Video Services Commands

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GENERIC COMMANDS

description

Syntax **description** *description-string*
no description

Context config>isa>video-group
config>service>ies>video-interface
config>service>vpls>video-interface
config>service>vprn>video-interface
config>service>ies>video-interface>adi>channel
config>service>vpls>video-interface>adi>channel
config>service>vprn>video-interface>adi>channel

Description This command creates a text description stored in the configuration file for a configuration context.

The **description** command associates a text string with a configuration context to help identify the context in the configuration file.

The **no** form of this command removes any description string from the context.

Default No description is associated with the configuration context.

Parameters *description-string* — A text string describing the entity. Allowed values are any string up to 80 characters long composed of printable, 7-bit ASCII characters excluding double quotes. If the string contains special characters (#, $, spaces, etc.), the entire string must be enclosed within double quotes.

shutdown

Syntax [**no**] **shutdown**

Context config>isa>video-group
config>service>ies>video-interface
config>service>vpls>video-interface
config>service>vprn>video-interface
config>service>ies>video-interface>adi
config>service>vpls>video-interface>adi
config>service>vprn>video-interface>adi

Description The **shutdown** command administratively disables the entity. When disabled, an entity does not change, reset, or remove any configuration settings or statistics. Many entities must be explicitly enabled using the **no shutdown** command.

The **shutdown** command administratively disables an entity. The operational state of the entity is disabled as well as the operational state of any entities contained within. Many objects must be shut down before they can be deleted.

Unlike other commands and parameters where the default state is not indicated in the configuration file, **shutdown** and **no shutdown** are always indicated in system generated configuration files.

Default no shutdown

HARDWARE COMMANDS

card

Syntax **card** *slot-number*
no card *slot-number*

Context config

Description This mandatory command enables access to the chassis card Input/Output Module (IOM), slot, and MDA CLI context.

The **no** form of this command removes the card from the configuration. All associated ports, services, and MDAs must be shutdown

Default No cards are configured.

Parameters *slot-number* — The slot number of the card in the chassis.

Values 1 — 10 depending on chassis model.

SR-1: *slot-number* = 1
SR-7: *slot-number* = 1 — 5
SR-12: *slot-number* = 1 — 10

ESS-1: *slot-number* = 1
ESS-6: *slot-number* = 1 — 4
ESS-7: *slot-number* = 1 — 5
ESS-12: *slot-number* = 1 — 10

card-type

Syntax **card-type** *card-type*
no card-type

Context config>card

Description This mandatory command adds an IOMto the device configuration for the slot. The card type can be preprovisioned, meaning that the card does not need to be installed in the chassis.

A card must be provisioned before an MDA or port can be configured.

A card can only be provisioned in a slot that is vacant, meaning no other card can be provisioned (configured) for that particular slot. To reconfigure a slot position, use the **no** form of this command to remove the current information.

A card can only be provisioned in a slot if the card type is allowed in the slot. An error message is generated if an attempt is made to provision a card type that is not allowed.

If a card is inserted that does not match the configured card type for the slot, then a medium severity alarm is raised. The alarm is cleared when the correct card type is installed or the configuration is modified.

A high severity alarm is raised if an administratively enabled card is removed from the chassis. The alarm is cleared when the correct card type is installed or the configuration is modified. A low severity trap is issued when a card is removed that is administratively disabled.

Because the IOM-3 integrated card does not have the capability in install separate MDAs, the configuration of the MDA is automatic. This configuration only includes the default parameters such as default buffer policies. Commands to manage the MDA such as **shutdown**, named buffer pool etc will remain in the MDA configuration context.

An appropriate alarm is raised if a partial or complete card failure is detected. The alarm is cleared when the error condition ceases.

The **no** form of this command removes the card from the configuration

Default No cards are preconfigured for any slots.

Parameters *card-type* — The type of card to be configured and installed in that slot.

Values
7750 SR: iom-20g, iom2-20g, iom-20g-b, iom3-xp
7450 ESS: iom-20g, iom-20g-b, iom3-xp

mda

Syntax **mda** *mda-slot*
no mda *mda-slot*

Context config>card

Description This mandatory command enables access to a card's MDA CLI context to configure MDAs.

Default No MDA slots are configured by default.

Parameters *mda-slot* — The MDA slot number to be configured. Slots are numbered 1 and 2. On vertically oriented slots, the top MDA slot is number 1, and the bottom MDA slot is number 2. On horizontally oriented slots, the left MDA is number 1, and the right MDA slot is number 2.

Values 1, 2

mda-type

Syntax **mda-type** *mda-type*
no mda-type

Context config>card>mda

Description This mandatory command provisions a specific MDA type to the device configuration for the slot. The MDA can be preprovisioned but an MDA must be provisioned before ports can be configured. Ports can be configured once the MDA is properly provisioned.

A maximum of two MDAs can be provisioned on an IOM. Only one MDA can be provisioned per IOM MDA slot. To modify an MDA slot, shut down all port associations.

An MDA can only be provisioned in a slot if the MDA type is allowed in the MDA slot. An error message is generated when an MDA is provisioned in a slot where it is not allowed.

A medium severity alarm is generated if an MDA is inserted that does not match the MDA type configured for the slot. This alarm is cleared when the correct MDA is inserted or the configuration is modified.

A high severity alarm is raised when an administratively enabled MDA is removed from the chassis. This alarm is cleared if the either the correct MDA type is inserted or the configuration is modified. A low severity trap is issued if an MDA is removed that is administratively disabled.

An alarm is raised if partial or complete MDA failure is detected. The alarm is cleared when the error condition ceases.

All parameters in the MDA context remain and if non-default values are required then their configuration remains as it is on all existing MDAs.

The **no** form of this command deletes the MDA from the configuration. The MDA must be administratively shut down before it can be deleted from the configuration.

Default No MD types are configured for any slots by default.

Parameters *mda-type* — The type of MDA selected for the slot postion.

7750: m60-10/100eth-tx, m10-1gb-sfp, m16-oc12/3-sfp, m8-oc12/3-sfp, m16-oc3-sfp, m8-oc3-sfp, m4-oc48-sfp, m1-oc192, m5-1gb-sfp, m12-chds3, m1-choc12-sfp, m1-10gb, m4-choc3-sfp, m2-oc48-sfp, m20-100eth-sfp, m20-1gb-tx, m2-10gb-xfp, m4-atmoc12/3-sfp, m16-atmoc3-sfp, m20-1gb-sfp, m4-chds3, m1-10gb-xfp, vsm-cca, 5-1gb-sfp-b, m10-1gb-sfp-b, m4-choc3-as-sfp, m10-1gb+1-10gb, isa-ipsec, m1-choc12-as-sfp, m12-chds3-as, m4-chds3-as, m10-1gb-hs-sfp, m1-10gb-hs-xfp, m4-choc3-ces-sfp, m1-choc3-ces-sfp, m4-10gb-xp-xfp, m2-10gb-xp-xfp, m1-10gb-xp-xfp, m10-1gb-xp-sfp, m20-1gb-xp-sfp, m20-1gb-xp-tx, m1-choc12-ces-sfp, imm24-1gb-xp-sfp, imm24-1gb-xp-tx, imm4-10gb-xp-xfp, imm2-10gb-xp-xfp, isa-ms

7450: m60-10/100eth-tx, m10-1gb-sfp, m16-oc12/3-sfp, m8-oc12/3-sfp, m16-oc3-sfp, m4-oc48-sfp, m1-10gb, m2-oc48-sfp, m20-100eth-sfp, m20-1gb-tx, m2-10gb-xfp, m20-1gb-sfp, m1-10gb-xfp, vsm-cca, m5-1gb-sfp-b, m10-1gb-sfp-b, m10-1gb+1-10gb, m10-1gb-hs-sfp, m1-10gb-hs-xfp, m4-10gb-xp-xfp, m2-10gb-xp-xfp, m1-10gb-xp-xfp, m10-1gb-xp-sfp, m20-1gb-xp-sfp, m20-1gb-xp-tx, isa-ms

LNS GROUP COMMANDS

lns-group

Syntax **lns-group** *ins-group-id* [**create**]
no lns-group *lns-group-id*

Context config>isa

Description This command configures the ISA LNS group.

Parameters *lns-group-id* — Specified the LNS group ID.

Values 1 — 4

create — Keyword required when first creating the configuration context. Once the context is created, one can navigate into the context without the **create** keyword.

mda

Syntax **mda** *mda-id* [**drain**]
no mda *mda-id*

Context config>isa>lns-group

Description This command configures an ISA LNS group MDA.

Parameters *mda-id* — Specifies the slot and MDA number for the primary video group ISA.

Values slot/mda
slot 1 — 10 (depending on the chassis model)
mda 1 — 2

VIDEO GROUP COMMANDS

video-group

Syntax **video-group** *video-group-id* [**create**]
no video-group *video-group-id*

Context config>isa

Description This command configures an ISA video group.

Parameters *video-group-id* — Specifies a video group ID.

Values 1 — 4

create — Keyword required when first creating the configuration context. Once the context is created, one can navigate into the context without the **create** keyword.

ad-insert

Syntax [**no**] **ad-insert**

Context config>isa>video-group

Description This command enables the ad insert server for the group. Ad insertion cannot be enabled if an FCC server or local RT server is enabled.

The **no** form of the command disables the server.

analyzer

Syntax [**no**] **analyzer**

Context config>isa>video-group

Description This command specifies whether or not the video analyzer is enabled for all streams on this video group.

The **no** form of the command disables the analyzer for the group.

Default no analyzer

fcc-server

Syntax [**no**] **fcc-server**

Context config>isa>video-group

Description This command enables the FCC server capability for the ISA video group. FCC server cannot be enabled if ad insertion or the local RET server is enabled.

FCC Server parameters can be configured in a multicast information policy or a service, but the parameters will have no effect if the FCC server is disabled or if the video group is administratively disabled (shutdown).

The **no** form of the command disables the FCC server.

Default no fcc-server

local-rt-server

Syntax [**no**] **local-rt-server**

Context config>isa>video-group

Description This command enables the local RET server for the group. A local RET server cannot be enabled if an FCC server or ad insertion is enabled.

The **no** form of the command disables the server.

primary

Syntax [**no**] **primary** *mda-id*

Context config>isa>video-group

Description This command configures the primary video group ISA. Only one primary can be configured per video group when ad insertion is enabled. The maximum number of primaries per video-group for FCC and RD is 4.

Parameters *mda-id* — Specifies the slot and MDA number for the primary video group ISA.

Values slot/mda

slot	1 — 10 (depending on the chassis model)
mda	1 — 2

resv-ret

Syntax **resv-ret** *resv-ret*

Context config>isa>video-group

Description This command provides a mechanism to reserve an explicit amount of egress bandwidth for RET for all the ISAs within a video group. If the amount of egress bandwidth is less than the reserved amount, FCC requests are discarded and only RET requests processed. The bandwidth is dynamically adjusted per ISA within the video group if an ISA becomes operational/non-operational within the group.

stream-selection

Syntax [**no**] **stream-selection**

Context config>isa>video-group

Description This command specifies whether or not stream selection is enabled on this video group.

The **no** form of the command disables stream-selection for the group.

Default no stream-selection

MULTICAST INFO POLICY COMMANDS

multicast-info-policy

Syntax **multicast-info-policy** *policy-name* [**create**]
no multicast-info-policy *policy-name*

Context config>mcast-management

Description This command configures a multicast information policy. Multicast information policies are used to manage parameters associated with Layer 2 and Layer 3 multicast records. Multiple features use the configured information within the policy. The multicast ingress path manager uses the policy to decide the inactive and active state behavior for each multicast record using the ingress paths to the switch fabric. The egress multicast CAC function may use the policy information as a basis for allowing or disallowing downstream nodes to join multicast streams. The system's multicast ECMP join decisions are influenced by the channel information contained within the policy.

Multicast Bundles:

A multicast information policy consists of one or multiple named bundles. Multicast streams are mapped to a bundle based on matching the destination address of the multicast stream to configured channel ranges defined within the bundles. Each policy has a bundle named 'default' that is used when a destination address does not fall within any of the configured channel ranges.

Each bundle has a set of default parameters used as the starting point for multicast channels matching the bundle. The default parameters may be overridden by optional exception parameters defined under each channel range. Further optional parameter overrides are possible under explicit source address contexts within each channel range.

Default Multicast Information Policy

A multicast information policy always exists with the name 'default' and cannot be edited or deleted. The following parameters are contained in the default multicast information policy:

Policy Description: Default policy, cannot be edited or deleted.
Bundle: default
Bundle Description: Default Bundle, cannot be edited or deleted.
Congestion-Priority-Threshold: 4
ECMP-Optimization-Limit-Threshold: 7

Bundle Defaults:
Administrative Bandwidth: 0 (undefined)
Preference: 0
CAC-Type: Optional
Bandwidth Activity: Dynamic with no black-hole rate
Explicit Ingress SF Path: None (undefined)
Configured Channel Ranges: None

The default multicast information policy is applied to all VPLS and VPRN services and all routing contexts until an explicitly defined multicast information policy has been mapped.

Explicit Multicast Information Policy Associations

Each VPLS service and each routing context (including VPRN routing contexts) supports an explicit association with an pre-existing multicast information policy. The policy may need to be

unique per service or routing context due to the fact that each context has its own multicast address space. The same multicast channels may be and most likely will be used for completely different multicast streams and applications in each forwarding context.

Interaction with Ingress Multicast Path Management

When ingress multicast path management is enabled on an MDA, the system automatically creates a bandwidth manager context that manages the multicast path bandwidth into the switch fabric used by the ingress ports on the MDA. As routing or snooping protocols generate L2 or L3 multicast FIB records that will be populated on the MDA's forwarding plane, they are processed though the multicast information policy that is associated with the service or routing context associated with the record. The policy will return the following information for the record to be used by the ingress bandwidth manager:

- The records administrative bandwidth ('0' if undefined)
- Preference level (0 to 7 with 7 being highest)
- Bandwidth activity monitoring setting (use admin bw or dynamic monitoring)
  If admin bw is indicated, will also return active and inactive thresholds
- Initial switch fabric multicast path (primary, secondary or ancillary)
  If ancillary path is indicated, will also return an SF destination threshold
- Explicit switch fabric multicast path (primary, secondary, ancillary or none)

Interaction with Egress Multicast CAC

The egress multicast CAC feature has its own multicast CAC policy that is applied to egress IP interfaces or egress VPLS interfaces. The policy contains bundles, each with their own sets of channel ranges defined. When a multicast joint event occurs on the interface, the system searches the multicast CAC policy to determine how that join event should be processed. The information returned from the CAC lookup provides the bundles allowed bandwidth and the channels administrative bandwidth. Since the allowed bundle bandwidth may change between differing egress interfaces, multiple policies with the same channel information may be needed.

With the addition of the multicast information policy, managing the CAC feature is simplified. The CAC monitor for the egress interface first searches the multicast CAC policy to determine if the multicast join event matches a configured channel range. If a match is found, it simply uses the local policy information. If a match is not found, it then searches the multicast information policy associated with the service or routing context to which the join event is associated. The multicast information policy returns the following information to the interfaces CAC manager:

- Bundle name
- Administrative bandwidth ('0' if undefined)
- Congestion Priority Threshold (high or low)
- CAC Type (mandatory or optional)

The CAC manager evaluates the returned results according to the following rules:

- If the returned administrative bandwidth = '0', all results are ignored
- If the returned bundle name is not found in the local multicast CAC policy, all results are ignored
- The administrative bandwidth is interpreted as channel 'bw'
- A value of 'high' for congestion priority threshold is interpreted as 'class high'
- A value of 'low' for congestion priority threshold is interpreted as 'class low'
- A value of 'mandatory' for CAC type is interpreted as 'type mandatory'

- A value of ‘optional’ for CAC type is interpreted as ‘type optional’
- Bundle bandwidth is always derived from the local multicast CAC policy

Using the multicast information policy to store the CAC information allows a single centralized managed policy for all channel information, allowing the multicast CAC policies to only have bundle defined with the appropriate bundle bandwidth. The multicast CAC policy still may be for channel information in exception cases.

Interaction with Multicast ECMP Optimization

The multicast information policy is used by the multicast ECMP optimization function to derive each channels administrative bandwidth. The ECMP function tallies all bandwidth information for channels joined and attempts to equalize the load between the various paths to the sender. The multicast information policy returns the following information to the ECMP path manager:

3. Administrative bandwidth (‘0’ if undefined)
4. Preference (0 to 7 with 7 the highest preference value)

Parameters *policy-name* — Iidentifies the name of the policy to be either created or edited. Each multicast information policy must be uniquely named within the system. Names of up to 32 ASCII characters are supported with the normal character restrictions.

create — The create keyword is required if creating a new multicast information policy when the system is configured to require the explicit use of the keyword to prevent accidental object creation. Objects may be accidentally created when this protection is disabled and an object name is mistyped when attempting to edit the object. This keyword is not required when the protection is disabled. The keyword is ignored when the multicast information policy name already exists.

multicast-info-policy

Syntax **multicast-info-policy** *policy-name*
no multicast-info-policy

Context config>service>ies
config>service>vpls
config>service>vprn
config>router

Description This command overrides the default multicast information policy on a service or routing context. When the policy association is changed, all multicast channels in the service or routing context must be reevaluated.

If a multicast information policy is not explicitly associated with the service or routing context, the default multicast information policy is used when ingress multicast path management is enabled.

While a multicast information policy is associated with a service or routing context, the policy cannot be deleted from the system.

The **no** form of the command removes an explicit multicast information policy from the service or routing context and restores the default multicast information policy.

Parameters *policy-name* — The policy-name parameter is required and specifies an existing multicast information policy that should be associated with the service or routing context.

Default default

bundle

Syntax **bundle** *bundle-name* [**create**]
no bundle *bundle-name*

Context config>mcast-mgmt>mcast-info-plcy

Description The bundle command is used to create or edit channel bundles within a multicast information policy. Bundles are used for two main purposes. First, bundles are used by the multicast CAC function to group multicast channels into a common bandwidth context. The CAC function limits the ability for downstream nodes to join multicast channels based on the egress interfaces ability to handle the multicast traffic. Bundling allows multicast channels with common preference or application to be managed into a certain percentage of the available bandwidth.

The second function of bundles is to provide a simple provisioning mechanism. Each bundle within a multicast information policy has a set of default channel parameters. If each channel provisioned in to the bundle is able to use the default parameters for the bundle, the provisioning and configuration storage requirements are minimized.

Up to 31 explicit bundles may be defined within a multicast information policy (32 including the default bundle).

Once a bundle is created, the default channel parameters should be configured and the individual channel ranges should be defined. Within each channel range, override parameters may be defined that override the default channel parameters. Further overrides are supported within the channel range based on explicit source overrides.

A bundle may be deleted at anytime (except for the default bundle). When a bundle is deleted, all configuration information within the bundle is removed including multicast channel ranges. Any multicast records using the bundle should be reevaluated. Multicast CAC and ECMP managers should also be updated.

Default Bundle

Each multicast information policy contains a bundle named **default**. The default bundle cannot be deleted. Any multicast channel that fails to match a channel range within an explicit bundle is automatically associated with the default bundle.

The **no** form of the command removes a bundle from the multicast information policy. The default bundle cannot be removed from the policy.

Default default

bundle-name — Specifies bundle expressed as an ASCII string with up to 16 characters and must follow normal naming conventions. If bundle-name already exists, the system will enter the bundle context for editing purposes. If bundle-name does not exist, the system will create the defined bundle in the policy and enter the bundle context for editing purposes.

create — The create keyword is required if creating a new multicast information policy bundle when the system is configured to require the explicit use of the keyword to prevent accidental object creation. Objects may be accidentally created when this protection is disabled and an object name is mistyped when attempting to edit the object. This keyword is not required when the protection is disabled. The keyword is ignored when the bundle name already exists.

admin-bw

Syntax **admin-bw** *kbps*
no admin-bw

Context config>mcast-mgmt>mcast-info-plcy
config>mcast-mgmt>mcast-info-plcy>channel

Description This command configures the administrative bandwidth.

Parameters *kbps* — Specifies the administrative bandwidth in Kbps.

Values 1 — 40000000

bw-activity

Syntax **bw-activity** {**use-admin-bw** | **dynamic** [**falling-delay** *seconds*]} [**black-hole-rate** *kbps*]
no bw-activity

Context config>mcast-mgmt>mcast-info-plcy>bundle
config>mcast-mgmt>mcast-info-plcy>channel

Description This command defines how the multicast ingress path manager determines the amount of bandwidth required by a multicast channel. The default setting is dynamic which causes the bandwidth manager to adjust the path bandwidth based on the current ingress multicast bandwidth. The alternative setting is use-admin-bw which causes the bandwidth manager to use the configured admin-bw associated with the channel. The use-admin-bw setting is enabled once the channels ingress bandwidth reaches the bandwidth-policy admin-bw-threshold value. The bandwidth manager uses the dynamic method until the threshold has been reached. If the ingress bandwidth falls below the threshold, the bandwidth manager reverts back to the dynamic method.

While operating in dynamic bandwidth mode, the bandwidth manager uses the falling-delay threshold to hold on to the previous highest bandwidth until the delay time has expired. This allows the bandwidth manager ignore momentary drops in channel bandwidth.

The bw-activity command in the bundle context defines how the current bandwidth is derived for all channels associated with the bundle unless the channel has an overriding bw-activity defined in the channel context. The channel context may also be overridden by the bw-activity command in the source-override context for a specific channel or channel range. The channel and source-override bw-activity settings default to ‘null’ (undefined) and have no effect unless explicitly set. The default-channel-info bw-activity default value is set to dynamic.

The use-admin-bw setting requires that the channel be configured with an admin-bw value that is not equal to ‘0’ in the same context as the bw-activity command using the setting. If use-admin-bw is defined in the default-channel-info context, then the default-channel-info admin-bw setting must not be set to ‘0’. A similar rule applies for channel and source-override bw-activity and admin-bw settings. Once a context has use-admin-bw configured, the context’s admin-bw value cannot be set to ‘0’ and the no admin-bw command will fail for that context.

The bw-activity command also supports an optional black-hole-rate kilobits-per-second keyword and parameter that defines at which current rate a channel should be placed in the black-hole state. This is intended to provide a protection mechanism against multicast channels that exceed a reasonable rate and cause outages in other channels.

The **no** form of the command reverts to the default parameters.

channel

Syntax **channel** *ip-address* [*ip-address*] [**create**]
no channel *ip-address* [*ip-address*]

Context config>mcast-mgmt>mcast-info-plcy>bundle

Description This command defines explicit channels or channel ranges that are associated with the containing bundle. A channel or channel range is defined by their destination IP addresses. A channel may be defined using either IPv4 or IPv6 addresses. If a channel range is being defined, both the start and ending addresses must be the same type.

A specific channel may only be defined within a single channel or channel range within the multicast information policy. A defined channel range cannot overlap with an existing channel range.

If a channel range is to be shortened, extended, split or moved to another bundle, it must first be removed from its existing bundle.

Each specified channel range creates a containing context for any override parameters for the channel range. By default, no override parameters exist.

The **no** form of the command removes the specified multicast channel from the containing bundle.

Parameters **start-channel-ip-address** [*end-channel-ip-address*] **—** The start-channel-ip-address parameter and optional end-channel-ip-address parameters define the starting and ending destination IP addresses for a channel range.

If only the start-channel-ip-address is given, the channel ranges comprises of a single multicast channel.

If both the starting and ending address are specified, all addresses within the range including the specified address are part of the channel range.

IPv4 or IPv6 addresses may be defined. All specified addresses must be valid multicast destination addresses. The starting IP address must be numerically lower then the ending IP address. [What do we do with 224.0.0.x addresses?]

Values Any valid IP multicast destination address

Default None

create — The create keyword is required if creating a new multicast channel range when the system is configured to require the explicit use of the keyword to prevent accidental object creation. Objects may be accidentally created when this protection is disabled and an object name is mistyped when attempting to edit the object. This keyword is not required when the protection is disabled. The keyword is ignored when the specified channel range already exists.

source-override

Syntax **source-override** *ip-address* [**create**]
no source-override *ip-address*

Context config>mcast-mgmt>mcast-info-plcy>bundle>channel

Description This command defines a multicast channel parameter override context for a specific multicast sender within the channel range. The specified senders IP address must be of the same type (IPv4 or IPv6) as the containing channel range.

The **no** form of the command removes the specifed sender override context from the channel range.

Default none

Parameters *ip-address* — Specifies either am IPv4 or IPv6 address and it must be the same type as the containing channel range.

Values

ipv4-address	a.b.c.d
ipv6-address	x:x:x:x:x:x:x:x (eight 16-bit pieces)
	x:x:x:x:x:x:d.d.d.d
	x - [0..FFFF]H
	d - [0..255]D

create — The create keyword is required if creating a new source override when the system is configured to require the explicit use of the keyword to prevent accidental object creation. Objects may be accidentally created when this protection is disabled and an object name is mistyped when attempting to edit the object. This keyword is not required when the protection is disabled. The keyword is ignored when the specified source override IP address already exists.

VIDEO POLICY COMMANDS

video-policy

Syntax **video-policy**

Context config>mcast-mgmt>mcast-info-plcy

Description This command enables the context to configure video interfaces and video services.

video-interface

Syntax **video-interface** *ip-address* [**create**]
no video-interface *ip-address*

Context config>mcast-mgmt>mcast-info-plcy>video-policy

Description This command creates a video interface policy context that correlates to the IP address assigned for a video interface. This interface is created in a subscriber service to which the multicast information policy is assigned. If the specified IP address does not correlate to a video interface ip address, the parameters defined within this context have no effect.

The **no** form of the command deletes the video interface policy context.

Parameters *ip-address* — The IP address of a video interface provisioned within the context of a service to which the Multicast Information Policy is assigned. If the IP address does not match the IP address assigned to a video interface, the parameters defined within this context have no effect.

create — Mandatory keyword needed when creating a new video interface within the video policy.

hd

Syntax **hd**

Context config>mcast-mgmt>mcast-info-plcy>video-policy>video-if

Description This command configures properties relating to requests received by the video interface for High Definition (HD) channel requests.

Default none

dent-threshold

Syntax **dent-threshold** *threshold*
no dent-threshold

Context config>mcast-mgmt>mcast-info-plcy>video-policy>video-if>hd

config>mcast-mgmt>mcast-info-plcy>video-policy>video-if>pip
config>mcast-mgmt>mcast-info-plcy>video-policy>video-if>sd

Description This command sets the threshold value below which the FCC server will dent/drop unicast data sent to the FCC client during a fast channel change. Within the RTP extension header, the packet priority (PRI) (2 bits) and the fine-grained priority (FPRI) (3 bits) indicate the "importance" of the frame as to how essential it is to the video stream.

This parameter is only applicable if the FCC server mode is **dent**.

The **no** form of the command returns the parameter to the default value.

Default 16 (only B frames are dropped)

Parameters *threshold* — The threshold value is used by the FCC server to compare with the concatenation of the PRI and FPRI to determine whether to send the packet to the FCC client. If the PRI and FPRI expressed as a decimal integer is greater than or equal to the threshold value, the packet will be sent.

Values 1 — 31

fcc-burst

Syntax **fcc-burst** *burst-percentage*
no fcc-burst

Context config>mcast-mgmt>mcast-info-plcy>video-policy>video-if>hd
config>mcast-mgmt>mcast-info-plcy>video-policy>video-if>pip
config>mcast-mgmt>mcast-info-plcy>video-policy>video-if>sd

Description This command sets the burst rate at which the Fast Channel Change (FCC) server will send unicast data to the FCC client above the received rate to allow the client to catchup to the multicast stream.

This parameter is only applicable if the FCC server mode is **burst**.

The **no** form of the command returns the parameter to the default value.

Default 25

Parameters *burst-percentage* — Specifies the percentage of nominal bandwidth used to catch up to the multicast stream.

Values

HD:	0 — 100
SD and PIP:	0 — 600

Default 25

fcc-server

Syntax **fcc-server** [**mode** {**burst | dent | hybrid**}]
no fcc-server

Context config>mcast-mgmt>mcast-info-plcy>video-policy>video-if>hd
config>mcast-mgmt>mcast-info-plcy>video-policy>video-if>pip

config>mcast-mgmt>mcast-info-plcy>video-policy>video-if>sd

Description This command enables the Fast Channel Change (FCC) server and sets the mode to send the FCC unicast stream.

The mode indicates how the FCC server will send information to the client. When **burst** is specified, the FCC server will send the channel at a nominally faster rate than the channel was received based on the applicable fcc-burst setting. When **dent** is specified, the FCC server will selectively discard frames from the original stream based on the applicable dent-threshold setting. If no mode is specified, burst is the default mode.

The **no** form of the command disables the FCC server at that context and subordinate contexts.

Default no fcc-server

Parameters **mode burst —** Sets the mode of the FCC server to burst when sending the channel to the FCC client.

mode dent — Sets the mode of the FCC server to dent when sending the channel to the FCC client.

mode hybrid — Combines the burst and dent modes.

local-rt-server

Syntax [**no**] **local-rt-server**

Context config>mcast-mgmt>mcast-info-plcy>video-policy>video-if>hd
config>mcast-mgmt>mcast-info-plcy>video-policy>video-if>pip
config>mcast-mgmt>mcast-info-plcy>video-policy>video-if>sd

Description This command enables the local retransmission server function for requests directed to the IP address.

The **no** form of the command disables the retransmission server.

Default no local-rt-server

mc-handover

Syntax **mc-handover** *percentage*
no mc-handover

Context config>mcast-mgmt>mcast-info-plcy>video-policy>video-if>hd
config>mcast-mgmt>mcast-info-plcy>video-policy>video-if>pip
config>mcast-mgmt>mcast-info-plcy>video-policy>video-if>sd

Description This command sets the rate at which the Fast Channel Change (FCC) server will send unicast data to the FCC client during the handover to the multicast stream.

The **no** form of the command returns the parameter to the default value.

Parameters *percentage* — Specifies the percentage of nominal bandwidth.

Values

HD:	0 — 100
SD and PIP:	0 — 600

Default 25

rt-mcast-reply

Syntax **rt-mcast-reply** [**count** *count*] [**interval** *milliseconds*] [**hold-time** *milliseconds*]
no rt-mcast-reply

Context config>mcast-mgmt>mcast-info-plcy>video-policy>video-if

Description This command enables the use of multicast retransmission packets by the retransmission server in response to a number of identical retransmission requests.

By default, the retransmission server replies to all retransmission requests with a unicast stream directed to the client requesting retransmission. Enabling multicast retransmission on the retransmission server is an optimization where a number of identical retransmission requests received will trigger the retransmission server to service the retransmission request with a single multicast reply stream with packets of Payload Type 33. An example of where multiple clients will request retransmission for identical packets is if there is a packet loss in the Access Network which affects multiple clients.

For clients that received the original packets or requested retransmission and had the retransmission serviced in unicast, the multicast retransmission will look like duplicate packets and discard the multicast retransmitted packets. For other clients, the multicast retransmission will look like out-of-sequence multicast packets, so the client must support reception of out of sequence multicast for multicast retransmission for multicast retransmission to be used.

The threshold value for identical retransmission requested received by the retransmission server is configured when enabling multicast retransmission along with a sample interval and a hold time. The sample interval is the elapsed time over which the retransmission requests are counted. The hold time is a quiet period after a multicast retransmission is triggered on the retransmission server where an identical retransmission request will be ignored. After the hold time expires, a new sampling interval is started. Sampling intervals will be restarted until the packets for the multicast request are cleared from the retransmission buffer.

To illustrate the threshold count, sample interval and hold time, suppose the values are 5, 100 ms and 50 ms, respectively. The first retransmission request arrives at time = 0. In one scenario, assume the fifth identical retransmission request arrives at the server at time = 60 ms. In this case, the first four retransmission requests are serviced as unicast and the arrival of the fifth retransmission request triggers a multicast retransmission. All identical retransmission requests received between time = 60 and 110 ms are ignored. At time = 110 ms, a new sampling period is started and retransmission requests are serviced in unicast unless the threshold is passed again in the new sampling period. For a second scenario, assume the fifth identical retransmission request arrives at time = 25 ms. In this scenario, the behavior is the same except the new sampling period starts at time = 75 ms even though this is before the original sampling period was set to expire.

The **no** form of the command disables retransmissions using multicast, so all retransmissions will be sent as unicast.

Default no rt-mcast-reply – Retransmission requests will only be serviced with unicast retransmission replies.

Parameters **count** *count* — Specifies the number of identical retransmission requests received for a packet in a sampling interval after which a reply will be sent as multicast Payload Type 33.

Values 2 – 1024

Default 5

interval *milliseconds* — Specifies the number of milliseconds for a sampling interval .

Values 100 – 8000 ms

Default 100 ms

hold-time *milliseconds* **—** Specifies the number of milliseconds after a multicast reply is sent that the retransmission server will wait before starting a new sampling period

rt-payload-type

Syntax **rt-payload-type** *payload-type*
no rt-payload-type

Context config>mcast-mgmt>mcast-info-plcy>video-policy>video-if

Description This command describes the format to be used by Retransmission (RT) server to send retransmission packets. The RET server interface allows the payload type within the retransmission packets to be configured.

Default 99 — Indicates that the frames will be sent in the RFC 4588, *RTP Retransmission Payload Format*, format.

Parameters *payload-type* — Indicates the format expected for received retransmission packets. The value 33 indicates that the frames will be received as originally sent. A value between 96 and 127 indicates the dynamic payload type value (per RFC 3551) to be used for RFC 4588 formatted retransmission packets.

Values 33, 96 – 127

rt-rate

Syntax **rt-rate** *rt-burst-percentage*
no rt-rate

Context config>mcast-mgmt>mcast-info-plcy>video-policy>video-if>hd
config>mcast-mgmt>mcast-info-plcy>video-policy>video-if>pip
config>mcast-mgmt>mcast-info-plcy>video-policy>video-if
config>mcast-mgmt>mcast-info-plcy>video-policy>video-if>sd

Description This command sets the rate of nominal bandwidth at which retransmission packets are sent to the retransmission client for requests directed to the IP address.

The **no** form of the command returns the parameter to the default value.

Default 5

Parameters *rt-burst-percentage* — Specifies the percentage of nominal bandwidth to send retransmission packets.

Values 1— 100

Default 5

max-sessions

Syntax **max-sessions** *sessions*
no max-sessions

Context config>mcast-mgmt>mcast-info-plcy>video-policy>video-if

Description This command configures the per-client maximum number of sessions.

The **no** form of the command reverts to the default value.

Parameters *sessions* — Specifies the per-client maximum number of sessions.

Values 1 — 65536

Default 256

pip

Syntax **pip**

Context config>mcast-mgmt>mcast-info-plcy>video-policy>video-if

Description This command enables the context within a video interface policy to configure properties relating to requests received by the video interface for Picture-in-Picture (PIP) channel requests.

Default none

sd

Syntax **sd**

Context config>mcast-mgmt>mcast-info-plcy>video-policy>video-if

Description This command enables the context within a video interface policy to configure properties relating to requests received by the video interface for Standard Definition (SD) channel requests.

subscriber-bw-limit

Syntax **subscriber-bw-limit** *bandwidth*
no subscriber-bw-limit

Default config>mcast-mgmt>mcast-info-plcy>video-policy>video-if

Description This command configures of an egress per-subscriber bandwidth limit for the combined retransmission and Fast Channel Change (FCC) replies for requests received directed to the IP address. If the bandwidth for a request will exceed the bandwidth limit, the request is logged and dropped.

The **no** form of the command disables enforcement of an egress bandwidth limit.

Default 4294967295

Parameters *bandwidth* — The per-subscriber egress bandwidth limit for retransmission and FCC packets in kilobits per second expressed as an integer indicates infinity or no limit.

Values 1 — 4294967295 kbps

BUNDLE AND CHANNEL COMMANDS

video

Syntax **video**

Context config>mcast-mgmt>mcast-info-plcy>bundle
config>mcast-mgmt>mcast-info-plcy>bundle>channel
config>mcast-mgmt>mcast-info-plcy>bundle>channel>source-override

Description This command enables the context to configure video parameters.

fcc-channel-type

Syntax **fcc-channel-type** {**hd** | **sd** | **pip**}
no fcc-channel-type

Context config>mcast-mgmt>mcast-info-plcy>bundle>video
config>mcast-mgmt>mcast-info-plcy>bundle>channel>video
config>mcast-mgmt>mcast-info-plcy>bundle>channel>source-override>video

Description This command configures the channel type for the bundle/channel. The channel type is used in the video policy to set various Fast Channel Change (FCC) parameters including the type of FCC and various FCC rates.

The no form of the command returns the parameter to the default value.

Default no fcc-channel

Parameters **hd** — The channel type is High-Definition (HD) (Default).

sd — The channel type is Standard Definition (SD).

pip — The channel type is Picture in Picture (PIP).

fcc-min-duration

Syntax **fcc-min-duration** *time*
no fcc-min-duration

Context config>mcast-mgmt>mcast-info-plcy>bundle>video
config>mcast-mgmt>mcast-info-plcy>bundle>channel>video

Description This command configures the minimum time duration, in milliseconds, of the Fast Channel Change (FCC) burst. The value of this object determines the starting point of the FCC burst. If the current Group of Pictures (GOP) has less than the minimum duration worth of data, FCC burst begins from the previous GOP.

The **no** form of the command reverts to the default value.

Default 300

Parameters *time* — Specifies the FCC burst minimum duration, in milliseconds.

Values 300 — 8000

fcc-server

Syntax **fcc-server** [**disable**]
no fcc-server

Context config>mcast-mgmt>mcast-info-plcy>bundle>video
config>mcast-mgmt>mcast-info-plcy>bundle>channel>video
config>mcast-mgmt>mcast-info-plcy>bundle>channel>source-override>video

Description This command enables Fast Channel Change (FCC) for a multicast bundle or channel. Note that additional parameters such as **fcc-channel-type** should also be configured to match the characteristics of the bundle/channel.

The **no** form of the command disables removes the FCC configuration for the bundle/channelcontext and implies the setting is inherited from a higher context or the default policy.

Default no fcc

Parameters **disable —** Explicitly disables the FCC server within the policy. For the default bundle within the default multicast information policy, the **no** form of the command and the **disable** keyword have the same meaning and imply that the server is disabled.

local-fcc-port

Syntax **local-fcc-port** *port*
no local-fcc-port

Context config>mcast-mgmt>mcast-info-plcy>bundle>video
config>mcast-mgmt>mcast-info-plcy>bundle>channel>video
config>mcast-mgmt>mcast-info-plcy>bundle>channel>source-override>video

Description This command configures the local port on which Fast Channel Change (FCC) requests are received. The value of this object can only be set for the default bundle and will be used by all bundles and channels.

The **local-fcc-port** *port* value is the only configuration parameter in the bundle "default" context.

The **no** form of the command removes the port from the video configuration.

Parameters *port* — Specifies a local port for FCC requests.

Values 1024 — 65535

local-rt-port

Syntax **local-rt-port** *port*
no local-rt-port

Context config>mcast-mgmt>mcast-info-plcy>bundle>video
config>mcast-mgmt>mcast-info-plcy>bundle>channel>video
config>mcast-mgmt>mcast-info-plcy>bundle>channel>source-override>video

Description This command configures the local port on which retransmission (RET) requests are received. The value of this object can only be set for the default bundle and will be used by all channels.

The **local-rt-port** *port* value is the only configuration parameter in the bundle "default" context.

The **no** form of the command removes the port from the video configuration.

Parameters *port* — Specifies a local port for RT requests.

Values 1024 — 65535

local-rt-server

Syntax **local-rt-server** [**disable**]
no local-rt-server

Context config>mcast-mgmt>mcast-info-plcy>bundle>video
config>mcast-mgmt>mcast-info-plcy>bundle>channel>video
config>mcast-mgmt>mcast-info-plcy>bundle>channel>source-override>video

Description This command enables the local retransmission server capability on the ISA video group.

RET server parameters can be configured in a multicast information policy or a service, but the parameters will have no effect if the RET server is disabled or if the video group is administratively disabled (shutdown).

The **no** form of the command returns the parameter to the default value where the RET server is disabled on the video group.

Default no local-rt-server

Parameters **disable —** Specifies to disable the RET server.

reorder-audio

Syntax **reorder-audio** *time*
no reorder-audio

Context config>mcast-mgmt>mcast-info-plcy>bundle>video
config>mcast-mgmt>mcast-info-plcy>bundle>channel>video

Description This command configures the time, in milliseconds, by which the audio packets are reordered in the ad stream.

Configuring this parameter depends on what is configured on the A Server and the GOP sizes of the network stream. Typically, this configuration should match the A Server configuration.

The **no** form of the command removes the time value from the configuration.

Default no redorder-audio

Parameters *time* — Specifies the audio reorder time, in milliseconds.

Values 100 — 1000

rt-buffer-size

Syntax **rt-buffer-size** *rt-buffer-size*
no rt-buffer-size

Context config>mcast-mgmt>mcast-info-plcy>bundle>channel>video
config>mcast-mgmt>mcast-info-plcy>bundle>channel>source-override>video

Description This command configures the retransmission buffer for channels within the bundle or channel range.

The **no** form of the command returns the parameter to the default value.

Default 300

Parameters *rt-buffer-size* — Specifies the buffer size, in milliseconds, to store channel packets.

Values 300 — 8000

rt-server

Syntax **rt-server disable**
rt-server *ip-address* **port** *port-num*
no rt-server

Context config>mcast-mgmt>mcast-info-plcy>bundle>video
config>mcast-mgmt>mcast-info-plcy>bundle>channel>video
config>mcast-mgmt>mcast-info-plcy>bundle>channel>source-override>video

Description This command enables and configures the upstream retransmission server configuration parameters.

The **no** form of the command removes the upstream retransmission server configuration and implies the configuration is inherited from a higher context or from the default policy.

Default no rt-server – The upstream retransmission server settings are inherited.

Parameters **disable —** This keyword explicitly disables the upstream retransmission server within the policy. For the default bundle within the default Multicast Information Policy, the **no** form of the command and the disable keyword have the same meaning and imply the server is disabled.

ip-address — The IP address of the upstream retransmission server.

port *num* **—** The UDP port to use to send RET requests to the upstream RET server.

Values 1024 — 65535

source-port

Syntax **source-port** *port-num*
no source-port

Context config>mcast-mgmt>mcast-info-plcy>bundle>video

Description This command configures the source port for upstream RET requests.

The **source-port** *port-num* value is the only configuration parameter in the bundle "default" context.

The **no** form of the command removes the value from the configuration.

Parameters *port-num* — Specifies the source port in the received RTP multicast stream.

Values 1024 — 65535

video-group

Syntax **video-group** *video-group-id*
video-group disable
no video-group

Context config>mcast-mgmt>mcast-info-plcy>bundle>video
config>mcast-mgmt>mcast-info-plcy>bundle>channel>video
config>mcast-mgmt>mcast-info-plcy>bundle>channel>source-override>video

Description This command assigns a video group ID to the channel.

Parameters *video-group-id* — specifies the identifier for this video group. The video group must have been configured in the **config>isa** context.

Values 1 — 4

disable — Explicitly disables the video group within the policy.

SERVICE VIDEO INTERFACE COMMANDS

video-interface

Syntax **video-interface** *ip-int-name* [**create**]
no video-interface *ip-int-name*

Context config>service>ies
config>service>vpls
config>service>vprn

Description This command creates a video interface within the service. The video interface and associated IP addresses are the addresses to which clients within the service will send requests.

The video interface must be associated with an ISA group using the video-sap command and have IP addresses for it to be functional.

The no form of the command deletes the video interface. The video interface must be administratively shut down before issuing the **no video-interface** command.

Default none

Parameters *ip-int-name* — Specifies the name of the video interface up to 32 characters in length. An interface name cannot be in the form of an IP address. If the string contains special characters (#, $, spaces, etc.), the entire string must be enclosed within double quotes.

create — This keyword is mandatory when creating a video interface.

address

Syntax [**no**] **address** *ip-address/mask*

Context config>service>ies>video-interface
config>service>vpls>video-interface
config>service>vprn>video-interface

Description This command assigns an IP address to the video interface within the service. Video interface IP addresses are used by video service clients to direct requests for video server services. Up to 16 IP address/subnets can be defined. Note that the addresses defined must all be distinct and cannot be contained within a previously defined address.

In the VPLS context, only one IP address can be defined for a video interface.

The **no** form of the command deletes the IP address/subnet from the video interface.

Default none

Parameters *ip-address* — The IP address/subnet of the video interface in dotted decimal notation.

mask — The subnet mask length for the IP address expressed as an integer.

adi

Syntax **adi**

Context config>service>ies>video-interface
config>service>vprn>video-interface

Description This command enables the context to configure ad insertion (ADI) for the video interafce.

channel

Syntax **channel** *mcast-address* **source** *ip-address* [**channel-name** *channel-name*]
no channel *mcast-address* **source** *ip-address*

Context config>service>ies>video-interface>adi
config>service>vprn>video-interface>adi

Description This command configures channel parameters for ad insertion.

Parameters *mcast-address* — Specifies the multicast addres.

source *ip-address* **—** Specifies the source IP address.

channel-name *channel-name* **—** Specifies the channel name up to 32 characters in length.

cpu-protection

Syntax **cpu-protection** *policy-id*
no cpu-protection

Context config>service>vpls>video-if
config>service>ies>video-if
config>service>vprn>video-if

Description This command assigns an existing CPU protection policy to the associated service video interface. The CPU protection policies are configured in the **config>sys>security>cpu-protection>policy** *cpu-protection-policy-id* context. The number of RTCP messages per client will be limited to the number as configured under the policy.

Default none

Parameters *policy-id* — Specifies a CPU protection policy.

Values 1 — 255

scte35-action

Syntax **scte35-action** {**forward** | **drop**}

Context config>service>ies>video-interface>adi>channel

config>service>vprn>video-interface>adi>channel

Description This command specifies whether the Society of Cable Telecommunications Engineers 35 (SCTE 35) cue avails in the stream need to be forwarded or not. When specified to forward, SCTE 35 messages will be forwarded downstream. When specified to drop, SCTE 35 messages will not be forwarded downstream. They will be still be processed for local splicing decisions.

Parameters **forward —** Forwards SCTE 35 messages downstream.

drop — Drops SCTE 35 messages.

zone-channel

Syntax **zone-channel** *mcast-address* **source** *ip-address* **adi-channel-name** *channel-name*
no zone-channel *mcast-address* **source** *ip-address*

Context config>service>ies>video-interface>adi>channel
config>service>vprn>video-interface>adi>channel

Description This command configures zone-channel parameters or ad insertion. The channel configuration along with the zone-channel configuration associates a network channel to a zone-channel and builds the store and forward relationship.

Parameters *mcast-address* — Specifies the IP multicast group address for which this entry contains information.

source *ip-address* **—** Specifies the type of address to be used for a source address/

adi-channel-name *channel-name* **—** Specifies the name for this zone channel.

scte30

Syntax **scte30**

Context config>service>ies>video-interface>adi
config>service>vprn>video-interface>adi

Description This command enables the context to configure SCTE 30 parameters.

ad-server

Syntax [**no**] **ad-server** *ip-address*

Context config>service>ies>video-interface>adi>scte30
config>service>vprn>video-interface>adi>scte30

Description This command configures the ad server address. A TCP session will be accepted for SCTE 30 messaging only for IP addresses that appear in this configuration.

The **no** form of the command removes the address from the ad server configuration.

Parameters *ip-address* — Specifies the IP address of the ad server.

local-address

Syntax **local-address control** *ip-address* **data** *ip-address*
no local-address

Context config>service>ies>video-interface>adi>scte30
config>service>vprn>video-interface>adi>scte30

Description SCTE 30 requires a TCP session per zone-channel between the ad server and splicer for control communication and it requires UDP sessions on which the video ad stream is sent. This command specifies the splicer's control IP address to which the ad-server(s) should setup TCP connections and the data IP address to which the video ad streams should be sent.

The no form of the command removes the address information from the local address configuration.

Parameters **control** *ip-address* — Specifies the local IP address to which ad servers send Society of Cable Telecommunications Engineers 30 (SCTE 30) ad control streams. This address should be in the same subnet as the ip address assigned to the video interface.

The values of **control** *ip-address* and the **data** *ip-address* specify the local IP address to which ad servers send SCTE 30 ad data streams, must be set together in the same SNMP request PDU or else the set request will fail with an inconsistent value error.

data *ip-address* — Specifies the local IP address to which ad servers send Society of Cable Telecommunications Engineers 30 (SCTE 30) ad data streams. This address should be in the same subnet as the ip address assigned to the video interface.

The values of the **control** *ip-address* and the **data** *ip-address* specifiy the local IP address to which ad servers send SCTE 30 ad control streams, must be set together in the same SNMP request PDU or else the set request will fail with an inconsistent value error.

multicast-service

Syntax **multicast-service** *service-id*
no multicast-service

Context config>service>ies>video-interface
config>service>vpls>video-interface
config>service>vprn>video-interface

Description This command adds a multicast service association to the video interface. This parameter is not required on the video interface when the service carries both unicast and multicast traffic.

When multicast and unicast are carried in separate service instances, the operator can set this parameter on the unicast video interface to form an association with the multicast service when replies need to be sent in the multicast service instance.

When multicast and unicast are carried in separate services when a downstream device (such as a DSLAM) can perform a service cross connect between the services and performs multicast replication.

The **no** form of the command removes the multicast service association.

Default none

Parameters *service-id* — The service ID of the associated multicast service.

Values *service-id*: 1 — 2147483647
svc-name: 64 characters maximum

rt-client-src-address

Syntax **rt-client-src-address** *ip-address*
no rt-client-src-address

Context config>service>ies>video-interface
config>service>vpls>video-interface
config>service>vprn>video-interface

Description This command assigns the IP address for the retransmission client on the video interface within the service. The RET client IP address is the originating address used for communication with upstream RET servers. If no RET client address is assigned, the RT client is operationally down as the RET client configuration is incomplete.

For a VPLS service, the RET client address cannot be the same as an existing address for the video interface, but it must be an address within a video interface subnet.

For IES and VPRN, the RET client address can be the same as an existing address for the video interface or an address within a video interface subnet.

The **no** form of the command deletes the RT client address from the video interface.

Default none

Parameters *ip-address* — Specifies the IP address for the retransmission client on the video interface within the service.

video-sap

Syntax **video-sap** *video-group-id*
no video-sap

Context config>service>ies>video-interface
config>service>vpls>video-interface
config>service>vprn>video-interface

Description This command configures a service video interface association with a video group.

The **no** form of the command removes the video group association.

Parameters none

Parameters *video-group-id* — Specifies the video group ID number.

Values 1 — 4

egress

Syntax **egress**

Context config>service>ies>video-interface>video-sap
config>service>vpls>video-interface>video-sap
config>service>vprn>video-interface>video-sap

Description This command enables the context to configure egress parameters for the service's video SAP.

ingress

Syntax **ingress**

Context config>service>ies>video-interface>video-sap
config>service>vpls>video-interface>video-sap
config>service>vprn>video-interface>video-sap

Description This command enables the context to configure in parameters for the service's video SAP.

qos

Syntax **qos** *policy-id*
no qos

Context config>service>ies>video-interface>video-sap>egress
config>service>vpls>video-interface>video-sap>egress
config>service>vprn>video-interface>video-sap>egress
config>service>ies>video-interface>video-sap>ingress
config>service>vpls>video-interface>video-sap>ingress
config>service>vprn>video-interface>video-sap>ingress

Description This command associates an existing egress or ingress QoS policy to a video interface. If the policy-id does not exist, an error will be returned. Attempts to associate a QoS policy of the wrong type returns an error.

Only one QoS policy can be associated with a video interface at one time in the ingress and egress contexts. Attempts to associate a second QoS policy of a given type will return an error.

The **no** form of the command removes the QoS policy association from the video interface, and the QoS policy reverts to the default.

Default default QoS policy

Parameters *policy-id* — The sap-egress or sap-ingress policy ID to associate with the video interface on ingress/egress. The policy ID must already exist.

Values 1 — 65535

filter

Syntax **filter ip** *ip-filter-id*
no filter

Context config>service>ies>video-interface>video-sap>egress
config>service>vpls>video-interface>video-sap>egress
config>service>vprn>video-interface>video-sap>egress
config>service>ies>video-interface>video-sap>ingress
config>service>vpls>video-interface>video-sap>ingress
config>service>vprn>video-interface>video-sap>ingress

Description This command associates an existing IP filter policy with an ingress or egress video SAP. Filter policies control the forwarding and dropping of packets based on the matching criteria.

Filters applied to SAPs (ingress or egress) apply to all packets on the SAP. One exception is non-IP packets are not applied to the match criteria, so the default action in the filter policy applies to these packets.

The **no** form of this command removes any configured filter ID association with the SAP. The filter ID itself is not removed from the system.

Parameters **ip** *ip-filter-id* — Specifies the ID for the IP filter policy.

Values 1 — 65535

gateway-ip

Syntax [**no**] **gateway-ip** *ip-address*

Context config>service>vpls>video-interface

Description This command assigns a gateway IP address for the video interface within the VPLS service. Because VPLS is a Layer 2 service and the video interface is modeled like a host within the service, the video interface needs a gateway IP to send requests to devices outside of the VPLS subnet.

The **no** form of the command deletes the gateway IP address from the VPLS video interface.

Default none

Parameters *ip-address* — Specifies the gateway IP address of the VPLS video interface.