



## Cable Commands: ca through cr

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## channel-group

To add an interface (Gigabit Ethernet or Fast Ethernet) to an EtherChannel Group, and to associate that interface with an EtherChannel link, use the **channel-group** command in interface configuration mode.

To remove an EtherChannel interface from the EtherChannel group, use the **no** form of this command.

**channel-group** *n*

**no channel-group** *n*

### Cisco cBR Series Converged Broadband Routers

**channel-group** *n* **link** *link-id* **mode** {**active**|**passive**} [**link** *link-id*]

**no channel-group** *n*

#### Syntax Description

<i>n</i>	The identifying number for the EtherChannel group with which to associate this interface. An EtherChannel group can be identified in the range of 1 to 64.  Each group can have up to four interfaces on the Cisco uBR10012 and Cisco uBR7200 series routers, only one of which is the master.  Each group can have up to eight interfaces on the Cisco cBR series routers, only one of which is the master.
<b>link</b> <i>link-id</i>	Assigns a link identifier used for load balancing.  • <i>link-id</i> —Load balancing link identifier. The range is from 1 to 8.
<b>mode</b>	Specifies the Etherchannel mode for the interface.
<b>active</b>	Enables Link Aggregation Control Protocol (LACP) unconditionally.
<b>passive</b>	Enables LACP only if an LACP device is detected.

#### Command Default

By default, the **channel-group** command has the following behaviors:

- EtherChannel groups and ports are not defined.
- EtherChannel groups and ports are disabled (**off** mode) once configured, and must be enabled.
- The first port assigned to an EtherChannel group is the bundle master.

**Command Modes** Interface configuration (config-if)

**Command History**

Release	Modification
12.2(11)BC3	This command was introduced on the Cisco uBR7246VXR router.
12.2(9a)BC	This command was introduced on the Cisco uBR10012 router.
12.3BC	This command was integrated into Cisco IOS Release 12.3BC.
12.2(33)SCA	This command was integrated into Cisco IOS Release 12.2(33)SCA. Support for the Cisco uBR7225VXR router was added.
IOS-XE 3.15.0S	This command was implemented on the Cisco cBR Series Converged Broadband Routers.

**Usage Guidelines**

The **no** form of this command also removes the associated EtherChannel ports within the EtherChannel group. For additional information, refer to the EtherChannel on the Cisco CMTS Routers feature document on Cisco.com.

The Cisco cBR series routers support the channel group configuration on the Ten Gigabit Ethernet interface.

**Examples**

The following example creates an EtherChannel link with a channel group identifier of 1 on the specified port. If this is the first port assigned to EtherChannel group 1, it becomes the master in that EtherChannel group.

```
Router(config-if)# channel-group etherchannel 1
```

The following example creates an EtherChannel link with a channel group identifier of 3 on the specified port on a Cisco cBR-8 router:

```
Router(config)# interface port-channel 3
Router(config-if)# exit
Router(config)# interface TenGigabitEthernet 5/1/0
Router(config-if)# channel-group 3 mode active
```

**Related Commands**

Command	Description
<b>show interface port-channel</b>	Displays the EtherChannel interfaces and channel identifiers, with their mode and operational status.

## channel-id (cable configuration file)

To create a DOCSIS configuration file that specifies the upstream channel ID for a CM configuration file, use the **channel-id** command in cable config-file configuration mode. To remove the channel ID specification, use the **no** form of this command.

**channel-id** *upstreamchan-id*

**no channel-id**

### Syntax Description

<i>upstreamchan-id</i>	Specifies the upstream channel ID. Valid range is 0 to 255, depending on the number of actual upstream ports on the cable interface being used.
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### Command Default

If no upstream channel ID is specified, the CM uses the upstream channel from the Upstream Channel Description (UCD) messages it receives on the downstream channel.

### Command Modes

Cable configuration file (config-file)

### Command History

Release	Modification
12.1(2)EC1	This command was introduced.
12.3BC	This command was integrated into Cisco IOS Release 12.3BC.
12.2(33)SCA	This command was integrated into Cisco IOS Release 12.2(33)SCA. Support for the Cisco uBR7225VXR router was added.
IOS-XE 3.15.0S	This command is not supported on the Cisco cBR Series Converged Broadband Routers.

### Usage Guidelines

This command sets the Upstream Channel ID Configuration Setting field in the DOCSIS configuration file. Typically, the CM uses the upstream channel ID that is specified by the CMTS during the registration process, but this command overrides that setting and forces the CM to use the upstream channel specified in the DOCSIS configuration file. If that upstream does not exist, or if the upstream cannot be obtained for some reason, the CM cannot come online.



#### Note

If you are using a telco-return CM, the upstream channel must be 0.

**Examples**

The following example shows how to set the upstream channel ID for the configuration file to 3. If the CM cannot obtain this upstream channel, it does not come online.

```
Router(config)# cable config-file channeloverride.cm
Router(config-file)# channel-id 3
Router(config-file)# exit
```

**Related Commands**

Command	Description
<b>cable config-file</b>	Creates a DOCSIS configuration file and enters configuration file mode.
<b>access-denied</b>	Disables access to the network.
<b>cpe max</b>	Specifies CPE information.
<b>download</b>	Specifies download information for the configuration file.
<b>frequency</b>	Specifies downstream frequency.
<b>option</b>	Provides config-file options.
<b>privacy</b>	Specifies privacy options for baseline privacy images.
<b>service-class</b>	Specifies service class definitions for the configuration file.
<b>snmp manager</b>	Specifies Simple Network Management Protocol (SNMP) options.
<b>timestamp</b>	Enables time-stamp generation.

# clear cable admission control counters

To reset all the resource counters on the Cisco CMTS to zero, use the **clear cable admission control counters** command in privileged EXEC mode.

**clear cable admission control counters**

## Command Default

None

## Command Modes

Privileged EXEC (#)

## Command History

Release	Modification
12.3(13a)BC	This command was introduced.
12.2(33)SCA	This command was integrated into Cisco IOS Release 12.2(33)SCA. Support for the Cisco uBR7225VXR router was added.
IOS-XE 3.15.OS	This command was implemented on the Cisco cBR Series Converged Broadband Routers.

## Usage Guidelines

The counters are also set to zero when a given resource is reconfigured. Counters can be displayed using the **show cable admission-control** command.

For additional information, refer to the Admission Control for the Cisco CMTS feature documents on Cisco.com.

## Examples

The following example resets configured admission control counters to zero, whether configured in global or interface configuration mode:

```
Router# clear cable admission control counters
```

## Related Commands

Command	Description
<b>cable admission-control</b>	Configures the CPU and memory thresholds for the Cisco CMTS and supporting broadband processing engines (BPEs)
<b>cable admission-control event</b>	Configures and enables Admission Control event types on the Cisco CMTS.
<b>cable admission-control ds-bandwidth</b>	Configures Admission Control downstream bandwidth thresholds on the Cisco CMTS.

<b>Command</b>	<b>Description</b>
<b>cable admission-control us-bandwidth</b>	Configures Admission Control upstream bandwidth thresholds on the Cisco CMTS.
<b>debug cable admission-control</b>	Enables automatic Admission Control troubleshooting processes on the Cisco CMTS.
<b>show cable admission-control</b>	Displays the current Admission Control configuration and status on the Cisco CMTS, or on a specified interface.



## clear cable arp-filter

To reset Address Resolution Protocol (ARP) filter statistics displayed by the **show cable arp-filter** command, use the **clear cable arp-filter** command in privileged EXEC mode.

**clear cable arp-filter** {**bundle** *number* **cable** *slot/port*| *slot/subslot/port*}

### Syntax Description

<b>bundle</b> <i>number</i>	Resets the ARP filter statistics for the specified virtual bundle interface, where <i>number</i> is a value from 1 to 255.
<b>cable</b> <i>slot/port</i>	<p>(Cisco uBR7100 and Cisco uBR7200 Series Routers) Specifies removal of CMs on the specified cable interface and downstream port, where:</p> <ul style="list-style-type: none"> <li>• <i>slot</i>—Specifies the chassis slot number of the cable interface line card.</li> <li>• <i>port</i>—Specifies the downstream port number.</li> </ul> <p>Valid values for these arguments are dependent on your CMTS router and cable interface line card. Refer to the hardware documentation for your router chassis and cable interface line card for supported slot and port numbering.</p>
<b>cable</b> <i>slot/subslot/port</i>	<p>(Cisco uBR10012 Router) Specifies removal of CMs on the specified cable interface, where:</p> <ul style="list-style-type: none"> <li>• <i>slot</i>—Specifies the chassis slot number of the cable interface line card. Valid slots are 5 to 8.</li> <li>• <i>subslot</i>—Specifies the secondary slot number of the cable interface line card. Valid subslots are 0 or 1.</li> <li>• <i>port</i>—Specifies the downstream port number. Valid ports are 0 to 4, depending on the cable interface line card.</li> </ul>
<b>cable</b> <i>slot/subslot/port</i>	<p>(Cisco cBR Series Routers) Specifies removal of CMs on the specified cable interface, where:</p> <ul style="list-style-type: none"> <li>• <i>slot</i>—Slot number of the card. Valid slots are 0 to 3 and 6 to 9 on the Cisco cBR-8router.</li> <li>• <i>subslot</i>—Subslot number of the card. The valid value is 0 on the Cisco cBR-8router.</li> <li>• <i>port</i>—Downstream port number. The valid range is from 0 to 15 on the Cisco cBR-8router.</li> </ul>

**Command Default** None

**Command Modes** Privileged EXEC (#)

**Command History**

Release	Modification
12.3(17a)BC	This command was introduced.
12.2(33)SCA	This command was integrated into Cisco IOS Release 12.2(33)SCA. Support for the Cisco uBR7225VXR router was added.
IOS-XE 3.15.0S	This command was implemented on the Cisco cBR Series Converged Broadband Routers.

**Usage Guidelines**

Use the **clear cable arp-filter** command to clear the ARP filter statistics that are displayed using the **show cable arp-filter** command.

**Examples**

This example shows cable ARP filter statistics for virtual bundle interface number 10, followed by a clearing of the ARP filter statistics on that bundle and the resulting display of cleared statistics.

```
Router# show cable arp-filter bundle 10
ARP Filter statistics for Bundle10:
  Replies Rcvd: 3069 total. 3062 unfiltered, 7 filtered
  Requests Forwarded: 1175 total. 1175 unfiltered, 0 filtered
  Requests Sent For IP: 0 total. 0 unfiltered, 0 filtered
Router# clear cable arp-filter bundle 10
Router# show cable arp-filter bundle 10
ARP Filter statistics for Bundle10:
  Replies Rcvd: 0 total. 0 unfiltered, 0 filtered
  Requests Forwarded: 0 total. 0 unfiltered, 0 filtered
  Requests Sent For IP: 0 total. 0 unfiltered, 0 filtered
```

**Related Commands**

Command	Description
<b>cable arp filter</b>	Controls the number of ARP packets that are allowable for each SID on a cable interface.
<b>clear arp-cache</b>	Refreshes dynamically created entries from the ARP cache.
<b>show cable arp-filter</b>	Displays the total number of ARP replies and requests that have been sent and received, including the number of requests that have been filtered.

# clear cable bgsync counters

To clear the background synchronization information on the Cisco CMTS, use the **clear cable bgsync counters** command in global configuration mode.

**clear cable bgsync counters**

**Syntax Description** This command has no arguments or keywords.

**Command Modes** Global configuration mode (config)

Command History	Release	Modification
	12.2(33)SCG	This command was introduced.
	IOS-XE 3.15.0S	This command is not supported on the Cisco cBR Series Converged Broadband Routers.

**Usage Guidelines** Use the **clear cable bgsync counters** command to clear the background synchronization information statistics on the Cisco CMTS.

**Examples** The following example shows how to clear the background synchronization counters on the Cisco uBR10012 router:

```
Router# configure terminal
Router(config)# clear cable bgsync counters
Router(config)#
```

## Related Commands

Command	Description
<b>clear cable bgsync</b>	Sets the data intervals for background synchronization on the Cisco CMTS.
<b>clear cable bgsync active</b>	Activates background synchronization process on the Cisco CMTS.
<b>show cable bgsync</b>	Displays the information on the background synchronization process.

# clear cable cmc

To clear the Cisco CMC information, use the **clear cable cmc** command in privileged EXEC mode.

```
clear cable cmc {all | mac-address}
```

## Syntax Description

<b>all</b>	Specifies that the information on all Cisco CMCs must be cleared.
<i>mac-address</i>	MAC address of the Cisco CMC for which the information must be cleared.

## Command Default

None

## Command Modes

Privileged EXEC (#)

## Command History

Release	Modification
12.2(33)CX	This command was introduced.
IOS-XE 3.15.0S	This command is not supported on the Cisco cBR Series Converged Broadband Routers.

## Usage Guidelines

The **clear cable cmc** clears the Cisco CMC. When this command is used, the Cisco CMTS clears all the running data of the Cisco CMC from current database and disconnects the Generic Control Protocol (GCP) connection. Therefore, the Cisco CMC reboots.

## Examples

The following example shows how to clear the information for all Cisco CMCs:

```
Router# clear cable cmc all
```

The following example shows how to clear the information on the Cisco CMC with the MAC address 0010.2024.7035:

```
Router# clear cable cmc 0010.2024.7035
```

## Related Commands

Command	Description
<b>cable cmc</b>	Configures the downstream RF power and FRx on the Cisco CMC.
<b>show cable cmc</b>	Displays the Cisco CMC information.

# clear cable dsg

To reset counters related to DOCSIS Set-top Gateway (DSG) tunnels, use the **clear cable dsg** command in privileged EXEC mode.

**clear cable dsg**

**Syntax Description** This command has no arguments or keywords.

**Command Modes** Privileged EXEC (#)

Release	Modification
12.2(15)BC2	This command was introduced for the Cisco uBR7100 series and Cisco uBR7246VXR routers.
12.3(13a)BC	This command is obsolete.
IOS-XE 3.15.0S	This command is not supported on the Cisco cBR Series Converged Broadband Routers.

**Usage Guidelines** DSG operation is disabled using the **no cable dsg** command, but this does not clear out the DSG-related counter (“mapping entry is used”), so that you can retain its value in case you intend to restart DSG operations again. If, however, you want to reset those counters to zero, use the **clear cable dsg** command.



**Note** This command resets the “mapping entry is used” counters for all DSG tunnels and interfaces on the router.

**Examples** The following example shows how to clear the DSG counters for all cable interfaces on the router, and shows an example of the **show cable dsg** command showing the counters after they have been cleared.

```
Router# show cable dsg stats

DSG statistics information
DSG keepalive is set
Vendor: DDD, Tunnel count: 1
Vendor: BBB, Tunnel count: 2
Vendor name is DDD, tunnel MAC is 0001.0002.0003
Group address is 226.2.2.2, source address is *
  Interface is Cable5/1, mapping entry is used 2
    Received 5968 packets, forwarded 5289 packets
    Dropped 679 packets, last second rate 16878 bits/sec
Router# clear cable dsg

Router# show cable dsg stats

DSG statistics information
```

```

Vendor: DDD, Tunnel count: 1
Vendor: BBB, Tunnel count: 2
Vendor name is DDD, tunnel MAC is 0001.0002.0003
Group address is 226.2.2.2, source address is *
Interface is Cable5/1, mapping entry is used 0
  Received 5968 packets, forwarded 5289 packets
  Dropped 679 packets, last second rate 16878 bits/sec

```

**Related Commands**

Command	Description
<b>clear cable dsg</b>	Enables the DOCSIS Set-Top Gateway (DSG) on a cable interface, and configures its tunnel-mapping parameters.
<b>clear cable dsg keepalive</b>	Enables keepalive messages over DOCSIS Set-Top Gateway (DSG) tunnels on a cable interface.
<b>debug cable dsg</b>	Enables the display of debugging messages for the operation of the DOCSIS Set-Top Gateway (DSG) feature.
<b>show cable dsg</b>	Displays the current DOCSIS Set-Top Gateway (DSG) tunneling parameters.

## clear cable flap-list

To reset the flap-list table for a specific CM or for all CMs connected to the Cisco CMTS router, use the **clear cable flap-list** command in privileged EXEC mode.

**clear cable flap-list** {*mac-addr*| **all**} [**save-counters**]

### Syntax Description

<i>mac-addr</i>	Specifies the 48-bit MAC address (hardware address) of an individual CM to be cleared from the flap-list table.
<b>all</b>	Removes all CMs from the flap-list table.
<b>save-counters</b>	(Optional) Preserves the flap-list counters that are displayed by the <b>show cable flap-list</b> command and by using SNMP requests to access the CISCO-CABLE-SPECTRUM-MIB.

### Command Default

Clears the flap-list counters.

### Command Modes

Privileged EXEC (#)

### Command History

Release	Modification
11.3 NA	This command was introduced.
11.3(7)NA	The <b>save-counters</b> option was supported on the Cisco uBR7200 series routers.
12.1(5)EC1	Support was added for the Cisco uBR7100 series routers.
12.2(4)BC1	Support for this command (without the <b>save-counters</b> option) was added for the Cisco uBR10012 router.
12.2(15)BC2	The <b>save-counters</b> option was supported on the Cisco uBR10012 router.
12.3BC	This command was integrated into Cisco IOS Release 12.3BC.
12.2(33)SCA	This command was integrated into Cisco IOS Release 12.2(33)SCA. Support for the Cisco uBR7225VXR router was added.
IOS-XE 3.15.OS	This command was implemented on the Cisco cBR Series Converged Broadband Routers.

**Usage Guidelines**

Cable modems are removed from the flap-list table after the number of days (between 1 and 60) specified by the **cable flap-list aging** global configuration command. Use the **clear cable flap-list** command to remove individual CMs from the flap-list while retaining flapping activity for other CMs, or to clear the entire flap-list table.

**Examples**

The following example shows how to remove all the CMs from the flap-list table:

```
Router# clear cable flap-list all
```

**Related Commands**

Command	Description
<b>cable flap-list aging</b>	Specifies the number of days to keep a CM in the flap-list table before aging it out of the table.
<b>cable flap-list insertion-time</b>	Sets the insertion time interval that determines whether a CM is placed in the flap list.
<b>cable flap-list miss-threshold</b>	Specifies miss threshold for recording a flap-list event.
<b>cable flap-list power-adjust threshold</b>	Specifies the power-adjust threshold for recording a CM flap-list event.
<b>cable flap-list size</b>	Specifies the maximum number of CMs that can be listed in the flap-list table.
<b>clear cable modem counters</b>	Zeroes the CM counters, including flap-list counters.
<b>clear cable modem reset</b>	Removes a CM from the Station Maintenance List and resets it.
<b>debug cable flap</b>	Displays information about the operation of the CM flap list that is maintained for the cable interfaces.
<b>ping docsis</b>	Sends a DOCSIS ping to a CM and increments the flap-list counters as appropriate.
<b>show cable flap-list</b>	Displays the current contents of the flap list.



# clear cable hop

To clear the forward error corrections (FEC) hop counters on one or all cable interfaces on a Cisco CMTS, use the **clear cable hop** command in privileged EXEC mode.

```
clear cable hop [cable {slot/port | slot/subslot/port} [upstream uport]]
```

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```
clear cable hop [upstream-cable {slot/card/port} [us-channel {physical us-channel number}]]
```

### Syntax Description

<b>cable</b> <i>slot/port</i>	<p>(Optional—Cisco uBR7100 and Cisco uBR7200 Series Routers) Specifies removal of CMs on the specified cable interface and downstream port, where:</p> <ul style="list-style-type: none"> <li>• <i>slot</i>—Specifies the chassis slot number of the cable interface line card.</li> <li>• <i>port</i>—Specifies the downstream port number.</li> </ul> <p>Valid values for these arguments are dependent on your CMTS router and cable interface line card. Refer to the hardware documentation for your router chassis and cable interface line card for supported slot and port numbering.</p>
<b>cable</b> <i>slot/subslot/port</i>	<p>(Optional—Cisco uBR10012 Router) Specifies removal of CMs on the specified cable interface, where:</p> <ul style="list-style-type: none"> <li>• <i>slot</i>—Specifies the chassis slot number of the cable interface line card. Valid slots are 5 to 8.</li> <li>• <i>subslot</i>—Specifies the secondary slot number of the cable interface line card. Valid subslots are 0 or 1.</li> <li>• <i>port</i>—Specifies the downstream port number. Valid ports are 0 to 4, depending on the cable interface line card.</li> </ul>
<b>upstream</b> <i>uport</i>	<p>(Optional) Clears the hop counters on a specific upstream port on a specific cable interface. The valid values for <i>uport</i> start with 0 for the first upstream port on the cable interface line card.</p>
<b>upstream-cable</b> <i>slot/card/port</i>	<p>(Optional) Clears the hop counters on a specific upstream-cable controller. The valid values start with 0 for the first upstream port on the cable interface line card.</p>

<b>us-channel</b> <i>physical us-channel number</i>	(Optional) Clears upstream channel information. Valid values are 0 to 11.
---	---

**Command Default** None

**Command Modes** Privileged EXEC (#)

### Command History

Release	Modification
12.2(15)BC1	This command was introduced.
12.3(BC)	This command was integrated into Cisco IOS Release 12.3BC.
12.2(33)SCA	This command was integrated into Cisco IOS Release 12.2(33)SCA.
IOS-XE 3.15.OS	This command was implemented on the Cisco cBR Series Converged Broadband Routers. <ul style="list-style-type: none"> <li>• The <b>upstream-cable</b> keyword was added.</li> <li>• The <b>us-channel</b> keyword was added.</li> </ul>

### Usage Guidelines

The **clear cable hop** command clears the correctable and uncorrectable forward error corrections (FEC) counters that are displayed by the **show cable hop** command. You can clear the counters for all interfaces on the Cisco CMTS, for one specific interface (one downstream and its associated upstreams), or for a specific upstream on a cable interface.

### Examples

The following example shows how to clear the frequency hop counters on all cable interfaces on the Cisco CMTS, along with sample output from the **show cable hop** command that shows the counters being cleared:

```
Router# show cable hop

Upstream      Port      Poll Missed Min   Missed Hop  Hop   Corr   Uncorr
Port          Status    Rate Poll  Poll  Poll  Thres Period FEC   FEC
              (ms) Count Sample Pcnt  Pcnt  (sec) Errors Errors
Cable3/0/U0   15.008 Mhz 1000 * * *set to fixed frequency * * * 2238 133
Cable3/0/U1   admindown 1000 * * * frequency not set * * * 0     0
Cable3/0/U2   admindown 1000 * * * frequency not set * * * 0     0
Cable3/0/U3   admindown 1000 * * * frequency not set * * * 0     0
Router# clear cable hop

Router# show cable hop

Upstream      Port      Poll Missed Min   Missed Hop  Hop   Corr   Uncorr
Port          Status    Rate Poll  Poll  Poll  Thres Period FEC   FEC
              (ms) Count Sample Pcnt  Pcnt  (sec) Errors Errors
Cable3/0/U0   15.008 Mhz 1000 * * *set to fixed frequency * * * 0     0
```

```

Cable3/0/U1  admindown  1000 * * *  frequency not set  * * *  0      0
Cable3/0/U2  admindown  1000 * * *  frequency not set  * * *  0      0
Cable3/0/U3  admindown  1000 * * *  frequency not set  * * *  0      0
Router#

```

The following example shows how to clear the frequency hop counters on a specific cable interface on the Cisco CMTS:

```
Router# clear cable hop c5/0
```

```
Router#
```

The following example shows how to clear the frequency hop counters on a specific upstream on the Cisco CMTS:

```
Router# clear cable hop c5/1/0 upstream 2
```

```
Router#
```

The following example shows how to clear the frequency hop counters on a specific upstream on the Cisco cBR Series Converged Broadband Routers:

```
Router# clear cable hop upstream-cable 3/0/3 us-channel 2
```

```
Router#
```

### Related Commands

Command	Description
<b>show cable hop</b>	Displays cable-hop statistics on a Cisco CMTS.
<b>show cable modem</b>	Displays CM configuration settings.

## clear cable host

To clear the host from the router's internal address tables, use the **clear cable host** command in privileged EXEC mode.

```
clear cable host {ip-address| mac-address| name fqdn}
```

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```
clear cable host {ip-address| mac-address| vrf {VPN Routing/Forwarding instance name ip-address}}
```

#### Syntax Description

<i>ip-address</i>	IPv4 or IPv6 address for the device to be cleared.
<i>mac-address</i>	MAC address for the device to be cleared.
<b>name fqdn</b>	Specifies the fully qualified domain name (FQDN) of the cable device to be displayed. This option is only available if the <b>show cable modem domain-name</b> command has been run for the first time to update the cable DNS cache on the CMTS router.
<b>vrf</b>	Specifies VPN Routing/Forwarding instance.
<i>VPN Routing/Forwarding instance name</i>	VPN Routing/Forwarding instance name.

#### Command Default

None

#### Command Modes

Privileged EXEC (#)

#### Command History

Release	Modification
11.3 NA	This command was introduced for the Cisco uBR7200 series universal broadband router.
12.1(5)EC1	Support was added for the Cisco uBR7100 series universal broadband router.
12.2(4)BC1	Support was added for the Cisco uBR10012 universal broadband router.
12.3BC	This command was integrated into Cisco IOS Release 12.3BC.

Release	Modification
12.2(33)SCA	This command was integrated into Cisco IOS Release 12.2(33)SCA, with the following changes: <ul style="list-style-type: none"> <li>• Support for the Cisco uBR7225VXR router was added.</li> <li>• Support for specifying the IPv6 address of a CM or CPE device was added.</li> <li>• The <b>name</b> keyword option was added for specifying the fully-qualified domain name of a CM.</li> </ul>
IOS-XE 3.15.OS	This command was implemented on the Cisco cBR Series Converged Broadband Routers. The <b>vrf</b> keyword was added.

### Usage Guidelines

This command removes a host's IP, MAC address, or domain name from the router's internal address tables. This might be necessary to allow a new host to come online from the previous host's CM.



#### Note

If the cleared host continues communicating through the CM, the Cisco CMTS adds the host back to its internal address tables, and the **show interface cable interface modem** command shows it as having a "static" address. To block the host from any further access, use the **cable source-verify dhcp** command, so that the host cannot access the network unless it obtains an IP address from an authorized DHCP server.



#### Note

In Cisco IOS Release 12.2(33)SCA, the **show cable modem domain-name** (not supported for cBR routers) command must be run first on the route processor (RP) of the CMTS router before any domain name can be used as part of a cable command.

### Examples

The following example shows how to remove a host's MAC address from the internal address tables on the Cisco CMTS router:

```
Router# clear cable host 0050.7366.17ab
```

The following example shows how to remove a host's domain name from the internal address tables on the Cisco CMTS router:

```
Router# clear cable host cisco
```

The following example shows how to remove a VPN Routing/Forwarding instance on the Cisco cBR Series Converged Broadband Routers:

```
Router# clear cable host vrf cisco 3046:1829:fefb::ddd1
```

### Related Commands

Command	Description
<b>cable device</b>	Configures the access list for a CM device or host.

Command	Description
<b>cable host access-group</b>	Configures the access list for the specified hosts.
<b>show cable device access-group</b>	Display the CMs and the hosts behind the CMs on the network.
<b>show cable host access-group</b>	Displays only the hosts behind the CMs on the network.

# clear cable ipc-stats

To clear the active database and reset all IPC statistics in the active database to zero, use the **clear cable ipc-stats** command in privileged EXEC mode.

**clear cable ipc-stats**

**Syntax Description** This command has no arguments or keywords.

**Command Default** None

**Command Modes** Privileged EXEC (#)

Command History	Release	Modification
	12.2(33)SCC	This command was introduced in Cisco IOS Release 12.2(33)SCC.
	IOS-XE 3.15.0S	This command is not supported on the Cisco cBR Series Converged Broadband Routers.

**Usage Guidelines** You must enable the Cable IPC Statistics Collection tool using the **cable ipc-stats** command before using the **clear cable ipc-stats** command.

**Examples** The following example shows how to clear the active database using the **clear cable ipc-stats** command on a Cisco CMTS router:

```
Router# clear cable ipc-stats
cr10k ipc stats is cleared at 03:38:54 PDT Fri Oct 9 2009
Router#
```

## Related Commands

Command	Description
<b>cable ipc-stats</b>	Enables the Cable IPC Statistics Collection tool on a Cisco CMTS router.
<b>show cable ipc-stats</b>	Displays statistics of all the IPC messages on a Cisco CMTS router.

## clear cable load-balance

To clear the counters or state machine used to track load-balancing operations, use the **clear cable load-balance** command in privileged EXEC mode.

**clear cable load-balance** {counters| state}

### Syntax Description

<b>counters</b>	Clears all load balancing statistical counters.
<b>state</b>	Clears all state information in the load balancing state machine. This command will also put all cable interfaces and their upstream channels in the “up” state, unless they are explicitly shut down using the <b>shutdown</b> interface configuration command.

### Command Default

None

### Command Modes

Privileged EXEC (#)

### Command History

Release	Modification
12.2(15)BC1	This command was introduced for the Cisco uBR7246VXR and Cisco uBR10012 routers.
12.3BC	This command was integrated into Cisco IOS Release 12.3BC.
12.2(33)SCA	This command was integrated into Cisco IOS Release 12.2(33)SCA. Support for the Cisco uBR7225VXR router was added.
IOS-XE 3.15.OS	This command was implemented on the Cisco cBR Series Converged Broadband Routers.

### Examples

The following example shows how to clear all of the counters that track load-balancing operations, resetting them all to zero:

```
Router# clear cable load-balance counters
```

The following example shows how to clear the state machine that is used for load-balancing operations.

```
Router# clear cable load-balance state
```



**Related Commands**

<b>Command</b>	<b>Description</b>
<b>cable load-balance exclude</b>	Excludes a particular cable modem, or all cable modems from a particular vendor, from one or more types of load-balancing operations.
<b>cable load-balance group (global configuration)</b>	Creates and configures a load-balance group.
<b>cable load-balance group (interface configuration)</b>	Assigns a downstream to a load-balance group.
<b>cable load-balance group interval</b>	Configures the frequency of the load-balancing policy updates.
<b>cable load-balance group policy ugs</b>	Configures how the Cisco CMTS should load balance cable modems with active unsolicited grant service (UGS) service flows.
<b>cable load-balance group threshold</b>	Configures the threshold values that a load-balance group should use for load-balancing operations.
<b>cable upstream load-balance group</b>	Assigns an upstream to a load-balance group.
<b>show cable load-balance</b>	Displays real-time statistical and operational information for load-balancing operations.

## clear cable load-balance error-statistics

To clear all the failure counters in the error statistics, use the **clear cable load-balance error-statistics** command in privileged EXEC mode.

**clear cable load-balance error-statistics**

**no clear cable load-balance error-statistics**

**Syntax Description** This command has no arguments or keywords.

**Command Default** None.

**Command Modes** Privileged EXEC (#)

### Command History

Release	Modification
12.2(33)SCI	This command was introduced.
IOS-XE 3.15.0S	This command is not supported on the Cisco cBR Series Converged Broadband Routers.

### Examples

The following example shows how to clear all the failure counters in the error statistics.

```
Router# clear cable load-balance error-statistics
```

### Related Commands

Command	Description
<b>show cable load-balance</b>	Displays real-time configuration, statistical and operational information for load balancing operations on the router.
<b>show cable load-balance docsis-group</b>	Displays real-time configurational, statistical, and operational information of the DOCSIS group operations on the router.
<b>cable load-balance docsis30-dynamic-enable</b>	Enables the DOCSIS 3.0 dynamic load balancing on the Cisco CMTS.
<b>show cable load-balance statistics error</b>	Displays information of the DOCSIS 3.0 and DOCSIS 2.0 load balance failure.

## clear cable logging

To remove all error messages about bad IP source addresses on the cable interfaces from the error log buffer, or to clear the downstream index buffer, use the **clear cable logging** command in privileged EXEC mode.

```
clear cable logging {badipsource| downstream-index}
```

### Cisco cBR Series Converged Broadband Routers

```
clear cable logging {badipsource| downstream-index| layer2events| overlapip}
```

#### Syntax Description

<b>badipsource</b>	Clears the log buffer for BADIPSOURCE messages.
<b>downstream-index</b>	Clears the log buffer for downstream index messages.
<b>layer2events</b>	Clears the layer 2 event messages.
<b>overlapip</b>	Clears the overlap ip messages.

#### Command Modes

Privileged EXEC (#)

#### Command History

Release	Modification
12.1(13)EC	This command was introduced for the Cisco uBR7100 series and Cisco uBR7200 series universal broadband routers.
12.2(11)CY	Support was added for the Cisco uBR10012 universal broadband router.
12.2(11)BC2	Support was added to the Release 12.2 BC train for the Cisco uBR7100 series, Cisco uBR7200 series, and Cisco uBR10012 routers.
12.3BC	This command was integrated into Cisco IOS Release 12.3BC.
12.2(33)SCA	This command was integrated into Cisco IOS Release 12.2(33)SCA. Support for the Cisco uBR7225VXR router was added.
12.2(33)SCG	The <b>downstream-index</b> keyword was added.
IOS-XE 3.15.OS	This command was implemented on the Cisco cBR Series Converged Broadband Routers.

**Usage Guidelines**

The **cable logging badipsource** command creates a circular buffer that contains the BADIPSOURCE error messages that the Cisco CMTS generates when it discovers a CM or CPE device using an unauthorized IP address. When the buffer becomes full, the oldest messages are deleted to make room for newer messages.

When you have viewed all of the error messages in the current buffer, use the **clear cable logging** command to clear out the buffer to make room for newer messages.

**Examples**

The following example shows how to clear the log buffer that contains the bad IP source address error messages:

```
Router# show cable logging summary
Cable logging: BADIPSOURCE Enabled
                Total buffer size (bytes): 1000000
                Used buffer size (bytes) : 36968
                Logged messages       : 231
Router# clear cable logging badipsource

Router# show cable logging summary
Cable logging: BADIPSOURCE Enabled
                Total buffer size (bytes): 1000000
                Used buffer size (bytes) : 0
                Logged messages       : 0
Router#
```

The following example shows how to clear the log buffer that contains the downstream index messages:

```
Router# show cable logging downstream-index
Cable logging: Enabled
                Total buffer size (bytes): 1000000
                Used buffer size (bytes) : 36968
                Logged messages       : 231
Router# clear cable logging downstream-index

Router# show cable logging downstream-index
Cable logging: Enabled
                Total buffer size (bytes): 1000000
                Used buffer size (bytes) : 0
                Logged messages       : 0
Router#
```

**Related Commands**

<b>cable logging badipsource</b>	Logs error messages about bad IP source addresses on the cable interfaces.
<b>cable logging layer2events</b>	Logs layer 2 messages.
<b>cable logging overlapip</b>	Logs overlap IP messages.
<b>cable logging downstream-index</b>	Logs buffer messages about the downstream indexes.
<b>cable source-verify</b>	Enables verification of IP addresses for CMs and CPE devices on the upstream.
<b>show cable logging</b>	Displays the log of error and buffer messages on the cable interfaces.

## clear cable modem attribute-masks

To clear the cable modem attribute masks, use the **clear cable modem attribute-masks** command in privileged EXEC mode.

**clear cable modem** {*mac-addr*|*ip-addr*} **cable slot/port** {**all**|*oui string*|**reject**}} **attribute-masks**

**clear cable modem** {*mac-addr*|*ip-addr*} **cable slot/subslot/port** {**all**|*oui string*|**reject**}} **attribute-masks**

**clear cable modem** {*mac-addr*|*ip-addr*} **cable slot/subslot/cable-interface-index** {**all**|*oui string*|**reject**}} **attribute-masks**

### Syntax Description

<i>mac-addr</i>	Specifies the MAC address for the CM.
<i>ip-addr</i>	Specifies the IP address for the CM.
<b>cable slot/port</b>	<p>(Optional—Cisco uBR7100 and Cisco uBR7200 Series Routers) Specifies removal of CMs on the specified cable interface and downstream port, where:</p> <ul style="list-style-type: none"> <li>• <i>slot</i>—Specifies the chassis slot number of the cable interface line card.</li> <li>• <i>port</i>—Specifies the downstream port number.</li> </ul> <p>Valid values for these arguments are dependent on your CMTS router and cable interface line card. Refer to the hardware documentation for your router chassis and cable interface line card for supported slot and port numbering.</p>
<b>cable slot/subslot/port</b>	<p>(Optional—Cisco uBR10012 Router) Specifies removal of CMs on the specified cable interface, where:</p> <ul style="list-style-type: none"> <li>• <i>slot</i>—Specifies the chassis slot number of the cable interface line card. Valid slots are 5 to 8.</li> <li>• <i>subslot</i>—Specifies the secondary slot number of the cable interface line card. Valid subslots are 0 or 1.</li> <li>• <i>port</i>—Specifies the downstream port number. Valid ports are 0 to 4, depending on the cable interface line card.</li> </ul>

<b>cable</b> <i>slot/subslot/cable-interface-index</i>	(Optional—Cisco cBR Series Converged Broadband Routers) Specifies removal of CMs on the specified cable interface, where: <ul style="list-style-type: none"> <li>• <i>slot</i>—Specifies the chassis slot number of the cable interface line card. The valid range is from 0 to 3 and 6 to 9.</li> <li>• <i>subslot</i>—Specifies the secondary slot number of the cable interface line card. The valid subslot is 0. Depending on the platform and cable interface line card, subslots 0 to 1 could be added.</li> <li>• <i>cable-interface-index</i>— Specifies the cable line card MAC domain. Valid range is from 0 to 15, depending on the cable interface line card</li> </ul>
<b>all</b>	Resets the flapping counters for all CMs.
<b>oui</b> <i>string</i>	Resets the flapping counters for all CMs that match the specified Organization Unique Identifier (OUI). The string parameter can be either the three-byte hexadecimal string (such as 00.00.0C).
<b>reject</b>	Resets the flapping counters for all CMs that are currently in one of the reject states.
<b>attribute-masks</b>	Specifies the attribute mask bitmap in hexadecimal format. Example: 0-FFFFFFF

**Command Default** None

**Command Modes** Privileged EXEC (#)

<b>Command History</b>	<b>Release</b>	<b>Modification</b>
	12.2(33)SCB	This command was introduced.
	IOS-XE 3.15.OS	This command was implemented on the Cisco cBR Series Converged Broadband Routers.

**Usage Guidelines** This command clears the cable modem attribute masks.

**Examples**

The following example shows how to clear cable modem attribute masks for CMs:

```
Router# clear cable modem all attribute-masks
Router# clear cable modem oui SA attribute-masks
Router# clear cable modem c5/0/0 offline attribute-masks
```

**Related Commands**

Command	Description
<b>clear cable modem upstream attribute-mask</b>	This command specifies an upstream attribute mask in hexadecimal format.

## clear cable modem cm-status

To reset the cable modem status events to zero, use the **clear cable modem cm-status** command in privileged EXEC mode.

### Cisco uBR7225VXR and Cisco uBR7246VXR Universal Broadband Routers

**clear cable modem** [*ip address*] [*mac address*] **cable slot/port** **cm-status**

### Cisco uBR10012 Universal Broadband Router

**clear cable modem** [*ip address*] [*mac address*] **cable slot/subslot/cable-interface-index** **cm-status**

### Cisco cBR Series Converged Broadband Routers

**clear cable modem** [*ip address*] [*mac address*] **cable slot/subslot/ cable-interface-index** **cm-status**

#### Syntax Description

<i>ip-address</i>	(Optional) IP address of a CM.
<i>mac-address</i>	(Optional) MAC address of a CM.
<b>cable slot/ subslot/ cable-interface-index</b>	<p>(Optional) Cable interface on the Cisco uBR10012 router. The following are the valid values:</p> <ul style="list-style-type: none"> <li>• <i>slot</i> = 5 to 8</li> <li>• <i>subslot</i> = 0 or 1</li> <li>• <i>cable-interface-index</i> <ul style="list-style-type: none"> <li>◦ Cisco uBR10012 router—The valid range for the Cisco uBR-MC20X20V and Cisco uBR-MC5X20 line cards is from 0 to 4. The valid range for the Cisco uBR-MC3GX60V line card is from 0 to 14.</li> </ul> </li> </ul> <p>For Cisco cBR Series Converged Broadband Routers, the following are the valid values:</p> <ul style="list-style-type: none"> <li>• <i>slot</i> = 0 to 3 and 6 to 9</li> <li>• <i>subslot</i> = 0</li> <li>• <i>cable-interface-index</i> = 0 to 15</li> </ul>



<b>cable slot/port</b>	<p>(Optional) Displays information for all CMs on the specified cable interface and downstream port on the Cisco uBR7225VXR and Cisco uBR7246VXR routers, where:</p> <ul style="list-style-type: none"> <li>• <i>slot</i>—Slot where the line card resides.</li> </ul> <p>Cisco uBR7246VXR router—The valid range is from 3 to 6</p> <p>Cisco uBR7225VXR router—The valid range is from 1 to 2</p> <ul style="list-style-type: none"> <li>• <i>port</i>—Specifies the downstream port number.</li> </ul>
<b>cm-status</b>	Resets the CM status events to zero for the specified CM's.

**Command Modes**

Privileged EXEC (#)

**Command History**

Release	Modification
12.2(33)SCB	This command was introduced.
12.2(33)SCC	This command was modified to clear the basic receive-statistics of all event code types for a specific CM or a group of CMs.
12.2(33)SCD	This command was modified. Support was added for Cisco uBR7225VXR and Cisco uBR7246VXR routers.
IOS-XE 3.15.OS	This command was implemented on the Cisco cBR Series Converged Broadband Routers.

**Related Commands**

Command	Description
<b>clear cable flap-list</b>	Resets the flap-list table for a specific CM or for all CMs.
<b>clear cable modem delete</b>	Removes one or more CMs from the internal address and routing tables on a CMTS router and stops DOCSIS station maintenance messages.
<b>clear cable modem lock</b>	Resets the lock on one or more CMs.
<b>clear cable modem name</b>	Removes or resets CMs by domain name.

Command	Description
clear cable modem reset	Removes one or more CMs from the Station Maintenance List and resets them.

## clear cable modem counters



### Note

Effective with Cisco IOS Release 12.2(15)BC1, the **clear cable modem counters** command is replaced by the **clear counters** command. See the **clear counters** command in the Cisco IOS software command reference documentation for more information.

To reset the cable modem (CM) flap-list counters to zero, use the **clear cable modem counters** command in privileged EXEC mode.

**clear cable modem** *{mac-addr|ip-addr}* [**cable** *{slot/port|slot/subslot/port}*] **{all|oui string|reject}** } **counters**

### Syntax Description

<i>mac-addr</i>	Specifies the 48-bit hardware address (MAC address) of an individual CM.
<i>ip-addr</i>	Specifies the IP address of an individual CM.
<b>cable</b> <i>slot/port</i>	(Optional—Cisco uBR7100 and Cisco uBR7200 Series Routers) Specifies removal of CMs on the specified cable interface and downstream port, where: <ul style="list-style-type: none"> <li>• <i>slot</i>—Specifies the chassis slot number of the cable interface line card.</li> <li>• <i>port</i>—Specifies the downstream port number.</li> </ul> Valid values for these arguments are dependent on your CMTS router and cable interface line card. Refer to the hardware documentation for your router chassis and cable interface line card for supported slot and port numbering.
<b>cable</b> <i>slot/subslot/port</i>	(Optional—Cisco uBR10012 Router) Specifies removal of CMs on the specified cable interface, where: <ul style="list-style-type: none"> <li>• <i>slot</i>—Specifies the chassis slot number of the cable interface line card. Valid slots are 5 to 8.</li> <li>• <i>subslot</i>—Specifies the secondary slot number of the cable interface line card. Valid subslots are 0 or 1.</li> <li>• <i>port</i>—Specifies the downstream port number. Valid ports are 0 to 4, depending on the cable interface line card.</li> </ul>
<b>all</b>	Resets the flapping counters for all CMs.

<b>oui</b> <i>string</i>	Resets the flapping counters for all CMs that match the specified Organization Unique Identifier (OUI). The <i>string</i> parameter can be either the three-byte hexadecimal string (such as 00.00.0C) or a vendor name that has been defined using the <b>cable modem vendor</b> command.
<b>reject</b>	Resets the flapping counters for all CMs that are currently in one of the reject states. (See the <b>show cable modem</b> command for a description of these states.)

**Command Default**

None

**Command Modes**

Privileged EXEC (#)

**Command History**

<b>Release</b>	<b>Modification</b>
12.1 T	This command was introduced.
12.2(11)BC2	Support was added for the <b>oui</b> and <b>reject</b> options.
12.2(11)BC3	Support for clearing the counters for a particular cable interface was added.
12.2(15)BC1	This command was replaced by the <b>clear counters</b> command.
IOS-XE 3.15.OS	This command is not supported on the Cisco cBR Series Converged Broadband Routers.

**Examples**

The following example shows how to clear the counters for the CM at IP address 172.16.23.45:

```
Router# clear cable modem 172.16.23.45 counters
```

The following example shows how to clear the counters for all CMs that have an OUI that has been defined as having the vendor name of Cisco using the **cable modem vendor** command:

```
Router# clear cable modem oui Cisco counters
```

The following example shows how to clear the counters for all CMs that are currently in one of the reject states:

```
Router# clear cable modem reject counters
```

**Note**

If running Cisco IOS Release 12.2(15)BC1 or later, use the **clear cable modem flap-counters** command to clear the CM flap-list counters.

**Related Commands**

Command	Description
<b>clear cable flap-list</b>	Resets the flap-list table for a specific CM or for all CMs.
<b>clear cable modem delete</b>	Removes one or more CMs from the internal address and routing tables on a CMTS router and stops DOCSIS station maintenance messages.
<b>clear cable modem flap-counters</b>	Resets the CM flap-list counters to zero.
<b>clear cable modem lock</b>	Resets the lock on one or more CMs.
<b>clear cable modem reset</b>	Removes one or more CMs from the Station Maintenance List and resets them.
<b>clear counters</b>	Resets interface counters and those counters associated with the <b>show cable modem counters</b> command.

## clear cable modem delete

To remove one or more cable modems (CMs) from the internal address and routing tables on a CMTS router and stop DOCSIS station maintenance messages, use the **clear cable modem delete** command in privileged EXEC mode.

**clear cable modem** *{ip-addr| mac-addr}* **delete**

**clear cable modem** [**cable** *{slot/port| slot/subslot/port}*] **{all| non-bonding-capable [legacy-ranging] | offline| oui** *string* **reject| wideband [registered-traditional-docsis] }** **delete**

### Cisco cBR Series Converged Broadband Routers

**clear cable modem** *{ip-addr | cable | {slot/subslot/cable interface index}}* *mac-addr* **| all | cm-status| non-bonding-capable| {delete | legacy-ranging | reset }** **| reject| {attribute-masks| cm-status| delete| flap-counters| rcs-counts| reset| rf-adapt| service-type-id| voice}** **| offline | {attribute-masks| cm-status| delete| flap-counters| rcs-counts| rf-adapt| service-type-id| voice}** **| online | {attribute-masks| cm-status| delete| flap-counters| rcs-counts| rf-adapt| service-type-id| voice}** **| oui| {string }** **| rcs-counts [Integrated-Cable] | wideband| {delete| registered-traditional-docsis| reset}** }

### Syntax Description

<i>ip-addr</i>	Specifies removal of an individual CM by its IPv4 or IPv6 address.
<i>mac-addr</i>	Specifies removal of an individual CM by its 48-bit hardware address (MAC address).
<b>cable</b> <i>slot/ port</i>	<p>(Optional—Cisco uBR7100 and Cisco uBR7200 Series Routers) Specifies removal of CMs on the specified cable interface and downstream port, where:</p> <ul style="list-style-type: none"> <li>• <i>slot</i>—Specifies the chassis slot number of the cable interface line card.</li> <li>• <i>port</i>—Specifies the downstream port number.</li> </ul> <p>Valid values for these arguments are dependent on your CMTS router and cable interface line card. Refer to the hardware documentation for your router chassis and cable interface line card for supported slot and port numbering.</p>

<b>cable slot/ cable interface index</b>	(Optional—Cisco cBR Series Converged Broadband Routers) Specifies removal of CMs on the specified cable interface, where: <ul style="list-style-type: none"> <li>• <i>slot</i>— Specifies the chassis slot number of the cable interface line card. The valid range is from 0 to 3 and 6 to 9.</li> <li>• <i>port</i>— Specifies the secondary slot number of the cable interface line card. The valid subslot is 0.</li> <li>• <i>cable-interface-index</i>— Specifies the cable line card MAC domain. Valid range is from 0 to 15, depending on the cable interface line card.</li> </ul>
<b>cable slot/subslot/port</b>	(Optional—Cisco uBR10012 Router) Specifies removal of CMs on the specified cable interface, where: <ul style="list-style-type: none"> <li>• <i>slot</i>— Specifies the chassis slot number of the cable interface line card. Valid slots are 5 to 8.</li> <li>• <i>subslot</i>— Specifies the secondary slot number of the cable interface line card. Valid subslots are 0 or 1.</li> <li>• <i>port</i>— Specifies the downstream port number. Valid ports are 0 to 4, depending on the cable interface line card.</li> </ul>
<b>all</b>	Specifies removal of all CMs or all CMs associated with a specified cable interface.
<b>non-bonding-capable</b>	Specifies removal of all narrowband CMs that are not capable of downstream channel bonding or all such CMs associated with a specified interface.
<b>legacy-ranging</b>	(Optional) Specifies removal of narrowband CMs that are accessed with legacy initial ranging or all such CMs associated with a specified interface.
<b>offline</b>	Specifies removal of all offline CMs or all such CMs associated with a specified interface.
<b>offline</b>	Specifies removal of all online CMs or all such CMs associated with a specified interface.

<b>oui string</b>	Specifies removal of all CMs that match the specified Organization Unique Identifier (OUI) or all such CMs associated with a specified interface. The <i>string</i> parameter can be either the three-byte hexadecimal string (such as 00.00.0C) or a vendor name that has been defined using the <b>cable modem vendor</b> command.
<b>reject</b>	Specifies removal of all CMs that are currently in one of the reject states or all such CMs associated with a specified interface. (See the <b>show cable modem</b> command for a description of these states.)
<b>rcs-counts</b>	Specifies removal of MDD, QAM/FEC failure and recovery counts.
<b>wideband</b>	Specifies removal of all wideband CMs or all such CMs associated with a specified interface.
<b>registered-traditional-docsis</b>	(Optional) Specifies removal of all wideband CMs that are registered as traditional DOCSIS CMs or all such CMs associated with a specified interface.

**Command Default** None

**Command Modes** Privileged EXEC (#)

**Command History**

<b>Release</b>	<b>Modification</b>
12.2(11)BC3	This command was introduced for the Cisco uBR7100 series, Cisco uBR7200 series, and Cisco uBR10012 universal broadband routers.
12.2(15)BC1	The <b>cable</b> keyword option was added.
12.3(23)BC	Support was added for the <b>non-bonding-capable</b> , <b>legacy-ranging</b> , <b>wideband</b> , and <b>registered-traditional-docsis</b> keyword options.
12.2(33)SCA	This command was integrated into Cisco IOS Release 12.2(33)SCA, with the following changes: <ul style="list-style-type: none"> <li>• Support for the Cisco uBR7225VXR router was added.</li> <li>• Support for specifying the IPv6 address of a CM was added.</li> </ul>
IOS-XE 3.15.OS	This command was implemented on the Cisco cBR Series Converged Broadband Routers.



**Usage Guidelines**

This command removes one or more CMs from the CMTS router memory, which causes the CMTS router to stop all DOCSIS station maintenance messages for the specified CMs until they time out and reattempt initial ranging.

**Caution**

The **clear cable modem all delete** command should normally be used only on a test or lab network. If used on a large network, it could impact service for a significant period of time, as it would force all CMs to simultaneously reset and reregister with the Cisco CMTS. In addition, if HCCP N+1 redundancy has also been configured, using the **clear cable modem delete** command can trigger a switchover to one or more Protect interfaces, unless **no keepalive** has also been configured on the cable interfaces.

**Examples**

The following example shows how to delete the CM at IP address 172.23.45.67:

```
Router# clear cable modem 172.23.45.67 delete
```

The following example shows how to delete all CMs that have a OUI that has been defined as having the vendor name of Cisco using the **cable modem vendor** command:

```
Router# clear cable modem oui Cisco delete
```

The following example shows how to delete all CMs that are currently in one of the reject states:

```
Router# clear cable modem reject delete
```

**Related Commands**

Command	Description
<b>clear cable flap-list</b>	Resets the flap-list table for a specific CM or for all CMs.
<b>clear cable modem flap -counters</b>	Resets the CM flap-list counters to zero.
<b>clear cable modem lock</b>	Resets the lock on one or more CMs.
<b>clear cable modem name</b>	Removes or resets CMs by domain name.
<b>clear cable modem reset</b>	Removes one or more CMs from the Station Maintenance List and resets them.
<b>show cable modem</b>	Displays information for the registered and unregistered CMs.

## clear cable modem flap-counters

To reset the cable modem (CM) flap-list counters to zero, use the **clear cable modem flap-counters** command in privileged EXEC mode.

**clear cable modem** {*ip-addr*|*mac-addr*} **flap-counters**

**clear cable modem** [**cable** {*slot/port*|*slot/subslot/port*}]{**all**|**offline**|*oui string*|**reject**} **flap-counters**

### Syntax Description

<i>ip-addr</i>	Resets the flap-list counters for an individual CM by its IPv4 or IPv6 address.
<i>mac-addr</i>	Resets the flap-list counters for an individual CM by its 48-bit hardware address (MAC address).
<b>cable</b> <i>slot/port</i>	<p>(Optional—Cisco uBR7100 and Cisco uBR7200 Series Routers) Resets the flap-list counters for all CMs on the specified cable interface and downstream port, where:</p> <ul style="list-style-type: none"> <li>• <i>slot</i>—Specifies the chassis slot number of the cable interface line card.</li> <li>• <i>port</i>—Specifies the downstream port number.</li> </ul> <p>Valid values for these arguments are dependent on your CMTS router and cable interface line card. Refer to the hardware documentation for your router chassis and cable interface line card for supported slot and port numbering.</p>
<b>cable</b> <i>slot/subslot/port</i>	<p>(Optional—Cisco uBR10012 Router) Resets the flap-list counters for all CMs on the specified cable interface, where:</p> <ul style="list-style-type: none"> <li>• <i>slot</i>—Specifies the chassis slot number of the cable interface line card. Valid slots are 5 to 8.</li> <li>• <i>subslot</i>—Specifies the secondary slot number of the cable interface line card. Valid subslots are 0 or 1.</li> <li>• <i>port</i>—Specifies the downstream port number. Valid ports are 0 to 4, depending on the cable interface line card.</li> </ul>

<b>cable</b> <i>slot/subslot/port</i>	(Optional—Cisco cBR Series Routers) Resets the flap-list counters for all CMs on the specified cable interface, where: <ul style="list-style-type: none"> <li>• <i>slot</i>—Specifies the chassis slot number of the interface card. Valid slots are 0 to 3 and 6 to 9 on the Cisco cBR-8 router.</li> <li>• <i>subslot</i>—Specifies the secondary slot number of the interface card. Valid subslot is 0 on the Cisco cBR-8 router.</li> <li>• <i>port</i>—Specifies the cable interface index number. Valid values are 0 to 15 on the Cisco cBR-8 router.</li> </ul>
<b>all</b>	Resets the flap-list counters for all CMs or all CMs associated with a specified cable interface.
<b>offline</b>	Resets the flap-list counters for all offline CMs or for all such CMs associated with a specified interface.
<b>oui</b> <i>string</i>	Resets the flap-list counters for all CMs that match the specified Organization Unique Identifier (OUI) or for all such CMs associated with a specified interface. The <i>string</i> parameter can be either the three byte hexadecimal string (such as 00.00.0C) or a vendor name that has been defined using the <b>cable modem vendor</b> command.
<b>reject</b>	Resets the flap-list counters for all CMs that are currently in one of the reject states or for all such CMs associated with a specified interface. (See the <b>show cable modem</b> command for a description of these states.)

**Command Default** None

**Command Modes** Privileged EXEC (#)

**Command History**

Release	Modification
12.2(15)BC1	This command was introduced.
12.3BC	This command was integrated into Cisco IOS Release 12.3BC.

Release	Modification
12.2(33)SCA	This command was integrated into Cisco IOS Release 12.2(33)SCA. Support for the Cisco uBR7225VXR router was added.
IOS-XE 3.15.0S	This command was implemented on the Cisco cBR Series Converged Broadband Routers.

### Usage Guidelines

Use the **clear cable modem flap-counters** command to reset the flap-list counters associated with the **show cable flap-list** command.

This command only resets flap-list counters. To reset other cable interface counters and those counters associated with the **show cable modem counters** command, use the **clear counters** command.

### Examples

The following example shows how to reset the flap-list counters for the CM at IP address 172.16.23.45:

```
Router# clear cable modem 172.16.23.45 flap-counters
```

The following example shows how to reset the flap-list counters for all CMs that have a OUI that has been defined as having the vendor name of Cisco using the **cable modem vendor** command:

```
Router# clear cable modem oui Cisco flap-counters
```

The following example shows how to reset the flap-list counters for all CMs that are currently in one of the reject states:

```
Router# clear cable modem reject flap-counters
```

### Related Commands

Command	Description
<b>clear cable flap-list</b>	Resets the flap-list table for a specific CM or for all CMs.
<b>clear cable modem delete</b>	Removes one or more CMs from the internal address and routing tables on a CMTS router and stops DOCSIS station maintenance messages.
<b>clear cable modem lock</b>	Resets the lock on one or more CMs.
<b>clear cable modem name</b>	Removes or resets CMs by domain name.
<b>clear cable modem reset</b>	Removes one or more CMs from the Station Maintenance List and resets them.
<b>clear counters</b>	Resets interface counters and those counters associated with the <b>show cable modem counters</b> command.

## clear cable modem lock

To reset the lock on one or more cable modems (CMs), and to reinitialize them so that they can reregister with a valid DOCSIS configuration file, use the **clear cable modem lock** command in privileged EXEC mode.

**clear cable modem** *{ip-addr| mac-addr}* **lock**

**clear cable modem** [**cable** *{slot/port| slot/subslot/port}*] **{all| oui string}** **lock**

### Syntax Description

<i>ip-addr</i>	Resets the lock for an individual CM by its IPv4 or IPv6 address.
<i>mac-addr</i>	Resets the lock for an individual CM by its 48-bit hardware address (MAC address).
<b>cable</b> <i>slot/port</i>	<p>(Optional—Cisco uBR7100 and Cisco uBR7200 Series Routers) Resets the lock for all CMs on the specified cable interface and downstream port, where:</p> <ul style="list-style-type: none"> <li>• <i>slot</i>—Specifies the chassis slot number of the cable interface line card.</li> <li>• <i>port</i>—Specifies the downstream port number.</li> </ul> <p>Valid values for these arguments are dependent on your CMTS router and cable interface line card. Refer to the hardware documentation for your router chassis and cable interface line card for supported slot and port numbering.</p>
<b>cable</b> <i>slot/subslot/port</i>	<p>(Optional—Cisco uBR10012 Router) Resets the lock for all CMs on the specified cable interface, where:</p> <ul style="list-style-type: none"> <li>• <i>slot</i>—Specifies the chassis slot number of the cable interface line card. Valid slots are 5 to 8.</li> <li>• <i>subslot</i>—Specifies the secondary slot number of the cable interface line card. Valid subslots are 0 or 1.</li> <li>• <i>port</i>—Specifies the downstream port number. Valid ports are 0 to 4, depending on the cable interface line card.</li> </ul>

<b>cable</b> <i>slot/subslot/port</i>	(Optional—Cisco cBR-8 Router) Resets the lock for all CMs on the specified cable interface, where: <ul style="list-style-type: none"> <li>• <i>slot</i>—Specifies the chassis slot number of the cable line card. Valid slots are 0 to 3 and 6 to 9.</li> <li>• <i>subslot</i>—Specifies the secondary slot number of the cable line card. Valid subslot is 0.</li> <li>• <i>port</i>—Specifies the MAC domain index. Valid range is from 0 to 15.</li> </ul>
<b>all</b>	Resets the lock for all CMs or all CMs associated with a specified cable interface.
<b>oui</b> <i>string</i>	Resets the lock for all CMs that match the specified Organization Unique Identifier (OUI) or for all such CMs associated with a specified interface. The <i>string</i> parameter can be either the three-byte hexadecimal string (such as 00.00.0C) or a vendor name that has been defined using the <b>cable modem vendor</b> command.

**Command Default** None

**Command Modes** Privileged EXEC (#)

#### Command History

Release	Modification
12.2(15)BC1	This command was introduced.
12.3BC	This command was integrated into Cisco IOS Release 12.3BC.
12.2(33)SCA	This command was integrated into Cisco IOS Release 12.2(33)SCA. Support for the Cisco uBR7225VXR router was added.
IOS-XE 3.15.0S	This command was implemented on the Cisco cBR Series Converged Broadband Routers.

#### Usage Guidelines

When you have configured the **cable dynamic-secret lock** command on a cable interface, the CMTS “locks” CMs that use a DOCSIS configuration file that fails the CMTS verification check. These CMs are allowed to come online, but with a restrictive QoS configuration that limits their service flows to 10 kbps.

Locked CMs are not allowed to reregister with a valid DOCSIS configuration file until they have been offline, without attempting to reregister, for at least 24 hours. You can manually clear the lock on a CM by using the **clear cable modem lock** command in privileged EXEC mode.

The **clear cable modem lock** command also automatically resets the CMs, so that they will reregister with the CMTS. If the CMs then reregister with a valid DOCSIS configuration file, the CMTS allows the CMs to come online with the requested QoS profiles. If the CMs violate the DOCSIS specifications again, they will be locked again.

**Note**

If a CM is not manually unlocked, it remains locked until it stays offline, without attempting to reregister, for 24 hours. It can also be unlocked by using the **clear cable modem delete** command to manually remove the CM from all of the CMTS internal databases.

**Examples**

The following example shows how to reset the lock for the CM with the MAC address of 0000.0C01.0203:

```
Router# clear cable modem 0000.0C01.0203 lock
```

The following example shows how to reset the lock for the CM at IP address 172.16.23.45:

```
Router# clear cable modem 172.16.23.45 lock
```

The following example shows how to reset the locks for all CMs that have an OUI that has been defined as having the vendor name of Cisco using the **clear cable modem vendor** command:

```
Router# clear cable modem oui Cisco lock
```

**Related Commands**

Command	Description
<b>clear cable dynamic-secret</b>	Enables the dynamic shared secret feature, so that DOCSIS configuration files are verified with a Message Integrity Check (MIC) that has been created with a dynamically generated shared secret.
<b>clear cable flap-list</b>	Resets the flap-list table for a specific CM or for all CMs.
<b>clear cable modem flap-counters</b>	Resets the CM flap-list counters to zero.
<b>clear cable modem delete</b>	Removes one or more CMs from the internal address and routing tables on a CMTS router and stops DOCSIS station maintenance messages.
<b>clear cable modem name</b>	Removes or resets CMs by domain name.
<b>clear cable modem reset</b>	Removes one or more CMs from the Station Maintenance List and resets them.

## clear cable modem name

To remove or reset cable modems (CMs) by domain name, use the **clear cable modem name** command in privileged EXEC mode.

**clear cable modem name** *fqdn* {delete|reset}

### Syntax Description

<i>fqdn</i>	Specifies the fully qualified domain name (FQDN) of the cable device to be displayed. This option is only available if the <b>show cable modem domain-name</b> command has been run for the first time to update the cable Domain Name System (DNS) cache on the CMTS router.
<b>delete</b>	Removes the CM with the specified domain name from the Station Maintenance List.
<b>reset</b>	Removes the CM with the specified domain name from the Station Maintenance List and resets it.

### Command Default

None

### Command Modes

Privileged EXEC (#)

### Command History

Release	Modification
12.2(33)SCA	This command was introduced.
12.2(33)SCD	This command was modified to remove <b>flap-counters</b> and <b>lock</b> keywords.
IOS-XE 3.15.0S	This command is not supported on the Cisco cBR Series Converged Broadband Routers.

### Usage Guidelines

In Cisco IOS Release 12.2(33)SCA, the **show cable modem domain-name** command must be run first on the route processor (RP) of the CMTS router before any domain name can be used as part of a cable command.

### Examples

The following example shows how to delete a CM with the domain name "example":

```
Router# clear cable modem name example delete
```



**Related Commands**

<b>Command</b>	<b>Description</b>
<b>clear cable flap-list</b>	Resets the flap-list table for a specific CM or for all CMs.
<b>clear cable modem flap -counters</b>	Resets the CM flap-list counters to zero.
<b>clear cable modem delete</b>	Removes one or more CMs from the internal address and routing tables on a CMTS router and stops DOCSIS station maintenance messages.
<b>clear cable modem lock</b>	Resets the lock on one or more CMs.
<b>clear cable modem reset</b>	Removes one or more CMs from the Station Maintenance List and resets them.
<b>show cable modem</b>	Displays information for the registered and unregistered CMs.

## clear cable modem rcs-counts

To clear the following failure and recovery event counts for all or given RF channels of a CM, use the **clear cable modem rcs-counts** command in privileged EXEC mode:

- MAC Domain Descriptor (MDD)
- QAM/forward error correction (FEC)

**clear cable modem** [**cable if** | **mac\_addr** | **ip\_addr**] **rcs-counts** [**modular-cable** *slot/bay/port nb-channel-number*]

### Cisco cBR Series Converged Broadband Routers

**clear cable modem** [**cable if** | **mac\_addr** | **ip\_addr**] **rcs-counts** [**integrated-cable** *slot/sub-slot/port rf-channel-number*]

#### Syntax Description

<b>cable if</b>	(Optional) The name of the downstream interface.
<b>mac-address</b>	(Optional) Identifies the MAC address of a CM to be displayed. If you specify the MAC address for a CPE device behind a CM, information for that CM is displayed.
<b>ip-address</b>	(Optional) Identifies the IP address of a specific CM to be displayed. If you specify the IP address for a CPE device behind a CM, information for that CM is displayed.
<i>slot</i>	The slot where a SIP resides. On the Cisco uBR10012 router, slots 1 and 3 can be used for SIPs.
<i>bay</i>	The bay in a SIP where a SPA is located. Valid values are 0 (upper bay) and 1 (lower bay).
<i>sub-slot</i>	The valid value is 0.
<i>sub-plot</i>	The valid value is 1.
<i>port</i>	Specifies the interface number on the SPA.
<i>nb-channel-number</i>	Represents the narrowband channel number.
<i>rf-channel-number</i>	Represents the downstream RF channel number.

#### Command Default

None

**Command Modes** Privileged EXEC (#)

<b>Command History</b>	<b>Release</b>	<b>Modification</b>
	12.2(33)SCB	This command was introduced.
	IOS-XE 3.15.0S	This command was integrated into Cisco IOS-XE Release 3.15.0S. Support for the Cisco cBR Series Converged Broadband Routers was added.

**Related Commands**

<b>Command</b>	<b>Description</b>
<b>clear cable flap-list</b>	Resets the flap-list table for a specific CM or for all CMs.
<b>clear cable modem delete</b>	Removes one or more CMs from the internal address and routing tables on a CMTS router and stops DOCSIS station maintenance messages.
<b>clear cable modem lock</b>	Resets the lock on one or more CMs.
<b>clear cable modem name</b>	Removes or resets CMs by domain name.
<b>clear cable modem reset</b>	Removes one or more CMs from the Station Maintenance List and resets them.

## clear cable modem reset

To remove one or more cable modems (CMs) from the Station Maintenance List and reset them, use the **clear cable modem reset** command in privileged EXEC mode.

**clear cable modem** {*ip-addr*|*mac-addr*} **reset**

**clear cable modem** [**cable** {*slot/port*|*slot/subslot/port*}] {**all**|**non-bonding-capable** [**legacy-ranging**] | **oui string**|**reject**|**wideband** [**registered-traditional-docsis**] } **reset**

### Syntax Description

<i>ip-addr</i>	Specifies removal of an individual CM by its IPv4 or IPv6 address.
<i>mac-addr</i>	Specifies removal of an individual CM by its 48-bit hardware address (MAC address).
<b>cable</b> <i>slot/port</i>	<p>(Optional—Cisco uBR7100 and Cisco uBR7200 Series Routers) Specifies removal of all CMs on the specified cable interface and downstream port, where:</p> <ul style="list-style-type: none"> <li>• <i>slot</i>—Specifies the chassis slot number of the cable interface line card.</li> <li>• <i>port</i>—Specifies the downstream port number.</li> </ul> <p>Valid values for these arguments are dependent on your CMTS router and cable interface line card. Refer to the hardware documentation for your router chassis and cable interface line card for supported slot and port numbering.</p>
<b>cable</b> <i>slot/subslot/port</i>	<p>(Optional—Cisco uBR10012 Router) Specifies removal of all CMs on the specified cable interface, where:</p> <ul style="list-style-type: none"> <li>• <i>slot</i>—Specifies the chassis slot number of the cable interface line card. Valid slots are 5 to 8.</li> <li>• <i>subslot</i>—Specifies the secondary slot number of the cable interface line card. Valid subslots are 0 or 1.</li> <li>• <i>port</i>—Specifies the downstream port number. Valid ports are 0 to 4, depending on the cable interface line card.</li> </ul>

<b>cable</b> <i>slot/subslot/port</i>	(Optional—Cisco cBR Series Routers) Specifies removal of all CMs on the specified cable interface, where: <ul style="list-style-type: none"> <li>• <i>slot</i>—Specifies the chassis slot number of the interface card. Valid slots are 0 to 3 and 6 to 9 on the Cisco cBR-8 router.</li> <li>• <i>subslot</i>—Specifies the secondary slot number of the interface card. Valid subslot is 0 on the Cisco cBR-8 router.</li> <li>• <i>port</i>—Specifies the cable interface index number. Valid values are 0 to 15 on the Cisco cBR-8 router.</li> </ul>
<b>all</b>	Specifies removal of all CMs or all CMs associated with a specified cable interface.
<b>non-bonding-capable</b>	Specifies removal of all narrowband CMs that are not capable of downstream channel bonding or all such CMs associated with a specified interface.
<b>legacy-ranging</b>	(Optional) Specifies removal of narrowband CMs that are accessed with legacy initial ranging or all such CMs associated with a specified interface.
<b>oui</b> <i>string</i>	Specifies removal of all CMs that match the specified Organization Unique Identifier (OUI) or all such CMs associated with a specified interface. The <i>string</i> parameter can be either the three-byte hexadecimal string (such as 00.00.0C) or a vendor name that has been defined using the <b>cable modem vendor</b> command.
<b>reject</b>	Specifies removal of all CMs that are currently in one of the reject states or all such CMs associated with a specified interface. (See the <b>show cable modem</b> command for a description of these states.)
<b>wideband</b>	Specifies removal of all wideband CMs or all such CMs associated with a specified interface.
<b>registered-traditional-docsis</b>	(Optional) Specifies removal of all wideband CMs that are registered as traditional DOCSIS CMs or all such CMs associated with a specified interface.

**Command Default**      None

**Command Modes**

Privileged EXEC (#)

**Command History**

Release	Modification
12.1(2) EC	This command was introduced.
12.2(4)BC1	Support was added to the Release 12.2 BC train.
12.2(11)BC2	Support was added for the <b>oui</b> and <b>reject</b> options.
12.2(15)BC1	The <b>cable</b> keyword option was added.
12.3(21)BC	Support was added for the <b>wideband</b> and <b>registered-traditional-docsis</b> keyword options.
12.3(23)BC	Support was added for the <b>non-bonding-capable</b> and <b>legacy-ranging</b> keyword options.
12.2(33)SCA	This command was integrated into Cisco IOS Release 12.2(33)SCA, with the following changes: <ul style="list-style-type: none"> <li>• Support for the Cisco uBR7225VXR router was added.</li> <li>• Support for specifying the IPv6 address of a CM was added.</li> </ul>
IOS-XE 3.15.0S	This command was implemented on the Cisco cBR Series Converged Broadband Routers.

**Usage Guidelines**

This command instructs the Cisco CMTS to stop sending DOCSIS station maintenance messages to one or more CMs, which effectively terminates the link to those CMs until those CMs time out and reattempt initial ranging. A CM responds to this by resetting itself. Depending on when the CM received the last station maintenance message, it can take up to 30 seconds before the CM detects the missing station maintenance messages and resets itself.

If the **clear cable modem** *{ip-address | mac-address}* **reset** form of the command is used to reset an individual modem, the CMTS router sends a ranging abort message to the specified modem in order to command the modem to reset itself and begin initial ranging more quickly without having to wait for up to 30 seconds to realize it is no longer receiving station maintenance keep-alive opportunities. This behavior is only seen when using the **clear cable modem reset** command for a specific CM.

**Tip**

You can also specify the MAC address or IP address for a CPE device or host, and the Cisco CMTS resets the CM that is associated with that CPE device in its internal database.

In some circumstances, the customer premises equipment (CPE) device behind a CM stops receiving traffic after the CM is reset. This is because the CMTS still has the CPE device listed in its address tables, but the CM does not after being reset, so the traffic passes through the CMTS but is dropped by the CM. To resolve

this situation, the CPE device should simply send some type of traffic to the CM, such as a ping packet. (You can also resolve this situation by using the **clear arp-cache** command on the Cisco CMTS router to clear the router's address table, but this is not recommended because it temporarily interrupts all traffic on the router.)

**Caution**

The **clear cable modem all reset** command should normally be used only on a test or lab network. If used on a large network, it could impact service for a significant period of time, as it would force all CMs to simultaneously reset and reregister with the Cisco CMTS.

**Note**

The **clear cable modem all reset** command can result in the CPU utilization temporarily reaching 100 percent for a couple of minutes, as the CPU processes the command for all CMs. The CPU utilization will return to normal within a couple of minutes.

**Examples**

The following example shows how to reset the CM at IP address 172.23.45.67:

```
Router# clear cable modem 172.23.45.67 reset
```

The following example shows how to reset all CMs that have an OUI that has been defined as having the vendor name of Cisco using the **cable modem vendor** command:

```
Router# clear cable modem oui Cisco reset
```

The following example shows how to reset all CMs that are currently in one of the reject states:

```
Router# clear cable modem reject reset
```

For the Cisco uBR10012 router, the following example shows how to reset all wideband CMs that are registered as traditional DOCSIS modems:

```
Router# clear cable modem wideband registered-traditional-docsis reset
```

**Related Commands**

Command	Description
<b>clear cable flap-list</b>	Resets the flap-list table for a specific CM or for all CMs.
<b>clear cable modem flap-counters</b>	Resets the CM flap-list counters to zero.
<b>clear cable modem delete</b>	Removes one or more CMs from the internal address and routing tables on a CMTS router and stops DOCSIS station maintenance messages.
<b>clear cable modem lock</b>	Resets the lock on one or more CMs.
<b>clear cable modem name</b>	Removes or resets CMs by domain name.
<b>show cable modem</b>	Displays information for registered and unregistered CMs.

## clear cable modem rf-adapt

To clear RF adaptation candidates or history information of the cable modems, use the **clear cable modem rf-adapt** command in privileged EXEC mode.

```
clear cable modem {ip-addr|mac-addr} [cable {slot/cable-interface-index|slot/subslot/cable-interface-index}] {all|offline|reject|oui string} rf-adapt {candidates [downgrade|upgrade] | history}
```

### Syntax Description

<i>ip-addr</i>	IPv4 or IPv6 address of the cable modem.
<i>mac-addr</i>	48-bit MAC address of the cable modem.
<b>cable</b>	Specifies the cable interface line card details. <ul style="list-style-type: none"> <li><i>slot</i>—Slot where the cable interface line card resides.</li> <li><i>subslot</i>—(Cisco uBR10012 router only) Secondary slot number of the cable interface line card.</li> <li><i>cable-interface-index</i>—Downstream port number or MAC domain index of the cable interface line card.</li> </ul>
<b>all</b>	Clears the RF adaptation history or candidate status of all cable modems.
<b>offline</b>	Clears the RF adaptation history or candidate status of all offline cable modems.
<b>reject</b>	Clears the RF adaptation history or candidate status of all cable modems in reject state.
<i>oui string</i>	Clears the RF adaptation history or candidate status of the cable modems that match the specified Organization Unique Identifier (OUI) or for all cable modems associated with a specified interface. The <i>string</i> parameter can be either the three byte hexadecimal string (such as 00.00.0C) or a vendor name that has been defined using the <b>cable modem vendor</b> command.
<b>candidates</b>	Clears RF adaptation candidates.
<b>downgrade</b>	(Optional) Clears RF adaptation downgrade candidates.



<b>upgrade</b>	(Optional) Clears RF adaptation upgrade candidates.
<b>history</b>	Clears RF adaptation history.

**Command Default** None

**Command Modes** Privileged EXEC (#)

<b>Command History</b>	<b>Release</b>	<b>Modification</b>
	12.2(33)SCF3	This command was introduced.
	IOS-XE 3.15.0S	This command is not supported on the Cisco cBR Series Converged Broadband Routers.

**Usage Guidelines** The **clear cable modem rf-adapt** command is used to configure the [Cable Modem Upstream RF Adaptation](#) feature.

Use the **clear cable modem rf-adapt history** command to remove the history of all RF adaptation relocations for a given cable modem.

Use the **clear cable modem rf-adapt candidates** command to change the status of a cable modem or group of cable modems that are RF adaptation relocation candidates.

Using the **clear cable modem rf-adapt history** and **clear cable modem rf-adapt candidates** commands do not affect the MAC state of the cable modem.

The table below displays the interface density information.

**Table 1: Interface Density Information**

<b>CMTS Router</b>	<b>Line Card</b>	<b>Slot</b>	<b>Subslot</b>	<b>Port</b>	<b>Cable Interface Index</b>
<b>Cisco uBR10012</b>	Cisco uBR-MC3GX60V	5 to 8	0 or 1	0 or 4	0 to 14
	Cisco UBR-MC20X20V				0 to 4
	Cisco uBR10-MC5X20				
<b>Cisco uBR7225VXR</b>	All	1 or 2	0 or 1	0 or 1	—

CMTS Router	Line Card	Slot	Subslot	Port	Cable Interface Index
Cisco uBR7246VXR	All	3 to 6	0 or 1	0 or 1	—

**Examples**

The following example shows how to reset the RF adaptation history for the cable modem at IP address 192.0.2.255:

```
Router# clear cable modem 192.0.2.255 rf-adapt history
```

The following example shows how to reset the RF adaptation downgrade candidates for all cable modems:

```
Router# clear cable modem all rf-adapt candidates downgrade
```

**Related Commands**

Command	Description
<b>show cable modem rf-adapt</b>	Displays the RF adaptation history.
<b>show cable rf-adapt</b>	Displays RF adaptation information of upgrade and downgrade candidates.

## clear cable modem service-type-id

To clear the cable modem service type ID, use the **clear cable modem service-type-id** command in privileged EXEC mode.

```
clear cable modem {ip| mac| name domain name| [[ interface ]] {all| offline| oui oui| reject| wideband| none-bounding-capable}} service-type-id
```

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```
clear cable modem {ip| mac| [[ interface ]] {all| offline| oui oui| reject}} service-type-id
```

#### Syntax Description

<b>ip</b>	Specifies removal of an individual CM by its IPv4 or IPv6 address.
<b>mac</b>	Specifies removal of an individual CM by its 48-bit hardware address (MAC address).
<b>name domain name</b>	Specifies the domain name of the cable modem.
<b>interface</b>	(Optional) Resets the attribute masks of the offline CMs.
<b>all</b>	Specifies removal of all CMs or all CMs associated with a specified cable interface.
<b>offline</b>	Specifies removal of all offline CMs or all such CMs associated with a specified interface.
<b>oui oui</b>	Specifies removal of all CMs that match the specified Organization Unique Identifier (OUI) or all such CMs associated with a specified interface. The string parameter can be either the three-byte hexadecimal string (such as 00.00.0C) or a vendor name.
<b>reject</b>	Specifies removal of all CMs that are currently in one of the reject states or all such CMs associated with a specified interface.
<b>wideband</b>	Specifies removal of all wideband CMs or all such CMs associated with a specified interface.
<b>none-bounding-capable</b>	Specifies removal of all narrowband CMs that are not capable of downstream channel bonding or all such CMs associated with a specified interface.
<b>service-type-id</b>	Specifies the service type identifier.

**Command Default**      None

**Command Modes**      Privileged EXEC (#)

<b>Command History</b>	<b>Release</b>	<b>Modification</b>
	12.2(33)SCB	This command was introduced.
	IOS-XE 3.15.0S	This command was implemented on the Cisco cBR Series Converged Broadband Routers. The <b>name</b> , <b>wideband</b> , and <b>none-bounding-capable</b> keywords were removed.

**Usage Guidelines**      This command clears the cable modem service type ID.

**Examples**      The following example shows how to clear cable modem service type ID:

```
Router# clear cable modem all service-type-id
Router# clear cable modem oui SA service-type-id
Router# clear cable modem c3/0/0 offline service-type-id
```

**Related Commands**

<b>Command</b>	<b>Description</b>
<b>clear cable modem attribute-masks</b>	This command clears the cable modem attribute masks.
<b>show cable modem service-type-id</b>	Displays the modems having service type id.

## clear cable modem voice

To clear the voice tag that is set for a cable modem (CM), use the **clear cable modem voice** command in privileged EXEC mode.

**clear cable modem** {*ip-addr*|*mac-addr*} **voice** {*retries*|*tag*}

**clear cable modem** [*cable slot/subslot/port*] {**all**|**offline**|*oui string*|**reject**} **voice** {*retries*|*tag*}

### Syntax Description

<i>ip-addr</i>	Specifies removal of an individual CM by its IPv4 or IPv6 address.
<i>mac-addr</i>	Specifies removal of an individual CM by its 48-bit hardware address (MAC address).
<b>retries</b>	Clears the CM downstream retries record.
<b>tag</b>	Clears the CM voice tag.
<b>cable</b> <i>slot/subslot/port</i>	(Optional—Cisco uBR10012 Router) Specifies clearing of voice tags for CMs on the specified cable interface, where: <ul style="list-style-type: none"> <li>• <i>slot</i>—Specifies the chassis slot number of the cable interface line card. Valid slots are 5 to 8.</li> <li>• <i>subslot</i>—Specifies the secondary slot number of the cable interface line card. Valid subslots are 0 or 1.</li> <li>• <i>port</i>—Specifies the downstream port number. Valid ports are 0 to 4, depending on the cable interface line card.</li> </ul>
<b>cable</b> <i>slot/subslot/port</i>	(Optional—Cisco cBR Series Routers) Specifies clearing of voice tags for CMs on the specified cable interface, where: <ul style="list-style-type: none"> <li>• <i>slot</i>—Specifies the chassis slot number of the interface card. Valid slots are 0 to 3 and 6 to 9 on the Cisco cBR-8 router.</li> <li>• <i>subslot</i>—Specifies the secondary slot number of the interface card. Valid subslot is 0 on the Cisco cBR-8 router.</li> <li>• <i>port</i>—Specifies the cable interface index number. Valid values are 0 to 15 on the Cisco cBR-8 router.</li> </ul>

<b>all</b>	Specifies clearing of voice tags for all CMs or all CMs associated with a specified cable interface.
<b>offline</b>	Specifies clearing of voice tags for all offline CMs or all such CMs associated with a specified interface.
<b>oui string</b>	Specifies clearing of voice tags for all CMs that match the specified Organization Unique Identifier (OUI) or all such CMs associated with a specified interface. The <i>string</i> parameter can be either the three byte hexadecimal string (such as 00.00.0C) or a vendor name that has been defined using the <b>cable modem vendor</b> command.
<b>reject</b>	Specifies clearing of voice tags for all CMs that are currently in one of the reject states or all such CMs associated with a specified interface. (See the <b>show cable modem</b> command for a description of these states).

**Command Default** None

**Command Modes** Privileged EXEC (#)

#### Command History

Release	Modification
12.3(23)BC	This command was introduced for the Cisco uBR10012 router.
IOS-XE 3.15.0S	This command was implemented on the Cisco cBR Series Converged Broadband Routers.

#### Examples

The following example shows how to clear the voice tag and retries record for the CM at IP address 172.16.23.45:

```
Router# clear cable modem 172.16.23.45 voice retries
```

#### Related Commands

Commands	Description
<b>show cable modem voice</b>	Displays the detected voice-enabled modems.
<b>test cable voice</b>	Allows you to manually set the voice tag of a cable modem.



## clear cable multicast ses-cache

To clear the multicast replication sessions cache, use the **clear cable ses-cache** command in privileged EXEC mode.

```
clear cable multicast ses-cache {all|counter|interface integrated-cable slot/subslot/port:rf-channel|modular-cable slot/{subslot|bay}/port:interface-number|wideband-cable slot/{subslot|bay}/port:wideband-channel}
```

### Syntax Description

<b>all</b>	Clears the cached multicast replication sessions for all interfaces.
<b>counter</b>	Clears multicast replication sessions cache counters.
<b>interface integrated-cable</b> <i>slot/subslot/port:rf-channel</i>	Clears the cached multicast replication sessions for a integrated-cable interface. <ul style="list-style-type: none"> <li>• <i>slot</i>—Slot where a line card resides.</li> <li>• <i>subslot</i>—(Cisco uBR10012 only) Secondary slot number of a line card.</li> <li>• <i>port</i>—Downstream port number.</li> <li>• <i>rf:channel</i>—RF channel number.</li> </ul>
<b>interface modular-cable</b> <i>slot/{subslot   bay}/port:interface-number</i>	Clears the cached multicast replication sessions for a modular-cable interface. <ul style="list-style-type: none"> <li>• <i>slot</i>—Slot where a SPA interface processor (SIP) or a line card resides.</li> <li>• <i>subslot</i>—Secondary slot for a shared port adapter (SPA) or a line card.</li> <li>• <i>bay</i>—Bay in a SIP where a SPA is located.</li> <li>• <i>port</i>—Downstream port number.</li> <li>• <i>interface-number</i>—Modular channel number.</li> </ul>



<b>interface wideband-cable</b> <i>slot</i> /{ <i>subslot</i>   <i>bay</i> }/ <i>port:wideband-channel</i>	<p>Clears the cached multicast replication sessions for a wideband-cable interface.</p> <ul style="list-style-type: none"> <li>• <i>slot</i>—Slot where a SPA interface processor (SIP) or a line card resides.</li> <li>• <i>subslot</i>—Secondary slot for a shared port adapter (SPA) or a line card.</li> <li>• <i>bay</i>—Bay in a SIP where a SPA is located.</li> <li>• <i>port</i>—Downstream port number.</li> <li>• <i>wideband-channel</i>—Wideband channel number.</li> </ul>
--	---

**Command Modes**

Privileged EXEC (#)

**Command History**

Release	Modification
12.2(33)SCH	This command was introduced.
IOS-XE 3.15.0S	This command is not supported on the Cisco cBR Series Converged Broadband Routers.

**Usage Guidelines**

Use the **clear cable multicast ses-cache** command to clear the multicast replication sessions configured on the interfaces.

The table below displays the valid values for an integrated-cable interface.

**Table 2: Integrated Cable Interface Density Information**

CMTS Router	Line Card	Slot	Subslot	Port	RF Channel Number
Cisco uBR10012	Cisco uBR-MC3GX60V	5 to 8	0 or 1	0 to 4	0 to 3
	Cisco UBR-MC20X20V				
	Cisco uBR10-MC5X20				
Cisco uBR7225VXR	All	1 or 2	—	0 or 1	—

CMTS Router	Line Card	Slot	Subslot	Port	RF Channel Number
Cisco uBR7246VXR	All	3 to 6	—	0 or 1	—

The table below displays the valid values for an modular-cable interface.

**Table 3: Modular Cable Interface Density Information**

Line Card	Slot	Subslot	Bay	Port	Interface Number
Cisco uBR-MC3GX60V	5 to 8	0 or 1	—	0 to 2	0 to 23
Cisco UBR-MC20X20V			—	0 to 5	
Cisco Wideband SPA	—	0 or 1 <sup>1</sup>	0 to 3	0	
Cisco Wideband SIP / Cisco SIP-600	1 or 3	—	—	—	

<sup>1</sup> Applicable to SPAs when the SIP is in Slot1 or Slot 3. The subslot is not specified from Cisco IOS Release 12.2(33)SCB onwards.

The table below displays the valid values for an wideband-cable interface.

**Table 4: Wideband Interface Density Information**

CMTS Router	Line Card	Slot	Subslot	Bay	Port	Wideband Channel
<b>Cisco uBR10012</b>	Cisco uBR-MC3GX60V	5 to 8	0 or 1	—	0 to 4	0 to 31
	Cisco UBR-MC20X20V			—		0 to 5
	Cisco uBR10-MC5X20			—		—
	Cisco Wideband SPA	—	0 or 1 <sup>2</sup>	0 to 3	0	—
	Cisco Wideband SIP / Cisco SIP-600	1 or 3	—	—	—	—
<b>Cisco uBR7225VXR</b>	All	1 to 2	—	—	0 or 1	0 to 5
<b>Cisco uBR7246VXR</b>	All	3 to 6	—	—		

<sup>2</sup> Applicable to SPAs when the SIP is in Slot1 or Slot 3. The subslot is not specified from Cisco IOS Release 12.2(33)SCB onwards.

**Examples**

The following example clears the multicast replication session cache for all interfaces on the Cisco uBR10012 router:

```
Router# clear cable multicast ses-cache all
```

**Related Commands**

Command	Description
<b>clear cable multicast ses-cache</b>	Configures the multicast replication session cache on the Cisco uBR10012 router.
<b>show cable multicast ses-cache</b>	Displays the multicast replication session cache information both at the global and interface level of the forwarding interface.

# clear cable multicast statistics counter

To reset all multicast statistics counters, use the **clear cable multicast statistics counter** command in privileged EXEC mode.

**clear cable multicast statistics counter**

## Command Modes

Privileged EXEC (#)

## Command History

Release	Modification
12.2(33)SCF	This command was introduced.
IOS-XE 3.15.0S	This command was implemented on the Cisco cBR Series Converged Broadband Routers.

## Usage Guidelines

The counters are also set to zero when a given multicast resource is reconfigured. Counters are displayed using the **show cable multicast statistics** command.

## Examples

The following example shows how to reset configured multicast statistics index allocation details to zero:

```
Router# clear cable multicast statistics counter
Router#
```

## Related Commands

Command	Description
<b>show cable multicast statistics</b>	Displays the multicast statistics index allocation details.
<b>show cable multicast db</b>	Displays the contents of the multicast explicit tracking database.

## clear cable resil-rf-status

To reset flap counts and flap time for all or a given RF channel, use the **clear cable resil-rf-status** command in privileged EXEC mode.

**clear cable resil-rf-status** [**Integrated-Cable** *slot/subslot/port rf-channel-number* ]

### Syntax Description

<b>Integrated-Cable</b>	(Optional) Specifies that the flap counts and flap time is reset for the given RF channel.
<i>slot</i>	Slot where interface card resides. The range is from 0 to 3 and 6 to 9 on the Cisco cBR-8 router.
<i>subslot</i>	Subslot number of the interface card. The value is 0 on the Cisco cBR-8 router.
<i>port</i>	Port number. The range is from 0 to 7 on the Cisco cBR-8 router.
<i>rf-channel-number</i>	Downstream RF channel number. The range is from 0 to 162 on the Cisco cBR-8 router.

### Command Default

None

### Command Modes

Privileged EXEC (#)

### Command History

Release	Modification
IOS-XE 3.15.0S	This command was introduced on the Cisco cBR Series Converged Broadband Routers. This command replaces the <b>clear cable rf-status</b> command.

### Examples

The following example shows how to reset the flap counts and flap time for RF channel 4:

```
Router# clear cable resil-rf-status Integrated-Cable 3/0/2 4
```

### Related Commands

Command	Description
<b>clear cable flap-list</b>	Resets the flap-list table for a specific CM or for all CMs.

Command	Description
<b>clear cable modem delete</b>	Removes one or more CMs from the internal address and routing tables on a CMTS router and stops DOCSIS station maintenance messages.
<b>clear cable modem lock</b>	Resets the lock on one or more CMs.
<b>clear cable modem reset</b>	Removes one or more CMs from the Station Maintenance List and resets them.

## clear cable rf-status

To reset flap counts and flap time for all or a given RF channel, use the **clear cable rf-status** command in privileged EXEC mode.

**clear cable rf-status** [**modular-cable** *slot/bay/port nb-channel-number*]

### Syntax Description

<i>slot</i>	The slot where a SIP resides. On the Cisco uBR10012 router, slots 1 and 3 can be used for SIPs.
<i>bay</i>	The bay in a SIP where a SPA is located. Valid values are 0 (upper bay) and 1 (lower bay).
<i>port</i>	Specifies the interface number on the SPA.
<i>nb-channel-number</i>	Represents the narrowband channel number.

### Command Default

None

### Command Modes

Privileged EXEC (#)

### Command History

Release	Modification
12.2(33)SCB	This command was introduced.
IOS-XE 3.15.0S	This command was replaced by the <b>clear cable resil-rf-status</b> command on the Cisco cBR Series Converged Broadband Routers.

### Related Commands

Command	Description
<b>clear cable flap-list</b>	Resets the flap-list table for a specific CM or for all CMs.
<b>clear cable modem delete</b>	Removes one or more CMs from the internal address and routing tables on a CMTS router and stops DOCSIS station maintenance messages.
<b>clear cable modem lock</b>	Resets the lock on one or more CMs.
<b>clear cable modem name</b>	Removes or resets CMs by domain name.

Command	Description
clear cable modem reset	Removes one or more CMs from the Station Maintenance List and resets them.



## clear cable secondary-ip

To clear the router's table that links secondary IP addresses to the devices that use them, use the **clear cable secondary-ip** command in privileged EXEC mode.

**clear cable secondary-ip interface cable** {*slot/port*|*slot/subport/port*} [**all**|**sid** *sid* [ *ip-address* ] ]

### Syntax Description

<i>slot/port</i>	(Cisco uBR7100 and Cisco uBR7200 Series Routers) Specifies the cable interface and downstream port, where: <ul style="list-style-type: none"> <li>• <i>slot</i>—Specifies the chassis slot number of the cable interface line card.</li> <li>• <i>port</i>—Specifies the downstream port number.</li> </ul> Valid values for these arguments are dependent on your CMTS router and cable interface line card. Refer to the hardware documentation for your router chassis and cable interface line card for supported slot and port numbering.
<i>slot/subslot/port</i>	(Cisco uBR10012 Router) Specifies the cable interface, where: <ul style="list-style-type: none"> <li>• <i>slot</i>—Specifies the chassis slot number of the cable interface line card. Valid slots are 5 to 8.</li> <li>• <i>subslot</i>—Specifies the secondary slot number of the cable interface line card. Valid subslots are 0 or 1.</li> <li>• <i>port</i>—Specifies the downstream port number. Valid ports are 0 to 4, depending on the cable interface line card.</li> </ul>
<b>all</b>	Specifies that all IP addresses in the secondary IP address table should be cleared.
<b>sid</b> <i>sid</i>	Specifies that all IP addresses for a particular Service ID (SID) should be cleared. The valid range is 1 to 8191.
<i>ip-address</i>	(Optional) Specifies that the IP address for a particular CM or CPE device should be cleared.

### Command Default

None

**Command Modes** Privileged EXEC (#)

Release	Modification
12.1(13)EC	This command was introduced for the Cisco uBR7100 series and Cisco uBR7200 series universal broadband routers.
12.2(11)BC1	Support was added for the Cisco uBR10012 universal broadband router.
12.2(11)BC2	This command was removed because it is no longer needed, because of database changes.
12.3BC	This command was integrated into Cisco IOS Release 12.3BC.
12.2(33)SCA	This command was integrated into Cisco IOS Release 12.2(33)SCA. Support for the Cisco uBR7225VXR router was added.
IOS-XE 3.15.0S	This command is not supported on the Cisco cBR Series Converged Broadband Routers.

### Usage Guidelines

To support BPI and BPI+ operations with CMs and CPE devices that use secondary IP addresses, the CMTS maintains a database that links the known secondary IP addresses to the SIDs used by those devices. When the CMTS and CM need to renew their public keys, the CMTS uses this database to ensure that all IP addresses are sufficiently updated to allow proper routing and fast switching.



#### Tip

You can display the list of known IP addresses per SID by using the **show interface cable sid** command.

If you encounter apparent problems with secondary IP addressing, or if you want to manually clear the table of IP addresses for a particular SID, use the **clear cable secondary-ip** command.

One possible situation that might occur is if a CM first assigns a secondary IP address to one CPE device, but later that same IP address is assigned to another CPE device behind a different CM. If this happens, the IP address will continue to show up as a secondary IP address for the original CM until that CM renews its public keys. This will not affect network connectivity for either CPE or CM. You can, however, clear the unneeded secondary IP address from the CMTS database using the **clear cable secondary-ip** command.

### Examples

The following example shows how to clear all of the secondary IP addresses for a particular cable interface:

```
Router# clear cable secondary-ip interface cable 3/0 all
```

The following example shows how to clear the secondary IP addresses for all CM and CPE devices on cable interface 1/0 that are using SID 5:

```
Router# clear cable secondary-ip interface cable 1/0 sid 5
```

The following example shows how to clear the secondary IP addresses for the CM and CPE devices on cable interface 5/0 that are using SID 113 and IP address 10.10.17.3:

```
Router# clear cable secondary-ip interface cable 5/0 sid 113 10.10.17.3
```

#### Related Commands

Command	Description
<code>show interface cable sid</code>	Displays information for a particular SID, including the known secondary IP addresses.

# clear hccp counters

To reset the counters for one or all Hot Standby Connection-to-Connection Protocol (HCCP) groups, use the **clear hccp counters** command in privileged EXEC mode.

**clear hccp** [*group*] **all** counters

## Syntax Description

<i>group</i>	Clears the counters for the specified group number. The valid range is 1 to 255.
<b>all</b>	Clears the counters for all HCCP groups.

## Command Default

None

## Command Modes

Privileged EXEC (#)

## Command History

Release	Modification
12.1(3a)EC	This command was introduced for the Cisco uBR7200 series routers.
12.1(7)EC1	Support was added for the Cisco uBR-MC16S cable interface line card.
12.2(4)XF1, 12.2(4)BC1	Support was added for the N+1 (1:n) RF Switch with the Cisco uBR10012 router and Cisco uBR-LCP-MC28C card.
12.2(8)BC2	Support was added for the N+1 (1:n) RF Switch with the Cisco uBR10012 router and Cisco uBR-LCP-MC16C, Cisco uBR-LCP-MC16E, and Cisco uBR-LCP-MC16S cards.
12.2(11)BC1	Support was added for the N+1 (1:n) RF Switch with the Cisco uBR7246VXR router and Cisco uBR-MC16C, Cisco uBR-MC16S, and Cisco uBR-MC28C cards.
12.3(21)BC	This command is obsolete on the Cisco uBR7246VXR router.
IOS-XE 3.15.0S	This command is not supported on the Cisco cBR Series Converged Broadband Routers.

## Usage Guidelines

This command clears the counters that are displayed by the **show hccp** and **show hccp interface** commands. You can clear the counters for a single HCCP group, or all HCCP groups.

**Examples**

The following example shows the counters for group 1 being reset to 0:

```
Router# clear hccp 1 counters
```

The following example shows the counters for all groups being reset to 0:

```
Router# clear hccp all counters
```

**Related Commands**

Command	Description
<b>hccp working</b>	Designates a cable interface on a CMTS in the specified group to be a Working CMTS.
<b>show hccp</b>	Displays information for all cable interfaces on which one or more HCCP groups and authentication modes have been configured.
<b>show hccp interface</b>	Displays group information for a specific cable interface on which one or more groups and authentication modes have been configured.

## clear hccp linecard

To clear information about the Hot Standby Connection-to-Connection Protocol (HCCP) startup and switchover flow and unused events associated with cable line cards, use the **clear hccp linecard** command in privileged EXEC mode.

**clear hccp linecard** {fsm| nullfsm} buffer

### Syntax Description

<b>fsm</b>	The HCCP state transition flow (startup and switchover flow). Each line card member in an HCCP group is controlled by a state machine, which controls the HCCP startup and switchover flow.
<b>nullfsm</b>	The HCCP members that received unused or redundant events. This option is used only for debugging.
<b>buffer</b>	Buffer for saving HCCP state transition flow.

### Command Default

None

### Command Modes

Privileged EXEC (#)

### Command History

Release	Modification
12.2(33)SCE	This command was introduced.
IOS-XE 3.15.0S	This command is not supported on the Cisco cBR Series Converged Broadband Routers.

### Examples

The following example shows how to clear entries for the HCCP startup and switchover flow using the **clear hccp linecard** command on a Cisco CMTS router:

```
Router# clear hccp linecard fsm buffer
```

### Related Commands

Command	Description
<b>show hccp interface</b>	Displays group information for a specific cable interface on which one or more groups and authentication modes have been configured.

Command	Description
show hccp linecard	Displays line card level HCCP group information.

## clear packetcable gate counter commit

To clear the specified gate counter for PacketCable Multimedia (PCMM) or Dynamic Quality of Service (DQoS) for PC, use the **clear packetcable gate counter commit** command in Privileged EXEC mode.

**clear packetcable gate counter commit** [**dqos**| **multimedia**]

### Syntax Description

<b>dqos</b>	Clears PC DQoS gate counters.
<b>multimedia</b>	Clears PCMM gate counters.

### Command Default

The committed gate counter is reset to zero by default with router restart, and gates are not cleared periodically by default.

### Command Modes

Privileged EXEC (#)

### Command History

Release	Modification
12.2(8)BC2	This command was introduced for the Cisco uBR7200 series universal broadband router.
12.2(15)BC1	Support was added for the Cisco uBR10012 router.
12.3(13a)BC	This command was modified to support PCMM on the Cisco uBR10012 router and the Cisco uBR7246VXR router. The <b>dqos</b> and <b>multimedia</b> keywords were added.
12.2(33)SCA	This command was integrated into Cisco IOS Release 12.2(33)SCA. Support for the Cisco uBR7225VXR router was added.
IOS-XE 3.15.0S	This command was implemented on the Cisco cBR Series Converged Broadband Routers.

### Usage Guidelines

This command is used to reset the gate counter being used to track the total number of committed gates. The CMTS router maintains a count of the total number of gates committed from the router's last startup. This command can be used to either clear all the gate commit counts, or to specifically clear the counts for DQoS- or multimedia-based gates.

A **show** command is used to display the total number of gates committed on the CMTS.



**Examples**

The following example shows the committed gate counter being reset to zero:

```
Router# clear packetcable gate counter commit
```

**Related Commands**

Command	Description
<b>packetcable authorize vanilla-docsis-mta</b>	Allows non-DQoS MTAs to send DOCSIS DSX messages.
<b>packetcable gate maxcount</b>	Sets the maximum number of PCMM gates in the gate database.
<b>packetcable multimedia</b>	Enables and displays PacketCable Multimedia processing on the Cisco CMTS.
<b>packetcable timer multimedia T1</b>	Sets the default timeout value for T1 timer used in PCMM gate processing.

## clear packetcable rks

To clear the record keeping server (RKS) entries when there are no calls associated with the RKS server, use the **clear packetcable rks** command in privileged EXEC mode.

```
clear packetcable rks {ip_addr ip_addr port| all}
```

### Syntax Description

<b>ip_addr</b> <i>ip_addr</i>	Indicates the IP address of the RKS server to be cleared.
<i>port</i>	Indicates the UDP port of the RKS server to be cleared.
<b>all</b>	Indicates that information about all RKS servers will be cleared.

### Command Modes

Privileged EXEC (#)

### Command History

Release	Modification
12.2(33)SCD	This command was introduced.
IOS-XE 3.15.0S	This command was implemented on the Cisco cBR Series Converged Broadband Routers.

### Usage Guidelines

The **clear packetcable rks** command is used to clear the unwanted IP addresses of the RKS servers from the RKS server group list.



#### Note

This command clears the IP addresses of only those RKS servers that are currently not being used. In other words, if the reference count of an RKS server is a non-zero value, that entry will not be cleared from the RKS server group list.



#### Tip

You can verify the value of reference count (ref-cnt) by executing the **show packetcable event** command with the **rks-group** keyword.

**Examples**

The following sample shows how to clear the RKS server with IP address 2.39.26.8 on port 1816:

```
router#  
clear packetcable rks ip_addr 2.39.26.8 1816
```

The following sample shows how to clear the entries of all RKS servers:

```
router#  
clear packetcable rks all
```

**Related Commands**

Command	Description
<b>show packetcable event</b>	Displays information about the servers that are configured on the Cisco CMTS router for PacketCable operations.

# clear pxf

To clear Parallel eXpress Forwarding (PXF) counters and statistics, use the **clear pxf** command in privileged EXEC mode.

**clear pxf** [**dma counters** | **interface** *interface* | **statistics** {**context** | **diversion** | **drop** | **ip** | **ipv6**} | **xcm counters**]

## Syntax Description

<b>dma counters</b>	(Optional) Clears the direct memory access (DMA) PXF counters.
<b>interface</b> <i>interface</i>	(Optional) Clears the PXF counters on the specified interface.
<b>statistics</b>	(Optional) Type of PXF statistics to clear. The options are: <ul style="list-style-type: none"> <li>• <b>context</b>—Current and historical loads on the PXF.</li> <li>• <b>diversion</b>—Traffic diverted from the PXF.</li> <li>• <b>drop</b>—Dropped packets and bytes.</li> <li>• <b>ip</b>—IP and ICMP statistics.</li> <li>• <b>ipv6</b>—IPv6 statistics.</li> </ul>
<b>xcm counters</b>	Clears the PXF Error Code Correction (ECC) counters.

## Command Default

Clears the PXF Error Code Correction (ECC) counters.

## Command Modes

Privileged EXEC (#)

## Command History

Release	Modification
12.0(22)S	This command was introduced on the Cisco 10000 series router.
12.2(1)XF1	This command was introduced on the Cisco uBR10012 router.
12.2(4)XF1	The <b>xcm counters</b> option was introduced to support the Performance Routing Engine (PRE1) module on the Cisco uBR10012 router.
12.3(7)XI1	This command was integrated into Cisco IOS Release 12.3(7)XI1.
12.3BC	This command was integrated into Cisco IOS Release 12.3BC. The <b>context</b> and <b>ipv6</b> keyword options are not supported.

Release	Modification
12.2(31)SB	This command was integrated into Cisco IOS Release 12.2(31)SB.
12.2(33)SCA	This command was integrated into Cisco IOS Release 12.2(33)SCA. The <b>ipv6</b> keyword option is not supported.
IOS-XE 3.15.OS	This command is not supported on the Cisco cBR Series Converged Broadband Routers.

### Usage Guidelines

If no interface is specified, the command clears PXF counters on all interfaces. The `clear pxf` command clears counters associated with the **show pxf dma**, **show pxf interface**, **show pxf statistics**, and **show pxf xcm** commands.

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Not all keyword options are supported in the Cisco IOS software for the Cisco uBR10012 universal broadband router. See the command history table for the unsupported keyword options by release.

The **clear pxf xcm counters** command is supported only on the PRE1 and later processors for the Cisco uBR10012 router. This command is not supported on the PRE processor.

### Examples

The following sample clears PXF statistics for serial interface 1/0/0:

```
router#
clear pxf interface serial 1/0/0
```

The following sample clears PXF statistics on all interfaces:

```
router#
clear pxf interface
```

### Related Commands

Command	Description
<b>show pxf cpu statistics</b>	Displays PXF CPU statistics.
<b>show pxf dma</b>	Displays the current state of DMA buffers, error counters, and registers on the PXF engine.
<b>show pxf interface</b>	Displays a summary of the statistics accumulated by column 0 of the PXF for an interface.
<b>show pxf statistics</b>	Displays chassis-wide, summary PXF statistics
<b>show pxf xcm</b>	Displays information about the servers that are configured on the Cisco CMTS router for PacketCable operations.

## clear pxf statistics drl cable-wan-ip

To clear the PXF DRL cable/wan-ip statistics table, use the **clear pxf statistics drl cable-wan-ip** command in privileged EXEC mode.

**clear pxf statistics drl cable-wan-ip**

**Syntax Description** This command has no arguments or keywords.

**Command Default** None

**Command Modes** Privileged EXEC (#)

<b>Command History</b>	<b>Release</b>	<b>Modification</b>
	12.2(33)SCB	This command was introduced.
	IOS-XE 3.15.0S	This command was replaced by the <b>show platform hardware qfp active infrastructure punt sbri</b> command on the Cisco cBR Series Converged Broadband Routers.

**Usage Guidelines** This command sets the drop count to zero for all entries in the PXF DRL cable/wan-ip statistics table. It does not change any other value.

**Examples** The following example shows how to clear cable-wan-ip statistics:

```
Router# clear pxf statistics drl cable-wan-ip
```

### Related Commands

<b>Command</b>	<b>Description</b>
<b>clear pxf statistics drl wan-non-ip</b> (for uBR series router)	This command set the drop count to zero for all entries in the PXF DRL wan-non-ip statistics table.

## clear pxf statistics drl wan-non-ip

To clear the PXF DRL wan-non-ip statistics, use the **clear pxf statistics drl wan-non-ip** command in privileged EXEC mode.

```
clear pxf statistics drl wan-non-ip
```

**Syntax Description** This command has no arguments or keywords.

**Command Default** None

**Command Modes** Privileged EXEC (#)

Command History	Release	Modification
	12.2(33)SCB	This command was introduced.
	IOS-XE 3.15.0S	This command was replaced by the <b>show platform software punt-policer clear</b> command on the Cisco cBR Series Converged Broadband Routers.

**Usage Guidelines** This command sets the drop count to zero for all entries in the PXF DRL wan-non-ip statistics table.

**Examples** The following example shows how to clear the PXF statistics in wan-non-ip:

```
Router# clear pxf statistics drl wan-non-ip
```

**Related Commands**

Command	Description
<b>clear pxf statistics drl cable-wan-ip</b>	This command sets the drop count to zero for all entries in the cable or wan-ip statistics table.

## clear pxf statistics drl max-rate

To clear the DRL max-rate statistics on the WAN interface, use the **clear pxf statistics drl max-rate** command in privileged EXEC mode.

### clear pxf statistics drl max-rate

#### Syntax Description

<i>threshold</i>	The packet threshold value. The valid range is 0 to 4294967295.
<i>output modifiers</i>	The following output modifiers are used. <ul style="list-style-type: none"> <li>• <b>begin</b>—Begins with the line that match.</li> <li>• <b>exclude</b>—Excludes the lines that match.</li> <li>• <b>include</b>—Includes the lines that match.</li> <li>• <b>redirect</b>—Redirects the output to the URL.</li> <li>• <b>section</b>—Filters a section of the output.</li> <li>• <b>tee</b>—Copies output to the URL.</li> </ul>

#### Command Modes

Privileged EXEC (#)

#### Command History

Release	Modification
12.2(33)SCH3	This command was introduced.
IOS-XE 3.15.0S	This command was replaced by the <b>show platform software punt-policer clear</b> command on the Cisco cBR Series Converged Broadband Routers.

#### Examples

The following example shows how to clear DRL max-rate statistics on the WAN interface:

```
Router#clear pxf statistics drl max-rate wan
      dropped   divert_code
No max-rate WAN drops
```

#### Related Commands

Command	Description
<b>service divert-rate-limit max-rate</b>	Sets per-divert-code rate limit on the WAN interface
<b>clear pxf statistics drl max-rate</b>	Clears the DRL max-rate statistics on the WAN interface.





# clear redundancy

To clear the counters and history information that are used by the Redundancy Facility (RF) subsystem, use the **clear redundancy** command in privileged EXEC mode.

**clear redundancy** {**counters**| **history**}

## Cisco cBR Series Converged Broadband Routers

**clear redundancy** {**counters** | **history** | **idb-sync-history** | **linecard history**}

### Syntax Description

<b>counters</b>	Clears the RF counters that are maintained by the RF subsystem.
<b>history</b>	Clears the history of RF activity that is maintained by the RF subsystem.
<b>idb-sync-history</b>	Clears the Interface Descriptor Blocks (IDB) synchronization history of RF activity that is maintained by the RF subsystem.
<b>linecard history</b>	Clears the line card redundancy information. <ul style="list-style-type: none"> <li>• <b>history</b>—Clears the line card redundancy history logs.</li> </ul>

### Command Default

None

### Command Modes

Privileged EXEC (#)

### Command History

Release	Modification
12.2(4)XF1	This command was introduced for the Cisco uBR10012 router.
12.3BC	This command was integrated into Cisco IOS Release 12.3BC.
12.2(33)SCA	This command was integrated into Cisco IOS Release 12.2(33)SCA.
IOS-XE 3.15.0S	This command was implemented on the Cisco cBR Series Converged Broadband Routers. The <b>idb-sync-history</b> and <b>linecard</b> keywords were added.

**Usage Guidelines**

The **clear redundancy** command clears the following information, which is shown by the **show redundancy** command:

- **counters**—Number of messages sent and received, buffers used, and synchronization errors.
- **history**—RF subsystem activity, such as checkpoint messages sent between RF clients.
- **idb-sync-history**—(On Cisco cBR series routers) RF subsystem activity, such as IDB synchronization information.
- **linecard history**—(On Cisco cBR series routers) Line card redundancy history information.

**Examples**

The following example shows how to clear the RF counters that are displayed by the **show redundancy** command:

```
Router# clear redundancy counters
```

The following example shows how to clear the RF history information that is displayed by the **show redundancy** command:

```
Router# clear redundancy history
```

The following example shows how to clear the RF IDB synchronization history information that is displayed by the **show redundancy** command on the Cisco cBR series routers:

```
Router# clear redundancy idb-sync-history
```

The following example shows how to clear the line card redundancy history information that is displayed by the **show redundancy** command on the Cisco cBR series routers:

```
Router# clear redundancy linecard history
```

**Related Commands**

Command	Description
<b>show redundancy</b>	Displays the current redundancy state.

## cmc

To configure the Cisco CMC in a channel group, use the **cmc** command in channel group configuration mode. To disable the configuration, use the **no** form of the command.

**cmc** *mac-address*

**no cmc** *mac-address*

### Syntax Description

<i>mac-address</i>	MAC address of the Cisco CMC.
--------------------	-------------------------------

### Command Default

Cisco CMC is not configured.

### Command Modes

Channel group configuration (config-ch-group)

### Command History

Release	Modification
12.2(33)CX	This command was introduced.
IOS-XE 3.15.0S	This command is not supported on the Cisco cBR Series Converged Broadband Routers.

### Usage Guidelines

You can configure up to four Cisco CMCs in a channel group.

### Examples

The following example shows how to configure a Cisco CMC in a channel group:

```
Router# configure terminal
Router(config)# cable channel-group 1
Router(config-ch-group)# cmc 0010.2024.7035
```

### Related Commands

Command	Description
<b>cable channel-group</b>	Configures channel group.
<b>show cable channel-group</b>	Displays the channel group information.

# controller integrated-cable

To enter controller configuration mode to configure the controller interface for an integrated DOCSIS 3.0 cable interface line card, use the **controller integrated-cable** command in global configuration mode.

## Cisco uBR10012 Router and Cisco cBR Series Converged Broadband Routers

**controller integrated-cable** *slot/subslot/port*

## Cisco uBR7225VXR and Cisco uBR7246VXR Routers

**controller integrated-cable** *slot/port*

### Syntax Description

<p><b>integrated-cable</b> <i>slot/subslot/port</i></p>	<p>Identifies the cable interface.</p> <p>For the Cisco uBR10012 router:</p> <ul style="list-style-type: none"> <li>• <i>slot</i>—Slot where the line card resides. The valid range is from 5 to 8.</li> <li>• <i>subslot</i>—Subslot where the line card resides. Available slots are 0 or 1.</li> <li>• <i>port</i>—Downstream controller number on the line card. Valid port values are from 0 to 4.</li> </ul> <p>For the Cisco cBR series router:</p> <ul style="list-style-type: none"> <li>• <i>slot</i>—Slot where the interface card resides. The valid range is from 0 to 3 and 6 to 9 on the Cisco cBR-8 router.</li> <li>• <i>subslot</i>—Subslot where the interface card resides. The valid value is 0 on the Cisco cBR-8 router.</li> <li>• <i>port</i>—Controller port number. The valid values are from 0 to 7 on the Cisco cBR-8 router.</li> </ul>
<p><b>integrated-cable</b> <i>slot/port</i></p>	<p>Identifies the cable interface on the Cisco uBR7246VXR or Cisco uBR7225VXR router.</p> <ul style="list-style-type: none"> <li>• <i>slot</i>—Slot where the line card resides. <ul style="list-style-type: none"> <li>◦ Cisco uBR7246VXR router: The valid range is from 3 to 6.</li> <li>◦ Cisco uBR7225VXR router: The valid range is from 1 to 2.</li> </ul> </li> <li>• <i>port</i>—Downstream port number on the line card. The valid port value is 0 or 1.</li> </ul>

**Command Default** None

**Command Modes** Global configuration (config)

**Command History**

Release	Modification
12.2(33)SCC	This command was introduced.
12.2(33)SCD	This command was modified. Added support for the controller interface configuration on Cisco uBR7246VXR and Cisco uBR7225VXR universal broadband routers.
IOS-XE 3.15.0S	This command was implemented on the Cisco cBR Series Converged Broadband Routers.

**Examples**

The following example shows how to enter controller configuration mode to configure the controller interface in slot 5, subslot 1, and port 0 of the Cisco uBR10012 router:

```
Router# configure terminal
```

```
Router(config)# controller integrated-cable 5/1/0
```

The following example shows how to enter controller configuration mode to configure the controller interface in slot 3, subslot 0, and port 0 of the Cisco cBR-8 router:

```
Router# configure terminal
```

```
Router(config)# controller integrated-cable 3/0/0
```

**Related Commands**

Command	Description
<b>annex modulation</b>	Sets the annex and modulation rates for each RF channel.
<b>rf-channel cable downstream channel-id</b>	Assigns a downstream channel ID to an RF channel.
<b>rf-channel frequency</b>	Sets the frequency for each RF channel.
<b>rf-channel rf-power</b>	Sets the RF power output level.
<b>rf-channel rf-shutdown</b>	Enables or disables an RF channel.

# controller modular-cable

To enter controller configuration mode to configure the wideband modular interface controller, use the **controller modular-cable** command in global configuration mode.

## Cisco IOS Releases 12.3(23)BC and 12.2(33)SCA

**controller modular-cable** *slot/subslot/bay*

## Cisco IOS Release 12.2(33)SCB and later releases

**controller modular-cable** *slot/bay/port* | *slot/subslot/controller*

### Syntax Description

<i>slot/subslot/bay</i> or <i>slot/bay/port</i>	<p>The Wideband SPA slot, subslot, bay, and port.</p> <ul style="list-style-type: none"> <li>• <i>slot</i>—Slot where the Wideband SIP resides. The valid values are 1 and 3.</li> <li>• <i>subslot</i>—Subslot where the Wideband SIP resides. The valid value is 0.</li> <li>• <i>bay</i>—Wideband SIP bay where the SPA resides. The valid range is from 0 to 3.</li> <li>• <i>port</i>—Port number on the SPA. The valid value is always 0.</li> </ul>
<i>slot/subslot/controller</i>	<p>Modular cable line card slot, subslot, and controller.</p> <ul style="list-style-type: none"> <li>• <i>slot</i>—Modular cable line card slot. The valid values are 5, 6, 7, and 8.</li> <li>• <i>subslot</i>—Modular cable line card subslot. The valid values are 0 and 1.</li> <li>• <i>controller</i>—Modular cable line card controller. The valid range is from 0 to 2.</li> </ul>

### Command Default

The command mode is unchanged.

### Command Modes

Global configuration (config)

### Command History

Release	Modification
12.3(21)BC	This command was introduced for the Cisco uBR10012 router.

Release	Modification
12.2(33)SCA	This command was integrated into Cisco IOS Release 12.2(33)SCA.
12.2(33)SCB	This command was modified. The addressing format for the modular cable interface was changed from <i>slot/subslot/bay</i> to <i>slot/bay/port</i> .
12.2(33)SCE	This command was modified. This command now supports the Cisco uBR-MC3GX60V cable interface line card. The addressing format <i>slot/subslot/controller</i> for the modular-cable line card was added.
IOS-XE 3.15.0S	This command is not supported on the Cisco cBR Series Converged Broadband Routers.

### Usage Guidelines

This command indicates where the wideband modular interface controller is located and enters controller configuration mode. The modular interface controller could be either a SPA, or a Cisco uBR-MC3GX60V cable interface line card.

### Examples

The following example shows how to enter the controller configuration mode for the Cisco Wideband SPA in slot 1, subslot 0, and bay 0.

```
Router# configure terminal
```

```
Router(config)# controller modular-cable 1/0/0
```

The following example shows how to enter the controller configuration mode for the Cisco uBR-MC3GX60V line card in slot 8, subslot 1, and controller-unit-number 1.

```
Router# configure terminal
```

```
Router(config)# controller modular-cable 8/1/1
```

### Related Commands

Command	Description
<b>annex modulation</b>	Sets the annex and modulation for the Cisco Wideband SPA.
<b>cable rf-channel</b>	Associates an RF channel on a Cisco Wideband SPA with a wideband channel.
<b>ip-address (controller)</b>	Sets the IP address of the Cisco Wideband SPA FPGA.
<b>modular-host subslot</b>	Specifies the modular-host line card for the Cisco Wideband SPA.
<b>rf-channel cable downstream channel-id</b>	Assigns a downstream channel ID to an RF channel.
<b>rf-channel description</b>	Specifies the description for each RF channel.



Command	Description
<b>rf-channel ip-address mac-address udp-port</b>	Sets the IP address, MAC address, and UDP port for each RF channel.
<b>rf-channel network delay</b>	Specifies the CIN delay for each RF channel.

# controller upstream-cable

To configure upstream-cable controller, use the **controller upstream-cable** command in global configuration mode. To restore the default value, use the **no** form of this command.

**contoller upstream-cable** *slot/subslot/controller port number*

**no contoller upstream-cable** *slot/subslot/controller port number*

## Syntax Description

<i>slot/subslot/controller port number</i>	<p>The <i>slot</i>, <i>subslot</i> and <i>controller port number</i>. The valid range values are:</p> <ul style="list-style-type: none"> <li>• <i>slot</i> - The valid range is from 0 to 9.</li> <li>• <i>subslot</i> - The valid subslot is 0.</li> <li>• <i>contoller port number</i> - The valid range is from 0 to 15.</li> </ul>
--	--

## Command Default

Cable linecards are created for all the 16 controllers (0 - 15) by default.

## Command Modes

Global configuration (config)

## Command History

Release	Modification
IOS-XE 3.15.OS	This command was introduced on the Cisco cBR Series Converged Broadband Routers.

## Usage Guidelines

Use the **controller upstream-cable** command to configure upstream-cable controller in global configuration mode.

## Examples

The following example shows how to configure upstream cable controller using **contoller upstream-cable** command:

```
Router# configure terminal
Router(config)# controller Upstream-Cable 3/0/0
Router(config-controller)#
```

## Related Commands

Command	Description
<b>controller integrated-cable</b>	Configures the Integrated-cable controller.



## cops ip dscp

To specify the Common Open Policy Service (COPS) Differentiated Services Code Point (DSCP) markings for COPS messages that are transmitted by the Cisco router, use the **cops ip dscp** command in global configuration mode. To remove this configuration, use the **no** form of this command.

**cops ip dscp** [0-63] default| af11-af43| cs1-cs7]

**nocops ip dscp** [0-63] default| af11-af43| cs1-cs7]

### Syntax Description

The values for this command specify the markings with which COPS messages are transmitted. The following values are supported for the Cisco CMTS router.

<b>0-63</b>	DSCP value ranging from 0-63.
<b>af11</b>	Use AF11 dscp (001010)
<b>af12</b>	Use AF12 dscp (001100)
<b>af13</b>	Use AF13 dscp (001110)
<b>af21</b>	Use AF21 dscp (010010)
<b>af22</b>	Use AF22 dscp (010100)
<b>af23</b>	Use AF23 dscp (010110)
<b>af31</b>	Use AF31 dscp (011010)
<b>af32</b>	Use AF32 dscp (011100)
<b>af33</b>	Use AF33 dscp (011110)
<b>af41</b>	Use AF41 dscp (100010)
<b>af42</b>	Use AF42 dscp (100100)
<b>af43</b>	Use AF43 dscp (100110)
<b>cs1</b>	Use CS1 dscp (001000) [precedence 1]
<b>cs2</b>	Use CS2 dscp (010000) [precedence 2]
<b>cs3</b>	Use CS3 dscp (011000) [precedence 3]
<b>cs4</b>	Use CS4 dscp (100000) [precedence 4]
<b>cs5</b>	Use CS5 dscp (101000) [precedence 5]

<b>cs6</b>	Use CS6 dscp (110000) [precedence 6]
<b>cs7</b>	Use CS7 dscp (111000) [precedence 7]
<b>default</b>	Use default dscp (000000)
<b>ef</b>	Use EF dscp (101110)

### Command Default

- This command is disabled by default.
- For messages transmitted by the Cisco router, the default DSCP value is 0.
- For incoming connections to the Cisco router, by default, the COPS engine takes the DSCP value used by the COPS server that initiates the TCP connection.

### Command Modes

Global configuration (config)

### Command History

Release	Modification
12.3(13a)BC	This command was introduced to the Cisco CMTS.
12.2(33)SCA	This command was integrated into Cisco IOS Release 12.2(33)SCA. Support for the Cisco uBR7225VXR router was added.
IOS-XE 3.15.0S	This command was implemented on the Cisco cBR Series Converged Broadband Routers.

### Usage Guidelines

This feature allows you to change the Differentiated Services Code Point (DSCP) marking for COPS messages that are transmitted or received by the Cisco router. Cisco IOS Release 12.3(13a)BC supports this function with the **cops ip dscp** command. The **cops ip dscp** command changes the default IP parameters for connections between the Cisco router and COPS servers in the cable network.

DSCP values are used in Quality of Service (QoS) configurations on a Cisco router to summarize the relationship between DSCP and IP precedence. This command allows COPS to remark the packets for either incoming or outbound connections.

The default setting is 0 for outbound connections. On default incoming connections, the COPS engine takes the DSCP value from the COPS server initiating the TCP connection.



#### Note

This feature affects all TCP connections with all COPS servers.

- The **cops ip dscp** command allows the Cisco router to re-mark the COPS packets for either incoming or outbound connections.

- This command affects all TCP connections with all COPS servers.
- This command does not affect existing connections to COPS servers. Once you issue this command, this function is supported only for new connections after that point in time.
- For messages transmitted by the Cisco router, the default DSCP value is 0.
- For incoming connections to the Cisco router, the COPS engine takes the DSCP value used by the COPS server that initiates the TCP connection, by default.

For additional information about this feature and related commands, refer to the “COPS Engine Operation on the Cisco CMTS Routers” feature document on Cisco.com.

## Examples

The following basic example illustrates the use of this command:

The following example illustrates the `cops ip dscp` command with supported command variations:

```
Router(config)# cops ip dscp ?
<0-63>  DSCP value
af11    Use AF11 dscp (001010)
af12    Use AF12 dscp (001100)
af13    Use AF13 dscp (001110)
af21    Use AF21 dscp (010010)
af22    Use AF22 dscp (010100)
af23    Use AF23 dscp (010110)
af31    Use AF31 dscp (011010)
af32    Use AF32 dscp (011100)
af33    Use AF33 dscp (011110)
af41    Use AF41 dscp (100010)
af42    Use AF42 dscp (100100)
af43    Use AF43 dscp (100110)
cs1     Use CS1  dscp (001000) [precedence 1]
cs2     Use CS2  dscp (010000) [precedence 2]
cs3     Use CS3  dscp (011000) [precedence 3]
cs4     Use CS4  dscp (100000) [precedence 4]
cs5     Use CS5  dscp (101000) [precedence 5]
cs6     Use CS6  dscp (110000) [precedence 6]
cs7     Use CS7  dscp (111000) [precedence 7]
default Use default dscp (000000)
ef      Use EF   dscp (101110)
Router(config)# cops ip dscp 63
```

The following example specifies the COPS server and enables COPS for RSVP on the server. Both of these functions are accomplished by using the `ip rsvp policy cops` command on the Cisco uBR10012 router. By implication, the default settings for all remaining COPS for RSVP commands are accepted.

```
Router# configure terminal
Enter configuration commands, one per line. End with CNTL/Z.
Router(config)# ip rsvp policy cops servers 161.44.130.168 161.44.129.6
Router(config)# exit
```

The following examples display three views of the COPS for RSVP configuration on the router, which can be used to verify the COPS for RSVP configuration.

The following example displays the policy server address, state, keepalives, and policy client information:

```
Router# show cops servers
COPS SERVER: Address: 161.44.135.172. Port: 3288. State: 0. Keepalive: 120 sec
Number of clients: 1. Number of sessions: 1.
COPS CLIENT: Client type: 1. State: 0.
```

The following example displays the policy server address, the ACL ID, and the client/server connection status:

```
Router# show ip rsvp policy cops
COPS/RSVP entry. ACLs: 40 60
```

```
PDPs: 161.44.135.172
Current state: Connected
Currently connected to PDP 161.44.135.172, port 0
```

The following example displays the ACL ID numbers and the status for each ACL ID:

```
Router# show ip rsvp policy
Local policy: Currently unsupported
COPS:
ACLs: 40 60 . State: CONNECTED.
ACLs: 40 160 . State: CONNECTING.
```

## Related Commands

Command	Description
<b>cops listeners access-list</b>	Configures access control lists (ACLs) for inbound connections to all COPS listener applications on the Cisco CMTS.
<b>cops tcp window-size</b>	Overrides the default TCP receive window size that is used by COPS processes.
<b>debug packetcable cops</b>	Enables debugging processes for PacketCable with the COPS engine.
<b>debug packetcable gate control</b>	Enables and displays debugging processes for PacketCable gate control.
<b>debug packetcable subscriber</b>	Enables and displays debugging processes for PacketCable subscribers.
<b>show cops servers</b>	Displays COPS server addresses, port, state, keepalives, and policy client information.
<b>show debug</b>	Displays current debugging information that includes PacketCable COPS messages on the Cisco CMTS.
<b>show ip rsvp policy</b>	Displays policy server addresses, ACL IDs, and client/server connection status.

## cops listeners access-list

To configure access control lists (ACLs) for inbound connections to all Common Open Policy Service (COPS) listener applications on the Cisco CMTS router, use the **cops listeners access-list** command in global configuration mode. To remove this setting from the Cisco CMTS router, use the **no** form of this command.

**cops listeners access-list** {*acl-num*|*acl-name*}

**no cops listeners access-list** {*acl-num*|*acl-name*}

### Syntax Description

<i>acl-num</i>	Numeric identifier that identifies the access list to apply to the current interface. For standard access lists, the valid range is 1 to 99; for extended access lists, the valid range is 100 to 199.  For IPv4 access list number, the normal range is 1 to 199 and extended range is 1300 to 2699 on the Cisco cBR series routers.
<i>acl-name</i>	Alphanumeric identifier of up to 30 characters, beginning with a letter that identifies the ACL to apply to the current interface.

### Command Default

Access lists are not configured by default on the Cisco CMTS router.

### Command Modes

Global configuration (config)

### Command History

Release	Modification
12.3(13a)BC	This command was introduced.
12.2(33)SCA	This command was integrated into Cisco IOS Release 12.2(33)SCA. Support for the Cisco uBR7225VXR router was added.
IOS-XE 3.15.0S	This command was implemented on the Cisco cBR Series Converged Broadband Routers.

### Usage Guidelines

When using ACLs with cable monitor and the Cisco uBR10012 router, combine multiple ACLs into one ACL, and then configure cable monitor with the consolidated ACL. For more information about cable monitor on the Cisco uBR10012 router, refer to the “Cable Monitor and Intercept Features for the Cisco CMTS” documentation on Cisco.com.



**Examples**

The following example illustrates a short access list configuration for the COPS listener feature:

```
Router# cops listeners access-list 40
```

**Related Commands**

Command	Description
<b>cops ip dscp</b>	Specifies the COPS DSCP markings for COPS messages that are transmitted by the Cisco router
<b>cops tcp window-size</b>	Overrides the default TCP receive window size that is used by COPS processes.
<b>debug packetcable cops</b>	Enables debugging processes for PacketCable with the COPS engine.
<b>debug packetcable gate control</b>	Enables and displays debugging processes for PacketCable gate control.
<b>debug packetcable subscriber</b>	Enables and displays debugging processes for PacketCable subscribers.
<b>show cops servers</b>	Displays COPS server addresses, port, state, keepalives, and policy client information.
<b>show debug</b>	Displays current debugging information that includes PacketCable COPS messages on the Cisco CMTS.
<b>show ip rsvp policy</b>	Displays policy server addresses, ACL IDs, and client/server connection status.

## cops tcp window-size

To override the default TCP receive window size on the Cisco CMTS router, use the **cops tcp window-size** command in global configuration mode. This setting allows you to prevent the COPS server from sending too much data at one time. To return the TCP window size to a default setting of 4K, use the **no** form of this command.

**cops tcp window-size** *bytes*

**no cops tcp window-size**

### Syntax Description

*bytes*

This is the TCP window size setting in bytes. This value can range from 516 to 65535 bytes.

### Command Default

The default COPS TCP window size is 4000 bytes.

### Command Modes

Global configuration (config)

### Command History

Release	Modification
12.3(13a)BC	This command was introduced.
12.2(33)SCA	This command was integrated into Cisco IOS Release 12.2(33)SCA. Support for the Cisco uBR7225VXR router was added.
IOS-XE 3.15.0S	This command was implemented on the Cisco cBR Series Converged Broadband Routers.

### Usage Guidelines

This command does not affect existing connections to COPS servers. Once you issue this command, this function is supported only for new connections after that point in time.

### Examples

The following example configures the TCP window size to be 64000 bytes.

```
Router(config)# cops tcp window-size 64000
```

**Related Commands**

<b>Command</b>	<b>Description</b>
<b>cops ip dscp</b>	Specifies the Common Open Policy Service (COPS) Differentiated Services Code Point (DSCP) markings for COPS messages that are transmitted by the Cisco router.
<b>cops listeners access-list</b>	Configures access control lists (ACLs) for inbound connections to all COPS listener applications on the Cisco CMTS.
<b>debug packetcable cops</b>	Enables debugging processes for PacketCable with the COPS engine.
<b>debug packetcable gate control</b>	Enables and displays debugging processes for PacketCable gate control.
<b>debug packetcable subscriber</b>	Enables and displays debugging processes for PacketCable subscribers.
<b>show cops servers</b>	Displays COPS server addresses, port, state, keepalives, and policy client information.
<b>show debug</b>	Displays current debugging information that includes PacketCable COPS messages on the Cisco CMTS.
<b>show ip rsvp policy</b>	Displays policy server addresses, ACL IDs, and client/server connection status.

# cpd

To enable the Control Point Discovery (CPD) feature, use the **cpd** command in global configuration mode. To disable CPD, use the **no** form of this command.

**cpd**

**no cpd**

**Syntax Description** This command has no keywords or arguments.

**Command Default** CPD is enabled.

**Command Modes** Global configuration (config)

## Command History

Release	Modification
12.3(21a)BC3	This command was introduced.
12.2(33)SCA	This command was integrated into Cisco IOS Release 12.2(33)SCA. Support for the Cisco uBR7225VXR router was added.
IOS-XE 3.15.OS	This command was implemented on the Cisco cBR Series Converged Broadband Routers.

## Examples

The following example shows the cpd enabled on a router:

```
Router(config)# cpd
```

## Related Commands

Command	Description
<b>cpd cr-id</b>	Configures a control relationship identifier.

## cpd cr-id

To configure a Control relationship identifier (CR ID), use the **cpd cr-id** command in global configuration mode. To disable the CR ID, use the **no** form of this command.

**cpd cr-id** *cr id number*

**no cpd cr-id**

### Syntax Description

<i>cr id number</i>	Control relationship identifier. The valid range is from 1 to 65535.
---------------------	--

### Command Default

The CR ID is configured as 1.

### Command Modes

Global configuration (config)

### Command History

Release	Modification
12.3(21a)BC3	This command was introduced.
12.2(33)SCA	This command was integrated into Cisco IOS Release 12.2(33)SCA. Support for the Cisco uBR7225VXR router was added.
IOS-XE 3.15.OS	This command was implemented on the Cisco cBR Series Converged Broadband Routers.

### Examples

The following example shows the control relationship identifier configured as 236:

```
Router(config)# cpd cr-id 236
```

### Related Commands

Command	Description
<b>cpd</b>	Enables CPD functionality.

## cpe max

To create a DOCSIS configuration file that specifies the maximum number of CPE devices that can use the CM to connect to the cable network, use the **cpe max** command in cable config-file configuration mode. To remove the CPE specification, use the **no** form of this command.

**cpe max** *cpe-num*

**no cpe max**

### Syntax Description

<i>cpe-num</i>	Specifies the number of CPEs. Valid range is 1 to 254.
----------------	--

### Command Default

A maximum of one CPE device can use the CM to connect to the cable network.

### Command Modes

Cable config-file configuration (config-file)

### Command History

Release	Modification
12.1(2)EC1	This command was introduced.
12.2(4)BC1	Support was added to the Release 12.2 BC train.
12.3BC	This command was integrated into Cisco IOS Release 12.3BC.
12.2(33)SCA	This command was integrated into Cisco IOS Release 12.2(33)SCA.
IOS-XE 3.15.0S	This command is not supported on the Cisco cBR Series Converged Broadband Routers.

### Usage Guidelines

The CM enforces the limitation imposed by the **cpe max** command, but the CMTS might enforce its own lower number of CPE devices. On Cisco CMTS routers, a *cpe-num* value of 0 enables an unlimited number of hosts, but on some CMs, this value provides only 0 hosts.

### Examples

The following example shows how to set the maximum CPE value for the configuration file:

```
Router(config)# cable config-file channeloverride.cm
Router(config-file)# cpe max 3

Router(config-file)# exit
```

**Related Commands**

<b>Command</b>	<b>Description</b>
<b>cable config-file</b>	Creates a DOCSIS configuration file and enters configuration file mode.
<b>access-denied</b>	Disables access to the network.
<b>channel-id</b>	Specifies upstream channel ID.
<b>download</b>	Specifies download information for the configuration file.
<b>frequency</b>	Specifies downstream frequency.
<b>option</b>	Provides config-file options.
<b>privacy</b>	Specifies privacy options for baseline privacy images.
<b>service-class</b>	Specifies service class definitions for the configuration file.
<b>snmp manager</b>	Specifies Simple Network Management Protocol (SNMP) options.
<b>timestamp</b>	Enables time-stamp generation.

