clear cable-diagnostics tdr

To clear a specific interface or clear all interfaces that support time domain reflectometery (TDR), use the **clear cable-diagnostics tdr** command.

clear cable-diagnostics tdr [**interface** *interface interface-number*]

Syntax Description

interface *interface*	(Optional) Specifies the interface type; possible valid values are **fastethernet**, **gigabitethernet**, and **tengigabitethernet**.
interface-number	Module and port number; see the "Usage Guidelines" section for valid values.

Defaults

This command has no default settings.

Command Modes

Privileged EXEC

Command History

Release	Modification
12.2(18)ZY	Support for this command was introduced.

Usage Guidelines

See the *Release Notes for Cisco IOS Release 12.2 SX on the Catalyst 6500* for the list of modules that support TDR.

Examples

This example shows how to clear a specific interface:

```
Router# clear cable-diagnostics tdr interface gigabitethernet 4/1
Router#
```

Related Commands

Command	Description
show cable-diagnostics tdr	Displays the test results for the TDR cable diagnostics.
test cable-diagnostics	Tests the condition of 10-Gigabit Ethernet links or copper cables on 48-port 10/100/1000 BASE-T modules.

clear catalyst6000 traffic-meter

To clear the traffic meter counters, use the **clear catalyst6000 traffic-meter** command.

clear catalyst6000 traffic-meter

Syntax Description

This command has no arguments or keywords.

Defaults

This command has no default settings.

Command Modes

Privileged EXEC

Command History

Release	Modification
12.2(18)ZY	Support for this command was introduced.

Examples

This example shows how to clear the traffic meter counters:

```
Router# clear catalyst6000 traffic-meter
Router#
```

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

interface	(Optional) Interface type; possible valid values are **ethernet**, **fastethernet**, **gigabitethernet**, and **tengigabitethernet**. See the "Usage Guidelines" section for additional valid values.
interface-number	(Optional) Module and port number; see the "Usage Guidelines" section for valid values.
null *interface-number*	(Optional) Specifies the null interface; the valid value is **0**.
port-channel *number*	(Optional) Specifies the channel interface; valid values are a maximum of 64 values ranging from 1 to 256.
vlan *vlan-id*	(Optional) Specifies the VLAN ID; valid values are from 1 to 4094.

Defaults

This command has no default settings.

Command Modes

Privileged EXEC

Command History

Release	Modification
12.2(18)ZY	Support for this command was introduced.

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 that are retrieved using SNMP but only those counters that appear 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 that are used. For example, if you specify a Gigabit Ethernet interface and have a 48-port 10/100BASE-T Ethernet module that is installed in a 13-slot chassis, valid values for the module number are from 1 to 13 and valid values for the port number are from 1 to 48.

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

Command	Description
show queueing interface	Displays queueing information.

clear fm netflow counters

To clear the NetFlow counters, use the **clear fm netflow counters** command.

clear fm netflow counters

Syntax Description

This command has no arguments or keywords.

Defaults

This command has no default settings.

Command Modes

Privileged EXEC

Command History

Release	Modification
12.2(18)ZY	Support for this command was introduced.

Examples

This example shows how to clear the NetFlow counters:

```
Router# clear fm netflow counters
Router#
```

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
12.2(18)ZY	Support for this command was introduced.

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 that are used. For example, if you specify a Gigabit Ethernet interface and have a 48-port 10/100BASE-T Ethernet module that is installed in a 13-slot chassis, valid values for the module number are from 1 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

Command	Description
show interfaces status	Displays the interface status or a list of interfaces in an error-disabled state on LAN ports only.

clear interface vlan

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

clear interface vlan *vlan-id*

Syntax Description

vlan-id	VLAN ID; valid values are from 1 to 4094.

Defaults

This command has no default settings.

Command Modes

Privileged EXEC

Command History

Release	Modification
12.2(18)ZY	Support for this command was introduced.

Examples

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

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

Related Commands

Command	Description
show interfaces status	Displays the interface status or a list of interfaces in an error-disabled state on LAN ports only.

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

access-list	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

Release	Modification
12.2(18)ZY	Support for this command was introduced.

Examples

This example shows how to clear statistical information on the access list:

```
Router# clear ip access-template 201
Router#
```

Related Commands

Command	Description
show mls netflow	Displays configuration information about the NetFlow hardware.

clear ip arp inspection log

To clear the status of the log buffer, use the **clear ip arp inspection log** command.

clear ip arp inspection log

Syntax Description

This command has no arguments or keywords.

Defaults

This command has no default settings.

Command Modes

Privileged EXEC

Command History

Release	Modification
12.2(18)ZY	Support for this command was introduced.

Examples

This example shows how to clear the contents of the log buffer:

```
Router# clear ip arp inspection log
Router#
```

Related Commands

Command	Description
arp access-list	Configures an ARP ACL for ARP inspection and QoS filtering and enters the ARP ACL configuration submode.
show ip arp inspection log	Displays the status of the log buffer.

clear ip arp inspection statistics

To clear the dynamic ARP inspection statistics, use the **clear ip arp inspection statistics** command.

clear ip arp inspection statistics [**vlan** *vlan-range*]

Syntax Description

vlan *vlan-range*	(Optional) Specifies the VLAN range.

Defaults

This command has no default settings.

Command Modes

Privileged EXEC

Command History

Release	Modification
12.2(18)ZY	Support for this command was introduced.

Examples

This example shows how to clear the DAI statistics from VLAN 1:

```
Router# clear ip arp inspection statistics vlan 1
Router#
```

Related Commands

Command	Description
arp access-list	Configures an ARP ACL for ARP inspection and QoS filtering and enters the ARP ACL configuration submode.
clear ip arp inspection log	Clears the status of the log buffer.
show ip arp inspection log	Displays the status of the log buffer.

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

ip-addr	IP address to be deleted from the watch list.
*	All watch-list entries from the watch list.

Defaults

This command has no default settings.

Command Modes

Privileged EXEC.

Command History

Release	Modification
12.2(18)ZY	Support for this command was introduced.

Usage Guidelines

If you see 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 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

Command	Description
ip auth-proxy max-login-attempts	Limits the number of login attempts at a firewall interface and QoS filtering and enters the ARP ACL configuration submode.
ip auth-proxy watch-list	Enables and configures an authentication proxy watch list.
show ip auth-proxy watch-list	Displays the information about the authentication 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
12.2(18)ZY	Support for this command was introduced.

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)
```

```
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

Command	Description
show adjacency detail	Displays the information about the protocol detail and timer.
show adjacency summary	Displays a summary of CEF-adjacency information.
show ip cef detail	Displays detailed FIB entry information.
show ip cef epoch	Displays the epoch information for the adjacency table and all FIB tables.
show ip cef summary	Displays a summary of the FIB.

clear ip cef inconsistency

To clear the statistics and records for the CEF-consistency checker, 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
12.2(18)ZY	Support for this command was introduced.

Usage Guidelines

This command clears the statistics and records that accumulate when you enable the **ip cef table consistency-check** command.

Examples

This example shows how to clear all statistics and records for the CEF-consistency checker:

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

Related Commands

Command	Description
ip cef table consistency-check	Enables the CEF-table consistency-checker types and parameters.

clear ip dhcp snooping

To clear the DHCP-snooping table without disabling DHCP snooping, use the **clear ip dhcp snooping** command.

clear ip dhcp snooping {**binding** | **database** | **statistics**}

Syntax Description

binding	Clears the DHCP-snooping binding-entry table without disabling DHCP snooping.
database	Clears the DHCP-snooping database table without disabling DHCP snooping.
statistics	Clears the DHCP-snooping statistics table without disabling DHCP snooping.

Defaults

This command has no default settings.

Command Modes

Privileged EXEC

Command History

Release	Modification
12.2(18)ZY	Support for this command was introduced.

Examples

This example shows how to clear the DHCP-snooping binding-entry table:

```
Router# clear ip dhcp snooping binding
Router#
```

This example shows how to clear the DHCP-snooping database table:

```
Router# clear ip dhcp snooping database
Router#
```

This example shows how to clear the DHCP-snooping statisics:

```
Router# clear ip dhcp snooping statistics
Router#
```

Related Commands

Command	Description
show ip dhcp snooping	Displays the DHCP snooping configuration.
show ip dhcp snooping binding	Displays the DHCP snooping binding entries.
show ip dhcp snooping database	Displays the status of the DHCP snooping database agent.

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
12.2(18)ZY	Support for this command was introduced.

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

Command	Description
show ip cache flow	Displays a summary of the NetFlow cache-flow entries.

clear ip igmp group

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

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

Syntax Description

vrf *vrf-name*	(Optional) Specifies the name that is assigned to the multicast VPN routing and forwarding (VRF) instance.
interface	(Optional) Interface type; possible valid values are **ethernet**, **fastethernet**, **gigabitethernet**, and **tengigabitethernet**.
interface-number	(Optional) Module and port number; see the "Usage Guidelines" section for valid values.
group-name	(Optional) Group name as defined in the DNS hosts table or with the **ip host** command.
group-address	(Optional) Address of the multicast group in four-part, dotted notation.
loopback *interface-number*	(Optional) Specifies the loopback interface; valid values are from 0 to 2147483647.
null *interface-number*	(Optional) Specifies the null interface; the valid value is **0**.
port-channel *number*	(Optional) Specifies the channel interface; valid values are a maximum of 64 values ranging from 1 to 256.
vlan *vlan-id*	(Optional) Specifies the VLAN ID; valid values are from 1 to 4094.

Defaults

This command has no default settings.

Command Modes

Privileged EXEC

Command History

Release	Modification
12.2(18)ZY	Support for this command was introduced.

Usage Guidelines

The IGMP cache contains a list of hosts on the directly connected LAN. If the switch has joined a group, that group is also listed in the cache.

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

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

Examples

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

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

Related Commands

Command	Description
ip host	Defines a static host name-to-address mapping in the host cache.
show ip igmp groups	Displays the multicast groups with receivers that are directly connected to the router and that were learned through IGMP.
show ip igmp interface	Displays the information about the IGMP-interface status and configuration.

clear ip igmp snooping statistics

To clear the IGMP-snooping statistics, use the **clear ip igmp snooping statistics** command.

clear ip igmp snooping statistics [**vlan** *vlan-id*]

Syntax Description

vlan *vlan-id*	(Optional) Specifies the VLAN ID; valid values are from 1 to 4094.

Defaults

This command has no default settings.

Command Modes

Privileged EXEC

Command History

Release	Modification
12.2(18)ZY	Support for this command was introduced.

Usage Guidelines

If you do not enter a VLAN, the IGMP-snooping statistics for all VLANs is cleared.

Examples

This example shows how to clear the IGMP-snooping statistics for all VLANs:

```
Router# clear ip igmp snooping statistics
Router#
```

This example shows how to clear the IGMP-snooping statistics for a specific VLAN:

```
Router# clear ip igmp snooping statistics vlan 300
Router#
```

Related Commands

Command	Description
show ip igmp snooping statistics	Displays information about IGMPv3 statistics.

clear ip mroute

To delete entries from the IP multicast routing table, use the **clear ip mroute** command.

clear ip mroute [**vrf** *vrf-name*] {***** | *group*} [*source*]

Syntax Description

vrf *vrf-name*	(Optional) Specifies the name that is assigned to the multicast VPN routing and forwarding (VRF) instance.
*	Deletes all entries from the IP multicast routing table.
group	Name or IP address of the multicast group; see the "Usage Guidelines" section for additional information.
source	(Optional) Name or address of a multicast source that is sending to the group; see the "Usage Guidelines" section for additional information.

Defaults

This command has no default settings.

Command Modes

Privileged EXEC

Command History

Release	Modification
12.2(18)ZY	Support for this command was introduced.

Usage Guidelines

The *group* argument specifies one of the following:

- Name of the multicast group as defined in the DNS hosts table or with the **ip host** command.
- IP address of the multicast group in four-part, dotted notation.

If you specify a *group* name or address, you can also enter the *source* argument to specify a name or address of a multicast source that is sending to the group. A source does not need to be a member of the group.

Examples

This example shows how to delete all entries from the IP multicast routing table:

```
Router# clear ip mroute *
Router#
```

This example shows how to delete all sources on the 228.3.0.0 subnet that are sending to the multicast group 224.2.205.42 from the IP multicast routing table. This example shows how to delete all sources on network 228.3, not individual sources:

```
Router# clear ip mroute 224.2.205.42 228.3.0.0
Router#
```

Related Commands

Command	Description
ip host	Defines a static host name-to-address mapping in the host cache.
show ip mroute	Displays the information about the IP-multicast routing table.

clear ip msdp peer

To clear the TCP connection to the specified MSDP peer, use the **clear ip msdp peer** command.

clear ip msdp [**vrf** *vrf-name*] **peer** {*peer-address* | *peer-name*}

Syntax Description

vrf *vrf-name*	(Optional) Specifies the name that is assigned to the multicast VPN routing and forwarding (VRF) instance.
peer-address | *peer-name*	IP address or name of the MSDP peer to which the TCP connection is cleared.

Defaults

This command has no default settings.

Command Modes

Privileged EXEC

Command History

Release	Modification
12.2(18)ZY	Support for this command was introduced.

Usage Guidelines

This command closes the TCP connection to the peer, resets all the MSDP peer statistics, and clears the input and output queues to and from the MSDP peer.

Examples

This example shows how to clear the TCP connection to the MSDP peer at 224.15.9.8:

```
Router# clear ip msdp peer 224.15.9.8
Router#
```

Related Commands

Command	Description
ip msdp peer	Configures an MSDP peer.

clear ip msdp sa-cache

To clear MSDP source active cache entries, use the **clear ip msdp sa-cache** command.

clear ip msdp [**vrf** *vrf-name*] **sa-cache** [*group-address* | *group-name*]

Syntax Description

vrf *vrf-name*	(Optional) Specifies the name that is assigned to the multicast VPN routing and forwarding (VRF) instance.
group-address | *group-name*	(Optional) Multicast group address or name for which source active entries are cleared from the source active cache.

Defaults

This command has no default settings.

Command Modes

Privileged EXEC

Command History

Release	Modification
12.2(18)ZY	Support for this command was introduced.

Usage Guidelines

In order to have any source active entries in the cache to clear, you must enable source active caching by entering the **ip msdp cache-sa-state** command.

If no multicast group is identified by group address or name, all source active cache entries are cleared.

Examples

This example shows how to clear the source active entries for the multicast group 224.5.6.7 from the cache:

```
Router# clear ip msdp sa-cache 224.5.6.7
Router#
```

Related Commands

Command	Description
ip msdp peer	Configures an MSDP peer.
ip msdp cache-sa-state	Creates a source-active state on the router.
show ip msdp sa-cache	Displays (S, G) state learned from MSDP peers.

clear ip msdp statistics

To clear statistics counters for one or all of the MSDP peers without resetting the sessions, use the **clear ip msdp statistics** command.

clear ip msdp [**vrf** *vrf-name*] **statistics** [*peer-address* | *peer-name*]

Syntax Description

vrf *vrf-name*	(Optional) Specifies the name that is assigned to the multicast VPN routing and forwarding (VRF) instance.
peer-address | *peer-name*	(Optional) Address or name of the MSDP peers whose statistics counters, reset count, and input/output count are cleared.

Defaults

This command has no default settings.

Command Modes

Privileged EXEC

Command History

Release	Modification
12.2(18)ZY	Support for this command was introduced.

Examples

This example shows how to clear the counters for the peer named sanjose:

```
Router# clear ip msdp statistics sanjose
Router#
```

Related Commands

Command	Description
show ip msdp sa-cache	Displays (S, G) state learned from MSDP peers.

clear ip pim auto-rp

To delete entries from the Auto-RP cache, use the **clear ip pim auto-rp** command.

clear ip pim [**vrf** *vrf-name*] **auto-rp** *rp-address*

Syntax Description

vrf *vrf-name*	(Optional) Specifies the name that is assigned to the multicast VPN routing and forwarding (VRF) instance.
rp-address	Rendevous-point address; see the "Usage Guidelines" section for additional information.

Defaults

This command has no default settings.

Command Modes

Privileged EXEC

Command History

Release	Modification
12.2(18)ZY	Support for this command was introduced.

Usage Guidelines

When you enter the *rp-address* argument, only the entries related to the rendezvous point at this address are cleared. If you omit this argument, the entire Auto-RP cache is cleared.

Examples

This example shows how to delete all entries from the Auto-RP cache:

```
Router# clear ip pim auto-rp 224.5.6.7
Router#
```

Related Commands

Command	Description
show ip pim rp mapping	Displays the mappings for the PIM group to the active rendezvous points.

clear ip pim snooping statistics

To delete the IP PIM-snooping global statistics, use the **clear ip pim snooping statistics** command.

clear ip pim snooping statistics

Syntax Description

This command has no arguments or keywords.

Defaults

This command has no default settings.

Command Modes

Privileged EXEC

Command History

Release	Modification
12.2(18)ZY	Support for this command was introduced.

Examples

This example shows how to clear the IP PIM statistics:

```
Router# clear ip pim snooping statistics
Router#
```

Related Commands

Command	Description
ip pim snooping (global configuration mode)	Enables PIM snooping globally.
show ip pim snooping statistics	Displays statistical information about IP PIM snooping.

clear ip pim snooping vlan

To delete the IP PIM-snooping entries on a specific VLAN, use the **clear ip pim snooping vlan** command.

clear ip pim snooping vlan *vlan-id* **mac-address** *gda-address*

clear ip pim snooping vlan *vlan-id* **mroute** {***** | {*group-addr src-addr*} {{**downstream-neighbor** *ip-addr*} | {**upstream-neighbor** *ip-addr*}}}

clear ip pim snooping vlan *vlan-id* **neighbor** {***** | *ip-addr*}

Syntax Description

vlan-id	VLAN ID; valid values are from 1 to 4094.
mac-address *gda-address*	Specifies the multicast group MAC address to delete.
mroute *	Deletes all mroute entries.
mroute *group-addr src-addr*	Deletes the mroute entries at the specified group and source IP address.
downstream-neighbor *ip-addr*	Deletes the entries at the specified downstream neighbor originating the join/prune message.
upstream-neighbor *ip-addr*	Deletes the entries at the specified upstream neighbor receiving the join/prune message.
neighbor *	Deletes all neighbors.
neighbor *ip-addr*	Deletes the neighbor at the specified IP address.

Defaults

This command has no default settings.

Command Modes

Privileged EXEC

Command History

Release	Modification
12.2(18)ZY	Support for this command was introduced.

Examples

This example shows how to clear the IP PIM statistics on a specific VLAN:

```
Router# clear ip pim snooping vlan 25 statistics
Router#
```

Related Commands

Command	Description
ip pim snooping (interface configuration mode)	Enables PIM snooping on a specific interface.
show ip pim snooping	Displays information about IP PIM snooping.

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

channel-group	(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
12.2(18)ZY	Support for this command was introduced.

Usage Guidelines

If you do not specify a *channel-group*, all channel groups are cleared.

If you enter this command for a channel group that contains members in PAgP mode, the command is ignored.

Examples

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

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

Related Commands

Command	Description
show lacp	Displays LACP information.

clear logging ip access-list cache

To clear all the entries from the OAL cache and send them to the syslog, use the **clear logging ip access-list cache** command.

clear logging ip access-list cache

Syntax Description

This command has no keywords or arguments.

Defaults

This command has no default settings.

Command Modes

Privileged EXEC

Command History

Release	Modification
12.2(18)ZY	Support for this command was introduced.

Examples

This example shows how to clear all the entries from the OAL cache and send them to the syslog:

```
Router# clear logging ip access-list cache
Router#
```

Related Commands

Command	Description
logging ip access-list cache (global configuration mode)	Configures the OAL parameters globally.
logging ip access-list cache (interface configuration mode)	Enables an OAL-logging cache on an interface that is based on direction.
show logging ip access-list	Displays information about the logging IP access list.

clear mac-address-table dynamic

To clear the dynamic address entries from the MAC-address table in Layer 2, 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 *mac-addr*	(Optional) Specifies the MAC address.
interface *interface*	(Optional) Specifies the interface type; possible valid values are **ethernet**, **fastethernet**, **gigabitethernet**, and **tengigabitethernet**. See the "Usage Guidelines" section for additional valid values.
interface-number	(Optional) Module and port number; see the "Usage Guidelines" section for valid values.
protocol assigned	(Optional) Specifies the assigned protocol bucket accounts for such protocols as DECnet, Banyan VINES, and AppleTalk.
protocol ip | **ipx**	(Optional) Specifies the protocol type of the entries to clear.
protocol other	(Optional) Specifies the protocol types (other than IP or IPX) of the entries to clear.
vlan *vlan-id*	(Optional) Specifies the VLAN ID; valid values are from 1 to 4094.

Defaults

This command has no default settings.

Command Modes

Privileged EXEC

Command History

Release	Modification
12.2(18)ZY	Support for this command was introduced.

Usage Guidelines

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

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

Command	Description
mac-address-table aging-time	Configures the aging time for entries in the Layer 2 table.
mac-address-table static	Adds static entries to the MAC-address table or configures a static MAC address with IGMP snooping disabled for that address.
show mac-address-table	Displays the information about the MAC-address table.

clear mls acl counters

To clear the MLS ACL counters, use the **clear mls acl counters** command.

clear mls acl counters {**all** | {**interface** *interface interface-number*} [{**loopback** *interface-number*} | {**null** *interface-number*} | {**port-channel** *number*} | {**vlan** *vlan-id*}}]

Syntax Description

all	Clears all the MLS ACL counters for all interfaces.
interface *interface*	Clears counters that are associated with the specified interface; possible valid values are **ethernet**, **fastethernet**, **gigabitethernet**, and **tengigabitethernet**. See the "Usage Guidelines" section for additional valid values.
interface-number	Module and port number; see the "Usage Guidelines" section for valid values.
loopback *interface-number*	(Optional) Specifies the loopback interface; valid values are from 0 to 2147483647.
null *interface-number*	(Optional) Specifies the null interface; the valid value is **0**.
port-channel *number*	(Optional) Specifies the channel interface; valid values are a maximum of 64 values ranging from 1 to 256.
vlan *vlan-id*	(Optional) Specifies the VLAN ID; valid values are from 1 to 4094.

Defaults

This command has no default settings.

Command Modes

Privileged EXEC

Command History

Release	Modification
12.2(18)ZY	Support for this command was introduced.

Usage Guidelines

If you enter the **clear mls acl counters all**, all the MLS ACL counters for all the modules and the supervisor engines are cleared.

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

Examples

This example shows how to reset the MLS ACL counters in all interfaces:

```
Router# clear mls acl counters all
Router#
```

Related Commands

Command	Description
show tcam interface	Displays information about the interface-based TCAM.

clear mls cef ip accounting per-prefix

To clear information about the IP per-prefix accounting statistics, use the **clear mls cef ip accounting per-prefix** command.

clear mls cef ip accounting per-prefix {**all** | {*prefix mask* [*instance*]}}

Syntax Description

all	Clears all per-prefix accounting statistics information.
prefix	Entry prefix in the format A.B.C.D.
mask	Entry prefix mask.
instance	(Optional) VPN Routing/Forwarding instance name.

Defaults

This command has no default settings.

Command Modes

Privileged EXEC

Command History

Release	Modification
12.2(18)ZY	Support for this command was introduced.

Examples

This example shows how to clear all information about the per-prefix accounting statistics:

```
Router# clear mls cef ip accounting per-prefix all
Router#
```

clear mls cef ipv6 accounting per-prefix

To clear information about the IPv6 per-prefix accounting statistics, use the **clear mls cef ipv6 accounting per-prefix** command.

clear mls cef ipv6 accounting per-prefix {**all** | {*ipv6-address*/*mask* [*instance*]}}

Syntax Description

all	Clears all per-prefix accounting statistics information.
ipv6-address	Entry IPv6 address; see the "Usage Guidelines" section for formatting information.
mask	Entry prefix mask.
instance	(Optional) VPN Routing/Forwarding instance name.

Defaults

This command has no default settings.

Command Modes

Privileged EXEC

Command History

Release	Modification
12.2(18)ZY	Support for this command was introduced.

Usage Guidelines

When entering the *ipv6-address*/*mask* arguments, use this format, X:X:X:X::X/*mask,* where the valid values for *mask* are from 0 to 128.

Examples

This example shows how to clear all information about the per-prefix accounting statistics:

```
Router# clear mls cef ipv6 accounting per-prefix all
Router#
```

clear mls ip multicast bidir-rpcache

To clear all bidirectional (Bider) rendezvous-point cache entries, use the **clear mls ip multicast bidir-rpcache** command.

clear mls ip multicast bidir-rpcache

Syntax Description

This command has no keywords or arguments.

Defaults

This command has no default settings.

Command Modes

Privileged EXEC

Command History

Release	Modification
12.2(18)ZY	Support for this command was introduced.

Examples

This example shows how to reset the Bidir counters:

```
Router# clear mls ip multicast bidir-rpcache
Router#
```

Related Commands

Command	Description
show mls ip multicast bidir	Displays the Bidir hardware-switched entries.

clear mls ip multicast group

To delete an IP multicast group, use the **clear mls ip multicast group** command.

clear mls ip multicast group {*ip-name* | *group-address*}

Syntax Description

ip-name	Host IP name.
group-address	(Optional) Address of the multicast group in four-part, dotted notation.

Defaults

This command has no default settings.

Command Modes

Privileged EXEC

Command History

Release	Modification
12.2(18)ZY	Support for this command was introduced.

Examples

This example shows how to delete an IP multicast group:

```
Router# clear mls ip multicast group 224.0.255.1
Router#
```

Related Commands

Command	Description
show mls ip multicast group	Displays the entries for a specific multicast-group address.

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
12.2(18)ZY	Support for this command was introduced.

Examples

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

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

Related Commands

Command	Description
show mls ip multicast	Displays the MLS IP information.

clear mls nde flow counters

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

clear mls nde flow 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
12.2(18)ZY	Support for this command was introduced.

Examples

This example shows how to reset the NDE counters:

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

Related Commands

Command	Description
show mls nde	Displays information about the NDE hardware-switched flow.

clear mls netflow

To clear the MLS NetFlow-shortcut entries, use the **clear mls netflow** command.

clear mls netflow ip [**destination** *ip-addr* [**source** *ip-addr-spec*]] [**dynamic** | {**sw-installed** [**non-static** | **static**]}] [**module** *mod*]

clear mls netflow ipv6 [**destination** *ipv6-addr*[*/ipv6-prefix*] [**source** *ipv6-addr*[*/ipv6-prefix*]]] [**flow** {**tcp** | **udp**}] [{**destination** | **source**} *port-num*] [**dynamic** | {**sw-installed** [**non-static** | **static**]}] [**module** *mod*]

clear mls netflow mpls [**top-label** *entry*] [**dynamic** | {**sw-installed** [**non-static** | **static**]}] [**module** *mod*]

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.
destination *ip-addr*	(Optional) Specifies a destination full IP address or a subnet address. See the "Usage Guidelines" section for formatting guidelines.
source *ip-addr-spec*	(Optional) Specifies a source full IP address or a subnet address. See the "Usage Guidelines" section for formatting guidelines.
dynamic	(Optional) Clears NetFlow-statistics entries that are created in the hardware.
sw-installed non-static	(Optional) Clears software-installed nonstatic entries.
sw-installed static	(Optional) Clears software-installed static entries.
module *mod*	(Optional) Specifies a module number.
ipv6	Clears IP version 6 software-installed entries.
destination *ipv6-addr*	(Optional) Specifies a destination full IPv6 address or a subnet address. See the "Usage Guidelines" section for formatting guidelines.
/ipv6-prefix	(Optional) IPv6 prefix; valid values are from 0 to 128.
source *iv6p-addr*	(Optional) Specifies a source full IPv6 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.
destination *port-num*	(Optional) Specifies a destination port number.
source *port-num*	(Optional) Specifies a source port number.
mpls	Clears MPLS software-installed entries.
top-label *entry*	(Optional) Clears top-label entries; valid values are from 1 to 4294967295.
ipx	Clears IPX MLS entries.
destination *ipx-network*	(Optional) Specifies the destination IPX address. See the "Usage Guidelines" section for formatting guidelines.
ipx-node	(Optional) IPX node address. See the "Usage Guidelines" section for formatting guidelines.

source *ipx-network*	(Optional) Specifies the source IPX address. See the "Usage Guidelines" section for formatting guidelines.
macs *mac-addr*	(Optional) Specifies the source MAC addresses to consider when searching for entries to purge.
macd *mac-addr*	(Optional) Specifies the destination MAC addresses to consider when searching for entries to purge.
interface *interface-num*	(Optional) Clears entries that are associated with the specified VLAN or interface.
all	(Optional) Clears all entries.

Defaults

This command has no default settings.

Command Modes

Privileged EXEC

Command History

Release	Modification
12.2(18)ZY	Support for this command was introduced.

Usage Guidelines

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

- IPX network address—1..FFFFFFFE
- 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)

Entering any combination of input parameters narrows the search of entries to be cleared. The **destination** or **source** *port-num* keyword and argument should be specified as one of the following: telnet, FTP, WWW, SMTP, X, or DNS.

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

Use the following syntax to specify an IP subnet address:

- *ip-subnet-addr* or *ipv6-subnet-addr*—Short subnet address format. The trailing decimal number 00 in an IP or IPv6 address YY.YY.YY.00 specifies the boundary for an IP or IPv6 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* or *ipv6-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* or *ipv6-addr* is a full host address, such as 172.22.253.1/255.255.252.00.
- *ip-addr/maskbits* or *ipv6-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* or *ipv6-addr* is a full host address, such as 193.22.253.1/22, which has the same subnet address as the *ip-subnet-addr* or *ipv6-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.

A 0 value for the **destination** or **source** *port-num* keyword and argument clears all entries. Unspecified options are treated as wildcards, and all entries are cleared.

Examples

This example shows how to clear all the entries that are associated with a specific module (2) and that have a specific destination IP address (173.11.50.89):

```
Router# clear mls netflow ip destination 173.11.50.89 module 2
Router#
```

This example shows how to clear the IPv6 software-installed entries:

```
Router# clear mls netflow ipv6
Router#
```

This example shows how to clear the statistical information:

```
Router# clear mls netflow dynamic
Router#
```

Related Commands

Command	Description
show mls netflow ip	Displays information about the hardware NetFlow IP.
show mls netflow ipv6	Displays information about the hardware NetFlow IPv6 configuration.

clear mls qos

To clear the MLS aggregate-QoS statistics, use the **clear mls qos** command.

clear mls qos [{**ip** | **ipx** | **mac** | **mpls** | **ipv6** | **arp**} [{*interface interface-number*} | {**null** *interface-number*} | {**port-channel** *number*} | {**vlan** *vlan-id*}]]

Syntax Description

ip	(Optional) Clears MLS IP aggregate-QoS statistics.
ipx	(Optional) Clears MLS IPX aggregate-QoS statistics.
mac	(Optional) Clears MLS MAC aggregate-QoS statistics.
mpls	(Optional) Clears MLS MPLS aggregate-QoS statistics.
ipv6	(Optional) Clears MLS IPv6 aggregate QoS statistics.
arp	(Optional) Clears MLS ARP aggregate QoS statistics.
interface	(Optional) Interface type; possible valid values are **ethernet**, **fastethernet**, **gigabitethernet**, and **tengigabitethernet**. See the "Usage Guidelines" section for additional valid values.
interface-number	(Optional) Module and port number; see the "Usage Guidelines" section for valid values.
null *interface-number*	(Optional) Specifies the null interface; the valid value is **0**.
port-channel *number*	(Optional) Specifies the channel interface; valid values are a maximum of 64 values ranging from 1 to 256.
vlan *vlan-id*	(Optional) Specifies the VLAN ID; valid values are from 1 to 4094.

Defaults

This command has no default settings.

Command Modes

Privileged EXEC

Command History

Release	Modification
12.2(18)ZY	Support for this command was introduced.

Usage Guidelines

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

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

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

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

Examples

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

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

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

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

Related Commands

Command	Description
show mls qos	Displays MLS QoS information.

clear mls statistics

To reset the MLS statistics counters, use the **clear mls statistics** command.

clear mls statistics [**module** *num*]

Syntax Description

module *num*	(Optional) Specifies the module number.

Defaults

This command has no default settings.

Command Modes

Privileged EXEC

Command History

Release	Modification
12.2(18)ZY	Support for this command was introduced.

Usage Guidelines

This command replaces the **clear mls stats** command.

Examples

This example shows how to reset the MLS statistics counters for all modules:

```
Router# clear mls statistics
Router#
```

This example shows how to reset the MLS statistics counters for a specific module:

```
Router# clear mls statistics module 5
Router#
```

Related Commands

Command	Description
show mls statistics	Displays the MLS statistics for the IP, IPX, multicast, Layer 2 protocol, and QoS.

clear mls stats

To clear the MLS statistics, use the **clear mls stats** command.

clear mls 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
12.2(18)ZY	Support for this command was introduced.

Examples

This example shows how to clear the MLS statistics for all modules:

```
Router# clear mls stats
Router#
```

Related Commands

Command	Description
clear mls statistics	Resets the MLS statistics counters.

clear pagp

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

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

Syntax Description

group-number	Channel group number; valid values are a maximum of 64 values from 1 to 256.
counters	Clears traffic filters.

Defaults

This command has no default settings.

Command Modes

Privileged EXEC

Command History

Release	Modification
12.2(18)ZY	Support for this command was introduced.

Examples

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

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

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

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

Related Commands

Command	Description
show pagp	Displays port-channel information.

clear platform netint

To clear the interrupt-throttling counters for the platform, use the **clear platform netint** command.

clear platform netint

Syntax Description

This command has no arguments or keywords.

Defaults

This command has no default settings.

Command Modes

Privileged EXEC

Command History

Release	Modification
12.2(18)ZY	Support for this command was introduced.

Examples

This example shows how to clear the interrupt-throttling counters for the platform:

```
Router# clear platform netint
Router#
```

Related Commands

Command	Description
show platform netint	Displays the platform network-interrupt information.

clear platform pisa ixp counters

To clear Supervisor Engine 32 PISA-specific counters for the platform, use the **clear platform pisa ixp** command.

clear platform pisa ixp counters *counter*

Syntax Description

counter	Counter information; see the "Usage Guidelines" section for the list of valid values.

Defaults

This command has no default settings.

Command Modes

Privileged EXEC (#)

Command History

Release	Modification
12.2(18)ZYA	Support for this command was introduced.
12.2(18)ZYA1	Support for this command was deprecated in favor of the **clear platform pisa np counters** command.

Usage Guidelines

The valid values for the counter argument are as follows:

- **all counters**—Clears all Supervisor Engine 32 PISA-specific counters.
- **fpm counters**—Clears the flexible packet matching (FPM) counters.
- **me** *num* **counters**—Clears the microengine information; valid values are from 0 to 15.
- **mqc counters**—Clears the modular quality of service (QoS) CLI counters.
- **mtacl counters**—Clears the MTrie ACL counters.
- **nbar counters**—Clears the network-based application recognition (NBAR) counters.
- **rx counters**—Clears the receive engine counters.
- **tx counters**—Clears the transmit engine counters.
- **urlf counters**—Clears the URL filtering counters.
- **vfr counters**—Clears the virtual fragmentation and reassembly (VFR) counters.

Examples

This example shows how to clear the flexible packet matching (FPM) counters for the platform:

```
Router# clear platform pisa ixp counters fpm
FPM Statistics cleared

Router#
```

Related Commands

Command	Description
show platform pisa np	Displays Supervisor Engine 32 PISA-specific information.

clear platform pisa np counters

To clear Supervisor Engine 32 PISA-specific counters for the platform, use the **clear platform pisa np counters** command.

clear platform pisa np *counter* **counters**

Syntax Description

counter	Counter information; see the "Usage Guidelines" section for the list of valid values.

Defaults

This command has no default settings.

Command Modes

Privileged EXEC (#)

Command History

Release	Modification
12.2(18)ZYA1	Support for this command was introduced to replace the **clear platform pisa ixp counters** command.

Usage Guidelines

The valid values for the counter argument are as follows:

- **all**—Clears all Supervisor Engine 32 PISA-specific counters.
- **fpm**—Clears the flexible packet matching (FPM) counters.
- **me** *num*—Clears the microengine information; valid values are from 0 to 15.
- **mqc**—Clears the modular quality of service (QoS) CLI counters.
- **mtacl**—Clears the MTrie ACL counters.
- **nbar**—Clears the network-based application recognition (NBAR) counters.
- **rx**—Clears the receive engine counters.
- **tagging**—Clears the protocol tagging counters.
- **tx**—Clears the transmit engine counters.
- **urlf**—Clears the URL filtering counters.
- **vfr**—Clears the virtual fragmentation and reassembly (VFR) counters.

Examples

This example shows how to clear all Supervisor Engine 32 PISA-specific counters for the platform:

```
Router# clear platform pisa np all counters
RX Statistics cleared for ME: 0
TX Statistics cleared for ME: 1
NBAR Statistics cleared
URLF Statistics cleared
MQC Statistics cleared
ACL Statistics cleared
```

```
FPM Statistics cleared
VFR Statistics cleared
Protocol Tagging Statistics cleared
Stubs Statistics cleared for ME: 2 to 15

Router#
```

Related Commands

Command	Description
show platform pisa np	Displays Supervisor Engine 32 PISA-specific information.

clear port-security

To delete configured secure MAC addresses and sticky MAC addresses from the MAC address table, use the **clear port-security** command.

clear port-security dynamic [{**address** *mac-addr*} | {**interface** *interface-id*}] [**vlan** *vlan-id*]

Syntax Description

address *mac-addr*	(Optional) Deletes the specified secure MAC address or sticky MAC address.
interface *interface-id*	(Optional) Deletes all secure MAC addresses and sticky MAC addresses on the specified physical port or port channel.
vlan *vlan-id*	(Optional) Deletes the specified secure MAC address or sticky MAC address from the specified VLAN.

Defaults

This command has no default settings.

Command Modes

Privileged EXEC

Command History

Release	Modification
12.2(18)ZY	Support for this command was introduced.

Usage Guidelines

This command is supported on negotiated trunks only.

If you enter the **clear port-security** command without adding any keywords or arguments, the switch removes all the secure MAC addresses and sticky MAC addresses from the MAC address table.

If you enter the **clear port-security dynamic interface** *interface-id* command, all the secure MAC addresses and sticky MAC addresses on an interface are removed from the MAC address table.

You can verify that the information was deleted by entering the **show port-security** command.

Examples

This example shows how to remove a specific secure address from the MAC address table:

```
Router# clear port-security dynamic address 0008.0070.0007
Router#
```

This example shows how to remove all the secure MAC addresses and sticky MAC addresses learned on a specific interface:

```
Router# clear port-security dynamic interface gigabitethernet0/1
Router#
```

Related Commands

Command	Description
show port-security	Displays information about the port-security setting.
switchport port-security mac-address	Adds a MAC address to the list of secure MAC addresses.

clear spanning-tree detected-protocol

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

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

Syntax Description

interface *interface*	(Optional) Specifies the interface type and number; possible valid values for type are **ethernet**, **fastethernet**, **gigabitethernet**, **tengigabitethernet**, **port-channel**, and **vlan**. See the "Usage Guidelines" section for additional valid values.
interface-num	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

Command History

Release	Modification
12.2(18)ZY	Support for this command was introduced.

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 that is associated with a different region. These mechanisms are not always able to revert to the most efficient mode. For example, an RSTP bridge that is 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 that are used. For example, if you specify a Gigabit Ethernet interface and have a 48-port 10/100BASE-T Ethernet module that is 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* are a maximum of 64 values ranging from 1 to 256.

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

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

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

Related Commands

Command	Description
show spanning-tree mst	Displays information about the MST protocol.

clear top counters interface report

To clear the TopN reports, use the **clear top counters interface report** command.

clear top counters interface report *number*

Syntax Description

number	(Optional) Number of ports to be displayed; valid values are from 1 to 5000 physical ports.

Defaults

This command has no default settings.

Command Modes

EXEC

Command History

Release	Modification
12.2(18)ZY	Support for this command was introduced.

Usage Guidelines

This command is supported on Ethernet, Fast Ethernet, Gigabit Ethernet, and 10-Gigabit Ethernet ports only. LAN ports on the OSMs are also supported.

The **clear top interface report** command clears all the completed reports. It does not clear the pending TopN reports. When you specify a report number, the TopN task is cleared regardless of its status.

Examples

This example shows how to clear all TopN tasks:

```
Router# clear top counters interface report
04:00:06: %TOPN_COUNTERS-5-DELETED: TopN report 1 deleted by the console
04:00:06: %TOPN_COUNTERS-5-DELETED: TopN report 2 deleted by the console
04:00:06: %TOPN_COUNTERS-5-DELETED: TopN report 3 deleted by the console
04:00:06: %TOPN_COUNTERS-5-DELETED: TopN report 4 deleted by the console1/24/
Router#
```

This example shows the output if you attempt to clear a pending TopN task:

```
Router# clear top counters interface report 4
04:52:12: %TOPN_COUNTERS-5-KILLED: TopN report 4 killed by the sattili onvty0 (9.10.69.9)
Router#
```

Related Commands

Command	Description
collect top counters interface	Lists the TopN processes and specific TopN reports.
show top counters interface report	Displays TopN reports and information.

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

vlan-id	(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
12.2(18)ZY	Support for this command was introduced.

Usage Guidelines

If you do not specify a *vlan-id*; the software-cached counter values for all existing VLANs are cleared.

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

Command	Description
show vlan counters	Displays the software-cached counter values.

clock

To configure the port clocking mode for the 1000BASE-T transceivers, use the **clock** command. To return to the default settings, use the **no** form of this command.

clock {**auto** | **active** [**prefer**] | **passive** [**prefer**]}

no clock

Syntax Description

auto	Enables the automatic clock configuration.
active	Enables the active operation.
prefer	(Optional) Negotiates the specified mode with the far end of the link.
passive	Enables the passive operation.

Defaults

auto

Command Modes

Interface configuration

Command History

Release	Modification
12.2(18)ZY	Support for this command was introduced.

Usage Guidelines

This command is supported on the 1000BASE-T transceivers only.

If the clock mode of the near end of a link does not match the clock mode of the far end, the line protocol does not come up.

The active and passive clock status is determined during autonegotiation before the transmission link is established.

The **clock** command supports the following configurations:

- **auto**—Autonegotiates with the far end of the link but gives preference to the active-clock switch.
- **active**—Uses a local clock to determine transmitter-operation timing.
- **passive**—Recovers the clock from the received signal and uses the recovered clock to determine transmitter-operation timing.
- **active prefer**—Autonegotiates with the far end of the link but gives preference to the active-clock switch.
- **passive prefer**—Autonegotiates with the far end of the link but gives preference to the passive-clock switch.

Enter the **show running-config interface** command to display the current clock mode.

Enter the **show interfaces** command to display the clock mode that is negotiated by the firmware.

Examples

This example shows how to enable the active-clock operation:

```
Router(config-if)# clock active
Router(config-if)#
```

Related Commands

Command	Description
show interfaces	Displays the traffic that is seen by a specific interface.
show running-config interface	Displays the status and configuration of the module or Layer 2 VLAN.

collect top counters interface

To list the TopN processes and specific TopN reports, use the **collect top counters interface** command.

collect top [*number*] **counters interface** *interface-type* [**interval** *seconds*] [**sort-by** *sort-by-value*]

Syntax Description

number	(Optional) Number of ports to be displayed; valid values are from 1 to 5000 physical ports.
interface-type	Type of ports to be used in the TopN request; valid values are **all**, **ethernet**, **fastethernet**, **gigabitethernet**, **tengigabitethernet**, **layer-2** *vlan-num*, and **layer-3**.
interval *seconds*	(Optional) Specifies the interval over which the statistics is gathered; valid values are from 0 to 999 seconds.
sort-by *sort-by-value*	(Optional) Specifies the port statistic to generate the report on; valid values are as follows: • **broadcast**—Sorts the report based on the receive and transmit broadcast packets. • **bytes**—Sorts the report based on the receive and transmit bytes. • **errors**—Sorts the report based on the receive errors. • **multicast**—Sorts the report based on the receive and transmit multicast packets. • **overflow**—Sorts the report based on the transmit overflow errors. • **packets**—Sorts the report based on the receive and transmit packets. • **utilization**—Sorts the report based on the port utilization.

Defaults

The defaults are as follows:

- *number* is **20** physical ports.
- *sort-by-value* is **util**.
- *seconds* is **30** seconds.
- *interface-type* is **all**.

Command Modes

EXEC

Command History

Release	Modification
12.2(18)ZY	Support for this command was introduced.

Usage Guidelines

This command is supported on Ethernet, Fast Ethernet, Gigabit Ethernet and 10-Gigabit Ethernet ports only. LAN ports on the OSMs are also supported.

If you specify an interval of **0** seconds, the TopN report is generated based on the absolute counters value. You cannot specify the **interval** *seconds* keyword and argument when the sorting criteria is **utilization** because utilization can only be computed over an interval.

When you specify the **layer-2** *vlan-num*, valid values are from 1 to 4094 and indicates the number of the Layer 2 interface.

Only a TopN task with a done status is allowed to display the report. If you try to view a report that is incomplete (pending), an appropriate message is displayed.

The TopN utility collects the following port utilization data for each physical port over the *seconds* interval:

- Total number of in and out bytes.
- Total number of in and out packets.
- Total number of in and out broadcast packets.
- Total number of in and out multicast packets.
- Total number of in errors (Ethernet ports such as CRC, undersize packets (+Runt), oversize packets, fragmentation, and jabber).
- Total number of buffer-overflow errors including outlost packets; for example, these errors include transmit errors that are due to these buffer full and Ethernet ports: dmaTxOverflow and dmaTxFull.

After the collection of information, the ports are sorted according to the *sort-by-value* argument, and the top *number* of ports are displayed.

When the TopN reports are ready, a syslog message is displayed that the TopN reports are available. You can use the **show top interface report** command to view the reports. You can display the TopN reports multiple times until you enter the **clear top interface report** command to clear the reports.

Use the **clear top interface report** command to clear the reports.

Examples

This example shows how to sort the TopN report based on the receive and transmit broadcast packets:

```
Router# collect top 40 counters interface all sort-by broadcast
Router#
```

This example shows how to sort the TopN report based on the receive and transmit broadcast packets and specify the TopN sampling interval:

```
Router# collect top 40 counters interface all sort-by broadcast interval 500
Router#
```

Related Commands

Command	Description
clear top counters interface report	Clears the TopN reports.
show top counters interface report	Displays TopN reports and information.

control-plane

To enter control-plane configuration mode, which allows users to associate or modify attributes or parameters (such as a service policy) that are associated with the control plane of the device, use the **control-plane** command.

control-plane

Syntax Description

This command has no arguments or keywords.

Defaults

No control plane service policies are defined.

Command Modes

Global configuration

Command History

Release	Modification
12.2(18)ZY	Support for this command was introduced.

Usage Guidelines

Note You must set a policy action for every class. If you do not set a policy action for every class, the traffic skips the class that does not have a policy action and matches against the subsequent classes.

After you enter the **control-plane** command, you can define aggregate control plane services for your route processor. For example, you can associate a service policy with the control plane to police all traffic that is destined to the control plane.

Examples

These examples show how to configure trusted hosts with source addresses 10.1.1.1 and 10.1.1.2 to forward Telnet packets to the control plane without constraint, while allowing all remaining Telnet packets to be policed at the specified rate:

```
Router(config)# access-list 140 deny tcp host 10.1.1.1 any eq telnet
! Allow 10.1.1.2 trusted host traffic.
Router(config)# access-list 140 deny tcp host 10.1.1.2 any eq telnet
! Rate limit all other Telnet traffic.
Router(config)# access-list 140 permit tcp any any eq telnet
! Define class-map "telnet-class."
Router(config)# class-map telnet-class
Router(config-cmap)# match access-group 140
Router(config-cmap)# exit
Router(config)# policy-map control-plane
Router(config-pmap)# class telnet-class
```

```
Router(config-pmap-c)# police 80000 conform transmit exceed drop
Router(config-pmap-c)# exit
Router(config-pmap)# exit
! Define aggregate control plane service for the active Route Processor.
Router(config)# control-plane
Router(config-cp)# service-policy input control-plane-policy
Router(config-cp)# exit
```

Related Commands

Command	Description
class (policy-map)	Specifies the name of the class that has a policy that you want to create or change or to specify the default class (commonly known as the class-default class) before you configure its policy.
class-map	Accesses the QoS class-map configuration mode to configure QoS class maps.
drop	Configures a traffic class to discard packets belonging to a specific class.
match access-group	Configures the match criteria for a class map on the basis of the specified ACL.
policy-map	Accesses QoS policy-map configuration mode to configure the QoS policy map.
service-policy (control-plane)	Attaches a policy map to a control plane for aggregate control plane services.
show policy-map control-plane	Displays the configuration either of a class or of all classes for the policy map of a control plane.

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

source-url	Location URL or alias of the source file or directory to be copied; see the "Usage Guidelines" section for additional information.
destination-url	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
12.2(18)ZY	Support for this command was introduced.

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 that 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 allow you to continue using some of the common commands that are used in previous versions of Cisco IOS software.

Table 2-3 shows two keyword shortcuts to URLs.

Table 2-3 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 2-4 through Table 2-6 list aliases by file system type. If you do not specify an alias, the system looks for a file in the current directory.

Table 2-4 lists the URL prefix aliases for special (opaque) file systems, Table 2-5 lists the URL prefix aliases for network file systems, and Table 2-6 lists the URL prefix aliases for local writable storage file systems.

Table 2-4 URL Prefix Aliases for Special File Systems

Alias	Source or Destination
flh:	Source URL for flash load helper log files.
nvram:	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 Ymodem protocol.

Table 2-5 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 2-6 URL Prefix Aliases for Local Writable Storage File Systems

Alias	Source or Destination
bootflash:	Source or destination URL for boot flash memory.
disk0: and disk1:	Source or destination URL of rotating media.
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.

Table 2-6 URL Prefix Aliases for Local Writable Storage File Systems (continued)

Alias	Source or Destination
slavebootflash:	Source or destination URL for internal flash memory on the slave RSP card of a device that is configured for HSA.
slaveram:	NVRAM on a slave RSP card of a device that is configured for HSA.
slavedisk0:	Source or destination URL of the first PCMCIA card on a slave RSP card of a device that is configured for HSA.
slavedisk1:	Source or destination URL of the second PCMCIA slot on a slave RSP card of a device that is configured for HSA.
slaveslot0:	Source or destination URL of the first .PCMCIA card on a slave RSP card of a router configured for HSA—Not supported
slaveslot1:	Source or destination URL of the second PCMCIA slot on a slave RSP card of a router configured for HSA—Not supported.
slot0:	Source or destination URL of the first PCMCIA flash memory card—Not supported.
slot1:	Source or destination URL of the second PCMCIA flash memory card—Not supported.

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 Table 2-3 through Table 2-6). 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 that do not require 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 hostname. 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

Command	Description
file verify auto	Verifies the compressed Cisco IOS image checksum.
verify	Verifies the checksum of a file on a flash memory file system or computes an MD5 signature for a file.