>	0 to 100
<b>Default</b>	90
<b>Configurable</b>	True

**datapath**

<b>Description</b>	Container for monitoring datapath resources system-wide
<b>Context</b>	<a href="#">platform resource-monitoring datapath</a>
<b>Tree</b>	<a href="#">datapath</a>
<b>Configurable</b>	True

**asic**

<b>Description</b>	Container for monitoring datapath resources that are specific to a subset of the chipsets supported by SRLinux.
<b>Context</b>	<a href="#">platform resource-monitoring datapath asic</a>
<b>Tree</b>	<a href="#">asic</a>
<b>Configurable</b>	True

**resource name *identityref***

<b>Description</b>	List of ASIC-specific datapath resources
<b>Context</b>	<a href="#">platform resource-monitoring datapath asic resource name <i>identityref</i></a>
<b>Tree</b>	<a href="#">resource</a>
<b>Configurable</b>	True

**name *identityref***

<b>Description</b>	The name of the ASIC-specific datapath resource.
<b>Context</b>	<a href="#">platform resource-monitoring datapath asic resource name <i>identityref</i></a>
<b>Options</b>	<ul style="list-style-type: none"> <li>• <a href="#">ip-lpm-ipv4-routes</a> <p>Trident3: 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.</p> <p>Trident3: 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. Tomahawk3: Reports the number of IPv4 routes installed in the FIB. Free entries is the Minimum Guaranteed Capacity returned by the BCM SDK.</p> </li> <li>• <a href="#">ip-lpm-ipv6-shorter-routes</a> <p>Trident3: 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.</p> <p>Trident3: 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. Tomahawk3: 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.</p> </li> <li>• <a href="#">ip-lpm-ipv6-longer-routes</a> <p>Trident3: 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</p> </li> </ul>



types of routes consume those entries). In ALPM mode, free entries is based on the Minimum Guaranteed Capacity returned by the BCM SDK.

Trident3: 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.

Tomahawk3: 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

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.

- underlay-ecmp-groups

Underlay ECMP group resources.

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.

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.

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.

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.

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.  
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.  
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.  
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.  
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.  
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  
L1 ECMP group resources.  
L1 ECMP group resources. ECMP FEC resources are divided into L1 ECMP FEC resources and L2 ECMP FEC resources. This counts the number of entries used in the L1 partition.
- level-2-ecmp-groups  
L2 ECMP group resources.  
L2 ECMP group resources. ECMP FEC resources are divided into L1 ECMP FEC resources and L2 ECMP FEC resources. This counts the number of entries used in the L2 partition.

- **level-1-ecmp-members**  
L1 ECMP member resources.  
L1 ECMP member resources. ECMP FEC member resources are divided into L1 and L2 resources. This counts the number of entries used in the L1 partition.
  - **level-2-ecmp-members**  
L2 ECMP member resources.  
L2 ECMP member resources. ECMP FEC member resources are divided into L1 and L2 resources. This counts the number of entries used in the L2 partition.
  - **level-1-non-ecmp-fecs**  
L1 non-ECMP FEC resources.  
L1 non-ECMP FEC resources. Non-ECMP FEC resources are divided into L1 and L2 resources. This counts the number of entries used in the L1 partition.
  - **level-2-non-ecmp-fecs**  
L2 non-ECMP FEC resources.  
L2 non-ECMP FEC resources. Non-ECMP FEC resources are divided into L1 and L2 resources. This counts the number of entries used in the L2 partition.
- Configurable** True

### falling-threshold-log *number*

<b>Description</b>	Sets the threshold that triggers the generation of a NOTICE log 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
<b>Context</b>	<a href="#">platform resource-monitoring datapath asic resource name <i>identityref</i> falling-threshold-log <i>number</i></a>
<b>Tree</b>	<a href="#">falling-threshold-log</a>
<b>Range</b>	0 to 100
<b>Default</b>	70
<b>Configurable</b>	True

### rising-threshold-log *number*

<b>Description</b>	Sets the threshold that triggers the generation of a WARNING log 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
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<b>Context</b>	<a href="#">platform resource-monitoring datapath asic resource name <i>identityref</i> rising-threshold-log</a> <i>number</i>
<b>Tree</b>	<a href="#">rising-threshold-log</a>
<b>Range</b>	0 to 100
<b>Default</b>	90
<b>Configurable</b>	True

## xdp

<b>Description</b>	Container for monitoring datapath resources that are generic in concept.
<b>Context</b>	<a href="#">platform resource-monitoring datapath xdp</a>
<b>Tree</b>	<a href="#">xdp</a>
<b>Configurable</b>	True

## resource name *identityref*

<b>Description</b>	List of generic datapath resources
<b>Context</b>	<a href="#">platform resource-monitoring datapath xdp resource name <i>identityref</i></a>
<b>Tree</b>	<a href="#">resource</a>
<b>Configurable</b>	True

## name *identityref*

<b>Description</b>	<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>
<b>Context</b>	<a href="#">platform resource-monitoring datapath xdp resource name <i>identityref</i></a>
<b>Options</b>	<ul style="list-style-type: none"> <li>arp-nd-entries           <p>IPv4 ARP and IPv6 neighbor discovery resources.</p> <p>IPv4 ARP and IPv6 neighbor discovery resources. Each IPv4 ARP and each IPv6 neighbor entry counts as 1 used resource against a total that is platform dependent. This does not consider underlying ASIC resources.</p> </li> <li>ip-hosts           <p>IP host route resources.</p> <p>IP host route resources. Trident3: Reports the number of entries used in the IP host table. Every local host /32 route, ARP entry and IPv4</p> </li> </ul>

subnet broadcast address requires 1 entry. In non-ALPM operation every remote /32 route also requires 1 entry. Every local host /128 route, and ND entry requires 2 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

IP host route resources. Trident3: 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. In non-ALPM operation every remote /32 route also requires 1 entry. Every local host /128 route, and ND entry requires 2 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 Tomahawk3: Reports the number of entries used in the IP host table. Every ARP entry and IPv4 subnet broadcast address requires 1 entry. Every ND entry requires 2 entries.

- ip-lpm-routes

IP longest prefix match route resources.

IP longest prefix match route resources. Jericho2: Reports the percentage utilization of the KAPS1 or KAPS2 table, whichever is higher. These tables are used for storing longest-prefix-match IPv4 and IPv6 routes.

IP longest prefix match route resources. Jericho2: Reports the percentage utilization of the KAPS1 or KAPS2 table, whichever is higher. These tables are used for storing longest-prefix-match IPv4 and IPv6 routes. Trident3 and Tomahawk3: Reports the used and free number of half-wide entries in the hardware LPM table. An IPv4 route (or index to IPv4 ALPM lookup) requires a half-wide entry. An IPv6 route (or index to IPv6 ALPM lookup) that is /64 or less requires a single-wide entry (2 half-wide entries). An IPv6 route (or index to IPv6 ALPM lookup) that is more than /64 requires a double-wide entry (4 half-wide entries).

- mac-addresses

MAC address resources.

MAC address resources. Reports the used number of entries, where 1 entry = 1 MAC address. Free entries reflects the total number of entries remaining in shared + dedicated UFT banks

- direct-next-hops

Direct next-hop resources.

Direct next-hop resources. Reports the number of entries, where 1 entry is used for every next-hop of an IP or MPLS route that is resolved directly to a local interface. This does not consider underlying ASIC resources.

- indirect-next-hops

Indirect next-hop resources.

Indirect next-hop resources. Reports the number of entries, where 1 entry is used for every next-hop of an IP route that is resolved by a non-local route. This does not consider underlying ASIC resources.

- tunnel-next-hops  
Tunnel next-hop resources.  
Tunnel next-hop resources. Reports the number of tunnel next-hop entries. For EVPN routes resolved by VXLAN, 1 entry is used for every <vni, vtep> pair. When a BGP IP route is resolved by an MPLS tunnel, 1 entry is used for every BGP next-hop of the route. This does not consider underlying ASIC resources.
- ecmp-groups  
ECMP group resources.  
ECMP group resources. Jericho2: Reports the used number of ECMP FECs, adding L1 ECMP FECs and L2 ECMP FECs.  
ECMP group resources. Jericho2: Reports the used number of ECMP FECs, adding L1 ECMP FECs and L2 ECMP FECs. Trident3: Reports the used number of ECMP groups, adding overlay and underlay ECMP groups.  
ECMP group resources. Jericho2: Reports the used number of ECMP FECs, adding L1 ECMP FECs and L2 ECMP FECs. Trident3: Reports the used number of ECMP groups, adding overlay and underlay ECMP groups. Tomahawk3: Reports used number of ECMP groups.
- ecmp-members  
ECMP member resources.  
ECMP member resources. Jericho2: Reports the used number of ECMP member FECs, adding L1 ECMP member FECs and L2 ECMP member FECs.  
ECMP member resources. Jericho2: Reports the used number of ECMP member FECs, adding L1 ECMP member FECs and L2 ECMP member FECs. Trident3: Reports the used number of ECMP members, adding overlay and underlay ECMP members.  
ECMP member resources. Jericho2: Reports the used number of ECMP member FECs, adding L1 ECMP member FECs and L2 ECMP member FECs. Trident3: Reports the used number of ECMP members, adding overlay and underlay ECMP members. Tomahawk3: Reports used number of ECMP members.
- egress-next-hops  
Egress next-hop resources.  
Egress next-hop resources. Trident3: 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.  
Egress next-hop resources. Trident3: 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. Tomahawk3: 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.  
LAG group resources. Reports the number of LAG resources used, including DGPP LAGs.
- lag-members  
LAG member resources.  
LAG member resources. Reports the number of LAG member resources used, including DGPP LAG members.
- subinterfaces  
Subinterface resources.  
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  
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  
One resource is used for every MPLS ILM entry that performs either a 'swap' or a 'pop' operation.
- tunnels  
Tunnel resources. One tunnel resource is used per VXLAN or MPLS tunnel endpoint.  
Tunnel resources. One tunnel resource is used per VXLAN or MPLS tunnel endpoint. On TD3 systems this equates to a DVP resource.

**Configurable** True

### falling-threshold-log *number*

<b>Description</b>	Sets the threshold that triggers the generation of a NOTICE log 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
<b>Context</b>	<a href="#">platform resource-monitoring datapath xdp resource name</a> <i>identityref</i> <a href="#">falling-threshold-log number</a>
<b>Tree</b>	<a href="#">falling-threshold-log</a>
<b>Range</b>	0 to 100
<b>Default</b>	70
<b>Configurable</b>	True

## rising-threshold-log *number*

<b>Description</b>	Sets the threshold that triggers the generation of a WARNING log 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
<b>Context</b>	<a href="#">platform resource-monitoring datapath xdp resource name <i>identityref</i> rising-threshold-log <i>number</i></a>
<b>Tree</b>	<a href="#">rising-threshold-log</a>
<b>Range</b>	0 to 100
<b>Default</b>	90
<b>Configurable</b>	True

## mtu



### Note:

This command is available for the following platforms:

- 7250 IXR-6
- 7250 IXR-10

<b>Description</b>	Enter the mtu context
<b>Context</b>	<a href="#">platform resource-monitoring mtu</a>
<b>Tree</b>	<a href="#">mtu</a>
<b>Configurable</b>	True

## resource name *identityref*



### Note:

This command is available for the following platforms:

- 7250 IXR-6
- 7250 IXR-10

<b>Description</b>	Enter the resource list instance
<b>Context</b>	<a href="#">platform resource-monitoring mtu resource name <i>identityref</i></a>
<b>Tree</b>	<a href="#">resource</a>
<b>Configurable</b>	True



**name *identityref*****Note:**

This command is available for the following platforms:

- 7250 IXR-6
- 7250 IXR-10

<b>Description</b>	The name of the MTU resource
<b>Context</b>	<a href="#">platform resource-monitoring mtu resource name <i>identityref</i></a>
<b>Options</b>	<ul style="list-style-type: none"> <li>• 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.</li> <li>• 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.</li> <li>• 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.</li> </ul>
<b>Configurable</b>	True

**falling-threshold-log *number*****Note:**

This command is available for the following platforms:

- 7250 IXR-6
- 7250 IXR-10

<b>Description</b>	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.
<b>Context</b>	<a href="#">platform resource-monitoring mtu resource name <i>identityref</i> falling-threshold-log <i>number</i></a>
<b>Tree</b>	<a href="#">falling-threshold-log</a>
<b>Range</b>	0 to 100
<b>Default</b>	70
<b>Configurable</b>	True

## rising-threshold-log *number*



### Note:

This command is available for the following platforms:

- 7250 IXR-6
- 7250 IXR-10

<b>Description</b>	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.
<b>Context</b>	<a href="#">platform resource-monitoring mtu resource name <i>identityref</i> rising-threshold-log <i>number</i></a>
<b>Tree</b>	<a href="#">rising-threshold-log</a>
<b>Range</b>	0 to 100
<b>Default</b>	90
<b>Configurable</b>	True

## qos



### Note:

This command is available for the following platforms:

- 7250 IXR-6
- 7250 IXR-10

<b>Description</b>	Enter the qos context
<b>Context</b>	<a href="#">platform resource-monitoring qos</a>
<b>Tree</b>	<a href="#">qos</a>
<b>Configurable</b>	True

## resource *name identityref*



### Note:

This command is available for the following platforms:

- 7250 IXR-6
- 7250 IXR-10

<b>Description</b>	Enter the resource list instance
--------------------	----------------------------------

<b>Context</b>	<a href="#">platform resource-monitoring qos resource name <i>identityref</i></a>
<b>Tree</b>	<a href="#">resource</a>
<b>Configurable</b>	True

## name *identityref*



### Note:

This command is available for the following platforms:

- 7250 IXR-6
- 7250 IXR-10

<b>Description</b>	The name of the QoS resource
<b>Context</b>	<a href="#">platform resource-monitoring qos resource name <i>identityref</i></a>
<b>Options</b>	<ul style="list-style-type: none"> <li>• 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 of the 7250 IXR IMM. There are 16 of these resources and one is always used by the combination of the default IPv4 DSCP classifier and the default IPv6 DSCP classifier.</li> <li>• 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 of the 7250 IXR IMM. There are 32 of these resources.</li> <li>• 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 of the 7250 IXR IMM. There are 32 of these resources.</li> </ul>
<b>Configurable</b>	True

## falling-threshold-log *number*



### Note:

This command is available for the following platforms:

- 7250 IXR-6
- 7250 IXR-10

<b>Description</b>	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
--------------------	---

<b>Context</b>	<a href="#">platform resource-monitoring qos resource name <i>identityref</i> falling-threshold-log <i>number</i></a>
<b>Tree</b>	<a href="#">falling-threshold-log</a>
<b>Range</b>	0 to 100
<b>Default</b>	70
<b>Configurable</b>	True

### rising-threshold-log *number*



**Note:**

This command is available for the following platforms:

- 7250 IXR-6
- 7250 IXR-10

<b>Description</b>	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
<b>Context</b>	<a href="#">platform resource-monitoring qos resource name <i>identityref</i> rising-threshold-log <i>number</i></a>
<b>Tree</b>	<a href="#">rising-threshold-log</a>
<b>Range</b>	0 to 100
<b>Default</b>	90
<b>Configurable</b>	True

### tcam

<b>Description</b>	Enter the tcam context
<b>Context</b>	<a href="#">platform resource-monitoring tcam</a>
<b>Tree</b>	<a href="#">tcam</a>
<b>Configurable</b>	True

### resource name *identityref*

<b>Description</b>	Enter the resource list instance
<b>Context</b>	<a href="#">platform resource-monitoring tcam resource name <i>identityref</i></a>
<b>Tree</b>	<a href="#">resource</a>
<b>Configurable</b>	True

**name *identityref***

<b>Description</b>	The name of the TCAM resource
<b>Context</b>	<a href="#">platform resource-monitoring tcam resource name <i>identityref</i></a>
<b>Options</b>	<ul style="list-style-type: none"> <li>• <b>if-input-ipv4</b> Resource pool of TCAM entries used by IPv4 ACLs applied as subinterface-input filters</li> <li>• <b>if-output-ipv4</b> Resource pool of TCAM entries used by IPv4 ACLs applied as subinterface-output filters</li> <li>• <b>if-input-ipv6</b> Resource pool of TCAM entries used by IPv6 ACLs applied as subinterface-input filters</li> <li>• <b>if-output-ipv6</b> Resource pool of TCAM entries used by IPv6 ACLs applied as subinterface-output filters</li> <li>• <b>cpm-capture-ipv4</b> Resource pool of TCAM entries used by IPv4 cpm-filter ACLs and capture-filter ACLs</li> <li>• <b>cpm-capture-ipv6</b> Resource pool of TCAM entries used by IPv6 cpm-filter ACLs and capture-filter ACLs</li> <li>• <b>system-capture-ipv4</b> Resource pool of TCAM entries used by IPv4 capture-filter ACLs and IPv4 system-filter ACLs</li> <li>• <b>system-capture-ipv6</b> Resource pool of TCAM entries used by IPv6 capture-filter ACLs and IPv6 system-filter ACLs</li> <li>• <b>capture-ipv4</b> Resource pool of TCAM entries used by IPv4 capture-filter ACLs</li> <li>• <b>capture-ipv6</b> Resource pool of TCAM entries used by IPv6 capture-filter ACLs</li> <li>• <b>if-output-cpm-ipv4</b> Resource pool of TCAM entries used by IPv4 egress ACLs and cpm-filter ACLs</li> <li>• <b>if-output-cpm-ipv6</b> Resource pool of TCAM entries used by IPv6 egress ACLs and cpm-filter ACLs</li> </ul>
<b>Configurable</b>	True

**falling-threshold-log *number***

<b>Description</b>	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
<b>Context</b>	<a href="#">platform resource-monitoring tcam resource name</a> <i>identityref</i> <a href="#">falling-threshold-log number</a>
<b>Tree</b>	<a href="#">falling-threshold-log</a>
<b>Range</b>	0 to 100
<b>Default</b>	70
<b>Configurable</b>	True

**rising-threshold-log *number***

<b>Description</b>	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
<b>Context</b>	<a href="#">platform resource-monitoring tcam resource name</a> <i>identityref</i> <a href="#">rising-threshold-log number</a>
<b>Tree</b>	<a href="#">rising-threshold-log</a>
<b>Range</b>	0 to 100
<b>Default</b>	90
<b>Configurable</b>	True

## 8 qos

```

qos
+ classifiers
+   dscp-policy name string
+     + dscp value number
+       + drop-probability keyword
+       + forwarding-class keyword
+   mpls-traffic-class-policy name string
+     + traffic-class value number
+     + drop-probability keyword
+     + forwarding-class keyword
+   vxlan-default reference
+ explicit-congestion-notification
+   ecn-dscp-policy reference
+ queue-templates
+   queue-template name string
+     + active-queue-management
+       + ecn-slope ecn-drop-probability keyword
+       + max-probability number
+       + max-threshold-percent number
+       + min-threshold-percent number
+       + weight-factor number
+       + wred-slope traffic-type keyword drop-probability keyword
+       + max-probability number
+       + max-threshold-percent number
+       + min-threshold-percent number
+     + queue-depth
+       + high-threshold-bytes number
+       + maximum-burst-size number
+ rewrite-rules
+   dscp-policy name string
+     + map forwarding-class keyword
+     + drop-probability drop-probability keyword
+     + dscp (number | keyword)
+     + dscp (number | keyword)
+   mpls-traffic-class-policy name string
+     + map forwarding-class keyword
+     + drop-probability drop-probability keyword
+     + traffic-class number
+     + traffic-class number

```

### 8.1 qos Descriptions

## qos



### Note:

This command is available for the following platforms:

- 7220 IXR-D2
- 7250 IXR-10
- 7220 IXR-D3L
- 7220 IXR-D2L
- 7220 IXR-H3
- 7220 IXR-H2
- 7220 IXR-D3
- 7250 IXR-6

<b>Description</b>	Top-level container for QoS data
<b>Context</b>	<a href="#">qos</a>
<b>Tree</b>	<a href="#">qos</a>
<b>Configurable</b>	True

## classifiers



### Note:

This command is available for the following platforms:

- 7220 IXR-D2
- 7250 IXR-10
- 7220 IXR-D3L
- 7220 IXR-D2L
- 7220 IXR-H3
- 7220 IXR-H2
- 7220 IXR-D3
- 7250 IXR-6

<b>Description</b>	Enter the classifiers context
<b>Context</b>	<a href="#">qos classifiers</a>
<b>Tree</b>	<a href="#">classifiers</a>
<b>Configurable</b>	True



**dscp-policy** *name string***Note:**

This command is available for the following platforms:

- 7220 IXR-D2
- 7250 IXR-10
- 7220 IXR-D3L
- 7220 IXR-D2L
- 7220 IXR-H3
- 7220 IXR-H2
- 7220 IXR-D3
- 7250 IXR-6

<b>Description</b>	Enter the dscp-policy list instance
<b>Context</b>	<a href="#">qos classifiers</a> <a href="#">dscp-policy</a> <i>name string</i>
<b>Tree</b>	<a href="#">dscp-policy</a>
<b>Configurable</b>	True

**name** *string***Note:**

This command is available for the following platforms:

- 7220 IXR-D2
- 7250 IXR-10
- 7220 IXR-D3L
- 7220 IXR-D2L
- 7220 IXR-H3
- 7220 IXR-H2
- 7220 IXR-D3
- 7250 IXR-6

<b>Description</b>	User-configured name for a DSCP classification policy The name 'default' is reserved for the system default DSCP classifier.
<b>Context</b>	<a href="#">qos classifiers</a> <a href="#">dscp-policy</a> <i>name string</i>
<b>String Length</b>	1 to 255
<b>Configurable</b>	True

**dscp value number****Note:**

This command is available for the following platforms:

- 7220 IXR-D2
- 7250 IXR-10
- 7220 IXR-D3L
- 7220 IXR-D2L
- 7220 IXR-H3
- 7220 IXR-H2
- 7220 IXR-D3
- 7250 IXR-6

<b>Description</b>	Enter the dscp list instance
<b>Context</b>	<a href="#">qos classifiers dscp-policy name</a> <i>string dscp value number</i>
<b>Tree</b>	<a href="#">dscp</a>
<b>Configurable</b>	True

**value number****Note:**

This command is available for the following platforms:

- 7220 IXR-D2
- 7250 IXR-10
- 7220 IXR-D3L
- 7220 IXR-D2L
- 7220 IXR-H3
- 7220 IXR-H2
- 7220 IXR-D3
- 7250 IXR-6

<b>Description</b>	DSCP codepoint value, expressed as a number in the range 0-63
<b>Context</b>	<a href="#">qos classifiers dscp-policy name</a> <i>string dscp value number</i>
<b>Range</b>	0 to 63
<b>Configurable</b>	True

## drop-probability *keyword*



### Note:

This command is available for the following platforms:

- 7220 IXR-D2
- 7250 IXR-10
- 7220 IXR-D3L
- 7220 IXR-D2L
- 7220 IXR-H3
- 7220 IXR-H2
- 7220 IXR-D3
- 7250 IXR-6

<b>Description</b>	The drop probability to which the DSCP value is mapped
<b>Context</b>	<a href="#">qos classifiers dscp-policy name</a> <i>string</i> <a href="#">dscp value</a> <i>number</i> <a href="#">drop-probability keyword</a>
<b>Tree</b>	<a href="#">drop-probability</a>
<b>Options</b>	<ul style="list-style-type: none"> <li>• low Traffic that should be dropped last when there is congestion. Internally this is traffic that is colored green.</li> <li>• 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.</li> <li>• high Traffic that should be dropped first when there is congestion. Internally this is traffic that is colored red.</li> </ul>
<b>Configurable</b>	True

**forwarding-class *keyword*****Note:**

This command is available for the following platforms:

- 7220 IXR-D2
- 7250 IXR-10
- 7220 IXR-D3L
- 7220 IXR-D2L
- 7220 IXR-H3
- 7220 IXR-H2
- 7220 IXR-D3
- 7250 IXR-6

<b>Description</b>	The forwarding class to which the DSCP value is mapped
<b>Context</b>	<a href="#">qos classifiers dscp-policy name</a> <i>string</i> <a href="#">dscp value number</a> <a href="#">forwarding-class keyword</a>
<b>Tree</b>	<a href="#">forwarding-class</a>
<b>Options</b>	<ul style="list-style-type: none"> <li>• fc0</li> <li>• fc1</li> <li>• fc2</li> <li>• fc3</li> <li>• fc4</li> <li>• fc5</li> <li>• fc6</li> <li>• fc7</li> </ul>
<b>Configurable</b>	True

**mpls-traffic-class-policy *name string*****Note:**

This command is available for the following platforms:

- 7250 IXR-6
- 7250 IXR-10

<b>Description</b>	Enter the mpls-traffic-class-policy list instance
<b>Context</b>	<a href="#">qos classifiers mpls-traffic-class-policy name</a> <i>string</i>
<b>Tree</b>	<a href="#">mpls-traffic-class-policy</a>

**Configurable** True

### name *string*



**Note:**

This command is available for the following platforms:

- 7250 IXR-6
- 7250 IXR-10

**Description** User-configured name for an MPLS traffic-class classification policy  
The name 'default' is reserved for the system default MPLS TC classifier.

**Context** [qos classifiers mpls-traffic-class-policy name \*string\*](#)

**String Length** 1 to 255

**Configurable** True

### traffic-class *value number*



**Note:**

This command is available for the following platforms:

- 7250 IXR-6
- 7250 IXR-10

**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

### value *number*



**Note:**

This command is available for the following platforms:

- 7250 IXR-6
- 7250 IXR-10

**Description** A single traffic-class value

<b>Context</b>	<a href="#">qos classifiers mpls-traffic-class-policy name</a> <i>string</i> <a href="#">traffic-class value number</a>
<b>Range</b>	0 to 7
<b>Configurable</b>	True

### drop-probability *keyword*



**Note:**

This command is available for the following platforms:

- 7250 IXR-6
- 7250 IXR-10

<b>Description</b>	The drop probability to which the traffic-class value is mapped
<b>Context</b>	<a href="#">qos classifiers mpls-traffic-class-policy name</a> <i>string</i> <a href="#">traffic-class value number</a> <a href="#">drop-probability keyword</a>
<b>Tree</b>	<a href="#">drop-probability</a>
<b>Options</b>	<ul style="list-style-type: none"> <li>• low Traffic that should be dropped last when there is congestion. Internally this is traffic that is colored green.</li> <li>• 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.</li> <li>• high Traffic that should be dropped first when there is congestion. Internally this is traffic that is colored red.</li> </ul>
<b>Configurable</b>	True

### forwarding-class *keyword*



**Note:**

This command is available for the following platforms:

- 7250 IXR-6
- 7250 IXR-10

<b>Description</b>	The forwarding class to which the traffic-class value is mapped
<b>Context</b>	<a href="#">qos classifiers mpls-traffic-class-policy name</a> <i>string</i> <a href="#">traffic-class value number</a> <a href="#">forwarding-class keyword</a>
<b>Tree</b>	<a href="#">forwarding-class</a>

<b>Options</b>	<ul style="list-style-type: none"> <li>• fc0</li> <li>• fc1</li> <li>• fc2</li> <li>• fc3</li> <li>• fc4</li> <li>• fc5</li> <li>• fc6</li> <li>• fc7</li> </ul>
<b>Configurable</b>	True

### vxlan-default *reference*



**Note:**

This command is available for the following platforms:

- 7220 IXR-D2
- 7220 IXR-D3
- 7220 IXR-D3L
- 7220 IXR-D2L

<b>Description</b>	Reference to the name of a DSCP classifier policy that applies to terminating VXLAN packets.
<b>Context</b>	<a href="#">qos classifiers vxlan-default</a> <i>reference</i>
<b>Tree</b>	<a href="#">vxlan-default</a>
<b>Reference</b>	<a href="#">qos classifiers dscp-policy name</a> <i>string</i>
<b>Configurable</b>	True

## explicit-congestion-notification



### Note:

This command is available for the following platforms:

- 7220 IXR-D2
- 7250 IXR-10
- 7220 IXR-D3L
- 7220 IXR-D2L
- 7220 IXR-H3
- 7220 IXR-H2
- 7220 IXR-D3
- 7250 IXR-6

<b>Description</b>	Enable the explicit-congestion-notification context
<b>Context</b>	<a href="#">qos explicit-congestion-notification</a>
<b>Tree</b>	<a href="#">explicit-congestion-notification</a>
<b>Configurable</b>	True

## ecn-dscp-policy *reference*



### Note:

This command is available for the following platforms:

- 7250 IXR-6
- 7250 IXR-10

<b>Description</b>	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.
<b>Context</b>	<a href="#">qos explicit-congestion-notification ecn-dscp-policy <i>reference</i></a>
<b>Tree</b>	<a href="#">ecn-dscp-policy</a>
<b>Reference</b>	<a href="#">qos rewrite-rules dscp-policy name <i>string</i></a>
<b>Configurable</b>	True



## queue-templates



### Note:

This command is available for the following platforms:

- 7220 IXR-D2
- 7250 IXR-10
- 7220 IXR-D3L
- 7220 IXR-D2L
- 7220 IXR-H3
- 7220 IXR-H2
- 7220 IXR-D3
- 7250 IXR-6

<b>Description</b>	Enter the queue-templates context
<b>Context</b>	<a href="#">qos queue-templates</a>
<b>Tree</b>	<a href="#">queue-templates</a>
<b>Configurable</b>	True

## queue-template *name string*



### Note:

This command is available for the following platforms:

- 7220 IXR-D2
- 7250 IXR-10
- 7220 IXR-D3L
- 7220 IXR-D2L
- 7220 IXR-H3
- 7220 IXR-H2
- 7220 IXR-D3
- 7250 IXR-6

<b>Description</b>	List of queue templates that can be applied to egress queues or VOQ sets The 7250 IXR-6/10 platforms supports a maximum 8 queue-templates. The 7220-D2/D3/H2/H3 platforms support a maximum of 64 queue-templates.
<b>Context</b>	<a href="#">qos queue-templates queue-template name string</a>
<b>Tree</b>	<a href="#">queue-template</a>
<b>Configurable</b>	True

**Max. Elements** 64

### name *string*



**Note:**

This command is available for the following platforms:

- 7220 IXR-D2
- 7250 IXR-10
- 7220 IXR-D3L
- 7220 IXR-D2L
- 7220 IXR-H3
- 7220 IXR-H2
- 7220 IXR-D3
- 7250 IXR-6

<b>Description</b>	The name of the queue template The queue template with the special name “default” is used when a queue-template reference is missing.
<b>Context</b>	<a href="#">qos queue-templates queue-template name</a> <i>string</i>
<b>String Length</b>	1 to 255
<b>Configurable</b>	True

### active-queue-management



**Note:**

This command is available for the following platforms:

- 7220 IXR-D2
- 7250 IXR-10
- 7220 IXR-D3L
- 7220 IXR-D2L
- 7220 IXR-H3
- 7220 IXR-H2
- 7220 IXR-D3
- 7250 IXR-6

<b>Description</b>	Enable the active-queue-management context
--------------------	--

<b>Context</b>	qos queue-templates queue-template name <i>string</i> active-queue-management
<b>Tree</b>	active-queue-management
<b>Configurable</b>	True

### ecn-slope ecn-drop-probability *keyword*



**Note:**

This command is available for the following platforms:

- 7220 IXR-D2
- 7250 IXR-10
- 7220 IXR-D3L
- 7220 IXR-D2L
- 7220 IXR-H3
- 7220 IXR-H2
- 7220 IXR-D3
- 7250 IXR-6

<b>Description</b>	List of ECN slopes.
<b>Context</b>	qos queue-templates queue-template name <i>string</i> active-queue-management ecn-slope ecn-drop-probability <i>keyword</i>
<b>Tree</b>	ecn-slope
<b>Configurable</b>	True

### ecn-drop-probability *keyword*



**Note:**

This command is available for the following platforms:

- 7220 IXR-D2
- 7250 IXR-10
- 7220 IXR-D3L
- 7220 IXR-D2L
- 7220 IXR-H3
- 7220 IXR-H2
- 7220 IXR-D3
- 7250 IXR-6

<b>Description</b>	The drop probability to which the ECN slope applies.
--------------------	--

<b>Context</b>	<code>qos queue-templates queue-template name</code> <i>string</i> <code>active-queue-management ecn-slope ecn-drop-probability</code> <i>keyword</i>
<b>Options</b>	<ul style="list-style-type: none"> <li>low Traffic that should be dropped last when there is congestion. Internally this is traffic that is colored green.</li> <li>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.</li> <li>high Traffic that should be dropped first when there is congestion. Internally this is traffic that is colored red.</li> <li>all All traffic, consisting of traffic marked low, medium and high drop-probability.</li> </ul>
<b>Configurable</b>	True

### max-probability *number*



#### Note:

This command is available for the following platforms:

- 7220 IXR-D2
- 7250 IXR-10
- 7220 IXR-D3L
- 7220 IXR-D2L
- 7220 IXR-H3
- 7220 IXR-H2
- 7220 IXR-D3
- 7250 IXR-6

<b>Description</b>	<p>The maximum probability of marking a packet (at or above the max-threshold).</p> <p>On TD3/TH3 max-probability has a limited set of discrete values: 1,2,3,4,5,6,7,8,9,10,25,50,75,100. The user is allowed to enter any value but the system will choose the next-highest value that is supported.</p> <p>A slope is disabled by setting min-threshold-percent=100, max-threshold-percent=100 and max-probability=0.</p>
<b>Context</b>	<code>qos queue-templates queue-template name</code> <i>string</i> <code>active-queue-management ecn-slope ecn-drop-probability</code> <i>keyword</i> <code>max-probability</code> <i>number</i>
<b>Tree</b>	<code>max-probability</code>

<b>Range</b>	0 to 100
<b>Default</b>	0
<b>Configurable</b>	True

### max-threshold-percent *number*



**Note:**

This command is available for the following platforms:

- 7220 IXR-D2
- 7250 IXR-10
- 7220 IXR-D3L
- 7220 IXR-D2L
- 7220 IXR-H3
- 7220 IXR-H2
- 7220 IXR-D3
- 7250 IXR-6

<b>Description</b>	The percentage of the MBS that corresponds to the ECN maximum threshold parameter.  A slope is disabled by setting min-threshold-percent=100, max-threshold-percent=100 and max-probability=0.
<b>Context</b>	<a href="#">qos queue-templates queue-template name</a> <i>string</i> <a href="#">active-queue-management ecn-slope ecn-drop-probability</a> <i>keyword</i> <a href="#">max-threshold-percent</a> <i>number</i>
<b>Tree</b>	<a href="#">max-threshold-percent</a>
<b>Range</b>	0 to 100
<b>Default</b>	100
<b>Configurable</b>	True

**min-threshold-percent** *number***Note:**

This command is available for the following platforms:

- 7220 IXR-D2
- 7250 IXR-10
- 7220 IXR-D3L
- 7220 IXR-D2L
- 7220 IXR-H3
- 7220 IXR-H2
- 7220 IXR-D3
- 7250 IXR-6

<b>Description</b>	The percentage of the MBS that corresponds to the ECN minimum threshold parameter.  A slope is disabled by setting min-threshold-percent=100, max-threshold-percent=100 and max-probability=0.
<b>Context</b>	<a href="#">qos queue-templates queue-template name</a> <i>string</i> <a href="#">active-queue-management ecn-slope ecn-drop-probability</a> <i>keyword</i> <a href="#">min-threshold-percent</a> <i>number</i>
<b>Tree</b>	<a href="#">min-threshold-percent</a>
<b>Range</b>	0 to 100
<b>Default</b>	100
<b>Configurable</b>	True

**weight-factor** *number***Note:**

This command is available for the following platforms:

- 7220 IXR-D2
- 7250 IXR-10
- 7220 IXR-D3L
- 7220 IXR-D2L
- 7220 IXR-H3
- 7220 IXR-H2
- 7220 IXR-D3
- 7250 IXR-6

<b>Description</b>	Weight factor to use in the calculation of the current (average weighted) queue depth.
<b>Context</b>	<a href="#">qos queue-templates queue-template name</a> <i>string</i> <a href="#">active-queue-management weight-factor</a> <i>number</i>
<b>Tree</b>	<a href="#">weight-factor</a>
<b>Range</b>	0 to 15
<b>Default</b>	0
<b>Configurable</b>	True

### **wred-slope** [traffic-type](#) *keyword* [drop-probability](#) *keyword*



#### **Note:**

This command is available for the following platforms:

- 7220 IXR-D2
- 7250 IXR-10
- 7220 IXR-D3L
- 7220 IXR-D2L
- 7220 IXR-H3
- 7220 IXR-H2
- 7220 IXR-D3
- 7250 IXR-6

<b>Description</b>	List of WRED slopes.
<b>Context</b>	<a href="#">qos queue-templates queue-template name</a> <i>string</i> <a href="#">active-queue-management wred-slope traffic-type</a> <i>keyword</i> <a href="#">drop-probability</a> <i>keyword</i>
<b>Tree</b>	<a href="#">wred-slope</a>
<b>Configurable</b>	True

**traffic-type keyword****Note:**

This command is available for the following platforms:

- 7220 IXR-D2
- 7250 IXR-10
- 7220 IXR-D3L
- 7220 IXR-D2L
- 7220 IXR-H3
- 7220 IXR-H2
- 7220 IXR-D3
- 7250 IXR-6

<b>Description</b>	The traffic type to which the WRED slope applies.
<b>Context</b>	<a href="#">qos queue-templates queue-template name string active-queue-management wred-slope traffic-type keyword drop-probability keyword</a>
<b>Options</b>	<ul style="list-style-type: none"> <li>• tcp Refers to IPv4/IPv6 packets with a protocol/next-header indicating a value of 6.</li> <li>• non-tcp Refers to all packets that are not IPv4/IPv6 packets with a protocol/next-header indicating a value of 6.</li> <li>• all Refers to all traffic, whether it is TCP or non-TCP.</li> </ul>
<b>Configurable</b>	True



## drop-probability *keyword*



### Note:

This command is available for the following platforms:

- 7220 IXR-D2
- 7250 IXR-10
- 7220 IXR-D3L
- 7220 IXR-D2L
- 7220 IXR-H3
- 7220 IXR-H2
- 7220 IXR-D3
- 7250 IXR-6

<b>Description</b>	The drop probability to which the WRED slope applies.
<b>Context</b>	<a href="#">qos queue-templates queue-template name</a> <i>string</i> <a href="#">active-queue-management wred-slope traffic-type</a> <i>keyword</i> <a href="#">drop-probability</a> <i>keyword</i>
<b>Options</b>	<ul style="list-style-type: none"> <li>• low Traffic that should be dropped last when there is congestion. Internally this is traffic that is colored green.</li> <li>• 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.</li> <li>• high Traffic that should be dropped first when there is congestion. Internally this is traffic that is colored red.</li> </ul>
<b>Configurable</b>	True

## max-probability *number*



### Note:

This command is available for the following platforms:

- 7220 IXR-D2
- 7250 IXR-10
- 7220 IXR-D3L
- 7220 IXR-D2L
- 7220 IXR-H3
- 7220 IXR-H2
- 7220 IXR-D3
- 7250 IXR-6

### Description

The maximum probability of dropping a packet (at or above the max-threshold).

A slope is disabled by setting min-threshold-percent=100, max-threshold-percent=100 and max-probability=0

### Context

[qos queue-templates queue-template name](#) *string* [active-queue-management wred-slope traffic-type keyword](#) [drop-probability keyword](#) [max-probability](#) *number*

### Tree

[max-probability](#)

### Range

0 to 100

### Default

0

### Configurable

True

## max-threshold-percent *number*



### Note:

This command is available for the following platforms:

- 7220 IXR-D2
- 7250 IXR-10
- 7220 IXR-D3L
- 7220 IXR-D2L
- 7220 IXR-H3
- 7220 IXR-H2
- 7220 IXR-D3
- 7250 IXR-6

<b>Description</b>	The percentage of the MBS that corresponds to the WRED maximum threshold parameter. A slope is disabled by setting min-threshold-percent=100, max-threshold-percent=100 and max-probability=0
<b>Context</b>	<a href="#">qos queue-templates queue-template name</a> <i>string</i> <a href="#">active-queue-management wred-slope traffic-type</a> <i>keyword</i> <a href="#">drop-probability</a> <i>keyword</i> <a href="#">max-threshold-percent</a> <i>number</i>
<b>Tree</b>	<a href="#">max-threshold-percent</a>
<b>Range</b>	0 to 100
<b>Default</b>	100
<b>Configurable</b>	True

### min-threshold-percent *number*



**Note:**

This command is available for the following platforms:

- 7220 IXR-D2
- 7250 IXR-10
- 7220 IXR-D3L
- 7220 IXR-D2L
- 7220 IXR-H3
- 7220 IXR-H2
- 7220 IXR-D3
- 7250 IXR-6

<b>Description</b>	The percentage of the MBS that corresponds to the WRED minimum threshold parameter. A slope is disabled by setting min-threshold-percent=100, max-threshold-percent=100 and max-probability=0
<b>Context</b>	<a href="#">qos queue-templates queue-template name</a> <i>string</i> <a href="#">active-queue-management wred-slope traffic-type</a> <i>keyword</i> <a href="#">drop-probability</a> <i>keyword</i> <a href="#">min-threshold-percent</a> <i>number</i>
<b>Tree</b>	<a href="#">min-threshold-percent</a>
<b>Range</b>	0 to 100
<b>Default</b>	100
<b>Configurable</b>	True

## queue-depth



### Note:

This command is available for the following platforms:

- 7220 IXR-D2
- 7250 IXR-10
- 7220 IXR-D3L
- 7220 IXR-D2L
- 7220 IXR-H3
- 7220 IXR-H2
- 7220 IXR-D3
- 7250 IXR-6

<b>Description</b>	Enter the queue-depth context
<b>Context</b>	<a href="#">qos queue-templates queue-template name</a> <i>string</i> <a href="#">queue-depth</a>
<b>Tree</b>	<a href="#">queue-depth</a>
<b>Configurable</b>	True

## high-threshold-bytes *number*



### Note:

This command is available for the following platforms:

- 7220 IXR-D2
- 7250 IXR-10
- 7220 IXR-D3L
- 7220 IXR-D2L
- 7220 IXR-H3
- 7220 IXR-H2
- 7220 IXR-D3
- 7250 IXR-6

<b>Description</b>	<p>The queue depth that, when crossed in a rising direction, triggers a hardware interrupt and a recording of the current system time.</p> <p>The default value of 0 disables the functionality.</p> <p>On J2 systems this parameter applies to a set of VOQs (and therefore to unicast traffic only). On TD3/TH3 systems this parameter applies to a unicast queue only; the configuration of this leaf is ignored when the queue-template is attached to a multicast-queue.</p>
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On TD3 the threshold is rounded up the nearest multiple of 2048 bytes. On J2 the threshold is rounded up to the nearest multiple of 4096 bytes. On TH3 the threshold is rounded up to the nearest multiple of 254 bytes.

<b>Context</b>	<a href="#">qos queue-templates queue-template name</a> <i>string</i> <a href="#">queue-depth high-threshold-bytes</a> <i>number</i>
<b>Tree</b>	<a href="#">high-threshold-bytes</a>
<b>Default</b>	0
<b>Configurable</b>	True

### maximum-burst-size *number*



**Note:**

This command is available for the following platforms:

- 7220 IXR-D2
- 7250 IXR-10
- 7220 IXR-D3L
- 7220 IXR-D2L
- 7220 IXR-H3
- 7220 IXR-H2
- 7220 IXR-D3
- 7250 IXR-6

<b>Description</b>	<p>Maximum queue depth in bytes. MBS buffer space is not guaranteed.</p> <p>On J2 systems this parameter applies to a set of VOQs and the default is 256 MB (268435456 bytes).</p> <p>On TD3/TH3 systems this parameter applies to an egress queue and the default value is based on system-derived 'alpha' calculation.</p> <p>Must be non-zero/non-default in order to add the active-queue-management presence container.</p>
<b>Context</b>	<a href="#">qos queue-templates queue-template name</a> <i>string</i> <a href="#">queue-depth maximum-burst-size</a> <i>number</i>
<b>Tree</b>	<a href="#">maximum-burst-size</a>
<b>Default</b>	0
<b>Units</b>	bytes
<b>Configurable</b>	True

## rewrite-rules



### Note:

This command is available for the following platforms:

- 7220 IXR-D2
- 7250 IXR-10
- 7220 IXR-D3L
- 7220 IXR-D2L
- 7220 IXR-H3
- 7220 IXR-H2
- 7220 IXR-D3
- 7250 IXR-6

<b>Description</b>	Enter the rewrite-rules context
<b>Context</b>	<a href="#">qos rewrite-rules</a>
<b>Tree</b>	<a href="#">rewrite-rules</a>
<b>Configurable</b>	True

## dscp-policy *name string*



### Note:

This command is available for the following platforms:

- 7220 IXR-D2
- 7250 IXR-10
- 7220 IXR-D3L
- 7220 IXR-D2L
- 7220 IXR-H3
- 7220 IXR-H2
- 7220 IXR-D3
- 7250 IXR-6

<b>Description</b>	Enter the dscp-policy list instance
<b>Context</b>	<a href="#">qos rewrite-rules dscp-policy name string</a>
<b>Tree</b>	<a href="#">dscp-policy</a>
<b>Configurable</b>	True

**name *string*****Note:**

This command is available for the following platforms:

- 7220 IXR-D2
- 7250 IXR-10
- 7220 IXR-D3L
- 7220 IXR-D2L
- 7220 IXR-H3
- 7220 IXR-H2
- 7220 IXR-D3
- 7250 IXR-6

<b>Description</b>	User-configured name for a DSCP rewrite policy.
<b>Context</b>	<a href="#">qos rewrite-rules dscp-policy name</a> <i>string</i>
<b>String Length</b>	1 to 255
<b>Configurable</b>	True

**map [forwarding-class](#) *keyword*****Note:**

This command is available for the following platforms:

- 7220 IXR-D2
- 7250 IXR-10
- 7220 IXR-D3L
- 7220 IXR-D2L
- 7220 IXR-H3
- 7220 IXR-H2
- 7220 IXR-D3
- 7250 IXR-6

<b>Description</b>	Enter the map list instance
<b>Context</b>	<a href="#">qos rewrite-rules dscp-policy name</a> <i>string</i> <a href="#">map forwarding-class</a> <i>keyword</i>
<b>Tree</b>	<a href="#">map</a>
<b>Configurable</b>	True

**forwarding-class *keyword*****Note:**

This command is available for the following platforms:

- 7220 IXR-D2
- 7250 IXR-10
- 7220 IXR-D3L
- 7220 IXR-D2L
- 7220 IXR-H3
- 7220 IXR-H2
- 7220 IXR-D3
- 7250 IXR-6

<b>Description</b>	The forwarding-class value
<b>Context</b>	<a href="#">qos rewrite-rules dscp-policy name</a> <i>string map forwarding-class keyword</i>
<b>Options</b>	<ul style="list-style-type: none"> <li>• fc0</li> <li>• fc1</li> <li>• fc2</li> <li>• fc3</li> <li>• fc4</li> <li>• fc5</li> <li>• fc6</li> <li>• fc7</li> </ul>
<b>Configurable</b>	True



**drop-probability** *drop-probability keyword***Note:**

This command is available for the following platforms:

- 7220 IXR-D2
- 7250 IXR-10
- 7220 IXR-D3L
- 7220 IXR-D2L
- 7220 IXR-H3
- 7220 IXR-H2
- 7220 IXR-D3
- 7250 IXR-6

<b>Description</b>	Enter the drop-probability list instance
<b>Context</b>	<a href="#">qos rewrite-rules dscp-policy name</a> <i>string</i> <a href="#">map forwarding-class</a> <i>keyword</i> <a href="#">drop-probability drop-probability</a> <i>keyword</i>
<b>Tree</b>	<a href="#">drop-probability</a>
<b>Configurable</b>	True

**drop-probability** *keyword***Note:**

This command is available for the following platforms:

- 7220 IXR-D2
- 7250 IXR-10
- 7220 IXR-D3L
- 7220 IXR-D2L
- 7220 IXR-H3
- 7220 IXR-H2
- 7220 IXR-D3
- 7250 IXR-6

<b>Description</b>	A drop probability level within the FC for which a different remarking is desired.
<b>Context</b>	<a href="#">qos rewrite-rules dscp-policy name</a> <i>string</i> <a href="#">map forwarding-class</a> <i>keyword</i> <a href="#">drop-probability drop-probability</a> <i>keyword</i>
<b>Options</b>	<ul style="list-style-type: none"> <li>• low</li> </ul> <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

### **dscp (*number* | *keyword*)**



**Note:**

This command is available for the following platforms:

- 7220 IXR-D2
- 7250 IXR-10
- 7220 IXR-D3L
- 7220 IXR-D2L
- 7220 IXR-H3
- 7220 IXR-H2
- 7220 IXR-D3
- 7250 IXR-6

<b>Description</b>	The DSCP marking to be used for this specific drop-probability
<b>Context</b>	<a href="#">qos rewrite-rules dscp-policy name <i>string</i> map forwarding-class <i>keyword</i> drop-probability <i>drop-probability</i> <i>keyword</i> dscp (<i>number</i>   <i>keyword</i>)</a>
<b>Tree</b>	<a href="#">dscp</a>
<b>Range</b>	0 to 63
<b>Options</b>	<ul style="list-style-type: none"> <li>• CS0</li> <li>• LE</li> <li>• CS1</li> <li>• AF11</li> <li>• AF12</li> <li>• AF13</li> <li>• CS2</li> <li>• AF21</li> <li>• AF22</li> <li>• AF23</li> <li>• CS3</li> <li>• AF31</li> </ul>

- AF32
- AF33
- CS4
- AF41
- AF42
- AF43
- CS5
- EF
- CS6
- CS7

**Configurable** True

### dscp (*number* | *keyword*)



**Note:**

This command is available for the following platforms:

- 7220 IXR-D2
- 7250 IXR-10
- 7220 IXR-D3L
- 7220 IXR-D2L
- 7220 IXR-H3
- 7220 IXR-H2
- 7220 IXR-D3
- 7250 IXR-6

<b>Description</b>	The DSCP marking to be used for all packets associated with the FC, except those with a drop-probability-specific override.
<b>Context</b>	<a href="#">qos rewrite-rules dscp-policy name</a> <i>string</i> <a href="#">map forwarding-class keyword</a> <a href="#">dscp (number   keyword)</a>
<b>Tree</b>	<a href="#">dscp</a>
<b>Range</b>	0 to 63
<b>Options</b>	<ul style="list-style-type: none"> <li>• CS0</li> <li>• LE</li> <li>• CS1</li> <li>• AF11</li> <li>• AF12</li> <li>• AF13</li> </ul>

- CS2
- AF21
- AF22
- AF23
- CS3
- AF31
- AF32
- AF33
- CS4
- AF41
- AF42
- AF43
- CS5
- EF
- CS6
- CS7

**Configurable** True

### **mpls-traffic-class-policy** *name string*



**Note:**

This command is available for the following platforms:

- 7250 IXR-6
- 7250 IXR-10

<b>Description</b>	Enter the mpls-traffic-class-policy list instance
<b>Context</b>	<a href="#">qos rewrite-rules mpls-traffic-class-policy name string</a>
<b>Tree</b>	<a href="#">mpls-traffic-class-policy</a>
<b>Configurable</b>	True

### **name** *string*



**Note:**

This command is available for the following platforms:

- 7250 IXR-6
- 7250 IXR-10

<b>Description</b>	User-configured name for an MPLS traffic-class rewrite policy.
<b>Context</b>	<code>qos rewrite-rules mpls-traffic-class-policy name string</code>
<b>String Length</b>	1 to 255
<b>Configurable</b>	True

### map forwarding-class *keyword*



**Note:**

This command is available for the following platforms:

- 7250 IXR-6
- 7250 IXR-10

<b>Description</b>	Enter the map list instance
<b>Context</b>	<code>qos rewrite-rules mpls-traffic-class-policy name string map forwarding-class keyword</code>
<b>Tree</b>	<code>map</code>
<b>Configurable</b>	True

### forwarding-class *keyword*



**Note:**

This command is available for the following platforms:

- 7250 IXR-6
- 7250 IXR-10

<b>Description</b>	The forwarding-class value
<b>Context</b>	<code>qos rewrite-rules mpls-traffic-class-policy name string map forwarding-class keyword</code>
<b>Options</b>	<ul style="list-style-type: none"> <li>• fc0</li> <li>• fc1</li> <li>• fc2</li> <li>• fc3</li> <li>• fc4</li> <li>• fc5</li> <li>• fc6</li> <li>• fc7</li> </ul>
<b>Configurable</b>	True

**drop-probability** *drop-probability keyword***Note:**

This command is available for the following platforms:

- 7250 IXR-6
- 7250 IXR-10

<b>Description</b>	Enter the drop-probability list instance
<b>Context</b>	<code>qos rewrite-rules mpls-traffic-class-policy name string map forwarding-class keyword drop-probability drop-probability keyword</code>
<b>Tree</b>	<code>drop-probability</code>
<b>Configurable</b>	True

**drop-probability** *keyword***Note:**

This command is available for the following platforms:

- 7250 IXR-6
- 7250 IXR-10

<b>Description</b>	A drop probability level within the FC for which a different remarking is desired.
<b>Context</b>	<code>qos rewrite-rules mpls-traffic-class-policy name string map forwarding-class keyword drop-probability drop-probability keyword</code>
<b>Options</b>	<ul style="list-style-type: none"> <li>• low Traffic that should be dropped last when there is congestion. Internally this is traffic that is colored green.</li> <li>• 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.</li> <li>• high Traffic that should be dropped first when there is congestion. Internally this is traffic that is colored red.</li> </ul>
<b>Configurable</b>	True

**traffic-class *number*****Note:**

This command is available for the following platforms:

- 7250 IXR-6
- 7250 IXR-10

<b>Description</b>	The MPLS traffic class marking to be used for this specific drop-probability
<b>Context</b>	<a href="#">qos rewrite-rules mpls-traffic-class-policy name</a> <i>string</i> <a href="#">map forwarding-class keyword drop-probability drop-probability keyword traffic-class number</a>
<b>Tree</b>	<a href="#">traffic-class</a>
<b>Range</b>	0 to 7
<b>Configurable</b>	True

**traffic-class *number*****Note:**

This command is available for the following platforms:

- 7250 IXR-6
- 7250 IXR-10

<b>Description</b>	The MPLS traffic class marking to be used for all packets associated with the FC, except those with a drop-probability-specific override.
<b>Context</b>	<a href="#">qos rewrite-rules mpls-traffic-class-policy name</a> <i>string</i> <a href="#">map forwarding-class keyword traffic-class number</a>
<b>Tree</b>	<a href="#">traffic-class</a>
<b>Range</b>	0 to 7
<b>Configurable</b>	True

## 9 routing-policy

```

routing-policy
+ as-path-set name string
  + expression string
+ community-set name string
  + member (bgp-std-community-type | bgp-std-community-regexp-type | identityref | bgp-large-community-type | bgp-large-community-regexp-type)
+ policy name string
  + default-action
    + accept
      + bgp
        + as-path
          + prepend
            + as-number (number | keyword)
            + repeat-n number
          + remove boolean
          + replace number
        + communities
          + add reference
          + remove reference
          + replace reference
        + local-preference
          + set number
        + origin
          + set keyword
    + reject
  + statement sequence-id number
  + action
    + accept
      + bgp
        + as-path
          + prepend
            + as-number (number | keyword)
            + repeat-n number
          + remove boolean
          + replace number
        + communities
          + add reference
          + remove reference
          + replace reference
        + local-preference
          + set number
        + origin
          + set keyword
    + reject
  + match
    + bgp
      + as-path-length
        + operator keyword
        + unique boolean
        + value number
      + as-path-set reference
      + community-set reference
      + evpn
        + route-type number
    + family identityref
    + isis
      + level number
      + route-type keyword

```



```

+ 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

```

## 9.1 routing-policy Descriptions

### routing-policy

<b>Description</b>	Top-level container for all routing policy configuration
<b>Context</b>	<a href="#">routing-policy</a>
<b>Tree</b>	<a href="#">routing-policy</a>
<b>Configurable</b>	True

### as-path-set *name string*

<b>Description</b>	AS Path regular expressions for use in policy entries
<b>Context</b>	<a href="#">routing-policy as-path-set name string</a>
<b>Tree</b>	<a href="#">as-path-set</a>
<b>Configurable</b>	True

### name *string*

<b>Description</b>	A name used to identify the AS path regular expression
<b>Context</b>	<a href="#">routing-policy as-path-set name string</a>
<b>String Length</b>	1 to 255
<b>Configurable</b>	True

### expression *string*

<b>Description</b>	A regular expression where each AS number is an elemental term
<b>Context</b>	<a href="#">routing-policy as-path-set name string expression string</a>
<b>Tree</b>	<a href="#">expression</a>
<b>String Length</b>	1 to 65535
<b>Configurable</b>	True

**community-set** *name string*

<b>Description</b>	List of BGP community sets containing standard and large BGP communities
<b>Context</b>	<a href="#">routing-policy community-set name string</a>
<b>Tree</b>	<a href="#">community-set</a>
<b>Configurable</b>	True

**name** *string*

<b>Description</b>	A name used to identify the community set
<b>Context</b>	<a href="#">routing-policy community-set name string</a>
<b>String Length</b>	1 to 255
<b>Configurable</b>	True

**member** (*bgp-std-community-type* | *bgp-std-community-regexp-type* | *identityref* | *bgp-large-community-type* | *bgp-large-community-regexp-type*)

<b>Description</b>	A standard BGP community value, regular expression or well-known name or else a large BGP community value or regular expression
<b>Context</b>	<a href="#">routing-policy community-set name string member</a> ( <i>bgp-std-community-type</i>   <i>bgp-std-community-regexp-type</i>   <i>identityref</i>   <i>bgp-large-community-type</i>   <i>bgp-large-community-regexp-type</i> )
<b>Tree</b>	<a href="#">member</a>
<b>Options</b>	<ul style="list-style-type: none"> <li>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.</li> <li>no-advertise All NLRI received carrying this community must not be advertised to other BGP peers. This community has a value of 0xFFFFFFFF02.</li> <li>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.</li> </ul>
<b>Configurable</b>	True
<b>Min. Elements</b>	1

**policy name string**

<b>Description</b>	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.
<b>Context</b>	<a href="#">routing-policy policy name string</a>
<b>Tree</b>	<a href="#">policy</a>
<b>Configurable</b>	True

**name string**

<b>Description</b>	A name used to identify the policy
<b>Context</b>	<a href="#">routing-policy policy name string</a>
<b>String Length</b>	1 to 255
<b>Configurable</b>	True

**default-action**

<b>Description</b>	Actions for routes that do not match any policy entry
<b>Context</b>	<a href="#">routing-policy policy name string default-action</a>
<b>Tree</b>	<a href="#">default-action</a>
<b>Configurable</b>	True

**accept**

<b>Description</b>	Accept action
<b>Context</b>	<a href="#">routing-policy policy name string default-action accept</a>
<b>Tree</b>	<a href="#">accept</a>
<b>Configurable</b>	True

**bgp**

<b>Description</b>	Enable the bgp context
<b>Context</b>	<a href="#">routing-policy policy name string default-action accept bgp</a>
<b>Tree</b>	<a href="#">bgp</a>
<b>Configurable</b>	True

**as-path**

<b>Description</b>	Modify AS Path attribute of routes
<b>Context</b>	<a href="#">routing-policy policy name</a> <i>string</i> <a href="#">default-action</a> <a href="#">accept</a> <a href="#">bgp as-path</a>
<b>Tree</b>	<a href="#">as-path</a>
<b>Configurable</b>	True

**prepend**

<b>Description</b>	Prepend a BGP AS number to the AS Path attribute of routes
<b>Context</b>	<a href="#">routing-policy policy name</a> <i>string</i> <a href="#">default-action</a> <a href="#">accept</a> <a href="#">bgp as-path</a> <a href="#">prepend</a>
<b>Tree</b>	<a href="#">prepend</a>
<b>Configurable</b>	True

**as-number (*number* | *keyword*)**

<b>Description</b>	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.
<b>Context</b>	<a href="#">routing-policy policy name</a> <i>string</i> <a href="#">default-action</a> <a href="#">accept</a> <a href="#">bgp as-path</a> <a href="#">prepend as-number</a> ( <i>number</i>   <i>keyword</i> )
<b>Tree</b>	<a href="#">as-number</a>
<b>Range</b>	1 to 4294967295
<b>Options</b>	<ul style="list-style-type: none"> <li>• auto</li> </ul>
<b>Configurable</b>	True

**repeat-n *number***

<b>Description</b>	The number of repetitions of the prepended AS number
<b>Context</b>	<a href="#">routing-policy policy name</a> <i>string</i> <a href="#">default-action</a> <a href="#">accept</a> <a href="#">bgp as-path</a> <a href="#">prepend repeat-n</a> <i>number</i>
<b>Tree</b>	<a href="#">repeat-n</a>
<b>Range</b>	1 to 50
<b>Default</b>	1
<b>Configurable</b>	True

**remove *boolean***

<b>Description</b>	Clear the AS path to make it empty.
<b>Context</b>	<a href="#">routing-policy</a> <a href="#">policy name</a> <i>string</i> <a href="#">default-action</a> <a href="#">accept</a> <a href="#">bgp</a> <a href="#">as-path</a> <a href="#">remove</a> <i>boolean</i>
<b>Tree</b>	<a href="#">remove</a>
<b>Configurable</b>	True

**replace *number***

<b>Description</b>	Clear the existing AS path and replace it a new AS_SEQUENCE containing the listed AS numbers.
<b>Context</b>	<a href="#">routing-policy</a> <a href="#">policy name</a> <i>string</i> <a href="#">default-action</a> <a href="#">accept</a> <a href="#">bgp</a> <a href="#">as-path</a> <a href="#">replace</a> <i>number</i>
<b>Tree</b>	<a href="#">replace</a>
<b>Range</b>	1 to 4294967295
<b>Configurable</b>	True

**communities**

<b>Description</b>	Modify BGP communities attached to routes
<b>Context</b>	<a href="#">routing-policy</a> <a href="#">policy name</a> <i>string</i> <a href="#">default-action</a> <a href="#">accept</a> <a href="#">bgp</a> <a href="#">communities</a>
<b>Tree</b>	<a href="#">communities</a>
<b>Configurable</b>	True

**add *reference***

<b>Description</b>	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.
<b>Context</b>	<a href="#">routing-policy</a> <a href="#">policy name</a> <i>string</i> <a href="#">default-action</a> <a href="#">accept</a> <a href="#">bgp</a> <a href="#">communities</a> <a href="#">add</a> <i>reference</i>
<b>Tree</b>	<a href="#">add</a>
<b>Reference</b>	<a href="#">routing-policy</a> <a href="#">community-set name</a> <i>string</i>
<b>Configurable</b>	True

**remove reference**

<b>Description</b>	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.
<b>Context</b>	<a href="#">routing-policy policy name</a> <i>string</i> <a href="#">default-action accept bgp communities remove reference</a>
<b>Tree</b>	<a href="#">remove</a>
<b>Reference</b>	<a href="#">routing-policy community-set name</a> <i>string</i>
<b>Configurable</b>	True

**replace reference**

<b>Description</b>	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.
<b>Context</b>	<a href="#">routing-policy policy name</a> <i>string</i> <a href="#">default-action accept bgp communities replace reference</a>
<b>Tree</b>	<a href="#">replace</a>
<b>Reference</b>	<a href="#">routing-policy community-set name</a> <i>string</i>
<b>Configurable</b>	True

**local-preference**

<b>Description</b>	Enter the local-preference context
<b>Context</b>	<a href="#">routing-policy policy name</a> <i>string</i> <a href="#">default-action accept bgp local-preference</a>
<b>Tree</b>	<a href="#">local-preference</a>
<b>Configurable</b>	True

**set number**

<b>Description</b>	The new value of LOCAL_PREF to write into the matching BGP routes
<b>Context</b>	<a href="#">routing-policy policy name</a> <i>string</i> <a href="#">default-action accept bgp local-preference set number</a>
<b>Tree</b>	<a href="#">set</a>
<b>Configurable</b>	True

**origin**

<b>Description</b>	Enter the origin context
<b>Context</b>	<a href="#">routing-policy policy name</a> <i>string</i> <a href="#">default-action accept bgp origin</a>
<b>Tree</b>	<a href="#">origin</a>
<b>Configurable</b>	True

**set keyword**

<b>Description</b>	The new value of the ORIGIN attribute to write into the matching BGP routes
<b>Context</b>	<a href="#">routing-policy policy name</a> <i>string</i> <a href="#">default-action accept bgp origin set keyword</a>
<b>Tree</b>	<a href="#">set</a>
<b>Options</b>	<ul style="list-style-type: none"> <li>• <a href="#">igp</a></li> <li>• <a href="#">egp</a></li> <li>• <a href="#">incomplete</a></li> </ul>
<b>Configurable</b>	True

**reject**

<b>Description</b>	Reject action
<b>Context</b>	<a href="#">routing-policy policy name</a> <i>string</i> <a href="#">default-action reject</a>
<b>Tree</b>	<a href="#">reject</a>
<b>Configurable</b>	True

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

<b>Description</b>	Policy statements group conditions and actions within a policy definition. They are evaluated in the order of their sequence id.
<b>Context</b>	<a href="#">routing-policy policy name</a> <i>string</i> <a href="#">statement sequence-id</a> <i>number</i>
<b>Tree</b>	<a href="#">statement</a>
<b>Configurable</b>	True

**sequence-id *number***

<b>Description</b>	Number indicating when this policy statement should be evaluated relative to other policy statements
--------------------	--

Lower numbered statements are evaluated before higher numbered statements.

<b>Context</b>	<a href="#">routing-policy policy name</a> <i>string</i> <a href="#">statement sequence-id</a> <i>number</i>
<b>Range</b>	1 to 4294967295
<b>Configurable</b>	True

## action

<b>Description</b>	Policy actions
<b>Context</b>	<a href="#">routing-policy policy name</a> <i>string</i> <a href="#">statement sequence-id</a> <i>number</i> <a href="#">action</a>
<b>Tree</b>	<a href="#">action</a>
<b>Configurable</b>	True

## accept

<b>Description</b>	Accept action
<b>Context</b>	<a href="#">routing-policy policy name</a> <i>string</i> <a href="#">statement sequence-id</a> <i>number</i> <a href="#">action</a> <a href="#">accept</a>
<b>Tree</b>	<a href="#">accept</a>
<b>Configurable</b>	True

## bgp

<b>Description</b>	Enable the bgp context
<b>Context</b>	<a href="#">routing-policy policy name</a> <i>string</i> <a href="#">statement sequence-id</a> <i>number</i> <a href="#">action</a> <a href="#">accept</a> <a href="#">bgp</a>
<b>Tree</b>	<a href="#">bgp</a>
<b>Configurable</b>	True

## as-path

<b>Description</b>	Modify AS Path attribute of routes
<b>Context</b>	<a href="#">routing-policy policy name</a> <i>string</i> <a href="#">statement sequence-id</a> <i>number</i> <a href="#">action</a> <a href="#">accept</a> <a href="#">bgp</a> <a href="#">as-path</a>
<b>Tree</b>	<a href="#">as-path</a>
<b>Configurable</b>	True



**prepend**

<b>Description</b>	Prepend a BGP AS number to the AS Path attribute of routes
<b>Context</b>	<a href="#">routing-policy policy name string statement sequence-id number action</a> <a href="#">accept bgp as-path prepend</a>
<b>Tree</b>	<a href="#">prepend</a>
<b>Configurable</b>	True

**as-number (*number* | *keyword*)**

<b>Description</b>	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.
<b>Context</b>	<a href="#">routing-policy policy name string statement sequence-id number action</a> <a href="#">accept bgp as-path prepend as-number (<i>number</i>   <i>keyword</i>)</a>
<b>Tree</b>	<a href="#">as-number</a>
<b>Range</b>	1 to 4294967295
<b>Options</b>	<ul style="list-style-type: none"> <li>• auto</li> </ul>
<b>Configurable</b>	True

**repeat-n *number***

<b>Description</b>	The number of repetitions of the prepended AS number
<b>Context</b>	<a href="#">routing-policy policy name string statement sequence-id number action</a> <a href="#">accept bgp as-path prepend repeat-n <i>number</i></a>
<b>Tree</b>	<a href="#">repeat-n</a>
<b>Range</b>	1 to 50
<b>Default</b>	1
<b>Configurable</b>	True

**remove *boolean***

<b>Description</b>	Clear the AS path to make it empty.
<b>Context</b>	<a href="#">routing-policy policy name string statement sequence-id number action</a> <a href="#">accept bgp as-path remove <i>boolean</i></a>
<b>Tree</b>	<a href="#">remove</a>
<b>Configurable</b>	True

**replace *number***

<b>Description</b>	Clear the existing AS path and replace it a new AS_SEQUENCE containing the listed AS numbers.
<b>Context</b>	<a href="#">routing-policy policy name</a> <i>string</i> <a href="#">statement sequence-id</a> <i>number</i> <a href="#">action</a> <a href="#">accept bgp as-path</a> <a href="#">replace</a> <i>number</i>
<b>Tree</b>	<a href="#">replace</a>
<b>Range</b>	1 to 4294967295
<b>Configurable</b>	True

**communities**

<b>Description</b>	Modify BGP communities attached to routes
<b>Context</b>	<a href="#">routing-policy policy name</a> <i>string</i> <a href="#">statement sequence-id</a> <i>number</i> <a href="#">action</a> <a href="#">accept bgp communities</a>
<b>Tree</b>	<a href="#">communities</a>
<b>Configurable</b>	True

**add *reference***

<b>Description</b>	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.
<b>Context</b>	<a href="#">routing-policy policy name</a> <i>string</i> <a href="#">statement sequence-id</a> <i>number</i> <a href="#">action</a> <a href="#">accept bgp communities</a> <a href="#">add</a> <i>reference</i>
<b>Tree</b>	<a href="#">add</a>
<b>Reference</b>	<a href="#">routing-policy community-set name</a> <i>string</i>
<b>Configurable</b>	True

**remove *reference***

<b>Description</b>	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.
<b>Context</b>	<a href="#">routing-policy policy name</a> <i>string</i> <a href="#">statement sequence-id</a> <i>number</i> <a href="#">action</a> <a href="#">accept bgp communities</a> <a href="#">remove</a> <i>reference</i>
<b>Tree</b>	<a href="#">remove</a>

<b>Reference</b>	<a href="#">routing-policy community-set name</a> <i>string</i>
<b>Configurable</b>	True

### replace *reference*

<b>Description</b>	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.
<b>Context</b>	<a href="#">routing-policy policy name</a> <i>string</i> <a href="#">statement sequence-id</a> <i>number</i> <a href="#">action</a> <a href="#">accept bgp communities</a> <a href="#">replace</a> <i>reference</i>
<b>Tree</b>	<a href="#">replace</a>
<b>Reference</b>	<a href="#">routing-policy community-set name</a> <i>string</i>
<b>Configurable</b>	True

### local-preference

<b>Description</b>	Enter the local-preference context
<b>Context</b>	<a href="#">routing-policy policy name</a> <i>string</i> <a href="#">statement sequence-id</a> <i>number</i> <a href="#">action</a> <a href="#">accept bgp local-preference</a>
<b>Tree</b>	<a href="#">local-preference</a>
<b>Configurable</b>	True

### set *number*

<b>Description</b>	The new value of LOCAL_PREF to write into the matching BGP routes
<b>Context</b>	<a href="#">routing-policy policy name</a> <i>string</i> <a href="#">statement sequence-id</a> <i>number</i> <a href="#">action</a> <a href="#">accept bgp local-preference set</a> <i>number</i>
<b>Tree</b>	<a href="#">set</a>
<b>Configurable</b>	True

### origin

<b>Description</b>	Enter the origin context
<b>Context</b>	<a href="#">routing-policy policy name</a> <i>string</i> <a href="#">statement sequence-id</a> <i>number</i> <a href="#">action</a> <a href="#">accept bgp origin</a>
<b>Tree</b>	<a href="#">origin</a>

**Configurable** True

### set keyword

**Description** The new value of the ORIGIN attribute to write into the matching BGP routes

**Context** [routing-policy policy name](#) *string* [statement sequence-id](#) *number* [action](#)  
[accept bgp origin set](#) *keyword*

**Tree** [set](#)

**Options**

- [igp](#)
- [egp](#)
- [incomplete](#)

**Configurable** True

### reject

**Description** Reject action

**Context** [routing-policy policy name](#) *string* [statement sequence-id](#) *number* [action](#) [reject](#)

**Tree** [reject](#)

**Configurable** True

### match

**Description** Match conditions of the policy statement

**Context** [routing-policy policy name](#) *string* [statement sequence-id](#) *number* [match](#)

**Tree** [match](#)

**Configurable** True

### bgp

**Description** Top-level container

**Context** [routing-policy policy name](#) *string* [statement sequence-id](#) *number* [match](#) [bgp](#)

**Tree** [bgp](#)

**Configurable** True

**as-path-length**

<b>Description</b>	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.
<b>Context</b>	<a href="#">routing-policy policy name</a> <i>string</i> <a href="#">statement sequence-id</a> <i>number</i> <a href="#">match bgp as-path-length</a>
<b>Tree</b>	<a href="#">as-path-length</a>
<b>Configurable</b>	True

**operator *keyword***

<b>Description</b>	The comparison operator that applies to the value
<b>Context</b>	<a href="#">routing-policy policy name</a> <i>string</i> <a href="#">statement sequence-id</a> <i>number</i> <a href="#">match bgp as-path-length operator</a> <i>keyword</i>
<b>Tree</b>	<a href="#">operator</a>
<b>Default</b>	eq
<b>Options</b>	<ul style="list-style-type: none"> <li>• eq</li> <li>• ge</li> <li>• le</li> </ul>
<b>Configurable</b>	True

**unique *boolean***

<b>Description</b>	Count a repeated sequence of the same AS number as just 1 element
<b>Context</b>	<a href="#">routing-policy policy name</a> <i>string</i> <a href="#">statement sequence-id</a> <i>number</i> <a href="#">match bgp as-path-length unique</a> <i>boolean</i>
<b>Tree</b>	<a href="#">unique</a>
<b>Default</b>	false
<b>Configurable</b>	True

**value *number***

<b>Description</b>	The number of (unique) AS numbers in the AS path
<b>Context</b>	<a href="#">routing-policy policy name</a> <i>string</i> <a href="#">statement sequence-id</a> <i>number</i> <a href="#">match bgp as-path-length value</a> <i>number</i>
<b>Tree</b>	<a href="#">value</a>
<b>Range</b>	0 to 255
<b>Configurable</b>	True

**as-path-set reference**

<b>Description</b>	Reference to an as-path-set name A route meets this condition if it matches the regular expression
<b>Context</b>	<a href="#">routing-policy policy name</a> <i>string</i> <a href="#">statement sequence-id</a> <i>number</i> <a href="#">match bgp as-path-set reference</a>
<b>Tree</b>	<a href="#">as-path-set</a>
<b>Reference</b>	<a href="#">routing-policy as-path-set name</a> <i>string</i>
<b>Configurable</b>	True

**community-set reference**

<b>Description</b>	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
<b>Context</b>	<a href="#">routing-policy policy name</a> <i>string</i> <a href="#">statement sequence-id</a> <i>number</i> <a href="#">match bgp community-set reference</a>
<b>Tree</b>	<a href="#">community-set</a>
<b>Reference</b>	<a href="#">routing-policy community-set name</a> <i>string</i>
<b>Configurable</b>	True

**evpn**

<b>Description</b>	Container for match conditions that are specific to BGP EVPN routes.
<b>Context</b>	<a href="#">routing-policy policy name</a> <i>string</i> <a href="#">statement sequence-id</a> <i>number</i> <a href="#">match bgp evpn</a>
<b>Tree</b>	<a href="#">evpn</a>
<b>Configurable</b>	True

**route-type number**

<b>Description</b>	An EVPN route meets this condition if the route-type field in the NLRI is one of the values provided in this list.
<b>Context</b>	<a href="#">routing-policy policy name</a> <i>string</i> <a href="#">statement sequence-id</a> <i>number</i> <a href="#">match bgp evpn route-type</a> <i>number</i>
<b>Tree</b>	<a href="#">route-type</a>
<b>Range</b>	1 to 5

<b>Configurable</b>	True
<b>Max. Elements</b>	1

### **family *identityref***

<b>Description</b>	The name of an address family A route meets this condition if the prefix belongs to the indicated address family.
<b>Context</b>	<a href="#">routing-policy policy name string statement sequence-id number match family <i>identityref</i></a>
<b>Tree</b>	<a href="#">family</a>
<b>Options</b>	<ul style="list-style-type: none"> <li>• <code>ipv4-unicast</code> Unlabeled IPv4 unicast routes (AFI = 1, SAFI = 1)</li> <li>• <code>ipv6-unicast</code> Unlabeled IPv6 unicast routes (AFI = 2, SAFI = 1)</li> <li>• <code>evpn</code> EVPN routes (AFI = 25, SAFI = 70)</li> </ul>
<b>Configurable</b>	True

### **isis**

<b>Description</b>	Configuration for ISIS-specific policy match criteria
<b>Context</b>	<a href="#">routing-policy policy name string statement sequence-id number match isis</a>
<b>Tree</b>	<a href="#">isis</a>
<b>Configurable</b>	True

### **level *number***

<b>Description</b>	IS-IS route level
<b>Context</b>	<a href="#">routing-policy policy name string statement sequence-id number match isis level <i>number</i></a>
<b>Tree</b>	<a href="#">level</a>
<b>Range</b>	1 to 2
<b>Configurable</b>	True

**route-type keyword**

<b>Description</b>	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.
<b>Context</b>	<a href="#">routing-policy policy name</a> <i>string</i> <a href="#">statement sequence-id</a> <i>number</i> <a href="#">match isis route-type keyword</a>
<b>Tree</b>	<a href="#">route-type</a>
<b>Options</b>	<ul style="list-style-type: none"> <li>• internal</li> <li>• external</li> </ul>
<b>Configurable</b>	True

**ospf**

<b>Description</b>	Configuration for OSPF-specific policy match criteria
<b>Context</b>	<a href="#">routing-policy policy name</a> <i>string</i> <a href="#">statement sequence-id</a> <i>number</i> <a href="#">match ospf area-id</a>
<b>Tree</b>	<a href="#">ospf</a>
<b>Configurable</b>	True

**area-id**

<b>Description</b>	The area identifier as a dotted-quad.
<b>Context</b>	<a href="#">routing-policy policy name</a> <i>string</i> <a href="#">statement sequence-id</a> <i>number</i> <a href="#">match ospf area-id</a>
<b>Tree</b>	<a href="#">area-id</a>
<b>Configurable</b>	True

**instance-id number**

<b>Description</b>	OSPFv3 instance identifier
<b>Context</b>	<a href="#">routing-policy policy name</a> <i>string</i> <a href="#">statement sequence-id</a> <i>number</i> <a href="#">match ospf instance-id number</a>
<b>Tree</b>	<a href="#">instance-id</a>
<b>Range</b>	0 to 255
<b>Configurable</b>	True



**route-type *identityref***

<b>Description</b>	The OSPF route type.
<b>Context</b>	<a href="#">routing-policy policy name string statement sequence-id number match ospf route-type identityref</a>
<b>Tree</b>	<a href="#">route-type</a>
<b>Options</b>	<ul style="list-style-type: none"> <li>• type-1-ext The route has path-type type 1 external</li> <li>• type-2-ext The route has path-type type 2 external</li> </ul>
<b>Configurable</b>	True

**prefix-set *reference***

<b>Description</b>	Reference to a prefix set name
<b>Context</b>	<a href="#">routing-policy policy name string statement sequence-id number match prefix-set reference</a>
<b>Tree</b>	<a href="#">prefix-set</a>
<b>Reference</b>	<a href="#">routing-policy prefix-set name string</a>
<b>Configurable</b>	True

**protocol *identityref***

<b>Description</b>	The route type to match
<b>Context</b>	<a href="#">routing-policy policy name string statement sequence-id number match protocol identityref</a>
<b>Tree</b>	<a href="#">protocol</a>
<b>Options</b>	<ul style="list-style-type: none"> <li>• aggregate Locally configured aggregate route</li> <li>• arp-nd IP route added by ARP ND.</li> <li>• bgp Border Gateway Protocol version 4</li> <li>• bgp-evpn BGP Ethernet VPN (EVPN)</li> <li>• dhcp IP (default) route added by DHCP.</li> </ul>

- 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** True

### **prefix-set** *name string*

**Description** List of defined prefix sets  
**Context** [routing-policy prefix-set name string](#)  
**Tree** [prefix-set](#)  
**Configurable** True

### **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

**prefix ip-prefix (ipv4-prefix | ipv6-prefix) mask-length-range string**

<b>Description</b>	List of prefixes in the prefix set
<b>Context</b>	<a href="#">routing-policy prefix-set name</a> <i>string</i> <a href="#">prefix ip-prefix (ipv4-prefix   ipv6-prefix)</a> <a href="#">mask-length-range</a> <i>string</i>
<b>Tree</b>	<a href="#">prefix</a>
<b>Configurable</b>	True

**ip-prefix (ipv4-prefix | ipv6-prefix)**

<b>Description</b>	The IPv4 or IPv6 prefix in CIDR notation
<b>Context</b>	<a href="#">routing-policy prefix-set name</a> <i>string</i> <a href="#">prefix ip-prefix (ipv4-prefix   ipv6-prefix)</a> <a href="#">mask-length-range</a> <i>string</i>
<b>Configurable</b>	True

**mask-length-range string**

<b>Description</b>	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
<b>Context</b>	<a href="#">routing-policy prefix-set name</a> <i>string</i> <a href="#">prefix ip-prefix (ipv4-prefix   ipv6-prefix)</a> <a href="#">mask-length-range</a> <i>string</i>
<b>Configurable</b>	True

## 10 system

```

system
+ aaa
+ accounting
+ accounting-method reference
+ event event-type identityref
+ record identityref
+ authentication
+ admin-user
+ password string
- username string
+ authentication-method reference
+ exit-on-reject boolean
+ idle-timeout number
- session id number
- authentication-method string
- login-time string
- priv-lvl number
- remote-host string
- service-name string
- tty-name string
- username string
+ user username string
+ password string
+ role reference
+ ssh-key string
+ authorization
+ role rolename string
+ 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
- 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
+ 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

```

```

- launch-command string
- oom-score-adj number
- path string
- pid number
- restricted-operations keyword
- search-command string
- state keyword
- statistics
  - restart-count number
- version string
- yang
  - modules string
  - source-directories string
+ authentication
+ keychain name string
+ admin-state keyword
+ description string
+ key index number
  + algorithm keyword
  + authentication-key string
  + type keyword
+ banner
+ login-banner string
+ motd-banner string
+ boot
+ autoboot
  + admin-state keyword
  + attempts number
  + client-id keyword
  + interface reference
  - oper-state string
  + timeout number
- image string
+ bridge-table
+ mac-learning
  - mac-relearn-only boolean
+ mac-limit
  - maximum-entries number
  - warning-threshold-pct 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
- 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
- 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
+ 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
  + 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
  - 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)
- 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
+ gnmi-server
+ admin-state keyword
+ commit-confirmed-timeout number
+ commit-save boolean
+ include-defaults-in-config-only-responses boolean
+ network-instance name reference
+ admin-state keyword
- oper-state keyword
+ port number
+ source-address (ipv4-address | ipv6-address)
+ tls-profile reference
+ use-authentication boolean
+ rate-limit number
+ session-limit number
- subscription id number
- mode keyword
- paths string
- remote-host (ipv4-address | ipv6-address)
- remote-port number
- sample-interval number
- start-time string
- user string
- user-agent string
+ timeout number
+ trace-options keyword
+ unix-socket
+ admin-state keyword
- oper-state keyword
- socket-path string
+ tls-profile reference
+ use-authentication boolean
+ 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
+ lacp
+ system-id string
+ system-priority number
+ 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 string
      - 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
+ 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
+ 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
+ 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
+ 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
+ remote-port number
+ subsystem subsystem-name keyword
  + priority
    + match-above keyword
    + match-exact keyword
+ transport keyword
+ subsystem-facility keyword
+ maintenance
+ group name string
  + maintenance-mode
    + admin-state keyword
+ maintenance-profile reference
+ members
  + bgp
    + network-instance name reference
    + neighbor reference
    + peer-group reference
  + isis
    + network-instances reference
+ profile name string
  + bgp
    + export-policy reference
    + import-policy reference
  + isis
    + overload
    + max-metric boolean
    + set-bit boolean
+ mirroring
  + mirroring-instance name string
  + admin-state keyword
  + description string
  + mirror-destination
    + local string
  + mirror-source
    + interface name string
    + direction keyword
    + subinterface name string
    + direction keyword
  - oper-down-reason keyword
  - oper-state keyword
+ mtu
  + default-ip-mtu number
  + default-l2-mtu number
  + default-mpls-mtu number
  + default-port-mtu number
  + min-path-mtu number
+ name
  + domain-name string
  + host-name string
+ network-instance
  + protocols
    + bgp-vpn
      + bgp-instance id number
      - oper-down-reason keyword
      + route-distinguisher
        - rd (string | string | string | string)
        - route-distinguisher-origin keyword
      + route-target
        - export-route-target-origin keyword
        - export-rt (string | string | string | string | string | string | string |
string | string | string)
        - import-route-target-origin keyword
        - import-rt (string | string | 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
- neighbor (ipv4-address | ipv6-address)
- route-distinguisher (string | string | string | string)
- vni number
+ df-election
+ algorithm
- 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
- ethernet-segment-routes
- attr-id reference
- esi string
- neighbor (ipv4-address | ipv6-address)
- originating-router (ipv4-address | ipv6-address)
- route-distinguisher (string | string | string | string)
+ interface reference
+ multi-homing-mode keyword
- oper-down-reason keyword
- oper-esi string
- oper-multi-homing-mode keyword
- oper-state keyword
+ routes
+ ethernet-segment
+ originating-ip keyword
+ next-hop keyword
+ timers
+ activation-timer number
- boot-remaining-time number
- boot-start-time string
+ boot-timer number
+ ntp
+ admin-state keyword
+ network-instance reference
- oper-state keyword
+ server address (ipv4-address | ipv6-address)
+ iburst boolean
- jitter string

```

```

- offset string
- poll-interval number
+ prefer boolean
- stratum number
- synchronized (ipv4-address | ipv6-address | string)
+ 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)
+ sample-rate number
+ sample-size number
- statistics
- total-offered-packets number
- total-samples-taken number
- total-sent-packets number
+ snmp
+ community string
+ network-instance name reference
+ admin-state keyword
- oper-state keyword
+ source-address (ipv4-address | ipv6-address)
+ ssh-server
+ network-instance name reference
+ admin-state keyword
- oper-state keyword
- protocol-version number
+ rate-limit number
+ source-address (ipv4-address | ipv6-address)
+ timeout number
+ tls
+ server-profile name string
+ authenticate-client boolean
+ certificate string
+ cipher-list identityref
+ key string
+ trust-anchor string
+ trace-options keyword
+ warm-reboot
+ bgp-max-wait number

```

## 10.1 system Descriptions

### system

<b>Description</b>	Enclosing container for system management
<b>Context</b>	<a href="#">system</a>

---

<b>Tree</b>	<a href="#">system</a>
<b>Configurable</b>	True

**aaa**

<b>Description</b>	Top-level container for AAA services
<b>Context</b>	<a href="#">system aaa</a>
<b>Tree</b>	<a href="#">aaa</a>
<b>Configurable</b>	True

**accounting**

<b>Description</b>	Top-level container for accounting
<b>Context</b>	<a href="#">system aaa accounting</a>
<b>Tree</b>	<a href="#">accounting</a>
<b>Configurable</b>	True

**accounting-method *reference***

<b>Description</b>	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.
<b>Context</b>	<a href="#">system aaa accounting accounting-method <i>reference</i></a>
<b>Tree</b>	<a href="#">accounting-method</a>
<b>Reference</b>	<a href="#">system aaa server-group name <i>string</i></a>
<b>Configurable</b>	True

**event *event-type identityref***

<b>Description</b>	List of events subject to accounting
<b>Context</b>	<a href="#">system aaa accounting event <i>event-type identityref</i></a>
<b>Tree</b>	<a href="#">event</a>
<b>Configurable</b>	True

**event-type *identityref***

<b>Description</b>	The type of activity to record at the accounting server
<b>Context</b>	<a href="#">system aaa accounting event event-type identityref</a>
<b>Options</b>	<ul style="list-style-type: none"> <li>command Specifies interactive command events for AAA accounting</li> </ul>
<b>Configurable</b>	True

**record *identityref***

<b>Description</b>	Type of record to send to the accounting server for this activity type
<b>Context</b>	<a href="#">system aaa accounting event event-type identityref record identityref</a>
<b>Tree</b>	<a href="#">record</a>
<b>Options</b>	<ul style="list-style-type: none"> <li>start-stop Send start and stop records for user activities 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</li> <li>stop Send only stop records for user activities Send only stop records for user activities A stop record is sent to the accounting server when the user activity completes</li> </ul>
<b>Configurable</b>	True

**authentication**

<b>Description</b>	Top-level container for global authentication data
<b>Context</b>	<a href="#">system aaa authentication</a>
<b>Tree</b>	<a href="#">authentication</a>
<b>Configurable</b>	True

**admin-user**

<b>Description</b>	Enclosing container for admin user
<b>Context</b>	<a href="#">system aaa authentication admin-user</a>
<b>Tree</b>	<a href="#">admin-user</a>
<b>Configurable</b>	True

**password *string***

<b>Description</b>	The admin password, supplied as cleartext The system will hash the value, storing only the hashed value
<b>Context</b>	<a href="#">system aaa authentication admin-user password <i>string</i></a>
<b>Tree</b>	<a href="#">password</a>
<b>Configurable</b>	True

**username *string***

<b>Description</b>	Assigned username for admin user
<b>Context</b>	<a href="#">system aaa authentication admin-user username <i>string</i></a>
<b>Tree</b>	<a href="#">username</a>
<b>Default</b>	admin
<b>Configurable</b>	False

**authentication-method *reference***

<b>Description</b>	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.
<b>Context</b>	<a href="#">system aaa authentication authentication-method <i>reference</i></a>
<b>Tree</b>	<a href="#">authentication-method</a>
<b>Reference</b>	<a href="#">system aaa server-group name <i>string</i></a>
<b>Configurable</b>	True

**exit-on-reject *boolean***

<b>Description</b>	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.
<b>Context</b>	<a href="#">system aaa authentication exit-on-reject <i>boolean</i></a>
<b>Tree</b>	<a href="#">exit-on-reject</a>
<b>Default</b>	false

---

**Configurable** True

### **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 \*number\*](#)

**Tree** [idle-timeout](#)

**Default** 600

**Units** seconds

**Configurable** True

### **session id *number***

**Description** List of active sessions in the system

**Context** [system aaa authentication session id \*number\*](#)

**Tree** [session](#)

**Configurable** False

### **id *number***

**Description** System generated session ID

**Context** [system aaa authentication session id \*number\*](#)

**Configurable** False

### **authentication-method *string***

**Description** Authentication method that authorized the user (the server-group name or local)

**Context** [system aaa authentication session id \*number\* authentication-method \*string\*](#)

**Tree** [authentication-method](#)

**Configurable** False

### **login-time *string***

**Description** Time the user logged in



<b>Context</b>	<a href="#">system aaa authentication session id number login-time string</a>
<b>Tree</b>	<a href="#">login-time</a>
<b>String Length</b>	20 to 32
<b>Configurable</b>	False

### **priv-lvl *number***



#### **Note:**

This command is available for the following platforms:

- 7220 IXR-D2
- 7250 IXR-10
- 7220 IXR-D3L
- 7220 IXR-D2L
- 7220 IXR-H3
- 7220 IXR-H2
- 7220 IXR-D3
- 7250 IXR-6
- 7220 IXR-D1

<b>Description</b>	TACACS+ authorization priv-lvl (if TACACS+ authorization is enabled)
<b>Context</b>	<a href="#">system aaa authentication session id number priv-lvl number</a>
<b>Tree</b>	<a href="#">priv-lvl</a>
<b>Configurable</b>	False

### **remote-host *string***

<b>Description</b>	Remote host of the session
<b>Context</b>	<a href="#">system aaa authentication session id number remote-host string</a>
<b>Tree</b>	<a href="#">remote-host</a>
<b>Configurable</b>	False

### **service-name *string***

<b>Description</b>	Service name that called login for the session
<b>Context</b>	<a href="#">system aaa authentication session id number service-name string</a>
<b>Tree</b>	<a href="#">service-name</a>

**Configurable** False

### **tty-name *string***

**Description** Terminal type  
**Context** [system aaa authentication session id number tty-name string](#)  
**Tree** [tty-name](#)  
**Configurable** False

### **username *string***

**Description** Username linked to the session  
**Context** [system aaa authentication session id number username string](#)  
**Tree** [username](#)  
**Configurable** False

### **user [username](#) *string***

**Description** List of local users configured on the system  
**Context** [system aaa authentication user username string](#)  
**Tree** [user](#)  
**Configurable** True  
**Max. Elements** 128

### **username *string***

**Description** Assigned username for this user  
**Context** [system aaa authentication user username string](#)  
**String Length** 1 to 32  
**Configurable** True

### **password *string***

**Description** The user password, supplied as cleartext  
 The system will hash the value on input, storing only the hashed value  
**Context** [system aaa authentication user username string password string](#)

<b>Tree</b>	<a href="#">password</a>
<b>Configurable</b>	True

**role reference**

<b>Description</b>	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.
<b>Context</b>	<a href="#">system aaa authentication user username string role reference</a>
<b>Tree</b>	<a href="#">role</a>
<b>Reference</b>	<a href="#">system aaa authorization role rolename string</a>
<b>Configurable</b>	True
<b>Max. Elements</b>	32

**ssh-key string**

<b>Description</b>	SSH public key(s) for the user (RSA) If defined, the user may login to the system over SSH with this key. This field includes the 'ssh-rsa' leader, as would normally be found in a SSH key.
<b>Context</b>	<a href="#">system aaa authentication user username string ssh-key string</a>
<b>Tree</b>	<a href="#">ssh-key</a>
<b>Configurable</b>	True
<b>Max. Elements</b>	32

**authorization**

<b>Description</b>	Top-level container for authorization configuration and operational state data
<b>Context</b>	<a href="#">system aaa authorization</a>
<b>Tree</b>	<a href="#">authorization</a>
<b>Configurable</b>	True

**role rolename string**

<b>Description</b>	List of local roles configured on the system
<b>Context</b>	<a href="#">system aaa authorization role rolename string</a>

<b>Tree</b>	<a href="#">role</a>
<b>Configurable</b>	True

### **rolename *string***

<b>Description</b>	Assigned rolename for this role
<b>Context</b>	<a href="#">system aaa authorization role rolename <i>string</i></a>
<b>String Length</b>	1 to 32
<b>Configurable</b>	True

### **tacacs**



**Note:**

This command is available for the following platforms:

- 7220 IXR-D2
- 7250 IXR-10
- 7220 IXR-D3L
- 7220 IXR-D2L
- 7220 IXR-H3
- 7220 IXR-H2
- 7220 IXR-D3
- 7250 IXR-6
- 7220 IXR-D1

<b>Description</b>	Top-level container for configuration relating to TACACS+ interworking with roles
<b>Context</b>	<a href="#">system aaa authorization role rolename <i>string</i> tacacs</a>
<b>Tree</b>	<a href="#">tacacs</a>
<b>Configurable</b>	True

**priv-lvl *number*****Note:**

This command is available for the following platforms:

- 7220 IXR-D2
- 7250 IXR-10
- 7220 IXR-D3L
- 7220 IXR-D2L
- 7220 IXR-H3
- 7220 IXR-H2
- 7220 IXR-D3
- 7250 IXR-6
- 7220 IXR-D1

<b>Description</b>	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.
<b>Context</b>	<a href="#">system aaa authorization role rolename</a> <i>string tacacs priv-lvl number</i>
<b>Tree</b>	<a href="#">priv-lvl</a>
<b>Range</b>	0 to 15
<b>Configurable</b>	True

**server-group [name](#) *string***

<b>Description</b>	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.
<b>Context</b>	<a href="#">system aaa server-group name</a> <i>string</i>
<b>Tree</b>	<a href="#">server-group</a>
<b>Configurable</b>	True
<b>Max. Elements</b>	2

**[name](#) *string***

<b>Description</b>	User defined name for the server group
<b>Context</b>	<a href="#">system aaa server-group name</a> <i>string</i>
<b>String Length</b>	1 to 255

**Configurable** True

## priv-lvl-authorization *boolean*



### Note:

This command is available for the following platforms:

- 7220 IXR-D2
- 7250 IXR-10
- 7220 IXR-D3L
- 7220 IXR-D2L
- 7220 IXR-H3
- 7220 IXR-H2
- 7220 IXR-D3
- 7250 IXR-6
- 7220 IXR-D1

<b>Description</b>	Use TACACS+ priv-lvl based authorization If false, then authorization is skipped for TACACS+ users granting full admin access for those users.
<b>Context</b>	<a href="#">system aaa server-group name</a> <i>string</i> <a href="#">priv-lvl-authorization</a> <i>boolean</i>
<b>Tree</b>	<a href="#">priv-lvl-authorization</a>
<b>Default</b>	false
<b>Configurable</b>	True

## server [address](#) (*ipv4-address* | *ipv6-address*)

<b>Description</b>	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
<b>Context</b>	<a href="#">system aaa server-group name</a> <i>string</i> <a href="#">server address</a> ( <i>ipv4-address</i>   <i>ipv6-address</i> )
<b>Tree</b>	<a href="#">server</a>
<b>Configurable</b>	True
<b>Max. Elements</b>	5

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

<b>Description</b>	Address used to reach the server
<b>Context</b>	<a href="#">system aaa server-group name string server address (<i>ipv4-address</i>   <i>ipv6-address</i>)</a>
<b>Configurable</b>	True

**name *string***

<b>Description</b>	User defined name assigned to the server
<b>Context</b>	<a href="#">system aaa server-group name string server address (<i>ipv4-address</i>   <i>ipv6-address</i>) name string</a>
<b>Tree</b>	<a href="#">name</a>
<b>String Length</b>	1 to 255
<b>Configurable</b>	True

**network-instance *reference***

<b>Description</b>	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.
<b>Context</b>	<a href="#">system aaa server-group name string server address (<i>ipv4-address</i>   <i>ipv6-address</i>) network-instance reference</a>
<b>Tree</b>	<a href="#">network-instance</a>
<b>Reference</b>	<a href="#">network-instance name stringname string string</a>
<b>Configurable</b>	True

**oper-state *keyword***

<b>Description</b>	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.
<b>Context</b>	<a href="#">system aaa server-group name string server address (<i>ipv4-address</i>   <i>ipv6-address</i>) oper-state keyword</a>
<b>Tree</b>	<a href="#">oper-state</a>
<b>Options</b>	<ul style="list-style-type: none"> <li>up Component or process is operational</li> </ul>

- 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  
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.

**Configurable** False

## statistics

**Description** Enclosing container for server statistics

**Context** [system aaa server-group name string server address \(ipv4-address | ipv6-address\) statistics](#)

**Tree** [statistics](#)

**Configurable** False



**accounting-connection-failures *number***

<b>Description</b>	Number of accounting connection failures
<b>Context</b>	<a href="#">system aaa server-group name string server address (ipv4-address   ipv6-address)</a> <a href="#">statistics accounting-connection-failures number</a>
<b>Tree</b>	<a href="#">accounting-connection-failures</a>
<b>Default</b>	0
<b>Configurable</b>	False

**accounting-rejects *number***

<b>Description</b>	Number of accounting rejections
<b>Context</b>	<a href="#">system aaa server-group name string server address (ipv4-address   ipv6-address)</a> <a href="#">statistics accounting-rejects number</a>
<b>Tree</b>	<a href="#">accounting-rejects</a>
<b>Default</b>	0
<b>Configurable</b>	False

**accounting-success *number***

<b>Description</b>	Number of accounting successes
<b>Context</b>	<a href="#">system aaa server-group name string server address (ipv4-address   ipv6-address)</a> <a href="#">statistics accounting-success number</a>
<b>Tree</b>	<a href="#">accounting-success</a>
<b>Default</b>	0
<b>Configurable</b>	False

**authorization-connection-failures *number*****Note:**

This command is available for the following platforms:

- 7220 IXR-D2
- 7250 IXR-10
- 7220 IXR-D3L
- 7220 IXR-D2L
- 7220 IXR-H3
- 7220 IXR-H2
- 7220 IXR-D3
- 7250 IXR-6
- 7220 IXR-D1

<b>Description</b>	Number of authorization connection failures
<b>Context</b>	<a href="#">system aaa server-group name string server address (ipv4-address   ipv6-address) statistics authorization-connection-failures number</a>
<b>Tree</b>	<a href="#">authorization-connection-failures</a>
<b>Default</b>	0
<b>Configurable</b>	False

**authorization-rejects *number*****Note:**

This command is available for the following platforms:

- 7220 IXR-D2
- 7250 IXR-10
- 7220 IXR-D3L
- 7220 IXR-D2L
- 7220 IXR-H3
- 7220 IXR-H2
- 7220 IXR-D3
- 7250 IXR-6
- 7220 IXR-D1

<b>Description</b>	Number of authorization rejections
<b>Context</b>	<a href="#">system aaa server-group name string server address (ipv4-address   ipv6-address) statistics authorization-rejects number</a>

<b>Tree</b>	<a href="#">authorization-rejects</a>
<b>Default</b>	0
<b>Configurable</b>	False

### authorization-success *number*



**Note:**

This command is available for the following platforms:

- 7220 IXR-D2
- 7250 IXR-10
- 7220 IXR-D3L
- 7220 IXR-D2L
- 7220 IXR-H3
- 7220 IXR-H2
- 7220 IXR-D3
- 7250 IXR-6
- 7220 IXR-D1

<b>Description</b>	Number of authorization successes
<b>Context</b>	<a href="#">system aaa server-group name string server address (ipv4-address   ipv6-address) statistics authorization-success number</a>
<b>Tree</b>	<a href="#">authorization-success</a>
<b>Default</b>	0
<b>Configurable</b>	False

### login-connection-failures *number*

<b>Description</b>	Number of login connection failures
<b>Context</b>	<a href="#">system aaa server-group name string server address (ipv4-address   ipv6-address) statistics login-connection-failures number</a>
<b>Tree</b>	<a href="#">login-connection-failures</a>
<b>Default</b>	0
<b>Configurable</b>	False

### login-rejects *number*

<b>Description</b>	Number of login rejections
--------------------	----------------------------

<b>Context</b>	<a href="#">system aaa server-group name</a> <i>string</i> <a href="#">server address</a> ( <i>ipv4-address</i>   <i>ipv6-address</i> ) <a href="#">statistics login-rejects</a> <i>number</i>
<b>Tree</b>	<a href="#">login-rejects</a>
<b>Default</b>	0
<b>Configurable</b>	False

### **login-success *number***

<b>Description</b>	Number of login successes
<b>Context</b>	<a href="#">system aaa server-group name</a> <i>string</i> <a href="#">server address</a> ( <i>ipv4-address</i>   <i>ipv6-address</i> ) <a href="#">statistics login-success</a> <i>number</i>
<b>Tree</b>	<a href="#">login-success</a>
<b>Default</b>	0
<b>Configurable</b>	False

### **tacacs**

<b>Description</b>	Top-level container for TACACS+ server data
<b>Context</b>	<a href="#">system aaa server-group name</a> <i>string</i> <a href="#">server address</a> ( <i>ipv4-address</i>   <i>ipv6-address</i> ) <a href="#">tacacs</a>
<b>Tree</b>	<a href="#">tacacs</a>
<b>Configurable</b>	True

### **port *number***

<b>Description</b>	The port number on which to contact the TACACS+ server
<b>Context</b>	<a href="#">system aaa server-group name</a> <i>string</i> <a href="#">server address</a> ( <i>ipv4-address</i>   <i>ipv6-address</i> ) <a href="#">tacacs port</a> <i>number</i>
<b>Tree</b>	<a href="#">port</a>
<b>Range</b>	0 to 65535
<b>Default</b>	49
<b>Configurable</b>	True

### **secret-key *string***

<b>Description</b>	The unencrypted shared key used between the system and server
<b>Context</b>	<a href="#">system aaa server-group name</a> <i>string</i> <a href="#">server address</a> ( <i>ipv4-address</i>   <i>ipv6-address</i> ) <a href="#">tacacs secret-key</a> <i>string</i>

<b>Tree</b>	<a href="#">secret-key</a>
<b>Configurable</b>	True

**timeout *number***

<b>Description</b>	Set the timeout in seconds on responses from servers in this group
<b>Context</b>	<a href="#">system aaa server-group name</a> <i>string</i> <a href="#">timeout</a> <i>number</i>
<b>Tree</b>	<a href="#">timeout</a>
<b>Range</b>	1 to 3600
<b>Default</b>	10
<b>Units</b>	seconds
<b>Configurable</b>	True

**type *identityref***

<b>Description</b>	AAA server type -- all servers in the group must be of this type
<b>Context</b>	<a href="#">system aaa server-group name</a> <i>string</i> <a href="#">type</a> <i>identityref</i>
<b>Tree</b>	<a href="#">type</a>
<b>Options</b>	<ul style="list-style-type: none"> <li>• tacacs           <ul style="list-style-type: none"> <li>Specifies servers using the TACACS+ protocol</li> <li>Specifies servers using the TACACS+ protocol Terminal Access Controller Access Control System (TACACS+)</li> </ul> </li> <li>• local           <ul style="list-style-type: none"> <li>Specifies using Linux local methods</li> <li>Specifies using Linux local methods This type cannot be combined with a server address</li> </ul> </li> </ul>
<b>Configurable</b>	True

**app-management**

<b>Description</b>	Top-level container for application configuration and state
<b>Context</b>	<a href="#">system app-management</a>
<b>Tree</b>	<a href="#">app-management</a>
<b>Configurable</b>	False

**application name *string***

<b>Description</b>	List of all applications managed by the application manager
<b>Context</b>	<a href="#">system app-management application name <i>string</i></a>
<b>Tree</b>	<a href="#">application</a>
<b>Configurable</b>	False

**name *string***

<b>Description</b>	Unique name of this application instance
<b>Context</b>	<a href="#">system app-management application name <i>string</i></a>
<b>Configurable</b>	False

**author *string***

<b>Description</b>	The author of the application
<b>Context</b>	<a href="#">system app-management application name <i>string</i> author <i>string</i></a>
<b>Tree</b>	<a href="#">author</a>
<b>Configurable</b>	False

**cgroup *string***

<b>Description</b>	Cgroup in with this application is started
<b>Context</b>	<a href="#">system app-management application name <i>string</i> cgroup <i>string</i></a>
<b>Tree</b>	<a href="#">cgroup</a>
<b>Configurable</b>	False

**failure-action *string***

<b>Description</b>	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
<b>Context</b>	<a href="#">system app-management application name <i>string</i> failure-action <i>string</i></a>
<b>Tree</b>	<a href="#">failure-action</a>
<b>Configurable</b>	False

**failure-threshold *number***

<b>Description</b>	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
<b>Context</b>	<a href="#">system app-management application name</a> <i>string</i> <a href="#">failure-threshold</a> <i>number</i>
<b>Tree</b>	<a href="#">failure-threshold</a>
<b>Range</b>	0 to 255
<b>Configurable</b>	False

**failure-window *number***

<b>Description</b>	Sliding window in seconds, over which to count restarts towards failure-threshold
<b>Context</b>	<a href="#">system app-management application name</a> <i>string</i> <a href="#">failure-window</a> <i>number</i>
<b>Tree</b>	<a href="#">failure-window</a>
<b>Range</b>	300 to 86400
<b>Units</b>	seconds
<b>Configurable</b>	False

**last-change *string***

<b>Description</b>	Date and time the application instance last changed state
<b>Context</b>	<a href="#">system app-management application name</a> <i>string</i> <a href="#">last-change</a> <i>string</i>
<b>Tree</b>	<a href="#">last-change</a>
<b>String Length</b>	20 to 32
<b>Configurable</b>	False

**launch-command *string***

<b>Description</b>	The command used to launch the application
<b>Context</b>	<a href="#">system app-management application name</a> <i>string</i> <a href="#">launch-command</a> <i>string</i>
<b>Tree</b>	<a href="#">launch-command</a>
<b>Configurable</b>	False

**oom-score-adj *number***

<b>Description</b>	OOM score adj value set for this application
<b>Context</b>	<a href="#">system app-management application name</a> <i>string</i> <a href="#">oom-score-adj</a> <i>number</i>
<b>Tree</b>	<a href="#">oom-score-adj</a>
<b>Configurable</b>	False

**path *string***

<b>Description</b>	The directory where the application can be found
<b>Context</b>	<a href="#">system app-management application name</a> <i>string</i> <a href="#">path</a> <i>string</i>
<b>Tree</b>	<a href="#">path</a>
<b>Configurable</b>	False

**pid *number***

<b>Description</b>	Process ID of this application instance
<b>Context</b>	<a href="#">system app-management application name</a> <i>string</i> <a href="#">pid</a> <i>number</i>
<b>Tree</b>	<a href="#">pid</a>
<b>Configurable</b>	False

**restricted-operations *keyword***

<b>Description</b>	The operations that may not be manually performed on this application
<b>Context</b>	<a href="#">system app-management application name</a> <i>string</i> <a href="#">restricted-operations</a> <i>keyword</i>
<b>Tree</b>	<a href="#">restricted-operations</a>
<b>Options</b>	<ul style="list-style-type: none"> <li>• restart This application may not be restarted manually</li> <li>• stop This application may not be stopped manually</li> <li>• start This application may not be started manually</li> <li>• reload This application may not be reloaded manually</li> <li>• quit This application may not be terminated manually</li> </ul>



- kill  
This application may not be terminated ungracefully manually

**Configurable** False

### 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

### 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  
Application instance is running This is the normal, active state of an application
- waiting-for-config  
Application instance is loaded, but has no configuration  
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  
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  
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  
The application is not running This state is most likely caused by an operator action

**Configurable** False

## statistics

**Description** Top-level container for application statistics

**Context** [system app-management application name](#) *string* [statistics](#)

**Tree** [statistics](#)

**Configurable** False

## restart-count *number*

**Description** The number of times this application instance has restarted

**Context** [system app-management application name](#) *string* [statistics restart-count number](#)

**Tree** [restart-count](#)

**Default** 0

**Configurable** False

## version *string*

**Description** The version of the application

**Context** [system app-management application name](#) *string* [version string](#)

**Tree** [version](#)

**Configurable** False

## yang

**Description** Top-level container for application state related to YANG

**Context** [system app-management application name](#) *string* [yang](#)

**Tree** [yang](#)

**Configurable** False

**modules *string***

<b>Description</b>	YANG module names used by this application instance
<b>Context</b>	<a href="#">system app-management application name</a> <i>string yang modules string</i>
<b>Tree</b>	<a href="#">modules</a>
<b>Configurable</b>	False

**source-directories *string***

<b>Description</b>	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
<b>Context</b>	<a href="#">system app-management application name</a> <i>string yang source-directories string</i>
<b>Tree</b>	<a href="#">source-directories</a>
<b>Configurable</b>	False

**authentication**

<b>Description</b>	Container for protocol authentication options available system wide
<b>Context</b>	<a href="#">system authentication</a>
<b>Tree</b>	<a href="#">authentication</a>
<b>Configurable</b>	True

**keychain [name](#) *string***

<b>Description</b>	List of system keychains
<b>Context</b>	<a href="#">system authentication keychain name</a> <i>string</i>
<b>Tree</b>	<a href="#">keychain</a>
<b>Configurable</b>	True
<b>Max. Elements</b>	1024

**name *string***

<b>Description</b>	The user configured name for the keychain
<b>Context</b>	<a href="#">system authentication keychain name</a> <i>string</i>
<b>String Length</b>	1 to 255

**Configurable** True

### **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 all inbound messages with authentication data are dropped. A key chain is also inactive if no key is configured.

**Context** [system authentication keychain name](#) *string* [admin-state](#) *keyword*

**Tree** [admin-state](#)

**Default** disable

**Options**

- enable
- disable

**Configurable** True

### **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

### **key *index number***

**Description** List of keys in the keychain

**Context** [system authentication keychain name](#) *string* [key index number](#)

**Tree** [key](#)

**Configurable** True

**Max. Elements** 1

### **index *number***

**Description** Each key in a keychain requires a unique identifier. The index value specifies this identifier.

**Context** [system authentication keychain name](#) *string* [key index number](#)

**Configurable** True

**algorithm keyword**

<b>Description</b>	The cryptographic algorithm used with the keying material to secure the messages.
<b>Context</b>	<a href="#">system authentication keychain name</a> <i>string</i> <a href="#">key index number</a> <a href="#">algorithm keyword</a>
<b>Tree</b>	<a href="#">algorithm</a>
<b>Options</b>	<ul style="list-style-type: none"> <li>• cleartext The authentication-key is encoded in plaintext.</li> <li>• md5 The authentication-key is used to generate an MD5 digest (RFC 1321).</li> <li>• hmac-md5 The authentication-key is used to generate a 16-byte (128 bit) MD5 digest using the HMAC algorithm (RFC 2104).</li> <li>• hmac-sha-1 The authentication-key is used to generate a SHA1 digest using the HMAC algorithm (RFC 2104).</li> <li>• 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).</li> <li>• aes-128-cmac The authentication-key is used with the AES-128 encryption algorithm to generate a cipher MAC (RFC 4493).</li> </ul>
<b>Configurable</b>	True

**authentication-key string**

<b>Description</b>	<p>The secret key.</p> <p>The maximum string length is 25 characters, of which a maximum of 20 characters is the secret data and the remaining 5 characters, if provided, must be ' hash' (i.e. one whitespace plus the word hash). The trailing 'hash' keyword indicates that the secret data was already encrypted and this is the display version of that secret data, which is a hash of the original data. If the 'hash' keyword is omitted the string is assumed to be the actual secret data. Whenever the value of authentication-key is read by any management interface, from any datastore (candidate, running, state) the return value is always the encrypted value – i.e. with the trailing ' hash' characters included.</p>
<b>Context</b>	<a href="#">system authentication keychain name</a> <i>string</i> <a href="#">key index number</a> <a href="#">authentication-key</a> <i>string</i>
<b>Tree</b>	<a href="#">authentication-key</a>

<b>String Length</b>	1 to 25
<b>Configurable</b>	True

**type keyword**

<b>Description</b>	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 ensure that this keychain is only used by protocols for which it is intended.
<b>Context</b>	<a href="#">system authentication keychain name</a> <i>string type keyword</i>
<b>Tree</b>	<a href="#">type</a>
<b>Options</b>	<ul style="list-style-type: none"> <li>• tcp-md5 Keychain intended to be used for TCP-MD5 authentication.</li> <li>• isis Keychain intended to be used for authentication of IS-IS PDUs.</li> <li>• ospf Keychain intended to be used for authentication of OSPFv2 messages.</li> <li>• tcp-ao Keychain intended to be used for TCP-AO authentication.</li> <li>• vrrp Keychain intended to be used for authentication of VRRPv2 messages.</li> </ul>
<b>Configurable</b>	True

**banner**

<b>Description</b>	Contains configuration and state related to system banners
<b>Context</b>	<a href="#">system banner</a>
<b>Tree</b>	<a href="#">banner</a>
<b>Configurable</b>	True

**login-banner *string***

<b>Description</b>	Banner to display before a user has authenticated
<b>Context</b>	<a href="#">system banner login-banner</a> <i>string</i>
<b>Tree</b>	<a href="#">login-banner</a>
<b>Configurable</b>	True

**motd-banner *string***

<b>Description</b>	Banner to display after a user has authenticated
<b>Context</b>	<a href="#">system banner motd-banner</a> <i>string</i>
<b>Tree</b>	<a href="#">motd-banner</a>
<b>Configurable</b>	True

**boot**

<b>Description</b>	Top-level container for configuration and state data related to booting the system
<b>Context</b>	<a href="#">system boot</a>
<b>Tree</b>	<a href="#">boot</a>
<b>Configurable</b>	True

**autoboot**

<b>Description</b>	Top-level container for configuration and state data related to autobooting the system
<b>Context</b>	<a href="#">system boot autoboot</a>
<b>Tree</b>	<a href="#">autoboot</a>
<b>Configurable</b>	True

**admin-state *keyword***

<b>Description</b>	Administratively enable or disable autoboot functionality
<b>Context</b>	<a href="#">system boot autoboot admin-state</a> <i>keyword</i>
<b>Tree</b>	<a href="#">admin-state</a>
<b>Options</b>	<ul style="list-style-type: none"> <li>• enable</li> <li>• disable</li> </ul>
<b>Configurable</b>	True

**attempts *number***

<b>Description</b>	Sets the amount of executions to try autoboot, before rebooting the system
<b>Context</b>	<a href="#">system boot autoboot attempts</a> <i>number</i>
<b>Tree</b>	<a href="#">attempts</a>

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<b>Range</b>	1 to 10
<b>Configurable</b>	True

**client-id *keyword***

<b>Description</b>	The client ID to use on outgoing DHCP requests
<b>Context</b>	<a href="#">system boot autoboot client-id keyword</a>
<b>Tree</b>	<a href="#">client-id</a>
<b>Options</b>	<ul style="list-style-type: none"> <li>serial</li> </ul> <p>Use the chassis serial number as the client ID</p>
<b>Configurable</b>	True

**interface *reference***

<b>Description</b>	Sets the interface to use for autoboot functionality
<b>Context</b>	<a href="#">system boot autoboot interface reference</a>
<b>Tree</b>	<a href="#">interface</a>
<b>Default</b>	mgmt0
<b>Reference</b>	<a href="#">interface name stringname string string</a>
<b>Configurable</b>	True

**oper-state *string***

<b>Description</b>	The current operational status of the autoboot process
<b>Context</b>	<a href="#">system boot autoboot oper-state string</a>
<b>Tree</b>	<a href="#">oper-state</a>
<b>Configurable</b>	False

**timeout *number***

<b>Description</b>	Sets the timeout for each attempt to autoboot
<b>Context</b>	<a href="#">system boot autoboot timeout number</a>
<b>Tree</b>	<a href="#">timeout</a>
<b>Range</b>	200 to 3600
<b>Units</b>	seconds
<b>Configurable</b>	True



**image *string***

<b>Description</b>	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>
<b>Context</b>	<a href="#">system boot image <i>string</i></a>
<b>Tree</b>	<a href="#">image</a>
<b>String Length</b>	1 to 255
<b>Configurable</b>	False
<b>Max. Elements</b>	3

**bridge-table**

<b>Description</b>	system bridge-table information
<b>Context</b>	<a href="#">system bridge-table</a>
<b>Tree</b>	<a href="#">bridge-table</a>
<b>Configurable</b>	True

**mac-learning**

<b>Description</b>	Enter the mac-learning context
<b>Context</b>	<a href="#">system bridge-table mac-learning</a>
<b>Tree</b>	<a href="#">mac-learning</a>
<b>Configurable</b>	True

**mac-relearn-only *boolean***

<b>Description</b>	The value of this leaf indicates that the system will not learn any new mac addresses, but will relearn any that are already programmed
<b>Context</b>	<a href="#">system bridge-table mac-learning mac-relearn-only <i>boolean</i></a>
<b>Tree</b>	<a href="#">mac-relearn-only</a>
<b>Configurable</b>	False

**mac-limit**

<b>Description</b>	Bridge Table size and thresholds.
<b>Context</b>	<a href="#">system bridge-table mac-limit</a>
<b>Tree</b>	<a href="#">mac-limit</a>
<b>Configurable</b>	True

**maximum-entries *number***

<b>Description</b>	Maximum number of mac addresses allowed in the system bridge-table.
<b>Context</b>	<a href="#">system bridge-table mac-limit maximum-entries <i>number</i></a>
<b>Tree</b>	<a href="#">maximum-entries</a>
<b>Configurable</b>	False

**warning-threshold-pct *number***

<b>Description</b>	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%
<b>Context</b>	<a href="#">system bridge-table mac-limit warning-threshold-pct <i>number</i></a>
<b>Tree</b>	<a href="#">warning-threshold-pct</a>
<b>Configurable</b>	False

**statistics**

<b>Description</b>	Enter the statistics context
<b>Context</b>	<a href="#">system bridge-table statistics</a>
<b>Tree</b>	<a href="#">statistics</a>
<b>Configurable</b>	False

**active-entries *number***

<b>Description</b>	The total number of macs that are active on the system.
<b>Context</b>	<a href="#">system bridge-table statistics active-entries <i>number</i></a>
<b>Tree</b>	<a href="#">active-entries</a>
<b>Default</b>	0
<b>Configurable</b>	False

**failed-entries *number***

<b>Description</b>	The total number of macs, which have not been programmed on atleast one slot
<b>Context</b>	<a href="#">system bridge-table statistics failed-entries <i>number</i></a>
<b>Tree</b>	<a href="#">failed-entries</a>
<b>Default</b>	0
<b>Configurable</b>	False

**mac-type *type keyword***

<b>Description</b>	the type of the mac in the system.
<b>Context</b>	<a href="#">system bridge-table statistics mac-type <i>type keyword</i></a>
<b>Tree</b>	<a href="#">mac-type</a>
<b>Configurable</b>	False

**type *keyword***

<b>Description</b>	Enter the type context
<b>Context</b>	<a href="#">system bridge-table statistics mac-type <i>type keyword</i></a>
<b>Options</b>	<ul style="list-style-type: none"> <li>• static</li> <li>• duplicate</li> <li>• learnt</li> <li>• irb-interface</li> <li>• evpn</li> <li>• evpn-static</li> <li>• irb-interface-anycast</li> <li>• proxy-anti-spoof</li> <li>• reserved</li> <li>• eth-cfm</li> </ul>
<b>Configurable</b>	False

**active-entries *number***

<b>Description</b>	The total number of macs of this type on the system.
<b>Context</b>	<a href="#">system bridge-table statistics mac-type <i>type keyword active-entries number</i></a>

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<b>Tree</b>	<a href="#">active-entries</a>
<b>Default</b>	0
<b>Configurable</b>	False

**failed-entries number**

<b>Description</b>	The total number of macs of this type, which have not been programmed on atleast one slot
<b>Context</b>	<a href="#">system bridge-table statistics mac-type type keyword failed-entries number</a>
<b>Tree</b>	<a href="#">failed-entries</a>
<b>Default</b>	0
<b>Configurable</b>	False

**total-entries number**

<b>Description</b>	The total number of macs of this type , active and inactive, on the system.
<b>Context</b>	<a href="#">system bridge-table statistics mac-type type keyword total-entries number</a>
<b>Tree</b>	<a href="#">total-entries</a>
<b>Default</b>	0
<b>Configurable</b>	False

**total-entries number**

<b>Description</b>	The total number of macs, active and inactive, on the system.
<b>Context</b>	<a href="#">system bridge-table statistics total-entries number</a>
<b>Tree</b>	<a href="#">total-entries</a>
<b>Default</b>	0
<b>Configurable</b>	False

**clock**

<b>Description</b>	Top-level container for system clock configuration and state
<b>Context</b>	<a href="#">system clock</a>
<b>Tree</b>	<a href="#">clock</a>
<b>Configurable</b>	True

## timezone *keyword*

<b>Description</b>	The timezone to use for the system Based on IANAs Time Zone database
<b>Context</b>	<a href="#">system clock</a> <a href="#">timezone</a> <i>keyword</i>
<b>Tree</b>	<a href="#">timezone</a>
<b>Options</b>	<ul style="list-style-type: none"><li>• Africa/Abidjan</li><li>• Africa/Accra</li><li>• Africa/Addis_Ababa</li><li>• Africa/Algiers</li><li>• Africa/Asmara</li><li>• Africa/Bamako</li><li>• Africa/Bangui</li><li>• Africa/Banjul</li><li>• Africa/Bissau</li><li>• Africa/Blantyre</li><li>• Africa/Brazzaville</li><li>• Africa/Bujumbura</li><li>• Africa/Cairo</li><li>• Africa/Casablanca</li><li>• Africa/Ceuta Ceuta, Melilla</li><li>• Africa/Conakry</li><li>• Africa/Dakar</li><li>• Africa/Dar_es_Salaam</li><li>• Africa/Djibouti</li><li>• Africa/Douala</li><li>• Africa/El_Aaiun</li><li>• Africa/Freetown</li><li>• Africa/Gaborone</li><li>• Africa/Harare</li><li>• Africa/Johannesburg</li><li>• Africa/Juba</li><li>• Africa/Kampala</li><li>• Africa/Khartoum</li><li>• Africa/Kigali</li><li>• Africa/Kinshasa Dem. Rep. of Congo (west)</li></ul>

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- 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/El\_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/DumontD'Urville  
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** True

## configuration

**Description** Top-level container for configuration and state data related to the system configuration

**Context** [system configuration](#)

**Tree** [configuration](#)

**Configurable** True

## auto-checkpoint *boolean*

**Description** Configuration checkpoint will be automatically created after every successful commit (if set to true).

**Context** [system configuration auto-checkpoint \*boolean\*](#)

**Tree** [auto-checkpoint](#)

**Default** false

**Configurable** True

## candidate *name string*

**Description** List of configuration candidates currently active

---

<b>Context</b>	<a href="#">system configuration candidate name</a> <i>string</i>
<b>Tree</b>	<a href="#">candidate</a>
<b>Configurable</b>	False

**name *string***

<b>Description</b>	Name of the configuration candidate
<b>Context</b>	<a href="#">system configuration candidate name</a> <i>string</i>
<b>String Length</b>	1 to 255
<b>Configurable</b>	False

**started *string***

<b>Description</b>	Start date and time of the configuration session
<b>Context</b>	<a href="#">system configuration candidate name</a> <i>string</i> <a href="#">started</a> <i>string</i>
<b>Tree</b>	<a href="#">started</a>
<b>String Length</b>	20 to 32
<b>Configurable</b>	False

**type *keyword***

<b>Description</b>	Type of configuration candidate
<b>Context</b>	<a href="#">system configuration candidate name</a> <i>string</i> <a href="#">type</a> <i>keyword</i>
<b>Tree</b>	<a href="#">type</a>
<b>Options</b>	<ul style="list-style-type: none"> <li>• shared</li> <li>• private</li> </ul>
<b>Configurable</b>	False

**username *string***

<b>Description</b>	User that started the configuration session
<b>Context</b>	<a href="#">system configuration candidate name</a> <i>string</i> <a href="#">username</a> <i>string</i>
<b>Tree</b>	<a href="#">username</a>
<b>String Length</b>	1 to 255
<b>Configurable</b>	False

**checkpoint id number**

<b>Description</b>	List of current checkpoints present in the system
<b>Context</b>	<a href="#">system configuration checkpoint id number</a>
<b>Tree</b>	<a href="#">checkpoint</a>
<b>Configurable</b>	False

**id number**

<b>Description</b>	System generated ID for the checkpoint
<b>Context</b>	<a href="#">system configuration checkpoint id number</a>
<b>Configurable</b>	False

**comment string**

<b>Description</b>	User provided annotations associated with the checkpoint
<b>Context</b>	<a href="#">system configuration checkpoint id number comment string</a>
<b>Tree</b>	<a href="#">comment</a>
<b>Configurable</b>	False

**created string**

<b>Description</b>	Date and time this checkpoint was created
<b>Context</b>	<a href="#">system configuration checkpoint id number created string</a>
<b>Tree</b>	<a href="#">created</a>
<b>String Length</b>	20 to 32
<b>Configurable</b>	False

**name string**

<b>Description</b>	User provided name of the checkpoint
<b>Context</b>	<a href="#">system configuration checkpoint id number name string</a>
<b>Tree</b>	<a href="#">name</a>
<b>Configurable</b>	False



**size number**

<b>Description</b>	Size of the checkpoint configuration file
<b>Context</b>	<a href="#">system configuration checkpoint id number size number</a>
<b>Tree</b>	<a href="#">size</a>
<b>Units</b>	bytes
<b>Configurable</b>	False

**tag string**

<b>Description</b>	Full system version that the checkpoint was generated on
<b>Context</b>	<a href="#">system configuration checkpoint id number tag string</a>
<b>Tree</b>	<a href="#">tag</a>
<b>Configurable</b>	False

**username string**

<b>Description</b>	Username that created this checkpoint
<b>Context</b>	<a href="#">system configuration checkpoint id number username string</a>
<b>Tree</b>	<a href="#">username</a>
<b>String Length</b>	1 to 255
<b>Configurable</b>	False

**version string**

<b>Description</b>	System version that the checkpoint was generated on
<b>Context</b>	<a href="#">system configuration checkpoint id number version string</a>
<b>Tree</b>	<a href="#">version</a>
<b>Configurable</b>	False

**commit id number**

<b>Description</b>	List of configuration transactions
<b>Context</b>	<a href="#">system configuration commit id number</a>
<b>Tree</b>	<a href="#">commit</a>
<b>Configurable</b>	False

**id *number***

<b>Description</b>	System identifier for the commit
<b>Context</b>	<a href="#">system configuration commit id</a> <i>number</i>
<b>Configurable</b>	False

**comment *string***

<b>Description</b>	Operator provided comment associated with this commit
<b>Context</b>	<a href="#">system configuration commit id</a> <i>number</i> <a href="#">comment</a> <i>string</i>
<b>Tree</b>	<a href="#">comment</a>
<b>Configurable</b>	False

**ended *string***

<b>Description</b>	End date and time of the commit This field is not populated if the commit is in progress
<b>Context</b>	<a href="#">system configuration commit id</a> <i>number</i> <a href="#">ended</a> <i>string</i>
<b>Tree</b>	<a href="#">ended</a>
<b>String Length</b>	20 to 32
<b>Configurable</b>	False

**name *string***

<b>Description</b>	Name of the configuration candidate the commit was triggered from
<b>Context</b>	<a href="#">system configuration commit id</a> <i>number</i> <a href="#">name</a> <i>string</i>
<b>Tree</b>	<a href="#">name</a>
<b>String Length</b>	1 to 255
<b>Configurable</b>	False

**started *string***

<b>Description</b>	Start date and time of the commit
<b>Context</b>	<a href="#">system configuration commit id</a> <i>number</i> <a href="#">started</a> <i>string</i>
<b>Tree</b>	<a href="#">started</a>
<b>String Length</b>	20 to 32

**Configurable** False

### **status *keyword***

**Description** Current status of the commit

**Context** [system configuration commit id](#) *number status keyword*

**Tree** [status](#)

**Options**

- validating
- publishing
- unconfirmed
- checkpoint
- save
- complete
- reverting
- failed

**Configurable** False

### **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

### **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

### **idle-timeout *number***

<b>Description</b>	The idle timeout of configuration candidates After this period of no activity, the candidate is emptied and removed from the system.
<b>Context</b>	<a href="#">system configuration idle-timeout <i>number</i></a>
<b>Tree</b>	<a href="#">idle-timeout</a>
<b>Default</b>	10080
<b>Units</b>	minutes
<b>Configurable</b>	True

### **last-change *string***

<b>Description</b>	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.
<b>Context</b>	<a href="#">system configuration last-change <i>string</i></a>
<b>Tree</b>	<a href="#">last-change</a>
<b>String Length</b>	20 to 32
<b>Configurable</b>	False

### **max-candidates *number***

<b>Description</b>	The maximum number of combined private and shared candidates
<b>Context</b>	<a href="#">system configuration max-candidates <i>number</i></a>
<b>Tree</b>	<a href="#">max-candidates</a>
<b>Range</b>	1 to 255
<b>Default</b>	10
<b>Configurable</b>	True

### **max-checkpoints *number***

<b>Description</b>	The number of checkpoints kept by the system
<b>Context</b>	<a href="#">system configuration max-checkpoints <i>number</i></a>
<b>Tree</b>	<a href="#">max-checkpoints</a>
<b>Range</b>	1 to 255
<b>Default</b>	10

**Configurable** True

### role *name reference*

**Description** List of roles configured in the system  
**Context** [system configuration role name reference](#)  
**Tree** [role](#)  
**Configurable** True  
**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

### 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  
**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

**action *keyword***

<b>Description</b>	Action to allow for this path
<b>Context</b>	<a href="#">system configuration role name reference rule path-reference string action keyword</a>
<b>Tree</b>	<a href="#">action</a>
<b>Options</b>	<ul style="list-style-type: none"> <li>• read This path may be read by the role</li> <li>• write This path may be written and read by the role</li> <li>• deny This path may not be read or written to by the role</li> </ul>
<b>Configurable</b>	True

**session id *number***

<b>Description</b>	List of configuration sessions currently active
<b>Context</b>	<a href="#">system configuration session id number</a>
<b>Tree</b>	<a href="#">session</a>
<b>Configurable</b>	False

**id *number***

<b>Description</b>	System generated ID for the configuration session
<b>Context</b>	<a href="#">system configuration session id number</a>
<b>Configurable</b>	False

**exclusive *boolean***

<b>Description</b>	Details if this session is running in exclusive mode
<b>Context</b>	<a href="#">system configuration session id number exclusive boolean</a>
<b>Tree</b>	<a href="#">exclusive</a>
<b>Configurable</b>	False

**name *string***

<b>Description</b>	Name of the candidate the session is active on
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	Set to 'default' if a non-named candidate is active
<b>Context</b>	<a href="#">system configuration session id number name string</a>
<b>Tree</b>	<a href="#">name</a>
<b>String Length</b>	1 to 255
<b>Configurable</b>	False

**started string**

<b>Description</b>	Start date and time of the configuration session
<b>Context</b>	<a href="#">system configuration session id number started string</a>
<b>Tree</b>	<a href="#">started</a>
<b>String Length</b>	20 to 32
<b>Configurable</b>	False

**type keyword**

<b>Description</b>	Type of configuration session
<b>Context</b>	<a href="#">system configuration session id number type keyword</a>
<b>Tree</b>	<a href="#">type</a>
<b>Options</b>	<ul style="list-style-type: none"> <li>• shared</li> <li>• private</li> </ul>
<b>Configurable</b>	False

**username string**

<b>Description</b>	User that started the configuration session
<b>Context</b>	<a href="#">system configuration session id number username string</a>
<b>Tree</b>	<a href="#">username</a>
<b>String Length</b>	1 to 255
<b>Configurable</b>	False

## dhcp-server



### Note:

This command is available for the following platforms:

- 7220 IXR-D2
- 7250 IXR-10
- 7220 IXR-D3L
- 7220 IXR-D2L
- 7220 IXR-H3
- 7220 IXR-H2
- 7220 IXR-D3
- 7250 IXR-6
- 7220 IXR-D1

<b>Description</b>	Configures the dhcp server
<b>Context</b>	<a href="#">system dhcp-server</a>
<b>Tree</b>	<a href="#">dhcp-server</a>
<b>Configurable</b>	True

## admin-state *keyword*



### Note:

This command is available for the following platforms:

- 7220 IXR-D2
- 7250 IXR-10
- 7220 IXR-D3L
- 7220 IXR-D2L
- 7220 IXR-H3
- 7220 IXR-H2
- 7220 IXR-D3
- 7250 IXR-6
- 7220 IXR-D1

<b>Description</b>	Globally enable or disable the dhcp server Disabling this will disable all dhcp servers.
<b>Context</b>	<a href="#">system dhcp-server admin-state keyword</a>
<b>Tree</b>	<a href="#">admin-state</a>
<b>Default</b>	disable



<b>Options</b>	<ul style="list-style-type: none"> <li>• enable</li> <li>• disable</li> </ul>
<b>Configurable</b>	True

## network-instance [name reference](#)



### Note:

This command is available for the following platforms:

- 7220 IXR-D2
- 7250 IXR-10
- 7220 IXR-D3L
- 7220 IXR-D2L
- 7220 IXR-H3
- 7220 IXR-H2
- 7220 IXR-D3
- 7250 IXR-6
- 7220 IXR-D1

<b>Description</b>	List of network instances to run a dhcp server in
<b>Context</b>	<a href="#">system dhcp-server network-instance name reference</a>
<b>Tree</b>	<a href="#">network-instance</a>
<b>Configurable</b>	True

## name *reference*



### Note:

This command is available for the following platforms:

- 7220 IXR-D2
- 7250 IXR-10
- 7220 IXR-D3L
- 7220 IXR-D2L
- 7220 IXR-H3
- 7220 IXR-H2
- 7220 IXR-D3
- 7250 IXR-6
- 7220 IXR-D1

<b>Description</b>	Reference to a configured network instance
<b>Context</b>	<a href="#">system dhcp-server network-instance name</a> <i>reference</i>
<b>Reference</b>	<a href="#">network-instance name string name string</a> <i>string</i>
<b>Configurable</b>	True

## dhcpv4



### Note:

This command is available for the following platforms:

- 7220 IXR-D2
- 7250 IXR-10
- 7220 IXR-D3L
- 7220 IXR-D2L
- 7220 IXR-H3
- 7220 IXR-H2
- 7220 IXR-D3
- 7250 IXR-6
- 7220 IXR-D1

<b>Description</b>	Enter the dhcpv4 context
<b>Context</b>	<a href="#">system dhcp-server network-instance name</a> <i>reference</i> <a href="#">dhcpv4</a>
<b>Tree</b>	<a href="#">dhcpv4</a>
<b>Configurable</b>	True

**admin-state keyword****Note:**

This command is available for the following platforms:

- 7220 IXR-D2
- 7250 IXR-10
- 7220 IXR-D3L
- 7220 IXR-D2L
- 7220 IXR-H3
- 7220 IXR-H2
- 7220 IXR-D3
- 7250 IXR-6
- 7220 IXR-D1

<b>Description</b>	Administratively enable or disable the dhcp server
<b>Context</b>	<a href="#">system dhcp-server network-instance name reference dhcpv4 admin-state keyword</a>
<b>Tree</b>	<a href="#">admin-state</a>
<b>Default</b>	disable
<b>Options</b>	<ul style="list-style-type: none"> <li>• enable</li> <li>• disable</li> </ul>
<b>Configurable</b>	True

**oper-state keyword****Note:**

This command is available for the following platforms:

- 7220 IXR-D2
- 7250 IXR-10
- 7220 IXR-D3L
- 7220 IXR-D2L
- 7220 IXR-H3
- 7220 IXR-H2
- 7220 IXR-D3
- 7250 IXR-6
- 7220 IXR-D1

<b>Description</b>	Details if the dhcp server is operationally available
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<b>Context</b>	<a href="#">system dhcp-server network-instance name</a> <i>reference</i> <a href="#">dhcpv4 oper-state</a> <i>keyword</i>
<b>Tree</b>	<a href="#">oper-state</a>
<b>Options</b>	<ul style="list-style-type: none"> <li>• up Component or process is operational</li> <li>• down Component or process is not operational</li> <li>• empty Component slot is empty</li> <li>• downloading Component is downloading image into memory</li> <li>• booting Component is booting downloaded image</li> <li>• starting Component image operational, application processes starting</li> <li>• failed Component or process has failed</li> <li>• synchronizing Component is currently being synchronized</li> <li>• upgrading Component is currently being upgraded</li> <li>• low-power Component is offline due to insufficient system power</li> <li>• degraded Component or process is in a degraded state</li> <li>• warm-reboot Component or process is currently warm rebooting  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.</li> </ul>
<b>Configurable</b>	False

## options



### Note:

This command is available for the following platforms:

- 7220 IXR-D2
- 7250 IXR-10
- 7220 IXR-D3L
- 7220 IXR-D2L
- 7220 IXR-H3
- 7220 IXR-H2
- 7220 IXR-D3
- 7250 IXR-6
- 7220 IXR-D1

<b>Description</b>	Enter the options context
<b>Context</b>	<a href="#">system dhcp-server network-instance name reference dhcpv4 options</a>
<b>Tree</b>	<a href="#">options</a>
<b>Configurable</b>	True

## bootfile-name *string*



### Note:

This command is available for the following platforms:

- 7220 IXR-D2
- 7250 IXR-10
- 7220 IXR-D3L
- 7220 IXR-D2L
- 7220 IXR-H3
- 7220 IXR-H2
- 7220 IXR-D3
- 7250 IXR-6
- 7220 IXR-D1

<b>Description</b>	The URL to the provisioning script the client will use during booting
<b>Context</b>	<a href="#">system dhcp-server network-instance name reference dhcpv4 options bootfile-name string</a>
<b>Tree</b>	<a href="#">bootfile-name</a>
<b>String Length</b>	1 to 128

**Configurable** True

### dns-server *string*



**Note:**

This command is available for the following platforms:

- 7220 IXR-D2
- 7250 IXR-10
- 7220 IXR-D3L
- 7220 IXR-D2L
- 7220 IXR-H3
- 7220 IXR-H2
- 7220 IXR-D3
- 7250 IXR-6
- 7220 IXR-D1

<b>Description</b>	An Ordered List of DNS servers to return to the dhcp client
<b>Context</b>	<a href="#">system dhcp-server network-instance name reference dhcpv4 options dns-server <i>string</i></a>
<b>Tree</b>	<a href="#">dns-server</a>
<b>Configurable</b>	True
<b>Max. Elements</b>	4

### domain-name *string*



**Note:**

This command is available for the following platforms:

- 7220 IXR-D2
- 7250 IXR-10
- 7220 IXR-D3L
- 7220 IXR-D2L
- 7220 IXR-H3
- 7220 IXR-H2
- 7220 IXR-D3
- 7250 IXR-6
- 7220 IXR-D1

<b>Description</b>	The domain name to return to the dhcp client that the client should use when resolving hostnames via the Domain Name System
<b>Context</b>	<a href="#">system dhcp-server network-instance name</a> <i>reference</i> <a href="#">dhcpv4 options domain-name</a> <i>string</i>
<b>Tree</b>	<a href="#">domain-name</a>
<b>String Length</b>	1 to 253
<b>Configurable</b>	True

### hostname *string*



**Note:**

This command is available for the following platforms:

- 7220 IXR-D2
- 7250 IXR-10
- 7220 IXR-D3L
- 7220 IXR-D2L
- 7220 IXR-H3
- 7220 IXR-H2
- 7220 IXR-D3
- 7250 IXR-6
- 7220 IXR-D1

<b>Description</b>	Host Name option of the dhcp client
<b>Context</b>	<a href="#">system dhcp-server network-instance name</a> <i>reference</i> <a href="#">dhcpv4 options hostname</a> <i>string</i>
<b>Tree</b>	<a href="#">hostname</a>
<b>String Length</b>	1 to 63
<b>Configurable</b>	True

## ntp-server *string*

**Note:**

This command is available for the following platforms:

- 7220 IXR-D2
- 7250 IXR-10
- 7220 IXR-D3L
- 7220 IXR-D2L
- 7220 IXR-H3
- 7220 IXR-H2
- 7220 IXR-D3
- 7250 IXR-6
- 7220 IXR-D1

<b>Description</b>	List of NTP Servers to return to the dhcp client
<b>Context</b>	<a href="#">system dhcp-server network-instance name reference dhcpv4 options ntp-server <i>string</i></a>
<b>Tree</b>	<a href="#">ntp-server</a>
<b>Configurable</b>	True
<b>Max. Elements</b>	4

## router *string*

**Note:**

This command is available for the following platforms:

- 7220 IXR-D2
- 7250 IXR-10
- 7220 IXR-D3L
- 7220 IXR-D2L
- 7220 IXR-H3
- 7220 IXR-H2
- 7220 IXR-D3
- 7250 IXR-6
- 7220 IXR-D1

<b>Description</b>	IPv4 address of the gateway for the dhcp client
<b>Context</b>	<a href="#">system dhcp-server network-instance name reference dhcpv4 options router <i>string</i></a>



<b>Tree</b>	<a href="#">router</a>
<b>Configurable</b>	True

### **server-id *string***



**Note:**

This command is available for the following platforms:

- 7220 IXR-D2
- 7250 IXR-10
- 7220 IXR-D3L
- 7220 IXR-D2L
- 7220 IXR-H3
- 7220 IXR-H2
- 7220 IXR-D3
- 7250 IXR-6
- 7220 IXR-D1

<b>Description</b>	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
<b>Context</b>	<a href="#">system dhcp-server network-instance name reference dhcpv4 options server-id string</a>
<b>Tree</b>	<a href="#">server-id</a>
<b>Configurable</b>	True

## static-allocation



### Note:

This command is available for the following platforms:

- 7220 IXR-D2
- 7250 IXR-10
- 7220 IXR-D3L
- 7220 IXR-D2L
- 7220 IXR-H3
- 7220 IXR-H2
- 7220 IXR-D3
- 7250 IXR-6
- 7220 IXR-D1

<b>Description</b>	Enter the static-allocation context
<b>Context</b>	<a href="#">system dhcp-server network-instance name reference dhcpv4 static-allocation</a>
<b>Tree</b>	<a href="#">static-allocation</a>
<b>Configurable</b>	True

## host *mac string*



### Note:

This command is available for the following platforms:

- 7220 IXR-D2
- 7250 IXR-10
- 7220 IXR-D3L
- 7220 IXR-D2L
- 7220 IXR-H3
- 7220 IXR-H2
- 7220 IXR-D3
- 7250 IXR-6
- 7220 IXR-D1

<b>Description</b>	The host name for static ip allocations
<b>Context</b>	<a href="#">system dhcp-server network-instance name reference dhcpv4 static-allocation host mac string</a>
<b>Tree</b>	<a href="#">host</a>

**Configurable** True

### mac *string*



**Note:**

This command is available for the following platforms:

- 7220 IXR-D2
- 7250 IXR-10
- 7220 IXR-D3L
- 7220 IXR-D2L
- 7220 IXR-H3
- 7220 IXR-H2
- 7220 IXR-D3
- 7250 IXR-6
- 7220 IXR-D1

**Description** Enter the mac context

**Context** [system dhcp-server network-instance name](#) *reference* [dhcpv4 static-allocation host mac](#) *string*

**Configurable** True

### ip-address *string*



**Note:**

This command is available for the following platforms:

- 7220 IXR-D2
- 7250 IXR-10
- 7220 IXR-D3L
- 7220 IXR-D2L
- 7220 IXR-H3
- 7220 IXR-H2
- 7220 IXR-D3
- 7250 IXR-6
- 7220 IXR-D1

**Description** Enter the ip-address context

**Context** [system dhcp-server network-instance name](#) *reference* [dhcpv4 static-allocation host mac](#) *string ip-address* *string*

<b>Tree</b>	<a href="#">ip-address</a>
<b>Configurable</b>	True

## options



### Note:

This command is available for the following platforms:

- 7220 IXR-D2
- 7250 IXR-10
- 7220 IXR-D3L
- 7220 IXR-D2L
- 7220 IXR-H3
- 7220 IXR-H2
- 7220 IXR-D3
- 7250 IXR-6
- 7220 IXR-D1

<b>Description</b>	Enter the options context
<b>Context</b>	<a href="#">system dhcp-server network-instance name reference dhcpv4 static-allocation host mac string options</a>
<b>Tree</b>	<a href="#">options</a>
<b>Configurable</b>	True

## bootfile-name *string*



### Note:

This command is available for the following platforms:

- 7220 IXR-D2
- 7250 IXR-10
- 7220 IXR-D3L
- 7220 IXR-D2L
- 7220 IXR-H3
- 7220 IXR-H2
- 7220 IXR-D3
- 7250 IXR-6
- 7220 IXR-D1

<b>Description</b>	The URL to the provisioning script the client will use during booting
<b>Context</b>	<a href="#">system dhcp-server network-instance name</a> <i>reference</i> <a href="#">dhcpv4 static-allocation host mac</a> <i>string options bootfile-name</i> <i>string</i>
<b>Tree</b>	<a href="#">bootfile-name</a>
<b>String Length</b>	1 to 128
<b>Configurable</b>	True

### dns-server *string*



**Note:**

This command is available for the following platforms:

- 7220 IXR-D2
- 7250 IXR-10
- 7220 IXR-D3L
- 7220 IXR-D2L
- 7220 IXR-H3
- 7220 IXR-H2
- 7220 IXR-D3
- 7250 IXR-6
- 7220 IXR-D1

<b>Description</b>	An Ordered List of DNS servers to return to the dhcp client
<b>Context</b>	<a href="#">system dhcp-server network-instance name</a> <i>reference</i> <a href="#">dhcpv4 static-allocation host mac</a> <i>string options dns-server</i> <i>string</i>
<b>Tree</b>	<a href="#">dns-server</a>
<b>Configurable</b>	True
<b>Max. Elements</b>	4

## domain-name *string*

**Note:**

This command is available for the following platforms:

- 7220 IXR-D2
- 7250 IXR-10
- 7220 IXR-D3L
- 7220 IXR-D2L
- 7220 IXR-H3
- 7220 IXR-H2
- 7220 IXR-D3
- 7250 IXR-6
- 7220 IXR-D1

<b>Description</b>	The domain name to return to the dhcp client that the client should use when resolving hostnames via the Domain Name System
<b>Context</b>	<a href="#">system dhcp-server network-instance name</a> <i>reference</i> <a href="#">dhcpv4 static-allocation host mac</a> <i>string options domain-name string</i>
<b>Tree</b>	<a href="#">domain-name</a>
<b>String Length</b>	1 to 253
<b>Configurable</b>	True

## hostname *string*

**Note:**

This command is available for the following platforms:

- 7220 IXR-D2
- 7250 IXR-10
- 7220 IXR-D3L
- 7220 IXR-D2L
- 7220 IXR-H3
- 7220 IXR-H2
- 7220 IXR-D3
- 7250 IXR-6
- 7220 IXR-D1

<b>Description</b>	Host Name option of the dhcp client
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<b>Context</b>	<a href="#">system dhcp-server network-instance name</a> <i>reference</i> <a href="#">dhcpv4 static-allocation host mac</a> <i>string</i> <a href="#">options hostname</a> <i>string</i>
<b>Tree</b>	<a href="#">hostname</a>
<b>String Length</b>	1 to 63
<b>Configurable</b>	True

### **ntp-server *string***



**Note:**

This command is available for the following platforms:

- 7220 IXR-D2
- 7250 IXR-10
- 7220 IXR-D3L
- 7220 IXR-D2L
- 7220 IXR-H3
- 7220 IXR-H2
- 7220 IXR-D3
- 7250 IXR-6
- 7220 IXR-D1

<b>Description</b>	List of NTP Servers to return to the dhcp client
<b>Context</b>	<a href="#">system dhcp-server network-instance name</a> <i>reference</i> <a href="#">dhcpv4 static-allocation host mac</a> <i>string</i> <a href="#">options ntp-server</a> <i>string</i>
<b>Tree</b>	<a href="#">ntp-server</a>
<b>Configurable</b>	True
<b>Max. Elements</b>	4

## router *string*

**Note:**

This command is available for the following platforms:

- 7220 IXR-D2
- 7250 IXR-10
- 7220 IXR-D3L
- 7220 IXR-D2L
- 7220 IXR-H3
- 7220 IXR-H2
- 7220 IXR-D3
- 7250 IXR-6
- 7220 IXR-D1

<b>Description</b>	IPv4 address of the gateway for the dhcp client
<b>Context</b>	<a href="#">system dhcp-server network-instance name reference dhcpv4 static-allocation host mac string options router string</a>
<b>Tree</b>	<a href="#">router</a>
<b>Configurable</b>	True

## server-id *string*

**Note:**

This command is available for the following platforms:

- 7220 IXR-D2
- 7250 IXR-10
- 7220 IXR-D3L
- 7220 IXR-D2L
- 7220 IXR-H3
- 7220 IXR-H2
- 7220 IXR-D3
- 7250 IXR-6
- 7220 IXR-D1

<b>Description</b>	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
<b>Context</b>	<a href="#">system dhcp-server network-instance name reference dhcpv4 static-allocation host mac string options server-id string</a>



<b>Tree</b>	<a href="#">server-id</a>
<b>Configurable</b>	True

## statistics



### Note:

This command is available for the following platforms:

- 7220 IXR-D2
- 7250 IXR-10
- 7220 IXR-D3L
- 7220 IXR-D2L
- 7220 IXR-H3
- 7220 IXR-H2
- 7220 IXR-D3
- 7250 IXR-6
- 7220 IXR-D1

<b>Description</b>	Enter the statistics context
<b>Context</b>	<a href="#">system dhcp-server network-instance name</a> <i>reference</i> <a href="#">dhcpv4 statistics</a>
<b>Tree</b>	<a href="#">statistics</a>
<b>Configurable</b>	False

## client-packets-discarded *number*



### Note:

This command is available for the following platforms:

- 7220 IXR-D2
- 7250 IXR-10
- 7220 IXR-D3L
- 7220 IXR-D2L
- 7220 IXR-H3
- 7220 IXR-H2
- 7220 IXR-D3
- 7250 IXR-6
- 7220 IXR-D1

<b>Description</b>	Total discarded dhcp packets from dhcp client(s)
--------------------	--

<b>Context</b>	<a href="#">system dhcp-server network-instance name reference dhcpv4 statistics client-packets-discarded number</a>
<b>Tree</b>	<a href="#">client-packets-discarded</a>
<b>Default</b>	0
<b>Configurable</b>	False

## client-packets-received *number*



### Note:

This command is available for the following platforms:

- 7220 IXR-D2
- 7250 IXR-10
- 7220 IXR-D3L
- 7220 IXR-D2L
- 7220 IXR-H3
- 7220 IXR-H2
- 7220 IXR-D3
- 7250 IXR-6
- 7220 IXR-D1

<b>Description</b>	Total received dhcp packets from dhcp client(s)
<b>Context</b>	<a href="#">system dhcp-server network-instance name reference dhcpv4 statistics client-packets-received number</a>
<b>Tree</b>	<a href="#">client-packets-received</a>
<b>Default</b>	0
<b>Configurable</b>	False

## server-packets-sent *number*



### Note:

This command is available for the following platforms:

- 7220 IXR-D2
- 7250 IXR-10
- 7220 IXR-D3L
- 7220 IXR-D2L
- 7220 IXR-H3
- 7220 IXR-H2
- 7220 IXR-D3
- 7250 IXR-6
- 7220 IXR-D1

<b>Description</b>	Total dhcp packets sent from DHCP server towards dhcp client(s)
<b>Context</b>	<a href="#">system dhcp-server network-instance name <i>reference</i> dhcpv4 statistics server-packets-sent <i>number</i></a>
<b>Tree</b>	<a href="#">server-packets-sent</a>
<b>Default</b>	0
<b>Configurable</b>	False

## trace-options



### Note:

This command is available for the following platforms:

- 7220 IXR-D2
- 7250 IXR-10
- 7220 IXR-D3L
- 7220 IXR-D2L
- 7220 IXR-H3
- 7220 IXR-H2
- 7220 IXR-D3
- 7250 IXR-6
- 7220 IXR-D1

<b>Description</b>	Container for tracing DHCP server operations instance
<b>Context</b>	<a href="#">system dhcp-server network-instance name <i>reference</i> dhcpv4 trace-options</a>
<b>Tree</b>	<a href="#">trace-options</a>

**Configurable** True

### trace *keyword*



**Note:**

This command is available for the following platforms:

- 7220 IXR-D2
- 7250 IXR-10
- 7220 IXR-D3L
- 7220 IXR-D2L
- 7220 IXR-H3
- 7220 IXR-H2
- 7220 IXR-D3
- 7250 IXR-6
- 7220 IXR-D1

<b>Description</b>	List of events to trace
<b>Context</b>	<a href="#">system dhcp-server network-instance name</a> <i>reference</i> <a href="#">dhcpv4 trace-options trace keyword</a>
<b>Tree</b>	<a href="#">trace</a>
<b>Options</b>	<ul style="list-style-type: none"> <li>• messages</li> </ul> Capture all DHCP server messages sent and received
<b>Configurable</b>	True

## dhcpv6



### Note:

This command is available for the following platforms:

- 7220 IXR-D2
- 7250 IXR-10
- 7220 IXR-D3L
- 7220 IXR-D2L
- 7220 IXR-H3
- 7220 IXR-H2
- 7220 IXR-D3
- 7250 IXR-6
- 7220 IXR-D1

<b>Description</b>	Enter the dhcpv6 context
<b>Context</b>	<a href="#">system dhcp-server network-instance name reference dhcpv6</a>
<b>Tree</b>	<a href="#">dhcpv6</a>
<b>Configurable</b>	True

## admin-state *keyword*



### Note:

This command is available for the following platforms:

- 7220 IXR-D2
- 7250 IXR-10
- 7220 IXR-D3L
- 7220 IXR-D2L
- 7220 IXR-H3
- 7220 IXR-H2
- 7220 IXR-D3
- 7250 IXR-6
- 7220 IXR-D1

<b>Description</b>	Administratively enable or disable the dhcp server
<b>Context</b>	<a href="#">system dhcp-server network-instance name reference dhcpv6 admin-state keyword</a>
<b>Tree</b>	<a href="#">admin-state</a>
<b>Default</b>	disable

<b>Options</b>	<ul style="list-style-type: none"> <li>• enable</li> <li>• disable</li> </ul>
<b>Configurable</b>	True

### oper-state *keyword*



#### Note:

This command is available for the following platforms:

- 7220 IXR-D2
- 7250 IXR-10
- 7220 IXR-D3L
- 7220 IXR-D2L
- 7220 IXR-H3
- 7220 IXR-H2
- 7220 IXR-D3
- 7250 IXR-6
- 7220 IXR-D1

<b>Description</b>	Details if the dhcp server is operationally available
<b>Context</b>	<a href="#">system dhcp-server network-instance name reference dhcpv6 oper-state keyword</a>
<b>Tree</b>	<a href="#">oper-state</a>
<b>Options</b>	<ul style="list-style-type: none"> <li>• up Component or process is operational</li> <li>• down Component or process is not operational</li> <li>• empty Component slot is empty</li> <li>• downloading Component is downloading image into memory</li> <li>• booting Component is booting downloaded image</li> <li>• starting Component image operational, application processes starting</li> <li>• failed Component or process has failed</li> </ul>

- 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  
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.

**Configurable**

False

## options

**Note:**

This command is available for the following platforms:

- 7220 IXR-D2
- 7250 IXR-10
- 7220 IXR-D3L
- 7220 IXR-D2L
- 7220 IXR-H3
- 7220 IXR-H2
- 7220 IXR-D3
- 7250 IXR-6
- 7220 IXR-D1

**Description**

Enter the options context

**Context**[system dhcp-server network-instance name \*reference\* dhcpv6 options](#)**Tree**[options](#)**Configurable**

True

## dns-server *string*



### Note:

This command is available for the following platforms:

- 7220 IXR-D2
- 7250 IXR-10
- 7220 IXR-D3L
- 7220 IXR-D2L
- 7220 IXR-H3
- 7220 IXR-H2
- 7220 IXR-D3
- 7250 IXR-6
- 7220 IXR-D1

<b>Description</b>	An Ordered List of DNS servers to return to the dhcp client
<b>Context</b>	<a href="#">system dhcp-server network-instance name <i>reference</i> dhcpv6 options dns-server <i>string</i></a>
<b>Tree</b>	<a href="#">dns-server</a>
<b>Configurable</b>	True
<b>Max. Elements</b>	4

## static-allocation



### Note:

This command is available for the following platforms:

- 7220 IXR-D2
- 7250 IXR-10
- 7220 IXR-D3L
- 7220 IXR-D2L
- 7220 IXR-H3
- 7220 IXR-H2
- 7220 IXR-D3
- 7250 IXR-6
- 7220 IXR-D1

<b>Description</b>	Enter the static-allocation context
<b>Context</b>	<a href="#">system dhcp-server network-instance name <i>reference</i> dhcpv6 static-allocation</a>



<b>Tree</b>	<a href="#">static-allocation</a>
<b>Configurable</b>	True

## host *mac string*



### Note:

This command is available for the following platforms:

- 7220 IXR-D2
- 7250 IXR-10
- 7220 IXR-D3L
- 7220 IXR-D2L
- 7220 IXR-H3
- 7220 IXR-H2
- 7220 IXR-D3
- 7250 IXR-6
- 7220 IXR-D1

<b>Description</b>	host name for static ip allocations
<b>Context</b>	<a href="#">system dhcp-server network-instance name</a> <i>reference</i> <a href="#">dhcpv6 static-allocation host mac string</a>
<b>Tree</b>	<a href="#">host</a>
<b>Configurable</b>	True

## mac *string*



### Note:

This command is available for the following platforms:

- 7220 IXR-D2
- 7250 IXR-10
- 7220 IXR-D3L
- 7220 IXR-D2L
- 7220 IXR-H3
- 7220 IXR-H2
- 7220 IXR-D3
- 7250 IXR-6
- 7220 IXR-D1

<b>Description</b>	Enter the mac context
<b>Context</b>	<a href="#">system dhcp-server network-instance name</a> <i>reference</i> <a href="#">dhcpv6 static-allocation host mac</a> <i>string</i>
<b>Configurable</b>	True

### ip-address *string*



**Note:**

This command is available for the following platforms:

- 7220 IXR-D2
- 7250 IXR-10
- 7220 IXR-D3L
- 7220 IXR-D2L
- 7220 IXR-H3
- 7220 IXR-H2
- 7220 IXR-D3
- 7250 IXR-6
- 7220 IXR-D1

<b>Description</b>	Enter the ip-address context
<b>Context</b>	<a href="#">system dhcp-server network-instance name</a> <i>reference</i> <a href="#">dhcpv6 static-allocation host mac</a> <i>string</i> <a href="#">ip-address</a> <i>string</i>
<b>Tree</b>	<a href="#">ip-address</a>
<b>Configurable</b>	True

## options



### Note:

This command is available for the following platforms:

- 7220 IXR-D2
- 7250 IXR-10
- 7220 IXR-D3L
- 7220 IXR-D2L
- 7220 IXR-H3
- 7220 IXR-H2
- 7220 IXR-D3
- 7250 IXR-6
- 7220 IXR-D1

<b>Description</b>	Enter the options context
<b>Context</b>	<a href="#">system dhcp-server network-instance name</a> <i>reference</i> <a href="#">dhcpv6 static-allocation host mac</a> <i>string</i> <a href="#">options</a>
<b>Tree</b>	<a href="#">options</a>
<b>Configurable</b>	True

## dns-server *string*



### Note:

This command is available for the following platforms:

- 7220 IXR-D2
- 7250 IXR-10
- 7220 IXR-D3L
- 7220 IXR-D2L
- 7220 IXR-H3
- 7220 IXR-H2
- 7220 IXR-D3
- 7250 IXR-6
- 7220 IXR-D1

<b>Description</b>	An Ordered List of DNS servers to return to the dhcp client
<b>Context</b>	<a href="#">system dhcp-server network-instance name</a> <i>reference</i> <a href="#">dhcpv6 static-allocation host mac</a> <i>string</i> <a href="#">options dns-server</a> <i>string</i>
<b>Tree</b>	<a href="#">dns-server</a>

<b>Configurable</b>	True
<b>Max. Elements</b>	4

## statistics



### Note:

This command is available for the following platforms:

- 7220 IXR-D2
- 7250 IXR-10
- 7220 IXR-D3L
- 7220 IXR-D2L
- 7220 IXR-H3
- 7220 IXR-H2
- 7220 IXR-D3
- 7250 IXR-6
- 7220 IXR-D1

<b>Description</b>	Enter the statistics context
<b>Context</b>	<a href="#">system dhcp-server network-instance name reference dhcpv6 statistics</a>
<b>Tree</b>	<a href="#">statistics</a>
<b>Configurable</b>	False

## client-packets-discarded *number*



### Note:

This command is available for the following platforms:

- 7220 IXR-D2
- 7250 IXR-10
- 7220 IXR-D3L
- 7220 IXR-D2L
- 7220 IXR-H3
- 7220 IXR-H2
- 7220 IXR-D3
- 7250 IXR-6
- 7220 IXR-D1

<b>Description</b>	Total discarded dhcp packets from dhcp client(s)
--------------------	--

<b>Context</b>	<a href="#">system dhcp-server network-instance name reference dhcpv6 statistics client-packets-discarded</a> <i>number</i>
<b>Tree</b>	<a href="#">client-packets-discarded</a>
<b>Default</b>	0
<b>Configurable</b>	False

## client-packets-received *number*



### Note:

This command is available for the following platforms:

- 7220 IXR-D2
- 7250 IXR-10
- 7220 IXR-D3L
- 7220 IXR-D2L
- 7220 IXR-H3
- 7220 IXR-H2
- 7220 IXR-D3
- 7250 IXR-6
- 7220 IXR-D1

<b>Description</b>	Total received dhcp packets from dhcp client(s)
<b>Context</b>	<a href="#">system dhcp-server network-instance name reference dhcpv6 statistics client-packets-received</a> <i>number</i>
<b>Tree</b>	<a href="#">client-packets-received</a>
<b>Default</b>	0
<b>Configurable</b>	False

## server-packets-sent *number*



### Note:

This command is available for the following platforms:

- 7220 IXR-D2
- 7250 IXR-10
- 7220 IXR-D3L
- 7220 IXR-D2L
- 7220 IXR-H3
- 7220 IXR-H2
- 7220 IXR-D3
- 7250 IXR-6
- 7220 IXR-D1

<b>Description</b>	Total dhcp packets sent from DHCP server towards dhcp client(s)
<b>Context</b>	<a href="#">system dhcp-server network-instance name <i>reference</i> dhcpv6 statistics server-packets-sent <i>number</i></a>
<b>Tree</b>	<a href="#">server-packets-sent</a>
<b>Default</b>	0
<b>Configurable</b>	False

## trace-options



### Note:

This command is available for the following platforms:

- 7220 IXR-D2
- 7250 IXR-10
- 7220 IXR-D3L
- 7220 IXR-D2L
- 7220 IXR-H3
- 7220 IXR-H2
- 7220 IXR-D3
- 7250 IXR-6
- 7220 IXR-D1

<b>Description</b>	Container for tracing DHCP server operations instance
<b>Context</b>	<a href="#">system dhcp-server network-instance name <i>reference</i> dhcpv6 trace-options</a>
<b>Tree</b>	<a href="#">trace-options</a>

<b>Configurable</b>	True
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### trace *keyword*



**Note:**

This command is available for the following platforms:

- 7220 IXR-D2
- 7250 IXR-10
- 7220 IXR-D3L
- 7220 IXR-D2L
- 7220 IXR-H3
- 7220 IXR-H2
- 7220 IXR-D3
- 7250 IXR-6
- 7220 IXR-D1

<b>Description</b>	List of events to trace
<b>Context</b>	<a href="#">system dhcp-server network-instance name</a> <i>reference</i> <a href="#">dhcpv6 trace-options trace keyword</a>
<b>Tree</b>	<a href="#">trace</a>
<b>Options</b>	<ul style="list-style-type: none"> <li>• messages</li> </ul> Capture all DHCP server messages sent and received
<b>Configurable</b>	True

### dns

<b>Description</b>	Top-level container for DNS configuration and state
<b>Context</b>	<a href="#">system dns</a>
<b>Tree</b>	<a href="#">dns</a>
<b>Configurable</b>	True

### host-entry [name string](#)

<b>Description</b>	List of static host entries
<b>Context</b>	<a href="#">system dns host-entry name string</a>
<b>Tree</b>	<a href="#">host-entry</a>
<b>Configurable</b>	True

**name *string***

<b>Description</b>	Name of host entry
<b>Context</b>	<a href="#">system dns host-entry name <i>string</i></a>
<b>String Length</b>	1 to 253
<b>Configurable</b>	True

**ipv4-address *string***

<b>Description</b>	IPv4 address for the host entry
<b>Context</b>	<a href="#">system dns host-entry name <i>string</i> ipv4-address <i>string</i></a>
<b>Tree</b>	<a href="#">ipv4-address</a>
<b>Configurable</b>	True

**ipv6-address *string***

<b>Description</b>	IPv6 address for the host entry
<b>Context</b>	<a href="#">system dns host-entry name <i>string</i> ipv6-address <i>string</i></a>
<b>Tree</b>	<a href="#">ipv6-address</a>
<b>Configurable</b>	True

**network-instance *reference***

<b>Description</b>	Reference to a configured network-instance to source DNS requests from
<b>Context</b>	<a href="#">system dns network-instance <i>reference</i></a>
<b>Tree</b>	<a href="#">network-instance</a>
<b>Reference</b>	<a href="#">network-instance name <i>string</i> name <i>string</i> <i>string</i></a>
<b>Configurable</b>	True

**oper-state *keyword***

<b>Description</b>	Details the operational state of the DNS client
<b>Context</b>	<a href="#">system dns oper-state <i>keyword</i></a>
<b>Tree</b>	<a href="#">oper-state</a>
<b>Options</b>	<ul style="list-style-type: none"> <li>up Component or process is operational</li> </ul>



- 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  
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.

**Configurable** False

### **search-list *string***

<b>Description</b>	An ordered list of domains to search when resolving a host name
<b>Context</b>	<a href="#">system dns search-list <i>string</i></a>
<b>Tree</b>	<a href="#">search-list</a>
<b>String Length</b>	1 to 253
<b>Configurable</b>	True

**server-list (*ipv4-address* | *ipv6-address*)**

<b>Description</b>	List of the DNS servers that the resolver should query
<b>Context</b>	<a href="#">system dns server-list (<i>ipv4-address</i>   <i>ipv6-address</i>)</a>
<b>Tree</b>	<a href="#">server-list</a>
<b>Configurable</b>	True
<b>Max. Elements</b>	3

**features *string***

<b>Description</b>	Features enabled on this platform
<b>Context</b>	<a href="#">system features <i>string</i></a>
<b>Tree</b>	<a href="#">features</a>
<b>String Length</b>	1 to 255
<b>Configurable</b>	False

**ftp-server**

<b>Description</b>	Top-level container for FTP server configuration and state
<b>Context</b>	<a href="#">system ftp-server</a>
<b>Tree</b>	<a href="#">ftp-server</a>
<b>Configurable</b>	True

**network-instance [name](#) *reference***

<b>Description</b>	List of network-instances to run an FTP server in
<b>Context</b>	<a href="#">system ftp-server network-instance <a href="#">name</a> <i>reference</i></a>
<b>Tree</b>	<a href="#">network-instance</a>
<b>Configurable</b>	True

**[name](#) *reference***

<b>Description</b>	Reference to a configured network-instance
<b>Context</b>	<a href="#">system ftp-server network-instance <a href="#">name</a> <i>reference</i></a>
<b>Reference</b>	<a href="#">network-instance <a href="#">name</a> <a href="#">string</a> <a href="#">name</a> <a href="#">string</a> <i>string</i></a>
<b>Configurable</b>	True

**admin-state keyword**

<b>Description</b>	Enables or disables the FTP server in this network-instance
<b>Context</b>	<a href="#">system ftp-server network-instance name</a> <i>reference</i> <a href="#">admin-state keyword</a>
<b>Tree</b>	<a href="#">admin-state</a>
<b>Default</b>	disable
<b>Options</b>	<ul style="list-style-type: none"> <li>• enable</li> <li>• disable</li> </ul>
<b>Configurable</b>	True

**oper-state keyword**

<b>Description</b>	Details the operational state of the FTP server
<b>Context</b>	<a href="#">system ftp-server network-instance name</a> <i>reference</i> <a href="#">oper-state keyword</a>
<b>Tree</b>	<a href="#">oper-state</a>
<b>Options</b>	<ul style="list-style-type: none"> <li>• up Component or process is operational</li> <li>• down Component or process is not operational</li> <li>• empty Component slot is empty</li> <li>• downloading Component is downloading image into memory</li> <li>• booting Component is booting downloaded image</li> <li>• starting Component image operational, application processes starting</li> <li>• failed Component or process has failed</li> <li>• synchronizing Component is currently being synchronized</li> <li>• upgrading Component is currently being upgraded</li> <li>• low-power Component is offline due to insufficient system power</li> </ul>

- degraded  
Component or process is in a degraded state
- warm-reboot  
Component or process is currently warm rebooting  
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.

**Configurable** False

### **session-limit *number***

**Description** Set a limit on the number of simultaneous active FTP sessions

**Context** [system ftp-server network-instance name reference session-limit number](#)

**Tree** [session-limit](#)

**Default** 20

**Configurable** True

### **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 reference source-address \(ipv4-address | ipv6-address\)](#)

**Tree** [source-address](#)

**Default** ::

**Configurable** True

### **timeout *number***

**Description** Set the idle timeout in seconds on FTP connections

**Context** [system ftp-server network-instance name reference timeout number](#)

**Tree** [timeout](#)

**Default** 300

**Units** seconds

<b>Configurable</b>	True
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## gnmi-server

<b>Description</b>	Configures the gNMI server access API
<b>Context</b>	<a href="#">system gnmi-server</a>
<b>Tree</b>	<a href="#">gnmi-server</a>
<b>Configurable</b>	True

## admin-state *keyword*

<b>Description</b>	Globally enable or disable the gNMI server Disabling this will disable all gNMI servers.
<b>Context</b>	<a href="#">system gnmi-server admin-state <i>keyword</i></a>
<b>Tree</b>	<a href="#">admin-state</a>
<b>Default</b>	disable
<b>Options</b>	<ul style="list-style-type: none"> <li>• enable</li> <li>• disable</li> </ul>
<b>Configurable</b>	True

## commit-confirmed-timeout *number*

<b>Description</b>	Number of seconds to wait for confirmation. A value of 0 means commit confirmed is not used
<b>Context</b>	<a href="#">system gnmi-server commit-confirmed-timeout <i>number</i></a>
<b>Tree</b>	<a href="#">commit-confirmed-timeout</a>
<b>Range</b>	0 to 86400
<b>Default</b>	0
<b>Units</b>	seconds
<b>Configurable</b>	True

## commit-save *boolean*

<b>Description</b>	Specifies whether to save startup configuration after every successful commit
<b>Context</b>	<a href="#">system gnmi-server commit-save <i>boolean</i></a>
<b>Tree</b>	<a href="#">commit-save</a>

<b>Default</b>	false
<b>Configurable</b>	True

### include-defaults-in-config-only-responses *boolean*

<b>Description</b>	Specifies whether to include field default values in get/subscribe responses when using configuration only datastore (for example running/intended datastore)
<b>Context</b>	<a href="#">system gnmi-server include-defaults-in-config-only-responses</a> <i>boolean</i>
<b>Tree</b>	<a href="#">include-defaults-in-config-only-responses</a>
<b>Default</b>	false
<b>Configurable</b>	True

### network-instance [name](#) *reference*

<b>Description</b>	List of network instances to run a gNMI server in
<b>Context</b>	<a href="#">system gnmi-server network-instance name</a> <i>reference</i>
<b>Tree</b>	<a href="#">network-instance</a>
<b>Configurable</b>	True

### name *reference*

<b>Description</b>	Reference to a configured network instance
<b>Context</b>	<a href="#">system gnmi-server network-instance name</a> <i>reference</i>
<b>Reference</b>	<a href="#">network-instance name string name string</a> <i>string</i>
<b>Configurable</b>	True

### admin-state *keyword*

<b>Description</b>	Administratively enable or disable the gNMI server
<b>Context</b>	<a href="#">system gnmi-server network-instance name</a> <i>reference</i> <a href="#">admin-state</a> <i>keyword</i>
<b>Tree</b>	<a href="#">admin-state</a>
<b>Default</b>	disable
<b>Options</b>	<ul style="list-style-type: none"> <li>• enable</li> <li>• disable</li> </ul>
<b>Configurable</b>	True

**oper-state keyword**

<b>Description</b>	Details if the gNMI server is operationally available
<b>Context</b>	<a href="#">system gnmi-server network-instance name</a> <i>reference</i> <a href="#">oper-state keyword</a>
<b>Tree</b>	<a href="#">oper-state</a>
<b>Options</b>	<ul style="list-style-type: none"> <li>• up Component or process is operational</li> <li>• down Component or process is not operational</li> <li>• empty Component slot is empty</li> <li>• downloading Component is downloading image into memory</li> <li>• booting Component is booting downloaded image</li> <li>• starting Component image operational, application processes starting</li> <li>• failed Component or process has failed</li> <li>• synchronizing Component is currently being synchronized</li> <li>• upgrading Component is currently being upgraded</li> <li>• low-power Component is offline due to insufficient system power</li> <li>• degraded Component or process is in a degraded state</li> <li>• warm-reboot Component or process is currently warm rebooting 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.</li> </ul>
<b>Configurable</b>	False

**port number**

<b>Description</b>	Port the gNMI server will listen on for incoming connections
<b>Context</b>	<a href="#">system gnmi-server network-instance name reference port number</a>
<b>Tree</b>	<a href="#">port</a>
<b>Range</b>	0 to 65535
<b>Default</b>	57400
<b>Configurable</b>	True

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

<b>Description</b>	List of IP addresses the gNMI server will listen on within the network instance
<b>Context</b>	<a href="#">system gnmi-server network-instance name reference source-address (<i>ipv4-address</i>   <i>ipv6-address</i>)</a>
<b>Tree</b>	<a href="#">source-address</a>
<b>Default</b>	::
<b>Configurable</b>	True

**tls-profile *reference***

<b>Description</b>	Reference to the TLS profile to use on the gNMI server
<b>Context</b>	<a href="#">system gnmi-server network-instance name reference tls-profile <i>reference</i></a>
<b>Tree</b>	<a href="#">tls-profile</a>
<b>Reference</b>	<a href="#">system tls server-profile name <i>string</i></a>
<b>Configurable</b>	True

**use-authentication *boolean***

<b>Description</b>	Enable or disable the use of username/password authentication for every gNMI request
<b>Context</b>	<a href="#">system gnmi-server network-instance name reference use-authentication <i>boolean</i></a>
<b>Tree</b>	<a href="#">use-authentication</a>
<b>Default</b>	true
<b>Configurable</b>	True



**rate-limit *number***

<b>Description</b>	Set a limit on the number of connection attempts per minute
<b>Context</b>	<a href="#">system gnmi-server rate-limit <i>number</i></a>
<b>Tree</b>	<a href="#">rate-limit</a>
<b>Range</b>	0 to 65535
<b>Default</b>	60
<b>Configurable</b>	True

**session-limit *number***

<b>Description</b>	Set a limit on the number of simultaneous active gNMI sessions
<b>Context</b>	<a href="#">system gnmi-server session-limit <i>number</i></a>
<b>Tree</b>	<a href="#">session-limit</a>
<b>Range</b>	0 to 65535
<b>Default</b>	20
<b>Configurable</b>	True

**subscription *id number***

<b>Description</b>	List of subscriptions
<b>Context</b>	<a href="#">system gnmi-server subscription <i>id number</i></a>
<b>Tree</b>	<a href="#">subscription</a>
<b>Configurable</b>	False

**id *number***

<b>Description</b>	System generated ID for for the subscription
<b>Context</b>	<a href="#">system gnmi-server subscription <i>id number</i></a>
<b>Range</b>	0 to 4294967295
<b>Configurable</b>	False

**mode *keyword***

<b>Description</b>	Subscription mode (ON_CHANGE, SAMPLE, TARGET_DEFINED, POLL, ONCE)
<b>Context</b>	<a href="#">system gnmi-server subscription <i>id number mode keyword</i></a>

<b>Tree</b>	<a href="#">mode</a>
<b>Options</b>	<ul style="list-style-type: none"> <li>• ON_CHANGE</li> <li>• SAMPLE</li> <li>• TARGET_DEFINED</li> <li>• POLL</li> <li>• ONCE</li> </ul>
<b>Configurable</b>	False

### **paths *string***

<b>Description</b>	List of paths being subscribed to
<b>Context</b>	<a href="#">system gnmi-server subscription id number paths string</a>
<b>Tree</b>	<a href="#">paths</a>
<b>Configurable</b>	False

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

<b>Description</b>	Remote host of the subscription
<b>Context</b>	<a href="#">system gnmi-server subscription id number remote-host (<i>ipv4-address</i>   <i>ipv6-address</i>)</a>
<b>Tree</b>	<a href="#">remote-host</a>
<b>Configurable</b>	False

### **remote-port *number***

<b>Description</b>	Remote port of the subscription
<b>Context</b>	<a href="#">system gnmi-server subscription id number remote-port number</a>
<b>Tree</b>	<a href="#">remote-port</a>
<b>Range</b>	0 to 65535
<b>Configurable</b>	False

### **sample-interval *number***

<b>Description</b>	Time in seconds to provide updates to the remote host, set to 0 for all subscription modes except SAMPLE
<b>Context</b>	<a href="#">system gnmi-server subscription id number sample-interval number</a>
<b>Tree</b>	<a href="#">sample-interval</a>

---

<b>Units</b>	seconds
<b>Configurable</b>	False

**start-time string**

<b>Description</b>	Time of the subscription creation
<b>Context</b>	<a href="#">system gnmi-server subscription id number start-time string</a>
<b>Tree</b>	<a href="#">start-time</a>
<b>String Length</b>	20 to 32
<b>Configurable</b>	False

**user string**

<b>Description</b>	Authenticated username for the subscription
<b>Context</b>	<a href="#">system gnmi-server subscription id number user string</a>
<b>Tree</b>	<a href="#">user</a>
<b>Configurable</b>	False

**user-agent string**

<b>Description</b>	User agent used for the subscription
<b>Context</b>	<a href="#">system gnmi-server subscription id number user-agent string</a>
<b>Tree</b>	<a href="#">user-agent</a>
<b>Configurable</b>	False

**timeout number**

<b>Description</b>	Set the idle timeout in seconds on gNMI connections
<b>Context</b>	<a href="#">system gnmi-server timeout number</a>
<b>Tree</b>	<a href="#">timeout</a>
<b>Range</b>	0 to 65535
<b>Default</b>	7200
<b>Units</b>	seconds
<b>Configurable</b>	True

**trace-options *keyword***

<b>Description</b>	gNMI trace options
<b>Context</b>	<a href="#">system gnmi-server trace-options</a> <i>keyword</i>
<b>Tree</b>	<a href="#">trace-options</a>
<b>Options</b>	<ul style="list-style-type: none"> <li>• request</li> <li>• response</li> <li>• common</li> </ul>
<b>Configurable</b>	True

**unix-socket**

<b>Description</b>	Top-level container for configuration and state related to unix sockets
<b>Context</b>	<a href="#">system gnmi-server unix-socket</a>
<b>Tree</b>	<a href="#">unix-socket</a>
<b>Configurable</b>	True

**admin-state *keyword***

<b>Description</b>	Administratively enable or disable the gNMI server
<b>Context</b>	<a href="#">system gnmi-server unix-socket admin-state</a> <i>keyword</i>
<b>Tree</b>	<a href="#">admin-state</a>
<b>Default</b>	disable
<b>Options</b>	<ul style="list-style-type: none"> <li>• enable</li> <li>• disable</li> </ul>
<b>Configurable</b>	True

**oper-state *keyword***

<b>Description</b>	Details if the gNMI server is operationally available
<b>Context</b>	<a href="#">system gnmi-server unix-socket oper-state</a> <i>keyword</i>
<b>Tree</b>	<a href="#">oper-state</a>
<b>Options</b>	<ul style="list-style-type: none"> <li>• up Component or process is operational</li> <li>• down Component or process is not operational</li> </ul>

- 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  
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.

**Configurable** False

### **socket-path *string***

**Description** Path to the unix socket used by gNMI  
**Context** [system](#) [gnmi-server](#) [unix-socket](#) [socket-path](#) *string*  
**Tree** [socket-path](#)  
**Configurable** False

### **tls-profile *reference***

**Description** Reference to the TLS profile to use on the gNMI unix socket server  
If none is specified, then TLS is not used.

---

<b>Context</b>	<a href="#">system gnmi-server unix-socket tls-profile</a> <i>reference</i>
<b>Tree</b>	<a href="#">tls-profile</a>
<b>Reference</b>	<a href="#">system tls server-profile name</a> <i>string</i>
<b>Configurable</b>	True

**use-authentication *boolean***

<b>Description</b>	Enable or disable the use of username/password authentication for every gNMI request
<b>Context</b>	<a href="#">system gnmi-server unix-socket use-authentication</a> <i>boolean</i>
<b>Tree</b>	<a href="#">use-authentication</a>
<b>Default</b>	true
<b>Configurable</b>	True

**information**

<b>Description</b>	Top-level container for system information configuration and state
<b>Context</b>	<a href="#">system information</a>
<b>Tree</b>	<a href="#">information</a>
<b>Configurable</b>	True

**contact *string***

<b>Description</b>	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.
<b>Context</b>	<a href="#">system information contact</a> <i>string</i>
<b>Tree</b>	<a href="#">contact</a>
<b>Configurable</b>	True

**current-datetime *string***

<b>Description</b>	The current system date and time
<b>Context</b>	<a href="#">system information current-datetime</a> <i>string</i>
<b>Tree</b>	<a href="#">current-datetime</a>
<b>String Length</b>	20 to 32

**Configurable** False

### **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 \*string\*](#)

**Tree** [description](#)

**Configurable** False

### **last-booted *string***

**Description** The date and time the system was last booted

**Context** [system information last-booted \*string\*](#)

**Tree** [last-booted](#)

**String Length** 20 to 32

**Configurable** False

### **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 \*string\*](#)

**Tree** [location](#)

**Configurable** True

### **version *string***

**Description** The system version  
 This field represents the version of the management server

**Context** [system information version \*string\*](#)

**Tree** [version](#)

<b>Configurable</b>	False
---------------------	-------

## json-rpc-server

<b>Description</b>	Configures the JSON RPC access API
<b>Context</b>	<a href="#">system json-rpc-server</a>
<b>Tree</b>	<a href="#">json-rpc-server</a>
<b>Configurable</b>	True

## admin-state *keyword*

<b>Description</b>	Globally enable or disable the JSON RPC server Disabling this will disable all JSON RPC servers.
<b>Context</b>	<a href="#">system json-rpc-server admin-state keyword</a>
<b>Tree</b>	<a href="#">admin-state</a>
<b>Default</b>	disable
<b>Options</b>	<ul style="list-style-type: none"> <li>• enable</li> <li>• disable</li> </ul>
<b>Configurable</b>	True

## commit-confirmed-timeout *number*

<b>Description</b>	Number of seconds to wait for confirmation. A value of 0 means commit confirmed is not used
<b>Context</b>	<a href="#">system json-rpc-server commit-confirmed-timeout number</a>
<b>Tree</b>	<a href="#">commit-confirmed-timeout</a>
<b>Range</b>	0 to 86400
<b>Default</b>	0
<b>Units</b>	seconds
<b>Configurable</b>	True

## network-instance [name](#) *reference*

<b>Description</b>	List of network instances to run the JSON RPC server in
<b>Context</b>	<a href="#">system json-rpc-server network-instance name reference</a>
<b>Tree</b>	<a href="#">network-instance</a>



**Configurable** True

### **name *reference***

**Description** Reference to a configured network-instance  
**Context** [system json-rpc-server network-instance name reference](#)  
**Reference** [network-instance name string name string string](#)  
**Configurable** True

### **http**

**Description** Top-level container for the JSON RPC HTTP server  
**Context** [system json-rpc-server network-instance name reference http](#)  
**Tree** [http](#)  
**Configurable** True

### **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 reference http admin-state keyword](#)  
**Tree** [admin-state](#)  
**Default** disable  
**Options**

- enable
- disable

**Configurable** True

### **oper-state *keyword***

**Description** Details if the JSON RPC server is operationally available  
**Context** [system json-rpc-server network-instance name reference http 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  
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.

**Configurable** False

### **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

**session-limit *number***

<b>Description</b>	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.
<b>Context</b>	<a href="#">system json-rpc-server network-instance name</a> <i>reference</i> <a href="#">http session-limit number</a>
<b>Tree</b>	<a href="#">session-limit</a>
<b>Range</b>	1 to 100
<b>Default</b>	10
<b>Configurable</b>	True

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

<b>Description</b>	List of IP addresses the JSON RPC server will listen on within the network instance
<b>Context</b>	<a href="#">system json-rpc-server network-instance name</a> <i>reference</i> <a href="#">http source-address (<i>ipv4-address</i>   <i>ipv6-address</i>)</a>
<b>Tree</b>	<a href="#">source-address</a>
<b>Default</b>	::
<b>Configurable</b>	True

**use-authentication *boolean***

<b>Description</b>	Enable or disable the use of username/password authentication for every JSON RPC request
<b>Context</b>	<a href="#">system json-rpc-server network-instance name</a> <i>reference</i> <a href="#">http use-authentication <i>boolean</i></a>
<b>Tree</b>	<a href="#">use-authentication</a>
<b>Default</b>	true
<b>Configurable</b>	True

**https**

<b>Description</b>	Top-level container for the JSON-RPC HTTPS server
<b>Context</b>	<a href="#">system json-rpc-server network-instance name</a> <i>reference</i> <a href="#">https</a>
<b>Tree</b>	<a href="#">https</a>
<b>Configurable</b>	True

**admin-state keyword**

<b>Description</b>	Administratively enable or disable the HTTPS JSON RPC server This requires the JSON RPC server to be globally enabled
<b>Context</b>	<a href="#">system json-rpc-server network-instance name</a> <i>reference</i> <a href="#">https admin-state keyword</a>
<b>Tree</b>	<a href="#">admin-state</a>
<b>Default</b>	disable
<b>Options</b>	<ul style="list-style-type: none"> <li>• enable</li> <li>• disable</li> </ul>
<b>Configurable</b>	True

**oper-state keyword**

<b>Description</b>	Details if the JSON RPC server is operationally available
<b>Context</b>	<a href="#">system json-rpc-server network-instance name</a> <i>reference</i> <a href="#">https oper-state keyword</a>
<b>Tree</b>	<a href="#">oper-state</a>
<b>Options</b>	<ul style="list-style-type: none"> <li>• up Component or process is operational</li> <li>• down Component or process is not operational</li> <li>• empty Component slot is empty</li> <li>• downloading Component is downloading image into memory</li> <li>• booting Component is booting downloaded image</li> <li>• starting Component image operational, application processes starting</li> <li>• failed Component or process has failed</li> <li>• synchronizing Component is currently being synchronized</li> <li>• upgrading Component is currently being upgraded</li> </ul>

- 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  
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.

**Configurable** False

### 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

### 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

### 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 \(ipv4-address | ipv6-address\)](#)

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<b>Tree</b>	<a href="#">source-address</a>
<b>Default</b>	::
<b>Configurable</b>	True

### **tls-profile *reference***

<b>Description</b>	Reference to the TLS profile to use on the HTTP JSON RPC server
<b>Context</b>	<a href="#">system json-rpc-server network-instance name reference</a> <a href="#">https tls-profile reference</a>
<b>Tree</b>	<a href="#">tls-profile</a>
<b>Reference</b>	<a href="#">system tls server-profile name string</a>
<b>Configurable</b>	True

### **use-authentication *boolean***

<b>Description</b>	Enable or disable the use of username/password authentication for every JSON RPC request
<b>Context</b>	<a href="#">system json-rpc-server network-instance name reference</a> <a href="#">https use-authentication boolean</a>
<b>Tree</b>	<a href="#">use-authentication</a>
<b>Default</b>	true
<b>Configurable</b>	True

### **trace-options *keyword***

<b>Description</b>	JSON RPC trace options
<b>Context</b>	<a href="#">system json-rpc-server trace-options keyword</a>
<b>Tree</b>	<a href="#">trace-options</a>
<b>Options</b>	<ul style="list-style-type: none"> <li>• request</li> <li>• response</li> <li>• common</li> </ul>
<b>Configurable</b>	True

### **unix-socket**

<b>Description</b>	Top-level container for configuration and state related to unix sockets
<b>Context</b>	<a href="#">system json-rpc-server unix-socket</a>

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<b>Tree</b>	<a href="#">unix-socket</a>
<b>Configurable</b>	True

**admin-state keyword**

<b>Description</b>	Administratively enable or disable the JSON RPC server via unix socket This requires the JSON RPC server to be globally enabled
<b>Context</b>	<a href="#">system json-rpc-server unix-socket admin-state keyword</a>
<b>Tree</b>	<a href="#">admin-state</a>
<b>Default</b>	disable
<b>Options</b>	<ul style="list-style-type: none"> <li>• enable</li> <li>• disable</li> </ul>
<b>Configurable</b>	True

**oper-state keyword**

<b>Description</b>	Details if the JSON RPC server is operationally available
<b>Context</b>	<a href="#">system json-rpc-server unix-socket oper-state keyword</a>
<b>Tree</b>	<a href="#">oper-state</a>
<b>Options</b>	<ul style="list-style-type: none"> <li>• up Component or process is operational</li> <li>• down Component or process is not operational</li> <li>• empty Component slot is empty</li> <li>• downloading Component is downloading image into memory</li> <li>• booting Component is booting downloaded image</li> <li>• starting Component image operational, application processes starting</li> <li>• failed Component or process has failed</li> <li>• synchronizing Component is currently being synchronized</li> <li>• upgrading Component is currently being upgraded</li> </ul>

- 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  
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.

**Configurable** False

### socket-path *string*

**Description** Path to the unix socket used by JSON RPC

**Context** [system json-rpc-server unix-socket socket-path](#) *string*

**Tree** [socket-path](#)

**Configurable** False

### 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](#) *reference*

**Tree** [tls-profile](#)

**Reference** [system tls server-profile name](#) *string*

**Configurable** True

### 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](#) *boolean*

**Tree** [use-authentication](#)

**Default** true

**Configurable** True



## lacp



### Note:

This command is available for the following platforms:

- 7220 IXR-D2
- 7250 IXR-10
- 7220 IXR-D3L
- 7220 IXR-D2L
- 7220 IXR-H3
- 7220 IXR-H2
- 7220 IXR-D3
- 7250 IXR-6
- 7220 IXR-D1

<b>Description</b>	Enter the lacp context
<b>Context</b>	<a href="#">system lacp</a>
<b>Tree</b>	<a href="#">lacp</a>
<b>Configurable</b>	True

## system-id *string*



### Note:

This command is available for the following platforms:

- 7220 IXR-D2
- 7250 IXR-10
- 7220 IXR-D3L
- 7220 IXR-D2L
- 7220 IXR-H3
- 7220 IXR-H2
- 7220 IXR-D3
- 7250 IXR-6
- 7220 IXR-D1

<b>Description</b>	The MAC address portion of the node's System ID. This is combined with the system priority to construct the 8-octet system-id
<b>Context</b>	<a href="#">system lacp system-id string</a>
<b>Tree</b>	<a href="#">system-id</a>
<b>Configurable</b>	True

**system-priority *number*****Note:**

This command is available for the following platforms:

- 7220 IXR-D2
- 7250 IXR-10
- 7220 IXR-D3L
- 7220 IXR-D2L
- 7220 IXR-H3
- 7220 IXR-H2
- 7220 IXR-D3
- 7250 IXR-6
- 7220 IXR-D1

<b>Description</b>	System priority used by the node on this LAG interface. Lower value is higher priority for determining which node is the controlling system.
<b>Context</b>	<a href="#">system lacp system-priority <i>number</i></a>
<b>Tree</b>	<a href="#">system-priority</a>
<b>Configurable</b>	True

**lldp**

<b>Description</b>	Top-level container for LLDP configuration and state data
<b>Context</b>	<a href="#">system lldp</a>
<b>Tree</b>	<a href="#">lldp</a>
<b>Configurable</b>	True

**admin-state *keyword***

<b>Description</b>	Enable or disable LLDP at the system level
<b>Context</b>	<a href="#">system lldp admin-state <i>keyword</i></a>
<b>Tree</b>	<a href="#">admin-state</a>
<b>Default</b>	enable
<b>Options</b>	<ul style="list-style-type: none"> <li>• enable</li> <li>• disable</li> </ul>
<b>Configurable</b>	True

**chassis-id string**

<b>Description</b>	The Chassis ID is a mandatory TLV which identifies the chassis component of the endpoint identifier associated with the transmitting LLDP agent
<b>Context</b>	<a href="#">system lldp chassis-id string</a>
<b>Tree</b>	<a href="#">chassis-id</a>
<b>Configurable</b>	False

**chassis-id-type keyword**

<b>Description</b>	The source for the chassis identifier string It is an enumerator defined by the LldpChassisIdSubtype object from IEEE 802.1AB MIB.
<b>Context</b>	<a href="#">system lldp chassis-id-type keyword</a>
<b>Tree</b>	<a href="#">chassis-id-type</a>
<b>Default</b>	MAC_ADDRESS
<b>Options</b>	<ul style="list-style-type: none"> <li>• CHASSIS_COMPONENT Chassis identifier based on the value of entPhysicalAlias object defined in IETF RFC 2737</li> <li>• INTERFACE_ALIAS Chassis identifier based on the value of ifAlias object defined in IETF RFC 2863</li> <li>• PORT_COMPONENT Chassis identifier based on the value of entPhysicalAlias object defined in IETF RFC 2737 for a port or backplane component</li> <li>• 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</li> <li>• 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</li> <li>• INTERFACE_NAME Chassis identifier based on the name of the interface, e.g., the value of if Name object defined in IETF RFC 2863</li> </ul>

- LOCAL  
Chassis identifier based on a locally defined value

**Configurable** False

### hello-timer *number*

**Description** System level hello timer for the LLDP protocol

**Context** [system lldp hello-timer \*number\*](#)

**Tree** [hello-timer](#)

**Default** 30

**Units** seconds

**Configurable** True

### 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

### interface [name \*reference\*](#)

**Description** List of interfaces on which LLDP can be enabled

**Context** [system lldp interface \*name reference\*](#)

**Tree** [interface](#)

**Configurable** True

### *name reference*

**Description** Reference to the LLDP Ethernet interface

**Context** [system lldp interface \*name reference\*](#)

---

<b>Reference</b>	<a href="#">interface name stringname string string</a>
<b>Configurable</b>	True

**admin-state keyword**

<b>Description</b>	Enable or disable LLDP on the interface
<b>Context</b>	<a href="#">system lldp interface name reference admin-state keyword</a>
<b>Tree</b>	<a href="#">admin-state</a>
<b>Default</b>	enable
<b>Options</b>	<ul style="list-style-type: none"> <li>• enable</li> <li>• disable</li> </ul>
<b>Configurable</b>	True

**neighbor id string**

<b>Description</b>	List of LLDP neighbors on this interface
<b>Context</b>	<a href="#">system lldp interface name reference neighbor id string</a>
<b>Tree</b>	<a href="#">neighbor</a>
<b>Configurable</b>	False

**id string**

<b>Description</b>	System generated identifier for the remote neighbor
<b>Context</b>	<a href="#">system lldp interface name reference neighbor id string</a>
<b>Configurable</b>	False

**capability name string**

<b>Description</b>	List of LLDP system capabilities advertised by the neighbor
<b>Context</b>	<a href="#">system lldp interface name reference neighbor id string capability name string</a>
<b>Tree</b>	<a href="#">capability</a>
<b>Configurable</b>	False

**name *string***

<b>Description</b>	Name of the system capability advertised by the neighbor Capabilities are represented in a bitmap that defines the primary functions of the system. The capabilities are defined in IEEE 802.1AB.
<b>Context</b>	<a href="#">system lldp interface name</a> <i>reference</i> <a href="#">neighbor id</a> <i>string</i> <a href="#">capability name</a> <i>string</i>
<b>Configurable</b>	False

**enabled *boolean***

<b>Description</b>	Indicates whether the corresponding system capability is enabled on the neighbor
<b>Context</b>	<a href="#">system lldp interface name</a> <i>reference</i> <a href="#">neighbor id</a> <i>string</i> <a href="#">capability name</a> <i>string</i> <a href="#">enabled</a> <i>boolean</i>
<b>Tree</b>	<a href="#">enabled</a>
<b>Configurable</b>	False

**chassis-id *string***

<b>Description</b>	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
<b>Context</b>	<a href="#">system lldp interface name</a> <i>reference</i> <a href="#">neighbor id</a> <i>string</i> <a href="#">chassis-id</a> <i>string</i>
<b>Tree</b>	<a href="#">chassis-id</a>
<b>Configurable</b>	False

**chassis-id-type *keyword***

<b>Description</b>	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.
<b>Context</b>	<a href="#">system lldp interface name</a> <i>reference</i> <a href="#">neighbor id</a> <i>string</i> <a href="#">chassis-id-type</a> <i>keyword</i>
<b>Tree</b>	<a href="#">chassis-id-type</a>
<b>Default</b>	MAC_ADDRESS

<b>Options</b>	<ul style="list-style-type: none"> <li>• CHASSIS_COMPONENT Chassis identifier based on the value of entPhysicalAlias object defined in IETF RFC 2737</li> <li>• INTERFACE_ALIAS Chassis identifier based on the value of ifAlias object defined in IETF RFC 2863</li> <li>• PORT_COMPONENT Chassis identifier based on the value of entPhysicalAlias object defined in IETF RFC 2737 for a port or backplane component</li> <li>• 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</li> <li>• 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</li> <li>• INTERFACE_NAME Chassis identifier based on the name of the interface, e.g., the value of if Name object defined in IETF RFC 2863</li> <li>• LOCAL Chassis identifier based on a locally defined value</li> </ul>
<b>Configurable</b>	False

### **custom-tlv** *type number oui string oui-subtype string*

<b>Description</b>	List of custom LLDP TLVs from a neighbor
<b>Context</b>	<a href="#">system lldp interface name</a> <i>reference</i> <a href="#">neighbor id</a> <i>string</i> <a href="#">custom-tlv type number</a> <i>oui string oui-subtype string</i>
<b>Tree</b>	<a href="#">custom-tlv</a>
<b>Configurable</b>	False

### **type number**

<b>Description</b>	The integer value identifying the type of information contained in the value field.
<b>Context</b>	<a href="#">system lldp interface name</a> <i>reference</i> <a href="#">neighbor id</a> <i>string</i> <a href="#">custom-tlv type number</a> <i>oui string oui-subtype string</i>

**Configurable** False

### **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 reference neighbor id string custom-tlv type number oui string oui-subtype string](#)

**Configurable** False

### **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

### **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

### **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



**last-update string**

<b>Description</b>	Date and time of the last update from neighbor
<b>Context</b>	<a href="#">system lldp interface name</a> <i>reference</i> <a href="#">neighbor id</a> <i>string</i> <a href="#">last-update</a> <i>string</i>
<b>Tree</b>	<a href="#">last-update</a>
<b>String Length</b>	20 to 32
<b>Configurable</b>	False

**management-address address string**

<b>Description</b>	List of management addresses received from the remote LLDP neighbor
<b>Context</b>	<a href="#">system lldp interface name</a> <i>reference</i> <a href="#">neighbor id</a> <i>string</i> <a href="#">management-address</a> <i>address</i> <i>string</i>
<b>Tree</b>	<a href="#">management-address</a>
<b>Configurable</b>	False

**address string**

<b>Description</b>	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.
<b>Context</b>	<a href="#">system lldp interface name</a> <i>reference</i> <a href="#">neighbor id</a> <i>string</i> <a href="#">management-address</a> <i>address</i> <i>string</i>
<b>Configurable</b>	False

**type keyword**

<b>Description</b>	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.
<b>Context</b>	<a href="#">system lldp interface name</a> <i>reference</i> <a href="#">neighbor id</a> <i>string</i> <a href="#">management-address</a> <i>address</i> <i>string</i> <i>type</i> <i>keyword</i>
<b>Tree</b>	<a href="#">type</a>
<b>Options</b>	<ul style="list-style-type: none"> <li>IPv4 Use IPv4 address for management address type</li> </ul>

- IPv6  
Use IPv6 address for management address type

**Configurable** False

### 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](#) [reference neighbor id](#) [string port-description](#)  
*string*

**Tree** [port-description](#)

**Configurable** False

### 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](#) [reference neighbor id](#) [string port-id](#) (*string* | *binary*)

**Tree** [port-id](#)

**Configurable** False

### 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](#) [reference neighbor id](#) [string port-id-type](#) *keyword*

**Tree** [port-id-type](#)

- Options**
- 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

### **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

### **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](#) *reference* [neighbor id](#) *string* [system-name string](#)

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<b>Tree</b>	<a href="#">system-name</a>
<b>String Length</b>	0 to 255
<b>Configurable</b>	False

### **oper-state keyword**

<b>Description</b>	Details the operational state of LLDP on the interface
<b>Context</b>	<a href="#">system lldp interface name</a> <i>reference</i> <a href="#">oper-state</a> <i>keyword</i>
<b>Tree</b>	<a href="#">oper-state</a>
<b>Options</b>	<ul style="list-style-type: none"> <li>• up Component or process is operational</li> <li>• down Component or process is not operational</li> <li>• empty Component slot is empty</li> <li>• downloading Component is downloading image into memory</li> <li>• booting Component is booting downloaded image</li> <li>• starting Component image operational, application processes starting</li> <li>• failed Component or process has failed</li> <li>• synchronizing Component is currently being synchronized</li> <li>• upgrading Component is currently being upgraded</li> <li>• low-power Component is offline due to insufficient system power</li> <li>• degraded Component or process is in a degraded state</li> <li>• warm-reboot Component or process is currently warm rebooting 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.</li> </ul>

<b>Configurable</b>	False
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### statistics

<b>Description</b>	LLDP counters on each interface
<b>Context</b>	<a href="#">system lldp interface name</a> <i>reference</i> <a href="#">statistics</a>
<b>Tree</b>	<a href="#">statistics</a>
<b>Configurable</b>	False

### frame-discard *number*

<b>Description</b>	The number of LLDP frames received and discarded
<b>Context</b>	<a href="#">system lldp interface name</a> <i>reference</i> <a href="#">statistics</a> <a href="#">frame-discard</a> <i>number</i>
<b>Tree</b>	<a href="#">frame-discard</a>
<b>Default</b>	0
<b>Configurable</b>	False

### frame-error-in *number*

<b>Description</b>	The number of LLDP frames received with errors
<b>Context</b>	<a href="#">system lldp interface name</a> <i>reference</i> <a href="#">statistics</a> <a href="#">frame-error-in</a> <i>number</i>
<b>Tree</b>	<a href="#">frame-error-in</a>
<b>Default</b>	0
<b>Configurable</b>	False

### frame-error-out *number*

<b>Description</b>	The number of frame transmit errors on the interface
<b>Context</b>	<a href="#">system lldp interface name</a> <i>reference</i> <a href="#">statistics</a> <a href="#">frame-error-out</a> <i>number</i>
<b>Tree</b>	<a href="#">frame-error-out</a>
<b>Default</b>	0
<b>Configurable</b>	False

### frame-in *number*

<b>Description</b>	The number of LLDP frames received
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<b>Context</b>	<a href="#">system lldp interface name</a> <i>reference</i> <a href="#">statistics frame-in number</a>
<b>Tree</b>	<a href="#">frame-in</a>
<b>Default</b>	0
<b>Configurable</b>	False

**frame-out number**

<b>Description</b>	The number of LLDP frames transmitted
<b>Context</b>	<a href="#">system lldp interface name</a> <i>reference</i> <a href="#">statistics frame-out number</a>
<b>Tree</b>	<a href="#">frame-out</a>
<b>Default</b>	0
<b>Configurable</b>	False

**last-clear string**

<b>Description</b>	Indicates the last time the counters were cleared
<b>Context</b>	<a href="#">system lldp interface name</a> <i>reference</i> <a href="#">statistics last-clear string</a>
<b>Tree</b>	<a href="#">last-clear</a>
<b>String Length</b>	20 to 32
<b>Configurable</b>	False

**tlv-discard number**

<b>Description</b>	The number of TLV frames received and discarded
<b>Context</b>	<a href="#">system lldp interface name</a> <i>reference</i> <a href="#">statistics tlv-discard number</a>
<b>Tree</b>	<a href="#">tlv-discard</a>
<b>Default</b>	0
<b>Configurable</b>	False

**tlv-unknown number**

<b>Description</b>	The number of frames received with unknown TLV
<b>Context</b>	<a href="#">system lldp interface name</a> <i>reference</i> <a href="#">statistics tlv-unknown number</a>
<b>Tree</b>	<a href="#">tlv-unknown</a>
<b>Default</b>	0
<b>Configurable</b>	False

**management-address subinterface string**

<b>Description</b>	List of subinterfaces to source management addresses from This list is sent in the management address TLV by LLDP.
<b>Context</b>	<a href="#">system lldp management-address subinterface string</a>
<b>Tree</b>	<a href="#">management-address</a>
<b>Configurable</b>	True

**subinterface string**

<b>Description</b>	Reference to the subinterface to source management addresses
<b>Context</b>	<a href="#">system lldp management-address subinterface string</a>
<b>String Length</b>	5 to 25
<b>Configurable</b>	True

**type keyword**

<b>Description</b>	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.
<b>Context</b>	<a href="#">system lldp management-address subinterface string type keyword</a>
<b>Tree</b>	<a href="#">type</a>
<b>Options</b>	<ul style="list-style-type: none"> <li>• IPv4 Use IPv4 address for management address type</li> <li>• IPv6 Use IPv6 address for management address type</li> </ul>
<b>Configurable</b>	True

**statistics**

<b>Description</b>	Global LLDP counters
<b>Context</b>	<a href="#">system lldp statistics</a>
<b>Tree</b>	<a href="#">statistics</a>
<b>Configurable</b>	False

**entries-aged-out *number***

<b>Description</b>	The number of entries aged out due to timeout.
<b>Context</b>	<a href="#">system lldp statistics entries-aged-out <i>number</i></a>
<b>Tree</b>	<a href="#">entries-aged-out</a>
<b>Default</b>	0
<b>Configurable</b>	False

**frame-discard *number***

<b>Description</b>	The number of LLDP frames received and discarded
<b>Context</b>	<a href="#">system lldp statistics frame-discard <i>number</i></a>
<b>Tree</b>	<a href="#">frame-discard</a>
<b>Default</b>	0
<b>Configurable</b>	False

**frame-error-in *number***

<b>Description</b>	The number of LLDP frames received with errors
<b>Context</b>	<a href="#">system lldp statistics frame-error-in <i>number</i></a>
<b>Tree</b>	<a href="#">frame-error-in</a>
<b>Default</b>	0
<b>Configurable</b>	False

**frame-in *number***

<b>Description</b>	The number of LLDP frames received
<b>Context</b>	<a href="#">system lldp statistics frame-in <i>number</i></a>
<b>Tree</b>	<a href="#">frame-in</a>
<b>Default</b>	0
<b>Configurable</b>	False

**frame-out *number***

<b>Description</b>	The number of LLDP frames transmitted
<b>Context</b>	<a href="#">system lldp statistics frame-out <i>number</i></a>



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<b>Tree</b>	<a href="#">frame-out</a>
<b>Default</b>	0
<b>Configurable</b>	False

**last-clear *string***

<b>Description</b>	Indicates the last time the counters were cleared
<b>Context</b>	<a href="#">system lldp statistics last-clear <i>string</i></a>
<b>Tree</b>	<a href="#">last-clear</a>
<b>String Length</b>	20 to 32
<b>Configurable</b>	False

**tlv-accepted *number***

<b>Description</b>	The number of valid TLVs received.
<b>Context</b>	<a href="#">system lldp statistics tlv-accepted <i>number</i></a>
<b>Tree</b>	<a href="#">tlv-accepted</a>
<b>Default</b>	0
<b>Configurable</b>	False

**tlv-discard *number***

<b>Description</b>	The number of TLV frames received and discarded
<b>Context</b>	<a href="#">system lldp statistics tlv-discard <i>number</i></a>
<b>Tree</b>	<a href="#">tlv-discard</a>
<b>Default</b>	0
<b>Configurable</b>	False

**tlv-unknown *number***

<b>Description</b>	The number of frames received with unknown TLV
<b>Context</b>	<a href="#">system lldp statistics tlv-unknown <i>number</i></a>
<b>Tree</b>	<a href="#">tlv-unknown</a>
<b>Default</b>	0
<b>Configurable</b>	False

**system-description *string***

<b>Description</b>	Field detailing system description, including name and versions  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.
<b>Context</b>	<a href="#">system lldp system-description string</a>
<b>Tree</b>	<a href="#">system-description</a>
<b>String Length</b>	0 to 255
<b>Configurable</b>	False

**system-name *string***

<b>Description</b>	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.
<b>Context</b>	<a href="#">system lldp system-name string</a>
<b>Tree</b>	<a href="#">system-name</a>
<b>String Length</b>	0 to 255
<b>Configurable</b>	False

**trace-options *keyword***

<b>Description</b>	LLDP trace options
<b>Context</b>	<a href="#">system lldp trace-options keyword</a>
<b>Tree</b>	<a href="#">trace-options</a>
<b>Options</b>	<ul style="list-style-type: none"> <li>• received</li> <li>• transmitted</li> <li>• common</li> </ul>
<b>Configurable</b>	True

**load-balancing**

<b>Description</b>	Adjust system-wide ECMP load balancing options.
<b>Context</b>	<a href="#">system load-balancing</a>
<b>Tree</b>	<a href="#">load-balancing</a>

<b>Configurable</b>	True
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## hash-options

<b>Description</b>	Container for packet header fields and other inputs used in hashing calculations
<b>Context</b>	<a href="#">system load-balancing hash-options</a>
<b>Tree</b>	<a href="#">hash-options</a>
<b>Configurable</b>	True

## destination-address *boolean*

<b>Description</b>	Include the destination IP address in the hash calculation
<b>Context</b>	<a href="#">system load-balancing hash-options destination-address <i>boolean</i></a>
<b>Tree</b>	<a href="#">destination-address</a>
<b>Default</b>	true
<b>Configurable</b>	True

## destination-port *boolean*

<b>Description</b>	Include the destination TCP/UDP port number in the hash calculation if the packet is an unfragmented IP packet carrying a TCP/UDP payload
<b>Context</b>	<a href="#">system load-balancing hash-options destination-port <i>boolean</i></a>
<b>Tree</b>	<a href="#">destination-port</a>
<b>Default</b>	true
<b>Configurable</b>	True

## hash-seed *number*

<b>Description</b>	A configured hash seed to override the default value of 0  Different routers can be configured with different hash-seed values to minimize traffic polarization effects. This hash-seed is used by all hash-related CRC calculations including those that take IP header fields, those that take Ethernet header fields and those that take MPLS labels.
<b>Context</b>	<a href="#">system load-balancing hash-options hash-seed <i>number</i></a>
<b>Tree</b>	<a href="#">hash-seed</a>
<b>Default</b>	0

<b>Configurable</b>	True
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### ipv6-flow-label *boolean*



**Note:**

This command is available for the following platforms:

- 7220 IXR-D2
- 7250 IXR-10
- 7220 IXR-D3L
- 7220 IXR-D2L
- 7220 IXR-H3
- 7220 IXR-H2
- 7220 IXR-D3
- 7250 IXR-6
- 7220 IXR-D1

<b>Description</b>	Include the IPv6 flow label in the hash calculation if the packet is an IPv6 packet  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.
<b>Context</b>	<a href="#">system load-balancing hash-options ipv6-flow-label <i>boolean</i></a>
<b>Tree</b>	<a href="#">ipv6-flow-label</a>
<b>Default</b>	false
<b>Configurable</b>	True

### mpls-label-stack *boolean*

<b>Description</b>	Include the received labels (terminated and non-terminated) in the hash calculation
<b>Context</b>	<a href="#">system load-balancing hash-options mpls-label-stack <i>boolean</i></a>
<b>Tree</b>	<a href="#">mpls-label-stack</a>
<b>Default</b>	false
<b>Configurable</b>	True

**protocol *boolean***

<b>Description</b>	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.
<b>Context</b>	<a href="#">system load-balancing hash-options protocol</a> <i>boolean</i>
<b>Tree</b>	<a href="#">protocol</a>
<b>Default</b>	true
<b>Configurable</b>	True

**source-address *boolean***

<b>Description</b>	Include the source IP address in the hash calculation
<b>Context</b>	<a href="#">system load-balancing hash-options source-address</a> <i>boolean</i>
<b>Tree</b>	<a href="#">source-address</a>
<b>Default</b>	true
<b>Configurable</b>	True

**source-port *boolean***

<b>Description</b>	Include the source TCP/UDP port number in the hash calculation if the packet is an unfragmented IP packet carrying a TCP/UDP payload
<b>Context</b>	<a href="#">system load-balancing hash-options source-port</a> <i>boolean</i>
<b>Tree</b>	<a href="#">source-port</a>
<b>Default</b>	true
<b>Configurable</b>	True

**vlan *boolean*****Note:**

This command is available for the following platforms:

- 7220 IXR-D2
- 7220 IXR-D3L
- 7220 IXR-D2L
- 7220 IXR-H3
- 7220 IXR-H2
- 7220 IXR-D3
- 7220 IXR-D1

<b>Description</b>	Include the received VLAN ID in the hash calculation
<b>Context</b>	<a href="#">system load-balancing hash-options vlan</a> <i>boolean</i>
<b>Tree</b>	<a href="#">vlan</a>
<b>Default</b>	true
<b>Configurable</b>	True

## logging

<b>Description</b>	System logging provides the interface to syslog services to setup output entities on a selection of log sources.
<b>Context</b>	<a href="#">system logging</a>
<b>Tree</b>	<a href="#">logging</a>
<b>Configurable</b>	True

## buffer [buffer-name](#) *string*

<b>Description</b>	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.
<b>Context</b>	<a href="#">system logging buffer buffer-name</a> <i>string</i>
<b>Tree</b>	<a href="#">buffer</a>
<b>Configurable</b>	True

## buffer-name *string*

<b>Description</b>	Base name of the file(s) to be stored in memory
<b>Context</b>	<a href="#">system logging buffer buffer-name</a> <i>string</i>
<b>Configurable</b>	True

## facility [facility-name](#) *keyword*

<b>Description</b>	List of facilities to source messages from
<b>Context</b>	<a href="#">system logging buffer buffer-name</a> <i>string</i> <a href="#">facility facility-name</a> <i>keyword</i>
<b>Tree</b>	<a href="#">facility</a>
<b>Configurable</b>	True

**facility-name *keyword***

<b>Description</b>	Name of a Linux syslog facility
<b>Context</b>	<a href="#">system logging buffer buffer-name string facility facility-name keyword</a>
<b>Options</b>	<ul style="list-style-type: none"> <li>• auth</li> <li>• authpriv</li> <li>• cron</li> <li>• daemon</li> <li>• ftp</li> <li>• kern</li> <li>• lpr</li> <li>• mail</li> <li>• news</li> <li>• syslog</li> <li>• user</li> <li>• uucp</li> <li>• local0</li> <li>• local1</li> <li>• local2</li> <li>• local3</li> <li>• local4</li> <li>• local5</li> <li>• local6</li> <li>• local7</li> </ul>
<b>Configurable</b>	True

**priority**

<b>Description</b>	Narrows the capture to a given severity, a range or a specific set of severities
<b>Context</b>	<a href="#">system logging buffer buffer-name string facility facility-name keyword priority</a>
<b>Tree</b>	<a href="#">priority</a>
<b>Configurable</b>	True

**match-above *keyword***

<b>Description</b>	At a given severity and above
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<b>Context</b>	<a href="#">system logging buffer buffer-name</a> <i>string</i> <a href="#">facility facility-name</a> <i>keyword</i> <a href="#">priority match-above</a> <i>keyword</i>
<b>Tree</b>	<a href="#">match-above</a>
<b>Options</b>	<ul style="list-style-type: none"> <li>• emergency</li> <li>• alert</li> <li>• critical</li> <li>• error</li> <li>• warning</li> <li>• notice</li> <li>• informational</li> <li>• debug</li> </ul>
<b>Configurable</b>	True

**match-exact keyword**

<b>Description</b>	Individually specified severities
<b>Context</b>	<a href="#">system logging buffer buffer-name</a> <i>string</i> <a href="#">facility facility-name</a> <i>keyword</i> <a href="#">priority match-exact</a> <i>keyword</i>
<b>Tree</b>	<a href="#">match-exact</a>
<b>Options</b>	<ul style="list-style-type: none"> <li>• emergency</li> <li>• alert</li> <li>• critical</li> <li>• error</li> <li>• warning</li> <li>• notice</li> <li>• informational</li> <li>• debug</li> </ul>
<b>Configurable</b>	True

**filter reference**

<b>Description</b>	A set of all-matching criteria that messages must fulfill in order to be captured
<b>Context</b>	<a href="#">system logging buffer buffer-name</a> <i>string</i> <a href="#">filter reference</a>
<b>Tree</b>	<a href="#">filter</a>
<b>Reference</b>	<a href="#">system logging filter filter-name</a> <i>string</i>
<b>Configurable</b>	True



**format string**

<b>Description</b>	Text format of the output syslog messages, in legacy syslog \$template style
<b>Context</b>	<a href="#">system logging buffer buffer-name string format string</a>
<b>Tree</b>	<a href="#">format</a>
<b>Default</b>	%TIMEGENERATED:::date-rtc3339% %HOSTNAME% %SYSLOGTAG% %MSG:::sp-if-no-1st-sp%%MSG:::drop-last-lf%\n
<b>Configurable</b>	True

**persist number**

<b>Description</b>	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.
<b>Context</b>	<a href="#">system logging buffer buffer-name string persist number</a>
<b>Tree</b>	<a href="#">persist</a>
<b>Range</b>	0   60 to 604800
<b>Default</b>	0
<b>Units</b>	seconds
<b>Configurable</b>	True

**rotate number**

<b>Description</b>	Number of files to keep in rotation when a maximum file size is reached
<b>Context</b>	<a href="#">system logging buffer buffer-name string rotate number</a>
<b>Tree</b>	<a href="#">rotate</a>
<b>Default</b>	4
<b>Configurable</b>	True

**rotations number**

<b>Description</b>	Number of file rotations occurred
<b>Context</b>	<a href="#">system logging buffer buffer-name string rotations number</a>
<b>Tree</b>	<a href="#">rotations</a>
<b>Default</b>	0

**Configurable** False

### **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](#) *string* **size** *string*

**Tree** [size](#)

**Default** 10M

**Configurable** True

### **subsystem [subsystem-name](#) *keyword***

**Description** Entity or entities that may produce messages to be captured

**Context** [system logging buffer buffer-name](#) *string* **subsystem** [subsystem-name](#) *keyword*

**Tree** [subsystem](#)

**Configurable** True

### **subsystem-name *keyword***

**Description** Reference to an available subsystem to source messages from

**Context** [system logging buffer buffer-name](#) *string* **subsystem** [subsystem-name](#) *keyword*

**Options**

- aaa
- accounting
- acl
- app
- arpd
- bfd
- bgp
- bridgetable
- chassis
- debug
- dhcp
- ethcfm

- evpn
- fib
- gnmi
- gribi
- igmp
- isis
- json
- lag
- ldp
- linux
- lldp
- log
- mgmt
- mld
- mpls
- netinst
- ospf
- p4rt
- pim
- platform
- policy
- qos
- radio
- sdk
- sflow
- staticroute
- twamp
- vxlan
- xdp

**Configurable**

True

**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

### 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**

- emergency
- alert
- critical
- error
- warning
- notice
- informational
- debug

**Configurable** True

### 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**

- emergency
- alert
- critical
- error
- warning
- notice
- informational
- debug

**Configurable** True

### console

**Description** Hardware serial device normally used for bring-up and diagnostics

---

<b>Context</b>	<a href="#">system logging console</a>
<b>Tree</b>	<a href="#">console</a>
<b>Configurable</b>	True

### **facility** [facility-name](#) *keyword*

<b>Description</b>	List of facilities to source messages from
<b>Context</b>	<a href="#">system logging console facility facility-name</a> <i>keyword</i>
<b>Tree</b>	<a href="#">facility</a>
<b>Configurable</b>	True

### **facility-name** *keyword*

<b>Description</b>	Name of a Linux syslog facility
<b>Context</b>	<a href="#">system logging console facility facility-name</a> <i>keyword</i>
<b>Options</b>	<ul style="list-style-type: none"> <li>• auth</li> <li>• authpriv</li> <li>• cron</li> <li>• daemon</li> <li>• ftp</li> <li>• kern</li> <li>• lpr</li> <li>• mail</li> <li>• news</li> <li>• syslog</li> <li>• user</li> <li>• uucp</li> <li>• local0</li> <li>• local1</li> <li>• local2</li> <li>• local3</li> <li>• local4</li> <li>• local5</li> <li>• local6</li> <li>• local7</li> </ul>
<b>Configurable</b>	True

## priority

<b>Description</b>	Narrows the capture to a given severity, a range or a specific set of severities
<b>Context</b>	<a href="#">system logging console facility facility-name keyword priority</a>
<b>Tree</b>	<a href="#">priority</a>
<b>Configurable</b>	True

## match-above *keyword*

<b>Description</b>	At a given severity and above
<b>Context</b>	<a href="#">system logging console facility facility-name keyword priority match-above keyword</a>
<b>Tree</b>	<a href="#">match-above</a>
<b>Options</b>	<ul style="list-style-type: none"><li>• emergency</li><li>• alert</li><li>• critical</li><li>• error</li><li>• warning</li><li>• notice</li><li>• informational</li><li>• debug</li></ul>
<b>Configurable</b>	True

## match-exact *keyword*

<b>Description</b>	Individually specified severities
<b>Context</b>	<a href="#">system logging console facility facility-name keyword priority match-exact keyword</a>
<b>Tree</b>	<a href="#">match-exact</a>
<b>Options</b>	<ul style="list-style-type: none"><li>• emergency</li><li>• alert</li><li>• critical</li><li>• error</li><li>• warning</li><li>• notice</li><li>• informational</li></ul>

	<ul style="list-style-type: none"> <li>• debug</li> </ul>
<b>Configurable</b>	True

### **filter *reference***

<b>Description</b>	A set of all-matching criteria that messages must fulfill in order to be captured
<b>Context</b>	<a href="#">system logging console filter <i>reference</i></a>
<b>Tree</b>	<a href="#">filter</a>
<b>Reference</b>	<a href="#">system logging filter filter-name <i>string</i></a>
<b>Configurable</b>	True

### **format *string***

<b>Description</b>	Text format of the output syslog messages, in legacy syslog \$template style
<b>Context</b>	<a href="#">system logging console format <i>string</i></a>
<b>Tree</b>	<a href="#">format</a>
<b>Default</b>	%TIMEGENERATED:::date-rfc3339% %HOSTNAME% %SYSLOGTAG% %MSG:::sp-if-no-1st-sp%%MSG:::drop-last-lf%\n
<b>Configurable</b>	True

### **subsystem [subsystem-name](#) *keyword***

<b>Description</b>	Entity or entities that may produce messages to be captured
<b>Context</b>	<a href="#">system logging console subsystem subsystem-name <i>keyword</i></a>
<b>Tree</b>	<a href="#">subsystem</a>
<b>Configurable</b>	True

### **subsystem-name *keyword***

<b>Description</b>	Reference to an available subsystem to source messages from
<b>Context</b>	<a href="#">system logging console subsystem subsystem-name <i>keyword</i></a>
<b>Options</b>	<ul style="list-style-type: none"> <li>• aaa</li> <li>• accounting</li> <li>• acl</li> <li>• app</li> <li>• arpd</li> </ul>

- bfd
- bgp
- bridgetable
- chassis
- debug
- dhcp
- ethcfm
- evpn
- fib
- gnmi
- gribi
- igmp
- isis
- json
- lag
- ldp
- linux
- lldp
- log
- mgmt
- mld
- mpls
- netinst
- ospf
- p4rt
- pim
- platform
- policy
- qos
- radio
- sdk
- sflow
- staticroute
- twamp
- vxlan
- xdp

**Configurable**

True



**priority**

<b>Description</b>	Narrows the capture to a given severity, a range or a specific set of severities
<b>Context</b>	<a href="#">system logging console subsystem subsystem-name</a> <i>keyword</i> <a href="#">priority</a>
<b>Tree</b>	<a href="#">priority</a>
<b>Configurable</b>	True

**match-above *keyword***

<b>Description</b>	At a given severity and above
<b>Context</b>	<a href="#">system logging console subsystem subsystem-name</a> <i>keyword</i> <a href="#">priority</a> <a href="#">match-above</a> <i>keyword</i>
<b>Tree</b>	<a href="#">match-above</a>
<b>Options</b>	<ul style="list-style-type: none"> <li>• emergency</li> <li>• alert</li> <li>• critical</li> <li>• error</li> <li>• warning</li> <li>• notice</li> <li>• informational</li> <li>• debug</li> </ul>
<b>Configurable</b>	True

**match-exact *keyword***

<b>Description</b>	Individually specified severities
<b>Context</b>	<a href="#">system logging console subsystem subsystem-name</a> <i>keyword</i> <a href="#">priority</a> <a href="#">match-exact</a> <i>keyword</i>
<b>Tree</b>	<a href="#">match-exact</a>
<b>Options</b>	<ul style="list-style-type: none"> <li>• emergency</li> <li>• alert</li> <li>• critical</li> <li>• error</li> <li>• warning</li> <li>• notice</li> <li>• informational</li> </ul>

	<ul style="list-style-type: none"> <li>• debug</li> </ul>
<b>Configurable</b>	True

### file *file-name string*

<b>Description</b>	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.
<b>Context</b>	<a href="#">system logging file file-name string</a>
<b>Tree</b>	<a href="#">file</a>
<b>Configurable</b>	True

### file-name *string*

<b>Description</b>	Base name of the file(s) to be stored on disk
<b>Context</b>	<a href="#">system logging file file-name string</a>
<b>Configurable</b>	True

### directory *string*

<b>Description</b>	Fully qualified path of a directory where the log file(s) shall be maintained
<b>Context</b>	<a href="#">system logging file file-name string directory string</a>
<b>Tree</b>	<a href="#">directory</a>
<b>Default</b>	/var/log/srlinux/file
<b>Configurable</b>	True

### facility *facility-name keyword*

<b>Description</b>	List of facilities to source messages from
<b>Context</b>	<a href="#">system logging file file-name string facility facility-name keyword</a>
<b>Tree</b>	<a href="#">facility</a>
<b>Configurable</b>	True

### facility-name *keyword*

<b>Description</b>	Name of a Linux syslog facility
<b>Context</b>	<a href="#">system logging file file-name string facility facility-name keyword</a>

<b>Options</b>	<ul style="list-style-type: none"> <li>• auth</li> <li>• authpriv</li> <li>• cron</li> <li>• daemon</li> <li>• ftp</li> <li>• kern</li> <li>• lpr</li> <li>• mail</li> <li>• news</li> <li>• syslog</li> <li>• user</li> <li>• uucp</li> <li>• local0</li> <li>• local1</li> <li>• local2</li> <li>• local3</li> <li>• local4</li> <li>• local5</li> <li>• local6</li> <li>• local7</li> </ul>
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<b>Configurable</b>	True
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## priority

<b>Description</b>	Narrows the capture to a given severity, a range or a specific set of severities
<b>Context</b>	<a href="#">system logging file file-name</a> <i>string</i> <a href="#">facility facility-name</a> <i>keyword</i> <a href="#">priority</a>
<b>Tree</b>	<a href="#">priority</a>
<b>Configurable</b>	True

## match-above *keyword*

<b>Description</b>	At a given severity and above
<b>Context</b>	<a href="#">system logging file file-name</a> <i>string</i> <a href="#">facility facility-name</a> <i>keyword</i> <a href="#">priority</a> <a href="#">match-above</a> <i>keyword</i>
<b>Tree</b>	<a href="#">match-above</a>
<b>Options</b>	<ul style="list-style-type: none"> <li>• emergency</li> <li>• alert</li> </ul>

- critical
- error
- warning
- notice
- informational
- debug

**Configurable** True

### **match-exact *keyword***

**Description** Individually specified severities

**Context** [system logging file file-name](#) *string* [facility facility-name](#) *keyword* [priority match-exact](#) *keyword*

**Tree** [match-exact](#)

**Options**

- emergency
- alert
- critical
- error
- warning
- notice
- informational
- debug

**Configurable** True

### **filter *reference***

**Description** A set of all-matching criteria that messages must fulfill in order to be captured

**Context** [system logging file file-name](#) *string* [filter reference](#)

**Tree** [filter](#)

**Reference** [system logging filter filter-name](#) *string*

**Configurable** True

### **format *string***

**Description** Text format of the output syslog messages, in legacy syslog \$template style

**Context** [system logging file file-name](#) *string* [format string](#)

<b>Tree</b>	<a href="#">format</a>
<b>Default</b>	%TIMEGENERATED:: <date-rfc3339% %hostname%="" %syslogtag%<br=""></date-rfc3339%> %MSG:: <sp-if-no-1st-sp%%msg::<drop-last-lf%\n< td=""> </sp-if-no-1st-sp%%msg::<drop-last-lf%\n<>
<b>Configurable</b>	True

**rotate *number***

<b>Description</b>	Number of files to keep in rotation when a maximum file size is reached
<b>Context</b>	<a href="#">system logging file file-name</a> <i>string</i> <a href="#">rotate</a> <i>number</i>
<b>Tree</b>	<a href="#">rotate</a>
<b>Default</b>	4
<b>Configurable</b>	True

**rotations *number***

<b>Description</b>	Number of file rotations occurred
<b>Context</b>	<a href="#">system logging file file-name</a> <i>string</i> <a href="#">rotations</a> <i>number</i>
<b>Tree</b>	<a href="#">rotations</a>
<b>Default</b>	0
<b>Configurable</b>	False

**size *string***

<b>Description</b>	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.
<b>Context</b>	<a href="#">system logging file file-name</a> <i>string</i> <a href="#">size</a> <i>string</i>
<b>Tree</b>	<a href="#">size</a>
<b>Default</b>	10M
<b>Configurable</b>	True

**subsystem [subsystem-name](#) *keyword***

<b>Description</b>	Entity or entities that may produce messages to be captured
<b>Context</b>	<a href="#">system logging file file-name</a> <i>string</i> <a href="#">subsystem</a> <a href="#">subsystem-name</a> <i>keyword</i>
<b>Tree</b>	<a href="#">subsystem</a>

---

**Configurable** True

### **subsystem-name *keyword***

<b>Description</b>	Reference to an available subsystem to source messages from
<b>Context</b>	<a href="#">system logging file file-name</a> <i>string</i> <a href="#">subsystem subsystem-name</a> <i>keyword</i>
<b>Options</b>	<ul style="list-style-type: none"><li>• aaa</li><li>• accounting</li><li>• acl</li><li>• app</li><li>• arpd</li><li>• bfd</li><li>• bgp</li><li>• bridgetable</li><li>• chassis</li><li>• debug</li><li>• dhcp</li><li>• ethcfm</li><li>• evpn</li><li>• fib</li><li>• gnmi</li><li>• gribi</li><li>• igmp</li><li>• isis</li><li>• json</li><li>• lag</li><li>• ldp</li><li>• linux</li><li>• lldp</li><li>• log</li><li>• mgmt</li><li>• mld</li><li>• mpls</li><li>• netinst</li><li>• ospf</li><li>• p4rt</li><li>• pim</li></ul>

- platform
- policy
- qos
- radio
- sdk
- sflow
- staticroute
- twamp
- vxlan
- xdp

**Configurable** True

## 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

## 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
  - notice
  - informational
  - debug

**Configurable** True

**match-exact *keyword***

<b>Description</b>	Individually specified severities
<b>Context</b>	<a href="#">system logging file file-name</a> <i>string</i> <a href="#">subsystem subsystem-name</a> <i>keyword</i> <a href="#">priority match-exact</a> <i>keyword</i>
<b>Tree</b>	<a href="#">match-exact</a>
<b>Options</b>	<ul style="list-style-type: none"> <li>• emergency</li> <li>• alert</li> <li>• critical</li> <li>• error</li> <li>• warning</li> <li>• notice</li> <li>• informational</li> <li>• debug</li> </ul>
<b>Configurable</b>	True

**filter [filter-name](#) *string***

<b>Description</b>	Describes a set of criteria that captured messages are required to fulfill
<b>Context</b>	<a href="#">system logging filter filter-name</a> <i>string</i>
<b>Tree</b>	<a href="#">filter</a>
<b>Configurable</b>	True

**filter-name *string***

<b>Description</b>	Name of the filter
<b>Context</b>	<a href="#">system logging filter filter-name</a> <i>string</i>
<b>Configurable</b>	True

**contains *string***

<b>Description</b>	Text to find in the MSG property of messages to capture from the stream This is slower than prefix.
<b>Context</b>	<a href="#">system logging filter filter-name</a> <i>string</i> <a href="#">contains</a> <i>string</i>
<b>Tree</b>	<a href="#">contains</a>
<b>Configurable</b>	True



**facility** *facility-name* *keyword*

<b>Description</b>	List of facilities to source messages from
<b>Context</b>	<a href="#">system logging filter filter-name</a> <i>string</i> <i>facility</i> <i>facility-name</i> <i>keyword</i>
<b>Tree</b>	<a href="#">facility</a>
<b>Configurable</b>	True

**facility-name** *keyword*

<b>Description</b>	Name of a Linux syslog facility
<b>Context</b>	<a href="#">system logging filter filter-name</a> <i>string</i> <i>facility</i> <i>facility-name</i> <i>keyword</i>
<b>Options</b>	<ul style="list-style-type: none"> <li>• auth</li> <li>• authpriv</li> <li>• cron</li> <li>• daemon</li> <li>• ftp</li> <li>• kern</li> <li>• lpr</li> <li>• mail</li> <li>• news</li> <li>• syslog</li> <li>• user</li> <li>• uucp</li> <li>• local0</li> <li>• local1</li> <li>• local2</li> <li>• local3</li> <li>• local4</li> <li>• local5</li> <li>• local6</li> <li>• local7</li> </ul>
<b>Configurable</b>	True

**priority**

<b>Description</b>	Narrows the capture to a given severity, a range or a specific set of severities
<b>Context</b>	<a href="#">system logging filter filter-name</a> <i>string</i> <i>facility</i> <i>facility-name</i> <i>keyword</i> <i>priority</i>

---

<b>Tree</b>	<a href="#">priority</a>
<b>Configurable</b>	True

**match-above *keyword***

<b>Description</b>	At a given severity and above
<b>Context</b>	<a href="#">system logging filter filter-name</a> <i>string</i> <a href="#">facility facility-name</a> <i>keyword</i> <a href="#">priority match-above</a> <i>keyword</i>
<b>Tree</b>	<a href="#">match-above</a>
<b>Options</b>	<ul style="list-style-type: none"> <li>• emergency</li> <li>• alert</li> <li>• critical</li> <li>• error</li> <li>• warning</li> <li>• notice</li> <li>• informational</li> <li>• debug</li> </ul>
<b>Configurable</b>	True

**match-exact *keyword***

<b>Description</b>	Individually specified severities
<b>Context</b>	<a href="#">system logging filter filter-name</a> <i>string</i> <a href="#">facility facility-name</a> <i>keyword</i> <a href="#">priority match-exact</a> <i>keyword</i>
<b>Tree</b>	<a href="#">match-exact</a>
<b>Options</b>	<ul style="list-style-type: none"> <li>• emergency</li> <li>• alert</li> <li>• critical</li> <li>• error</li> <li>• warning</li> <li>• notice</li> <li>• informational</li> <li>• debug</li> </ul>
<b>Configurable</b>	True

**prefix string**

<b>Description</b>	Text to be present at the beginning of the MSG property of a message This is a fast lookup.
<b>Context</b>	<a href="#">system logging filter filter-name</a> <i>string prefix string</i>
<b>Tree</b>	<a href="#">prefix</a>
<b>Configurable</b>	True

**regex string**

<b>Description</b>	Extended regular expression to search in the MSG property of messages
<b>Context</b>	<a href="#">system logging filter filter-name</a> <i>string regex string</i>
<b>Tree</b>	<a href="#">regex</a>
<b>Configurable</b>	True

**tag string**

<b>Description</b>	Text to be searched in the SYSLOGTAG property of messages Usually a program name or part of it.
<b>Context</b>	<a href="#">system logging filter filter-name</a> <i>string tag string</i>
<b>Tree</b>	<a href="#">tag</a>
<b>Configurable</b>	True

**network-instance reference**

<b>Description</b>	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.
<b>Context</b>	<a href="#">system logging network-instance</a> <i>reference</i>
<b>Tree</b>	<a href="#">network-instance</a>
<b>Reference</b>	<a href="#">network-instance name stringname</a> <i>string string</i>
<b>Configurable</b>	True

**remote-server host (ipv4-address | ipv6-address | domain-name)**

<b>Description</b>	List of output remote syslog servers
<b>Context</b>	<a href="#">system logging remote-server host</a> <i>(ipv4-address   ipv6-address   domain-name)</i>

<b>Tree</b>	<a href="#">remote-server</a>
<b>Configurable</b>	True

### host (*ipv4-address* | *ipv6-address* | *domain-name*)

<b>Description</b>	Domain or IP address of a remote syslog server destination
<b>Context</b>	<a href="#">system logging remote-server host</a> ( <i>ipv4-address</i>   <i>ipv6-address</i>   <i>domain-name</i> )
<b>String Length</b>	1 to 253
<b>Configurable</b>	True

### facility [facility-name](#) *keyword*

<b>Description</b>	List of facilities to source messages from
<b>Context</b>	<a href="#">system logging remote-server host</a> ( <i>ipv4-address</i>   <i>ipv6-address</i>   <i>domain-name</i> ) <a href="#">facility facility-name</a> <i>keyword</i>
<b>Tree</b>	<a href="#">facility</a>
<b>Configurable</b>	True

### facility-name *keyword*

<b>Description</b>	Name of a Linux syslog facility
<b>Context</b>	<a href="#">system logging remote-server host</a> ( <i>ipv4-address</i>   <i>ipv6-address</i>   <i>domain-name</i> ) <a href="#">facility facility-name</a> <i>keyword</i>
<b>Options</b>	<ul style="list-style-type: none"> <li>• auth</li> <li>• authpriv</li> <li>• cron</li> <li>• daemon</li> <li>• ftp</li> <li>• kern</li> <li>• lpr</li> <li>• mail</li> <li>• news</li> <li>• syslog</li> <li>• user</li> <li>• uucp</li> <li>• local0</li> </ul>

	<ul style="list-style-type: none"> <li>• local1</li> <li>• local2</li> <li>• local3</li> <li>• local4</li> <li>• local5</li> <li>• local6</li> <li>• local7</li> </ul>
<b>Configurable</b>	True

## priority

<b>Description</b>	Narrows the capture to a given severity, a range or a specific set of severities
<b>Context</b>	<a href="#">system logging remote-server host</a> ( <a href="#">ipv4-address</a>   <a href="#">ipv6-address</a>   <a href="#">domain-name</a> ) <a href="#">facility</a> <a href="#">facility-name</a> <a href="#">keyword</a> <a href="#">priority</a>
<b>Tree</b>	<a href="#">priority</a>
<b>Configurable</b>	True

## match-above *keyword*

<b>Description</b>	At a given severity and above
<b>Context</b>	<a href="#">system logging remote-server host</a> ( <a href="#">ipv4-address</a>   <a href="#">ipv6-address</a>   <a href="#">domain-name</a> ) <a href="#">facility</a> <a href="#">facility-name</a> <a href="#">keyword</a> <a href="#">priority</a> <a href="#">match-above</a> <a href="#">keyword</a>
<b>Tree</b>	<a href="#">match-above</a>
<b>Options</b>	<ul style="list-style-type: none"> <li>• emergency</li> <li>• alert</li> <li>• critical</li> <li>• error</li> <li>• warning</li> <li>• notice</li> <li>• informational</li> <li>• debug</li> </ul>
<b>Configurable</b>	True

## match-exact *keyword*

<b>Description</b>	Individually specified severities
--------------------	-----------------------------------

<b>Context</b>	<a href="#">system logging remote-server host</a> ( <i>ipv4-address</i>   <i>ipv6-address</i>   <i>domain-name</i> ) <a href="#">facility</a> <i>facility-name</i> <a href="#">keyword</a> <a href="#">priority</a> <a href="#">match-exact</a> <a href="#">keyword</a>
<b>Tree</b>	<a href="#">match-exact</a>
<b>Options</b>	<ul style="list-style-type: none"> <li>• emergency</li> <li>• alert</li> <li>• critical</li> <li>• error</li> <li>• warning</li> <li>• notice</li> <li>• informational</li> <li>• debug</li> </ul>
<b>Configurable</b>	True

**filter reference**

<b>Description</b>	A set of all-matching criteria that messages must fulfill in order to be captured
<b>Context</b>	<a href="#">system logging remote-server host</a> ( <i>ipv4-address</i>   <i>ipv6-address</i>   <i>domain-name</i> ) <a href="#">filter reference</a>
<b>Tree</b>	<a href="#">filter</a>
<b>Reference</b>	<a href="#">system logging filter</a> <a href="#">filter-name</a> <i>string</i>
<b>Configurable</b>	True

**remote-port number**

<b>Description</b>	Transport port for syslog to use for messages sent to a remote server
<b>Context</b>	<a href="#">system logging remote-server host</a> ( <i>ipv4-address</i>   <i>ipv6-address</i>   <i>domain-name</i> ) <a href="#">remote-port number</a>
<b>Tree</b>	<a href="#">remote-port</a>
<b>Default</b>	514
<b>Configurable</b>	True

**subsystem [subsystem-name](#) keyword**

<b>Description</b>	Entity or entities that may produce messages to be captured
<b>Context</b>	<a href="#">system logging remote-server host</a> ( <i>ipv4-address</i>   <i>ipv6-address</i>   <i>domain-name</i> ) <a href="#">subsystem</a> <a href="#">subsystem-name</a> <a href="#">keyword</a>

---

<b>Tree</b>	<a href="#">subsystem</a>
<b>Configurable</b>	True

### **subsystem-name *keyword***

<b>Description</b>	Reference to an available subsystem to source messages from
<b>Context</b>	<a href="#">system logging remote-server host</a> ( <i>ipv4-address</i>   <i>ipv6-address</i>   <i>domain-name</i> ) <a href="#">subsystem subsystem-name</a> <i>keyword</i>
<b>Options</b>	<ul style="list-style-type: none"><li>• aaa</li><li>• accounting</li><li>• acl</li><li>• app</li><li>• arpd</li><li>• bfd</li><li>• bgp</li><li>• bridgetable</li><li>• chassis</li><li>• debug</li><li>• dhcp</li><li>• ethcfm</li><li>• evpn</li><li>• fib</li><li>• gnmi</li><li>• gribi</li><li>• igmp</li><li>• isis</li><li>• json</li><li>• lag</li><li>• ldp</li><li>• linux</li><li>• lldp</li><li>• log</li><li>• mgmt</li><li>• mld</li><li>• mpls</li><li>• netinst</li><li>• ospf</li></ul>

- p4rt
- pim
- platform
- policy
- qos
- radio
- sdk
- sflow
- staticroute
- twamp
- vxlan
- xdp

**Configurable** True

## 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

## 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
- debug

**Configurable** True



**match-exact keyword**

<b>Description</b>	Individually specified severities
<b>Context</b>	<a href="#">system logging remote-server host</a> ( <i>ipv4-address</i>   <i>ipv6-address</i>   <i>domain-name</i> ) <a href="#">subsystem subsystem-name</a> <i>keyword</i> <a href="#">priority match-exact</a> <i>keyword</i>
<b>Tree</b>	<a href="#">match-exact</a>
<b>Options</b>	<ul style="list-style-type: none"> <li>• emergency</li> <li>• alert</li> <li>• critical</li> <li>• error</li> <li>• warning</li> <li>• notice</li> <li>• informational</li> <li>• debug</li> </ul>
<b>Configurable</b>	True

**transport keyword**

<b>Description</b>	Transport protocol for syslog to use for messages sent to a remote server
<b>Context</b>	<a href="#">system logging remote-server host</a> ( <i>ipv4-address</i>   <i>ipv6-address</i>   <i>domain-name</i> ) <a href="#">transport</a> <i>keyword</i>
<b>Tree</b>	<a href="#">transport</a>
<b>Default</b>	udp
<b>Options</b>	<ul style="list-style-type: none"> <li>• udp</li> <li>• tcp</li> </ul>
<b>Configurable</b>	True

**subsystem-facility keyword**

<b>Description</b>	Linux facility that internal application subsystems will use
<b>Context</b>	<a href="#">system logging subsystem-facility</a> <i>keyword</i>
<b>Tree</b>	<a href="#">subsystem-facility</a>
<b>Default</b>	local6
<b>Options</b>	<ul style="list-style-type: none"> <li>• auth</li> <li>• authpriv</li> <li>• cron</li> </ul>

- daemon
- ftp
- kern
- lpr
- mail
- news
- syslog
- user
- uucp
- local0
- local1
- local2
- local3
- local4
- local5
- local6
- local7

**Configurable** True

## **maintenance**

**Description** Top-level container for Maintenance Mode configuration

**Context** [system maintenance](#)

**Tree** [maintenance](#)

**Configurable** True

### **group [name string](#)**

**Description** List of user-configured and built-in maintenance groups

**Context** [system maintenance group name string](#)

**Tree** [group](#)

**Configurable** True

### **name [string](#)**

**Description** Name of the maintenance group. The name "system" is reserved

**Context** [system maintenance group name string](#)

**Configurable** True

## **maintenance-mode**

**Description** Container for activating maintenance mode

**Context** [system maintenance group name](#) *string* [maintenance-mode](#)

**Tree** [maintenance-mode](#)

**Configurable** True

## **admin-state *keyword***

**Description** Enable or disable maintenance mode group

**Context** [system maintenance group name](#) *string* [maintenance-mode admin-state](#) *keyword*

**Tree** [admin-state](#)

**Default** disable

**Options**

- enable
- disable

**Configurable** True

## **maintenance-profile *reference***

**Description** Leaf reference to /system/maintenance/profile/name

**Context** [system maintenance group name](#) *string* [maintenance-profile](#) *reference*

**Tree** [maintenance-profile](#)

**Reference** [system maintenance profile name](#) *string*

**Configurable** True

## **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](#) *string* [members](#)

**Tree** [members](#)

**Configurable** True

**bgp**

<b>Description</b>	Container for specifying the BGP members of the maintenance group
<b>Context</b>	<a href="#">system maintenance group name</a> <i>string</i> <a href="#">members</a> <a href="#">bgp</a>
<b>Tree</b>	<a href="#">bgp</a>
<b>Configurable</b>	True

**network-instance** [name](#) *reference*

<b>Description</b>	List of network instances with one or more peers to be placed in maintenance mode
<b>Context</b>	<a href="#">system maintenance group name</a> <i>string</i> <a href="#">members</a> <a href="#">bgp</a> <a href="#">network-instance name</a> <i>reference</i>
<b>Tree</b>	<a href="#">network-instance</a>
<b>Configurable</b>	True

**name** *reference*

<b>Description</b>	A unique name identifying the network instance
<b>Context</b>	<a href="#">system maintenance group name</a> <i>string</i> <a href="#">members</a> <a href="#">bgp</a> <a href="#">network-instance name</a> <i>reference</i>
<b>Reference</b>	<a href="#">network-instance name</a> <i>stringname</i> <i>string</i> <i>string</i>
<b>Configurable</b>	True

**neighbor** *reference*

<b>Description</b>	<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>
<b>Context</b>	<a href="#">system maintenance group name</a> <i>string</i> <a href="#">members</a> <a href="#">bgp</a> <a href="#">network-instance name</a> <i>reference</i> <a href="#">neighbor</a> <i>reference</i>
<b>Tree</b>	<a href="#">neighbor</a>

<b>Reference</b>	<a href="#">network-instance name stringname string</a> <i>string</i> protocols <a href="#">bgp neighbor peer-address (ipv4-address   ipv6-address-with-zone) peer-address (ipv4-address   ipv6-address-with-zone) (ipv4-address   ipv6-address-with-zone)</a>
<b>Configurable</b>	True

## peer-group *reference*

<b>Description</b>	List of BGP peer groups that belong to the network instance and that should be part of the maintenance group  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.
<b>Context</b>	<a href="#">system maintenance group name</a> <i>string</i> members <a href="#">bgp network-instance name</a> <i>reference</i> <a href="#">peer-group</a> <i>reference</i>
<b>Tree</b>	<a href="#">peer-group</a>
<b>Reference</b>	<a href="#">network-instance name stringname string</a> <i>string</i> protocols <a href="#">bgp group group-name string group-name string</a> <i>string</i>
<b>Configurable</b>	True

## isis



### Note:

This command is available for the following platforms:

- 7220 IXR-D2
- 7250 IXR-10
- 7220 IXR-D3L
- 7220 IXR-D2L
- 7220 IXR-H3
- 7220 IXR-H2
- 7220 IXR-D3
- 7250 IXR-6
- 7220 IXR-D1

<b>Description</b>	Container for specifying the ISIS members of the maintenance group
<b>Context</b>	<a href="#">system maintenance group name</a> <i>string</i> members <a href="#">isis</a>
<b>Tree</b>	<a href="#">isis</a>
<b>Configurable</b>	True

## network-instances *reference*



### Note:

This command is available for the following platforms:

- 7220 IXR-D2
- 7250 IXR-10
- 7220 IXR-D3L
- 7220 IXR-D2L
- 7220 IXR-H3
- 7220 IXR-H2
- 7220 IXR-D3
- 7250 IXR-6
- 7220 IXR-D1

<b>Description</b>	List of network instances that should be part of the maintenance group.
<b>Context</b>	<a href="#">system maintenance group name</a> <i>string</i> <a href="#">members isis network-instances reference</a>
<b>Tree</b>	<a href="#">network-instances</a>
<b>Reference</b>	<a href="#">network-instance name stringname string</a> <i>string</i>
<b>Configurable</b>	True

## profile *name string*

<b>Description</b>	Enter the profile list instance
<b>Context</b>	<a href="#">system maintenance profile name</a> <i>string</i>
<b>Tree</b>	<a href="#">profile</a>
<b>Configurable</b>	True

## name *string*

<b>Description</b>	Name of the maintenance profile
<b>Context</b>	<a href="#">system maintenance profile name</a> <i>string</i>
<b>Configurable</b>	True

## bgp

<b>Description</b>	Container for BGP policies used to achieve traffic draining
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<b>Context</b>	<a href="#">system maintenance profile name</a> <i>string</i> <a href="#">bgp</a>
<b>Tree</b>	<a href="#">bgp</a>
<b>Configurable</b>	True

### export-policy *reference*

<b>Description</b>	Enter the export-policy context
<b>Context</b>	<a href="#">system maintenance profile name</a> <i>string</i> <a href="#">bgp</a> <a href="#">export-policy</a> <i>reference</i>
<b>Tree</b>	<a href="#">export-policy</a>
<b>Reference</b>	<a href="#">routing-policy</a> <i>policy name string name string</i> <i>string</i>
<b>Configurable</b>	True

### import-policy *reference*

<b>Description</b>	Enter the import-policy context
<b>Context</b>	<a href="#">system maintenance profile name</a> <i>string</i> <a href="#">bgp</a> <a href="#">import-policy</a> <i>reference</i>
<b>Tree</b>	<a href="#">import-policy</a>
<b>Reference</b>	<a href="#">routing-policy</a> <i>policy name string name string</i> <i>string</i>
<b>Configurable</b>	True

## isis



### Note:

This command is available for the following platforms:

- 7220 IXR-D2
- 7250 IXR-10
- 7220 IXR-D3L
- 7220 IXR-D2L
- 7220 IXR-H3
- 7220 IXR-H2
- 7220 IXR-D3
- 7250 IXR-6
- 7220 IXR-D1

<b>Description</b>	Container for ISIS configurations.
<b>Context</b>	<a href="#">system maintenance profile name</a> <i>string</i> <a href="#">isis</a>

<b>Tree</b>	<a href="#">isis</a>
<b>Configurable</b>	True

## overload



### Note:

This command is available for the following platforms:

- 7220 IXR-D2
- 7250 IXR-10
- 7220 IXR-D3L
- 7220 IXR-D2L
- 7220 IXR-H3
- 7220 IXR-H2
- 7220 IXR-D3
- 7250 IXR-6
- 7220 IXR-D1

<b>Description</b>	Container for ISIS overload configurations.
<b>Context</b>	<a href="#">system maintenance profile name</a> <i>string</i> <a href="#">isis overload</a>
<b>Tree</b>	<a href="#">overload</a>
<b>Configurable</b>	True

## max-metric *boolean*



### Note:

This command is available for the following platforms:

- 7220 IXR-D2
- 7250 IXR-10
- 7220 IXR-D3L
- 7220 IXR-D2L
- 7220 IXR-H3
- 7220 IXR-H2
- 7220 IXR-D3
- 7250 IXR-6
- 7220 IXR-D1



<b>Description</b>	When set to true transit links are advertised with a wide metric of 0xfffffe and a narrow metric of 0x3f
<b>Context</b>	<a href="#">system maintenance profile name</a> <i>string</i> <a href="#">isis overload max-metric</a> <i>boolean</i>
<b>Tree</b>	<a href="#">max-metric</a>
<b>Default</b>	false
<b>Configurable</b>	True

## set-bit *boolean*



### Note:

This command is available for the following platforms:

- 7220 IXR-D2
- 7250 IXR-10
- 7220 IXR-D3L
- 7220 IXR-D2L
- 7220 IXR-H3
- 7220 IXR-H2
- 7220 IXR-D3
- 7250 IXR-6
- 7220 IXR-D1

<b>Description</b>	When set to true, the Overload bit is set
<b>Context</b>	<a href="#">system maintenance profile name</a> <i>string</i> <a href="#">isis overload set-bit</a> <i>boolean</i>
<b>Tree</b>	<a href="#">set-bit</a>
<b>Default</b>	false
<b>Configurable</b>	True

## mirroring



### Note:

This command is available for the following platforms:

- 7220 IXR-D2
- 7220 IXR-D3
- 7220 IXR-D3L
- 7220 IXR-D2L

<b>Description</b>	Top level container for configuration and operational state for mirroring
--------------------	---

<b>Context</b>	<a href="#">system mirroring</a>
<b>Tree</b>	<a href="#">mirroring</a>
<b>Configurable</b>	True

### mirroring-instance [name string](#)



**Note:**

This command is available for the following platforms:

- 7220 IXR-D2
- 7220 IXR-D3
- 7220 IXR-D3L
- 7220 IXR-D2L

<b>Description</b>	Mirroring instances configured on the local system
<b>Context</b>	<a href="#">system mirroring mirroring-instance name string</a>
<b>Tree</b>	<a href="#">mirroring-instance</a>
<b>Configurable</b>	True
<b>Max. Elements</b>	4

### name *string*



**Note:**

This command is available for the following platforms:

- 7220 IXR-D2
- 7220 IXR-D3
- 7220 IXR-D3L
- 7220 IXR-D2L

<b>Description</b>	A unique name identifying the mirroring instance
<b>Context</b>	<a href="#">system mirroring mirroring-instance name string</a>
<b>String Length</b>	1 to 255
<b>Configurable</b>	True

**admin-state *keyword*****Note:**

This command is available for the following platforms:

- 7220 IXR-D2
- 7220 IXR-D3
- 7220 IXR-D3L
- 7220 IXR-D2L

<b>Description</b>	This leaf contains the configured, desired state of the mirroring instance.
<b>Context</b>	<a href="#">system mirroring mirroring-instance name string admin-state keyword</a>
<b>Tree</b>	<a href="#">admin-state</a>
<b>Default</b>	enable
<b>Options</b>	<ul style="list-style-type: none"> <li>• enable</li> <li>• disable</li> </ul>
<b>Configurable</b>	True

**description *string*****Note:**

This command is available for the following platforms:

- 7220 IXR-D2
- 7220 IXR-D3
- 7220 IXR-D3L
- 7220 IXR-D2L

<b>Description</b>	A user-entered description of this mirroring instance.
<b>Context</b>	<a href="#">system mirroring mirroring-instance name string description string</a>
<b>Tree</b>	<a href="#">description</a>
<b>String Length</b>	1 to 255
<b>Configurable</b>	True

## mirror-destination



### Note:

This command is available for the following platforms:

- 7220 IXR-D2
- 7220 IXR-D3
- 7220 IXR-D3L
- 7220 IXR-D2L

<b>Description</b>	Configure mirror destination
<b>Context</b>	<a href="#">system mirroring mirroring-instance name</a> <i>string</i> <a href="#">mirror-destination</a>
<b>Tree</b>	<a href="#">mirror-destination</a>
<b>Configurable</b>	True

## local *string*



### Note:

This command is available for the following platforms:

- 7220 IXR-D2
- 7220 IXR-D3
- 7220 IXR-D3L
- 7220 IXR-D2L

<b>Description</b>	subinterface of type local-mirror-dest used as local mirror destination
<b>Context</b>	<a href="#">system mirroring mirroring-instance name</a> <i>string</i> <a href="#">mirror-destination</a> <a href="#">local string</a>
<b>Tree</b>	<a href="#">local</a>
<b>String Length</b>	5 to 25
<b>Configurable</b>	True

## mirror-source

**Note:**

This command is available for the following platforms:

- 7220 IXR-D2
- 7220 IXR-D3
- 7220 IXR-D3L
- 7220 IXR-D2L

<b>Description</b>	Configure mirror source(s)
<b>Context</b>	<a href="#">system mirroring mirroring-instance name</a> <i>string</i> <a href="#">mirror-source</a>
<b>Tree</b>	<a href="#">mirror-source</a>
<b>Configurable</b>	True

## interface [name](#) *string*

**Note:**

This command is available for the following platforms:

- 7220 IXR-D2
- 7220 IXR-D3
- 7220 IXR-D3L
- 7220 IXR-D2L

<b>Description</b>	List of interfaces used as mirror source
<b>Context</b>	<a href="#">system mirroring mirroring-instance name</a> <i>string</i> <a href="#">mirror-source</a> <a href="#">interface name</a> <i>string</i>
<b>Tree</b>	<a href="#">interface</a>
<b>Configurable</b>	True
<b>Max. Elements</b>	128

**name *string*****Note:**

This command is available for the following platforms:

- 7220 IXR-D2
- 7220 IXR-D3
- 7220 IXR-D3L
- 7220 IXR-D2L

<b>Description</b>	Enter the name context
<b>Context</b>	<a href="#">system mirroring mirroring-instance name <i>string</i> mirror-source interface name <i>string</i></a>
<b>String Length</b>	3 to 20
<b>Configurable</b>	True

**direction *keyword*****Note:**

This command is available for the following platforms:

- 7220 IXR-D2
- 7220 IXR-D3
- 7220 IXR-D3L
- 7220 IXR-D2L

<b>Description</b>	The direction of traffic to be mirrored
<b>Context</b>	<a href="#">system mirroring mirroring-instance name <i>string</i> mirror-source interface name <i>string</i> direction <i>keyword</i></a>
<b>Tree</b>	<a href="#">direction</a>
<b>Default</b>	egress-only
<b>Options</b>	<ul style="list-style-type: none"> <li>• ingress-only</li> <li>• egress-only</li> <li>• ingress-egress</li> </ul>
<b>Configurable</b>	True

**subinterface** *name string***Note:**

This command is available for the following platforms:

- 7220 IXR-D2
- 7220 IXR-D3
- 7220 IXR-D3L
- 7220 IXR-D2L

<b>Description</b>	List of subinterfaces used as mirror source
<b>Context</b>	<a href="#">system mirroring mirroring-instance name string mirror-source subinterface name string</a>
<b>Tree</b>	<a href="#">subinterface</a>
<b>Configurable</b>	True
<b>Max. Elements</b>	128

**name** *string***Note:**

This command is available for the following platforms:

- 7220 IXR-D2
- 7220 IXR-D3
- 7220 IXR-D3L
- 7220 IXR-D2L

<b>Description</b>	Enter the name context
<b>Context</b>	<a href="#">system mirroring mirroring-instance name string mirror-source subinterface name string</a>
<b>String Length</b>	5 to 25
<b>Configurable</b>	True

**direction *keyword*****Note:**

This command is available for the following platforms:

- 7220 IXR-D2
- 7220 IXR-D3
- 7220 IXR-D3L
- 7220 IXR-D2L

<b>Description</b>	The direction of traffic to be mirrored
<b>Context</b>	<a href="#">system mirroring mirroring-instance name</a> <i>string</i> <a href="#">mirror-source subinterface name</a> <i>string</i> <i>direction keyword</i>
<b>Tree</b>	<a href="#">direction</a>
<b>Default</b>	egress-only
<b>Options</b>	<ul style="list-style-type: none"> <li>• ingress-only</li> <li>• egress-only</li> <li>• ingress-egress</li> </ul>
<b>Configurable</b>	True

**oper-down-reason *keyword*****Note:**

This command is available for the following platforms:

- 7220 IXR-D2
- 7220 IXR-D3
- 7220 IXR-D3L
- 7220 IXR-D2L

<b>Description</b>	The reason for the mirroring instance being operational down
<b>Context</b>	<a href="#">system mirroring mirroring-instance name</a> <i>string</i> <a href="#">oper-down-reason</a> <i>keyword</i>
<b>Tree</b>	<a href="#">oper-down-reason</a>
<b>Options</b>	<ul style="list-style-type: none"> <li>• mirror-inst-admin-down</li> <li>• no-mirror-source</li> <li>• local-mirror-subif-down</li> <li>• remote-mirror-dst-unreachable</li> </ul>
<b>Configurable</b>	False



**oper-state keyword****Note:**

This command is available for the following platforms:

- 7220 IXR-D2
- 7220 IXR-D3
- 7220 IXR-D3L
- 7220 IXR-D2L

<b>Description</b>	This leaf contains the operational state of the mirroring instance.
<b>Context</b>	<a href="#">system mirroring mirroring-instance name</a> <i>string</i> <b>oper-state</b> <i>keyword</i>
<b>Tree</b>	<a href="#">oper-state</a>
<b>Options</b>	<ul style="list-style-type: none"> <li>• up Component or process is operational</li> <li>• down Component or process is not operational</li> <li>• empty Component slot is empty</li> <li>• downloading Component is downloading image into memory</li> <li>• booting Component is booting downloaded image</li> <li>• starting Component image operational, application processes starting</li> <li>• failed Component or process has failed</li> <li>• synchronizing Component is currently being synchronized</li> <li>• upgrading Component is currently being upgraded</li> <li>• low-power Component is offline due to insufficient system power</li> <li>• degraded Component or process is in a degraded state</li> <li>• warm-reboot Component or process is currently warm rebooting Component or process is currently warm rebooting This state is set during a warm reboot immediately following initiation of the reboot,</li> </ul>

continuing after startup until the system has completed audit. In this state the system will not accept configuration changes.

**Configurable** False

## mtu

**Description** Top-level container for configuration and state data related to the system MTU

**Context** [system mtu](#)

**Tree** [mtu](#)

**Configurable** True

## 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 \*number\*](#)

**Tree** [default-ip-mtu](#)

**Range** 1280 to 9486

**Default** 1500

**Configurable** True

## default-l2-mtu *number*



### Note:

This command is available for the following platforms:

- 7220 IXR-D2
- 7220 IXR-D3L
- 7220 IXR-D2L
- 7220 IXR-D3
- 7220 IXR-D1

**Description** System default Layer-2 MTU in bytes including ethernet overhead and VLAN tags 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 L2 MTU of 9412 bytes.

<b>Context</b>	<a href="#">system mtu default-l2-mtu</a> <i>number</i>
<b>Tree</b>	<a href="#">default-l2-mtu</a>
<b>Range</b>	1500 to 9500
<b>Default</b>	9232
<b>Configurable</b>	True

### **default-mpls-mtu** *number*



**Note:**

This command is available for the following platforms:

- 7250 IXR-6
- 7250 IXR-10

<b>Description</b>	System default MPLS MTU in bytes including the size of the transmitted label stack.
<b>Context</b>	<a href="#">system mtu default-mpls-mtu</a> <i>number</i>
<b>Tree</b>	<a href="#">default-mpls-mtu</a>
<b>Range</b>	1284 to 9496
<b>Default</b>	1508
<b>Configurable</b>	True

### **default-port-mtu** *number*

<b>Description</b>	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.
<b>Context</b>	<a href="#">system mtu default-port-mtu</a> <i>number</i>
<b>Tree</b>	<a href="#">default-port-mtu</a>
<b>Range</b>	1500 to 9500
<b>Default</b>	9232
<b>Configurable</b>	True

### **min-path-mtu** *number*

<b>Description</b>	Sets the minimum path MTU to use when receiving an ICMP fragmentation needed message
--------------------	--

This is controlled via the kernel `min_pmtu` 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.

<b>Context</b>	<a href="#">system mtu min-path-mtu</a> <i>number</i>
<b>Tree</b>	<a href="#">min-path-mtu</a>
<b>Range</b>	552 to 9232
<b>Default</b>	552
<b>Configurable</b>	True

## name

<b>Description</b>	Contains configuration and state related to system naming
<b>Context</b>	<a href="#">system name</a>
<b>Tree</b>	<a href="#">name</a>
<b>Configurable</b>	True

## domain-name *string*

<b>Description</b>	The system domain name
<b>Context</b>	<a href="#">system name domain-name</a> <i>string</i>
<b>Tree</b>	<a href="#">domain-name</a>
<b>String Length</b>	1 to 253
<b>Configurable</b>	True

## host-name *string*

<b>Description</b>	The system host name
<b>Context</b>	<a href="#">system name host-name</a> <i>string</i>
<b>Tree</b>	<a href="#">host-name</a>
<b>String Length</b>	1 to 63
<b>Configurable</b>	True

## network-instance

<b>Description</b>	Enable the network-instance context
<b>Context</b>	<a href="#">system network-instance</a>
<b>Tree</b>	<a href="#">network-instance</a>

<b>Configurable</b>	True
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## protocols

<b>Description</b>	The routing protocols that are enabled for this network-instance.
<b>Context</b>	<a href="#">system network-instance protocols</a>
<b>Tree</b>	<a href="#">protocols</a>
<b>Configurable</b>	True

## bgp-vpn

<b>Description</b>	Enable the bgp-vpn context
<b>Context</b>	<a href="#">system network-instance protocols bgp-vpn</a>
<b>Tree</b>	<a href="#">bgp-vpn</a>
<b>Configurable</b>	True

## bgp-instance *id number*

<b>Description</b>	List of bgp-vpn instances configured in the system network-instance. Only one instance allowed in the current release.
<b>Context</b>	<a href="#">system network-instance protocols bgp-vpn bgp-instance id number</a>
<b>Tree</b>	<a href="#">bgp-instance</a>
<b>Configurable</b>	True
<b>Max. Elements</b>	1

## *id number*

<b>Description</b>	The index of the bgp-vpn instance
<b>Context</b>	<a href="#">system network-instance protocols bgp-vpn bgp-instance id number</a>
<b>Range</b>	1 to 2
<b>Configurable</b>	True

## oper-down-reason *keyword*

<b>Description</b>	Reason for the system bgp-instance being down
<b>Context</b>	<a href="#">system network-instance protocols bgp-vpn bgp-instance id number oper-down-reason keyword</a>

<b>Tree</b>	<a href="#">oper-down-reason</a>
<b>Options</b>	<ul style="list-style-type: none"> <li>• no-loopback-address</li> <li>• no-esi</li> <li>• none</li> <li>• network-instance-oper-down</li> </ul>
<b>Configurable</b>	False

## route-distinguisher

<b>Description</b>	Route Distinguisher (RD) of the bgp-vpn instance.
<b>Context</b>	<a href="#">system network-instance protocols bgp-vpn bgp-instance id number route-distinguisher</a>
<b>Tree</b>	<a href="#">route-distinguisher</a>
<b>Configurable</b>	True

## rd (*string* | *string* | *string* | *string*)

<b>Description</b>	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.
<b>Context</b>	<a href="#">system network-instance protocols bgp-vpn bgp-instance id number route-distinguisher rd (<i>string</i>   <i>string</i>   <i>string</i>   <i>string</i>)</a>
<b>Tree</b>	<a href="#">rd</a>
<b>Configurable</b>	False

## route-distinguisher-origin *keyword*

<b>Description</b>	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.
<b>Context</b>	<a href="#">system network-instance protocols bgp-vpn bgp-instance id number route-distinguisher route-distinguisher-origin <i>keyword</i></a>
<b>Tree</b>	<a href="#">route-distinguisher-origin</a>
<b>Options</b>	<ul style="list-style-type: none"> <li>• auto-derived-from-system-ip:0</li> <li>• none</li> </ul>
<b>Configurable</b>	False

**route-target**

<b>Description</b>	Route Target (RT) of the system bgp-vpn instance.
<b>Context</b>	<a href="#">system network-instance protocols bgp-vpn bgp-instance id number route-target</a>
<b>Tree</b>	<a href="#">route-target</a>
<b>Configurable</b>	True

**export-route-target-origin keyword**

<b>Description</b>	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.
<b>Context</b>	<a href="#">system network-instance protocols bgp-vpn bgp-instance id number route-target export-route-target-origin keyword</a>
<b>Tree</b>	<a href="#">export-route-target-origin</a>
<b>Options</b>	<ul style="list-style-type: none"> <li>• auto-derived-from-esi-bytes-1-6</li> <li>• none</li> </ul>
<b>Configurable</b>	False

**export-rt (*string* | *string* | *string* | *string* | *string* | *string* | *string* | *string* | *string* | *string*)**

<b>Description</b>	Export 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 advertised along with the ES route.
<b>Context</b>	<a href="#">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>   <i>string</i>   <i>string</i>)</a>
<b>Tree</b>	<a href="#">export-rt</a>
<b>Configurable</b>	False

**import-route-target-origin keyword**

<b>Description</b>	Origin of the operational import Route Target (RT) of the bgp-vpn instance.
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	'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.
<b>Context</b>	<a href="#">system network-instance protocols bgp-vpn bgp-instance id number route-target import-route-target-origin keyword</a>
<b>Tree</b>	<a href="#">import-route-target-origin</a>
<b>Options</b>	<ul style="list-style-type: none"> <li>• auto-derived-from-esi-bytes-1-6</li> <li>• none</li> </ul>
<b>Configurable</b>	False

### **import-rt (*string* | *string* | *string* | *string* | *string* | *string* | *string* | *string* | *string* | *string*)**

<b>Description</b>	<p>Import 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 received along with the ES route.</p>
<b>Context</b>	<a href="#">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>   <i>string</i>   <i>string</i>)</a>
<b>Tree</b>	<a href="#">import-rt</a>
<b>Configurable</b>	False

## evpn



### **Note:**

This command is available for the following platforms:

- 7220 IXR-D2
- 7220 IXR-D3
- 7220 IXR-D3L
- 7220 IXR-D2L

<b>Description</b>	Enable the evpn context
<b>Context</b>	<a href="#">system network-instance protocols evpn</a>
<b>Tree</b>	<a href="#">evpn</a>
<b>Configurable</b>	True



## ethernet-segments



**Note:**

This command is available for the following platforms:

- 7220 IXR-D2
- 7220 IXR-D3
- 7220 IXR-D3L
- 7220 IXR-D2L

<b>Description</b>	Enable the ethernet-segments context
<b>Context</b>	<a href="#">system network-instance protocols evpn ethernet-segments</a>
<b>Tree</b>	<a href="#">ethernet-segments</a>
<b>Configurable</b>	True

## bgp-instance *id reference*



**Note:**

This command is available for the following platforms:

- 7220 IXR-D2
- 7220 IXR-D3
- 7220 IXR-D3L
- 7220 IXR-D2L

<b>Description</b>	BGP global instances configured in net-instance
<b>Context</b>	<a href="#">system network-instance protocols evpn ethernet-segments bgp-instance id reference</a>
<b>Tree</b>	<a href="#">bgp-instance</a>
<b>Configurable</b>	True
<b>Max. Elements</b>	1

## id reference

**Note:**

This command is available for the following platforms:

- 7220 IXR-D2
- 7220 IXR-D3
- 7220 IXR-D3L
- 7220 IXR-D2L

<b>Description</b>	Enter the id context
<b>Context</b>	<a href="#">system network-instance protocols evpn ethernet-segments bgp-instance id reference</a>
<b>Reference</b>	<a href="#">system network-instance protocols bgp-vpn bgp-instance id number</a>
<b>Configurable</b>	True

## ethernet-segment *name string*

**Note:**

This command is available for the following platforms:

- 7220 IXR-D2
- 7220 IXR-D3
- 7220 IXR-D3L
- 7220 IXR-D2L

<b>Description</b>	Ethernet Segment configuration and state.
<b>Context</b>	<a href="#">system network-instance protocols evpn ethernet-segments bgp-instance id reference ethernet-segment name string</a>
<b>Tree</b>	<a href="#">ethernet-segment</a>
<b>Configurable</b>	True
<b>Max. Elements</b>	128

**name *string*****Note:**

This command is available for the following platforms:

- 7220 IXR-D2
- 7220 IXR-D3
- 7220 IXR-D3L
- 7220 IXR-D2L

<b>Description</b>	A unique name identifying the ethernet segment.
<b>Context</b>	<a href="#">system network-instance protocols evpn ethernet-segments bgp-instance id reference ethernet-segment name string</a>
<b>String Length</b>	1 to 32
<b>Configurable</b>	True

**admin-state *keyword*****Note:**

This command is available for the following platforms:

- 7220 IXR-D2
- 7220 IXR-D3
- 7220 IXR-D3L
- 7220 IXR-D2L

<b>Description</b>	Admin state of the ethernet segment
<b>Context</b>	<a href="#">system network-instance protocols evpn ethernet-segments bgp-instance id reference ethernet-segment name string admin-state keyword</a>
<b>Tree</b>	<a href="#">admin-state</a>
<b>Default</b>	disable
<b>Options</b>	<ul style="list-style-type: none"> <li>• enable</li> <li>• disable</li> </ul>
<b>Configurable</b>	True

## association



### Note:

This command is available for the following platforms:

- 7220 IXR-D2
- 7220 IXR-D3
- 7220 IXR-D3L
- 7220 IXR-D2L

<b>Description</b>	Enter the association context
<b>Context</b>	<a href="#">system network-instance protocols evpn ethernet-segments bgp-instance id reference ethernet-segment name string association</a>
<b>Tree</b>	<a href="#">association</a>
<b>Configurable</b>	False

## network-instance [name string](#)



### Note:

This command is available for the following platforms:

- 7220 IXR-D2
- 7220 IXR-D3
- 7220 IXR-D3L
- 7220 IXR-D2L

<b>Description</b>	The network instance associated to this ethernet-segment
<b>Context</b>	<a href="#">system network-instance protocols evpn ethernet-segments bgp-instance id reference ethernet-segment name string association network-instance name string</a>
<b>Tree</b>	<a href="#">network-instance</a>
<b>Configurable</b>	False

**name *string*****Note:**

This command is available for the following platforms:

- 7220 IXR-D2
- 7220 IXR-D3
- 7220 IXR-D3L
- 7220 IXR-D2L

<b>Description</b>	Enter the name context
<b>Context</b>	<a href="#">system</a> <a href="#">network-instance</a> <a href="#">protocols</a> <a href="#">evpn</a> <a href="#">ethernet-segments</a> <a href="#">bgp-instance</a> <a href="#">id</a> <a href="#">reference</a> <a href="#">ethernet-segment</a> <a href="#">name</a> <i>string</i> <a href="#">association</a> <a href="#">network-instance</a> <a href="#">name</a> <i>string</i>
<b>Configurable</b>	False

**bgp-instance [instance](#) *number*****Note:**

This command is available for the following platforms:

- 7220 IXR-D2
- 7220 IXR-D3
- 7220 IXR-D3L
- 7220 IXR-D2L

<b>Description</b>	The bgp-instance associated to this ethernet-segment
<b>Context</b>	<a href="#">system</a> <a href="#">network-instance</a> <a href="#">protocols</a> <a href="#">evpn</a> <a href="#">ethernet-segments</a> <a href="#">bgp-instance</a> <a href="#">id</a> <a href="#">reference</a> <a href="#">ethernet-segment</a> <a href="#">name</a> <a href="#">string</a> <a href="#">association</a> <a href="#">network-instance</a> <a href="#">name</a> <i>string</i> <a href="#">bgp-instance</a> <a href="#">instance</a> <i>number</i>
<b>Tree</b>	<a href="#">bgp-instance</a>
<b>Configurable</b>	False

## instance *number*

**Note:**

This command is available for the following platforms:

- 7220 IXR-D2
- 7220 IXR-D3
- 7220 IXR-D3L
- 7220 IXR-D2L

<b>Description</b>	Enter the instance context
<b>Context</b>	<a href="#">system</a> <a href="#">network-instance</a> <a href="#">protocols</a> <a href="#">evpn</a> <a href="#">ethernet-segments</a> <a href="#">bgp-instance</a> <a href="#">id</a> <a href="#">reference</a> <a href="#">ethernet-segment</a> <a href="#">name</a> <a href="#">string</a> <a href="#">association</a> <a href="#">network-instance</a> <a href="#">name</a> <a href="#">string</a> <a href="#">bgp-instance</a> <a href="#">instance</a> <a href="#">number</a>
<b>Configurable</b>	False

## computed-designated-forwarder-candidates

**Note:**

This command is available for the following platforms:

- 7220 IXR-D2
- 7220 IXR-D3
- 7220 IXR-D3L
- 7220 IXR-D2L

<b>Description</b>	Enter the computed-designated-forwarder-candidates context
<b>Context</b>	<a href="#">system</a> <a href="#">network-instance</a> <a href="#">protocols</a> <a href="#">evpn</a> <a href="#">ethernet-segments</a> <a href="#">bgp-instance</a> <a href="#">id</a> <a href="#">reference</a> <a href="#">ethernet-segment</a> <a href="#">name</a> <a href="#">string</a> <a href="#">association</a> <a href="#">network-instance</a> <a href="#">name</a> <a href="#">string</a> <a href="#">bgp-instance</a> <a href="#">instance</a> <a href="#">number</a> <a href="#">computed-designated-forwarder-candidates</a>
<b>Tree</b>	<a href="#">computed-designated-forwarder-candidates</a>
<b>Configurable</b>	False

**designated-forwarder-candidate** *address (ipv4-address | ipv6-address)***Note:**

This command is available for the following platforms:

- 7220 IXR-D2
- 7220 IXR-D3
- 7220 IXR-D3L
- 7220 IXR-D2L

<b>Description</b>	The designated forwarder candidates for this evi
<b>Context</b>	<a href="#">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)</a>
<b>Tree</b>	<a href="#">designated-forwarder-candidate</a>
<b>Configurable</b>	False

**address** *(ipv4-address | ipv6-address)***Note:**

This command is available for the following platforms:

- 7220 IXR-D2
- 7220 IXR-D3
- 7220 IXR-D3L
- 7220 IXR-D2L

<b>Description</b>	Enter the address context
<b>Context</b>	<a href="#">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)</a>
<b>Configurable</b>	False

## add-time *string*

**Note:**

This command is available for the following platforms:

- 7220 IXR-D2
- 7220 IXR-D3
- 7220 IXR-D3L
- 7220 IXR-D2L

<b>Description</b>	The date and time when the designated-forwarder-candidate was added to the designated forwarder candidate list for this evi
<b>Context</b>	<a href="#">system</a> <a href="#">network-instance</a> <a href="#">protocols</a> <a href="#">evpn</a> <a href="#">ethernet-segments</a> <a href="#">bgp-instance</a> <a href="#">id</a> <a href="#">reference</a> <a href="#">ethernet-segment</a> <a href="#">name</a> <i>string</i> <a href="#">association</a> <a href="#">network-instance</a> <a href="#">name</a> <i>string</i> <a href="#">bgp-instance</a> <a href="#">instance</a> <a href="#">number</a> <a href="#">computed-designated-forwarder-candidates</a> <a href="#">designated-forwarder-candidate</a> <a href="#">address</a> ( <a href="#">ipv4-address</a>   <a href="#">ipv6-address</a> ) <i>add-time</i> <i>string</i>
<b>Tree</b>	<a href="#">add-time</a>
<b>String Length</b>	20 to 32
<b>Configurable</b>	False

## designated-forwarder *boolean*

**Note:**

This command is available for the following platforms:

- 7220 IXR-D2
- 7220 IXR-D3
- 7220 IXR-D3L
- 7220 IXR-D2L

<b>Description</b>	Indicates if this designated-forwarder-candidate is the designated-forwarder.
<b>Context</b>	<a href="#">system</a> <a href="#">network-instance</a> <a href="#">protocols</a> <a href="#">evpn</a> <a href="#">ethernet-segments</a> <a href="#">bgp-instance</a> <a href="#">id</a> <a href="#">reference</a> <a href="#">ethernet-segment</a> <a href="#">name</a> <i>string</i> <a href="#">association</a> <a href="#">network-instance</a> <a href="#">name</a> <i>string</i> <a href="#">bgp-instance</a> <a href="#">instance</a> <a href="#">number</a> <a href="#">computed-designated-forwarder-candidates</a> <a href="#">designated-forwarder-candidate</a> <a href="#">address</a> ( <a href="#">ipv4-address</a>   <a href="#">ipv6-address</a> ) <a href="#">designated-forwarder</a> <i>boolean</i>
<b>Tree</b>	<a href="#">designated-forwarder</a>
<b>Default</b>	false
<b>Configurable</b>	False



## designated-forwarder-activation-start-time *string*



### Note:

This command is available for the following platforms:

- 7220 IXR-D2
- 7220 IXR-D3
- 7220 IXR-D3L
- 7220 IXR-D2L

<b>Description</b>	Indicates the time at which the designated-forwarder activation timer started.
<b>Context</b>	<a href="#">system</a> <a href="#">network-instance</a> <a href="#">protocols</a> <a href="#">evpn</a> <a href="#">ethernet-segments</a> <a href="#">bgp-instance</a> <a href="#">id</a> <a href="#">reference</a> <a href="#">ethernet-segment</a> <a href="#">name</a> <i>string</i> <a href="#">association</a> <a href="#">network-instance</a> <a href="#">name</a> <i>string</i> <a href="#">bgp-instance</a> <a href="#">instance</a> <a href="#">number</a> <a href="#">designated-forwarder-activation-start-time</a> <i>string</i>
<b>Tree</b>	<a href="#">designated-forwarder-activation-start-time</a>
<b>String Length</b>	20 to 32
<b>Configurable</b>	False

## designated-forwarder-activation-time *number*



### Note:

This command is available for the following platforms:

- 7220 IXR-D2
- 7220 IXR-D3
- 7220 IXR-D3L
- 7220 IXR-D2L

<b>Description</b>	Indicates the number of seconds for the activation timer to run, for this node to become the designated forwarder for this bgp instance.
<b>Context</b>	<a href="#">system</a> <a href="#">network-instance</a> <a href="#">protocols</a> <a href="#">evpn</a> <a href="#">ethernet-segments</a> <a href="#">bgp-instance</a> <a href="#">id</a> <a href="#">reference</a> <a href="#">ethernet-segment</a> <a href="#">name</a> <i>string</i> <a href="#">association</a> <a href="#">network-instance</a> <a href="#">name</a> <i>string</i> <a href="#">bgp-instance</a> <a href="#">instance</a> <a href="#">number</a> <a href="#">designated-forwarder-activation-time</a> <i>number</i>
<b>Tree</b>	<a href="#">designated-forwarder-activation-time</a>
<b>Units</b>	seconds
<b>Configurable</b>	False

## designated-forwarder-role-last-change *string*



### Note:

This command is available for the following platforms:

- 7220 IXR-D2
- 7220 IXR-D3
- 7220 IXR-D3L
- 7220 IXR-D2L

<b>Description</b>	Indicates the time at which the designated-forwarder role was changed.
<b>Context</b>	<a href="#">system</a> <a href="#">network-instance</a> <a href="#">protocols</a> <a href="#">evpn</a> <a href="#">ethernet-segments</a> <a href="#">bgp-instance</a> <a href="#">id</a> <a href="#">reference</a> <a href="#">ethernet-segment</a> <a href="#">name</a> <i>string</i> <a href="#">association</a> <a href="#">network-instance</a> <a href="#">name</a> <i>string</i> <a href="#">bgp-instance</a> <a href="#">instance</a> <a href="#">number</a> <a href="#">designated-forwarder-role-last-change</a> <i>string</i>
<b>Tree</b>	<a href="#">designated-forwarder-role-last-change</a>
<b>String Length</b>	20 to 32
<b>Configurable</b>	False

## autodiscovery-per-ethernet-segment-routes



### Note:

This command is available for the following platforms:

- 7220 IXR-D2
- 7220 IXR-D3
- 7220 IXR-D3L
- 7220 IXR-D2L

<b>Description</b>	Enter the autodiscovery-per-ethernet-segment-routes context
<b>Context</b>	<a href="#">system</a> <a href="#">network-instance</a> <a href="#">protocols</a> <a href="#">evpn</a> <a href="#">ethernet-segments</a> <a href="#">bgp-instance</a> <a href="#">id</a> <a href="#">reference</a> <a href="#">ethernet-segment</a> <a href="#">name</a> <i>string</i> <a href="#">autodiscovery-per-ethernet-segment-routes</a>
<b>Tree</b>	<a href="#">autodiscovery-per-ethernet-segment-routes</a>
<b>Configurable</b>	False

## attr-id reference

**Note:**

This command is available for the following platforms:

- 7220 IXR-D2
- 7220 IXR-D3
- 7220 IXR-D3L
- 7220 IXR-D2L

<b>Description</b>	Leaf reference to networkinstance/protocols/bgp/rib/attr-sets/attr-set/index.
<b>Context</b>	<a href="#">system</a> <a href="#">network-instance</a> <a href="#">protocols</a> <a href="#">evpn</a> <a href="#">ethernet-segments</a> <a href="#">bgp-instance</a> <a href="#">id reference</a> <a href="#">ethernet-segment name</a> <i>string</i> <a href="#">autodiscovery-per-ethernet-segment-routes</a> <a href="#">attr-id reference</a>
<b>Tree</b>	<a href="#">attr-id</a>
<b>Reference</b>	<a href="#">network-instance</a> <a href="#">name</a> <a href="#">stringname</a> <a href="#">string</a> <i>string</i> <a href="#">bgp-rib</a> <a href="#">attr-sets</a> <a href="#">attr-set</a> <a href="#">attr-set-type</a> <a href="#">keyword</a> <a href="#">index</a> <a href="#">number</a> <a href="#">attr-set-type</a> <a href="#">keyword</a> <i>keyword</i> <a href="#">index</a> <a href="#">number</a> <a href="#">number</a>
<b>Configurable</b>	False

## esi string

**Note:**

This command is available for the following platforms:

- 7220 IXR-D2
- 7220 IXR-D3
- 7220 IXR-D3L
- 7220 IXR-D2L

<b>Description</b>	The Ethernet Segment Identifier encoded in the NLRI
<b>Context</b>	<a href="#">system</a> <a href="#">network-instance</a> <a href="#">protocols</a> <a href="#">evpn</a> <a href="#">ethernet-segments</a> <a href="#">bgp-instance</a> <a href="#">id reference</a> <a href="#">ethernet-segment name</a> <i>string</i> <a href="#">autodiscovery-per-ethernet-segment-routes</a> <a href="#">esi</a> <i>string</i>
<b>Tree</b>	<a href="#">esi</a>
<b>Configurable</b>	False

**ethernet-tag-id *number*****Note:**

This command is available for the following platforms:

- 7220 IXR-D2
- 7220 IXR-D3
- 7220 IXR-D3L
- 7220 IXR-D2L

<b>Description</b>	The 32-bit Ethernet Tag ID encoded in the NLRI. The Ethernet Tag ID identifies a broadcast domain.
<b>Context</b>	<a href="#">system network-instance protocols evpn ethernet-segments bgp-instance id reference ethernet-segment name string autodiscovery-per-ethernet-segment-routes ethernet-tag-id number</a>
<b>Tree</b>	<a href="#">ethernet-tag-id</a>
<b>Configurable</b>	False

**neighbor (*ipv4-address* | *ipv6-address*)****Note:**

This command is available for the following platforms:

- 7220 IXR-D2
- 7220 IXR-D3
- 7220 IXR-D3L
- 7220 IXR-D2L

<b>Description</b>	If the route was learned from a BGP neighbor, this is the IPv4 or IPv6 address of that neighbor.
<b>Context</b>	<a href="#">system network-instance protocols evpn ethernet-segments bgp-instance id reference ethernet-segment name string autodiscovery-per-ethernet-segment-routes neighbor (ipv4-address   ipv6-address)</a>
<b>Tree</b>	<a href="#">neighbor</a>
<b>Configurable</b>	False

**route-distinguisher (*string* | *string* | *string* | *string*)****Note:**

This command is available for the following platforms:

- 7220 IXR-D2
- 7220 IXR-D3
- 7220 IXR-D3L
- 7220 IXR-D2L

<b>Description</b>	The route distinguisher encoded in the NLRI.
<b>Context</b>	<a href="#">system network-instance protocols evpn ethernet-segments bgp-instance id reference ethernet-segment name string autodiscovery-per-ethernet-segment-routes route-distinguisher (string   string   string   string)</a>
<b>Tree</b>	<a href="#">route-distinguisher</a>
<b>Configurable</b>	False

**vni *number*****Note:**

This command is available for the following platforms:

- 7220 IXR-D2
- 7220 IXR-D3
- 7220 IXR-D3L
- 7220 IXR-D2L

<b>Description</b>	The VXLAN Network Identifier
<b>Context</b>	<a href="#">system network-instance protocols evpn ethernet-segments bgp-instance id reference ethernet-segment name string autodiscovery-per-ethernet-segment-routes vni number</a>
<b>Tree</b>	<a href="#">vni</a>
<b>Range</b>	0 to 16777215
<b>Configurable</b>	False

## df-election



### Note:

This command is available for the following platforms:

- 7220 IXR-D2
- 7220 IXR-D3
- 7220 IXR-D3L
- 7220 IXR-D2L

<b>Description</b>	Enter the df-election context
<b>Context</b>	<a href="#">system network-instance protocols evpn ethernet-segments bgp-instance id reference ethernet-segment name string df-election</a>
<b>Tree</b>	<a href="#">df-election</a>
<b>Configurable</b>	True

## algorithm



### Note:

This command is available for the following platforms:

- 7220 IXR-D2
- 7220 IXR-D3
- 7220 IXR-D3L
- 7220 IXR-D2L

<b>Description</b>	Enter the algorithm context
<b>Context</b>	<a href="#">system network-instance protocols evpn ethernet-segments bgp-instance id reference ethernet-segment name string df-election algorithm</a>
<b>Tree</b>	<a href="#">algorithm</a>
<b>Configurable</b>	True

## oper-type keyword



### Note:

This command is available for the following platforms:

- 7220 IXR-D2
- 7220 IXR-D3
- 7220 IXR-D3L
- 7220 IXR-D2L

<b>Description</b>	Operational Designated Forwarder algorithm type for this ethernet-segment.
<b>Context</b>	<a href="#">system network-instance protocols evpn ethernet-segments bgp-instance id reference ethernet-segment name string df-election algorithm oper-type keyword</a>
<b>Tree</b>	<a href="#">oper-type</a>
<b>Options</b>	<ul style="list-style-type: none"> <li>• default</li> <li>• preference</li> </ul>
<b>Configurable</b>	False

## preference-alg



### Note:

This command is available for the following platforms:

- 7220 IXR-D2
- 7220 IXR-D3
- 7220 IXR-D3L
- 7220 IXR-D2L

<b>Description</b>	Enable the preference-alg context
<b>Context</b>	<a href="#">system network-instance protocols evpn ethernet-segments bgp-instance id reference ethernet-segment name string df-election algorithm preference-alg</a>
<b>Tree</b>	<a href="#">preference-alg</a>
<b>Configurable</b>	True

## capabilities



### Note:

This command is available for the following platforms:

- 7220 IXR-D2
- 7220 IXR-D3
- 7220 IXR-D3L
- 7220 IXR-D2L

<b>Description</b>	Enter the capabilities context
<b>Context</b>	<a href="#">system network-instance protocols evpn ethernet-segments bgp-instance id reference ethernet-segment name string df-election algorithm preference-alg capabilities</a>
<b>Tree</b>	<a href="#">capabilities</a>
<b>Configurable</b>	True

## ac-df keyword



### Note:

This command is available for the following platforms:

- 7220 IXR-D2
- 7220 IXR-D3
- 7220 IXR-D3L
- 7220 IXR-D2L

<b>Description</b>	Attachment Circuit influenced DF Election.
<b>Context</b>	<a href="#">system network-instance protocols evpn ethernet-segments bgp-instance id reference ethernet-segment name string df-election algorithm preference-alg capabilities ac-df keyword</a>
<b>Tree</b>	<a href="#">ac-df</a>
<b>Default</b>	include
<b>Options</b>	<ul style="list-style-type: none"> <li>• include</li> <li>• exclude</li> </ul>
<b>Configurable</b>	True



**non-revertive *boolean*****Note:**

This command is available for the following platforms:

- 7220 IXR-D2
- 7220 IXR-D3
- 7220 IXR-D3L
- 7220 IXR-D2L

<b>Description</b>	Non Revertive mode. If set to true, the 'Don't Preempt Me' capability is advertised in the ES route.
<b>Context</b>	<a href="#">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></a>
<b>Tree</b>	<a href="#">non-revertive</a>
<b>Default</b>	false
<b>Configurable</b>	True

**oper-do-not-preempt *boolean*****Note:**

This command is available for the following platforms:

- 7220 IXR-D2
- 7220 IXR-D3
- 7220 IXR-D3L
- 7220 IXR-D2L

<b>Description</b>	Operational do-not-preempt value
<b>Context</b>	<a href="#">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></a>
<b>Tree</b>	<a href="#">oper-do-not-preempt</a>
<b>Configurable</b>	False

**oper-preference-value *number*****Note:**

This command is available for the following platforms:

- 7220 IXR-D2
- 7220 IXR-D3
- 7220 IXR-D3L
- 7220 IXR-D2L

<b>Description</b>	Operational Preference value
<b>Context</b>	<a href="#">system network-instance protocols evpn ethernet-segments bgp-instance id reference ethernet-segment name string df-election algorithm preference-alg oper-preference-value number</a>
<b>Tree</b>	<a href="#">oper-preference-value</a>
<b>Configurable</b>	False

**preference-value *number*****Note:**

This command is available for the following platforms:

- 7220 IXR-D2
- 7220 IXR-D3
- 7220 IXR-D3L
- 7220 IXR-D2L

<b>Description</b>	Preference that is used to elect the designated forwarder
<b>Context</b>	<a href="#">system network-instance protocols evpn ethernet-segments bgp-instance id reference ethernet-segment name string df-election algorithm preference-alg preference-value number</a>
<b>Tree</b>	<a href="#">preference-value</a>
<b>Range</b>	0 to 65535
<b>Default</b>	32767
<b>Configurable</b>	True

## type keyword

**Note:**

This command is available for the following platforms:

- 7220 IXR-D2
- 7220 IXR-D3
- 7220 IXR-D3L
- 7220 IXR-D2L

<b>Description</b>	Designated Forwarder algorithm type for this ethernet-segment.
<b>Context</b>	<a href="#">system network-instance protocols evpn ethernet-segments bgp-instance id reference ethernet-segment name string df-election algorithm type keyword</a>
<b>Tree</b>	<a href="#">type</a>
<b>Default</b>	default
<b>Options</b>	<ul style="list-style-type: none"> <li>• default</li> <li>• preference</li> </ul>
<b>Configurable</b>	True

## interface-standby-signaling-on-non-df

**Note:**

This command is available for the following platforms:

- 7220 IXR-D2
- 7220 IXR-D3
- 7220 IXR-D3L
- 7220 IXR-D2L

<b>Description</b>	Enable the interface-standby-signaling-on-non-df context
<b>Context</b>	<a href="#">system network-instance protocols evpn ethernet-segments bgp-instance id reference ethernet-segment name string df-election interface-standby-signaling-on-non-df</a>
<b>Tree</b>	<a href="#">interface-standby-signaling-on-non-df</a>
<b>Configurable</b>	True

## timers



### Note:

This command is available for the following platforms:

- 7220 IXR-D2
- 7220 IXR-D3
- 7220 IXR-D3L
- 7220 IXR-D2L

<b>Description</b>	Enter the timers context
<b>Context</b>	<a href="#">system network-instance protocols evpn ethernet-segments bgp-instance id reference ethernet-segment name string df-election timers</a>
<b>Tree</b>	<a href="#">timers</a>
<b>Configurable</b>	True

## activation-timer *number*



### Note:

This command is available for the following platforms:

- 7220 IXR-D2
- 7220 IXR-D3
- 7220 IXR-D3L
- 7220 IXR-D2L

<b>Description</b>	Remaining activation timer per Ethernet segment
<b>Context</b>	<a href="#">system network-instance protocols evpn ethernet-segments bgp-instance id reference ethernet-segment name string df-election timers activation-timer number</a>
<b>Tree</b>	<a href="#">activation-timer</a>
<b>Range</b>	0 to 100
<b>Units</b>	seconds
<b>Configurable</b>	True

## esi string

**Note:**

This command is available for the following platforms:

- 7220 IXR-D2
- 7220 IXR-D3
- 7220 IXR-D3L
- 7220 IXR-D2L

<b>Description</b>	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.
<b>Context</b>	<a href="#">system network-instance protocols evpn ethernet-segments bgp-instance id reference ethernet-segment name string esi string</a>
<b>Tree</b>	<a href="#">esi</a>
<b>Configurable</b>	True

## ethernet-segment-routes

**Note:**

This command is available for the following platforms:

- 7220 IXR-D2
- 7220 IXR-D3
- 7220 IXR-D3L
- 7220 IXR-D2L

<b>Description</b>	Enter the ethernet-segment-routes context
<b>Context</b>	<a href="#">system network-instance protocols evpn ethernet-segments bgp-instance id reference ethernet-segment name string ethernet-segment-routes</a>
<b>Tree</b>	<a href="#">ethernet-segment-routes</a>
<b>Configurable</b>	False

## attr-id reference

**Note:**

This command is available for the following platforms:

- 7220 IXR-D2
- 7220 IXR-D3
- 7220 IXR-D3L
- 7220 IXR-D2L

<b>Description</b>	Leaf reference to networkinstance/protocols/bgp/rib/attr-sets/attr-set/index.
<b>Context</b>	<a href="#">system</a> <a href="#">network-instance</a> <a href="#">protocols</a> <a href="#">evpn</a> <a href="#">ethernet-segments</a> <a href="#">bgp-instance</a> <a href="#">id reference</a> <a href="#">ethernet-segment name</a> <i>string</i> <a href="#">ethernet-segment-routes</a> <a href="#">attr-id reference</a>
<b>Tree</b>	<a href="#">attr-id</a>
<b>Reference</b>	<a href="#">network-instance</a> <a href="#">name</a> <a href="#">stringname</a> <a href="#">string</a> <i>string</i> <a href="#">bgp-rib</a> <a href="#">attr-sets</a> <a href="#">attr-set</a> <a href="#">attr-set-type</a> <a href="#">keyword</a> <a href="#">index</a> <a href="#">number</a> <a href="#">attr-set-type</a> <a href="#">keyword</a> <i>keyword</i> <a href="#">index</a> <a href="#">number</a> <a href="#">number</a>
<b>Configurable</b>	False

## esi string

**Note:**

This command is available for the following platforms:

- 7220 IXR-D2
- 7220 IXR-D3
- 7220 IXR-D3L
- 7220 IXR-D2L

<b>Description</b>	The Ethernet Segment Identifier
<b>Context</b>	<a href="#">system</a> <a href="#">network-instance</a> <a href="#">protocols</a> <a href="#">evpn</a> <a href="#">ethernet-segments</a> <a href="#">bgp-instance</a> <a href="#">id reference</a> <a href="#">ethernet-segment name</a> <a href="#">string</a> <a href="#">ethernet-segment-routes</a> <a href="#">esi</a> <a href="#">string</a>
<b>Tree</b>	<a href="#">esi</a>
<b>Configurable</b>	False

**neighbor (*ipv4-address* | *ipv6-address*)****Note:**

This command is available for the following platforms:

- 7220 IXR-D2
- 7220 IXR-D3
- 7220 IXR-D3L
- 7220 IXR-D2L

<b>Description</b>	If the route was learned from a BGP neighbor, this is the IPv4 or IPv6 address of that neighbor.
<b>Context</b>	<a href="#">system</a> <a href="#">network-instance</a> <a href="#">protocols</a> <a href="#">evpn</a> <a href="#">ethernet-segments</a> <a href="#">bgp-instance</a> <a href="#">id</a> <a href="#">reference</a> <a href="#">ethernet-segment</a> <a href="#">name</a> <a href="#">string</a> <a href="#">ethernet-segment-routes</a> <a href="#">neighbor</a> ( <i>ipv4-address</i>   <i>ipv6-address</i> )
<b>Tree</b>	<a href="#">neighbor</a>
<b>Configurable</b>	False

**originating-router (*ipv4-address* | *ipv6-address*)****Note:**

This command is available for the following platforms:

- 7220 IXR-D2
- 7220 IXR-D3
- 7220 IXR-D3L
- 7220 IXR-D2L

<b>Description</b>	The IPv4 or IPv6 address of the originating router
<b>Context</b>	<a href="#">system</a> <a href="#">network-instance</a> <a href="#">protocols</a> <a href="#">evpn</a> <a href="#">ethernet-segments</a> <a href="#">bgp-instance</a> <a href="#">id</a> <a href="#">reference</a> <a href="#">ethernet-segment</a> <a href="#">name</a> <a href="#">string</a> <a href="#">ethernet-segment-routes</a> <a href="#">originating-router</a> ( <i>ipv4-address</i>   <i>ipv6-address</i> )
<b>Tree</b>	<a href="#">originating-router</a>
<b>Configurable</b>	False

## route-distinguisher (*string* | *string* | *string* | *string*)



### Note:

This command is available for the following platforms:

- 7220 IXR-D2
- 7220 IXR-D3
- 7220 IXR-D3L
- 7220 IXR-D2L

<b>Description</b>	The route distinguisher encoded in the NLRI.
<b>Context</b>	<a href="#">system network-instance protocols evpn ethernet-segments bgp-instance id reference ethernet-segment name string ethernet-segment-routes route-distinguisher (string   string   string   string)</a>
<b>Tree</b>	<a href="#">route-distinguisher</a>
<b>Configurable</b>	False

## interface *reference*



### Note:

This command is available for the following platforms:

- 7220 IXR-D2
- 7220 IXR-D3
- 7220 IXR-D3L
- 7220 IXR-D2L

<b>Description</b>	Interface associated with the ethernet segment. Only one interface can be associated in the current release.
<b>Context</b>	<a href="#">system network-instance protocols evpn ethernet-segments bgp-instance id reference ethernet-segment name string interface reference</a>
<b>Tree</b>	<a href="#">interface</a>
<b>Reference</b>	<a href="#">interface name string name string string</a>
<b>Configurable</b>	True



## multi-homing-mode *keyword*



### Note:

This command is available for the following platforms:

- 7220 IXR-D2
- 7220 IXR-D3
- 7220 IXR-D3L
- 7220 IXR-D2L

<b>Description</b>	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'.
<b>Context</b>	<a href="#">system network-instance protocols evpn ethernet-segments bgp-instance id reference ethernet-segment name string multi-homing-mode keyword</a>
<b>Tree</b>	<a href="#">multi-homing-mode</a>
<b>Default</b>	all-active
<b>Options</b>	<ul style="list-style-type: none"> <li>• all-active</li> <li>• single-active</li> </ul>
<b>Configurable</b>	True

## oper-down-reason *keyword*



### Note:

This command is available for the following platforms:

- 7220 IXR-D2
- 7220 IXR-D3
- 7220 IXR-D3L
- 7220 IXR-D2L

<b>Description</b>	The reason for the ethernet-segment being down in the bgp-instance
<b>Context</b>	<a href="#">system network-instance protocols evpn ethernet-segments bgp-instance id reference ethernet-segment name string oper-down-reason keyword</a>
<b>Tree</b>	<a href="#">oper-down-reason</a>
<b>Options</b>	<ul style="list-style-type: none"> <li>• admin-disabled</li> <li>• no-nexthop-address</li> <li>• no-originating-address</li> </ul>

- no-associated-interface
- associated-interface-oper-down
- no-esi

**Configurable** False

## oper-esi *string*



### Note:

This command is available for the following platforms:

- 7220 IXR-D2
- 7220 IXR-D3
- 7220 IXR-D3L
- 7220 IXR-D2L

**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

## oper-multi-homing-mode *keyword*



### Note:

This command is available for the following platforms:

- 7220 IXR-D2
- 7220 IXR-D3
- 7220 IXR-D3L
- 7220 IXR-D2L

**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

	<ul style="list-style-type: none"> <li>• single-active</li> </ul>
<b>Configurable</b>	False

### oper-state *keyword*



#### Note:

This command is available for the following platforms:

- 7220 IXR-D2
- 7220 IXR-D3
- 7220 IXR-D3L
- 7220 IXR-D2L

<b>Description</b>	This leaf contains the operational state of ethernet segment.
<b>Context</b>	<a href="#">system network-instance protocols evpn ethernet-segments bgp-instance id reference ethernet-segment name string oper-state keyword</a>
<b>Tree</b>	<a href="#">oper-state</a>
<b>Options</b>	<ul style="list-style-type: none"> <li>• up Component or process is operational</li> <li>• down Component or process is not operational</li> <li>• empty Component slot is empty</li> <li>• downloading Component is downloading image into memory</li> <li>• booting Component is booting downloaded image</li> <li>• starting Component image operational, application processes starting</li> <li>• failed Component or process has failed</li> <li>• synchronizing Component is currently being synchronized</li> <li>• upgrading Component is currently being upgraded</li> <li>• low-power Component is offline due to insufficient system power</li> </ul>

- degraded  
Component or process is in a degraded state
- warm-reboot  
Component or process is currently warm rebooting  
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.

**Configurable** False

## routes



### Note:

This command is available for the following platforms:

- 7220 IXR-D2
- 7220 IXR-D3
- 7220 IXR-D3L
- 7220 IXR-D2L

**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

## ethernet-segment



### Note:

This command is available for the following platforms:

- 7220 IXR-D2
- 7220 IXR-D3
- 7220 IXR-D3L
- 7220 IXR-D2L

**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

## originating-ip keyword



### Note:

This command is available for the following platforms:

- 7220 IXR-D2
- 7220 IXR-D3
- 7220 IXR-D3L
- 7220 IXR-D2L

<b>Description</b>	The originating ip-address that the inclusive multicast route will be advertised with in this evpn instance
<b>Context</b>	<a href="#">system network-instance protocols evpn ethernet-segments bgp-instance id reference ethernet-segment name string routes ethernet-segment originating-ip keyword</a>
<b>Tree</b>	<a href="#">originating-ip</a>
<b>Default</b>	use-system-ipv4-address
<b>Options</b>	<ul style="list-style-type: none"> <li>• use-system-ipv4-address</li> </ul>
<b>Configurable</b>	True

## next-hop keyword



### Note:

This command is available for the following platforms:

- 7220 IXR-D2
- 7220 IXR-D3
- 7220 IXR-D3L
- 7220 IXR-D2L

<b>Description</b>	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.
<b>Context</b>	<a href="#">system network-instance protocols evpn ethernet-segments bgp-instance id reference ethernet-segment name string routes next-hop keyword</a>
<b>Tree</b>	<a href="#">next-hop</a>
<b>Default</b>	use-system-ipv4-address
<b>Options</b>	<ul style="list-style-type: none"> <li>• use-system-ipv4-address</li> </ul>
<b>Configurable</b>	True

## timers



### Note:

This command is available for the following platforms:

- 7220 IXR-D2
- 7220 IXR-D3
- 7220 IXR-D3L
- 7220 IXR-D2L

<b>Description</b>	Enter the timers context
<b>Context</b>	<a href="#">system network-instance protocols evpn ethernet-segments timers</a>
<b>Tree</b>	<a href="#">timers</a>
<b>Configurable</b>	True

## activation-timer *number*



### Note:

This command is available for the following platforms:

- 7220 IXR-D2
- 7220 IXR-D3
- 7220 IXR-D3L
- 7220 IXR-D2L

<b>Description</b>	Enter the activation-timer context
<b>Context</b>	<a href="#">system network-instance protocols evpn ethernet-segments timers activation-timer <i>number</i></a>
<b>Tree</b>	<a href="#">activation-timer</a>
<b>Range</b>	0 to 100
<b>Default</b>	3
<b>Units</b>	seconds
<b>Configurable</b>	True

**boot-remaining-time *number*****Note:**

This command is available for the following platforms:

- 7220 IXR-D2
- 7220 IXR-D3
- 7220 IXR-D3L
- 7220 IXR-D2L

<b>Description</b>	Indicates the number of seconds remaining for the boot timer to expire.
<b>Context</b>	<a href="#">system network-instance protocols evpn ethernet-segments timers boot-remaining-time <i>number</i></a>
<b>Tree</b>	<a href="#">boot-remaining-time</a>
<b>Units</b>	seconds
<b>Configurable</b>	False

**boot-start-time *string*****Note:**

This command is available for the following platforms:

- 7220 IXR-D2
- 7220 IXR-D3
- 7220 IXR-D3L
- 7220 IXR-D2L

<b>Description</b>	Indicates the time at which the boot timer started.
<b>Context</b>	<a href="#">system network-instance protocols evpn ethernet-segments timers boot-start-time <i>string</i></a>
<b>Tree</b>	<a href="#">boot-start-time</a>
<b>String Length</b>	20 to 32
<b>Configurable</b>	False

**boot-timer *number*****Note:**

This command is available for the following platforms:

- 7220 IXR-D2
- 7220 IXR-D3
- 7220 IXR-D3L
- 7220 IXR-D2L

<b>Description</b>	Remaining time before running BGP EVPN multi-homing DF election algorithm
<b>Context</b>	<a href="#">system network-instance protocols evpn ethernet-segments timers boot-timer <i>number</i></a>
<b>Tree</b>	<a href="#">boot-timer</a>
<b>Range</b>	0 to 6000
<b>Default</b>	10
<b>Units</b>	seconds
<b>Configurable</b>	True

**ntp**

<b>Description</b>	Top-level container for NTP configuration and state
<b>Context</b>	<a href="#">system ntp</a>
<b>Tree</b>	<a href="#">ntp</a>
<b>Configurable</b>	True

**admin-state *keyword***

<b>Description</b>	Enables the system NTP client and indicates that the system should attempt to synchronize the clock
<b>Context</b>	<a href="#">system ntp admin-state <i>keyword</i></a>
<b>Tree</b>	<a href="#">admin-state</a>
<b>Options</b>	<ul style="list-style-type: none"> <li>• enable</li> <li>• disable</li> </ul>
<b>Configurable</b>	True



**network-instance *reference***

<b>Description</b>	Reference to a configured network-instance
<b>Context</b>	<a href="#">system ntp network-instance reference</a>
<b>Tree</b>	<a href="#">network-instance</a>
<b>Reference</b>	<a href="#">network-instance name string string</a>
<b>Configurable</b>	True

**oper-state *keyword***

<b>Description</b>	Details the operational state of the NTP client
<b>Context</b>	<a href="#">system ntp oper-state keyword</a>
<b>Tree</b>	<a href="#">oper-state</a>
<b>Options</b>	<ul style="list-style-type: none"> <li>• up Component or process is operational</li> <li>• down Component or process is not operational</li> <li>• empty Component slot is empty</li> <li>• downloading Component is downloading image into memory</li> <li>• booting Component is booting downloaded image</li> <li>• starting Component image operational, application processes starting</li> <li>• failed Component or process has failed</li> <li>• synchronizing Component is currently being synchronized</li> <li>• upgrading Component is currently being upgraded</li> <li>• low-power Component is offline due to insufficient system power</li> <li>• degraded Component or process is in a degraded state</li> </ul>

- warm-reboot  
Component or process is currently warm rebooting  
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.

**Configurable** False

### **server address (ipv4-address | ipv6-address)**

**Description** List of NTP servers to use for system clock synchronization

**Context** [system ntp server address \(ipv4-address | ipv6-address\)](#)

**Tree** [server](#)

**Configurable** True

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

**Description** IP address of the NTP server, may be either IPv4 or IPv6

**Context** [system ntp server address \(ipv4-address | ipv6-address\)](#)

**Configurable** True

### **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 \(ipv4-address | ipv6-address\) iburst boolean](#)

**Tree** [iburst](#)

**Default** false

**Configurable** True

### **jitter string**

**Description** Measurement of the variance in latency on the network

**Context** [system ntp server address \(ipv4-address | ipv6-address\) jitter string](#)

**Tree** [jitter](#)

**Configurable** False

**offset string**

<b>Description</b>	Estimate of the current time offset from the peer This is the time difference between the local and reference clock.
<b>Context</b>	<a href="#">system ntp server address (ipv4-address   ipv6-address)</a> <a href="#">offset string</a>
<b>Tree</b>	<a href="#">offset</a>
<b>Configurable</b>	False

**poll-interval number**

<b>Description</b>	Polling interval of the peer
<b>Context</b>	<a href="#">system ntp server address (ipv4-address   ipv6-address)</a> <a href="#">poll-interval number</a>
<b>Tree</b>	<a href="#">poll-interval</a>
<b>Range</b>	16 to 3600
<b>Units</b>	seconds
<b>Configurable</b>	False

**prefer boolean**

<b>Description</b>	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
<b>Context</b>	<a href="#">system ntp server address (ipv4-address   ipv6-address)</a> <a href="#">prefer boolean</a>
<b>Tree</b>	<a href="#">prefer</a>
<b>Default</b>	false
<b>Configurable</b>	True

**stratum number**

<b>Description</b>	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
<b>Context</b>	<a href="#">system ntp server address (ipv4-address   ipv6-address)</a> <a href="#">stratum number</a>
<b>Tree</b>	<a href="#">stratum</a>
<b>Configurable</b>	False

**synchronized** (*ipv4-address* | *ipv6-address* | *string*)

<b>Description</b>	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
<b>Context</b>	<a href="#">system ntp synchronized</a> ( <i>ipv4-address</i>   <i>ipv6-address</i>   <i>string</i> )
<b>Tree</b>	<a href="#">synchronized</a>
<b>Configurable</b>	False

**ra-guard-policy** *name string***Note:**

This command is available for the following platforms:

- 7220 IXR-D2
- 7220 IXR-D3L
- 7220 IXR-D2L
- 7220 IXR-D3
- 7220 IXR-D1

<b>Description</b>	List containing RA Guard Policy and parameters
<b>Context</b>	<a href="#">system ra-guard-policy name</a> <i>string</i>
<b>Tree</b>	<a href="#">ra-guard-policy</a>
<b>Configurable</b>	True
<b>Max. Elements</b>	64

**name** *string***Note:**

This command is available for the following platforms:

- 7220 IXR-D2
- 7220 IXR-D3L
- 7220 IXR-D2L
- 7220 IXR-D3
- 7220 IXR-D1

<b>Description</b>	RA Guard Policy name
<b>Context</b>	<a href="#">system ra-guard-policy name</a> <i>string</i>
<b>String Length</b>	1 to 255

**Configurable** True

## action *keyword*



### Note:

This command is available for the following platforms:

- 7220 IXR-D2
- 7220 IXR-D3L
- 7220 IXR-D2L
- 7220 IXR-D3
- 7220 IXR-D1

<b>Description</b>	Describes the RA Guard Policy action for RA Messages matching the specified attributes. RA Messages no matching the specified attributes will be handled in the opposite manner.
<b>Context</b>	<a href="#">system ra-guard-policy name</a> <i>string</i> <a href="#">action keyword</a>
<b>Tree</b>	<a href="#">action</a>
<b>Default</b>	discard
<b>Options</b>	<ul style="list-style-type: none"> <li>• accept</li> <li>• discard</li> </ul>
<b>Configurable</b>	True

## advertise-prefix-set *reference*



### Note:

This command is available for the following platforms:

- 7220 IXR-D2
- 7220 IXR-D3L
- 7220 IXR-D2L
- 7220 IXR-D3
- 7220 IXR-D1

<b>Description</b>	Reference to a prefix set to match advertised address within RA message
<b>Context</b>	<a href="#">system ra-guard-policy name</a> <i>string</i> <a href="#">advertise-prefix-set reference</a>
<b>Tree</b>	<a href="#">advertise-prefix-set</a>
<b>Reference</b>	<a href="#">routing-policy prefix-set name</a> <i>string</i> <a href="#">name string</a> <i>string</i>
<b>Configurable</b>	True

## hop-limit *number*

**Note:**

This command is available for the following platforms:

- 7220 IXR-D2
- 7220 IXR-D3L
- 7220 IXR-D2L
- 7220 IXR-D3
- 7220 IXR-D1

<b>Description</b>	Verifies the minimum advertised hop count limit. If not specified the verification is skipped.
<b>Context</b>	<code>system ra-guard-policy name string hop-limit number</code>
<b>Tree</b>	<code>hop-limit</code>
<b>Range</b>	1 to 255
<b>Configurable</b>	True

## managed-config-flag *boolean*

**Note:**

This command is available for the following platforms:

- 7220 IXR-D2
- 7220 IXR-D3L
- 7220 IXR-D2L
- 7220 IXR-D3
- 7220 IXR-D1

<b>Description</b>	Causes the RA Guard policy to match IPv6 RA messages with the M (Managed address) flag set. If not specified the verification is skipped.
<b>Context</b>	<code>system ra-guard-policy name string managed-config-flag boolean</code>
<b>Tree</b>	<code>managed-config-flag</code>
<b>Configurable</b>	True

## other-config-flag *boolean*

**Note:**

This command is available for the following platforms:

- 7220 IXR-D2
- 7220 IXR-D3L
- 7220 IXR-D2L
- 7220 IXR-D3
- 7220 IXR-D1

<b>Description</b>	Causes the RA Guard policy to match IPv6 RA messages with the O (Other config) flag set. If not specified the verification is skipped.
<b>Context</b>	<a href="#">system ra-guard-policy name</a> <i>string</i> <a href="#">other-config-flag</a> <i>boolean</i>
<b>Tree</b>	<a href="#">other-config-flag</a>
<b>Configurable</b>	True

## router-preference *keyword*

**Note:**

This command is available for the following platforms:

- 7220 IXR-D2
- 7220 IXR-D3L
- 7220 IXR-D2L
- 7220 IXR-D3
- 7220 IXR-D1

<b>Description</b>	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.
<b>Context</b>	<a href="#">system ra-guard-policy name</a> <i>string</i> <a href="#">router-preference</a> <i>keyword</i>
<b>Tree</b>	<a href="#">router-preference</a>
<b>Options</b>	<ul style="list-style-type: none"> <li>• high</li> <li>• medium</li> <li>• low</li> </ul>
<b>Configurable</b>	True

## source-prefix-set *reference*

**Note:**

This command is available for the following platforms:

- 7220 IXR-D2
- 7220 IXR-D3L
- 7220 IXR-D2L
- 7220 IXR-D3
- 7220 IXR-D1

<b>Description</b>	Reference to a prefix set to match RA source address. If not specified the verification is skipped.
<b>Context</b>	<a href="#">system ra-guard-policy name string source-prefix-set reference</a>
<b>Tree</b>	<a href="#">source-prefix-set</a>
<b>Reference</b>	<a href="#">routing-policy prefix-set name string string</a>
<b>Configurable</b>	True

## sflow

<b>Description</b>	Context to configure sFlow Agent parameters and report sFlow state
<b>Context</b>	<a href="#">system sflow</a>
<b>Tree</b>	<a href="#">sflow</a>
<b>Configurable</b>	True

## admin-state *keyword*

<b>Description</b>	Administratively enable or disable sFlow for the system
<b>Context</b>	<a href="#">system sflow admin-state keyword</a>
<b>Tree</b>	<a href="#">admin-state</a>
<b>Default</b>	disable
<b>Options</b>	<ul style="list-style-type: none"> <li>• enable</li> <li>• disable</li> </ul>
<b>Configurable</b>	True

## collector [collector-id number](#)

<b>Description</b>	List of sFlow collectors to which sFlow sample data is sent
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<b>Context</b>	<a href="#">system sflow collector collector-id number</a>
<b>Tree</b>	<a href="#">collector</a>
<b>Configurable</b>	True
<b>Max. Elements</b>	8

### **collector-id *number***

<b>Description</b>	Specify the collector ID
<b>Context</b>	<a href="#">system sflow collector collector-id number</a>
<b>Range</b>	1 to 8
<b>Configurable</b>	True

### **collector-address (*ipv4-address* | *ipv6-address*)**

<b>Description</b>	The IP address for an sFlow collector
<b>Context</b>	<a href="#">system sflow collector collector-id number collector-address (<i>ipv4-address</i>   <i>ipv6-address</i>)</a>
<b>Tree</b>	<a href="#">collector-address</a>
<b>Configurable</b>	True

### **network-instance *reference***

<b>Description</b>	Reference to a configured network-instance
<b>Context</b>	<a href="#">system sflow collector collector-id number network-instance reference</a>
<b>Tree</b>	<a href="#">network-instance</a>
<b>Reference</b>	<a href="#">network-instance name string string</a>
<b>Configurable</b>	True

### **next-hop (*ipv4-address* | *ipv6-address*)**

<b>Description</b>	Specifies the active IP next hop used to reach the associated collector
<b>Context</b>	<a href="#">system sflow collector collector-id number next-hop (<i>ipv4-address</i>   <i>ipv6-address</i>)</a>
<b>Tree</b>	<a href="#">next-hop</a>
<b>Configurable</b>	False

**port number**

<b>Description</b>	Specifies the destination UDP port number to be used in sFlow packets
<b>Context</b>	<a href="#">system sflow collector collector-id number port number</a>
<b>Tree</b>	<a href="#">port</a>
<b>Default</b>	6343
<b>Configurable</b>	True

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

<b>Description</b>	Specifies the IP address to be used as the source address in sFlow packets
<b>Context</b>	<a href="#">system sflow collector collector-id number source-address (ipv4-address   ipv6-address)</a>
<b>Tree</b>	<a href="#">source-address</a>
<b>Configurable</b>	True

**sample-rate number**

<b>Description</b>	Specify sFlow sample rate This value is the rate at which traffic will be sampled at a rate of 1:N received packets.
<b>Context</b>	<a href="#">system sflow sample-rate number</a>
<b>Tree</b>	<a href="#">sample-rate</a>
<b>Range</b>	1 to 2000000
<b>Default</b>	10000
<b>Configurable</b>	True

**sample-size number**

<b>Description</b>	Specify sFlow sample size This value specifies the number of bytes the sFlow agent samples from each frame.
<b>Context</b>	<a href="#">system sflow sample-size number</a>
<b>Tree</b>	<a href="#">sample-size</a>
<b>Range</b>	256
<b>Default</b>	256
<b>Configurable</b>	True

## statistics

<b>Description</b>	Enter the statistics context
<b>Context</b>	<a href="#">system sflow statistics</a>
<b>Tree</b>	<a href="#">statistics</a>
<b>Configurable</b>	False

## total-offered-packets *number*

<b>Description</b>	Total number of packets subject to sFlow sampling
<b>Context</b>	<a href="#">system sflow statistics total-offered-packets number</a>
<b>Tree</b>	<a href="#">total-offered-packets</a>
<b>Default</b>	0
<b>Configurable</b>	False

## total-samples-taken *number*

<b>Description</b>	Total number of sFlow samples taken
<b>Context</b>	<a href="#">system sflow statistics total-samples-taken number</a>
<b>Tree</b>	<a href="#">total-samples-taken</a>
<b>Default</b>	0
<b>Configurable</b>	False

## total-sent-packets *number*

<b>Description</b>	Total number of sFlow packets sent to collectors
<b>Context</b>	<a href="#">system sflow statistics total-sent-packets number</a>
<b>Tree</b>	<a href="#">total-sent-packets</a>
<b>Default</b>	0
<b>Configurable</b>	False

## snmp

<b>Description</b>	Top-level container for SNMP configuration and state
<b>Context</b>	<a href="#">system snmp</a>
<b>Tree</b>	<a href="#">snmp</a>

**Configurable** True

### **community *string***

**Description** Enter the community context  
**Context** [system snmp community string](#)  
**Tree** [community](#)  
**String Length** 1 to 255  
**Configurable** True

### **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

### **name *reference***

**Description** Reference to a configured network-instance  
**Context** [system snmp network-instance name reference](#)  
**Reference** [network-instance name string string](#)  
**Configurable** True

### **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](#)  
**Options**

- enable
- disable

**Configurable** True

### **oper-state *keyword***

**Description** Details the operational state of the SNMP server

<b>Context</b>	<a href="#">system snmp network-instance name</a> <i>reference</i> <a href="#">oper-state</a> <i>keyword</i>
<b>Tree</b>	<a href="#">oper-state</a>
<b>Options</b>	<ul style="list-style-type: none"> <li>• up Component or process is operational</li> <li>• down Component or process is not operational</li> <li>• empty Component slot is empty</li> <li>• downloading Component is downloading image into memory</li> <li>• booting Component is booting downloaded image</li> <li>• starting Component image operational, application processes starting</li> <li>• failed Component or process has failed</li> <li>• synchronizing Component is currently being synchronized</li> <li>• upgrading Component is currently being upgraded</li> <li>• low-power Component is offline due to insufficient system power</li> <li>• degraded Component or process is in a degraded state</li> <li>• warm-reboot Component or process is currently warm rebooting 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.</li> </ul>
<b>Configurable</b>	False

### **source-address (*ipv4-address* | *ipv6-address*)**

<b>Description</b>	List of IP addresses for the SNMP server to listen on within the network-instance
<b>Context</b>	<a href="#">system snmp network-instance name</a> <i>reference</i> <a href="#">source-address</a> ( <i>ipv4-address</i>   <i>ipv6-address</i> )

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<b>Tree</b>	<a href="#">source-address</a>
<b>Default</b>	::
<b>Configurable</b>	True

## ssh-server

<b>Description</b>	Top-level container for SSH server configuration and state
<b>Context</b>	<a href="#">system ssh-server</a>
<b>Tree</b>	<a href="#">ssh-server</a>
<b>Configurable</b>	True

## network-instance [name reference](#)

<b>Description</b>	List of network-instances to run an SSH server in
<b>Context</b>	<a href="#">system ssh-server network-instance name reference</a>
<b>Tree</b>	<a href="#">network-instance</a>
<b>Configurable</b>	True

## name [reference](#)

<b>Description</b>	Reference to a configured network-instance
<b>Context</b>	<a href="#">system ssh-server network-instance name reference</a>
<b>Reference</b>	<a href="#">network-instance name string string</a>
<b>Configurable</b>	True

## admin-state [keyword](#)

<b>Description</b>	Enables the SSH server in this network-instance
<b>Context</b>	<a href="#">system ssh-server network-instance name reference admin-state keyword</a>
<b>Tree</b>	<a href="#">admin-state</a>
<b>Options</b>	<ul style="list-style-type: none"> <li>• enable</li> <li>• disable</li> </ul>
<b>Configurable</b>	True

**oper-state keyword**

<b>Description</b>	Details the operational state of the SSH server
<b>Context</b>	<a href="#">system ssh-server network-instance name</a> <i>reference</i> <a href="#">oper-state</a> <i>keyword</i>
<b>Tree</b>	<a href="#">oper-state</a>
<b>Options</b>	<ul style="list-style-type: none"> <li>• up Component or process is operational</li> <li>• down Component or process is not operational</li> <li>• empty Component slot is empty</li> <li>• downloading Component is downloading image into memory</li> <li>• booting Component is booting downloaded image</li> <li>• starting Component image operational, application processes starting</li> <li>• failed Component or process has failed</li> <li>• synchronizing Component is currently being synchronized</li> <li>• upgrading Component is currently being upgraded</li> <li>• low-power Component is offline due to insufficient system power</li> <li>• degraded Component or process is in a degraded state</li> <li>• warm-reboot Component or process is currently warm rebooting 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.</li> </ul>
<b>Configurable</b>	False

**protocol-version number**

<b>Description</b>	Protocol version in use by the SSH server
--------------------	---

<b>Context</b>	<a href="#">system ssh-server network-instance name</a> <i>reference</i> <a href="#">protocol-version number</a>
<b>Tree</b>	<a href="#">protocol-version</a>
<b>Configurable</b>	False

**rate-limit *number***

<b>Description</b>	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
<b>Context</b>	<a href="#">system ssh-server network-instance name</a> <i>reference</i> <a href="#">rate-limit number</a>
<b>Tree</b>	<a href="#">rate-limit</a>
<b>Default</b>	20
<b>Configurable</b>	True

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

<b>Description</b>	List of IP addresses for the SSH server to listen on within the network-instance
<b>Context</b>	<a href="#">system ssh-server network-instance name</a> <i>reference</i> <a href="#">source-address (<i>ipv4-address</i>   <i>ipv6-address</i>)</a>
<b>Tree</b>	<a href="#">source-address</a>
<b>Configurable</b>	True

**timeout *number***

<b>Description</b>	Set the idle timeout in seconds on SSH connections
<b>Context</b>	<a href="#">system ssh-server network-instance name</a> <i>reference</i> <a href="#">timeout number</a>
<b>Tree</b>	<a href="#">timeout</a>
<b>Default</b>	0
<b>Units</b>	seconds
<b>Configurable</b>	True

**tls**

<b>Description</b>	Top-level container for TLS configuration and state
<b>Context</b>	<a href="#">system tls</a>
<b>Tree</b>	<a href="#">tls</a>



**Configurable** True

### **server-profile** *name string*

**Description** List of configured TLS server profiles  
**Context** [system tls server-profile name string](#)  
**Tree** [server-profile](#)  
**Configurable** True

### **name** *string*

**Description** Name of the TLS server-profile  
**Context** [system tls server-profile name string](#)  
**String Length** 1 to 255  
**Configurable** True

### **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 string authenticate-client boolean](#)  
**Tree** [authenticate-client](#)  
**Default** false  
**Configurable** True

### **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 string certificate string](#)  
**Tree** [certificate](#)  
**Configurable** True

### **cipher-list** *identityref*

**Description** List of ciphers to use when negotiating TLS with clients

---

<b>Context</b>	<a href="#">system</a> <a href="#">tls</a> <a href="#">server-profile</a> <a href="#">name</a> <i>string</i> <a href="#">cipher-list</a> <a href="#">identityref</a>
<b>Tree</b>	<a href="#">cipher-list</a>
<b>Options</b>	<ul style="list-style-type: none"> <li>• <a href="#">ecdhe-rsa-aes256-gcm-sha384</a></li> <li>• <a href="#">ecdhe-ecdsa-aes256-gcm-sha384</a></li> <li>• <a href="#">ecdhe-rsa-aes256-sha384</a></li> <li>• <a href="#">ecdhe-ecdsa-aes256-sha384</a></li> <li>• <a href="#">ecdhe-rsa-aes256-sha</a></li> <li>• <a href="#">ecdhe-ecdsa-aes256-sha</a></li> <li>• <a href="#">dh-dss-aes256-gcm-sha384</a></li> <li>• <a href="#">dhe-dss-aes256-gcm-sha384</a></li> <li>• <a href="#">dh-rsa-aes256-gcm-sha384</a></li> <li>• <a href="#">dhe-rsa-aes256-gcm-sha384</a></li> <li>• <a href="#">dhe-rsa-aes256-sha256</a></li> <li>• <a href="#">dhe-dss-aes256-sha256</a></li> <li>• <a href="#">dh-rsa-aes256-sha256</a></li> <li>• <a href="#">dh-dss-aes256-sha256</a></li> <li>• <a href="#">dhe-rsa-aes256-sha</a></li> <li>• <a href="#">dhe-dss-aes256-sha</a></li> <li>• <a href="#">dh-rsa-aes256-sha</a></li> <li>• <a href="#">dh-dss-aes256-sha</a></li> <li>• <a href="#">dhe-rsa-camellia256-sha</a></li> <li>• <a href="#">dhe-dss-camellia256-sha</a></li> <li>• <a href="#">dh-rsa-camellia256-sha</a></li> <li>• <a href="#">dh-dss-camellia256-sha</a></li> <li>• <a href="#">ecdh-rsa-aes256-gcm-sha384</a></li> <li>• <a href="#">ecdh-ecdsa-aes256-gcm-sha384</a></li> <li>• <a href="#">ecdh-rsa-aes256-sha384</a></li> <li>• <a href="#">ecdh-ecdsa-aes256-sha384</a></li> <li>• <a href="#">ecdh-rsa-aes256-sha</a></li> <li>• <a href="#">ecdh-ecdsa-aes256-sha</a></li> <li>• <a href="#">aes256-gcm-sha384</a></li> <li>• <a href="#">aes256-sha256</a></li> <li>• <a href="#">aes256-sha</a></li> <li>• <a href="#">camellia256-sha</a></li> <li>• <a href="#">psk-aes256-cbc-sha</a></li> <li>• <a href="#">ecdhe-rsa-aes128-gcm-sha256</a></li> <li>• <a href="#">ecdhe-ecdsa-aes128-gcm-sha256</a></li> </ul>

- 
- ecdhe-rsa-aes128-sha256
  - ecdhe-ecdsa-aes128-sha256
  - ecdhe-rsa-aes128-sha
  - ecdhe-ecdsa-aes128-sha
  - dh-dss-aes128-gcm-sha256
  - dhe-dss-aes128-gcm-sha256
  - dh-rsa-aes128-gcm-sha256
  - dhe-rsa-aes128-gcm-sha256
  - dhe-rsa-aes128-sha256
  - dhe-dss-aes128-sha256
  - dh-rsa-aes128-sha256
  - dh-dss-aes128-sha256
  - dhe-rsa-aes128-sha
  - dhe-dss-aes128-sha
  - dh-rsa-aes128-sha
  - dh-dss-aes128-sha
  - dhe-rsa-seed-sha
  - dhe-dss-seed-sha
  - dh-rsa-seed-sha
  - dh-dss-seed-sha
  - dhe-rsa-camellia128-sha
  - dhe-dss-camellia128-sha
  - dh-rsa-camellia128-sha
  - dh-dss-camellia128-sha
  - ecdh-rsa-aes128-gcm-sha256
  - ecdh-ecdsa-aes128-gcm-sha256
  - ecdh-rsa-aes128-sha256
  - ecdh-ecdsa-aes128-sha256
  - ecdh-rsa-aes128-sha
  - ecdh-ecdsa-aes128-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
- dh-rsa-des-cbc3-sha
- dh-dss-des-cbc3-sha
- ecdh-rsa-des-cbc3-sha
- ecdh-ecdsa-des-cbc3-sha
- des-cbc3-sha
- idea-cbc-sha
- psk-3des-ede-cbc-sha
- krb5-idea-cbc-sha
- krb5-des-cbc3-sha
- krb5-idea-cbc-md5
- krb5-des-cbc3-md5
- ecdhe-rsa-rc4-sha
- ecdhe-ecdsa-rc4-sha
- ecdh-rsa-rc4-sha
- ecdh-ecdsa-rc4-sha
- rc4-sha
- rc4-md5
- psk-rc4-sha
- krb5-rc4-sha
- krb5-rc4-md5

**Configurable** True

### **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* *key string*

**Tree** [key](#)

**Configurable** True

**trust-anchor *string***

<b>Description</b>	Base64 encoded certificate to use as a trust anchor This includes the '-----BEGIN CERTIFICATE-----' and '-----END CERTIFICATE-----' header and footer
<b>Context</b>	<a href="#">system tls server-profile name</a> <i>string</i> <a href="#">trust-anchor</a> <i>string</i>
<b>Tree</b>	<a href="#">trust-anchor</a>
<b>Configurable</b>	True

**trace-options *keyword***

<b>Description</b>	Management server trace options
<b>Context</b>	<a href="#">system trace-options</a> <i>keyword</i>
<b>Tree</b>	<a href="#">trace-options</a>
<b>Options</b>	<ul style="list-style-type: none"> <li>• request</li> <li>• response</li> <li>• common</li> </ul>
<b>Configurable</b>	True

**warm-reboot****Note:**

This command is available for the following platforms:

- 7220 IXR-D2
- 7220 IXR-D3
- 7220 IXR-D3L
- 7220 IXR-D2L

<b>Description</b>	Top-level container for warm reboot options
<b>Context</b>	<a href="#">system warm-reboot</a>
<b>Tree</b>	<a href="#">warm-reboot</a>
<b>Configurable</b>	True

## bgp-max-wait *number*

**Note:**

This command is available for the following platforms:

- 7220 IXR-D2
- 7220 IXR-D3
- 7220 IXR-D3L
- 7220 IXR-D2L

**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 warm reboot (in all network instances).

After this time elapses BGP declares that convergence has occurred and sends its own EOR markers to its peers.

**Context**

[system warm-reboot bgp-max-wait \*number\*](#)

**Tree**

[bgp-max-wait](#)

**Range**

0 to 3600

**Default**

600

**Units**

seconds

**Configurable**

True

## 11 tools acl

```

acl
+ cpm-filter
+ ipv4-filter
  + clear
  + entry sequence-id number
    + statistics
    + clear
+ ipv6-filter
  + clear
  + entry sequence-id number
    + statistics
    + clear
+ ipv4-filter name string
  + entry sequence-id number
  + statistics
  + clear
  + per-interface
    + subinterface name string
    + clear
  + statistics
  + clear
+ ipv6-filter name string
  + entry sequence-id number
  + statistics
  + clear
  + per-interface
    + subinterface name string
    + clear
  + statistics
  + clear
+ policers
  + policer name string
  + statistics
  + clear
  + system-cpu-policer name string
  + statistics
  + clear
+ system-filter
  + ipv4-filter
  + clear
  + entry sequence-id number
  + statistics
  + clear
  + ipv6-filter
  + clear
  + entry sequence-id number
  + statistics
  + clear

```

### 11.1 acl Descriptions

**acl**

<b>Description</b>	Top level enclosing container for ACL operational tools
<b>Context</b>	<a href="#">acl</a>
<b>Tree</b>	<a href="#">acl</a>
<b>Configurable</b>	True

**cpm-filter**

<b>Description</b>	List of CPM filters
<b>Context</b>	<a href="#">acl cpm-filter</a>
<b>Tree</b>	<a href="#">cpm-filter</a>
<b>Configurable</b>	True

**ipv4-filter**

<b>Description</b>	List of CPM IPv4 filter rules
<b>Context</b>	<a href="#">acl cpm-filter ipv4-filter</a>
<b>Tree</b>	<a href="#">ipv4-filter</a>
<b>Configurable</b>	True

**clear**

<b>Description</b>	Reset all statistics of all entries of the filter to zero
<b>Context</b>	<a href="#">acl cpm-filter ipv4-filter clear</a>
<b>Tree</b>	<a href="#">clear</a>
<b>Configurable</b>	True

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

<b>Description</b>	List of filter rules.
<b>Context</b>	<a href="#">acl cpm-filter ipv4-filter entry <a href="#">sequence-id</a> <i>number</i></a>
<b>Tree</b>	<a href="#">entry</a>
<b>Configurable</b>	True



**sequence-id *number***

<b>Description</b>	A number to indicate the relative evaluation order of the different entries; lower numbered entries are evaluated before higher numbered entries
<b>Context</b>	<a href="#">acl cpm-filter ipv4-filter entry sequence-id <i>number</i></a>
<b>Configurable</b>	True

**statistics**

<b>Description</b>	Enter the statistics context
<b>Context</b>	<a href="#">acl cpm-filter ipv4-filter entry sequence-id <i>number</i> statistics</a>
<b>Tree</b>	<a href="#">statistics</a>
<b>Configurable</b>	True

**clear**

<b>Description</b>	Reset all statistics associated with this particular entry to zero
<b>Context</b>	<a href="#">acl cpm-filter ipv4-filter entry sequence-id <i>number</i> statistics clear</a>
<b>Tree</b>	<a href="#">clear</a>
<b>Configurable</b>	True

**ipv6-filter**

<b>Description</b>	List of CPM IPv6 filter rules
<b>Context</b>	<a href="#">acl cpm-filter ipv6-filter</a>
<b>Tree</b>	<a href="#">ipv6-filter</a>
<b>Configurable</b>	True

**clear**

<b>Description</b>	Reset all statistics of all entries of the filter to zero
<b>Context</b>	<a href="#">acl cpm-filter ipv6-filter clear</a>
<b>Tree</b>	<a href="#">clear</a>
<b>Configurable</b>	True

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

<b>Description</b>	List of filter rules.
<b>Context</b>	<a href="#">acl cpm-filter ipv6-filter entry sequence-id number</a>
<b>Tree</b>	<a href="#">entry</a>
<b>Configurable</b>	True

**sequence-id *number***

<b>Description</b>	A number to indicate the relative evaluation order of the different entries; lower numbered entries are evaluated before higher numbered entries
<b>Context</b>	<a href="#">acl cpm-filter ipv6-filter entry sequence-id number</a>
<b>Configurable</b>	True

**statistics**

<b>Description</b>	Enter the statistics context
<b>Context</b>	<a href="#">acl cpm-filter ipv6-filter entry sequence-id number statistics</a>
<b>Tree</b>	<a href="#">statistics</a>
<b>Configurable</b>	True

**clear**

<b>Description</b>	Reset all statistics associated with this particular entry to zero
<b>Context</b>	<a href="#">acl cpm-filter ipv6-filter entry sequence-id number statistics clear</a>
<b>Tree</b>	<a href="#">clear</a>
<b>Configurable</b>	True

**ipv4-filter [name](#) *string***

<b>Description</b>	List of IPv4 filter policies
<b>Context</b>	<a href="#">acl ipv4-filter name string</a>
<b>Tree</b>	<a href="#">ipv4-filter</a>
<b>Configurable</b>	True

**name *string***

<b>Description</b>	Name of the IPv4 filter policy.
<b>Context</b>	<a href="#">acl ipv4-filter name</a> <i>string</i>
<b>String Length</b>	1 to 255
<b>Configurable</b>	True

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

<b>Description</b>	List of filter rules.
<b>Context</b>	<a href="#">acl ipv4-filter name</a> <i>string</i> <a href="#">entry sequence-id</a> <i>number</i>
<b>Tree</b>	<a href="#">entry</a>
<b>Configurable</b>	True

**sequence-id *number***

<b>Description</b>	A number to indicate the relative evaluation order of the different entries; lower numbered entries are evaluated before higher numbered entries
<b>Context</b>	<a href="#">acl ipv4-filter name</a> <i>string</i> <a href="#">entry sequence-id</a> <i>number</i>
<b>Configurable</b>	True

**statistics**

<b>Description</b>	Enter the statistics context
<b>Context</b>	<a href="#">acl ipv4-filter name</a> <i>string</i> <a href="#">entry sequence-id</a> <i>number</i> <a href="#">statistics</a>
<b>Tree</b>	<a href="#">statistics</a>
<b>Configurable</b>	True

**clear**

<b>Description</b>	Reset all aggregate and per-interface statistics associated with this particular entry to zero
<b>Context</b>	<a href="#">acl ipv4-filter name</a> <i>string</i> <a href="#">entry sequence-id</a> <i>number</i> <a href="#">statistics clear</a>
<b>Tree</b>	<a href="#">clear</a>
<b>Configurable</b>	True

**per-interface**

<b>Description</b>	Container for per-subinterface per-entry statistics
<b>Context</b>	<a href="#">acl ipv4-filter name</a> <i>string</i> <a href="#">entry sequence-id</a> <i>number</i> <a href="#">statistics per-interface</a>
<b>Tree</b>	<a href="#">per-interface</a>
<b>Configurable</b>	True

**subinterface** *name string*

<b>Description</b>	List of subinterfaces where the ACL is applied to either input or output traffic
<b>Context</b>	<a href="#">acl ipv4-filter name</a> <i>string</i> <a href="#">entry sequence-id</a> <i>number</i> <a href="#">statistics per-interface</a> <a href="#">subinterface name</a> <i>string</i>
<b>Tree</b>	<a href="#">subinterface</a>
<b>Configurable</b>	True

**name** *string*

<b>Description</b>	Enter the name context
<b>Context</b>	<a href="#">acl ipv4-filter name</a> <i>string</i> <a href="#">entry sequence-id</a> <i>number</i> <a href="#">statistics per-interface</a> <a href="#">subinterface name</a> <i>string</i>
<b>String Length</b>	5 to 25
<b>Configurable</b>	True

**clear**

<b>Description</b>	Reset the per-interface statistics associated with this particular entry and this particular subinterface to zero
<b>Context</b>	<a href="#">acl ipv4-filter name</a> <i>string</i> <a href="#">entry sequence-id</a> <i>number</i> <a href="#">statistics per-interface</a> <a href="#">subinterface name</a> <i>string</i> <a href="#">clear</a>
<b>Tree</b>	<a href="#">clear</a>
<b>Configurable</b>	True

**statistics**

<b>Description</b>	Enter the statistics context
<b>Context</b>	<a href="#">acl ipv4-filter name</a> <i>string</i> <a href="#">statistics</a>
<b>Tree</b>	<a href="#">statistics</a>
<b>Configurable</b>	True

**clear**

<b>Description</b>	Reset all statistics of all entries of the filter to zero
<b>Context</b>	<a href="#">acl ipv4-filter name</a> <i>string</i> <a href="#">statistics clear</a>
<b>Tree</b>	<a href="#">clear</a>
<b>Configurable</b>	True

**ipv6-filter name *string***

<b>Description</b>	List of IPv6 filter policies
<b>Context</b>	<a href="#">acl ipv6-filter name</a> <i>string</i>
<b>Tree</b>	<a href="#">ipv6-filter</a>
<b>Configurable</b>	True

**name *string***

<b>Description</b>	Name of the IPv6 filter policy.
<b>Context</b>	<a href="#">acl ipv6-filter name</a> <i>string</i>
<b>String Length</b>	1 to 255
<b>Configurable</b>	True

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

<b>Description</b>	List of filter rules.
<b>Context</b>	<a href="#">acl ipv6-filter name</a> <i>string</i> <a href="#">entry sequence-id</a> <i>number</i>
<b>Tree</b>	<a href="#">entry</a>
<b>Configurable</b>	True

**sequence-id *number***

<b>Description</b>	A number to indicate the relative evaluation order of the different entries; lower numbered entries are evaluated before higher numbered entries
<b>Context</b>	<a href="#">acl ipv6-filter name</a> <i>string</i> <a href="#">entry sequence-id</a> <i>number</i>
<b>Configurable</b>	True

**statistics**

<b>Description</b>	Enter the statistics context
<b>Context</b>	<a href="#">acl ipv6-filter name</a> <i>string</i> <a href="#">entry</a> <a href="#">sequence-id</a> <i>number</i> <a href="#">statistics</a>
<b>Tree</b>	<a href="#">statistics</a>
<b>Configurable</b>	True

**clear**

<b>Description</b>	Reset all aggregate and per-interface statistics associated with this particular entry to zero
<b>Context</b>	<a href="#">acl ipv6-filter name</a> <i>string</i> <a href="#">entry</a> <a href="#">sequence-id</a> <i>number</i> <a href="#">statistics</a> <a href="#">clear</a>
<b>Tree</b>	<a href="#">clear</a>
<b>Configurable</b>	True

**per-interface**

<b>Description</b>	Container for per-subinterface per-entry statistics
<b>Context</b>	<a href="#">acl ipv6-filter name</a> <i>string</i> <a href="#">entry</a> <a href="#">sequence-id</a> <i>number</i> <a href="#">statistics</a> <a href="#">per-interface</a>
<b>Tree</b>	<a href="#">per-interface</a>
<b>Configurable</b>	True

**subinterface [name](#) *string***

<b>Description</b>	List of subinterfaces where the ACL is applied to either input or output traffic
<b>Context</b>	<a href="#">acl ipv6-filter name</a> <i>string</i> <a href="#">entry</a> <a href="#">sequence-id</a> <i>number</i> <a href="#">statistics</a> <a href="#">per-interface</a> <a href="#">subinterface name</a> <i>string</i>
<b>Tree</b>	<a href="#">subinterface</a>
<b>Configurable</b>	True

**name *string***

<b>Description</b>	Enter the name context
<b>Context</b>	<a href="#">acl ipv6-filter name</a> <i>string</i> <a href="#">entry</a> <a href="#">sequence-id</a> <i>number</i> <a href="#">statistics</a> <a href="#">per-interface</a> <a href="#">subinterface name</a> <i>string</i>
<b>String Length</b>	5 to 25
<b>Configurable</b>	True

**clear**

<b>Description</b>	Reset the per-interface statistics associated with this particular entry and this particular subinterface to zero
<b>Context</b>	<a href="#">acl ipv6-filter name</a> <i>string</i> <a href="#">entry sequence-id</a> <i>number</i> <a href="#">statistics per-interface subinterface name</a> <i>string</i> <a href="#">clear</a>
<b>Tree</b>	<a href="#">clear</a>
<b>Configurable</b>	True

**statistics**

<b>Description</b>	Enter the statistics context
<b>Context</b>	<a href="#">acl ipv6-filter name</a> <i>string</i> <a href="#">statistics</a>
<b>Tree</b>	<a href="#">statistics</a>
<b>Configurable</b>	True

**clear**

<b>Description</b>	Reset all statistics of all entries of the filter to zero
<b>Context</b>	<a href="#">acl ipv6-filter name</a> <i>string</i> <a href="#">statistics clear</a>
<b>Tree</b>	<a href="#">clear</a>
<b>Configurable</b>	True

**policers**

<b>Description</b>	List of policers used by ACL entries
<b>Context</b>	<a href="#">acl policers</a>
<b>Tree</b>	<a href="#">policers</a>
<b>Configurable</b>	True

**policer** [name](#) *string*

<b>Description</b>	List of hardware policers
<b>Context</b>	<a href="#">acl policers</a> <a href="#">policer name</a> <i>string</i>
<b>Tree</b>	<a href="#">policer</a>
<b>Configurable</b>	True

**name *string***

<b>Description</b>	Name of the hardware policer
<b>Context</b>	<a href="#">acl policers policer name <i>string</i></a>
<b>String Length</b>	1 to 255
<b>Configurable</b>	True

**statistics**

<b>Description</b>	Enter the statistics context
<b>Context</b>	<a href="#">acl policers policer name <i>string</i> statistics</a>
<b>Tree</b>	<a href="#">statistics</a>
<b>Configurable</b>	True

**clear**

<b>Description</b>	Reset all statistics associated with this particular policer to zero
<b>Context</b>	<a href="#">acl policers policer name <i>string</i> statistics clear</a>
<b>Tree</b>	<a href="#">clear</a>
<b>Configurable</b>	True

**system-cpu-policer [name \*string\*](#)**

<b>Description</b>	List of system CPU policers
<b>Context</b>	<a href="#">acl policers system-cpu-policer name <i>string</i></a>
<b>Tree</b>	<a href="#">system-cpu-policer</a>
<b>Configurable</b>	True

**name *string***

<b>Description</b>	Name of the system cpu policer
<b>Context</b>	<a href="#">acl policers system-cpu-policer name <i>string</i></a>
<b>String Length</b>	1 to 255
<b>Configurable</b>	True



## statistics

<b>Description</b>	Enter the statistics context
<b>Context</b>	<a href="#">acl policers system-cpu-policer name</a> <i>string</i> <a href="#">statistics</a>
<b>Tree</b>	<a href="#">statistics</a>
<b>Configurable</b>	True

## clear

<b>Description</b>	Reset all statistics associated with this particular policer to zero
<b>Context</b>	<a href="#">acl policers system-cpu-policer name</a> <i>string</i> <a href="#">statistics clear</a>
<b>Tree</b>	<a href="#">clear</a>
<b>Configurable</b>	True

## system-filter

<b>Description</b>	List of System filters
<b>Context</b>	<a href="#">acl system-filter</a>
<b>Tree</b>	<a href="#">system-filter</a>
<b>Configurable</b>	True

## ipv4-filter

<b>Description</b>	List of System IPv4 filter rules
<b>Context</b>	<a href="#">acl system-filter ipv4-filter</a>
<b>Tree</b>	<a href="#">ipv4-filter</a>
<b>Configurable</b>	True

## clear

<b>Description</b>	Reset all statistics of all entries of the filter to zero
<b>Context</b>	<a href="#">acl system-filter ipv4-filter clear</a>
<b>Tree</b>	<a href="#">clear</a>
<b>Configurable</b>	True

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

<b>Description</b>	List of filter rules.
<b>Context</b>	<a href="#">acl system-filter ipv4-filter entry sequence-id number</a>
<b>Tree</b>	<a href="#">entry</a>
<b>Configurable</b>	True

**sequence-id *number***

<b>Description</b>	A number to indicate the relative evaluation order of the different entries; lower numbered entries are evaluated before higher numbered entries
<b>Context</b>	<a href="#">acl system-filter ipv4-filter entry sequence-id number</a>
<b>Configurable</b>	True

**statistics**

<b>Description</b>	Enter the statistics context
<b>Context</b>	<a href="#">acl system-filter ipv4-filter entry sequence-id number statistics</a>
<b>Tree</b>	<a href="#">statistics</a>
<b>Configurable</b>	True

**clear**

<b>Description</b>	Reset all statistics associated with this particular entry to zero
<b>Context</b>	<a href="#">acl system-filter ipv4-filter entry sequence-id number statistics clear</a>
<b>Tree</b>	<a href="#">clear</a>
<b>Configurable</b>	True

**ipv6-filter**

<b>Description</b>	List of System IPv6 filter rules
<b>Context</b>	<a href="#">acl system-filter ipv6-filter</a>
<b>Tree</b>	<a href="#">ipv6-filter</a>
<b>Configurable</b>	True

**clear**

<b>Description</b>	Reset all statistics of all entries of the filter to zero
<b>Context</b>	<a href="#">acl system-filter ipv6-filter clear</a>
<b>Tree</b>	<a href="#">clear</a>
<b>Configurable</b>	True

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

<b>Description</b>	List of filter rules.
<b>Context</b>	<a href="#">acl system-filter ipv6-filter entry sequence-id number</a>
<b>Tree</b>	<a href="#">entry</a>
<b>Configurable</b>	True

**sequence-id *number***

<b>Description</b>	A number to indicate the relative evaluation order of the different entries; lower numbered entries are evaluated before higher numbered entries
<b>Context</b>	<a href="#">acl system-filter ipv6-filter entry sequence-id number</a>
<b>Configurable</b>	True

**statistics**

<b>Description</b>	Enter the statistics context
<b>Context</b>	<a href="#">acl system-filter ipv6-filter entry sequence-id number statistics</a>
<b>Tree</b>	<a href="#">statistics</a>
<b>Configurable</b>	True

**clear**

<b>Description</b>	Reset all statistics associated with this particular entry to zero
<b>Context</b>	<a href="#">acl system-filter ipv6-filter entry sequence-id number statistics clear</a>
<b>Tree</b>	<a href="#">clear</a>
<b>Configurable</b>	True

## 12 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

```

### 12.1 bfd Descriptions

#### bfd

<b>Description</b>	Top-level grouping for bfd operational commands
<b>Context</b>	<a href="#">bfd</a>
<b>Tree</b>	<a href="#">bfd</a>
<b>Configurable</b>	True

#### micro-bfd-sessions



**Note:**

This command is available for the following platforms:

- 7220 IXR-D2
- 7250 IXR-10
- 7220 IXR-D3L
- 7220 IXR-D2L
- 7220 IXR-H3
- 7220 IXR-H2
- 7220 IXR-D3
- 7250 IXR-6
- 7220 IXR-D1

<b>Description</b>	Enter the micro-bfd-sessions context
<b>Context</b>	<a href="#">bfd micro-bfd-sessions</a>
<b>Tree</b>	<a href="#">micro-bfd-sessions</a>
<b>Configurable</b>	True

### lag-interface [name](#) *string*



**Note:**

This command is available for the following platforms:

- 7220 IXR-D2
- 7250 IXR-10
- 7220 IXR-D3L
- 7220 IXR-D2L
- 7220 IXR-H3
- 7220 IXR-H2
- 7220 IXR-D3
- 7250 IXR-6
- 7220 IXR-D1

<b>Description</b>	Lag interface against which the clear command is to be executed
<b>Context</b>	<a href="#">bfd micro-bfd-sessions lag-interface name</a> <i>string</i>
<b>Tree</b>	<a href="#">lag-interface</a>
<b>Configurable</b>	True

**name *string*****Note:**

This command is available for the following platforms:

- 7220 IXR-D2
- 7250 IXR-10
- 7220 IXR-D3L
- 7220 IXR-D2L
- 7220 IXR-H3
- 7220 IXR-H2
- 7220 IXR-D3
- 7250 IXR-6
- 7220 IXR-D1

<b>Description</b>	Reference ID for associated lag interface Example: lag1 (Reference Interface lag1).
<b>Context</b>	<a href="#">bfd micro-bfd-sessions lag-interface name <i>string</i></a>
<b>String Length</b>	3 to 20
<b>Configurable</b>	True

**member-interface *name string*****Note:**

This command is available for the following platforms:

- 7220 IXR-D2
- 7250 IXR-10
- 7220 IXR-D3L
- 7220 IXR-D2L
- 7220 IXR-H3
- 7220 IXR-H2
- 7220 IXR-D3
- 7250 IXR-6
- 7220 IXR-D1

<b>Description</b>	List of member-interfaces to be cleared
<b>Context</b>	<a href="#">bfd micro-bfd-sessions lag-interface name <i>string</i> member-interface name <i>string</i></a>
<b>Tree</b>	<a href="#">member-interface</a>

**Configurable** True

## name *string*



### Note:

This command is available for the following platforms:

- 7220 IXR-D2
- 7250 IXR-10
- 7220 IXR-D3L
- 7220 IXR-D2L
- 7220 IXR-H3
- 7220 IXR-H2
- 7220 IXR-D3
- 7250 IXR-6
- 7220 IXR-D1

**Description** Reference ID for associated ethernet 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

## clear



### Note:

This command is available for the following platforms:

- 7220 IXR-D2
- 7250 IXR-10
- 7220 IXR-D3L
- 7220 IXR-D2L
- 7220 IXR-H3
- 7220 IXR-H2
- 7220 IXR-D3
- 7250 IXR-6
- 7220 IXR-D1

**Description** Clear the associated micro-BFD sessions

Clearing a micro-BFD sessions causes the associated sessions to transition to a Down state

<b>Context</b>	<a href="#">bfd micro-bfd-sessions lag-interface name</a> <i>string</i> <a href="#">member-interface name</a> <i>string</i> <a href="#">clear</a>
<b>Tree</b>	<a href="#">clear</a>
<b>Configurable</b>	True

## statistics



### Note:

This command is available for the following platforms:

- 7220 IXR-D2
- 7250 IXR-10
- 7220 IXR-D3L
- 7220 IXR-D2L
- 7220 IXR-H3
- 7220 IXR-H2
- 7220 IXR-D3
- 7250 IXR-6
- 7220 IXR-D1

<b>Description</b>	Enter the statistics context
<b>Context</b>	<a href="#">bfd micro-bfd-sessions statistics</a>
<b>Tree</b>	<a href="#">statistics</a>
<b>Configurable</b>	True



**lag-interface** *name string***Note:**

This command is available for the following platforms:

- 7220 IXR-D2
- 7250 IXR-10
- 7220 IXR-D3L
- 7220 IXR-D2L
- 7220 IXR-H3
- 7220 IXR-H2
- 7220 IXR-D3
- 7250 IXR-6
- 7220 IXR-D1

<b>Description</b>	Lag interface against which the clear command is to be executed
<b>Context</b>	<a href="#">bfd micro-bfd-sessions statistics lag-interface</a> <i>name string</i>
<b>Tree</b>	<a href="#">lag-interface</a>
<b>Configurable</b>	True

**name** *string***Note:**

This command is available for the following platforms:

- 7220 IXR-D2
- 7250 IXR-10
- 7220 IXR-D3L
- 7220 IXR-D2L
- 7220 IXR-H3
- 7220 IXR-H2
- 7220 IXR-D3
- 7250 IXR-6
- 7220 IXR-D1

<b>Description</b>	Reference ID for associated lag interface Example: lag1 (Reference Interface lag1).
<b>Context</b>	<a href="#">bfd micro-bfd-sessions statistics lag-interface</a> <i>name string</i>
<b>String Length</b>	3 to 20
<b>Configurable</b>	True

**member-interface** *name string***Note:**

This command is available for the following platforms:

- 7220 IXR-D2
- 7250 IXR-10
- 7220 IXR-D3L
- 7220 IXR-D2L
- 7220 IXR-H3
- 7220 IXR-H2
- 7220 IXR-D3
- 7250 IXR-6
- 7220 IXR-D1

<b>Description</b>	List of member-interfaces to be cleared
<b>Context</b>	<a href="#">bfd micro-bfd-sessions statistics lag-interface name</a> <i>string</i> <a href="#">member-interface name</a> <i>string</i>
<b>Tree</b>	<a href="#">member-interface</a>
<b>Configurable</b>	True

**name** *string***Note:**

This command is available for the following platforms:

- 7220 IXR-D2
- 7250 IXR-10
- 7220 IXR-D3L
- 7220 IXR-D2L
- 7220 IXR-H3
- 7220 IXR-H2
- 7220 IXR-D3
- 7250 IXR-6
- 7220 IXR-D1

<b>Description</b>	Reference ID for associated ethernet interface Example: ethernet-2/1 (Reference Interface ethernet-2/1).
<b>Context</b>	<a href="#">bfd micro-bfd-sessions statistics lag-interface name</a> <i>string</i> <a href="#">member-interface name</a> <i>string</i>

<b>String Length</b>	3 to 20
<b>Configurable</b>	True

## clear



### Note:

This command is available for the following platforms:

- 7220 IXR-D2
- 7250 IXR-10
- 7220 IXR-D3L
- 7220 IXR-D2L
- 7220 IXR-H3
- 7220 IXR-H2
- 7220 IXR-D3
- 7250 IXR-6
- 7220 IXR-D1

<b>Description</b>	Clear the BFD statistics associated with the micro-BFD sessions
<b>Context</b>	<a href="#">bfd micro-bfd-sessions statistics lag-interface name</a> <i>string</i> <a href="#">member-interface name</a> <i>string</i> <b>clear</b>
<b>Tree</b>	<a href="#">clear</a>
<b>Configurable</b>	True

## [peer local-discriminator](#) *number*

<b>Description</b>	The list of local-discriminators associated with BFD
<b>Context</b>	<a href="#">bfd peer local-discriminator</a> <i>number</i>
<b>Tree</b>	<a href="#">peer</a>
<b>Configurable</b>	True

## **local-discriminator** *number*

<b>Description</b>	BFD session local discriminator
<b>Context</b>	<a href="#">bfd peer local-discriminator</a> <i>number</i>
<b>Configurable</b>	True

**clear**

<b>Description</b>	Clear the associated BFD sessions Clearing a BFD sessions causes the associated BFD sessions of transition to a Down state
<b>Context</b>	<a href="#">bfd peer local-discriminator</a> <i>number</i> <b>clear</b>
<b>Tree</b>	<a href="#">clear</a>
<b>Configurable</b>	True

**statistics**

<b>Description</b>	Enter the statistics context
<b>Context</b>	<a href="#">bfd statistics</a>
<b>Tree</b>	<a href="#">statistics</a>
<b>Configurable</b>	True

**peer [local-discriminator](#) *number***

<b>Description</b>	The list of local-discriminators associated with BFD
<b>Context</b>	<a href="#">bfd statistics peer local-discriminator</a> <i>number</i>
<b>Tree</b>	<a href="#">peer</a>
<b>Configurable</b>	True

**local-discriminator *number***

<b>Description</b>	BFD session local discriminator
<b>Context</b>	<a href="#">bfd statistics peer local-discriminator</a> <i>number</i>
<b>Configurable</b>	True

**clear**

<b>Description</b>	Clear the BFD statistics associated with the BFD sessions
<b>Context</b>	<a href="#">bfd statistics peer local-discriminator</a> <i>number</i> <b>clear</b>
<b>Tree</b>	<a href="#">clear</a>
<b>Configurable</b>	True

## 13 tools interface

```
interface name string
+ ethernet
  + statistics
    + clear
      + include-members
+ resource
+ retry
+ statistics
+ clear
+ include-members
+ queue-statistics
+ clear
+ multicast-queue queue-id number
+ clear
+ unicast-queue queue-id number
+ clear
+ 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
+ arp
+ delete-dynamic
+ neighbor ipv4-address string
+ delete-dynamic
+ dhcp-relay
+ statistics
+ clear
+ ipv6
+ dhcp-relay
+ statistics
+ clear
+ neighbor-discovery
+ delete-dynamic
+ neighbor ipv6-address string
+ delete-dynamic
+ statistics
+ clear
```

### 13.1 interface Descriptions

---

**interface name string**

<b>Description</b>	The list of named interfaces on the device.
<b>Context</b>	<a href="#">interface name string</a>
<b>Tree</b>	<a href="#">interface</a>
<b>Configurable</b>	True

**name string**

<b>Description</b>	References the configured name of the interface
<b>Context</b>	<a href="#">interface name string</a>
<b>Configurable</b>	True

**ethernet**

<b>Description</b>	Enter the ethernet context
<b>Context</b>	<a href="#">interface name string ethernet</a>
<b>Tree</b>	<a href="#">ethernet</a>
<b>Configurable</b>	True

**statistics**

<b>Description</b>	Enter the statistics context
<b>Context</b>	<a href="#">interface name string ethernet statistics</a>
<b>Tree</b>	<a href="#">statistics</a>
<b>Configurable</b>	True

**clear**

<b>Description</b>	Clear interface ethernet statistics
<b>Context</b>	<a href="#">interface name string ethernet statistics clear</a>
<b>Tree</b>	<a href="#">clear</a>
<b>Configurable</b>	True

## include-members



### Note:

This command is available for the following platforms:

- 7220 IXR-D2
- 7250 IXR-10
- 7220 IXR-D3L
- 7220 IXR-D2L
- 7220 IXR-H3
- 7220 IXR-H2
- 7220 IXR-D3
- 7250 IXR-6
- 7220 IXR-D1

<b>Description</b>	Causes the member link ethernet statistics to also be cleared
<b>Context</b>	<a href="#">interface name</a> <i>string</i> <a href="#">ethernet statistics clear</a> <a href="#">include-members</a>
<b>Tree</b>	<a href="#">include-members</a>
<b>Configurable</b>	True

## resource



### Note:

This command is available for the following platforms:

- 7220 IXR-D2
- 7250 IXR-10
- 7220 IXR-D3L
- 7220 IXR-D2L
- 7220 IXR-H3
- 7220 IXR-H2
- 7220 IXR-D3
- 7250 IXR-6
- 7220 IXR-D1

<b>Description</b>	Enable the resource context
<b>Context</b>	<a href="#">interface name</a> <i>string</i> <a href="#">resource</a>
<b>Tree</b>	<a href="#">resource</a>
<b>Configurable</b>	True

## retry



### Note:

This command is available for the following platforms:

- 7220 IXR-D2
- 7250 IXR-10
- 7220 IXR-D3L
- 7220 IXR-D2L
- 7220 IXR-H3
- 7220 IXR-H2
- 7220 IXR-D3
- 7250 IXR-6
- 7220 IXR-D1

<b>Description</b>	Causes the specified lag to be reevaluate for missing system resources
<b>Context</b>	<a href="#">interface name</a> <i>string</i> <a href="#">resource</a> <a href="#">retry</a>
<b>Tree</b>	<a href="#">retry</a>
<b>Configurable</b>	True

## statistics

<b>Description</b>	Enter the statistics context
<b>Context</b>	<a href="#">interface name</a> <i>string</i> <a href="#">statistics</a>
<b>Tree</b>	<a href="#">statistics</a>
<b>Configurable</b>	True

## clear

<b>Description</b>	Clear interface statistics
<b>Context</b>	<a href="#">interface name</a> <i>string</i> <a href="#">statistics</a> <a href="#">clear</a>
<b>Tree</b>	<a href="#">clear</a>
<b>Configurable</b>	True



## include-members



### Note:

This command is available for the following platforms:

- 7220 IXR-D2
- 7250 IXR-10
- 7220 IXR-D3L
- 7220 IXR-D2L
- 7220 IXR-H3
- 7220 IXR-H2
- 7220 IXR-D3
- 7250 IXR-6
- 7220 IXR-D1

<b>Description</b>	Causes the member link statistics to also be cleared
<b>Context</b>	<a href="#">interface name</a> <i>string</i> <a href="#">statistics clear include-members</a>
<b>Tree</b>	<a href="#">include-members</a>
<b>Configurable</b>	True

## queue-statistics



### Note:

This command is available for the following platforms:

- 7220 IXR-D2
- 7250 IXR-10
- 7220 IXR-D3L
- 7220 IXR-D2L
- 7220 IXR-H3
- 7220 IXR-H2
- 7220 IXR-D3
- 7250 IXR-6

<b>Description</b>	Enter the queue-statistics context
<b>Context</b>	<a href="#">interface name</a> <i>string</i> <a href="#">statistics queue-statistics</a>
<b>Tree</b>	<a href="#">queue-statistics</a>
<b>Configurable</b>	True

## clear

**Note:**

This command is available for the following platforms:

- 7220 IXR-D2
- 7250 IXR-10
- 7220 IXR-D3L
- 7220 IXR-D2L
- 7220 IXR-H3
- 7220 IXR-H2
- 7220 IXR-D3
- 7250 IXR-6

<b>Description</b>	Enter the clear context
<b>Context</b>	<a href="#">interface name</a> <i>string</i> <a href="#">statistics queue-statistics clear</a>
<b>Tree</b>	<a href="#">clear</a>
<b>Configurable</b>	True

## multicast-queue [queue-id](#) *number*

**Note:**

This command is available for the following platforms:

- 7220 IXR-D2
- 7250 IXR-10
- 7220 IXR-D3L
- 7220 IXR-D2L
- 7220 IXR-H3
- 7220 IXR-H2
- 7220 IXR-D3
- 7250 IXR-6

<b>Description</b>	Enter the multicast-queue list instance
<b>Context</b>	<a href="#">interface name</a> <i>string</i> <a href="#">statistics queue-statistics multicast-queue queue-id</a> <i>number</i>
<b>Tree</b>	<a href="#">multicast-queue</a>
<b>Configurable</b>	True

## queue-id *number*

**Note:**

This command is available for the following platforms:

- 7220 IXR-D2
- 7250 IXR-10
- 7220 IXR-D3L
- 7220 IXR-D2L
- 7220 IXR-H3
- 7220 IXR-H2
- 7220 IXR-D3
- 7250 IXR-6

<b>Description</b>	Queue number: 0-7
<b>Context</b>	<a href="#">interface name</a> <i>string</i> <a href="#">statistics</a> <a href="#">queue-statistics</a> <a href="#">multicast-queue</a> <a href="#">queue-id number</a>
<b>Range</b>	0 to 7
<b>Configurable</b>	True

## clear

**Note:**

This command is available for the following platforms:

- 7220 IXR-D2
- 7250 IXR-10
- 7220 IXR-D3L
- 7220 IXR-D2L
- 7220 IXR-H3
- 7220 IXR-H2
- 7220 IXR-D3
- 7250 IXR-6

<b>Description</b>	Enter the clear context
<b>Context</b>	<a href="#">interface name</a> <i>string</i> <a href="#">statistics</a> <a href="#">queue-statistics</a> <a href="#">multicast-queue</a> <a href="#">queue-id number</a> <a href="#">clear</a>
<b>Tree</b>	<a href="#">clear</a>
<b>Configurable</b>	True

**unicast-queue** *queue-id number***Note:**

This command is available for the following platforms:

- 7220 IXR-D2
- 7250 IXR-10
- 7220 IXR-D3L
- 7220 IXR-D2L
- 7220 IXR-H3
- 7220 IXR-H2
- 7220 IXR-D3
- 7250 IXR-6

<b>Description</b>	Enter the unicast-queue list instance
<b>Context</b>	<a href="#">interface name</a> <i>string</i> <a href="#">statistics</a> <a href="#">queue-statistics</a> <a href="#">unicast-queue</a> <a href="#">queue-id number</a>
<b>Tree</b>	<a href="#">unicast-queue</a>
<b>Configurable</b>	True

**queue-id** *number***Note:**

This command is available for the following platforms:

- 7220 IXR-D2
- 7250 IXR-10
- 7220 IXR-D3L
- 7220 IXR-D2L
- 7220 IXR-H3
- 7220 IXR-H2
- 7220 IXR-D3
- 7250 IXR-6

<b>Description</b>	Queue number: 0-7
<b>Context</b>	<a href="#">interface name</a> <i>string</i> <a href="#">statistics</a> <a href="#">queue-statistics</a> <a href="#">unicast-queue</a> <a href="#">queue-id number</a>
<b>Range</b>	0 to 7
<b>Configurable</b>	True

## clear

**Note:**

This command is available for the following platforms:

- 7220 IXR-D2
- 7250 IXR-10
- 7220 IXR-D3L
- 7220 IXR-D2L
- 7220 IXR-H3
- 7220 IXR-H2
- 7220 IXR-D3
- 7250 IXR-6

<b>Description</b>	Enter the clear context
<b>Context</b>	<a href="#">interface name</a> <i>string</i> <a href="#">statistics</a> <a href="#">queue-statistics</a> <a href="#">unicast-queue</a> <a href="#">queue-id</a> <a href="#">number</a> <a href="#">clear</a>
<b>Tree</b>	<a href="#">clear</a>
<b>Configurable</b>	True

## subinterface [index](#) *number*

<b>Description</b>	The list of subinterfaces (logical interfaces) associated with a physical interface
<b>Context</b>	<a href="#">interface name</a> <i>string</i> <a href="#">subinterface</a> <a href="#">index</a> <i>number</i>
<b>Tree</b>	<a href="#">subinterface</a>
<b>Configurable</b>	True

## [index](#) *number*

<b>Description</b>	The index of the subinterface, or logical interface number
<b>Context</b>	<a href="#">interface name</a> <i>string</i> <a href="#">subinterface</a> <a href="#">index</a> <i>number</i>
<b>Configurable</b>	True

## bridge-table

<b>Description</b>	Enter the bridge-table context
<b>Context</b>	<a href="#">interface name</a> <i>string</i> <a href="#">subinterface</a> <a href="#">index</a> <i>number</i> <a href="#">bridge-table</a>
<b>Tree</b>	<a href="#">bridge-table</a>

**Configurable** True

## mac-duplication

**Description** Enable the mac-duplication context

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

**Tree** [mac-duplication](#)

**Configurable** True

## 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

## 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

## 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

## address *string*

**Description** Enter the address context

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

**Configurable** True

### delete-mac

**Description** delete the duplicate mac address.

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

**Tree** [delete-mac](#)

**Configurable** True

### mac-learning

**Description** Enable the mac-learning context

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

**Tree** [mac-learning](#)

**Configurable** True

### delete-all-macs

**Description** Delete all learnt mac entries.

**Context** [interface name](#) *string* [subinterface index](#) *number* [bridge-table mac-learning delete-all-macs](#)

**Tree** [delete-all-macs](#)

**Configurable** True

### learnt-entries

**Description** Enter the learnt-entries context

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

**Tree** [learnt-entries](#)

**Configurable** True

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

**Description** macs learnt on the bridging instance

---

<b>Context</b>	<a href="#">interface name</a> <i>string</i> <a href="#">subinterface</a> <a href="#">index</a> <i>number</i> <a href="#">bridge-table</a> <a href="#">mac-learning</a> <a href="#">learnt-entries</a> <a href="#">mac</a> <a href="#">address</a> <i>string</i>
<b>Tree</b>	<a href="#">mac</a>
<b>Configurable</b>	True

**address** *string*

<b>Description</b>	Enter the address context
<b>Context</b>	<a href="#">interface name</a> <i>string</i> <a href="#">subinterface</a> <a href="#">index</a> <i>number</i> <a href="#">bridge-table</a> <a href="#">mac-learning</a> <a href="#">learnt-entries</a> <a href="#">mac</a> <a href="#">address</a> <i>string</i>
<b>Configurable</b>	True

**delete-mac**

<b>Description</b>	delete the learnt mac address.
<b>Context</b>	<a href="#">interface name</a> <i>string</i> <a href="#">subinterface</a> <a href="#">index</a> <i>number</i> <a href="#">bridge-table</a> <a href="#">mac-learning</a> <a href="#">learnt-entries</a> <a href="#">mac</a> <a href="#">address</a> <i>string</i> <a href="#">delete-mac</a>
<b>Tree</b>	<a href="#">delete-mac</a>
<b>Configurable</b>	True

**ipv4**

<b>Description</b>	Enter the ipv4 context
<b>Context</b>	<a href="#">interface name</a> <i>string</i> <a href="#">subinterface</a> <a href="#">index</a> <i>number</i> <a href="#">ipv4</a>
<b>Tree</b>	<a href="#">ipv4</a>
<b>Configurable</b>	True

**arp**

<b>Description</b>	Enable the arp context
<b>Context</b>	<a href="#">interface name</a> <i>string</i> <a href="#">subinterface</a> <a href="#">index</a> <i>number</i> <a href="#">ipv4</a> <a href="#">arp</a>
<b>Tree</b>	<a href="#">arp</a>
<b>Configurable</b>	True

**delete-dynamic**

<b>Description</b>	Delete all dynamic ARP entries
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<b>Context</b>	<a href="#">interface name</a> <i>string</i> <a href="#">subinterface</a> <i>index</i> <i>number</i> <a href="#">ipv4 arp delete-dynamic</a>
<b>Tree</b>	<a href="#">delete-dynamic</a>
<b>Configurable</b>	True

### neighbor [ipv4-address](#) *string*

<b>Description</b>	Enter the neighbor list instance
<b>Context</b>	<a href="#">interface name</a> <i>string</i> <a href="#">subinterface</a> <i>index</i> <i>number</i> <a href="#">ipv4 arp neighbor ipv4-address</a> <i>string</i>
<b>Tree</b>	<a href="#">neighbor</a>
<b>Configurable</b>	True

### ipv4-address *string*

<b>Description</b>	IPv4 address resolved by the ARP entry
<b>Context</b>	<a href="#">interface name</a> <i>string</i> <a href="#">subinterface</a> <i>index</i> <i>number</i> <a href="#">ipv4 arp neighbor ipv4-address</a> <i>string</i>
<b>Configurable</b>	True

### delete-dynamic

<b>Description</b>	Delete one specific dynamic ARP entry
<b>Context</b>	<a href="#">interface name</a> <i>string</i> <a href="#">subinterface</a> <i>index</i> <i>number</i> <a href="#">ipv4 arp neighbor ipv4-address</a> <i>string</i> <a href="#">delete-dynamic</a>
<b>Tree</b>	<a href="#">delete-dynamic</a>
<b>Configurable</b>	True

### dhcp-relay

<b>Description</b>	Enable the dhcp-relay context
<b>Context</b>	<a href="#">interface name</a> <i>string</i> <a href="#">subinterface</a> <i>index</i> <i>number</i> <a href="#">ipv4 dhcp-relay</a>
<b>Tree</b>	<a href="#">dhcp-relay</a>
<b>Configurable</b>	True

### statistics

<b>Description</b>	Enter the statistics context
--------------------	------------------------------

---

<b>Context</b>	<a href="#">interface name</a> <i>string</i> <a href="#">subinterface</a> <a href="#">index</a> <a href="#">number</a> <a href="#">ipv4</a> <a href="#">dhcp-relay</a> <a href="#">statistics</a>
<b>Tree</b>	<a href="#">statistics</a>
<b>Configurable</b>	True

**clear**

<b>Description</b>	Enter the clear context
<b>Context</b>	<a href="#">interface name</a> <i>string</i> <a href="#">subinterface</a> <a href="#">index</a> <a href="#">number</a> <a href="#">ipv4</a> <a href="#">dhcp-relay</a> <a href="#">statistics</a> <a href="#">clear</a>
<b>Tree</b>	<a href="#">clear</a>
<b>Configurable</b>	True

**ipv6**

<b>Description</b>	Enter the ipv6 context
<b>Context</b>	<a href="#">interface name</a> <i>string</i> <a href="#">subinterface</a> <a href="#">index</a> <a href="#">number</a> <a href="#">ipv6</a>
<b>Tree</b>	<a href="#">ipv6</a>
<b>Configurable</b>	True

**dhcp-relay**

<b>Description</b>	Enable the dhcp-relay context
<b>Context</b>	<a href="#">interface name</a> <i>string</i> <a href="#">subinterface</a> <a href="#">index</a> <a href="#">number</a> <a href="#">ipv6</a> <a href="#">dhcp-relay</a>
<b>Tree</b>	<a href="#">dhcp-relay</a>
<b>Configurable</b>	True

**statistics**

<b>Description</b>	Enter the statistics context
<b>Context</b>	<a href="#">interface name</a> <i>string</i> <a href="#">subinterface</a> <a href="#">index</a> <a href="#">number</a> <a href="#">ipv6</a> <a href="#">dhcp-relay</a> <a href="#">statistics</a>
<b>Tree</b>	<a href="#">statistics</a>
<b>Configurable</b>	True

**clear**

<b>Description</b>	Enter the clear context
--------------------	-------------------------

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<b>Context</b>	<a href="#">interface name</a> <i>string</i> <a href="#">subinterface</a> <i>index</i> <i>number</i> <a href="#">ipv6 dhcp-relay</a> <a href="#">statistics</a> <a href="#">clear</a>
<b>Tree</b>	<a href="#">clear</a>
<b>Configurable</b>	True

## neighbor-discovery

<b>Description</b>	Enable the neighbor-discovery context
<b>Context</b>	<a href="#">interface name</a> <i>string</i> <a href="#">subinterface</a> <i>index</i> <i>number</i> <a href="#">ipv6 neighbor-discovery</a>
<b>Tree</b>	<a href="#">neighbor-discovery</a>
<b>Configurable</b>	True

## delete-dynamic

<b>Description</b>	Delete all dynamic neighbor cache entries
<b>Context</b>	<a href="#">interface name</a> <i>string</i> <a href="#">subinterface</a> <i>index</i> <i>number</i> <a href="#">ipv6 neighbor-discovery</a> <a href="#">delete-dynamic</a>
<b>Tree</b>	<a href="#">delete-dynamic</a>
<b>Configurable</b>	True

## neighbor [ipv6-address](#) *string*

<b>Description</b>	Enter the neighbor list instance
<b>Context</b>	<a href="#">interface name</a> <i>string</i> <a href="#">subinterface</a> <i>index</i> <i>number</i> <a href="#">ipv6 neighbor-discovery</a> <a href="#">neighbor</a> <a href="#">ipv6-address</a> <i>string</i>
<b>Tree</b>	<a href="#">neighbor</a>
<b>Configurable</b>	True

## [ipv6-address](#) *string*

<b>Description</b>	IPv6 address resolved by the ND cache entry
<b>Context</b>	<a href="#">interface name</a> <i>string</i> <a href="#">subinterface</a> <i>index</i> <i>number</i> <a href="#">ipv6 neighbor-discovery</a> <a href="#">neighbor</a> <a href="#">ipv6-address</a> <i>string</i>
<b>Configurable</b>	True

## delete-dynamic

<b>Description</b>	Delete one specific dynamic neighbor cache entry
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---

<b>Context</b>	<a href="#">interface name</a> <i>string</i> <a href="#">subinterface</a> <a href="#">index</a> <i>number</i> <a href="#">ipv6 neighbor-discovery neighbor ipv6-address</a> <i>string</i> <a href="#">delete-dynamic</a>
<b>Tree</b>	<a href="#">delete-dynamic</a>
<b>Configurable</b>	True

## statistics

<b>Description</b>	Enter the statistics context
<b>Context</b>	<a href="#">interface name</a> <i>string</i> <a href="#">subinterface</a> <a href="#">index</a> <i>number</i> <a href="#">statistics</a>
<b>Tree</b>	<a href="#">statistics</a>
<b>Configurable</b>	True

## clear

<b>Description</b>	Enter the clear context
<b>Context</b>	<a href="#">interface name</a> <i>string</i> <a href="#">subinterface</a> <a href="#">index</a> <i>number</i> <a href="#">statistics</a> <a href="#">clear</a>
<b>Tree</b>	<a href="#">clear</a>
<b>Configurable</b>	True

## 14 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
+ icmp
  + statistics
  + clear
+ icmp6
  + statistics
  + clear
+ protocols
  + bgp
    + group group-name string
      + reset-peer
      + peer-as number
      + soft-clear
      + peer-as number
      + route-refresh keyword
    + neighbor peer-address (ipv4-address | ipv6-address-with-zone)
      + reset-peer
      + soft-clear
      + route-refresh keyword
    + reset-peer
      + peer-as number
    + soft-clear
      + peer-as number
      + route-refresh keyword
  + 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
    + peers
      + peer lsr-id string label-space-id number
        + reset
        + statistics
        + clear

```

```

+ reset-overload
+ 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

```

## 14.1 network-instance Descriptions

### network-instance *name string*

<b>Description</b>	Enter the network-instance list instance
<b>Context</b>	<a href="#">network-instance name <i>string</i></a>
<b>Tree</b>	<a href="#">network-instance</a>
<b>Configurable</b>	True

### name *string*

<b>Description</b>	A unique name identifying the network instance
<b>Context</b>	<a href="#">network-instance name <i>string</i></a>
<b>Configurable</b>	True

### bridge-table

<b>Description</b>	Enter the bridge-table
<b>Context</b>	<a href="#">network-instance name <i>string</i> bridge-table</a>
<b>Tree</b>	<a href="#">bridge-table</a>
<b>Configurable</b>	True

## mac-duplication

<b>Description</b>	Enable the mac-duplication context
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">bridge-table</a> <a href="#">mac-duplication</a>
<b>Tree</b>	<a href="#">mac-duplication</a>
<b>Configurable</b>	True

## delete-macs-type *keyword*

<b>Description</b>	Type of duplicate mac entries to delete.
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">bridge-table</a> <a href="#">mac-duplication</a> <a href="#">delete-macs-type</a> <i>keyword</i>
<b>Tree</b>	<a href="#">delete-macs-type</a>
<b>Options</b>	<ul style="list-style-type: none"> <li>• all</li> <li>• blackhole-only</li> </ul>
<b>Configurable</b>	True

## duplicate-entries

<b>Description</b>	Enter the duplicate-entries context
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">bridge-table</a> <a href="#">mac-duplication</a> <a href="#">duplicate-entries</a>
<b>Tree</b>	<a href="#">duplicate-entries</a>
<b>Configurable</b>	True

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

<b>Description</b>	Address of MACs learnt on the bridging instance
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">bridge-table</a> <a href="#">mac-duplication</a> <a href="#">duplicate-entries</a> <a href="#">mac address</a> <i>string</i>
<b>Tree</b>	<a href="#">mac</a>
<b>Configurable</b>	True

## address *string*

<b>Description</b>	Enter the address context
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">bridge-table</a> <a href="#">mac-duplication</a> <a href="#">duplicate-entries</a> <a href="#">mac address</a> <i>string</i>

**Configurable** True

## delete-mac

**Description** Delete the duplicate MAC address.

**Context** [network-instance name \*string\*](#) [bridge-table](#) [mac-duplication](#) [duplicate-entries](#)  
[mac address \*string\*](#) [delete-mac](#)

**Tree** [delete-mac](#)

**Configurable** True

## mac-learning

**Description** Enable the mac-learning context

**Context** [network-instance name \*string\*](#) [bridge-table](#) [mac-learning](#)

**Tree** [mac-learning](#)

**Configurable** True

## delete-all-macs

**Description** Delete all learnt mac entries.

**Context** [network-instance name \*string\*](#) [bridge-table](#) [mac-learning](#) [delete-all-macs](#)

**Tree** [delete-all-macs](#)

**Configurable** True

## learnt-entries

**Description** Enter the learnt-entries context

**Context** [network-instance name \*string\*](#) [bridge-table](#) [mac-learning](#) [learnt-entries](#)

**Tree** [learnt-entries](#)

**Configurable** True

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

**Description** The MACs learnt on the bridging instance

**Context** [network-instance name \*string\*](#) [bridge-table](#) [mac-learning](#) [learnt-entries](#) [mac address \*string\*](#)

**Tree** [mac](#)



**Configurable** True

### address *string*

**Description** Enter the address context

**Context** [network-instance name](#) *string* [bridge-table](#) [mac-learning](#) [learnt-entries](#) [mac address](#) *string*

**Configurable** True

### delete-mac

**Description** Delete the learnt MAC address.

**Context** [network-instance name](#) *string* [bridge-table](#) [mac-learning](#) [learnt-entries](#) [mac address](#) *string* [delete-mac](#)

**Tree** [delete-mac](#)

**Configurable** True

### icmp

**Description** Enter the icmp context

**Context** [network-instance name](#) *string* [icmp](#)

**Tree** [icmp](#)

**Configurable** True

### statistics

**Description** ICMP version 4 statistics

**Context** [network-instance name](#) *string* [icmp](#) [statistics](#)

**Tree** [statistics](#)

**Configurable** True

### 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](#)

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<b>Configurable</b>	True
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## icmp6

<b>Description</b>	Enter the icmp6 context
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">icmp6</a>
<b>Tree</b>	<a href="#">icmp6</a>
<b>Configurable</b>	True

## statistics

<b>Description</b>	ICMP version 6 statistics
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">icmp6</a> <a href="#">statistics</a>
<b>Tree</b>	<a href="#">statistics</a>
<b>Configurable</b>	True

## clear

<b>Description</b>	Resets all the YANG state counters under network-instance/icmp6/statistics to zero
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">icmp6</a> <a href="#">statistics</a> <a href="#">clear</a>
<b>Tree</b>	<a href="#">clear</a>
<b>Configurable</b>	True

## protocols

<b>Description</b>	The routing protocols that are enabled for this network-instance.
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">protocols</a>
<b>Tree</b>	<a href="#">protocols</a>
<b>Configurable</b>	True

## bgp

<b>Description</b>	Enable the bgp context
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">protocols</a> <a href="#">bgp</a>
<b>Tree</b>	<a href="#">bgp</a>
<b>Configurable</b>	True

**group** *group-name string*

<b>Description</b>	Enter the group list instance
<b>Context</b>	<a href="#">network-instance name string protocols bgp group group-name string</a>
<b>Tree</b>	<a href="#">group</a>
<b>Configurable</b>	True

**group-name** *string*

<b>Description</b>	The configured name of the peer group
<b>Context</b>	<a href="#">network-instance name string protocols bgp group group-name string</a>
<b>String Length</b>	1 to 255
<b>Configurable</b>	True

**reset-peer**

<b>Description</b>	Enable the reset-peer context
<b>Context</b>	<a href="#">network-instance name string protocols bgp group group-name string reset-peer</a>
<b>Tree</b>	<a href="#">reset-peer</a>
<b>Configurable</b>	True

**peer-as** *number*

<b>Description</b>	Hard reset only BGP peers in the peer-group that have the specified peer-AS number, whether they are configured peers or dynamic peers
<b>Context</b>	<a href="#">network-instance name string protocols bgp group group-name string reset-peer peer-as number</a>
<b>Tree</b>	<a href="#">peer-as</a>
<b>Range</b>	1 to 4294967295
<b>Configurable</b>	True

**soft-clear**

<b>Description</b>	Enable the soft-clear context
<b>Context</b>	<a href="#">network-instance name string protocols bgp group group-name string soft-clear</a>

<b>Tree</b>	<a href="#">soft-clear</a>
<b>Configurable</b>	True

### **peer-as *number***

<b>Description</b>	Soft reset only BGP peers in the peer-group that have the specified peer-AS number, whether they are configured peers or dynamic peers
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">protocols bgp group group-name</a> <i>string</i> <a href="#">soft-clear peer-as</a> <i>number</i>
<b>Tree</b>	<a href="#">peer-as</a>
<b>Range</b>	1 to 4294967295
<b>Configurable</b>	True

### **route-refresh *keyword***

<b>Description</b>	The address family to refresh  This is encoded in the ROUTE_REFRESH message. By default all families are refreshed.
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">protocols bgp group group-name</a> <i>string</i> <a href="#">soft-clear route-refresh</a> <i>keyword</i>
<b>Tree</b>	<a href="#">route-refresh</a>
<b>Options</b>	<ul style="list-style-type: none"> <li>• <a href="#">ipv4-unicast</a></li> <li>• <a href="#">ipv6-unicast</a></li> <li>• <a href="#">evpn</a></li> </ul>
<b>Configurable</b>	True

### **neighbor [peer-address](#) (*ipv4-address* | *ipv6-address-with-zone*)**

<b>Description</b>	Enter the neighbor list instance
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">protocols bgp neighbor peer-address</a> ( <i>ipv4-address</i>   <i>ipv6-address-with-zone</i> )
<b>Tree</b>	<a href="#">neighbor</a>
<b>Configurable</b>	True

### **peer-address (*ipv4-address* | *ipv6-address-with-zone*)**

<b>Description</b>	The transport address of the BGP peer
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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 string protocols bgp neighbor peer-address \(ipv4-address | ipv6-address-with-zone\)](#)

**Configurable** True

## reset-peer

**Description** Hard reset the peer

**Context** [network-instance name string protocols bgp neighbor peer-address \(ipv4-address | ipv6-address-with-zone\) reset-peer](#)

**Tree** [reset-peer](#)

**Configurable** True

## soft-clear

**Description** Enable the soft-clear context

**Context** [network-instance name string protocols bgp neighbor peer-address \(ipv4-address | ipv6-address-with-zone\) soft-clear](#)

**Tree** [soft-clear](#)

**Configurable** True

## route-refresh *keyword*

**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 \(ipv4-address | ipv6-address-with-zone\) soft-clear route-refresh keyword](#)

**Tree** [route-refresh](#)

**Options**

- ipv4-unicast
- ipv6-unicast
- evpn

**Configurable** True

## reset-peer

**Description** Enable the reset-peer context

<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">protocols bgp reset-peer</a>
<b>Tree</b>	<a href="#">reset-peer</a>
<b>Configurable</b>	True

**peer-as *number***

<b>Description</b>	Hard reset only BGP peers that have the specified peer-AS number, whether they are configured peers or dynamic peers
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">protocols bgp reset-peer peer-as</a> <i>number</i>
<b>Tree</b>	<a href="#">peer-as</a>
<b>Range</b>	1 to 4294967295
<b>Configurable</b>	True

**soft-clear**

<b>Description</b>	Enable the soft-clear context
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">protocols bgp soft-clear</a>
<b>Tree</b>	<a href="#">soft-clear</a>
<b>Configurable</b>	True

**peer-as *number***

<b>Description</b>	Soft reset only BGP peers that have the specified peer-AS number, whether they are configured peers or dynamic peers
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">protocols bgp soft-clear peer-as</a> <i>number</i>
<b>Tree</b>	<a href="#">peer-as</a>
<b>Range</b>	1 to 4294967295
<b>Configurable</b>	True

**route-refresh *keyword***

<b>Description</b>	The address family to refresh  This is encoded in the ROUTE_REFRESH message. By default all families are refreshed.
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">protocols bgp soft-clear route-refresh</a> <i>keyword</i>
<b>Tree</b>	<a href="#">route-refresh</a>
<b>Options</b>	<ul style="list-style-type: none"> <li>• <a href="#">ipv4-unicast</a></li> </ul>

	<ul style="list-style-type: none"> <li>• ipv6-unicast</li> <li>• evpn</li> </ul>
<b>Configurable</b>	True

**isis**

<b>Description</b>	Enable the isis context
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> protocols isis
<b>Tree</b>	<a href="#">isis</a>
<b>Configurable</b>	True

**instance** [name](#) *string*

<b>Description</b>	List of IS-IS protocol instances associated with this network-instance. Only a single instance is supported for now
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> protocols isis <a href="#">instance name</a> <i>string</i>
<b>Tree</b>	<a href="#">instance</a>
<b>Configurable</b>	True
<b>Max. Elements</b>	1

**name** *string*

<b>Description</b>	The name of the IS-IS instance
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> protocols isis <a href="#">instance name</a> <i>string</i>
<b>String Length</b>	1 to 255
<b>Configurable</b>	True

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

<b>Description</b>	List of IS-IS interfaces
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> protocols isis <a href="#">instance name</a> <i>string</i> <a href="#">interface</a> <a href="#">interface-name</a> <i>string</i>
<b>Tree</b>	<a href="#">interface</a>
<b>Configurable</b>	True

**interface-name *string***

<b>Description</b>	Reference to a specific subinterface of the form <interface-name>.<subinterface-index>
<b>Context</b>	<a href="#">network-instance name <i>string</i> protocols isis instance name <i>string</i> interface interface-name <i>string</i></a>
<b>String Length</b>	5 to 25
<b>Configurable</b>	True

**adjacencies**

<b>Description</b>	Enter the adjacencies context
<b>Context</b>	<a href="#">network-instance name <i>string</i> protocols isis instance name <i>string</i> interface interface-name <i>string</i> adjacencies</a>
<b>Tree</b>	<a href="#">adjacencies</a>
<b>Configurable</b>	True

**clear**

<b>Description</b>	Reset all of the adjacencies on this interface
<b>Context</b>	<a href="#">network-instance name <i>string</i> protocols isis instance name <i>string</i> interface interface-name <i>string</i> adjacencies clear</a>
<b>Tree</b>	<a href="#">clear</a>
<b>Configurable</b>	True

**ldp-synchronization**

<b>Description</b>	IS-IS LDP-IGP synchronisation
<b>Context</b>	<a href="#">network-instance name <i>string</i> protocols isis instance name <i>string</i> ldp-synchronization</a>
<b>Tree</b>	<a href="#">ldp-synchronization</a>
<b>Configurable</b>	True

**exit**

<b>Description</b>	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
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<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">protocols isis instance name</a> <i>string</i> <a href="#">ldp-synchronization exit</a>
<b>Tree</b>	<a href="#">exit</a>
<b>Configurable</b>	True

## link-state-database

<b>Description</b>	The ISIS link state database
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">protocols isis instance name</a> <i>string</i> <a href="#">link-state-database</a>
<b>Tree</b>	<a href="#">link-state-database</a>
<b>Configurable</b>	True

## clear

<b>Description</b>	Clear the contents of the LSDB.
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">protocols isis instance name</a> <i>string</i> <a href="#">link-state-database clear</a>
<b>Tree</b>	<a href="#">clear</a>
<b>Configurable</b>	True

## statistics

<b>Description</b>	Enter the statistics context
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">protocols isis instance name</a> <i>string</i> <a href="#">statistics</a>
<b>Tree</b>	<a href="#">statistics</a>
<b>Configurable</b>	True

## clear

<b>Description</b>	Reset all of the IS-IS instance statistics to zero.
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">protocols isis instance name</a> <i>string</i> <a href="#">statistics clear</a>
<b>Tree</b>	<a href="#">clear</a>
<b>Configurable</b>	True

## ldp

**Note:**

This command is available for the following platforms:

- 7250 IXR-6
- 7250 IXR-10

<b>Description</b>	Operational tools commands for LDP.
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> protocols ldp
<b>Tree</b>	<a href="#">ldp</a>
<b>Configurable</b>	True

## discovery

**Note:**

This command is available for the following platforms:

- 7250 IXR-6
- 7250 IXR-10

<b>Description</b>	Enter the discovery context
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> protocols ldp discovery
<b>Tree</b>	<a href="#">discovery</a>
<b>Configurable</b>	True

## interfaces

**Note:**

This command is available for the following platforms:

- 7250 IXR-6
- 7250 IXR-10

<b>Description</b>	Enter the interfaces context
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> protocols ldp discovery interfaces
<b>Tree</b>	<a href="#">interfaces</a>
<b>Configurable</b>	True

**interface** *name string***Note:**

This command is available for the following platforms:

- 7250 IXR-6
- 7250 IXR-10

<b>Description</b>	Enter the interface list instance
<b>Context</b>	<a href="#">network-instance name string protocols ldp discovery interfaces interface name string</a>
<b>Tree</b>	<a href="#">interface</a>
<b>Configurable</b>	True

**name** *string***Note:**

This command is available for the following platforms:

- 7250 IXR-6
- 7250 IXR-10

<b>Description</b>	Reference type to a specific subinterface of the form <interface-name>.<subinterface-index>
<b>Context</b>	<a href="#">network-instance name string protocols ldp discovery interfaces interface name string</a>
<b>String Length</b>	5 to 25
<b>Configurable</b>	True

**ipv4****Note:**

This command is available for the following platforms:

- 7250 IXR-6
- 7250 IXR-10

<b>Description</b>	Enter the ipv4 context
<b>Context</b>	<a href="#">network-instance name string protocols ldp discovery interfaces interface name string ipv4</a>
<b>Tree</b>	<a href="#">ipv4</a>
<b>Configurable</b>	True

## statistics



### Note:

This command is available for the following platforms:

- 7250 IXR-6
- 7250 IXR-10

<b>Description</b>	Enter the statistics context
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">protocols ldp discovery interfaces interface name</a> <i>string</i> <a href="#">ipv4 statistics</a>
<b>Tree</b>	<a href="#">statistics</a>
<b>Configurable</b>	True

## clear



### Note:

This command is available for the following platforms:

- 7250 IXR-6
- 7250 IXR-10

<b>Description</b>	Resets all the LDP instance state counters to zero
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">protocols ldp discovery interfaces interface name</a> <i>string</i> <a href="#">ipv4 statistics clear</a>
<b>Tree</b>	<a href="#">clear</a>
<b>Configurable</b>	True

## peers



### Note:

This command is available for the following platforms:

- 7250 IXR-6
- 7250 IXR-10

<b>Description</b>	Enter the peers context
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">protocols ldp peers</a>
<b>Tree</b>	<a href="#">peers</a>
<b>Configurable</b>	True

**peer** *lsr-id string label-space-id number***Note:**

This command is available for the following platforms:

- 7250 IXR-6
- 7250 IXR-10

<b>Description</b>	List of peers.
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">protocols ldp peers peer</a> <i>lsr-id string label-space-id number</i>
<b>Tree</b>	<a href="#">peer</a>
<b>Configurable</b>	True

**lsr-id** *string***Note:**

This command is available for the following platforms:

- 7250 IXR-6
- 7250 IXR-10

<b>Description</b>	The LSR ID of the peer, to identify the globally unique LSR. This is the first four octets of the LDP ID. This leaf is used together with the leaf 'label-space-id' to form the LDP ID.
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">protocols ldp peers peer</a> <i>lsr-id string label-space-id number</i>
<b>Configurable</b>	True

**label-space-id** *number***Note:**

This command is available for the following platforms:

- 7250 IXR-6
- 7250 IXR-10

<b>Description</b>	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.
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">protocols ldp peers peer</a> <i>lsr-id string label-space-id number</i>

<b>Configurable</b>	True
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## reset



**Note:**

This command is available for the following platforms:

- 7250 IXR-6
- 7250 IXR-10

<b>Description</b>	Reset the LDP session by closing the TCP connection and establishing a new one.
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">protocols ldp peers peer lsr-id</a> <i>string</i> <a href="#">label-space-id</a> <i>number</i> <a href="#">reset</a>
<b>Tree</b>	<a href="#">reset</a>
<b>Configurable</b>	True

## statistics



**Note:**

This command is available for the following platforms:

- 7250 IXR-6
- 7250 IXR-10

<b>Description</b>	Enter the statistics context
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">protocols ldp peers peer lsr-id</a> <i>string</i> <a href="#">label-space-id</a> <i>number</i> <a href="#">statistics</a>
<b>Tree</b>	<a href="#">statistics</a>
<b>Configurable</b>	True

## clear



**Note:**

This command is available for the following platforms:

- 7250 IXR-6
- 7250 IXR-10

<b>Description</b>	Resets all the LDP instance state counters to zero
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<b>Context</b>	<a href="#">network-instance name <i>string</i> protocols ldp peers peer lsr-id <i>string</i> label-space-id <i>number</i> statistics clear</a>
<b>Tree</b>	<a href="#">clear</a>
<b>Configurable</b>	True

## reset-overload



### Note:

This command is available for the following platforms:

- 7250 IXR-6
- 7250 IXR-10

<b>Description</b>	Enable the reset-overload context
<b>Context</b>	<a href="#">network-instance name <i>string</i> protocols ldp reset-overload</a>
<b>Tree</b>	<a href="#">reset-overload</a>
<b>Configurable</b>	True

## statistics



### Note:

This command is available for the following platforms:

- 7250 IXR-6
- 7250 IXR-10

<b>Description</b>	Enter the statistics context
<b>Context</b>	<a href="#">network-instance name <i>string</i> protocols ldp statistics</a>
<b>Tree</b>	<a href="#">statistics</a>
<b>Configurable</b>	True

## clear



### Note:

This command is available for the following platforms:

- 7250 IXR-6
- 7250 IXR-10

<b>Description</b>	Resets all the LDP instance state counters to zero
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<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">protocols ldp</a> <a href="#">statistics clear</a>
<b>Tree</b>	<a href="#">clear</a>
<b>Configurable</b>	True

**ospf**

<b>Description</b>	Enable the ospf context
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">protocols ospf</a>
<b>Tree</b>	<a href="#">ospf</a>
<b>Configurable</b>	True

**instance** [name](#) *string*

<b>Description</b>	List of OSPF protocol instances associated with this network-instance. Only a single instance is supported for now
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">protocols ospf</a> <a href="#">instance name</a> <i>string</i>
<b>Tree</b>	<a href="#">instance</a>
<b>Configurable</b>	True
<b>Max. Elements</b>	1

**name** *string*

<b>Description</b>	The name of the OSPF instance
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">protocols ospf</a> <a href="#">instance name</a> <i>string</i>
<b>String Length</b>	1 to 255
<b>Configurable</b>	True

**area** [area-id](#)

<b>Description</b>	List of OSPF area
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">protocols ospf</a> <a href="#">instance name</a> <i>string</i> <a href="#">area</a> <a href="#">area-id</a>
<b>Tree</b>	<a href="#">area</a>
<b>Configurable</b>	True



**area-id**

<b>Description</b>	Enter the area-id context
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">protocols ospf instance name</a> <i>string</i> <a href="#">area area-id</a>
<b>Configurable</b>	True

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

<b>Description</b>	List of OSPF interfaces
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">protocols ospf instance name</a> <i>string</i> <a href="#">area area-id interface interface-name</a> <i>string</i>
<b>Tree</b>	<a href="#">interface</a>
<b>Configurable</b>	True

**interface-name** *string*

<b>Description</b>	Reference to a specific subinterface of the form <interface-name>.<subinterface-index>
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">protocols ospf instance name</a> <i>string</i> <a href="#">area area-id interface interface-name</a> <i>string</i>
<b>String Length</b>	5 to 25
<b>Configurable</b>	True

**neighbors**

<b>Description</b>	Enter the neighbors context
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">protocols ospf instance name</a> <i>string</i> <a href="#">area area-id interface interface-name</a> <i>string</i> <a href="#">neighbors</a>
<b>Tree</b>	<a href="#">neighbors</a>
<b>Configurable</b>	True

**clear**

<b>Description</b>	Reset all of the adjacencies on this interface
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">protocols ospf instance name</a> <i>string</i> <a href="#">area area-id interface interface-name</a> <i>string</i> <a href="#">neighbors clear</a>
<b>Tree</b>	<a href="#">clear</a>
<b>Configurable</b>	True

## ldp-synchronization

<b>Description</b>	Enter the ldp-synchronization context
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">protocols ospf instance name</a> <i>string</i> <a href="#">ldp-synchronization</a>
<b>Tree</b>	<a href="#">ldp-synchronization</a>
<b>Configurable</b>	True

## exit

<b>Description</b>	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
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">protocols ospf instance name</a> <i>string</i> <a href="#">ldp-synchronization exit</a>
<b>Tree</b>	<a href="#">exit</a>
<b>Configurable</b>	True

## link-state-database

<b>Description</b>	The OSPF link state database
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">protocols ospf instance name</a> <i>string</i> <a href="#">link-state-database</a>
<b>Tree</b>	<a href="#">link-state-database</a>
<b>Configurable</b>	True

## clear

<b>Description</b>	Clear the contents of the LSDB.
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">protocols ospf instance name</a> <i>string</i> <a href="#">link-state-database clear</a>
<b>Tree</b>	<a href="#">clear</a>
<b>Configurable</b>	True

## manual-spf

<b>Description</b>	Enter the manual-spf context
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<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">protocols ospf instance name</a> <i>string</i> <a href="#">manual-spf</a>
<b>Tree</b>	<a href="#">manual-spf</a>
<b>Configurable</b>	True

**run**

<b>Description</b>	Run a SPF calculation.
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">protocols ospf instance name</a> <i>string</i> <a href="#">manual-spf run</a>
<b>Tree</b>	<a href="#">run</a>
<b>Configurable</b>	True

**neighbors**

<b>Description</b>	Container for OSPF neighbors tools
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">protocols ospf instance name</a> <i>string</i> <a href="#">neighbors</a>
<b>Tree</b>	<a href="#">neighbors</a>
<b>Configurable</b>	True

**clear**

<b>Description</b>	Clear all OSPF neighbors
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">protocols ospf instance name</a> <i>string</i> <a href="#">neighbors clear</a>
<b>Tree</b>	<a href="#">clear</a>
<b>Configurable</b>	True

**neighbor** [neighbor-id](#)

<b>Description</b>	Enter the neighbor list instance
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">protocols ospf instance name</a> <i>string</i> <a href="#">neighbors neighbor neighbor-id</a>
<b>Tree</b>	<a href="#">neighbor</a>
<b>Configurable</b>	True

**neighbor-id**

<b>Description</b>	The neighbor's ip-address in case of OSPFv2, the router-id otherwise
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">protocols ospf instance name</a> <i>string</i> <a href="#">neighbors neighbor neighbor-id</a>
<b>Configurable</b>	True

**clear**

<b>Description</b>	Reset this neighbor in the OSPF instance
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">protocols ospf instance name</a> <i>string</i> <a href="#">neighbors neighbor neighbor-id clear</a>
<b>Tree</b>	<a href="#">clear</a>
<b>Configurable</b>	True

**overload**

<b>Description</b>	Enter the overload context
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">protocols ospf instance name</a> <i>string</i> <a href="#">overload</a>
<b>Tree</b>	<a href="#">overload</a>
<b>Configurable</b>	True

**clear**

<b>Description</b>	Reset OSPF instance overload status.
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">protocols ospf instance name</a> <i>string</i> <a href="#">overload clear</a>
<b>Tree</b>	<a href="#">clear</a>
<b>Configurable</b>	True

**statistics**

<b>Description</b>	Enter the statistics context
<b>Context</b>	<a href="#">network-instance name</a> <i>string</i> <a href="#">protocols ospf instance name</a> <i>string</i> <a href="#">statistics</a>
<b>Tree</b>	<a href="#">statistics</a>
<b>Configurable</b>	True

---

**clear**

<b>Description</b>	Reset all of the OSPF instance statistics to zero.
<b>Context</b>	<code>network-instance name <i>string</i> protocols ospf instance name <i>string</i> statistics clear</code>
<b>Tree</b>	<code>clear</code>
<b>Configurable</b>	True

# 15 tools platform

```

platform
+ chassis
  + reboot
    + force
    + warm
      + force
      + validate
+ control slot string
+ locator
  + disable
  + enable
  + duration number
+ reboot
+ force
+ fabric slot number
+ locator
  + disable
  + enable
  + duration number
+ reboot
+ fan-tray id number
+ locator
  + disable
  + enable
  + duration number
+ linecard slot number
+ locator
  + disable
  + enable
  + duration number
+ reboot
+ redundancy
+ switchover
+ synchronize
+ overlay
+ system
+ show-fabric-bandwidth

```

## 15.1 platform Descriptions

### platform

<b>Description</b>	Top-level container for platform operational commands
<b>Context</b>	<a href="#">platform</a>
<b>Tree</b>	<a href="#">platform</a>
<b>Configurable</b>	True

## chassis

<b>Description</b>	Operational commands related to the chassis
<b>Context</b>	<a href="#">platform chassis</a>
<b>Tree</b>	<a href="#">chassis</a>
<b>Configurable</b>	True

## reboot

<b>Description</b>	Trigger a reboot of the chassis
<b>Context</b>	<a href="#">platform chassis reboot</a>
<b>Tree</b>	<a href="#">reboot</a>
<b>Configurable</b>	True

## force

<b>Description</b>	Force a reboot of the chassis, overriding any synchronizations or other activities in progress  This option can be dangerous, and may result in a standby module booting on an older image if used after an image change
<b>Context</b>	<a href="#">platform chassis reboot force</a>
<b>Tree</b>	<a href="#">force</a>
<b>Configurable</b>	True

## warm



### Note:

This command is available for the following platforms:

- 7220 IXR-D2
- 7220 IXR-D3
- 7220 IXR-D3L
- 7220 IXR-D2L

<b>Description</b>	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.
--------------------	--

<b>Context</b>	<a href="#">platform chassis reboot warm</a>
<b>Tree</b>	<a href="#">warm</a>
<b>Configurable</b>	True

## force



### Note:

This command is available for the following platforms:

- 7220 IXR-D2
- 7220 IXR-D3
- 7220 IXR-D3L
- 7220 IXR-D2L

<b>Description</b>	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.
<b>Context</b>	<a href="#">platform chassis reboot warm force</a>
<b>Tree</b>	<a href="#">force</a>
<b>Configurable</b>	True

## validate



### Note:

This command is available for the following platforms:

- 7220 IXR-D2
- 7220 IXR-D3
- 7220 IXR-D3L
- 7220 IXR-D2L

<b>Description</b>	Validate that the system's current configuration and state supports a warm reboot operation
<b>Context</b>	<a href="#">platform chassis reboot warm validate</a>
<b>Tree</b>	<a href="#">validate</a>
<b>Configurable</b>	True



---

## control slot string

<b>Description</b>	Operational commands related to control modules
<b>Context</b>	<a href="#">platform control slot string</a>
<b>Tree</b>	<a href="#">control</a>
<b>Configurable</b>	True

## slot string

<b>Description</b>	Slot identifier for the control module
<b>Context</b>	<a href="#">platform control slot string</a>
<b>Configurable</b>	True

## locator

<b>Description</b>	Operational commands for the locator LED
<b>Context</b>	<a href="#">platform control slot string locator</a>
<b>Tree</b>	<a href="#">locator</a>
<b>Configurable</b>	True

## disable

<b>Description</b>	Deactivates the locator LED for this component
<b>Context</b>	<a href="#">platform control slot string locator disable</a>
<b>Tree</b>	<a href="#">disable</a>
<b>Configurable</b>	True

## enable

<b>Description</b>	Activate the locator LED for this component
<b>Context</b>	<a href="#">platform control slot string locator enable</a>
<b>Tree</b>	<a href="#">enable</a>
<b>Configurable</b>	True

## duration *number*

<b>Description</b>	Sets the duration to activate the locator LED, after which it will disable automatically
<b>Context</b>	<a href="#">platform control slot</a> <i>string</i> <a href="#">locator enable</a> <i>duration number</i>
<b>Tree</b>	<a href="#">duration</a>
<b>Range</b>	10 to 3600
<b>Units</b>	seconds
<b>Configurable</b>	True

## reboot

**Note:**

This command is available for the following platforms:

- 7250 IXR-6
- 7250 IXR-10

<b>Description</b>	Trigger a reboot of the control module
<b>Context</b>	<a href="#">platform control slot</a> <i>string</i> <a href="#">reboot</a>
<b>Tree</b>	<a href="#">reboot</a>
<b>Configurable</b>	True

## force

**Note:**

This command is available for the following platforms:

- 7250 IXR-6
- 7250 IXR-10

<b>Description</b>	Force a reboot of the control module, overriding any synchronizations or other activities in progress  This option can be dangerous, and may result in a standby module booting on an older image if used after an image change
<b>Context</b>	<a href="#">platform control slot</a> <i>string</i> <a href="#">reboot</a> <a href="#">force</a>
<b>Tree</b>	<a href="#">force</a>
<b>Configurable</b>	True

## fabric slot number

**Note:**

This command is available for the following platforms:

- 7250 IXR-6
- 7250 IXR-10

<b>Description</b>	Operational commands related to fabric modules
<b>Context</b>	<a href="#">platform fabric slot number</a>
<b>Tree</b>	<a href="#">fabric</a>
<b>Configurable</b>	True

## slot number

**Note:**

This command is available for the following platforms:

- 7250 IXR-6
- 7250 IXR-10

<b>Description</b>	Numeric identifier for the fabric module
<b>Context</b>	<a href="#">platform fabric slot number</a>
<b>Configurable</b>	True

## locator

**Note:**

This command is available for the following platforms:

- 7250 IXR-6
- 7250 IXR-10

<b>Description</b>	Operational commands for the locator LED
<b>Context</b>	<a href="#">platform fabric slot number locator</a>
<b>Tree</b>	<a href="#">locator</a>
<b>Configurable</b>	True

## disable


**Note:**

This command is available for the following platforms:

- 7250 IXR-6
- 7250 IXR-10

<b>Description</b>	Deactivates the locator LED for this component
<b>Context</b>	<a href="#">platform fabric slot number locator disable</a>
<b>Tree</b>	<a href="#">disable</a>
<b>Configurable</b>	True

## enable


**Note:**

This command is available for the following platforms:

- 7250 IXR-6
- 7250 IXR-10

<b>Description</b>	Activate the locator LED for this component
<b>Context</b>	<a href="#">platform fabric slot number locator enable</a>
<b>Tree</b>	<a href="#">enable</a>
<b>Configurable</b>	True

## duration *number*


**Note:**

This command is available for the following platforms:

- 7250 IXR-6
- 7250 IXR-10

<b>Description</b>	Sets the duration to activate the locator LED, after which it will disable automatically
<b>Context</b>	<a href="#">platform fabric slot number locator enable duration number</a>
<b>Tree</b>	<a href="#">duration</a>
<b>Range</b>	10 to 3600
<b>Units</b>	seconds
<b>Configurable</b>	True

## reboot



### Note:

This command is available for the following platforms:

- 7250 IXR-6
- 7250 IXR-10

<b>Description</b>	Reboot this component
<b>Context</b>	<a href="#">platform fabric slot number reboot</a>
<b>Tree</b>	<a href="#">reboot</a>
<b>Configurable</b>	True

## fan-tray *id number*

<b>Description</b>	Operational commands related to fan modules
<b>Context</b>	<a href="#">platform fan-tray id number</a>
<b>Tree</b>	<a href="#">fan-tray</a>
<b>Configurable</b>	True

## id *number*

<b>Description</b>	Numeric identifier for the fan module
<b>Context</b>	<a href="#">platform fan-tray id number</a>
<b>Configurable</b>	True

## locator

<b>Description</b>	Operational commands for the locator LED
<b>Context</b>	<a href="#">platform fan-tray id number locator</a>
<b>Tree</b>	<a href="#">locator</a>
<b>Configurable</b>	True

## disable

<b>Description</b>	Deactivates the locator LED for this component
<b>Context</b>	<a href="#">platform fan-tray id number locator disable</a>

<b>Tree</b>	<a href="#">disable</a>
<b>Configurable</b>	True

## enable

<b>Description</b>	Activate the locator LED for this component
<b>Context</b>	<a href="#">platform fan-tray id number locator enable</a>
<b>Tree</b>	<a href="#">enable</a>
<b>Configurable</b>	True

## duration *number*

<b>Description</b>	Sets the duration to activate the locator LED, after which it will disable automatically
<b>Context</b>	<a href="#">platform fan-tray id number locator enable duration number</a>
<b>Tree</b>	<a href="#">duration</a>
<b>Range</b>	10 to 3600
<b>Units</b>	seconds
<b>Configurable</b>	True

## linecard [slot number](#)



### Note:

This command is available for the following platforms:

- 7250 IXR-6
- 7250 IXR-10

<b>Description</b>	Operational commands related to line cards
<b>Context</b>	<a href="#">platform linecard slot number</a>
<b>Tree</b>	<a href="#">linecard</a>
<b>Configurable</b>	True

## slot number



### Note:

This command is available for the following platforms:

- 7250 IXR-6
- 7250 IXR-10

<b>Description</b>	Numeric identifier for the line card
<b>Context</b>	<a href="#">platform linecard slot number</a>
<b>Configurable</b>	True

## locator



### Note:

This command is available for the following platforms:

- 7250 IXR-6
- 7250 IXR-10

<b>Description</b>	Operational commands for the locator LED
<b>Context</b>	<a href="#">platform linecard slot number locator</a>
<b>Tree</b>	<a href="#">locator</a>
<b>Configurable</b>	True

## disable



### Note:

This command is available for the following platforms:

- 7250 IXR-6
- 7250 IXR-10

<b>Description</b>	Deactivates the locator LED for this component
<b>Context</b>	<a href="#">platform linecard slot number locator disable</a>
<b>Tree</b>	<a href="#">disable</a>
<b>Configurable</b>	True

## enable



### Note:

This command is available for the following platforms:

- 7250 IXR-6
- 7250 IXR-10

<b>Description</b>	Activate the locator LED for this component
<b>Context</b>	<a href="#">platform linecard slot number locator enable</a>
<b>Tree</b>	<a href="#">enable</a>
<b>Configurable</b>	True

## duration *number*



### Note:

This command is available for the following platforms:

- 7250 IXR-6
- 7250 IXR-10

<b>Description</b>	Sets the duration to activate the locator LED, after which it will disable automatically
<b>Context</b>	<a href="#">platform linecard slot number locator enable duration number</a>
<b>Tree</b>	<a href="#">duration</a>
<b>Range</b>	10 to 3600
<b>Units</b>	seconds
<b>Configurable</b>	True

## reboot



### Note:

This command is available for the following platforms:

- 7250 IXR-6
- 7250 IXR-10

<b>Description</b>	Reboot this component
<b>Context</b>	<a href="#">platform linecard slot number reboot</a>
<b>Tree</b>	<a href="#">reboot</a>
<b>Configurable</b>	True



## redundancy

**Note:**

This command is available for the following platforms:

- 7250 IXR-6
- 7250 IXR-10

<b>Description</b>	Top-level container for redundancy operational commands
<b>Context</b>	<a href="#">platform redundancy</a>
<b>Tree</b>	<a href="#">redundancy</a>
<b>Configurable</b>	True

## switchover

**Note:**

This command is available for the following platforms:

- 7250 IXR-6
- 7250 IXR-10

<b>Description</b>	Trigger a redundancy switchover to the other control module
<b>Context</b>	<a href="#">platform redundancy switchover</a>
<b>Tree</b>	<a href="#">switchover</a>
<b>Configurable</b>	True

## synchronize

**Note:**

This command is available for the following platforms:

- 7250 IXR-6
- 7250 IXR-10

<b>Description</b>	Top-level container for manual synchronization activities
<b>Context</b>	<a href="#">platform redundancy synchronize</a>
<b>Tree</b>	<a href="#">synchronize</a>
<b>Configurable</b>	True

## overlay


**Note:**

This command is available for the following platforms:

- 7250 IXR-6
- 7250 IXR-10

<b>Description</b>	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
<b>Context</b>	<a href="#">platform redundancy synchronize overlay</a>
<b>Tree</b>	<a href="#">overlay</a>
<b>Configurable</b>	True

## system


**Note:**

This command is available for the following platforms:

- 7250 IXR-6
- 7250 IXR-10

<b>Description</b>	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
<b>Context</b>	<a href="#">platform redundancy synchronize system</a>
<b>Tree</b>	<a href="#">system</a>
<b>Configurable</b>	True

## show-fabric-bandwidth


**Note:**

This command is available for the following platforms:

- 7250 IXR-6
- 7250 IXR-10

<b>Description</b>	Show fabric bandwidth
<b>Context</b>	<a href="#">platform show-fabric-bandwidth</a>

---

<b>Tree</b>	<a href="#">show-fabric-bandwidth</a>
<b>Configurable</b>	True

## 16 tools system

```

system
+ app-management
  + application name string
    + kill
    + quit
    + reload
    + restart
    + start
    + statistics
      + clear
    + stop
+ boot
+ cgroup
+ configuration
  + candidate name string
    + clear
  + checkpoint id (number | checkpoint-name)
    + clear
    + load
    + revert
  + confirmed-accept
  + confirmed-reject
  + 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
+ dhcp-server
  + network-instance name string
    + dhcpv4
      + statistics
      + clear
    + dhcpv6
      + statistics
      + clear
+ packet-trace-base64
+ interface string
+ packet binary
+ tls
  + generate-csr
    + common-name string
    + country string
    + email string
    + locality string
    + organization string
    + organization-unit string
    + state string
  + generate-self-signed
    + common-name string
    + country string

```

```

+ duration number
+ email string
+ locality string
+ organization string
+ organization-unit string
+ state string

```

## 16.1 system Descriptions

### system

<b>Description</b>	Enclosing container for system management.
<b>Context</b>	<a href="#">system</a>
<b>Tree</b>	<a href="#">system</a>
<b>Configurable</b>	True

### app-management

<b>Description</b>	Operational commands related to app-management
<b>Context</b>	<a href="#">system app-management</a>
<b>Tree</b>	<a href="#">app-management</a>
<b>Configurable</b>	True

### application *name string*

<b>Description</b>	List of all applications managed by the application manager
<b>Context</b>	<a href="#">system app-management application name string</a>
<b>Tree</b>	<a href="#">application</a>
<b>Configurable</b>	True

### name *string*

<b>Description</b>	Unique name of this application instance
<b>Context</b>	<a href="#">system app-management application name string</a>
<b>Configurable</b>	True

## kill

<b>Description</b>	Terminate the application instance ungracefully
<b>Context</b>	<a href="#">system app-management application name</a> <i>string</i> <b>kill</b>
<b>Tree</b>	<a href="#">kill</a>
<b>Configurable</b>	True

## quit

<b>Description</b>	Terminate the application instance, requesting it to core dump
<b>Context</b>	<a href="#">system app-management application name</a> <i>string</i> <b>quit</b>
<b>Tree</b>	<a href="#">quit</a>
<b>Configurable</b>	True

## reload

<b>Description</b>	Reload the configuration of the application instance
<b>Context</b>	<a href="#">system app-management application name</a> <i>string</i> <b>reload</b>
<b>Tree</b>	<a href="#">reload</a>
<b>Configurable</b>	True

## restart

<b>Description</b>	Restart the application instance
<b>Context</b>	<a href="#">system app-management application name</a> <i>string</i> <b>restart</b>
<b>Tree</b>	<a href="#">restart</a>
<b>Configurable</b>	True

## start

<b>Description</b>	Start the application instance
<b>Context</b>	<a href="#">system app-management application name</a> <i>string</i> <b>start</b>
<b>Tree</b>	<a href="#">start</a>
<b>Configurable</b>	True

## statistics

<b>Description</b>	Top-level grouping of operational commands related to application statistics
<b>Context</b>	<a href="#">system app-management application name</a> <i>string</i> <a href="#">statistics</a>
<b>Tree</b>	<a href="#">statistics</a>
<b>Configurable</b>	True

## clear

<b>Description</b>	Clear statistics for this application instance
<b>Context</b>	<a href="#">system app-management application name</a> <i>string</i> <a href="#">statistics</a> <a href="#">clear</a>
<b>Tree</b>	<a href="#">clear</a>
<b>Configurable</b>	True

## stop

<b>Description</b>	Terminate the application instance gracefully
<b>Context</b>	<a href="#">system app-management application name</a> <i>string</i> <a href="#">stop</a>
<b>Tree</b>	<a href="#">stop</a>
<b>Configurable</b>	True

## boot

<b>Description</b>	Top-level container for operational commands related to booting the system
<b>Context</b>	<a href="#">system boot</a>
<b>Tree</b>	<a href="#">boot</a>
<b>Configurable</b>	True

## cgroup

<b>Description</b>	Top-level container for query commands related to cgroup in the system
<b>Context</b>	<a href="#">system cgroup</a>
<b>Tree</b>	<a href="#">cgroup</a>
<b>Configurable</b>	True

**configuration**

<b>Description</b>	Top-level container for operational commands related to the system configuration
<b>Context</b>	<a href="#">system configuration</a>
<b>Tree</b>	<a href="#">configuration</a>
<b>Configurable</b>	True

**candidate name *string***

<b>Description</b>	List of configuration candidates currently active
<b>Context</b>	<a href="#">system configuration candidate name <i>string</i></a>
<b>Tree</b>	<a href="#">candidate</a>
<b>Configurable</b>	True

**name *string***

<b>Description</b>	The name of the candidate
<b>Context</b>	<a href="#">system configuration candidate name <i>string</i></a>
<b>String Length</b>	1 to 255
<b>Configurable</b>	True

**clear**

<b>Description</b>	Clear the candidate from the system, discarding any changes This results in any users currently in the candidate being dropped back to running mode.
<b>Context</b>	<a href="#">system configuration candidate name <i>string</i> clear</a>
<b>Tree</b>	<a href="#">clear</a>
<b>Configurable</b>	True

**checkpoint id (*number* | *checkpoint-name*)**

<b>Description</b>	List of current checkpoints present in the system
<b>Context</b>	<a href="#">system configuration checkpoint id (<i>number</i>   <i>checkpoint-name</i>)</a>
<b>Tree</b>	<a href="#">checkpoint</a>
<b>Configurable</b>	True



**id (*number* | *checkpoint-name*)**

<b>Description</b>	System generated ID, or operator defined name for the checkpoint
<b>Context</b>	<a href="#">system configuration checkpoint id (<i>number</i>   <i>checkpoint-name</i>)</a>
<b>Configurable</b>	True

**clear**

<b>Description</b>	Clear the checkpoint from the system
<b>Context</b>	<a href="#">system configuration checkpoint id (<i>number</i>   <i>checkpoint-name</i>)</a> <a href="#">clear</a>
<b>Tree</b>	<a href="#">clear</a>
<b>Configurable</b>	True

**load**

<b>Description</b>	Load candidate from saved checkpoint configuration
<b>Context</b>	<a href="#">system configuration checkpoint id (<i>number</i>   <i>checkpoint-name</i>)</a> <a href="#">load</a>
<b>Tree</b>	<a href="#">load</a>
<b>Configurable</b>	True

**revert**

<b>Description</b>	Revert running system configuration to the saved checkpoint configuration This functions as a load and commit action.
<b>Context</b>	<a href="#">system configuration checkpoint id (<i>number</i>   <i>checkpoint-name</i>)</a> <a href="#">revert</a>
<b>Tree</b>	<a href="#">revert</a>
<b>Configurable</b>	True

**confirmed-accept**

<b>Description</b>	Accepts an in progress commit and stops the confirmation timer
<b>Context</b>	<a href="#">system configuration confirmed-accept</a>
<b>Tree</b>	<a href="#">confirmed-accept</a>
<b>Configurable</b>	True

**confirmed-reject**

<b>Description</b>	Rejects an in progress commit and stops the confirmation timer
<b>Context</b>	<a href="#">system configuration confirmed-reject</a>
<b>Tree</b>	<a href="#">confirmed-reject</a>
<b>Configurable</b>	True

**generate-checkpoint**

<b>Description</b>	Generate a checkpoint point based on the current running configuration
<b>Context</b>	<a href="#">system configuration generate-checkpoint</a>
<b>Tree</b>	<a href="#">generate-checkpoint</a>
<b>Configurable</b>	True

**comment *string***

<b>Description</b>	User provided comment to associate with the checkpoint
<b>Context</b>	<a href="#">system configuration generate-checkpoint comment <i>string</i></a>
<b>Tree</b>	<a href="#">comment</a>
<b>Configurable</b>	True

**name *string***

<b>Description</b>	User provided name of the checkpoint
<b>Context</b>	<a href="#">system configuration generate-checkpoint name <i>string</i></a>
<b>Tree</b>	<a href="#">name</a>
<b>Configurable</b>	True

**rescue-clear**

<b>Description</b>	Remove rescue configuration
<b>Context</b>	<a href="#">system configuration rescue-clear</a>
<b>Tree</b>	<a href="#">rescue-clear</a>
<b>Configurable</b>	True

**rescue-save**

<b>Description</b>	Save current running configuration as rescue configuration - rescue-config.json
<b>Context</b>	<a href="#">system configuration rescue-save</a>
<b>Tree</b>	<a href="#">rescue-save</a>
<b>Configurable</b>	True

**save**

<b>Description</b>	Save current running configuration as initial (startup) configuration - config.json
<b>Context</b>	<a href="#">system configuration save</a>
<b>Tree</b>	<a href="#">save</a>
<b>Configurable</b>	True

**session id *number***

<b>Description</b>	List of configuration sessions currently active
<b>Context</b>	<a href="#">system configuration session id <i>number</i></a>
<b>Tree</b>	<a href="#">session</a>
<b>Configurable</b>	True

**id *number***

<b>Description</b>	System generated ID for the configuration session
<b>Context</b>	<a href="#">system configuration session id <i>number</i></a>
<b>Configurable</b>	True

**clear**

<b>Description</b>	Clear the session from the system, discarding any changes
<b>Context</b>	<a href="#">system configuration session id <i>number</i> clear</a>
<b>Tree</b>	<a href="#">clear</a>
<b>Configurable</b>	True

## upgrade

<b>Description</b>	Operational commands related to configuration upgrade
<b>Context</b>	<a href="#">system configuration upgrade</a>
<b>Tree</b>	<a href="#">upgrade</a>
<b>Configurable</b>	True

## checkpoint id (*number* | *checkpoint-name*)

<b>Description</b>	List of configuration checkpoints
<b>Context</b>	<a href="#">system configuration upgrade checkpoint id (<i>number</i>   <i>checkpoint-name</i>)</a>
<b>Tree</b>	<a href="#">checkpoint</a>
<b>Configurable</b>	True

## id (*number* | *checkpoint-name*)

<b>Description</b>	System generated ID, or operator defined name for the checkpoint
<b>Context</b>	<a href="#">system configuration upgrade checkpoint id (<i>number</i>   <i>checkpoint-name</i>)</a>
<b>Configurable</b>	True

## file string

<b>Description</b>	System file path to a json configuration file
<b>Context</b>	<a href="#">system configuration upgrade file string</a>
<b>Tree</b>	<a href="#">file</a>
<b>Configurable</b>	True

## rescue

<b>Description</b>	Rescue configuration
<b>Context</b>	<a href="#">system configuration upgrade rescue</a>
<b>Tree</b>	<a href="#">rescue</a>
<b>Configurable</b>	True

## startup

<b>Description</b>	Startup (initial) configuration
--------------------	---------------------------------

<b>Context</b>	<a href="#">system configuration upgrade startup</a>
<b>Tree</b>	<a href="#">startup</a>
<b>Configurable</b>	True

## dhcp-server

<b>Description</b>	Enable the dhcp-server context
<b>Context</b>	<a href="#">system dhcp-server</a>
<b>Tree</b>	<a href="#">dhcp-server</a>
<b>Configurable</b>	True

## network-instance *name string*

<b>Description</b>	List of network instances to run a dhcp server in
<b>Context</b>	<a href="#">system dhcp-server network-instance name string</a>
<b>Tree</b>	<a href="#">network-instance</a>
<b>Configurable</b>	True

## name *string*

<b>Description</b>	Network Instance
<b>Context</b>	<a href="#">system dhcp-server network-instance name string</a>
<b>String Length</b>	1 to 255
<b>Configurable</b>	True

## dhcpv4

<b>Description</b>	Enter the dhcpv4 context
<b>Context</b>	<a href="#">system dhcp-server network-instance name string dhcpv4</a>
<b>Tree</b>	<a href="#">dhcpv4</a>
<b>Configurable</b>	True

## statistics

<b>Description</b>	Enter the statistics context
<b>Context</b>	<a href="#">system dhcp-server network-instance name string dhcpv4 statistics</a>

<b>Tree</b>	<a href="#">statistics</a>
<b>Configurable</b>	True

**clear**

<b>Description</b>	Enter the clear context
<b>Context</b>	<a href="#">system dhcp-server network-instance name <i>string</i> dhcpv4 statistics clear</a>
<b>Tree</b>	<a href="#">clear</a>
<b>Configurable</b>	True

**dhcpv6**

<b>Description</b>	Enter the dhcpv6 context
<b>Context</b>	<a href="#">system dhcp-server network-instance name <i>string</i> dhcpv6</a>
<b>Tree</b>	<a href="#">dhcpv6</a>
<b>Configurable</b>	True

**statistics**

<b>Description</b>	Enter the statistics context
<b>Context</b>	<a href="#">system dhcp-server network-instance name <i>string</i> dhcpv6 statistics</a>
<b>Tree</b>	<a href="#">statistics</a>
<b>Configurable</b>	True

**clear**

<b>Description</b>	Enter the clear context
<b>Context</b>	<a href="#">system dhcp-server network-instance name <i>string</i> dhcpv6 statistics clear</a>
<b>Tree</b>	<a href="#">clear</a>
<b>Configurable</b>	True

**packet-trace-base64**

<b>Description</b>	Tools command to report the forwarding behavior for a specified test packet (packet specified in base64 format)
<b>Context</b>	<a href="#">system packet-trace-base64</a>
<b>Tree</b>	<a href="#">packet-trace-base64</a>

**Configurable** True

### interface *string*

**Description** References the configured name of the interface in which to inject the probe packet

**Context** [system packet-trace-base64 interface string](#)

**Tree** [interface](#)

**Configurable** True

### packet *binary*

**Description** Packet content encoded in base64 string format

**Context** [system packet-trace-base64 packet binary](#)

**Tree** [packet](#)

**Configurable** True

### tls

**Description** Top-level container for operational commands related to TLS

**Context** [system tls](#)

**Tree** [tls](#)

**Configurable** True

### 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

### 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.

<b>Context</b>	<a href="#">system tls generate-csr common-name</a> <i>string</i>
<b>Tree</b>	<a href="#">common-name</a>
<b>String Length</b>	1 to 64
<b>Configurable</b>	True

### **country *string***

<b>Description</b>	The country name to use for the certificate signing request The expected format is two characters long, e.g. 'US'.
<b>Context</b>	<a href="#">system tls generate-csr country</a> <i>string</i>
<b>Tree</b>	<a href="#">country</a>
<b>String Length</b>	2
<b>Default</b>	US
<b>Configurable</b>	True

### **email *string***

<b>Description</b>	The email address to use for the certificate signing request
<b>Context</b>	<a href="#">system tls generate-csr email</a> <i>string</i>
<b>Tree</b>	<a href="#">email</a>
<b>String Length</b>	1 to 255
<b>Configurable</b>	True

### **locality *string***

<b>Description</b>	The city or locality to use for the certificate signing request
<b>Context</b>	<a href="#">system tls generate-csr locality</a> <i>string</i>
<b>Tree</b>	<a href="#">locality</a>
<b>String Length</b>	1 to 255
<b>Configurable</b>	True

### **organization *string***

<b>Description</b>	The organization to use for the certificate signing request
--------------------	---



---

<b>Context</b>	<a href="#">system tls generate-csr organization</a> <i>string</i>
<b>Tree</b>	<a href="#">organization</a>
<b>String Length</b>	1 to 255
<b>Configurable</b>	True

### **organization-unit *string***

<b>Description</b>	The organization unit to use for the certificate signing request
<b>Context</b>	<a href="#">system tls generate-csr organization-unit</a> <i>string</i>
<b>Tree</b>	<a href="#">organization-unit</a>
<b>String Length</b>	1 to 255
<b>Configurable</b>	True

### **state *string***

<b>Description</b>	The state or province to use for the certificate signing request
<b>Context</b>	<a href="#">system tls generate-csr state</a> <i>string</i>
<b>Tree</b>	<a href="#">state</a>
<b>String Length</b>	1 to 255
<b>Configurable</b>	True

### **generate-self-signed**

<b>Description</b>	Generates a self signed certificate and key pair 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.
<b>Context</b>	<a href="#">system tls generate-self-signed</a>
<b>Tree</b>	<a href="#">generate-self-signed</a>
<b>Configurable</b>	True

### **common-name *string***

<b>Description</b>	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.
<b>Context</b>	<a href="#">system tls generate-self-signed common-name</a> <i>string</i>

<b>Tree</b>	<a href="#">common-name</a>
<b>String Length</b>	1 to 64
<b>Configurable</b>	True

**country *string***

<b>Description</b>	The country name to use for the certificate signing request The expected format is two characters long, e.g. 'US'.
<b>Context</b>	<a href="#">system tls generate-self-signed country string</a>
<b>Tree</b>	<a href="#">country</a>
<b>String Length</b>	2
<b>Default</b>	US
<b>Configurable</b>	True

**duration *number***

<b>Description</b>	The time in which the certificate is valid
<b>Context</b>	<a href="#">system tls generate-self-signed duration number</a>
<b>Tree</b>	<a href="#">duration</a>
<b>Range</b>	1 to 3650
<b>Default</b>	365
<b>Units</b>	days
<b>Configurable</b>	True

**email *string***

<b>Description</b>	The email address to use for the certificate signing request
<b>Context</b>	<a href="#">system tls generate-self-signed email string</a>
<b>Tree</b>	<a href="#">email</a>
<b>String Length</b>	1 to 255
<b>Configurable</b>	True

**locality *string***

<b>Description</b>	The city or locality to use for the certificate signing request
<b>Context</b>	<a href="#">system tls generate-self-signed locality string</a>

---

<b>Tree</b>	<a href="#">locality</a>
<b>String Length</b>	1 to 255
<b>Configurable</b>	True

### **organization *string***

<b>Description</b>	The organization to use for the certificate signing request
<b>Context</b>	<a href="#">system tls generate-self-signed organization <i>string</i></a>
<b>Tree</b>	<a href="#">organization</a>
<b>String Length</b>	1 to 255
<b>Configurable</b>	True

### **organization-unit *string***

<b>Description</b>	The organization unit to use for the certificate signing request
<b>Context</b>	<a href="#">system tls generate-self-signed organization-unit <i>string</i></a>
<b>Tree</b>	<a href="#">organization-unit</a>
<b>String Length</b>	1 to 255
<b>Configurable</b>	True

### **state *string***

<b>Description</b>	The state or province to use for the certificate signing request
<b>Context</b>	<a href="#">system tls generate-self-signed state <i>string</i></a>
<b>Tree</b>	<a href="#">state</a>
<b>String Length</b>	1 to 255
<b>Configurable</b>	True

# 17 tools tunnel

```
tunnel
+ vxlan-tunnel
+   statistics
+   clear
+ vtep address (ipv4-address | ipv6-address)
+   statistics
+   clear
```

## 17.1 tunnel Descriptions

### tunnel

<b>Description</b>	This model collects all config and state aspects of the tools-tunnel table in SRLinux.
<b>Context</b>	<a href="#">tunnel</a>
<b>Tree</b>	<a href="#">tunnel</a>
<b>Configurable</b>	True

### vxlan-tunnel



**Note:**

This command is available for the following platforms:

- 7220 IXR-D2
- 7220 IXR-D3
- 7220 IXR-D3L
- 7220 IXR-D2L

<b>Description</b>	Enter the vxlan-tunnel context
<b>Context</b>	<a href="#">tunnel vxlan-tunnel</a>
<b>Tree</b>	<a href="#">vxlan-tunnel</a>
<b>Configurable</b>	True

## statistics



### Note:

This command is available for the following platforms:

- 7220 IXR-D2
- 7220 IXR-D3
- 7220 IXR-D3L
- 7220 IXR-D2L

<b>Description</b>	Enter the statistics context
<b>Context</b>	<a href="#">tunnel vxlan-tunnel statistics</a>
<b>Tree</b>	<a href="#">statistics</a>
<b>Configurable</b>	True

## clear



### Note:

This command is available for the following platforms:

- 7220 IXR-D2
- 7220 IXR-D3
- 7220 IXR-D3L
- 7220 IXR-D2L

<b>Description</b>	Enter the clear context
<b>Context</b>	<a href="#">tunnel vxlan-tunnel statistics clear</a>
<b>Tree</b>	<a href="#">clear</a>
<b>Configurable</b>	True

## vtep [address](#) (*ipv4-address* | *ipv6-address*)



### Note:

This command is available for the following platforms:

- 7220 IXR-D2
- 7220 IXR-D3
- 7220 IXR-D3L
- 7220 IXR-D2L

<b>Description</b>	The IP address that identifies the remote VXLAN Termination Endpoint (VTEP).
<b>Context</b>	<a href="#">tunnel vxlan-tunnel vtep address</a> ( <i>ipv4-address</i>   <i>ipv6-address</i> )
<b>Tree</b>	<a href="#">vtep</a>
<b>Configurable</b>	True

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



**Note:**

This command is available for the following platforms:

- 7220 IXR-D2
- 7220 IXR-D3
- 7220 IXR-D3L
- 7220 IXR-D2L

<b>Description</b>	The IP address that identifies the remote VXLAN Termination Endpoint (VTEP).
<b>Context</b>	<a href="#">tunnel vxlan-tunnel vtep address</a> ( <i>ipv4-address</i>   <i>ipv6-address</i> )
<b>Configurable</b>	True

### statistics



**Note:**

This command is available for the following platforms:

- 7220 IXR-D2
- 7220 IXR-D3
- 7220 IXR-D3L
- 7220 IXR-D2L

<b>Description</b>	Enter the statistics context
<b>Context</b>	<a href="#">tunnel vxlan-tunnel vtep address</a> ( <i>ipv4-address</i>   <i>ipv6-address</i> ) <a href="#">statistics</a>
<b>Tree</b>	<a href="#">statistics</a>
<b>Configurable</b>	True

## clear

**Note:**

This command is available for the following platforms:

- 7220 IXR-D2
- 7220 IXR-D3
- 7220 IXR-D3L
- 7220 IXR-D2L

<b>Description</b>	Enter the clear context
<b>Context</b>	<a href="#">tunnel vxlan-tunnel vtep address (ipv4-address   ipv6-address) statistics</a> <a href="#">clear</a>
<b>Tree</b>	<a href="#">clear</a>
<b>Configurable</b>	True

## 18 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
- 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
+ source-ip keyword
+ ingress
+ vni number
- oper-down-reason keyword
- oper-state keyword

```



+ `type identityref`

## 18.1 tunnel-interface Descriptions

### tunnel-interface `name string`



**Note:**

This command is available for the following platforms:

- 7220 IXR-D2
- 7220 IXR-D3
- 7220 IXR-D3L
- 7220 IXR-D2L

<b>Description</b>	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.
<b>Context</b>	<code>tunnel-interface name string</code>
<b>Tree</b>	<code>tunnel-interface</code>
<b>Configurable</b>	True

### name `string`



**Note:**

This command is available for the following platforms:

- 7220 IXR-D2
- 7220 IXR-D3
- 7220 IXR-D3L
- 7220 IXR-D2L

<b>Description</b>	The name of the tunnel-interface. Valid options are: vxlan<N>, N=0..255
<b>Context</b>	<code>tunnel-interface name string</code>
<b>String Length</b>	6 to 8
<b>Configurable</b>	True

**vxlan-interface** *index number***Note:**

This command is available for the following platforms:

- 7220 IXR-D2
- 7220 IXR-D3
- 7220 IXR-D3L
- 7220 IXR-D2L

<b>Description</b>	The list of vxlan-interfaces.
<b>Context</b>	<a href="#">tunnel-interface name</a> <i>string</i> <a href="#">vxlan-interface index number</a>
<b>Tree</b>	<a href="#">vxlan-interface</a>
<b>Configurable</b>	True
<b>Max. Elements</b>	16384

**index number****Note:**

This command is available for the following platforms:

- 7220 IXR-D2
- 7220 IXR-D3
- 7220 IXR-D3L
- 7220 IXR-D2L

<b>Description</b>	The index of the vxlan-tunnel.
<b>Context</b>	<a href="#">tunnel-interface name</a> <i>string</i> <a href="#">vxlan-interface index number</a>
<b>Range</b>	0 to 99999999
<b>Configurable</b>	True

**bridge-table****Note:**

This command is available for the following platforms:

- 7220 IXR-D2
- 7220 IXR-D3
- 7220 IXR-D3L
- 7220 IXR-D2L

<b>Description</b>	Enable the bridge-table context
<b>Context</b>	<a href="#">tunnel-interface name</a> <i>string</i> <a href="#">vxlan-interface index</a> <i>number</i> <a href="#">bridge-table</a>
<b>Tree</b>	<a href="#">bridge-table</a>
<b>Configurable</b>	True

## multicast-destinations



### Note:

This command is available for the following platforms:

- 7220 IXR-D2
- 7220 IXR-D3
- 7220 IXR-D3L
- 7220 IXR-D2L

<b>Description</b>	Enter the multicast-destinations context
<b>Context</b>	<a href="#">tunnel-interface name</a> <i>string</i> <a href="#">vxlan-interface index</a> <i>number</i> <a href="#">bridge-table</a> <a href="#">multicast-destinations</a>
<b>Tree</b>	<a href="#">multicast-destinations</a>
<b>Configurable</b>	False

## destination [vtep](#) ([ipv4-address](#) | [ipv6-address](#)) [vni](#) *number*



### Note:

This command is available for the following platforms:

- 7220 IXR-D2
- 7220 IXR-D3
- 7220 IXR-D3L
- 7220 IXR-D2L

<b>Description</b>	Enter the destination list instance
<b>Context</b>	<a href="#">tunnel-interface name</a> <i>string</i> <a href="#">vxlan-interface index</a> <i>number</i> <a href="#">bridge-table</a> <a href="#">multicast-destinations</a> <a href="#">destination vtep</a> ( <a href="#">ipv4-address</a>   <a href="#">ipv6-address</a> ) <a href="#">vni</a> <i>number</i>
<b>Tree</b>	<a href="#">destination</a>
<b>Configurable</b>	False

**vtep (*ipv4-address* | *ipv6-address*)****Note:**

This command is available for the following platforms:

- 7220 IXR-D2
- 7220 IXR-D3
- 7220 IXR-D3L
- 7220 IXR-D2L

<b>Description</b>	The IP address that identifies the remote VXLAN Termination Endpoint (VTEP).
<b>Context</b>	<a href="#">tunnel-interface name</a> <i>string</i> <a href="#">vxlan-interface index number</a> <a href="#">bridge-table multicast-destinations destination</a> <a href="#">vtep (<i>ipv4-address</i>   <i>ipv6-address</i>)</a> <a href="#">vni number</a>
<b>Configurable</b>	False

**vni *number*****Note:**

This command is available for the following platforms:

- 7220 IXR-D2
- 7220 IXR-D3
- 7220 IXR-D3L
- 7220 IXR-D2L

<b>Description</b>	VXLAN Network Identifier of the destination.
<b>Context</b>	<a href="#">tunnel-interface name</a> <i>string</i> <a href="#">vxlan-interface index number</a> <a href="#">bridge-table multicast-destinations destination</a> <a href="#">vtep (<i>ipv4-address</i>   <i>ipv6-address</i>)</a> <a href="#">vni number</a>
<b>Range</b>	1 to 16777215
<b>Configurable</b>	False

## destination-index *number*

**Note:**

This command is available for the following platforms:

- 7220 IXR-D2
- 7220 IXR-D3
- 7220 IXR-D3L
- 7220 IXR-D2L

<b>Description</b>	A system-wide unique identifier of this vxlan destination object (system allocated).
<b>Context</b>	<a href="#">tunnel-interface name</a> <i>string</i> <a href="#">vxlan-interface index number</a> <a href="#">bridge-table multicast-destinations destination vtep</a> ( <i>ipv4-address   ipv6-address</i> ) <a href="#">vni number destination-index number</a>
<b>Tree</b>	<a href="#">destination-index</a>
<b>Configurable</b>	False

## multicast-forwarding *keyword*

**Note:**

This command is available for the following platforms:

- 7220 IXR-D2
- 7220 IXR-D3
- 7220 IXR-D3L
- 7220 IXR-D2L

<b>Description</b>	The type of multicast data forwarded by this vxlan destination.
<b>Context</b>	<a href="#">tunnel-interface name</a> <i>string</i> <a href="#">vxlan-interface index number</a> <a href="#">bridge-table multicast-destinations destination vtep</a> ( <i>ipv4-address   ipv6-address</i> ) <a href="#">vni number multicast-forwarding keyword</a>
<b>Tree</b>	<a href="#">multicast-forwarding</a>
<b>Options</b>	<ul style="list-style-type: none"> <li>• none</li> <li>• BUM</li> <li>• unknown-unicast</li> <li>• broadcast-mcast</li> </ul>
<b>Configurable</b>	False

## not-programmed-reason *keyword*



### Note:

This command is available for the following platforms:

- 7220 IXR-D2
- 7220 IXR-D3
- 7220 IXR-D3L
- 7220 IXR-D2L

<b>Description</b>	The reason why the destination is not programmed in the floodlist
<b>Context</b>	<a href="#">tunnel-interface name</a> <i>string</i> <a href="#">vxlan-interface index number</a> <a href="#">bridge-table multicast-destinations destination vtep</a> ( <i>ipv4-address</i>   <i>ipv6-address</i> ) <a href="#">vni number</a> <a href="#">not-programmed-reason keyword</a>
<b>Tree</b>	<a href="#">not-programmed-reason</a>
<b>Options</b>	<ul style="list-style-type: none"> <li>• no-destination-index</li> <li>• multicast-limit</li> </ul>
<b>Configurable</b>	False

## statistics



### Note:

This command is available for the following platforms:

- 7220 IXR-D2
- 7220 IXR-D3
- 7220 IXR-D3L
- 7220 IXR-D2L

<b>Description</b>	Enter the statistics context
<b>Context</b>	<a href="#">tunnel-interface name</a> <i>string</i> <a href="#">vxlan-interface index number</a> <a href="#">bridge-table statistics</a>
<b>Tree</b>	<a href="#">statistics</a>
<b>Configurable</b>	False

**active-entries *number*****Note:**

This command is available for the following platforms:

- 7220 IXR-D2
- 7220 IXR-D3
- 7220 IXR-D3L
- 7220 IXR-D2L

<b>Description</b>	The total number of entries that are active on the sub-interface.
<b>Context</b>	<a href="#">tunnel-interface name</a> <i>string</i> <a href="#">vxlan-interface index</a> <i>number</i> <a href="#">bridge-table statistics active-entries</a> <i>number</i>
<b>Tree</b>	<a href="#">active-entries</a>
<b>Default</b>	0
<b>Configurable</b>	False

**failed-entries *number*****Note:**

This command is available for the following platforms:

- 7220 IXR-D2
- 7220 IXR-D3
- 7220 IXR-D3L
- 7220 IXR-D2L

<b>Description</b>	The total number of macs, which have not been programmed on at least one slot
<b>Context</b>	<a href="#">tunnel-interface name</a> <i>string</i> <a href="#">vxlan-interface index</a> <i>number</i> <a href="#">bridge-table statistics failed-entries</a> <i>number</i>
<b>Tree</b>	<a href="#">failed-entries</a>
<b>Default</b>	0
<b>Configurable</b>	False

**mac-type** *type keyword***Note:**

This command is available for the following platforms:

- 7220 IXR-D2
- 7220 IXR-D3
- 7220 IXR-D3L
- 7220 IXR-D2L

<b>Description</b>	The type of the mac on the sub-interface.
<b>Context</b>	<a href="#">tunnel-interface name</a> <i>string</i> <a href="#">vxlan-interface index number</a> <a href="#">bridge-table statistics</a> <a href="#">mac-type type keyword</a>
<b>Tree</b>	<a href="#">mac-type</a>
<b>Configurable</b>	False

**type** *keyword***Note:**

This command is available for the following platforms:

- 7220 IXR-D2
- 7220 IXR-D3
- 7220 IXR-D3L
- 7220 IXR-D2L

<b>Description</b>	Enter the type context
<b>Context</b>	<a href="#">tunnel-interface name</a> <i>string</i> <a href="#">vxlan-interface index number</a> <a href="#">bridge-table statistics</a> <a href="#">mac-type type keyword</a>
<b>Options</b>	<ul style="list-style-type: none"> <li>• static</li> <li>• duplicate</li> <li>• learnt</li> <li>• irb-interface</li> <li>• evpn</li> <li>• evpn-static</li> <li>• irb-interface-anycast</li> <li>• proxy-anti-spoof</li> <li>• reserved</li> <li>• eth-cfm</li> </ul>
<b>Configurable</b>	False



**active-entries *number*****Note:**

This command is available for the following platforms:

- 7220 IXR-D2
- 7220 IXR-D3
- 7220 IXR-D3L
- 7220 IXR-D2L

<b>Description</b>	The total number of entries of this type on the sub-interface
<b>Context</b>	<a href="#">tunnel-interface name</a> <i>string</i> <a href="#">vxlan-interface index</a> <i>number</i> <a href="#">bridge-table statistics mac-type type</a> <i>keyword</i> <a href="#">active-entries</a> <i>number</i>
<b>Tree</b>	<a href="#">active-entries</a>
<b>Default</b>	0
<b>Configurable</b>	False

**failed-entries *number*****Note:**

This command is available for the following platforms:

- 7220 IXR-D2
- 7220 IXR-D3
- 7220 IXR-D3L
- 7220 IXR-D2L

<b>Description</b>	The total number of macs of this type, which have not been programmed on at least one slot
<b>Context</b>	<a href="#">tunnel-interface name</a> <i>string</i> <a href="#">vxlan-interface index</a> <i>number</i> <a href="#">bridge-table statistics mac-type type</a> <i>keyword</i> <a href="#">failed-entries</a> <i>number</i>
<b>Tree</b>	<a href="#">failed-entries</a>
<b>Default</b>	0
<b>Configurable</b>	False

**total-entries *number*****Note:**

This command is available for the following platforms:

- 7220 IXR-D2
- 7220 IXR-D3
- 7220 IXR-D3L
- 7220 IXR-D2L

<b>Description</b>	The total number of macs of this type, active and inactive, on the sub-interface.
<b>Context</b>	<a href="#">tunnel-interface name</a> <i>string</i> <a href="#">vxlan-interface index</a> <i>number</i> <a href="#">bridge-table statistics mac-type type</a> <i>keyword</i> <a href="#">total-entries</a> <i>number</i>
<b>Tree</b>	<a href="#">total-entries</a>
<b>Default</b>	0
<b>Configurable</b>	False

**total-entries *number*****Note:**

This command is available for the following platforms:

- 7220 IXR-D2
- 7220 IXR-D3
- 7220 IXR-D3L
- 7220 IXR-D2L

<b>Description</b>	The total number of macs, active and inactive, on the sub-interface.
<b>Context</b>	<a href="#">tunnel-interface name</a> <i>string</i> <a href="#">vxlan-interface index</a> <i>number</i> <a href="#">bridge-table statistics total-entries</a> <i>number</i>
<b>Tree</b>	<a href="#">total-entries</a>
<b>Default</b>	0
<b>Configurable</b>	False

## unicast-destinations



### Note:

This command is available for the following platforms:

- 7220 IXR-D2
- 7220 IXR-D3
- 7220 IXR-D3L
- 7220 IXR-D2L

<b>Description</b>	Enter the unicast-destinations context
<b>Context</b>	<a href="#">tunnel-interface name</a> <i>string</i> <a href="#">vxlan-interface index number</a> <a href="#">bridge-table unicast-destinations</a>
<b>Tree</b>	<a href="#">unicast-destinations</a>
<b>Configurable</b>	False

## destination [vtep](#) ([ipv4-address](#) | [ipv6-address](#)) [vni number](#)



### Note:

This command is available for the following platforms:

- 7220 IXR-D2
- 7220 IXR-D3
- 7220 IXR-D3L
- 7220 IXR-D2L

<b>Description</b>	Enter the destination list instance
<b>Context</b>	<a href="#">tunnel-interface name</a> <i>string</i> <a href="#">vxlan-interface index number</a> <a href="#">bridge-table unicast-destinations destination vtep</a> ( <a href="#">ipv4-address</a>   <a href="#">ipv6-address</a> ) <a href="#">vni number</a>
<b>Tree</b>	<a href="#">destination</a>
<b>Configurable</b>	False

**vtep (*ipv4-address* | *ipv6-address*)****Note:**

This command is available for the following platforms:

- 7220 IXR-D2
- 7220 IXR-D3
- 7220 IXR-D3L
- 7220 IXR-D2L

<b>Description</b>	The IP address that identifies the remote VXLAN Termination Endpoint (VTEP).
<b>Context</b>	<a href="#">tunnel-interface name</a> <i>string</i> <a href="#">vxlan-interface index</a> <i>number</i> <a href="#">bridge-table unicast-destinations destination</a> <a href="#">vtep (<i>ipv4-address</i>   <i>ipv6-address</i>)</a> <a href="#">vni number</a>
<b>Configurable</b>	False

**vni *number*****Note:**

This command is available for the following platforms:

- 7220 IXR-D2
- 7220 IXR-D3
- 7220 IXR-D3L
- 7220 IXR-D2L

<b>Description</b>	VXLAN Network Identifier of the destination.
<b>Context</b>	<a href="#">tunnel-interface name</a> <i>string</i> <a href="#">vxlan-interface index</a> <i>number</i> <a href="#">bridge-table unicast-destinations destination</a> <a href="#">vtep (<i>ipv4-address</i>   <i>ipv6-address</i>)</a> <a href="#">vni number</a>
<b>Range</b>	1 to 16777215
<b>Configurable</b>	False

**destination-index *number*****Note:**

This command is available for the following platforms:

- 7220 IXR-D2
- 7220 IXR-D3
- 7220 IXR-D3L
- 7220 IXR-D2L

<b>Description</b>	A system-wide unique identifier of this vxlan destination object (system allocated).
<b>Context</b>	<a href="#">tunnel-interface name</a> <i>string</i> <a href="#">vxlan-interface index number</a> <a href="#">bridge-table unicast-destinations destination vtep</a> ( <i>ipv4-address</i>   <i>ipv6-address</i> ) <a href="#">vni number</a> <a href="#">destination-index number</a>
<b>Tree</b>	<a href="#">destination-index</a>
<b>Configurable</b>	False

**mac-table****Note:**

This command is available for the following platforms:

- 7220 IXR-D2
- 7220 IXR-D3
- 7220 IXR-D3L
- 7220 IXR-D2L

<b>Description</b>	Enter the mac-table context
<b>Context</b>	<a href="#">tunnel-interface name</a> <i>string</i> <a href="#">vxlan-interface index number</a> <a href="#">bridge-table unicast-destinations destination vtep</a> ( <i>ipv4-address</i>   <i>ipv6-address</i> ) <a href="#">vni number</a> <a href="#">mac-table</a>
<b>Tree</b>	<a href="#">mac-table</a>
<b>Configurable</b>	False

## mac address *string*

**Note:**

This command is available for the following platforms:

- 7220 IXR-D2
- 7220 IXR-D3
- 7220 IXR-D3L
- 7220 IXR-D2L

<b>Description</b>	MACs learnt on the bridging instance
<b>Context</b>	<a href="#">tunnel-interface name</a> <i>string</i> <a href="#">vxlan-interface index number</a> <a href="#">bridge-table unicast-destinations destination vtep</a> ( <a href="#">ipv4-address</a>   <a href="#">ipv6-address</a> ) <a href="#">vni number</a> <a href="#">mac-table</a> <a href="#">mac address</a> <i>string</i>
<b>Tree</b>	<a href="#">mac</a>
<b>Configurable</b>	False

## address *string*

**Note:**

This command is available for the following platforms:

- 7220 IXR-D2
- 7220 IXR-D3
- 7220 IXR-D3L
- 7220 IXR-D2L

<b>Description</b>	Enter the address context
<b>Context</b>	<a href="#">tunnel-interface name</a> <i>string</i> <a href="#">vxlan-interface index number</a> <a href="#">bridge-table unicast-destinations destination vtep</a> ( <a href="#">ipv4-address</a>   <a href="#">ipv6-address</a> ) <a href="#">vni number</a> <a href="#">mac-table</a> <a href="#">mac address</a> <i>string</i>
<b>Configurable</b>	False

**failed-slots *number*****Note:**

This command is available for the following platforms:

- 7220 IXR-D2
- 7220 IXR-D3
- 7220 IXR-D3L
- 7220 IXR-D2L

<b>Description</b>	The list of slot IDs corresponding to the linecards that did not successfully program the mac
<b>Context</b>	<a href="#">tunnel-interface name</a> <i>string</i> <a href="#">vxlan-interface index</a> <i>number</i> <a href="#">bridge-table unicast-destinations destination vtep</a> ( <i>ipv4-address</i>   <i>ipv6-address</i> ) <a href="#">vni number</a> <a href="#">mac-table mac address</a> <i>string</i> <b>failed-slots</b> <i>number</i>
<b>Tree</b>	<a href="#">failed-slots</a>
<b>Range</b>	1 to 8
<b>Configurable</b>	False

**last-update *string*****Note:**

This command is available for the following platforms:

- 7220 IXR-D2
- 7220 IXR-D3
- 7220 IXR-D3L
- 7220 IXR-D2L

<b>Description</b>	The date and time of the last update of this mac
<b>Context</b>	<a href="#">tunnel-interface name</a> <i>string</i> <a href="#">vxlan-interface index</a> <i>number</i> <a href="#">bridge-table unicast-destinations destination vtep</a> ( <i>ipv4-address</i>   <i>ipv6-address</i> ) <a href="#">vni number</a> <a href="#">mac-table mac address</a> <i>string</i> <b>last-update</b> <i>string</i>
<b>Tree</b>	<a href="#">last-update</a>
<b>String Length</b>	20 to 32
<b>Configurable</b>	False

**not-programmed-reason *keyword*****Note:**

This command is available for the following platforms:

- 7220 IXR-D2
- 7220 IXR-D3
- 7220 IXR-D3L
- 7220 IXR-D2L

<b>Description</b>	The reason why the mac is not programmed
<b>Context</b>	<a href="#">tunnel-interface name</a> <i>string</i> <a href="#">vxlan-interface index</a> <i>number</i> <a href="#">bridge-table unicast-destinations destination vtep</a> ( <i>ipv4-address</i>   <i>ipv6-address</i> ) <a href="#">vni number</a> <a href="#">mac-table mac address</a> <i>string</i> <b>not-programmed-reason</b> <i>keyword</i>
<b>Tree</b>	<a href="#">not-programmed-reason</a>
<b>Options</b>	<ul style="list-style-type: none"> <li>• mac-limit</li> <li>• failed-on-slots</li> <li>• no-destination-index</li> <li>• reserved</li> </ul>
<b>Configurable</b>	False

**type *keyword*****Note:**

This command is available for the following platforms:

- 7220 IXR-D2
- 7220 IXR-D3
- 7220 IXR-D3L
- 7220 IXR-D2L

<b>Description</b>	The type of the mac installed in the fib.
<b>Context</b>	<a href="#">tunnel-interface name</a> <i>string</i> <a href="#">vxlan-interface index</a> <i>number</i> <a href="#">bridge-table unicast-destinations destination vtep</a> ( <i>ipv4-address</i>   <i>ipv6-address</i> ) <a href="#">vni number</a> <a href="#">mac-table mac address</a> <i>string</i> <b>type</b> <i>keyword</i>
<b>Tree</b>	<a href="#">type</a>
<b>Options</b>	<ul style="list-style-type: none"> <li>• static</li> <li>• duplicate</li> <li>• learnt</li> <li>• irb-interface</li> </ul>



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

**Configurable** False

## statistics



### Note:

This command is available for the following platforms:

- 7220 IXR-D2
- 7220 IXR-D3
- 7220 IXR-D3L
- 7220 IXR-D2L

**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

## active-entries *number*



### Note:

This command is available for the following platforms:

- 7220 IXR-D2
- 7220 IXR-D3
- 7220 IXR-D3L
- 7220 IXR-D2L

**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](#)

<b>Default</b>	0
<b>Configurable</b>	False

### failed-entries *number*



**Note:**

This command is available for the following platforms:

- 7220 IXR-D2
- 7220 IXR-D3
- 7220 IXR-D3L
- 7220 IXR-D2L

<b>Description</b>	The total number of macs, which have not been programmed on atleast one slot
<b>Context</b>	<a href="#">tunnel-interface name</a> <i>string</i> <a href="#">vxlan-interface index</a> <i>number</i> <a href="#">bridge-table unicast-destinations destination vtep</a> ( <i>ipv4-address</i>   <i>ipv6-address</i> ) <a href="#">vni number</a> <a href="#">statistics failed-entries</a> <i>number</i>
<b>Tree</b>	<a href="#">failed-entries</a>
<b>Default</b>	0
<b>Configurable</b>	False

### mac-type *type keyword*



**Note:**

This command is available for the following platforms:

- 7220 IXR-D2
- 7220 IXR-D3
- 7220 IXR-D3L
- 7220 IXR-D2L

<b>Description</b>	The type of the MAC on the sub-interface.
<b>Context</b>	<a href="#">tunnel-interface name</a> <i>string</i> <a href="#">vxlan-interface index</a> <i>number</i> <a href="#">bridge-table unicast-destinations destination vtep</a> ( <i>ipv4-address</i>   <i>ipv6-address</i> ) <a href="#">vni number</a> <a href="#">statistics mac-type</a> <i>type keyword</i>
<b>Tree</b>	<a href="#">mac-type</a>
<b>Configurable</b>	False

**type keyword****Note:**

This command is available for the following platforms:

- 7220 IXR-D2
- 7220 IXR-D3
- 7220 IXR-D3L
- 7220 IXR-D2L

<b>Description</b>	Enter the type context
<b>Context</b>	<a href="#">tunnel-interface name</a> <i>string</i> <a href="#">vxlan-interface index number</a> <a href="#">bridge-table unicast-destinations destination vtep</a> ( <i>ipv4-address   ipv6-address</i> ) <a href="#">vni number</a> <a href="#">statistics mac-type type keyword</a>
<b>Options</b>	<ul style="list-style-type: none"> <li>• static</li> <li>• duplicate</li> <li>• learnt</li> <li>• irb-interface</li> <li>• evpn</li> <li>• evpn-static</li> <li>• irb-interface-anycast</li> <li>• proxy-anti-spoof</li> <li>• reserved</li> <li>• eth-cfm</li> </ul>
<b>Configurable</b>	False

**active-entries number****Note:**

This command is available for the following platforms:

- 7220 IXR-D2
- 7220 IXR-D3
- 7220 IXR-D3L
- 7220 IXR-D2L

<b>Description</b>	The total number of entries of this type on the sub-interface
<b>Context</b>	<a href="#">tunnel-interface name</a> <i>string</i> <a href="#">vxlan-interface index number</a> <a href="#">bridge-table unicast-destinations destination vtep</a> ( <i>ipv4-address   ipv6-address</i> ) <a href="#">vni number</a> <a href="#">statistics mac-type type keyword</a> <a href="#">active-entries number</a>

<b>Tree</b>	<a href="#">active-entries</a>
<b>Default</b>	0
<b>Configurable</b>	False

### failed-entries *number*



**Note:**

This command is available for the following platforms:

- 7220 IXR-D2
- 7220 IXR-D3
- 7220 IXR-D3L
- 7220 IXR-D2L

<b>Description</b>	The total number of macs of this type, which have not been programmed on atleast one slot
<b>Context</b>	<a href="#">tunnel-interface name</a> <i>string</i> <a href="#">vxlan-interface index number</a> <a href="#">bridge-table unicast-destinations destination vtep</a> ( <i>ipv4-address   ipv6-address</i> ) <a href="#">vni number</a> <a href="#">statistics mac-type type keyword</a> <a href="#">failed-entries number</a>
<b>Tree</b>	<a href="#">failed-entries</a>
<b>Default</b>	0
<b>Configurable</b>	False

### total-entries *number*



**Note:**

This command is available for the following platforms:

- 7220 IXR-D2
- 7220 IXR-D3
- 7220 IXR-D3L
- 7220 IXR-D2L

<b>Description</b>	The total number of macs of this type , active and inactive, on the sub-interface.
<b>Context</b>	<a href="#">tunnel-interface name</a> <i>string</i> <a href="#">vxlan-interface index number</a> <a href="#">bridge-table unicast-destinations destination vtep</a> ( <i>ipv4-address   ipv6-address</i> ) <a href="#">vni number</a> <a href="#">statistics mac-type type keyword</a> <a href="#">total-entries number</a>
<b>Tree</b>	<a href="#">total-entries</a>
<b>Default</b>	0

**Configurable** False

### total-entries *number*



**Note:**

This command is available for the following platforms:

- 7220 IXR-D2
- 7220 IXR-D3
- 7220 IXR-D3L
- 7220 IXR-D2L

<b>Description</b>	The total number of macs, active and inactive, on the sub-interface.
<b>Context</b>	<a href="#">tunnel-interface name</a> <i>string</i> <a href="#">vxlan-interface index</a> <i>number</i> <a href="#">bridge-table unicast-destinations destination vtep</a> ( <i>ipv4-address</i>   <i>ipv6-address</i> ) <a href="#">vni number</a> <a href="#">statistics total-entries</a> <i>number</i>
<b>Tree</b>	<a href="#">total-entries</a>
<b>Default</b>	0
<b>Configurable</b>	False

### es-destination *esi string*



**Note:**

This command is available for the following platforms:

- 7220 IXR-D2
- 7220 IXR-D3
- 7220 IXR-D3L
- 7220 IXR-D2L

<b>Description</b>	Enter the es-destination list instance
<b>Context</b>	<a href="#">tunnel-interface name</a> <i>string</i> <a href="#">vxlan-interface index</a> <i>number</i> <a href="#">bridge-table unicast-destinations es-destination esi</a> <i>string</i>
<b>Tree</b>	<a href="#">es-destination</a>
<b>Configurable</b>	False

**esi string****Note:**

This command is available for the following platforms:

- 7220 IXR-D2
- 7220 IXR-D3
- 7220 IXR-D3L
- 7220 IXR-D2L

<b>Description</b>	The 10-byte Ethernet Segment Identifier of the ethernet segment. ESI-0 or MAX-ESI values are not allowed.
<b>Context</b>	<a href="#">tunnel-interface name</a> <i>string</i> <a href="#">vxlan-interface index</a> <i>number</i> <a href="#">bridge-table unicast-destinations es-destination esi</a> <i>string</i>
<b>Configurable</b>	False

**destination-index number****Note:**

This command is available for the following platforms:

- 7220 IXR-D2
- 7220 IXR-D3
- 7220 IXR-D3L
- 7220 IXR-D2L

<b>Description</b>	A system-wide unique identifier of this vxlan destination object (system allocated).
<b>Context</b>	<a href="#">tunnel-interface name</a> <i>string</i> <a href="#">vxlan-interface index</a> <i>number</i> <a href="#">bridge-table unicast-destinations es-destination esi</a> <i>string</i> <a href="#">destination-index</a> <i>number</i>
<b>Tree</b>	<a href="#">destination-index</a>
<b>Configurable</b>	False

## mac-table



### Note:

This command is available for the following platforms:

- 7220 IXR-D2
- 7220 IXR-D3
- 7220 IXR-D3L
- 7220 IXR-D2L

<b>Description</b>	Enter the mac-table context
<b>Context</b>	<a href="#">tunnel-interface name</a> <i>string</i> <a href="#">vxlan-interface index number</a> <a href="#">bridge-table unicast-destinations es-destination esi</a> <i>string</i> <a href="#">mac-table</a>
<b>Tree</b>	<a href="#">mac-table</a>
<b>Configurable</b>	False

## mac address *string*



### Note:

This command is available for the following platforms:

- 7220 IXR-D2
- 7220 IXR-D3
- 7220 IXR-D3L
- 7220 IXR-D2L

<b>Description</b>	MACs learnt on the bridging instance
<b>Context</b>	<a href="#">tunnel-interface name</a> <i>string</i> <a href="#">vxlan-interface index number</a> <a href="#">bridge-table unicast-destinations es-destination esi</a> <i>string</i> <a href="#">mac-table mac address</a> <i>string</i>
<b>Tree</b>	<a href="#">mac</a>
<b>Configurable</b>	False

**address *string*****Note:**

This command is available for the following platforms:

- 7220 IXR-D2
- 7220 IXR-D3
- 7220 IXR-D3L
- 7220 IXR-D2L

<b>Description</b>	Enter the address context
<b>Context</b>	<a href="#">tunnel-interface name <i>string</i></a> <a href="#">vxlan-interface index <i>number</i></a> <a href="#">bridge-table unicast-destinations es-destination esi <i>string</i></a> <a href="#">mac-table mac address <i>string</i></a>
<b>Configurable</b>	False

**failed-slots *number*****Note:**

This command is available for the following platforms:

- 7220 IXR-D2
- 7220 IXR-D3
- 7220 IXR-D3L
- 7220 IXR-D2L

<b>Description</b>	The list of slot IDs corresponding to the linecards that did not successfully program the mac
<b>Context</b>	<a href="#">tunnel-interface name <i>string</i></a> <a href="#">vxlan-interface index <i>number</i></a> <a href="#">bridge-table unicast-destinations es-destination esi <i>string</i></a> <a href="#">mac-table mac address <i>string</i></a> <a href="#">failed-slots <i>number</i></a>
<b>Tree</b>	<a href="#">failed-slots</a>
<b>Range</b>	1 to 8
<b>Configurable</b>	False



## last-update *string*

**Note:**

This command is available for the following platforms:

- 7220 IXR-D2
- 7220 IXR-D3
- 7220 IXR-D3L
- 7220 IXR-D2L

<b>Description</b>	The date and time of the last update of this mac
<b>Context</b>	<a href="#">tunnel-interface name</a> <i>string</i> <a href="#">vxlan-interface index</a> <i>number</i> <a href="#">bridge-table unicast-destinations es-destination esi</a> <i>string</i> <a href="#">mac-table mac address</a> <i>string</i> <a href="#">last-update</a> <i>string</i>
<b>Tree</b>	<a href="#">last-update</a>
<b>String Length</b>	20 to 32
<b>Configurable</b>	False

## not-programmed-reason *keyword*

**Note:**

This command is available for the following platforms:

- 7220 IXR-D2
- 7220 IXR-D3
- 7220 IXR-D3L
- 7220 IXR-D2L

<b>Description</b>	The reason why the mac is not programmed
<b>Context</b>	<a href="#">tunnel-interface name</a> <i>string</i> <a href="#">vxlan-interface index</a> <i>number</i> <a href="#">bridge-table unicast-destinations es-destination esi</a> <i>string</i> <a href="#">mac-table mac address</a> <i>string</i> <a href="#">not-programmed-reason</a> <i>keyword</i>
<b>Tree</b>	<a href="#">not-programmed-reason</a>
<b>Options</b>	<ul style="list-style-type: none"> <li>• mac-limit</li> <li>• failed-on-slots</li> <li>• no-destination-index</li> <li>• reserved</li> </ul>
<b>Configurable</b>	False

## type keyword

**Note:**

This command is available for the following platforms:

- 7220 IXR-D2
- 7220 IXR-D3
- 7220 IXR-D3L
- 7220 IXR-D2L

<b>Description</b>	The type of the MAC installed in the fib.
<b>Context</b>	<a href="#">tunnel-interface name</a> <i>string</i> <a href="#">vxlan-interface index</a> <i>number</i> <a href="#">bridge-table unicast-destinations es-destination esi</a> <i>string</i> <a href="#">mac-table mac address</a> <i>string</i> <b>type</b> <i>keyword</i>
<b>Tree</b>	<a href="#">type</a>
<b>Options</b>	<ul style="list-style-type: none"> <li>• static</li> <li>• duplicate</li> <li>• learnt</li> <li>• irb-interface</li> <li>• evpn</li> <li>• evpn-static</li> <li>• irb-interface-anycast</li> <li>• proxy-anti-spoof</li> <li>• reserved</li> <li>• eth-cfm</li> </ul>
<b>Configurable</b>	False

## statistics

**Note:**

This command is available for the following platforms:

- 7220 IXR-D2
- 7220 IXR-D3
- 7220 IXR-D3L
- 7220 IXR-D2L

<b>Description</b>	Enter the statistics context
<b>Context</b>	<a href="#">tunnel-interface name</a> <i>string</i> <a href="#">vxlan-interface index</a> <i>number</i> <a href="#">bridge-table unicast-destinations es-destination esi</a> <i>string</i> <b>statistics</b>

<b>Tree</b>	<a href="#">statistics</a>
<b>Configurable</b>	False

### active-entries *number*



**Note:**

This command is available for the following platforms:

- 7220 IXR-D2
- 7220 IXR-D3
- 7220 IXR-D3L
- 7220 IXR-D2L

<b>Description</b>	The total number of entries that are active on the sub-interface.
<b>Context</b>	<a href="#">tunnel-interface name</a> <i>string</i> <a href="#">vxlan-interface index</a> <i>number</i> <a href="#">bridge-table unicast-destinations es-destination esi</a> <i>string</i> <a href="#">statistics active-entries</a> <i>number</i>
<b>Tree</b>	<a href="#">active-entries</a>
<b>Default</b>	0
<b>Configurable</b>	False

### failed-entries *number*



**Note:**

This command is available for the following platforms:

- 7220 IXR-D2
- 7220 IXR-D3
- 7220 IXR-D3L
- 7220 IXR-D2L

<b>Description</b>	The total number of macs, which have not been programmed on atleast one slot
<b>Context</b>	<a href="#">tunnel-interface name</a> <i>string</i> <a href="#">vxlan-interface index</a> <i>number</i> <a href="#">bridge-table unicast-destinations es-destination esi</a> <i>string</i> <a href="#">statistics failed-entries</a> <i>number</i>
<b>Tree</b>	<a href="#">failed-entries</a>
<b>Default</b>	0
<b>Configurable</b>	False

**mac-type** *type keyword***Note:**

This command is available for the following platforms:

- 7220 IXR-D2
- 7220 IXR-D3
- 7220 IXR-D3L
- 7220 IXR-D2L

<b>Description</b>	The type of the MAC on the sub-interface.
<b>Context</b>	<a href="#">tunnel-interface name</a> <i>string</i> <a href="#">vxlan-interface index number</a> <a href="#">bridge-table unicast-destinations es-destination esi</a> <i>string</i> <a href="#">statistics mac-type type keyword</a>
<b>Tree</b>	<a href="#">mac-type</a>
<b>Configurable</b>	False

**type** *keyword***Note:**

This command is available for the following platforms:

- 7220 IXR-D2
- 7220 IXR-D3
- 7220 IXR-D3L
- 7220 IXR-D2L

<b>Description</b>	Enter the type context
<b>Context</b>	<a href="#">tunnel-interface name</a> <i>string</i> <a href="#">vxlan-interface index number</a> <a href="#">bridge-table unicast-destinations es-destination esi</a> <i>string</i> <a href="#">statistics mac-type type keyword</a>
<b>Options</b>	<ul style="list-style-type: none"> <li>• static</li> <li>• duplicate</li> <li>• learnt</li> <li>• irb-interface</li> <li>• evpn</li> <li>• evpn-static</li> <li>• irb-interface-anycast</li> <li>• proxy-anti-spoof</li> <li>• reserved</li> </ul>

	• eth-cfm
<b>Configurable</b>	False

### active-entries *number*



**Note:**

This command is available for the following platforms:

- 7220 IXR-D2
- 7220 IXR-D3
- 7220 IXR-D3L
- 7220 IXR-D2L

<b>Description</b>	The total number of entries of this type on the sub-interface
<b>Context</b>	<a href="#">tunnel-interface name</a> <i>string</i> <a href="#">vxlan-interface index</a> <i>number</i> <a href="#">bridge-table unicast-destinations es-destination esi</a> <i>string</i> <a href="#">statistics mac-type type keyword active-entries</a> <i>number</i>
<b>Tree</b>	<a href="#">active-entries</a>
<b>Default</b>	0
<b>Configurable</b>	False

### failed-entries *number*



**Note:**

This command is available for the following platforms:

- 7220 IXR-D2
- 7220 IXR-D3
- 7220 IXR-D3L
- 7220 IXR-D2L

<b>Description</b>	The total number of macs of this type, which have not been programmed on atleast one slot
<b>Context</b>	<a href="#">tunnel-interface name</a> <i>string</i> <a href="#">vxlan-interface index</a> <i>number</i> <a href="#">bridge-table unicast-destinations es-destination esi</a> <i>string</i> <a href="#">statistics mac-type type keyword failed-entries</a> <i>number</i>
<b>Tree</b>	<a href="#">failed-entries</a>
<b>Default</b>	0
<b>Configurable</b>	False

**total-entries *number*****Note:**

This command is available for the following platforms:

- 7220 IXR-D2
- 7220 IXR-D3
- 7220 IXR-D3L
- 7220 IXR-D2L

<b>Description</b>	The total number of macs of this type , active and inactive, on the sub-interface.
<b>Context</b>	<a href="#">tunnel-interface name</a> <i>string</i> <a href="#">vxlan-interface index</a> <i>number</i> <a href="#">bridge-table unicast-destinations es-destination esi</a> <i>string</i> <a href="#">statistics mac-type type keyword total-entries</a> <i>number</i>
<b>Tree</b>	<a href="#">total-entries</a>
<b>Default</b>	0
<b>Configurable</b>	False

**total-entries *number*****Note:**

This command is available for the following platforms:

- 7220 IXR-D2
- 7220 IXR-D3
- 7220 IXR-D3L
- 7220 IXR-D2L

<b>Description</b>	The total number of macs, active and inactive, on the sub-interface.
<b>Context</b>	<a href="#">tunnel-interface name</a> <i>string</i> <a href="#">vxlan-interface index</a> <i>number</i> <a href="#">bridge-table unicast-destinations es-destination esi</a> <i>string</i> <a href="#">statistics total-entries</a> <i>number</i>
<b>Tree</b>	<a href="#">total-entries</a>
<b>Default</b>	0
<b>Configurable</b>	False

**vtep address (ipv4-address | ipv6-address) vni number****Note:**

This command is available for the following platforms:

- 7220 IXR-D2
- 7220 IXR-D3
- 7220 IXR-D3L
- 7220 IXR-D2L

<b>Description</b>	Add a list entry for vtep
<b>Context</b>	<a href="#">tunnel-interface name</a> <i>string</i> <a href="#">vxlan-interface index number</a> <a href="#">bridge-table unicast-destinations es-destination esi</a> <i>string</i> <a href="#">vtep address (ipv4-address   ipv6-address)</a> <i>vni number</i>
<b>Tree</b>	<a href="#">vtep</a>
<b>Configurable</b>	False

**address (ipv4-address | ipv6-address)****Note:**

This command is available for the following platforms:

- 7220 IXR-D2
- 7220 IXR-D3
- 7220 IXR-D3L
- 7220 IXR-D2L

<b>Description</b>	The IP address that identifies the remote VXLAN Termination Endpoint (VTEP).
<b>Context</b>	<a href="#">tunnel-interface name</a> <i>string</i> <a href="#">vxlan-interface index number</a> <a href="#">bridge-table unicast-destinations es-destination esi</a> <i>string</i> <a href="#">vtep address (ipv4-address   ipv6-address)</a> <i>vni number</i>
<b>Configurable</b>	False

**vni number****Note:**

This command is available for the following platforms:

- 7220 IXR-D2
- 7220 IXR-D3
- 7220 IXR-D3L
- 7220 IXR-D2L

<b>Description</b>	VXLAN Network Identifier of the destination.
<b>Context</b>	<a href="#">tunnel-interface name</a> <i>string</i> <a href="#">vxlan-interface index number</a> <a href="#">bridge-table unicast-destinations es-destination esi</a> <i>string</i> <a href="#">vtep address (ipv4-address   ipv6-address)</a> <a href="#">vni number</a>
<b>Range</b>	1 to 16777215
<b>Configurable</b>	False

**egress****Note:**

This command is available for the following platforms:

- 7220 IXR-D2
- 7220 IXR-D3
- 7220 IXR-D3L
- 7220 IXR-D2L

<b>Description</b>	Enter the egress context
<b>Context</b>	<a href="#">tunnel-interface name</a> <i>string</i> <a href="#">vxlan-interface index number</a> <a href="#">egress</a>
<b>Tree</b>	<a href="#">egress</a>
<b>Configurable</b>	True



## inner-ethernet-header



### Note:

This command is available for the following platforms:

- 7220 IXR-D2
- 7220 IXR-D3
- 7220 IXR-D3L
- 7220 IXR-D2L

<b>Description</b>	Parameters of the inner VXLAN ethernet payload when the VXLAN tunnel is used in an ip-vrf.
<b>Context</b>	<a href="#">tunnel-interface name</a> <i>string</i> <a href="#">vxlan-interface index</a> <i>number</i> <a href="#">egress inner-ethernet-header</a>
<b>Tree</b>	<a href="#">inner-ethernet-header</a>
<b>Configurable</b>	True

## source-mac *keyword*



### Note:

This command is available for the following platforms:

- 7220 IXR-D2
- 7220 IXR-D3
- 7220 IXR-D3L
- 7220 IXR-D2L

<b>Description</b>	VXLAN inner ethernet source mac-address. Present when the VXLAN tunnel is associated with a ip-vrf network-instance.
<b>Context</b>	<a href="#">tunnel-interface name</a> <i>string</i> <a href="#">vxlan-interface index</a> <i>number</i> <a href="#">egress inner-ethernet-header</a> <a href="#">source-mac</a> <i>keyword</i>
<b>Tree</b>	<a href="#">source-mac</a>
<b>Default</b>	use-system-mac
<b>Options</b>	<ul style="list-style-type: none"> <li>• use-system-mac</li> </ul>
<b>Configurable</b>	True

## source-ip *keyword*



### Note:

This command is available for the following platforms:

- 7220 IXR-D2
- 7220 IXR-D3
- 7220 IXR-D3L
- 7220 IXR-D2L

<b>Description</b>	The ip-address that will be used as the source-ip for all vxlan traffic egressing this vxlan-interface.
<b>Context</b>	<a href="#">tunnel-interface name</a> <i>string</i> <a href="#">vxlan-interface index number</a> <a href="#">egress source-ip keyword</a>
<b>Tree</b>	<a href="#">source-ip</a>
<b>Default</b>	use-system-ipv4-address
<b>Options</b>	<ul style="list-style-type: none"> <li>• use-system-ipv4-address</li> </ul>
<b>Configurable</b>	True

## ingress



### Note:

This command is available for the following platforms:

- 7220 IXR-D2
- 7220 IXR-D3
- 7220 IXR-D3L
- 7220 IXR-D2L

<b>Description</b>	Enter the ingress context
<b>Context</b>	<a href="#">tunnel-interface name</a> <i>string</i> <a href="#">vxlan-interface index number</a> <a href="#">ingress</a>
<b>Tree</b>	<a href="#">ingress</a>
<b>Configurable</b>	True

**vni number****Note:**

This command is available for the following platforms:

- 7220 IXR-D2
- 7220 IXR-D3
- 7220 IXR-D3L
- 7220 IXR-D2L

<b>Description</b>	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.
<b>Context</b>	<a href="#">tunnel-interface name</a> <i>string</i> <a href="#">vxlan-interface index number</a> <a href="#">ingress vni number</a>
<b>Tree</b>	<a href="#">vni</a>
<b>Range</b>	1 to 16777215
<b>Configurable</b>	True

**oper-down-reason keyword****Note:**

This command is available for the following platforms:

- 7220 IXR-D2
- 7220 IXR-D3
- 7220 IXR-D3L
- 7220 IXR-D2L

<b>Description</b>	The reason why the vxlan-interface is oper-down
<b>Context</b>	<a href="#">tunnel-interface name</a> <i>string</i> <a href="#">vxlan-interface index number</a> <a href="#">oper-down-reason keyword</a>
<b>Tree</b>	<a href="#">oper-down-reason</a>
<b>Options</b>	<ul style="list-style-type: none"> <li>• mac-failed</li> <li>• ingress-hash-failed</li> <li>• egress-hash-failed</li> <li>• other</li> </ul>
<b>Configurable</b>	False

**oper-state keyword****Note:**

This command is available for the following platforms:

- 7220 IXR-D2
- 7220 IXR-D3
- 7220 IXR-D3L
- 7220 IXR-D2L

<b>Description</b>	The operational state of the vxlan-interface
<b>Context</b>	<a href="#">tunnel-interface name</a> <i>string</i> <a href="#">vxlan-interface index</a> <i>number</i> <b>oper-state</b> <i>keyword</i>
<b>Tree</b>	<a href="#">oper-state</a>
<b>Options</b>	<ul style="list-style-type: none"> <li>• up</li> <li>• down</li> </ul>
<b>Configurable</b>	False

**type identityref****Note:**

This command is available for the following platforms:

- 7220 IXR-D2
- 7220 IXR-D3
- 7220 IXR-D3L
- 7220 IXR-D2L

<b>Description</b>	The value of this leaf indicates the context in which the vxlan-interface will be used in.
<b>Context</b>	<a href="#">tunnel-interface name</a> <i>string</i> <a href="#">vxlan-interface index</a> <i>number</i> <b>type</b> <i>identityref</i>
<b>Tree</b>	<a href="#">type</a>
<b>Options</b>	<ul style="list-style-type: none"> <li>• routed indicates subinterface is used in a routed context</li> <li>• bridged indicates subinterface is used in a bridged context</li> <li>• local-mirror-dest indicates subinterface is used in a mirroring destination SPAN context</li> </ul>
<b>Configurable</b>	True

# 19 tunnel

```

tunnel
+ vxlan-tunnel
- statistics
  - 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

```

## 19.1 tunnel Descriptions

### tunnel



**Note:**

This command is available for the following platforms:

- 7220 IXR-D2
- 7220 IXR-D3
- 7220 IXR-D3L
- 7220 IXR-D2L

<b>Description</b>	This model collects all config and state aspects of the tunnel table in SR Linux.
<b>Context</b>	<a href="#">tunnel</a>
<b>Tree</b>	<a href="#">tunnel</a>
<b>Configurable</b>	True

## vxlan-tunnel



### Note:

This command is available for the following platforms:

- 7220 IXR-D2
- 7220 IXR-D3
- 7220 IXR-D3L
- 7220 IXR-D2L

<b>Description</b>	Enter the vxlan-tunnel context
<b>Context</b>	<a href="#">tunnel vxlan-tunnel</a>
<b>Tree</b>	<a href="#">vxlan-tunnel</a>
<b>Configurable</b>	True

## statistics



### Note:

This command is available for the following platforms:

- 7220 IXR-D2
- 7220 IXR-D3
- 7220 IXR-D3L
- 7220 IXR-D2L

<b>Description</b>	Container for vxlan-tunnel global statistics.
<b>Context</b>	<a href="#">tunnel vxlan-tunnel statistics</a>
<b>Tree</b>	<a href="#">statistics</a>
<b>Configurable</b>	False

## in-discarded-packets *number*



### Note:

This command is available for the following platforms:

- 7220 IXR-D2
- 7220 IXR-D3
- 7220 IXR-D3L
- 7220 IXR-D2L

<b>Description</b>	The total number of discarded ingress VXLAN packets.
--------------------	--

Ingress VXLAN packets can be discarded due to one of the following reasons:

['The tunnel source IP address is not found on the list of discovered remote VTEPs.', 'The VNI is not a local one.']

<b>Context</b>	<a href="#">tunnel vxlan-tunnel statistics in-discarded-packets</a> <i>number</i>
<b>Tree</b>	<a href="#">in-discarded-packets</a>
<b>Default</b>	0
<b>Configurable</b>	False

### **in-octets** *number*



**Note:**

This command is available for the following platforms:

- 7220 IXR-D2
- 7220 IXR-D3
- 7220 IXR-D3L
- 7220 IXR-D2L

<b>Description</b>	The total sum of ingress VXLAN octets.
<b>Context</b>	<a href="#">tunnel vxlan-tunnel statistics in-octets</a> <i>number</i>
<b>Tree</b>	<a href="#">in-octets</a>
<b>Default</b>	0
<b>Configurable</b>	False

### **in-packets** *number*



**Note:**

This command is available for the following platforms:

- 7220 IXR-D2
- 7220 IXR-D3
- 7220 IXR-D3L
- 7220 IXR-D2L

<b>Description</b>	The total sum of ingress VXLAN packets. A packet in this context is an inner frame.
<b>Context</b>	<a href="#">tunnel vxlan-tunnel statistics in-packets</a> <i>number</i>
<b>Tree</b>	<a href="#">in-packets</a>

<b>Default</b>	0
<b>Configurable</b>	False

### **last-clear *string***



**Note:**

This command is available for the following platforms:

- 7220 IXR-D2
- 7220 IXR-D3
- 7220 IXR-D3L
- 7220 IXR-D2L

<b>Description</b>	Timestamp of the last time the vxlan tunnel counters were cleared.
<b>Context</b>	<a href="#">tunnel vxlan-tunnel statistics last-clear string</a>
<b>Tree</b>	<a href="#">last-clear</a>
<b>String Length</b>	20 to 32
<b>Configurable</b>	False

### **out-octets *number***



**Note:**

This command is available for the following platforms:

- 7220 IXR-D2
- 7220 IXR-D3
- 7220 IXR-D3L
- 7220 IXR-D2L

<b>Description</b>	The total sum of egress VXLAN octets
<b>Context</b>	<a href="#">tunnel vxlan-tunnel statistics out-octets number</a>
<b>Tree</b>	<a href="#">out-octets</a>
<b>Default</b>	0
<b>Configurable</b>	False



**out-packets *number*****Note:**

This command is available for the following platforms:

- 7220 IXR-D2
- 7220 IXR-D3
- 7220 IXR-D3L
- 7220 IXR-D2L

<b>Description</b>	The total sum of egress VXLAN packets. . A packet in this context is an inner frame.
<b>Context</b>	<a href="#">tunnel vxlan-tunnel statistics out-packets number</a>
<b>Tree</b>	<a href="#">out-packets</a>
<b>Default</b>	0
<b>Configurable</b>	False

**vtep address (*ipv4-address* | *ipv6-address*)****Note:**

This command is available for the following platforms:

- 7220 IXR-D2
- 7220 IXR-D3
- 7220 IXR-D3L
- 7220 IXR-D2L

<b>Description</b>	The IP address that identifies the remote VXLAN Termination Endpoint (VTEP).
<b>Context</b>	<a href="#">tunnel vxlan-tunnel vtep address (<i>ipv4-address</i>   <i>ipv6-address</i>)</a>
<b>Tree</b>	<a href="#">vtep</a>
<b>Configurable</b>	False

**address (*ipv4-address* | *ipv6-address*)****Note:**

This command is available for the following platforms:

- 7220 IXR-D2
- 7220 IXR-D3
- 7220 IXR-D3L
- 7220 IXR-D2L

<b>Description</b>	The IP address that identifies the remote VXLAN Termination Endpoint (VTEP).
<b>Context</b>	<a href="#">tunnel vxlan-tunnel vtep address (<i>ipv4-address</i>   <i>ipv6-address</i>)</a>
<b>Configurable</b>	False

**index *number*****Note:**

This command is available for the following platforms:

- 7220 IXR-D2
- 7220 IXR-D3
- 7220 IXR-D3L
- 7220 IXR-D2L

<b>Description</b>	The next-hop-group-id (system allocated) for resolving the VXLAN termination endpoint
<b>Context</b>	<a href="#">tunnel vxlan-tunnel vtep address (<i>ipv4-address</i>   <i>ipv6-address</i>) <i>index number</i></a>
<b>Tree</b>	<a href="#">index</a>
<b>Configurable</b>	False

**last-change *string*****Note:**

This command is available for the following platforms:

- 7220 IXR-D2
- 7220 IXR-D3
- 7220 IXR-D3L
- 7220 IXR-D2L

<b>Description</b>	The date and time of the most recent change to the tunnel state
<b>Context</b>	<a href="#">tunnel vxlan-tunnel vtep address (ipv4-address   ipv6-address) last-change string</a>
<b>Tree</b>	<a href="#">last-change</a>
<b>String Length</b>	20 to 32
<b>Configurable</b>	False

## statistics



### Note:

This command is available for the following platforms:

- 7220 IXR-D2
- 7220 IXR-D3
- 7220 IXR-D3L
- 7220 IXR-D2L

<b>Description</b>	Container for vxlan-tunnel per VTEP (Vxlan Termination EndPoint) statistics.
<b>Context</b>	<a href="#">tunnel vxlan-tunnel vtep address (ipv4-address   ipv6-address) statistics</a>
<b>Tree</b>	<a href="#">statistics</a>
<b>Configurable</b>	False

## in-discarded-packets *number*



### Note:

This command is available for the following platforms:

- 7220 IXR-D2
- 7220 IXR-D3
- 7220 IXR-D3L
- 7220 IXR-D2L

<b>Description</b>	<p>The number of discarded ingress VXLAN packets.</p> <p>Ingress VXLAN packets can be discarded due to one of the following reasons:</p> <p>[The outer destination IP address matches a local loopback in the default network-instance, but the sub-interface is operationally down.', 'The outer destination IP address matches a local interface in the default network-instance, but the sub-interface is not a loopback.', 'The VNI is not a local one.', 'The VXLAN packet is malformed.']</p>
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<b>Context</b>	<a href="#">tunnel vxlan-tunnel vtep address (ipv4-address   ipv6-address) statistics in-discarded-packets number</a>
<b>Tree</b>	<a href="#">in-discarded-packets</a>
<b>Default</b>	0
<b>Configurable</b>	False

### **in-octets *number***



**Note:**

This command is available for the following platforms:

- 7220 IXR-D2
- 7220 IXR-D3
- 7220 IXR-D3L
- 7220 IXR-D2L

<b>Description</b>	The number of octets encapsulated in ingress VXLAN packets.
<b>Context</b>	<a href="#">tunnel vxlan-tunnel vtep address (ipv4-address   ipv6-address) statistics in-octets number</a>
<b>Tree</b>	<a href="#">in-octets</a>
<b>Default</b>	0
<b>Configurable</b>	False

### **in-packets *number***



**Note:**

This command is available for the following platforms:

- 7220 IXR-D2
- 7220 IXR-D3
- 7220 IXR-D3L
- 7220 IXR-D2L

<b>Description</b>	The number of packets encapsulated in ingress VXLAN packets. A packet in this context is an inner frame.
<b>Context</b>	<a href="#">tunnel vxlan-tunnel vtep address (ipv4-address   ipv6-address) statistics in-packets number</a>
<b>Tree</b>	<a href="#">in-packets</a>
<b>Default</b>	0

<b>Configurable</b>	False
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### last-clear *string*



**Note:**

This command is available for the following platforms:

- 7220 IXR-D2
- 7220 IXR-D3
- 7220 IXR-D3L
- 7220 IXR-D2L

<b>Description</b>	Timestamp of the last time the vxlan tunnel counters were cleared.
<b>Context</b>	<a href="#">tunnel vxlan-tunnel vtep address (ipv4-address   ipv6-address) statistics last-clear string</a>
<b>Tree</b>	<a href="#">last-clear</a>
<b>String Length</b>	20 to 32
<b>Configurable</b>	False

### out-discarded-packets *number*



**Note:**

This command is available for the following platforms:

- 7220 IXR-D2
- 7220 IXR-D3
- 7220 IXR-D3L
- 7220 IXR-D2L

<b>Description</b>	The number of discarded egress VXLAN packets. Egress VXLAN packets can be discarded due to one of the following reasons: [The packet size exceeds the outgoing sub-interface MTU or interface MTU.', 'The packet is discarded due to existing ACLs or QoS policies.']
<b>Context</b>	<a href="#">tunnel vxlan-tunnel vtep address (ipv4-address   ipv6-address) statistics out-discarded-packets number</a>
<b>Tree</b>	<a href="#">out-discarded-packets</a>
<b>Default</b>	0
<b>Configurable</b>	False

**out-octets *number*****Note:**

This command is available for the following platforms:

- 7220 IXR-D2
- 7220 IXR-D3
- 7220 IXR-D3L
- 7220 IXR-D2L

<b>Description</b>	The number of octets encapsulated in egress VXLAN packets.
<b>Context</b>	<a href="#">tunnel vxlan-tunnel vtep address (ipv4-address   ipv6-address) statistics out-octets number</a>
<b>Tree</b>	<a href="#">out-octets</a>
<b>Default</b>	0
<b>Configurable</b>	False

**out-packets *number*****Note:**

This command is available for the following platforms:

- 7220 IXR-D2
- 7220 IXR-D3
- 7220 IXR-D3L
- 7220 IXR-D2L

<b>Description</b>	The number of packets encapsulated in egress VXLAN packets. A packet in this context is an inner frame.
<b>Context</b>	<a href="#">tunnel vxlan-tunnel vtep address (ipv4-address   ipv6-address) statistics out-packets number</a>
<b>Tree</b>	<a href="#">out-packets</a>
<b>Default</b>	0
<b>Configurable</b>	False



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