

clear counters

To clear the interface counters, use the **clear counters** command.

```
clear counters [{interface interface-number} | {null interface-number} | {port-channel number}
| {vlan vlan-id}]
```

Syntax Description		
<i>interface</i>	(Optional) Interface type; possible valid values are ethernet , fastethernet , gigabitethernet , tengigabitethernet , pos , ge-wan , and atm .	
<i>interface-number</i>	(Optional) Module and port number; see the “Usage Guidelines” section for valid values.	
null <i>interface-number</i>	(Optional) Null interface; the valid value is 0 .	
port-channel <i>number</i>	(Optional) Channel interface; see the “Usage Guidelines” section for valid values.	
vlan <i>vlan-id</i>	(Optional) VLAN ID; see the “Usage Guidelines” section for valid values.	

Defaults

This command has no default settings.

Command Modes

Privileged EXEC

Command History

Release	Modification
12.0(7)XE	Support for this command was introduced on the Catalyst 6500 series switches.
12.1(1)E	Support for this command on the Catalyst 6500 series switches was extended to the 12.1 E release.
12.1(3a)E3	The number of valid values for port-channel <i>number</i> was changed; see the “Usage Guidelines” section for valid values.
12.1(5c)EX	This command was changed to display the drop counters.
12.1(11b)E	This command was changed to include the pos , atm , and ge-wan keywords.
12.1(11b)EX	This command was changed to support extended-range VLANs.
12.1(13)E	This command was changed to include clearing traffic meter counters.

Usage Guidelines

This command clears all the current interface counters from the interface unless you specify the interface.



Note

This command does not clear counters retrieved using SNMP, but only those seen when you enter the **show queueing interface** command.

The *interface-number* argument designates the module and port number. Valid values for *interface-number* depend on the specified interface type and the chassis and module used. For example, if you specify a Gigabit Ethernet interface and have a 48-port 10/100BASE-T Ethernet module installed in a 13-slot chassis, valid values for the module number are from 2 to 13 and valid values for the port number are from 1 to 48.

The number of valid values for **port-channel number** depends on the software release. For releases prior to Release 12.1(3a)E3, valid values are from 1 to 256; for Releases 12.1(3a)E3, 12.1(3a)E4, and 12.1(4)E1, valid values are from 1 to 64. Release 12.1(5c)EX and later support a maximum of 64 values ranging from 1 to 256. Release 12.1(13)E and later support a maximum of 64 values ranging from 1 to 282; values 257 to 282 are supported on the CSM and FWSM only.

If your system is configured with a Supervisor Engine 1, valid values for *vlan-id* are from 1 to 1005. If your system is configured with a Supervisor Engine 2, valid values for *vlan-id* are from 1 to 4094. Extended-range VLANs are not supported on systems configured with a Supervisor Engine 1.

Examples

This example shows how to clear all interface counters:

```
Router# clear counters
Clear "show interface" counters on all interfaces [confirm]y
Router#
```

This example shows how to clear counters on a specific interface:

```
Router# clear counters vlan 200
Clear "show interface" counters on this interface [confirm]y
Router#
```

Related Commands

show queuing interface (refer to the *Cisco IOS Release 12.1 Command Reference*)

clear interface gigabitethernet

To clear the hardware logic on a Gigabit Ethernet IEEE 802.3z interface, use the **clear interface gigabitethernet** command.

clear interface gigabitethernet *number*

Syntax Description

number Gigabit Ethernet interface number; see the “Usage Guidelines” section for valid values.

Defaults

This command has no default settings.

Command Modes

Privileged EXEC

Command History

Release	Modification
12.0(7)XE	Support for this command was introduced on the Catalyst 6500 series switches.
12.1(1)E	Support for this command on the Catalyst 6500 series switches was extended to the 12.1 E release.

Usage Guidelines

The *number* argument designates the module and port number. Valid values for *number* depend on the specified interface type and the chassis and module used. For example, if you specify a Gigabit Ethernet interface and have a 48-port 10/100BASE-T Ethernet module installed in a 13-slot chassis, valid values for the module number are from 2 to 13 and valid values for the port number are from 1 to 48.

Examples

This example shows how to clear the hardware logic on a Gigabit Ethernet IEEE 802.3z interface:

```
Router# clear interface gigabitethernet 5
Router#
```

Related Commands

[show interfaces status](#)

clear interface vlan

To clear the hardware logic on a VLAN, use the **clear interface vlan** command.

clear interface vlan *vlan-id*

Syntax Description	<i>vlan-id</i> VLAN ID; valid values are from 1 to 4094.
---------------------------	--

Defaults	This command has no default settings.
-----------------	---------------------------------------

Command Modes	Privileged EXEC
----------------------	-----------------

Command History	Release	Modification
	12.0(7)XE	Support for this command was introduced on the Catalyst 6500 series switches.
	12.1(1)E	Support for this command on the Catalyst 6500 series switches was extended to the 12.1 E release.
	12.1(11b)EX	This command was changed to support extended-range VLANs.

Usage Guidelines	If your system is configured with a Supervisor Engine 1, valid values for <i>vlan-id</i> are from 1 to 1005. If your system is configured with a Supervisor Engine 2, valid values for <i>vlan-id</i> are from 1 to 4094. Extended-range VLANs are not supported on systems configured with a Supervisor Engine 1.
-------------------------	--

Examples	This example shows how to clear the hardware logic on a specific VLAN:
-----------------	--

```
Router# clear interface vlan 5
Router#
```

Related Commands	show interfaces status
-------------------------	--

clear ip access-template

To clear statistical information on the access list, use the **clear ip access-template** command.

clear ip access-template *access-list*

Syntax Description	<i>access-list</i> Access list number; valid values are from 100 to 199 for an IP extended-access list and from 2000 to 2699 for an expanded-range IP extended-access list.						
Defaults	This command has no default settings.						
Command Modes	Privileged EXEC						
Command History	<table border="1"> <thead> <tr> <th style="border-top: 1px solid black; border-bottom: 1px solid black;">Release</th> <th style="border-top: 1px solid black; border-bottom: 1px solid black;">Modification</th> </tr> </thead> <tbody> <tr> <td style="border-bottom: 1px solid black;">12.0(7)XE</td> <td style="border-bottom: 1px solid black;">Support for this command was introduced on the Catalyst 6500 series switches.</td> </tr> <tr> <td style="border-bottom: 1px solid black;">12.1(1)E</td> <td style="border-bottom: 1px solid black;">Support for this command on the Catalyst 6500 series switches was extended to the 12.1 E release.</td> </tr> </tbody> </table>	Release	Modification	12.0(7)XE	Support for this command was introduced on the Catalyst 6500 series switches.	12.1(1)E	Support for this command on the Catalyst 6500 series switches was extended to the 12.1 E release.
Release	Modification						
12.0(7)XE	Support for this command was introduced on the Catalyst 6500 series switches.						
12.1(1)E	Support for this command on the Catalyst 6500 series switches was extended to the 12.1 E release.						
Examples	<p>This example shows how to clear statistical information on the access list:</p> <pre>Router# clear ip access-template 201 Router#</pre>						
Related Commands	show mls netflow						

clear ip auth-proxy watch-list

To delete a single watch-list entry or all watch-list entries, use the **clear ip auth-proxy watch-list** command.

```
clear ip auth-proxy watch-list {ip-addr | *}
```

Syntax Description	<i>ip-addr</i>	Specifies the IP address to be deleted from the watch list.
	*	Removes all watch-list entries from the watch list.

Defaults This command has no default settings.

Command Modes Privileged EXEC

Command History	Release	Modification
	12.1(13)E	Support for this command was introduced on the Catalyst 6500 series switches.

Usage Guidelines If there are entries in the watch list that you suspect are not valid, you can enter the **clear ip auth-proxy watch-list** command to clear them manually instead of waiting for the watch list **expiry-time** to expire.

Examples This example shows how to delete a single watch-list entry:

```
Router# clear ip auth-proxy watch-list 12.0.0.2
Router#
```

This example shows how to delete all watch-list entries:

```
Router# clear ip auth-proxy watch-list *
Router#
```

Related Commands

- [ip auth-proxy max-login-attempts](#)
- [ip auth-proxy watch-list](#)
- [show ip auth-proxy watch-list](#)

clear ip cef epoch full

To begin a new epoch and increment the epoch number for all tables (including the adjacency table), use the **clear ip cef epoch full** command.

clear ip cef epoch full

Syntax Description This command has no arguments or keywords.

Defaults This command has no default settings.

Command Modes Privileged EXEC

Command History	Release	Modification
	12.1(8a)EX	Support for this command was introduced on the Catalyst 6500 series switches.

Usage Guidelines Use the **clear ip cef epoch full** command when you want to rebuild a table. This command allows old and new table entries to be distinguished within the same data structure and allows you to retain the old CEF database table while constructing the new table.

These **show** commands display epoch information:

- **show ip cef summary**—Displays the table epoch for a specific FIB table.
- **show ip cef detail**—Displays the epoch value for each entry of a specific FIB table.
- **show adjacency summary**—Displays the adjacency table epoch.
- **show adjacency detail**—Displays the epoch value for each entry of the adjacency table.

Examples This example shows the output before and after you clear the epoch table and increment the epoch number:

```
Router# show ip cef epoch
CEF epoch information:

Table:Default-table
  Table epoch:2 (164 entries at this epoch)

Adjacency table
  Table epoch:1 (33 entries at this epoch)
```

clear ip cef epoch full

```
Router# clear ip cef epoch full
Router# show ip cef epoch
CEF epoch information:

Table:Default-table
  Table epoch:3 (164 entries at this epoch)

Adjacency table
  Table epoch:2 (33 entries at this epoch)
Router#
```

Related Commands

show adjacency detail (refer to the *Cisco IOS Release 12.1 Command Reference*)
show adjacency summary (refer to the *Cisco IOS Release 12.1 Command Reference*)
show ip cef detail (refer to the *Cisco IOS Release 12.1 Command Reference*)
show ip cef epoch
show ip cef summary (refer to the *Cisco IOS Release 12.1 Command Reference*)

clear ip cef inconsistency

To clear the CEF inconsistency checker statistics and records, use the **clear ip cef inconsistency** command.

clear ip cef inconsistency

Syntax Description This command has no arguments or keywords.

Defaults This command has no default settings.

Command Modes Privileged EXEC

Command History	Release	Modification
	12.1(8a)EX	Support for this command was introduced on the Catalyst 6500 series switches.

Usage Guidelines This command clears the CEF inconsistency checker statistics and records that accumulate when the **ip cef table consistency-check** command is enabled.

Examples This example shows how to clear all CEF inconsistency checker statistics and records:

```
Router# clear ip cef inconsistency
Router#
```

Related Commands [ip cef table consistency-check](#)
[show ip cef inconsistency](#)

clear ip flow stats

To clear the NetFlow switching statistics, use the **clear ip flow stats** command.

clear ip flow stats

Syntax Description This command has no arguments or keywords.

Defaults This command has no default settings.

Command Modes Privileged EXEC

Command History	Release	Modification
	12.0(7)XE	Support for this command was introduced on the Catalyst 6500 series switches.
	12.1(1)E	Support for this command on the Catalyst 6500 series switches was extended to the 12.1 E release.

Usage Guidelines The **show ip cache flow** command displays the NetFlow switching statistics.

Examples This example shows how to clear the NetFlow switching statistics:

```
Router# clear ip flow stats
Router#
```

Related Commands **show ip cache flow**

clear ip igmp group

To delete IGMP group cache entries, use the **clear ip igmp group** command.

```
clear ip igmp group [{interface interface-number} | {host-name | group-address}] {loopback
interface-number} | {null interface-number} | {port-channel number} | {vlan vlan-id}
```

Syntax Description		
<i>interface</i>	(Optional) Interface type; possible valid values are ethernet , fastethernet , gigabitethernet , tengigabitethernet , pos , ge-wan , and atm .	
<i>interface-number</i>	(Optional) Module and port number; see the “Usage Guidelines” section for valid values.	
<i>host-name</i>	(Optional) Host name, as defined in the DNS hosts table or with the ip host command.	
<i>group-address</i>	(Optional) Address of the multicast group in four-part, dotted notation.	
loopback <i>interface-number</i>	(Optional) Loopback interface; valid values are from 0 to 2147483647.	
null <i>interface-number</i>	(Optional) Null interface; the valid value is 0 .	
port-channel <i>number</i>	(Optional) Channel interface; see the “Usage Guidelines” section for valid values.	
vlan <i>vlan-id</i>	(Optional) VLAN ID; see the “Usage Guidelines” section for valid values.	

Defaults

This command has no default settings.

Command Modes

Privileged EXEC

Command History

Release	Modification
12.0(7)XE	Support for this command was introduced on the Catalyst 6500 series switches.
12.1(1)E	Support for this command on the Catalyst 6500 series switches was extended to the 12.1 E release.
12.1(3a)E3	The number of valid values for port-channel <i>number</i> was changed; see the “Usage Guidelines” section for valid values.
12.1(5c)EX	Added group types.
12.1(11b)E	This command was changed to include the pos , atm , and ge-wan keywords.
12.1(11b)EX	This command was changed to support extended-range VLANs.

Usage Guidelines

The number of valid values for **port-channel number** depends on the software release. For releases prior to Release 12.1(3a)E3, valid values are from 1 to 256; for Releases 12.1(3a)E3, 12.1(3a)E4, and 12.1(4)E1, valid values are from 1 to 64. Release 12.1(5c)EX and later support a maximum of 64 values ranging from 1 to 256. Release 12.1(13)E and later support a maximum of 64 values ranging from 1 to 282; values 257 to 282 are supported on the CSM and FWSM only.

The *interface-number* argument designates the module and port number. Valid values for *interface-number* depend on the specified interface type and the chassis and module used. For example, if you specify a Gigabit Ethernet interface and have a 48-port 10/100BASE-T Ethernet module installed in a 13-slot chassis, valid values for the module number are from 2 to 13 and valid values for the port number are from 1 to 48.

If your system is configured with a Supervisor Engine 1, valid values for *vlan-id* are from 1 to 1005. If your system is configured with a Supervisor Engine 2, valid values for *vlan-id* are from 1 to 4094. Extended-range VLANs are not supported on systems configured with a Supervisor Engine 1.

The IGMP cache contains a list of hosts on the directly connected LAN.

To delete all entries from the IGMP cache, specify the **clear ip igmp group** command with no arguments.

Examples

This example shows how to clear entries for a specific group from the IGMP cache:

```
Router# clear ip igmp group 224.0.255.1
Router#
```

This example shows how to clear IGMP group cache entries from a specific interface:

```
Router# clear ip igmp group gigabitethernet 2/2
Router#
```

Related Commands

ip host (refer to the *Cisco IOS Release 12.1 Command Reference*)

show ip igmp groups (refer to the *Cisco IOS Release 12.1 Command Reference*)

show ip igmp interface

clear lacp counters

To clear the statistics for all interfaces belonging to a specific channel group, use the **clear lacp counters** command.

clear lacp [*channel-group*] **counters**

Syntax Description	<i>channel-group</i> (Optional) Channel group number; valid values are from 1 to 256.
---------------------------	---

Defaults	This command has no default settings.
-----------------	---------------------------------------

Command Modes	Privileged EXEC
----------------------	-----------------

Command History	Release	Modification
	12.1(11b)EX	Support for this command was introduced on the Catalyst 6500 series switches.
	12.1(13)E	Support for this command on the Catalyst 6500 series switches was extended to the 12.1 E release. This command was changed to support a maximum of 64 values ranging from 1 to 282; values 257 to 282 are supported on the CSM and FWSM only.

Usage Guidelines	<p>This command is not supported on systems configured with a Supervisor Engine 1.</p> <p>If you do not specify a <i>channel-group</i>, all channel groups are cleared.</p> <p>If you enter this command for a channel group that contains members in PAgP mode, the command is ignored.</p>
-------------------------	--

Examples	This example shows how to clear the statistics for a specific group:
-----------------	--

```
Router# clear lacp 1 counters
Router#
```

Related Commands	show lacp
-------------------------	---------------------------

clear mac-address-table dynamic

To clear dynamic address entries from the Layer 2 MAC address table, use the **clear mac-address-table dynamic** command.

```
clear mac-address-table dynamic [{address mac-addr} | {interface interface interface-number}
| {protocol {assigned | ip | ipx | other}}] [vlan vlan-id]
```

Syntax Description	
address <i>mac-addr</i>	(Optional) MAC address.
interface <i>interface</i>	(Optional) Interface type; possible valid values are ethernet , fastethernet , gigabitethernet , tengigabitethernet , pos , ge-wan , and atm .
<i>interface-number</i>	(Optional) Module and port number; see the “Usage Guidelines” section for valid values.
protocol assigned	(Optional) Assigned protocol bucket accounts for such protocols as DECnet, Banyan VINES, and AppleTalk.
protocol ip ipx	(Optional) Protocol type of the entries to clear.
protocol other	(Optional) Protocol types (other than IP or IPX) of the entries to clear.
vlan <i>vlan-id</i>	(Optional) VLAN ID; see the “Usage Guidelines” section for valid values.

Defaults This command has no default settings.

Command Modes Privileged EXEC

Command History	Release	Modification
	12.0(7)XE	Support for this command was introduced on the Catalyst 6500 series switches.
	12.1(1)E	Support for this command on the Catalyst 6500 series switches was extended to the 12.1 E release.
	12.1(5c)EX	This command was changed to remove the all keyword and include these restrictions for protocol filtering: <ul style="list-style-type: none"> • Layer 3 protocol filtering is supported with Supervisor Engine 1. • Layer 3 protocol filtering is not supported with Supervisor Engine 2.
	12.1(11b)E	This command was changed to include the pos , atm , and ge-wan keywords.
	12.1(11b)EX	This command was changed to support extended-range VLANs.

Usage Guidelines

The **protocol** { **assigned** | **ip** | **ipx** | **other** } keywords are supported on systems configured with a Supervisor Engine 1 but not on systems configured with a Supervisor Engine 2.

Enter the **clear mac-address-table dynamic** command with no arguments to remove all dynamic entries from the table.

The *interface-number* argument designates the module and port number. Valid values for *interface-number* depend on the specified interface type and the chassis and module used. For example, if you specify a Gigabit Ethernet interface and have a 48-port 10/100BASE-T Ethernet module installed in a 13-slot chassis, valid values for the module number are from 2 to 13 and valid values for the port number are from 1 to 48.

If your system is configured with a Supervisor Engine 1, valid values for *vlan-id* are from 1 to 1005. If your system is configured with a Supervisor Engine 2, valid values for *vlan-id* are from 1 to 4094. Extended-range VLANs are not supported on systems configured with a Supervisor Engine 1.

Examples

This example shows how to clear all dynamic Layer 2 entries for a specific interface (e2/1) and protocol type (IPX):

```
Router# clear mac-address-table dynamic interface e2/1 protocol ipx
Router#
```

Related Commands

[mac-address-table aging-time](#)
[mac-address-table static](#)
[show mac-address-table](#)

clear mls

To clear IP and IPX shortcut entries, use the **clear mls** command.

```
clear mls ip [[module mod] [destination ip-addr-spec] [source ip-addr-spec] [flow {tcp | udp}
  {src-port | any} {dst-port | any}] [macs mac-addr] [macd mac-addr] [interface
  interface-num]] | [all]
```

```
clear mls ipx [[module mod] [destination ipx-network [ipx-node]] [source ipx-network]
  [macs mac-addr] [macd mac-addr] [interface interface-num] | [all]
```

Syntax Description

ip	Clears IP MLS entries.
ipx	Clears IPX MLS entries.
module <i>mod</i>	(Optional) Clears ATM addresses on this slot.
destination <i>ip-addr-spec</i>	(Optional) Destination full IP address or a subnet address. See the “Usage Guidelines” section for formatting guidelines.
source <i>ip-addr-spec</i>	(Optional) Source full IP address or a subnet address. See the “Usage Guidelines” section for formatting guidelines.
flow tcp	(Optional) Clears TCP flow information.
flow udp	(Optional) Clears UDP flow information.
<i>src-port</i>	Source port purge filter type; valid values are FTP , WWW , SMTP , X , or DNS .
<i>dst-port</i>	Destination port purge filter type; valid values are FTP , WWW , SMTP , X , or DNS .
any	Any filter type.
macs <i>mac-addr</i>	(Optional) Source MAC addresses to consider when searching for entries to purge.
macd <i>mac-addr</i>	(Optional) Destination MAC addresses to consider when searching for entries to purge.
interface <i>interface-num</i>	(Optional) Clears entries associated with the specified VLAN or interface.
all	(Optional) Clears all entries.
destination <i>ipx-network</i>	(Optional) Destination IPX address. See the “Usage Guidelines” section for formatting guidelines.
<i>ipx-node</i>	(Optional) IPX node address. See the “Usage Guidelines” section for formatting guidelines.
source <i>ipx-network</i>	(Optional) Source IPX address. See the “Usage Guidelines” section for formatting guidelines.

Defaults

This command has no default settings.

Command Modes

A. Privileged EXEC

Command History	Release	Modification
	12.0(7)XE	Support for this command was introduced on the Catalyst 6500 series switches.
	12.1(1)E	Support for this command on the Catalyst 6500 series switches was extended to the 12.1 E release.

Usage Guidelines

The **module mod** option is supported only on systems configured with a Supervisor Engine 2.

Entering any combination of input parameters narrows down the search of entries to be cleared. A 0 value for *src-port* and *dst-port* clears all entries. Unspecified options are treated as wildcards, and all entries are cleared. The *src-port* and *dst-port* values should be specified as one of the following: telnet, FTP, WWW, SMTP, X, or DNS.

When entering the IPX address syntax, use the following format:

- IPX network address—1..FFFFFFE
- IPX node address—x.x.x where x is 0..FFFF
- IPX address—ipx_net.ipx_node (for example 3.0034.1245.AB45, A43.0000.0000.0001)

Up to 16 routers can be included explicitly as MLS-RPs.

To use a router as an MLS, you must meet these conditions:

- The router must be included (either explicitly or automatically) in the MLS-SE.
- The MLS feature must be enabled in the Catalyst 6500 series switches.
- The Catalyst 6500 series switches must know the router's MAC-VLAN pairs.

Use the following syntax to specify an IP subnet address:

- *ip-subnet-addr*—Short subnet address format. The trailing decimal number 00 in an IP address YY.YY.YY.00 specifies the boundary for an IP subnet address. For example, 172.22.36.00 indicates a 24-bit subnet address (subnet mask 172.22.36.00/255.255.255.0), and 173.24.00.00 indicates a 16-bit subnet address (subnet mask 173.24.00.00/255.255.0.0). However, this format can identify only a subnet address of 8, 16, or 24 bits.
- *ip-addr/subnet-mask*—Long subnet address format. For example, 172.22.252.00/255.255.252.00 indicates a 22-bit subnet address. This format can specify a subnet address of any bit number. To provide more flexibility, the *ip-addr* is a full host address, such as 172.22.253.1/255.255.252.00.
- *ip-addr/maskbits*—Simplified long subnet address format. The mask bits specify the number of bits of the network masks. For example, 172.22.252.00/22 indicates a 22-bit subnet address. The *ip-addr* is a full host address, such as 193.22.253.1/22, which has the same subnet address as the *ip-subnet-addr*.

If you do not use the **all** keyword, you must specify at least one of the other four keywords (**source**, **destination**, **flow**, or **interface**) and its arguments.

Examples

This example shows how to clear all entries associated with a specific interface (e2/2) that have a specific destination IP address (173.11.50.89):

```
Router# clear mls ip destination 173.11.50.89 interface e2/2
Router#
```

Related Commands

[show mls ip multicast](#)

clear mls exclude protocol

To remove an MLSE entry, use the **clear mls exclude protocol** command.

```
clear mls exclude protocol { tcp | udp | all } [port port-number]
```

Syntax Description		
	tcp	TCP port.
	udp	UDP port.
	all	Port that is applied to both TCP and UDP traffic.
	port <i>port-number</i>	(Optional) Port number.

Defaults This command has no default settings.

Command Modes Privileged EXEC

Command History	Release	Modification
	12.0(7)XE	Support for this command was introduced on the Catalyst 6500 series switches.
	12.1(1)E	Support for this command on the Catalyst 6500 series switches was extended to the 12.1 E release.

Examples This example shows how to set TCP packets in a protocol port to be switched through hardware connections:

```
Router# clear mls exclude protocol tcp 25
Router#
```

Related Commands [show mls ip multicast](#)

clear mls ip multicast statistics

To reset the IP multicast statistics counters, use the **clear mls ip multicast statistics** command.

clear mls ip multicast statistics

Syntax Description This command has no keywords or arguments.

Defaults This command has no default settings.

Command Modes Privileged EXEC

Command History	Release	Modification
	12.0(7)XE	Support for this command was introduced on the Catalyst 6500 series switches.
	12.1(1)E	Support for this command on the Catalyst 6500 series switches was extended to the 12.1 E release.

Examples This example shows how to reset the IP multicast statistics counters:

```
Router# clear mls ip multicast statistics
Router#
```

Related Commands [show mls ip multicast](#)

clear mls nde counters

To clear NDE counters, use the **clear mls nde counters** command.

clear mls nde counters

Syntax Description This command has no keywords or arguments.

Defaults This command has no default settings.

Command Modes Privileged EXEC

Command History	Release	Modification
	12.0(7)XE	Support for this command was introduced on the Catalyst 6500 series switches.
	12.1(1)E	Support for this command on the Catalyst 6500 series switches was extended to the 12.1 E release.

Examples This example shows how to reset the NDE statistics counters:

```
Router# clear mls nde counters
Router#
```

Related Commands [show mls nde](#)

clear mls nde flow

To clear the NDE filter, use the **clear mls nde flow** command.

clear mls nde flow { **exclude** | **include** | **all** }

Syntax Description		
	exclude	Clears the exclusion filter.
	include	Clears the inclusion filter.
	all	Clears both the exclusion and inclusion filters.

Defaults This command has no default settings.

Command Modes Privileged EXEC

Command History	Release	Modification
	12.1(13)E	Support for this command was introduced on the Catalyst 6500 series switches.

Usage Guidelines If you clear both the exclusion and inclusion filters, all flows are exported.

Examples This example shows how to clear the NDE exclude filter:

```
Router# clear mls nde flow exclude
Router#
```

This example shows how to clear the NDE include filter:

```
Router# clear mls nde flow include
Router#
```

This example shows how to clear both NDE filters:

```
Router# clear mls nde flow all
Router#
```

Related Commands [show mls netflow](#)

clear mls qos

To clear both statistics and token counts in high-rate and low-rate policer buckets, use the **clear mls qos** command.

```
clear mls qos [{ip | ipx | mac}] [{interface interface-number} | {null interface-number} |
{port-channel number} | {vlan vlan-id}]]
```

Syntax Description		
ip	(Optional)	Clears IP MLS QoS counters.
ipx	(Optional)	Clears IPX MLS QoS counters.
mac	(Optional)	Clears MAC address-based MLS QoS counters.
<i>interface</i>	(Optional)	Interface type; possible valid values are ethernet , fastethernet , gigabitethernet , tengigabitethernet , pos , ge-wan , and atm .
<i>interface-number</i>	(Optional)	Module and port number; see the “Usage Guidelines” section for valid values.
null <i>interface-number</i>	(Optional)	Keyword and argument to specify the null interface; the valid value is 0 .
port-channel <i>number</i>	(Optional)	Channel interface; see the “Usage Guidelines” section for valid values.
vlan <i>vlan-id</i>	(Optional)	VLAN ID; see the “Usage Guidelines” section for valid values.

Defaults

This command has no default settings.

Command Modes

Privileged EXEC

Command History

Release	Modification
12.0(7)XE	Support for this command was introduced on the Catalyst 6500 series switches.
12.1(1)E	Support for this command on the Catalyst 6500 series switches was extended to the 12.1 E release.
12.1(3a)E3	The number of valid values for port-channel changed; see the “Usage Guidelines” section for valid values.
12.1(11b)E	This command was changed to include the pos , atm , and ge-wan keywords.
12.1(11b)EX	This command was changed to support extended-range VLANs.

Usage Guidelines
**Note**

Entering the **clear mls qos** command affects the policing token bucket counters and might briefly allow traffic to be forwarded that would otherwise be policed.

The number of valid values for **port-channel number** depends on the software release. For releases prior to Release 12.1(3a)E3, valid values are from 1 to 256; for Releases 12.1(3a)E3, 12.1(3a)E4, and 12.1(4)E1, valid values are from 1 to 64. Release 12.1(5c)EX and later support a maximum of 64 values ranging from 1 to 256. Release 12.1(13)E and later support a maximum of 64 values ranging from 1 to 282; values 257 to 282 are supported on the CSM and FWSM only.

The *interface-number* argument designates the module and port number. Valid values for *interface-number* depend on the specified interface type and the chassis and module used. For example, if you specify a Gigabit Ethernet interface and have a 48-port 10/100BASE-T Ethernet module installed in a 13-slot chassis, valid values for the module number are from 2 to 13 and valid values for the port number are from 1 to 48.

If your system is configured with a Supervisor Engine 1, valid values for *vlan-id* are from 1 to 1005. If your system is configured with a Supervisor Engine 2, valid values for *vlan-id* are from 1 to 4094. Extended-range VLANs are not supported on systems configured with a Supervisor Engine 1.

If you enter the **clear mls qos** command with no arguments, global and per-interface aggregate QoS counters for all protocols are cleared.

If you do not enter an interface type, protocol aggregate QoS counters for all interfaces are cleared.

Examples

This example shows how to clear global and per-interface aggregate QoS counters for all protocols:

```
Router# clear mls qos
Router#
```

This example shows how to clear specific protocol aggregate QoS counters for all interfaces:

```
Router# clear mls qos ip
Router#
```

Related Commands

[show mls qos](#)

clear pagp

To clear port-channel information, use the **clear pagp** command.

```
clear pagp {group-number | counters}
```

Syntax Description	
<i>group-number</i>	Channel group number; see the “Usage Guidelines” section for valid values.
counters	Clears traffic filters.

Defaults This command has no default settings.

Command Modes Privileged EXEC

Command History	Release	Modification
	12.0(7)XE	Support for this command was introduced on the Catalyst 6500 series switches.
	12.1(1)E	Support for this command on the Catalyst 6500 series switches was extended to the 12.1 E release.
	12.1(3a)E3	The number of valid values for <i>group-number</i> was changed; see the “Usage Guidelines” section for valid values.

Usage Guidelines The number of valid values for *group-number* depends on the software release. For releases prior to Release 12.1(3a)E3, valid values are from 1 to 256; for Releases 12.1(3a)E3, 12.1(3a)E4, and 12.1(4)E1, valid values are from 1 to 64. Release 12.1(5c)EX and later support a maximum of 64 values ranging from 1 to 256. Release 12.1(13)E and later support a maximum of 64 values ranging from 1 to 282; values 257 to 282 are supported on the CSM and FWSM only.

Examples This example shows how to clear port-channel information for a specific group:

```
Router# clear pagp 324
Router#
```

This example shows how to clear port-channel traffic filters:

```
Router# clear pagp counters
Router#
```

Related Commands [show pagp](#)

clear spanning-tree detected-protocol

To restart protocol migration, use the **clear spanning-tree detected-protocol** command.

clear spanning-tree detected-protocol [**interface** *interface interface-number*]

Syntax Description	interface <i>interface</i> (Optional) Interface type and number; possible valid values for type are ethernet , fastethernet , gigabitethernet , tengigabitethernet , pos , atm , ge-wan , port-channel , and vlan .
	<i>interface-number</i> Module and port number; see the “Usage Guidelines” section for valid values for port-channel and vlan .

Defaults	This command has no default settings.
-----------------	---------------------------------------

Command Modes	EXEC mode
----------------------	-----------

Command History	Release	Modification
	12.1(11b)EX	Support for this command was introduced on the Catalyst 6500 series switches.
	12.1(13)E	Support for this command on the Catalyst 6500 series switches was extended to the 12.1 E release.

Usage Guidelines

RSTP and MST have built-in compatibility mechanisms that allow them to interact properly with other versions of IEEE spanning tree or other regions. For example, a bridge running RSTP can send 802.1D BPDUs on one of its ports when it is connected to a legacy bridge. An MST bridge can detect that a port is at the boundary of a region when it receives a legacy BPDU or an MST BPDU associated with a different region. These mechanisms are not always able to revert to the most efficient mode. For example, an RSTP bridge designated for a legacy 802.1D stays in 802.1D mode even after the legacy bridge has been removed from the link. Similarly, an MST port assumes that it is a boundary port when the bridges to which it is connected have joined the same region. To force the MST port to renegotiate with the neighbors, enter the **clear spanning-tree detected-protocol** command.

The valid values for *interface-number* depend on the specified interface type and the chassis and module used. For example, if you specify a Gigabit Ethernet interface and have a 48-port 10/100BASE-T Ethernet module installed in a 13-slot chassis, valid values for the module number are from 2 to 13 and valid values for the port number are 1 to 48.

The number of valid values for **port-channel number** depends on the software release. For releases prior to Release 12.1(3a)E3, valid values are from 1 to 256; for Releases 12.1(3a)E3, 12.1(3a)E4, and 12.1(4)E1, valid values are from 1 to 64. Release 12.1(5c)EX and later support a maximum of 64 values ranging from 1 to 256. Release 12.1(13)E and later support a maximum of 64 values ranging from 1 to 282; values 257 to 282 are supported on the CSM and FWSM only.

If your system is configured with a Supervisor Engine 1, valid values for **vlan** are from 1 to 1005. If your system is configured with a Supervisor Engine 2, valid values for **vlan** are from 1 to 4094. Extended-range VLANs are not supported on systems configured with a Supervisor Engine 1.

If you specify an interface, the command is applied to this interface only. If you enter the **clear spanning-tree detected-protocol** command with no arguments, the command is applied to every port of the Catalyst 6500 series switch.

Examples

The example shows how to restart protocol migration on a specific interface:

```
Router# clear spanning-tree detected-protocol fa1/1
Router#
```

Related Commands

[show spanning-tree mst](#)

clear vlan counters

To clear the software-cached counter values to start from zero again for a specified VLAN or all existing VLANs, use the **clear vlan counters** command.

clear vlan [*vlan-id*] **counters**

Syntax Description	<i>vlan-id</i> (Optional) VLAN number; see the “Usage Guidelines” section for valid values.
---------------------------	---

Defaults This command has no default settings.

Command Modes Privileged EXEC

Command History	Release	Modification
	12.1(11b)EX	Support for this command was introduced on the Catalyst 6500 series switches.
	12.1(13)E	Support for this command on the Catalyst 6500 series switches was extended to the 12.1 E release.

Usage Guidelines If you do not specify a *vlan-id*, the software-cached counter values for all existing VLANs are cleared. If your system is configured with a Supervisor Engine 1, valid values for *vlan-id* are from 1 to 1005. If your system is configured with a Supervisor Engine 2, valid values for *vlan-id* are from 1 to 4094. Extended-range VLANs are not supported on systems configured with a Supervisor Engine 1.

Examples This example shows how to clear the software-cached counter values for a specific VLAN:

```
Router# clear vlan 10 counters
Clear "show vlan" counters on this vlan [confirm]y
Router#
```

Related Commands [show vlan counters](#)

copy /noverify

To disable the automatic image verification for the current copy operation, use the **copy /noverify** command.

copy /noverify *source-url destination-url*

Syntax Description

<i>source-url</i>	Location URL or alias of the source file or directory to be copied; see the “Usage Guidelines” section for additional information.
<i>destination-url</i>	Destination URL or alias of the copied file or directory; see the “Usage Guidelines” section for additional information.

Defaults

Verification is done automatically after completion of a copy operation.

Command Modes

EXEC

Command History

Release	Modification
12.1(19)E	Support for this command was introduced on the Catalyst 6500 series switches.

Usage Guidelines

The exact format of the source and destination URLs varies according to the file or directory location. You may enter either an alias keyword for a particular file or an alias keyword for a file system type (not a file within a type).



Timesaver

Aliases are used to cut down on the amount of typing you need to perform. For example, it is easier to type **copy run start** (the abbreviated form of the **copy running-config startup-config** command) than it is to type **copy system:r nvram:s** (the abbreviated form of the **copy system:running-config nvram:startup-config** command). These aliases also allow you to continue using some of the common commands used in previous versions of Cisco IOS software.

[Table 2-2](#) shows two keyword shortcuts to URLs.

Table 2-2 Common Keyword Aliases to URLs

Keyword	Source or Destination
running-config	(Optional) Specifies the alias for the system:running-config URL. This keyword does not work in the more and show file command syntaxes.
startup-config	(Optional) Specifies the alias for the nvram:startup-config URL. The nvram:startup-config keyword represents the configuration file that is used during initialization (startup). This file is contained in NVRAM. This keyword does not work in more and show file EXEC command syntaxes.

Table 2-3 through Table 2-5 list aliases by file system type. If you do not specify an alias, the system looks for a file in the current directory.

Table 2-3 lists the URL prefix aliases for special (opaque) file systems, Table 2-4 lists the URL prefix aliases for network file systems, and Table 2-5 lists the URL prefix aliases for local writable storage file systems.

Table 2-3 URL Prefix Aliases for Special File Systems

Alias	Source or Destination
flh:	Source URL for flash load helper log files.
nvr:	Router NVRAM. You can copy the startup configuration into or from NVRAM. You can also display the size of a private configuration file.
null:	Null destination for copies or files. You can copy a remote file to null to determine its size.
system:	Source or destination URL for system memory, which includes the running configuration.
xmodem:	Source destination for the file from a network device that uses the Xmodem protocol.
ymodem:	Source destination for the file from a network device that uses the Xmodem protocol.

Table 2-4 URL Prefix Aliases for Network File Systems

Alias	Source or Destination
ftp:	Source or destination URL for an FTP network server. The syntax for this alias is as follows: ftp:[[/username [:password]@]location]/directory]/filename.
rcp:	Source or destination URL for an rcp network server. The syntax for this alias is as follows: rcp:[[/username@]location]/directory]/filename.
tftp:	Source or destination URL for a TFTP network server. The syntax for this alias is tftp:[/location]/directory]/filename.

Table 2-5 URL Prefix Aliases for Local Writable Storage File Systems

Alias	Source or Destination
bootflash:	Source or destination URL for boot flash memory.
flash:	Source or destination URL for Flash memory. This alias is available on all platforms. For platforms that lack a Flash: device, note that flash: is aliased to slot0: , allowing you to refer to the main Flash memory storage area on all platforms.
slavebootflash:	Source or destination URL for internal Flash memory on the slave RSP card of a device configured for HSA.
slaveram:	NVRAM on a slave RSP card of a device configured for HSA.

Table 2-5 URL Prefix Aliases for Local Writable Storage File Systems (continued)

Alias	Source or Destination
slavedisk0:	Source or destination URL of the first PCMCIA card on a slave RSP card of a device configured for HSA.
slavedisk1:	Source or destination URL of the second PCMCIA slot on a slave RSP card of a device configured for HSA.
slaveslot0:	Source or destination URL of the first PCMCIA card on a slave RSP card of a router configured for HSA.
slaveslot1:	Source or destination URL of the second PCMCIA slot on a slave RSP card of a router configured for HSA.
slot0:	Source or destination URL of the first PCMCIA Flash memory card.
slot1:	Source or destination URL of the second PCMCIA Flash memory card.

You can enter on the command line all necessary source- and destination-URL information and the username and password to use, or you can enter the **copy** command and have the switch prompt you for any missing information.

If you enter information, choose one of the following three options: **running-config**, **startup-config**, or a file system alias (see previous tables). The location of a file system dictates the format of the source or destination URL.

The colon is required after the alias. However, earlier commands not requiring a colon remain supported, but are unavailable in context-sensitive help.

The entire copying process may take several minutes and differs from protocol to protocol and from network to network.

In the alias syntax for **ftp:**, **rcp:**, and **tftp:**, the location is either an IP address or a host name. The filename is specified for the directory that is used for file transfers.

Enter the **file verify auto** command to set up verification globally.

Examples

This example shows how to disable the automatic image verification for the current copy operation:

```
Router# copy /noverify tftp: sup-bootflash:
.....
[OK - 24301348 bytes]
24301348 bytes copied in 157.328 secs (154463 bytes/sec)
Router#
```

Related Commands

file verify auto
verify

debug adjacency

To display information on the adjacency database, use the **debug adjacency** command. Use the **no** form of this command to disable debugging output.

debug adjacency [ipc]

no debug adjacency

Syntax Description	ipc (Optional) Displays IPC entries in the adjacency database.						
Defaults	This command has no default settings.						
Command Modes	Privileged EXEC						
Command History	<table border="1"> <thead> <tr> <th style="border-top: 1px solid black; border-bottom: 1px solid black;">Release</th> <th style="border-top: 1px solid black; border-bottom: 1px solid black;">Modification</th> </tr> </thead> <tbody> <tr> <td style="border-bottom: 1px solid black;">12.0(7)XE</td> <td style="border-bottom: 1px solid black;">Support for this command was introduced on the Catalyst 6500 series switches.</td> </tr> <tr> <td style="border-bottom: 1px solid black;">12.1(1)E</td> <td style="border-bottom: 1px solid black;">Support for this command on the Catalyst 6500 series switches was extended to the 12.1 E release.</td> </tr> </tbody> </table>	Release	Modification	12.0(7)XE	Support for this command was introduced on the Catalyst 6500 series switches.	12.1(1)E	Support for this command on the Catalyst 6500 series switches was extended to the 12.1 E release.
Release	Modification						
12.0(7)XE	Support for this command was introduced on the Catalyst 6500 series switches.						
12.1(1)E	Support for this command on the Catalyst 6500 series switches was extended to the 12.1 E release.						

Examples

This example shows how to display information on the adjacency database:

```
Router# debug adjacency
4d02h: ADJ: add 172.20.52.36 (GigabitEthernet1/1) via ARP will expire: 04:00:00
4d02h: ADJ: add 172.20.52.36 (GigabitEthernet1/1) via ARP will expire: 04:00:00
4d02h: ADJ: add 172.20.52.36 (GigabitEthernet1/1) via ARP will expire: 04:00:00
4d02h: ADJ: add 172.20.52.36 (GigabitEthernet1/1) via ARP will expire: 04:00:00
4d02h: ADJ: add 172.20.52.36 (GigabitEthernet1/1) via ARP will expire: 04:00:00
4d02h: ADJ: add 172.20.52.36 (GigabitEthernet1/1) via ARP will expire: 04:00:00
4d02h: ADJ: add 172.20.52.36 (GigabitEthernet1/1) via ARP will expire: 04:00:00
4d02h: ADJ: add 172.20.52.36 (GigabitEthernet1/1) via ARP will expire: 04:00:00
<... output truncated ...>
Router#
```

Related Commands **undebug adjacency** (same as **no debug adjacency**)

debug backup

To debug backup events, use the **debug backup** command. Use the **no** form of this command to disable debugging output.

debug backup

no debug backup

Syntax Description This command has no arguments or keywords.

Defaults This command has no default settings.

Command Modes Privileged EXEC

Command History	Release	Modification
	12.0(7)XE	Support for this command was introduced on the Catalyst 6500 series switches.
	12.1(1)E	Support for this command on the Catalyst 6500 series switches was extended to the 12.1 E release.

Examples This example shows how to debug backup events:

```
Router# debug backup
Backup events debugging is on
Router#
```

Related Commands **undebug backup** (same as **no debug backup**)

debug callback

To debug PPP telephone callback activity, use the **debug callback** command. Use the **no** form of this command to disable debugging output.

debug callback

no debug callback

Syntax Description This command has no arguments or keywords.

Defaults This command has no default settings.

Command Modes Privileged EXEC

Command History	Release	Modification
	12.0(7)XE	Support for this command was introduced on the Catalyst 6500 series switches.
	12.1(1)E	Support for this command on the Catalyst 6500 series switches was extended to the 12.1 E release.

Examples This example shows how to debug callback activity:

```
Router# debug callback
Callback activity debugging is on
Router#
```

Related Commands **undebug callback** (same as **no debug callback**)