show mpls traffic-eng topology

To show the MPLS traffic engineering global topology as currently known at this node, use the **show mpls traffic-eng topology** command in privileged EXEC mode.

show mpls traffic-eng topology {*A.B.C.D* | **igp-id** {**isis** *nsap-address* | **ospf** *A.B.C.D*} [**brief**]

Syntax Description

A.B.C.D	Specifies the node by the IP address (router identifier to interface address).
igp-id	Specifies the node by IGP router identifier.
isis *nsap-address*	Specifies the node by router identification (*nsap-address*) if using IS-IS.
ospf *A.B.C.D*	Specifies the node by router identifier if using OSPF.
brief	(Optional) Provides a less detailed version of the topology.

Command Modes

Privileged EXEC

Command History

Release	Modification
12.0(5)S	This command was introduced.
12.0(11)ST	The single “Reservable” column was replaced by two columns: one each for “global pool” and for “subpool.”
12.2(8)T	This command was integrated into Cisco IOS Release 12.2(8)T.

Examples

The following example shows output from the **show mpls traffic-eng topology** command:

```
Router# show mpls traffic-eng topology

My_System_id: 0000.0025.0003.00

IGP Id: 0000.0024.0004.00, MPLS TE Id:24.4.4.4 Router Node
      link[0 ]:Intf Address: 150.1.1.4
                  Nbr IGP Id: 0000.0024.0004.02,
                 admin_weight:10, affinity_bits:0x0
                 max_link_bw:10000 max_link_reservable: 10000
        globalpoolsubpool
                total allocatedreservable reservable
                --------------- ---------- ----------
    bw[0]: 0 1000500
    bw[1]:10 990490
    bw[2]: 600 390390
    bw[3]: 0 390390
    bw[4]: 0 390390
    bw[5]: 0 390390
```

Table 103 describes the significant fields shown in the display.

Table 103 show mpls traffic-eng topology Field Descriptions

Field	Description
My-System_id	Unique identifier of the IGP.
IGP Id	Identification of advertising router.
MPLS TE Id	Unique MPLS traffic engineering identification.
Intf Address	THe interface address of the link.
Nbr IGP Id	Neighbor IGP router identifier.
admin_weight	Cost of the link.
affinity_bits	Requirements on the attributes of the links that the traffic crosses.
max_link_bw	Physical line rate.
max_link_reservable	Maximum amount of bandwidth that can be reserved on a link.
total allocated	Amount of bandwidth allocated at that priority.
reservable	Amount of available bandwidth reservable at that priority for each of the two pools: global and sub.

Related Commands

Command	Description
show mpls traffic-eng tunnels	Displays information about tunnels.

show mpls traffic-eng topology path

To show the properties of the best available path to a specified destination that satisfies certain constraints, use the **show mpls traffic-eng topology path** command in user EXEC or privileged EXEC mode.

show mpls traffic-eng topology path {*tunnel-interface* [**destination** *address*] | **destination** *address*} [**bandwidth** *value*] [**priority** *value* [*value*]] [**affinity** *value* [**mask** *mask*]]

Syntax Description

tunnel-interface	Name of an MPLS traffic engineering interface (for example, Tunnel1) from which default constraints should be copied.
destination *address*	(Optional) IP address specifying the path's destination.
bandwidth *value*	(Optional) Bandwidth constraint. The amount of available bandwidth that a suitable path requires. This overrides the bandwidth constraint obtained from the specified tunnel interface. You can specify any positive number.
priority *value* [*value*]	(Optional) Priority constraints. The setup and hold priorities used to acquire bandwidth along the path. If specified, this overrides the priority constraints obtained from the tunnel interface. Valid values are from 0 to 7.
affinity *value*	(Optional) Affinity constraints. The link attributes for which the path has an affinity. If specified, this overrides the affinity constraints obtained from the tunnel interface.
mask *mask*	(Optional) Affinity constraints. The mask associated with the affinity specification.

Command Modes

User EXEC
Privileged EXEC

Command History

Release	Modification
12.1(3)T	This command was introduced.

Usage Guidelines

The specified constraints override any constraints obtained from a reference tunnel.

Examples

The following is sample output from the **show mpls traffic-eng topology path** command:

```
Router1# show mpls traffic-eng topology path Tunnel1 bandwidth 1000

Query Parameters:
  Destination:10.112.0.12
    Bandwidth:1000
   Priorities:1 (setup), 1 (hold)
     Affinity:0x0 (value), 0xFFFF (mask)
Query Results:
  Min Bandwidth Along Path:2000 (kbps)
```

```
Max Bandwidth Along Path:5000 (kbps)
Hop  0:10.1.0.6       :affinity 00000000, bandwidth 2000 (kbps)
Hop  1:10.1.0.10      :affinity 00000000, bandwidth 5000 (kbps)
Hop  2:10.43.0.10     :affinity 00000000, bandwidth 2000 (kbps)
Hop  3:10.112.0.12
```

Table 104 describes the significant fields shown in the display.

Table 104 show mpls traffic-eng topology path Field Descriptions

Field	Description
Destination	IP address of the path's destination.
Bandwidth	Amount of available bandwidth that a suitable path requires.
Priorities	Setup and hold priorities used to acquire bandwidth.
Affinity	Link attributes for which the path has an affinity.
Min Bandwidth Along Path	Minimum amount of bandwidth configured for a path.
Max Bandwidth Along Path	Maximum amount of bandwidth configured for a path.
Hop	Information about each link in the path.

show mpls traffic-eng tunnels

To show information about tunnels, use the **show mpls traffic-eng tunnels** command in user EXEC or privileged EXEC mode.

show mpls traffic-eng tunnels *tunnel-interface* [**brief**]

show mpls traffic-eng tunnels
[**destination** *address*]
[**source-id** {*number* | *ip-address* | *ip-address number*}]
[**role** {**all** | **head** | **middle** | **tail** | **remote**}]
[**up** | **down**]
[**name** *string*]
[**suboptimal constraints** {**none** | **current** | **max**}]
[[**interface in** *physical-interface*] [**interface out** *physical-interface*] | [**interface** *physical-interface*] [**brief**]

Syntax Description

tunnel-interface	Displays information for the specified tunneling interface.
brief	(Optional) Displays the information in brief format.
destination *address*	(Optional) Restricts the display to tunnels destined to the specified IP address.
source-id	(Optional) Restricts the display to tunnels with a matching source IP address or tunnel number.
number	(Optional) Tunnel number.
ip-address	(Optional) Source IP address.
ip-address number	(Optional) Source IP address and tunnel number.
role	(Optional) Restricts the display to tunnels with the indicated role (all, head, middle, tail, or remote).
all	(Optional) Displays all tunnels.
head	(Optional) Displays tunnels with their heads at this router.
middle	(Optional) Displays tunnels with their midpoints at this router.
tail	(Optional) Displays tunnels with their tails at this router.
remote	(Optional) Displays tunnels with their heads at another router; this is a combination of the **middle** and **tail** keyword values.
up	(Optional) Displays tunnels if the tunnel interface is up. Tunnel midpoints and tails are typically up or not present.
down	(Optional) Displays tunnels that are down.
name *string*	(Optional) Displays tunnels with the specified name. The tunnel name is derived from the interface description, if specified; otherwise, it is the interface name. The tunnel name is included in the signalling message so it is available at all hops.
suboptimal constraints none	(Optional) Displays tunnels whose path metric is greater than the shortest unconstrained path. Selected tunnels have a longer path than the IGP's shortest path.

suboptimal constraints current	(Optional) Displays tunnels whose path metric is greater than the current shortest path, constrained by the tunnel's configured options. Selected tunnels would have a shorter path if they were reoptimized immediately.
suboptimal constraints max	(Optional) Displays tunnels whose path metric is greater than the current shortest path, constrained by the tunnel's configured options, and considering only the network's capacity. Selected tunnels would have a shorter path if no other tunnels were consuming network resources.
interface in *physical-interface*	(Optional) Displays tunnels that use the specified input interface.
interface out *physical-interface*	(Optional) Displays tunnels that use the specified output interface.
interface *physical-interface*	(Optional) Displays tunnels that use the specified interface as an input or output interface.
brief	(Optional) Specifies one line per tunnel.

Command Modes

User EXEC
Privileged EXEC

Command History

Release	Modification
12.0(5)S	This command was introduced.
12.1(3)T	The new **brief** format includes input and output interface information. The **suboptimal** and **interface** keywords were added to the nonbrief format. The nonbrief, nonsummary formats each include the history of LSP selection.

Examples

The following is sample output from the **show mpls traffic-eng tunnels brief** command:

```
Router1# show mpls traffic-eng tunnels brief

Signalling Summary:
    LSP Tunnels Process:            running
    RSVP Process:                   running
    Forwarding:                     enabled
    Periodic reoptimization:        every 3600 seconds, next in 1706 seconds
TUNNEL NAME                      DESTINATION      UP IF     DOWN IF   STATE/PROT
Router1_t1                       10.112.0.12      -         Et4/0/1   up/up
tagsw-r11_t2                     10.112.0.12      -         unknown   up/down
tagsw-r11_t3                     10.112.0.12      -         unknown   admin-down
tagsw-r11_t1000                  10.110.0.10      -         unknown   up/down
tagsw-r11_t2000                  10.110.0.10      -         Et4/0/1   up/up
Displayed 5 (of 5) heads, 0 (of 0) midpoints, 0 (of 0) tails
```

Table 105 describes the significant fields shown in the display.

Table 105 show mpls traffic-eng tunnels Field Descriptions

Field	Description
LSP Tunnels Process	Status of the LSP tunnels process.
RSVP Process	Status of the RSVP process.

Table 105 show mpls traffic-eng tunnels Field Descriptions (continued)

Field	Description
Forwarding	Status of forwarding (enabled or disabled).
Periodic reoptimization	Schedule for periodic reoptimization.
TUNNEL NAME	Name of the interface that is configured at the tunnel head.
DESTINATION	Identifier of the tailend router.
UP IF	Upstream interface that the tunnel used.
DOWN IF	Downstream interface that the tunnel used.
STATE/PROT	For tunnel heads, admin-down or up. For nonheads, signalled.

Related Commands

Command	Description
mpls traffic-eng reoptimize timers frequency	Controls the frequency with which tunnels with established LSPs are checked for better LSPs.
mpls traffic-eng tunnels (configuration)	Enables MPLS traffic engineering tunnel signalling on a device.
mpls traffic-eng tunnels (interface)	Enables MPLS traffic engineering tunnel signalling on an interface.

show mpls traffic-eng tunnels summary

To show summary information about tunnels, use the **show mpls traffic-eng tunnels summary** command in user EXEC or privileged EXEC mode.

show mpls traffic-eng tunnels summary

Syntax Description

This command has no arguments or keywords.

Command Modes

User EXEC
Privileged EXEC

Command History

Release	Modification
12.0(5)S	This command was introduced.

Examples

The following is sample output from the **show mpls traffic-eng tunnels summary** command**:**

```
Router# show mpls traffic-eng tunnels summary

Signalling Summary:
    LSP Tunnels Process:            running
    RSVP Process:                   running
    Forwarding:                     enabled
    Head: 1 interfaces, 1 active signalling attempts, 1 established
          1 activations, 0 deactivations
    Midpoints: 0, Tails: 0
    Periodic reoptimization:        every 3600 seconds, next in 3436 seconds
```

Table 106 describes the significant fields shown in the display.

Table 106 show mpls traffic-eng tunnels summary Field Descriptions

Field	Description
LSP Tunnels Process	MPLS traffic engineering has or has not been enabled.
RSVP Process	RSVP has or has not been enabled. (This feature is enabled as a consequence of MPLS traffic engineering being enabled.)
Forwarding	Indicates whether appropriate forwarding is enabled. (Appropriate forwarding on a router is CEF switching.)
Head	Summary information about tunnel heads at this device.
Interfaces	Number of MPLS traffic engineering tunnel interfaces.
Active signalling attempts	LSPs currently successfully signalled or being signalled.
Established	LSPs currently signalled.
activations	Signalling attempts initiated.

Table 106 show mpls traffic-eng tunnels summary Field Descriptions (continued)

Field	Description
deactivations	Signalling attempts terminated.
Periodic reoptimization	Frequency of periodic reoptimization and time until the next periodic reoptimization.

Related Commands

Command	Description
mpls traffic-eng reoptimize timers frequency	Controls the frequency with which tunnels with established LSPs are checked for better LSPs.
mpls traffic-eng tunnels (configuration)	Enables MPLS traffic engineering tunnel signalling on a device.
mpls traffic-eng tunnels (interface)	Enables MPLS traffic engineering tunnel signalling on an interface.

show mpoa client

To display a summary of information regarding one or all Multiprotocol over ATM (MPOA) clients (MPCs), use the **show mpoa client** command in user EXEC or privileged EXEC mode.

show mpoa client [**name** *mpc-name*] [**brief**]

Syntax Description

name *mpc-name*	(Optional) Name of the MPC with the specified name.
brief	(Optional) Output limit of the command.

Command Modes

User EXEC
Privileged EXEC

Command History

Release	Modification
11.3(3a)WA4(5)	This command was introduced.

Usage Guidelines

If you omit the **name** keyword, the command displays information for all MPCs.

Examples

The following is sample output from the **show mpoa client** command:

```
Router# show mpoa client name ip_mpc brief

MPC Name: ip_mpc, Interface: ATM1/0, State: Up
MPC actual operating address: 47.00918100000000613E5A2F01.0010A6943825.00
Shortcut-Setup Count: 1, Shortcut-Setup Time: 1
Lane clients bound to MPC ip_mpc: ATM1/0.1
Discovered MPS neighbors                    kp-alv   vcd     rxPkts     txPkts
47.00918100000000613E5A2F01.006070174824.00     59    30         28          2
Remote Devices known                                  vcd     rxPkts     txPkts
47.00918100000000613E5A2F01.00000C5A0C5D.00            35          0         10
```

Table 107 describes the significant fields shown in the display.

Table 107 show mpoa client Field Descriptions

Field	Description
MPC Name	Name specified for the MPC.
Interface	Interface to which the MPC is attached.
State	Current state of the MPC.
MPC actual operating address	ATM address of the MPC.
Shortcut-Setup Count	Current number specified by the **shortcut-frame-count** command.
Shortcut-Setup Time	Current value specified by the **shortcut-frame-time** command.

Table 107 show mpoa client Field Descriptions (continued)

Field	Description
Lane clients bound to MPC ip_mpc	List of LANE clients currently bound to MPC ip_mpc.
Discovered MPS neighbours	List of learned MPS addresses.
kp-alv	Number of seconds until the next keepalive message should be received.
vcd	Number that identifies the virtual circuit.
rxPkts	Number of packets received from the learned MPS.
txPkts	Number of packets sent to the learned MPS.
Remote Devices known	List of other devices (typically other MPCs) not in this ELAN.
vcd	Number that identifies the virtual circuit to that MPC.
rxPkts	Number of packets received from the learned remote device.
txPkts	Number of packets sent to the learned remote device.

Related Commands

Command	Description
clear mpoa client name	Clears the ingress and egress cache entries.

show mpoa client cache

To display the ingress or egress cache entries matching the IP addresses for the Multiprotocol over ATM (MPOA) clients (MPCs), use the **show mpoa client cache** command in user EXEC or privileged EXEC mode.

show mpoa client [**name** *mpc-name*] **cache** [**ingress** | **egress**] [**ip-address** *ip-address*]

Syntax Description

name *mpc-name*	(Optional) Name of the MPC with the specified name.
ingress	(Optional) Displays ingress cache entries associated with an MPC.
egress	(Optional) Displays egress cache entries associated with an MPC.
ip-address *ip-address*	(Optional) Displays cache entries that match the specified IP address.

Command Modes

User EXEC
Privileged EXEC

Command History

Release	Modification
11.3(3a)WA4(5)	This command was introduced.

Examples

The following is sample output from the **show mpoa client cache** command for a specific MPC:

```
Router# show mpoa client ip_mpc cache

MPC Name: ip-mpc, Interface: ATM1/0, State: Up
MPC actual operating address: 47.00918100000000613E5A2F01.0010A6943825.00
Shortcut-Setup Count: 1, Shortcut-Setup Time: 1
Number of Ingress cache entries: 1
MPC Ingress Cache Information:
Dst IP addr     State   vcd Expires Egress MPC Atm address
20.20.20.1      RSVLD    35   11:38 47.00918100000000613E5A2F01.00000C5A0C5D.00
Number of Egress cache entries: 1
MPC Egress Cache Information:
Dst IP addr         Dst MAC       Src MAC     MPSid  Elan Expires  CacheId  Tag
10.10.10.1      0000.0c5a.0c58 0060.7017.4820     9     2   11:55        1    1
```

Table 108 describes the significant fields shown in the display.

Table 108 show mpoa client cache Field Descriptions

Field	Description
MPC Name	Name specified for the MPC.
Interface	Interface to which the MPC is attached.
State	Current state of the MPC (up or down).
MPC actual operating address	ATM address of the MPC.
Shortcut-Setup Count	Current number specified by the **shortcut-frame-count** command.

Table 108 show mpoa client cache Field Descriptions (continued)

Field	Description
Number of Ingress cache entries	Number of entries in the ingress cache.
MPC Ingress Cache Information	
Dst IP addr	IP address of the destination.
State	State of the ingress cache entry. (Valid states are initialized, trigger, refresh, hold-down, resolved, and suspended.)
vcd	Number that identifies the virtual circuit.
Expires	Time in minutes or seconds until the ingress cache entry expires.
Egress MPC Atm address	ATM address of the egress MPC.
Number of Egress cache entries	Number of entries in the egress cache.
MPC Egress Cache Information	
Dst IP addr	IP address of the destination.
Dst MAC	MAC address of the destination.
Src MAC	MAC address of the source.
MPSid	Unique number representing the egress MPS.
Elan	ELAN identifier of the ELAN serving this destination IP address.
Expires	Time in minutes or seconds until the egress cache entry expires.
CacheID	Cache identifier.
Tag	Label (tag) identifier.

show mpoa client statistics

To display all the statistics collected by a Multiprotocol over ATM (MPOA) client (MPC), use the **show mpoa client statistics** command in user EXEC or privileged EXEC mode.

show mpoa client [**name** *mpc-name*] **statistics**

Syntax Description

name *mpc-name*	(Optional) Specifies the name of the MPC.

Command Modes

User EXEC
Privileged EXEC

Command History

Release	Modification
11.3(3a)WA4(5)	This command was introduced.

Usage Guidelines

This command displays all the statistics collected by an MPC.

Examples

The following is sample output from the **show mpoa client statistics** command for the MPC named ip_mpc:

```
Router# show mpoa client name ip_mpc statistics

MPC Name: ip_mpc, Interface: ATM1/0, State: Up
MPC actual operating address: 47.00918100000000613E5A2F01.0010A6943825.00
Shortcut-Setup Count: 1, Shortcut-Setup Time: 1

                            Transmitted       Received
MPOA Resolution Requests              2              0
MPOA Resolution Replies               0              2
MPOA Cache Imposition Requests        0              0
MPOA Cache Imposition Replies         0              0
MPOA Cache Purge Requests             0              0
MPOA Cache Purge Replies              0              0
MPOA Trigger Request                  0              0
NHRP Purge Requests                   0              0


Invalid MPOA Data Packets Received: 0
```

show mpoa default-atm-addresses

To display the default ATM addresses for the Multiprotocol over ATM (MPOA) client (MPC), use the **show mpoa default-atm-addresses** command in user EXEC or privileged EXEC mode.

show mpoa default-atm-addresses

Syntax Description

This command has no arguments or keywords.

Command Modes

User EXEC
Privileged EXEC

Command History

Release	Modification
11.3(3a)WA4(5)	This command was introduced.

Examples

The following is sample output from the **show mpoa default-atm-addresses** command when the switch prefix is not available:

```
Router# show mpoa default-atm-addresses

interface ATM1/0:
MPOA Server: ...006070174824.**
MPOA Client: ...006070174825.**
note: ** is the MPS/MPC instance number in hex

interface ATM2/0:
MPOA Server: ...006070174844.**
MPOA Client: ...006070174845.**
note: ** is the MPS/MPC instance number in hex
```

The following is sample output from the **show mpoa default-atm-addresses** command when the switch prefix is available:

```
Router# show mpoa default-atm-addresses

interface ATM1/0:
MPOA Server: 47.00918100000000613E5A2F01.006070174824.**
MPOA Client: 47.00918100000000613E5A2F01.006070174825.**
note: ** is the MPS/MPC instance number in hex

interface ATM2/0:
MPOA Server: 47.10000000000000000000000.006070174844.**
MPOA Client: 47.10000000000000000000000.006070174845.**
note: ** is the MPS/MPC instance number in hex
```

Table 109 describes the significant fields shown in the display.

Table 109 show mpoa default-atm-addresses Field Descriptions

Field	Description
interface ATM1/0	Specified interface.
MPOA Server	ATM address of the MPOA server on the interface.
MPOA Client	ATM address of the MPOA client on the interface.

show mpoa server

To display information about any specified Multiprotocol over ATM (MPOA) server (MPS) or all MPSs in the system, depending on whether the name of the required MPS is specified, use the **show mpoa server** command in user EXEC or privileged EXEC mode.

show mpoa server [**name** *mps-name*]

Syntax Description

name *mps-name*	(Optional) Specifies the name of the MPS.

Command Modes

User EXEC
Privileged EXEC

Command History

Release	Modification
11.3(3a)WA4(5)	This command was introduced.

Usage Guidelines

The command displays information about server configuration parameters. It also displays information about LAN Emulated Clients (LECs) that are bound to the MPOA server neighbors (both MPC and MPS).

Examples

The following is sample output from the **show mpoa server** command, with a specified name:

```
Router# show mpoa server name ip_mps

MPS Name: ip_mps, MPS id: 0, Interface: ATM1/0, State: up
network-id: 1, Keepalive: 25 secs, Holding time: 1200 secs
Keepalive lifetime: 75 secs, Giveup time: 40 secs
MPS actual operating address: 47.00918100000000613E5A2F01.006070174824.00
Lane clients bound to MPS ip_mps: ATM1/0.1 ATM1/0.2
Discovered neighbours:
MPC 47.00918100000000613E5A2F01.00000C5A0C5D.00 vcds: 39(R,A)
MPC 47.00918100000000613E5A2F01.0010A6943825.00 vcds: 40(R,A)
```

Table 110 describes the significant fields shown in the display.

Table 110 show mpoa server Field Descriptions

Field	Description
MPS Name	Name of the MPOA server.
MPS id	ID of the MPOA server.
Interface	Interface to which the MPS is attached.
State	State of the MPOA server: up or down.
network-id	Network ID used for partitioning.
Keepalive	Keepalive time value.

Table 110 show mpoa server Field Descriptions (continued)

Field	Description
Holding time	Holding time value.
Keepalive lifetime	Keepalive lifetime value.
Giveup time	Minimum time to wait before giving up on a pending resolution request.
MPS actual operating address	Actual control address of this MPS.
Lane clients bound to MPS ip_mps	List of LANE clients served by the MPS.
Discovered neighbours	MPOA devices discovered by the clients bound to this MPS.

Related Commands

Command	Description
clear mpoa server name	Clears the ingress and egress cache entries of one or all MPCs.

show mpoa server cache

To display ingress and egress cache entries associated with an Multiprotocol over ATM (MPOA) server (MPS), use the **show mpoa server cache** command in user EXEC or privileged EXEC mode.

show mpoa server [**name** *mps-name*] **cache** [**ingress** | **egress**] [**ip-address** *ip-address*]

Syntax Description

name *mps-name*	(Optional) Specifies the name of an MPS.
ingress	(Optional) Displays ingress cache entries associated with a server.
egress	(Optional) Displays egress cache entries associated with a server.
ip-address *ip-address*	(Optional) Displays the entries that match the specified IP address.

Command Modes

User EXEC
Privileged EXEC

Command History

Release	Modification
12.0	This command was introduced.

Usage Guidelines

This command displays ingress and egress cache entries associated with an MPS.

Examples

The following is sample output from the **show mpoa server cache** command, with a name specified:

```
Router# show mpoa server name ip_mps cache

MPS Name: ip_mps, MPS id: 0, Interface: ATM1/0, State: up
network-id: 1, Keepalive: 25 secs, Holding time: 1200 secs
Keepalive lifetime: 75 secs, Giveup time: 40 secs
MPS actual operating address: 47.00918100000000613E5A2F01.006070174824.00
Number of Ingress cache entries: 1
Ingress Cache information:
  IP address      Ingress MPC ATM Address                      Remaining Time
  20.20.20.1      47.00918100000000613E5A2F01.0010A6943825.00  19:07
Number of Egress cache entries: 1
Egress Cache information:
  Dst IP address  Ingress MPC ATM Address                      Remaining Time
  20.20.20.1      47.00918100000000613E5A2F01.0010A6943825.00  19:06
         src IP 20.20.20.2, cache Id 1
```

Table 111 describes the significant fields shown in the display.

Table 111 show mpoa server cache Field Descriptions

Field	Description
MPS Name	Name of the MPOA server.
MPS id	ID of the MPOA server.
Interface	Interface to which the MPS is attached.

Table 111 show mpoa server cache Field Descriptions (continued)

Field	Description
State	State of the MPOA server: up or down.
network-id	Network ID used for partitioning.
Keepalive	Keepalive time value.
Holding time	Holding time value.
Keepalive lifetime	Keepalive lifetime value.
Giveup time	Minimum time to wait before giving up on a pending resolution request.
MPS actual operating address	Actual control address of this MPS.
Number of Ingress cache entries	Number of entries in the ingress cache.
Ingress Cache information	Information of ingress cache.
IP address	IP address of the MPC.
Ingress MPC ATM Address	ATM address of the ingress MPC.
Remaining Time	Time for which the cache entry is valid.
Number of Egress cache entries	Number of entries in the egress cache.
Egress Cache information	Information of egress cache.
Dst IP address	IP address of the destination.
src IP	IP address of the source MPS that originated the NHRP resolution request.
cache Id	Cache identifier.

show mpoa server statistics

To display all the statistics collected by an Multiprotocol over ATM (MPOA) server (MPS), use the **show mpoa server statistics** command in user EXEC or privileged EXEC mode.

show mpoa server [**name** *mps-name*] **statistics**

Syntax Description

name *mps-name*	(Optional) Specifies the name of an MPS.

Command Modes

User EXEC
Privileged EXEC

Command History

Release	Modification
12.0	This command was introduced.

Usage Guidelines

This command will display all the statistics collected by an MPS. The statistics pertain to the ingress or egress cache entry creation, deletion, and failures.

Examples

The following is a sample output from the **show mpoa server statistics** command, with a name specified:

```
Router# show mpoa server name ip_mps statistics

MPS Name: ip_mps, MPS id: 0, Interface: ATM1/0, State: up
network-id: 1, Keepalive: 25 secs, Holding time: 1200 secs
Keepalive lifetime: 75 secs, Giveup time: 40 secs
MPS actual operating address: 47.00918100000000613E5A2F01.006070174824.00
Opcode                          Transmitted    Received
-----------------------------------------------------------
MPOA Resolution Requests                             2
MPOA Resolution Replies                    2
MPOA Cache Imposition Requests             1
MPOA Cache Imposition Replies                        1
MPOA Egress Cache Purge Requests                     0
MPOA Egress Cache Purge Replies            0
NHRP Resolution Requests                   0         0
NHRP Resolution Replies                    0         0
NHRP Purge Requests                        0         0
```

Table 112 describes the significant fields shown in the display.

Table 112 show mpoa server statistics Field Descriptions

Field	Description
MPS Name	Name of the MPOA server.
MPS id	ID of the MPOA server.
Interface	Specified interface.

Table 112 show mpoa server statistics Field Descriptions (continued)

Field	Description
State	State of the MPOA server: up or down.
network-id	Network ID used for partitioning.
Keepalive	Keepalive time value.
Holding time	Holding time value.
Keepalive lifetime	Keepalive lifetime value.
Giveup time	Minimum time to wait before giving up on a pending resolution request.
MPS actual operating address	Actual control address of this MPS.

show port flowcontrol

To display per-port status information and statistics related to flow control, use the **show port flowcontrol** command in privileged EXEC mode.

show port flowcontrol [*module-number*[/*port-number*]]

Syntax Description

module-number	(Optional) Number of the module.
port-number	(Optional) Number of the port on the module. If you do not specify a number, filters configured on all the ports on the module are shown.

Command Modes

Privileged EXEC

Command History

Release	Modification
12.2(11)T	This command was introduced and implemented on the Cisco 2600 series, Cisco 3600 series, and Cisco 3700 series routers.

Usage Guidelines

The Catalyst 2948G is a fixed configuration switch. All ports are located on module 2; for this reason, if you enter *module-number*/*port-number* 1/*N*, an error message is displayed.

Examples

The following example shows how to display the flow-control port status and statistics:

```
Router# show port flowcontrol

Port    Send-Flowcontrol   Receive-Flowcntl   RxPause   TxPause
        Admin    Oper      Admin    Oper
-----   -------------      -------------      -------   ------
 3/1    on       disagree  on       disagree  0         0
 3/2    off      off       off      off       0         0
 3/3    desired  on        desired  off       10        10
```

Table 113 describes the fields shown in the display.

Table 113 show port flowcontrol Field Descriptions

Field	Description
Port	Module and port number.
Send-Flowcontrol Admin	Flow-control administration. Possible settings: • On indicates the local port sends flow control to the far end. • Off indicates the local port does not send flow control to the far end. • Desired indicates the local end sends flow control to the far end if the far end supports it.

Table 113 show port flowcontrol Field Descriptions (continued)

Field	Description
Send-Flowcontrol Oper	Flow-control operation. Possible setting: • Disagree indicates the two ports could not agree on a link protocol. • Off indicates that the local port cannot send flowcontrol to a remote port.
Receive-Flowcntl Admin	Flow-control administration. Possible settings: • On indicates the local port requires the far end to send flow control. • Off indicates the local port does not allow the far end to send flow control. • Desired indicates the local end allows the far end to send flow control.
Receive-Flowcntl Oper	Flow-control operation. Possible setting: • Disagree indicates the two ports could not agree on a link protocol. • Off indicates that the local port cannot receive flowcontrol from a remote port.
RxPause	Number of pause frames received.
TxPause	Number of pause frames transmitted.

Related Commands

Command	Description
set port flowcontrol	Sets the receive flow-control value for a particular Gigabit Ethernet switching module port.

show pxf accounting

To show Parallel eXpress Forwarding (PXF) switching statistics for individual interfaces, use the **show pxf accounting** command in user EXEC or privileged EXEC mode.

show pxf accounting *interface* [*slot/port*]

Syntax Description

interface	Specifies the type of interface to display.
slot	(Optional) Backplane slot number. On the Cisco 7200 VXR series routers, the value can be from 0 to 6.
port	(Optional) Port number of the interface. On the Cisco 7200 VXR series routers, the value can be from 0 to 5.

Command Modes

User EXEC
Privileged EXEC

Command History

Release	Modification
12.1(1)E	This command was introduced.
12.1(5)T	This command was integrated into Cisco IOS Release 12.1(5)T.

Usage Guidelines

You can display information about the following interface types using the **show pxf accounting** command, as shown in Table 114:

Table 114 show pxf accounting Interface Types

Keyword	Interface Type
atm	ATM interface.
ethernet	Ethernet interface.
fastethernet	FastEthernet interface.
hssi	High Speed Serial interface.
null	Null interface.
pos	Packet-over-SONET interface.
serial	Synchronous serial interface.
summary	PXF summary statistics.

Examples

The following is sample output from the **show pxf accounting ?** command:

```
Router# show pxf accounting ?

  ATM           ATM interface
  Ethernet      IEEE 802.3
  FastEthernet  FastEthernet IEEE 802.3
  Hssi          High Speed Serial Interface
  Null          Null interface
  POS           Packet over Sonet
  Serial        Serial
  summary       PXF summary statistics
```

The following is sample output from the **show pxf accounting ethernet** command using an Ethernet interface in slot 4 on a Cisco 7200 VXR series router:

```
Router# show pxf accounting ethernet 4/0

Interface    Pkts In   Chars In   Pkts Out  Chars Out     Punted     Dropped
Ethernet4/0    0          0        122      11490          4          0
```

The following is sample output from the **show pxf accounting null** command using a null interface in slot 0 on a Cisco 7200 VXR series router:

```
Router# show pxf accounting null 0/0

Interface    Pkts In   Chars In   Pkts Out  Chars Out     Punted    Dropped
nu0/0          0          0          0          0       4932          0
```

The following is sample output from the **show pxf accounting pos** command using a Packet-over-SONET interface in slot 4 on a Cisco 7200 VXR series router:

```
Router# show pxf accounting pos

Interface    Pkts In   Chars In   Pkts Out  Chars Out     Punted    Dropped
POS4/0          19       1064         0          0         44         0
```

The following is sample output from the **show pxf accounting serial** command using a serial interface in slot 5 on a Cisco 7200 VXR series router:

```
Router# show pxf accounting serial 5/0

       Interface    Pkts In   Chars In   Pkts Out  Chars Out     Punted    Dropped
   Serial5/0          0          0          0          0          0       0
```

The following is sample output from the **show pxf accounting summary** command:

```
Router# show pxf accounting summary

           Pkts        Dropped   RP Processed        Ignored
          Total              0          48360              0

PXF Statistic:
Packets RP -> PXF:
    switch ip:                0
    switch raw:          30048360
    qos fastsend:             0
    qos enqueue:           1938
Total:                   30050298

Packets PXF -> RP:
    qos pkts:              1938
    fast pkts:           30000000
    drops:total               0
    punts:total           48360
```

```
      "    not IP            :      40572
      "    CEF no adjacency  :       7788
Total:                  30050298

Packets ignored:               0     |    ring space:
    shadow ring full:          0     |        shadow ring:          16384
    in ring full:              0     |        inring:                 968
    PXF inactive:              0

tx credits:             16230330     |    delayed credits:              0
holdq enqueues:                0     |    requeue drops:                0
interrupts:                40538     |    interrupt misses:          1947
interrupt packets:         53326
pending read bytes:            0

     Interface    Pkts In   Chars In   Pkts Out  Chars Out     Punted    Dropped
         Fa0/0          0          0   30000000 1740000000        970          0
         Et1/0          0          0          0          0      21309          0
         Et1/1          0          0          0          0          0          0
         Et1/2          0          0          0          0          0          0
         Et1/3          0          0          0          0          0          0
         Se2/0          0          0          0          0        963          0
         Se2/1          0          0          0          0          0          0
         Se2/2          0          0          0          0          0          0
         Se2/3          0          0          0          0          0          0
         Fa3/0          0          0          0          0        963          0
         PO4/0   30000000 1440000000          0          0        963          0
         AT5/0          0          0          0          0      23192          0
           Vi1          0          0          0          0          0          0
           Vt1          0          0          0          0          0          0
           Vi2          0          0          0          0          0          0
```

Related Commands

Command	Description
show pxf crash	Displays PXF crash information.
show pxf feature	Displays the PXF routing feature tables for enabled PXF features.
show pxf interface	Displays a summary of the interfaces in the router and the PXF features or capabilities enabled on these interfaces.

show pxf crash

To show Parallel eXpress Forwarding (PXF) crash information, use the **show pxf crash** command in user EXEC or privileged EXEC mode.

show pxf crash

Syntax Description

This command has no arguments or keywords.

Command Modes

User EXEC
Privileged EXEC

Command History

Release	Modification
12.1(1)E	This command was introduced.
12.1(5)T	This command was integrated into Cisco IOS Release 12.1(5)T.

Examples

The following is sample output from the **show pxf crash** command:

```
Router# show pxf crash

      EX_Type = 0x80000000
      EX_ID(b0~3,16~17) = 0x00400
      CPU_EX_ID(b0~15) = 0x0004
      IHB_EX_Type(b0~5) = 0x00
      XRAM0(b0~13) = 0x00000
      XRAM1(b0~13) = 0x00000
      XRAM2(b0~13) = 0x00000
      XRAM3(b0~13) = 0x00000
      Pipeline:7FDEFD pdone[3210]:1F  17  17  1D

    ICM0(b4~13) = 0x00000  ICM1(b4~13) = 0x00000
    ICM2(b4~13) = 0x00010  ICM3(b4~13) = 0x00000
    LOCK0(b0~4) = 0x00000  LOCK1(b0~4) = 0x00000
    LOCK2(b0~4) = 0x00000  LOCK3(b0~4) = 0x00000
    CPU0/2: SW EX Type=0x00000000 LBUS EX Type=0x00000081 HW EX
    Type=0x00000400

    CPU:row=0x0 column=0x2 cpu=0x2
     PC:0000098E  LR:0000087F  CR:002C4C00
     r0:00000000  r1:8001CEA0  r2:80784390  r3:00000000
     r4:00005400  r5:80D3BA04  r6:80A7CA00  r7:00000004
     r8:00000000  r9:00000008 r10:80092324 r11:800A6200
    r12:00000033 r13:00000008 r14:00000000 r15:00000000
      misr1a:00000000 misr1bhi:00000000 misr1blo:00000000  misr2hi:00000000
     misr2lo:00000000  reserve:00000000  reserve:00000000  reserve:00000000
      sisr1a:01000040   sisr1b:00000000     irhi:4402200F     irlo:00000000
    cAll:C20DE822 DCD1:00020400 DCD2:00000002 CNTL:00000000
    TBuf intr 0:1111111F
    TBuf intr 1:020FFFF0
    TBuf intr 2:00003C80
    TBuf intr 3:80000000
    TBuf intr 4:00000400
```

```
Xram return:00000000
Icram return hi:80024E00
Icram return lo:800A4E00
TBuf addr 0:005E6800 TBuf sblock1 0:8078A374 TBuf sblock0 0:804FD600
TBuf addr 1:005E6800 TBuf sblock1 1:8078A374 TBuf sblock0 1:804FD600
TBuf addr 2:005E6800 TBuf sblock1 2:8078A374 TBuf sblock0 2:804FD600
TBuf addr 3:005E6800 TBuf sblock1 3:8078A374 TBuf sblock0 3:804FD600
TBuf addr 4:005E6800 TBuf sblock1 4:8078A374 TBuf sblock0 4:804FD600
TBuf addr 5:005E6800 TBuf sblock1 5:8078A374 TBuf sblock0 5:804FD600
TBuf addr 6:005E6800 TBuf sblock1 6:8078A374 TBuf sblock0 6:804FD600
TBuf addr 7:005E6800 TBuf sblock1 7:8078A374 TBuf sblock0 7:804FD600
```

show pxf feature cef

To display Parallel eXpress Forwarding (PXF) routing feature tables for Cisco Express Forwarding (CEF), use the **show pxf feature cef** command in user EXEC or privileged EXEC mode.

show pxf feature cef *entry*

Syntax Description

entry	Display the PXF entry.

Command Modes

User EXEC
Privileged EXEC

Command History

Release	Modification
12.1(1)E	This command was introduced.
12.1(5)T	This command was integrated into Cisco IOS Release 12.1(5)T.

Examples

The following is sample output from the **show pxf feature cef** command:

```
Router# show pxf feature cef entry

    Shadow 16-4-4-8 PXF Mtrie:
      41 leaves, 1968 leaf bytes, 15 nodes, 267000 node bytes
      5 invalidations
      46 prefix updates
      refcounts: 66746 leaf, 66720 node

    Prefix/Length        Refcount   Parent
    0.0.0.0/0           62282
    0.0.0.0/32          3           0.0.0.0/0
    171.69.12.128/27    34          0.0.0.0/0
    171.69.12.128/32    3           171.69.12.128/27
    171.69.12.129/32    3           171.69.12.128/27
    171.69.12.130/32    3           171.69.12.128/27
    171.69.12.131/32    3           171.69.12.128/27
    171.69.12.147/32    3           171.69.12.128/27
```

Related Commands

Command	Description
show pxf feature nat	Displays PXF routing feature tables for NAT.

show pxf feature nat

To display Parallel eXpress Forwarding (PXF) routing tables for Network Address Translation (NAT), use the **show pxf feature nat** command in user EXEC or privileged EXEC mode.

show pxf feature nat [**entry** | **stat** | **tcp**]

Syntax Description

entry	Displays NAT information.
stat	Displays NAT processing information.
tcp	Displays NAT TCP logging information.

Command Modes

User EXEC
Privileged EXEC

Command History

Release	Modification
12.1(1)E	This command was introduced.
12.1(5)T	This command was integrated into Cisco IOS Release 12.1(5)T.

Examples

The following is sample output from the **show pxf feature nat** command:

```
Router# show pxf feature nat

--- 171.69.12.175      192.168.0.129      ---                ---
--- 171.69.12.163      192.168.0.7        ---                ---
--- 171.69.12.161      192.168.0.13       ---                ---
--- 171.69.12.162      192.168.0.3        ---                ---
--- 171.69.12.165      192.168.0.8        ---                ---
--- 171.69.12.168      192.168.0.14       ---                ---
--- 171.69.12.170      192.168.0.12       ---                ---
--- 171.69.12.166      192.168.0.15       ---                ---
--- 171.69.12.164      192.168.0.16       ---                ---
```

Related Commands

Command	Description
show pxf feature cef	Displays PXF routing feature tables for CEF.

show pxf interface

To show a summary of the interfaces on the router and the Parallel eXpress Forwarding (PXF) features or capabilities enabled on these interfaces, use the **show pxf interface** command in user EXEC or privileged EXEC mode.

show pxf interface

Syntax Description

This command has no arguments or keywords.

Command Modes

User EXEC
Privileged EXEC

Command History

Release	Modification
12.1(3a)E	This command was introduced.
12.1(5)T	This command was integrated into Cisco IOS Release 12.1(5)T.

Examples

The following is sample output from the **show pxf interface** command:

```
Router# show pxf interface

 Intf  I/f #  Attributes
Fa0/0    3    Raw, Encap, QoS(Cr 0, Thrsh 2, Max 101)
Et1/0    4    Raw, Encap
Et1/1    5    Raw, Encap, QoS(Cr 0, Thrsh 2, Max 13)
Et1/2    6    Raw, Encap
Et1/3    7    Raw, Encap
Se2/0    8    Raw, Encap, QoS(Cr 0, Thrsh 2, Max 5)
Se2/1    9    Raw, Encap, QoS(Cr 0, Thrsh 2, Max 5)
Se2/2    10   Raw, Encap, QoS(Cr 0, Thrsh 2, Max 5)
Se2/3    11   Raw, Encap, QoS(Cr 0, Thrsh 2, Max 5)
Fa3/0    12   Raw, Encap
PO4/0    13   Raw, Encap
AT5/0    14   Raw, Encap
```

Related Commands

Command	Description
show pxf feature	Displays the PXF routing feature tables for enabled PXF features.

show route-map ipc

To display counts of the one-way route map interprocess communication (IPC) messages sent from the rendezvous point (RP) to the Versatile Interface Processor (VIP) when NetFlow policy routing is configured, use the **show route-map ipc** command in user EXEC or privileged EXEC mode.

show route-map ipc

Syntax Description

This command has no arguments or keywords.

Command Modes

Privileged EXEC

Command History

Release	Modification
12.0(3)T	This command was introduced.

Usage Guidelines

This command displays the counts of one-way route map IPC messages from the RP to the VIP when NetFlow policy routing is configured. If you execute this command on the RP, the messages are shown as “Sent.” If you execute this command on the VIP console, the IPC messages are shown as “Received.”

Examples

The following is sample output of the **show route-map ipc** command when it is executed on the RP:

```
Router# show route-map ipc

Route-map RP IPC Config Updates Sent
Name: 4
Match access-list: 2
Match length: 0
Set precedence: 1
Set tos: 0
Set nexthop: 4
Set interface: 0
Set default nexthop: 0
Set default interface: 1
Clean all: 2
```

The following is sample output of the **show route-map ipc** command when it is executed on the VIP:

```
Router# show route-map ipc

Route-map LC IPC Config Updates Received
Name: 4
Match access-list: 2
Match length: 0
Set precedence: 1
Set tos: 0
Set nexthop: 4
Set interface: 0
Set default nexthop: 0
Set default interface: 1
Clean all: 2
```

Table 115 describes the significant fields shown in the display.

Table 115 show route-map ipc Field Descriptions

Field	Description
Route-map RP IPC Config Updates Sent	Indicates that IPC messages are being sent from the RP to the VIP.
Name:	Number of IPC messages sent about the name of the route map.
Match access-list:	Number of IPC messages sent about the access list.
Match length	Number of IPC messages sent about the length to match.
Set precedence:	Number of IPC messages sent about the precedence.
Set tos:	Number of IPC messages sent about the type of service (ToS).
Set nexthop:	Number of IPC messages sent about the next hop.
Set interface:	Number of IPC messages sent about the interface.
Set default nexthop:	Number of IPC messages sent about the default next hop.
Set default interface:	Number of IPC messages sent about the default interface.
Clean all:	Number of IPC messages sent about clearing the policy routing configuration from the VIP. When dCEF is disabled and reenabled, the configuration related to policy routing must be removed (cleaned) from the VIP before the new information is downloaded from the RP to the VIP.

Related Commands

Command	Description
set ip next-hop verify-availability	Configures policy routing to verify if the next hops of a route map are CDP neighbors before policy routing to that next hop.

show spantree

To display spanning-tree information for a virtual LAN (VLAN) or port, use the **show spantree** command in privileged EXEC mode.

show spantree [*vlan*] [**active**]

show spantree *mod/port*

Syntax Description

vlan	(Optional) Number of the VLAN; valid values are from 1 to 1001 and from 1025 to 4094.
active	(Optional) Displays only the active ports.
mod/port	Number of the module and the port on the module. The slash mark is required.

Command Modes

Privileged EXEC

Command History

Release	Modification
12.0(7)XE	This command was introduced on the Catalyst 6000 family switches.
12.2(2)XT	This command was implemented on the Cisco 2600 series, Cisco 3600 series, and Cisco 3700 series routers.
12.2(8)T	This command was integrated into Cisco IOS Release 12.2(8)T on the Cisco 2600 series, Cisco 3600 series, and Cisco 3700 series routers.

Usage Guidelines

If you do not specify the VLAN number, VLAN 1 is displayed.

If you are in Multiple Instances of Spanning Tree (MISTP) mode, instance information is not displayed.

The maximum length of the channel port list can be 47. The space in the Port(s) column might not be enough to display the entire list in one line. If this is the case, the port list is split into multiple lines. For example, in the following display, ports 6/5-8, 6/13, 6/15, 6/17, 6/19 are channeling:

```
.
.
.
Port(s)                  Vlan Port-State    Cost      Prio Portfast Channel_id
------------------------ ---- ------------- --------- ---- -------- ----------
6/5-8,6/13,6/15,6/17,6/1 1    not-connected 2684354   32   disabled 0

9
.
.
.
```

The Link Aggregation Control Protocol (LACP) channel protocol does not support half-duplex links. If a port is in active/passive mode and becomes half duplex, the port is suspended (and a syslog message is generated). The port is shown as “connected” using the **show port** command and as “not connected” using the **show spantree** command. This discrepancy is because the port is physically connected but never joined between spanning tree. To get the port to join spanning tree, either set the duplex to full or set the channel mode to off for that port.

Examples

The following example shows how to display the active spanning tree port configuration for VLAN 1 while in Per VLAN Spanning Tree (PVST+ mode):

```
Router# (enable) show spantree 1 active
VLAN 1
Spanning tree mode          PVST+
Spanning tree type          ieee
Spanning tree enabled

Designated Root             00-60-70-4c-70-00
Designated Root Priority    16384
Designated Root Cost        19
Designated Root Port        2/3
Root Max Age   14 sec   Hello Time 2  sec   Forward Delay 10 sec

Bridge ID MAC ADDR          00-d0-00-4c-18-00
Bridge ID Priority          32768
Bridge Max Age 20 sec   Hello Time 2  sec   Forward Delay 15 sec

Port                     Vlan Port-State    Cost      Prio Portfast Channel_id
------------------------ ---- ------------- --------- ---- -------- ----------
 2/3                     1    forwarding           19   32 disabled 0
 2/12                    1    forwarding           19   32 disabled 0
```

The following example shows how to display the active spanning-tree port configuration for VLAN 1 (while in MISTP mode):

```
Router# (enable) show spantree 1 active

VLAN 1
Spanning tree mode          MISTP
Spanning tree type          ieee
Spanning tree enabled
VLAN mapped to MISTP Instance: 1
Port                     Vlan Port-State    Cost      Prio Portfast Channel_id
------------------------ ---- ------------- --------- ---- -------- ----------
 2/3                     1    forwarding       200000   32 disabled 0
 2/12                    1    forwarding       200000   32 disabled 0
```

Table 116 describes the significant fields shown in the displays.

Table 116 show spantree Field Descriptions

Field	Description
VLAN	VLAN for which the spanning-tree information is shown.
Spanning tree	Status of whether Spanning Tree Protocol is enabled or disabled.
Designated Root	MAC address of the designated spanning-tree root bridge.
Designated Root Priority	Priority of the designated root bridge.
Designated Root Cost	Total path cost to reach the root.
Designated Root Port	Port through which the root bridge can be reached (shown only on nonroot bridges).
Root Max Age	Amount of time a bridge packet data unit (BPDU) packet should be considered valid.
Hello Time	Number of times the root bridge sends BPDUs.
Forward Delay	Amount of time the port spends in listening or learning mode.
Port	Port number.
Vlan	VLAN to which the port belongs.
Port-State	Spanning tree port state (disabled, inactive, not-connected, blocking, listening, learning, forwarding, bridging, or type-pvid-inconsistent).
Cost	Cost associated with the port.
Prio	Priority associated with the port.
Portfast	Status of whether the port is configured to use the PortFast feature.
Channel_id	Channel ID number.

Related Commands

Command	Description
show spantree backbonefast	Displays whether the spanning-tree BackboneFast Convergence feature is enabled.
show spantree blockedports	Displays only the blocked ports on a per-VLAN or per-instance basis.
show spantree portvlancost	Shows the path cost for the VLANs or extended-range VLANs.
show spantree statistics	Shows spanning tree statistical information
show spantree summary	Displays a summary of spanning-tree information.
show spantree uplinkfast	Shows the UplinkFast feature settings.

show tag-switching atm-tdp bindings

The **show tag-switching atm-tdp bindings** command is replaced by the **show mpls atm-ldp bindings** command. See the **show mpls atm-ldp bindings** command for more information.

show tag-switching atm-tdp bindwait

The **show tag-switching atm-tdp bindwait** command is replaced by the **show mpls atm-ldp bindwait** command. See the **show mpls atm-ldp bindwait** command for more information.

show tag-switching atm-tdp capability

The **show tag-switching atm-tdp capability** command is replaced by the **show mpls atm-ldp capability** command. See the **show mpls atm-ldp capability** command for more information.

show tag-switching atm-tdp summary

The **show tag-switching atm-tdp summary** command is replaced by the **show mpls atm-ldp bindings summary** command. See the **show mpls atm-ldp bindings** command for more information.

show tag-switching cos-map

The **show tag-switching cos-map** command is replaced by the **show mpls cos-map** command. See the **show mpls cos-map** command for more information.

show tag-switching prefix-map

The **show tag-switching prefix-map** command is replaced by the **show mpls prefix-map** command. See the **show mpls prefix-map** command for more information.

show tag-switching tdp bindings

The **show tag-switching tdp bindings** command is replaced by the **show mpls ldp bindings** command. See the **show mpls ldp bindings** command for more information.