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FiberstoreOS

VPLS Command Line Reference

Contents

1 LDP Commands

1.1 advertise-labels for

Use this command to specify which destinations have their labels advertised to LDP neighbors. Use the no parameter to specify which destinations do not have their labels advertised to LDP neighbors.

Command Syntax

advertise-labels for *PREFIX_ACL* **to** (*PEER_ACL* | **any**)

no advertise-labels for *PREFIX_ACL* **to** (*PEER_ACL* | **any**)

PREFIX_ACL	Destinations which have their labels advertised
PEER_ACL	neighbors which receive these advertisements
any	All LDP neighbors

Command Mode

Router

Defaults

The labels of all destinations are advertised to all LDP neighbors.

Examples

In the following example, the advertise-labels for command is used to specify which destinations have their labels advertised to all LDP neighbors:

Switch# configure terminal

Switch(config)# router ldp

Switch(config-router)# advertise-labels for prefix-acl to any

Related Commands

advertise-labels for any to none

advertise-labels for prefix-acl to peer-acl

1.2 clear ldp adjacency

Use this command to clear an adjacency with a specified peer (IP address A.B.C.D), or to clear all adjacencies for the current LSR.

Command Syntax

clear ldp adjacency (*A.B.C.D* | *)

A.B.C.D	The address of the adjacent peer
*	Use to clear all adjacencies

Command Mode

Privileged Exec

Defaults

None

Examples

In the following example, the clear ldp adjacency command is used to clear an adjacency with a specified peer:

Switch# clear ldp adjacency 123.123.123.33

Related Commands

clear ldp session

show ldp adjacency

1.3 clear ldp session

Use this command to clear a session established with a specified peer (IP address A.B.C.D), or to clear all sessions for the current LSR.

Command Syntax

clear ldp session (*A.B.C.D*|*)

A.B.C.D	The address of the adjacent peer
*	Use to clear all adjacencies

Command Mode

Privileged Exec

Defaults

None

Examples

In the following example, the clear ldp session command is used to clear a session established with a specified peer:

Switch# clear ldp session 123.123.123.33

Related Commands

clear ldp adjacency

show ldp adjacency

show ldp session

1.4 clear ldp statistics

Use this command to clear LDP packet statistics.

Command Syntax

clear ldp statistics

Command Mode

Privileged Exec

Defaults

None

Examples

In the following example, the clear ldp statistics command is used to clear LDP packet statistics:

Switch# clear ldp statistics

Related Commands

show ldp statistics

1.5 clear ldp statistics advertise-labels

Use this command to clear LDP advertise-labels statistics.

Command Syntax

clear ldp statistics advertise-labels (**for** *PREFIX_ACL*) (**to** *PERR_ACL*)

advertise-labels	Count per each operation filtered by an advertisement list
PREFIX_ACL	Destinations which have their labels advertised
PERR_ACL	LDP neighbors which receive these advertisements

Command Mode

Privileged Exec

Defaults

None

Examples

In the following example, the clear ldp statistics advertise-labels command is used to clear LDP advertise-labels statistics:

Switch# clear ldp statistics advertise-labels for prefix_acl to peer_acl

Related Commands

show ldp statistics advertise-labels

1.6 control-mode

Use this command to set the control mode for label processing. Use the no parameter to revert to default control mode.

Ordered processing sets the mode to strict chain-of-command ;an LSR replies to a request packet from an LSR higher in the chain only after it receives a label from an LSR lower in the chain. Independent processing sets the mode to instant replies.

In independent control mode, each LSR might advertise label mappings to its neighbors at any time. An LSR might advertise a label mapping for an FEC to its neighbors whenever it is prepared to label-switch that FEC.

In ordered control mode, an LSR may initiate the transmission of label mapping only for an FEC for which it has a label mapping for the FEC next hop, or for which the LSR is the egress.

Changes in control mode only affect labels that were sent to or received after the change was made.

Command Syntax

control-mode (**ordered | independent**)

no control-mode (**ordered | independent**)

ordered	Sets control mode to ordered processing.
independent	Sets control mode to independent processing

Command Mode

Router

Defaults

Independent control

Examples

In the following example, the control-mode command is used to set the control mode for label processing:

Switch# configure terminal

Switch(config)# router ldp

Switch(congig-router)# control-mode ordered

Related Commands

show ldp

1.7 debug ldp advertise-labels

Use this command to debug the IP access list of LDP advertise-labels. Use the no parameter with this command to disable this function.

Command Syntax

debug ldp advertise-labels

no debug ldp advertise-labels

Command Mode

Privileged Exec

Defaults

None

Examples

In the following example, the debug ldp advertise-labels command is used to debug the IP access list of LDP advertise-labels:

Switch# debug ldp advertise-labels

Related Commands

show debugging ldp

1.8 debug ldp all

Use this command to enable all LDP troubleshooting functions. Use the no parameter with this command to disable this function.

Command Syntax

debug ldp all

no debug ldp all

Command Mode

Privileged Exec

Defaults

None

Examples

In the following example, the debug ldp all command is used to enable all LDP troubleshooting functions:

Switch# debug ldp all

Related Commands

show debugging ldp

1.9 debug ldp dsm

Use this command to write Downstream state machine specific information to the output.

On using a debug command, the router continues to generate an output until the no parameter is used with the command. The debug output and system error messages are written on the virtual terminal. Use the log file or log syslog command in configure mode to redirect the debugging output to a file or the syslog.

Command Syntax

debug ldp dsm

no debug ldp dsm

Command Mode

Privileged Exec

Defaults

None

Examples

In the following example, the **debug ldp dsm** command is used to write Downstream state machine specific information to the output:

Switch# debug ldp dsm

Related Commands

debug ldp fsm

debug ldp packet

1.10 debug ldp usm

Use this command to write Upstream state machine specific information to the output.

On using a debug command, the router continues to generate an output until the no parameter is used with the command. The debug output and system error messages are written on the virtual terminal. Use the log file or log syslog command in configure mode to redirect the debugging output to a file or the syslog.

Command Syntax

debug ldp usm

no debug ldp usm

Command Mode

Privileged Exec

Defaults

None

Examples

In the following example, the debug ldp usm command is used to write Downstream state machine specific information to the output:

Switch# debug ldp usm

Related Commands

debug ldp fsm

debug ldp packet

1.11 debug ldp events

Use this command to monitor all LDP events, such as sending packets and receiving packets.

On using a debug command the router continues to generate an output until the no parameter is used with the command. The debug output and system error messages are written on the virtual terminal. Use the log file or log syslog command in the configure mode to redirect the debugging output to a file or the syslog.

Command Syntax

debug ldp events

no debug ldp events

Command Mode

Privileged Exec

Defaults

None

Examples

In the following example, the debug ldp events command is used to monitor all LDP events:

Switch# debug ldp events

```
2002/06/18 11:30:35 LDP: RECV packet from 192.168.3.5 port 32783
2002/06/18 11:30:35 LDP: ldp_message_hello_recv: Hello Packet received from 192.168.3.5
2002/06/18 11:30:36 LDP: ldp_message_hello_send: Sending Hello message via interface
eth1. No transport address is being advertised.
2002/06/18 11:30:36 LDP: SEND to socket 13 port 646 addr 224.0.0.2
```

```
2002/06/18 11:30:36 LDP: ldp_message_hello_send: Sending Hello message via interface
eth2. No transport address is being advertised.
2002/06/18 11:30:36 LDP: SEND to socket 13 port 646 addr 224.0.0.2
2002/06/18 11:30:37 LDP: Server : TCP Connection established with 192.168.3.5
2002/06/18 11:30:37 LDP: ldp_message_initialization_recv: Initialization message
received from 192.168.3.5
```

Related Commands

debug ldp fsm

debug ldp packet

1.12 debug ldp fsm

Use this command to monitor the LDP finite state machine status.

On using a debug command, the router continues to generate an output until the no parameter is used with the command. The debug output and system error messages are written on the virtual terminal. Use the log file or log syslog command in configure mode to redirect the debugging output to a file or the syslog.

Command Syntax

debug ldp fsm

no debug ldp fsm

Command Mode

Privileged Exec

Defaults

None

Examples

In the following example, the debug ldp fsm command is used to monitor the LDP finite state machine status:

Switch# debug ldp fsm

```
2002/06/18 11:40:01 LDP: FSM: State changed from NON_EXISTENT to INITIALIZED for event
LDP_EVENT_TCP_established
2002/06/18 11:40:01 LDP: FSM: State changed from INITIALIZED to OPENREC for event
LDP_EVENT_Recv_Init_msg
```

```
2002/06/18 11:40:01 LDP: FSM: State changed from OPENREC to OPERATIONAL for event
LDP_EVENT_Recv_KeepAlive_msg
2002/06/18 11:40:01 LDP: FSM: State changed from OPERATIONAL to OPERATIONAL for event
LDP_EVENT_Recv_Other_msg
```

Related Commands

debug ldp packet

debug ldp events

1.13 debug ldp hexdump

Use this command to write hexdump specific information to the output.

On using a debug command the router continues to generate an output until the no parameter is used with the command. The debug output and system error messages are written on the virtual terminal. Use the log file or log syslog command in configure mode to redirect the debugging output to a file or the syslog.

Command Syntax

debug ldp hexdump

no debug ldp hexdump

Command Mode

Privileged Exec

Defaults

None

Examples

In the following example, the debug ldp hexdump command is used to write hexdump specific information to the output:

Switch# debug ldp hexdump

Related Commands

debug ldp fsm

debug ldp packet

1.14 debug ldp packet

Use this command to monitor all sent or received packets to or from LDP peers.

On using a debug command, the router continues to generate an output until the no parameter is used with the command. The debug output and system error messages are written on the virtual terminal. Use the log file or log syslog command in configure mode to redirect the debugging output to a file or the syslog.

Command Syntax

debug ldp packet

no debug ldp packet

Command Mode

Privileged Exec

Defaults

None

Examples

In the following example, the debug ldp packet command is used to received packets to or from LDP peers:

Switch# debug ldp packet

```
2002/06/18 11:43:23 LDP: ldp_message_hello_send: Dump of outgoing packet
2002/06/18 11:43:23 LDP:
2002/06/18 11:43:23 LDP: PDU Version: 1
2002/06/18 11:43:23 LDP: PDU Length: 22
2002/06/18 11:43:23 LDP: LDP Identifier: 10.10.0.11:0
2002/06/18 11:43:23 LDP:
2002/06/18 11:43:23 LDP: Message U bit: 0
2002/06/18 11:43:23 LDP: Message Type: Hello Message
2002/06/18 11:43:23 LDP: Message Length: 12
2002/06/18 11:43:23 LDP: Message ID: 0x1a9
2002/06/18 11:43:23 LDP:
2002/06/18 11:43:23 LDP: TLV U bit: 0
2002/06/18 11:43:23 LDP: TLV F bit: 0
2002/06/18 11:43:23 LDP: TLV Type: Common Hello Parameters TLV
2002/06/18 11:43:23 LDP: TLV length: 4
2002/06/18 11:43:23 LDP: Hold Time: 15
2002/06/18 11:43:23 LDP: Targeted Hello: 0
2002/06/18 11:43:23 LDP: Request Send Targedetail
```

Related Commands

debug ldp fsm

debug ldp events

1.15 debug ldp qos

Use this command to write Quality of Service information to the output.

On using a debug command, the router continues to generate an output until the no parameter is used with the command. The debug output and system error messages are written on the virtual terminal. Use the log file or log syslog command in configure mode to redirect the debugging output to a file or the syslog.

Command Syntax

debug ldp qos

no debug ldp qos

Command Mode

Privileged Exec

Defaults

None

Examples

In the following example, the debug ldp qos command is used to write Quality of Service information to the output:

Switch# debug ldp qos

Related Commands

debug ldp fsm

debug ldp packet

1.16 debug ldp tsm

Use this command to write trunk state machine specific information to the output.

On using a debug command, the router continues to generate an output until the no parameter is used with the command. The debug output and system error messages are written on the virtual terminal. Use the log file or log syslog command in configure mode to redirect the debugging output to a file or the syslog.

Command Syntax

debug ldp tsm

no debug ldp tsm

Command Mode

Privileged Exec

Defaults

None

Examples

In the following example, the debug ldp tsm command is used to write trunk state machine specific information to the output:

Switch# debug ldp tsm

Related Commands

debug ldp fsm

debug ldp packet

1.17 debug ldp vc

Use this command to debug Layer-2 Virtual Circuit information.

Command Syntax

debug ldp vc (dsm | usm | events)

no debug ldp vc (dsm | usm | events)

dsm	Downstream state machine
usm	Upstream state machine
events	VC events

Command Mode

Privileged Exec

Defaults

None

Examples

In the following example, the debug ldp vc events command is used to debug Layer-2 Virtual Circuit information:

Switch# debug ldp vc events

Related Commands

debug ldp dsm

debug ldp usm

1.18 disable-ldp

Use this command to disable LDP on a specified interface.

This command disables the transmission of Hello packets through the current interface, and clears all created sessions and adjacencies for this interface.

Command Syntax

disable-ldp

Command Mode

Interface

Defaults

None

Examples

In the following example, the disable-ldp command is used to disable LDP on a specified interface:

Switch # configure terminal

Switch (config)# interface eth-0-1

Switch (config-if)# disable-ldp

Related Commands

None

1.19 enable-ldp

Use this command to enable LDP on a specified interface.

Command Syntax

enable-ldp

Command Mode

Interface

Defaults

None

Examples

In the following example, the enable-ldp command is used to enable LDP on a specified interface:

Switch# configure terminal

Switch(config)# interface eth-0-1

Switch(config-if)# enable-ldp

Related Commands

None

1.20 explicit-null

Use this command to configure the router to send explicit-null labels for directly connected FECs instead of implicit-null labels. Implicit-nulls are the default labels

Do not use this command if the LDP is currently being used for MPLS/BGP VPNs.Use the no parameter to stop sending explicit-null labels for directly connected FECs, and resume sending implicit-null labels for them.

Command Syntax

explicit-null

no explicit-null

Command Mode

Router

Defaults

Sends implicit-null labels

Examples

In the following example, the explicit-null command is used to send explicit-null labels for directly connected FECs instead of implicit-null labels:

Switch# configure terminal

Switch(config)# router ldp

Switch(config-router)# explicit-null

Related Commands

show ldp FEC

1.21 hello-interval

Use this command to set the interval after which hello packets are sent out. Use the no parameter to revert to default hello interval.

Command Syntax

hello-interval *INTERVAL*

no hello-interval *INTERVAL*

INTERVAL	Interval for sending periodic hello message to peers, the range is 1 to 21845

Command Mode

Router

Defaults

The default is 5 seconds.

Examples

In the following example, the hello-interval command is used to set the interval after which hello packets are sent out:

Switch(config)# router ldp

Switch(config-router)# hello-interval 35

Related Commands

hold-time

ldp hello-interval

ldp hold-time

1.22 hold-time

Use this command to set the global value for the hold-time after which the LSR rejects adjacencies. Use the no parameter to revert to the default hold time.

Command Syntax

hold-time *TIME*

no hold-time *TIME*

TIME	Specifies the hold-time value in seconds, the range is 3 to 65535

Command Mode

Router

Defaults

The default is 15 seconds.

Examples

In the following example, the hold-time command is used to set the global value for the hold-time after which the LSR rejects adjacencies:

Switch# configure terminal

Switch(config)# router ldp

Switch(config-router)# hold-time 635

Related Commands

hello-interval

ldp hello-interval

ldp hold-time

1.23 keepalive-interval

Use this command to set the global value for the interval after which keep-alive packets are sent out. Use the no parameter to revert to default keep-alive interval.

Command Syntax

keepalive-interval *INTERVAL*

no keepalive-interval *INTERVAL*

INTERVAL	Interval for sending periodic hello message to peers, the range is 1 to 21845

Command Mode

Router

Defaults

The default is 10 seconds.

Examples

In the following example, the keepalive-interval command is used to set the global value for the interval after which keep-alive packets are sent out:

Switch# configure terminal

Switch(config)# router ldp

Switch(config-router)# keepalive-interval 635

Related Commands

keepalive-timeout

ldp keepalive-interval

ldp keepalive-timeout

1.24 keepalive-timeout

Use this command to set the global value for the time-out after which sessions are rejected. Use the no parameter to revert to default keep-alive time-out.

Command Syntax

keepalive-timeout *TIME*

no keepalive-timeout *TIME*

TIME	Specifies the time-out value in seconds, the range is 30 to 65535.

Command Mode

Router

Defaults

The default is 30 seconds.

Examples

In the following example, the keepalive-timeout command is used to set the global value for the time-out after which sessions are rejected:

Switch# configure terminal

Switch(config)# router ldp

Switch(config-router)# keepalive-timeout 635

Related Commands

keepalive-timeout

ldp keepalive-interval

ldp keepalive-timeout

1.25 ldp hello-interval

Use this command to set the interval for sending multicast Hello packets via an interface. Use the no parameter with this command to revert to the hello-interval value set for the main LDP process.

Command Syntax

ldp hello-interval *TIME*

no ldp hello-interval *TIME*

TIME	Specifies the interval in seconds, the range is 1 to 21845

Command Mode

Interface

Defaults

The default is 5 seconds.

Examples

In the following example, the ldp hello-interval command is used to set the interval for sending multicast Hello packets via an interface:

Switch# configure terminal

Switch(config)# interface eth-0-1

Switch(config-if)# ldp hello-interval 635

Related Commands

hello-interval

hold-time

ldp hold-time

1.26 ldp hold-time

Use this command to set the hold-time value after which the LSR rejects adjacencies. Use the no parameter to revert to the hold-time value set for the main LDP process.

Command Syntax

ldp hold-time *TIME*

no ldp hold-time *TIME*

TIME	Specifies the interval in seconds, the range is 3 to 65535

Command Mode

Interface

Defaults

The default is 15 seconds.

Examples

In the following example, the ldp hold-time command is used to set the hold-time value after which the LSR rejects adjacencies:

Switch # configure terminal

Switch(config)# interface eth-0-1

Switch(config-if)# ldp hold-time 635

Related Commands

hello-interval

hold-time

ldp hello-interval

1.27 ldp keepalive-interval

Use this command to set the interval for sending keep-alive messages to the peer in order to maintain a session. Use the no parameter to revert to the keep-alive interval set for the main LDP process.

Command Syntax

ldp keepalive-interval *INTERVAL*

no ldp keepalive-interval *INTERVAL*

INTERVAL	Specifies the interval in seconds, the range is 10 to 21845

Command Mode

Interface

Defaults

The default is 10 seconds

Examples

In the following example, the ldp keepalive-interval command is used to set the interval for sending keep-alive messages to the peer in order to maintain a session:

Switch# configure terminal

Switch(config)# interface eth-0-1

Switch(config-if)# ldp keepalive-interval 635

Related Commands

ldp keepalive-timeout

1.28 ldp keepalive-timeout

Use this command to set the keep-alive time-out value for rejecting a session with a peer. Use the no parameter to revert to the keep-alive time-out set for the main LDP process.

Command Syntax

ldp keepalive-timeout *TIME*

no ldp keepalive-timeout

TIME	Specifies the value in seconds, the range is 30 to 65535

Command Mode

Interface

Defaults

The default is 30 seconds.

Examples

In the following example, the ldp keepalive-timeout command is used to set the keep-alive time-out value for rejecting a session with a peer:

Switch# configure terminal

Switch(config)# interface eth-0-1

Switch(config-if)# ldp keepalive-timeout 635

Related Commands

ldp keepalive-interval

1.29 ldp multicast-hellos

Use this command to enable multicast hello exchange on a specified interface.

Use the no parameter to disable multicast hello exchange.

Command Syntax

ldp multicast-hellos

no ldp multicast-hellos

Command Mode

Interface

Defaults

Disabled

Examples

In the following example, the ldp multicast-hellos command is used to enable multicast hello exchange on a specified interface:

Switch# configure terminal

Switch(config)# interface eth-0-1

Switch(config-if)# ldp multicast-hellos

Related Commands

multicast-hellos

1.30 ldp targeted-peer-hello-interval

Use this command to set the interval for sending unicast hello packets to targeted peers via this interface. Use the no parameter to revert to the targeted-peer hello-interval value set for the main LDP process.

Command Syntax

ldp targeted-peer-hello-interval *INTERVAL*

no ldp targeted-peer-hello-interval

INTERVAL	Specifies the interval in seconds, the range is 1 to 21845

Command Mode

Interface

Defaults

The default is 15 seconds.

Examples

In the following example, the ldp targeted-peer-hello-interval command is used to set the interval for sending unicast hello packets to targeted peers via this interface:

Switch# configure terminal

Switch(config)# interface eth-0-1

Switch(config-if)# ldp targeted-peer-hello-interval 635

Related Commands

show ldp interface IFNAME

targeted-peer-hello-interval

1.31 ldp targeted-peer-hold-time

Use this command to set the time-out value that is the time that the router waits before rejecting an adjacency with a targeted peer. Use the no parameter to revert to the targeted-peer value set for the main LDP process.

Command Syntax

ldp targeted-peer-hold-time *TIME*

no ldp targeted-peer-hold-time

TIME	Specifies the interval in seconds, the range is 3 to 65535

Command Mode

Interface

Defaults

The default is 45 seconds.

Examples

In the following example, the ldp targeted-peer-hold-time command is used to set the time-out value that is the time that the router waits before rejecting an adjacency with a targeted peer:

Switch# configure terminal

Switch(config)# interface eth-0-1

Switch(config-if)# ldp targeted-peer-hold-time 635

Related Commands

show ldp interface IFNAME

targeted-peer-hold-time

1.32 router ldp

This command is used to enter the LDP specific command-line mode in which global attributes for the LDP process can be set. Without this command, the LSR does not perform any LDP operations, such as sending hello packets.

Command Syntax

router ldp

Command Mode

Global Configure

Defaults

None

Examples

In the following example, the router ldp command is used to enter the LDP specific command-line mode in which global attributes for the LDP process can be set:

Switch# configure router

Switch(config)# router ldp

Switch(config-router)#

Related Commands

None

1.33 router-id

Use this command to set the router-id to the supplied IP address; the router uses this address to generate the LDP-ID.

Use the no parameter with this command to revert to using the first IP address configured on the box as the router-id for LDP-ID generation purposes.

Command Syntax

router-id *A.B.C.D*

no router-id *A*

A.B.C.D	The new IP address as router-id

Command Mode

Router

Defaults

None

Examples

In the following example, the router-id command is used to set the router-id to the supplied IP address:

Switch# configure router

Switch(config)# router ldp

Switch(config-router)# router-id 123.123.123.8

Related Commands

None

1.34 show debugging ldp

Use this command to display the status of the debugging of the LDP system.

Command Syntax

show debugging ldp

Command Mode

Privileged Exec

Defaults

None

Examples

In the following example, the show debugging ldp command is used to display the status of the debugging of the LDP system:

Switch# show debugging ldp

```
LDP debugging status:
LDP event debugging is on
LDP packet debugging is on
LDP finite state machine debugging is on
LDP pdu hexdump debugging is on
LDP downstream state machine debugging is on
LDP upstream state machine debugging is on
LDP trunk state machine debugging is on
LDP QoS debugging is on
LDP CSPF debugging is on
LDP VC USM debugging is on
LDP VC DSM debugging is on
LDP NSM debugging is on
LDP Advertise-labels debugging is on
```

Related Commands

None

1.35 show ldp

Use this command to display basic LDP attributes defined for the current LSR.

Command Syntax

show ldp

Command Mode

Privileged Exec

Examples

The following is a sample output from the show ldp command displaying basic LDP attributes.

Switch# show ldp

```
Router ID : 10.10.0.11
LDP Version : 1
Global Merge Capability : N/A
Label Advertisement Mode : Downstream Unsolicited
Label Retention Mode : Liberal
Label Control Mode : Independent
Loop Detection : Off
Loop Detection Count : 0
Request Retry : Off
Propagate Release : Disabled
Hello Interval : 5
Targeted Hello Interval : 15
Hold time : 15
Targeted Hold time : 45
Keepalive Interval : 10
Keepalive Timeout : 30
Request retry Timeout : 5
Targeted Hello Receipt : Disabled
Transport Address : N/A
Transport Interface : N/A
Import BGP routes : No
```

Related Commands

None

1.36 show ldp adjacency

Use this command to display all the adjacencies for the current LSR.

Command Syntax

show ldp adjacency

Command Mode

Privileged Exec

Examples

In the following example, the show ldp adjacency command is used to display all the adjacencies for the current LSR:

Switch # show ldp adjacency

```
IP Address Interface Name Holdtime LDP ID
192.168.3.5 eth1 15 10.10.0.18:0
192.168.4.5 eth2 15 10.10.0.18:0
```

Related Commands

None

1.37 show ldp advertise-labels

Use this command to display the IP access list of LDP advertise-labels.

Command Syntax

show ldp advertise-labels

Command Mode

Privileged Exec

Examples

In the following example, the show ldp advertise-labels command is used to display the IP access list of LDP advertise-labels:

```
Switch# show ldp advertise-labels
Advertisement spec:
Prefix acl = pfx1; Peer acl = pfx1
Prevent the distribution of any assigned labels
```

Related Commands

None

1.38 show ldp downstream

Use this command to display the status of all downstream sessions and the label information exchanged.

Command Syntax

show ldp downstream

Command Mode

Privileged Exec

Examples

In the following example, the show ldp downstream command is used to display the status of all downstream sessions and the label information exchanged:

```
Switch # show ldp downstream
Session peer 192.168.11.50:
Downstream state: Established Label: impl-null RequestID: 0 Peer:
192.168.11.50 Attr:
Downstream state: Established Label: impl-null RequestID: 0 Peer: 192.168.11.50 Attr:
Downstream state: Established Label: impl-null RequestID: 0 Peer: 192.168.11.50 Attr:
Downstream state: Established Label: 20 RequestID: 0 Peer: 192.168.11.50 Attr:
Session peer 192.168.13.60:
Downstream state: Established Label: impl-null RequestID: 0 Peer: 192.168.13.60 Attr:
Downstream state: Established Label: 16 RequestID: 0 Peer: 192.168.13.60 Attr:
Downstream state: Established Label: 17 RequestID: 0 Peer: 192.168.13.60 Attr:
Downstream state: Established Label: impl-null RequestID: 0 Peer: 192.168.13.60 Attr:
Downstream state: Established Label: 18 RequestID: 0 Peer: 192.168.13.60 Attr:
Downstream state: Established Label: impl-null RequestID: 0 Peer: 192.168.13.60 Attr:
Downstream state: Established Label: 19 RequestID: 0 Peer: 192.168.13.60 Attr: --More--
Downstream state: Established Label: 20 RequestID: 0 Peer: 192.168.13.60 Attr:
```

Related Commands

None

1.39 show ldp fec

Use the following command to display all FECs known to the current LSR.

Command Syntax

show ldp fec (host | prefix|)

host	The host FEC
prefix	The prefix FEC

Command Mode

Privileged Exec

Defaults

None

Examples

In the following example, the show ldp fec command is used to display all FECs known to the current LSR:

Switch# show ldp fec

```
LSR codes : E/N - LSR is egress/non-egress for this FEC,
L - LSR received a label for this FEC,
> - LSR will use this route for the FEC
Code FEC Session Out Label Nexthop Addr
E > 10.10.0.0/24 non-existent none connected
NL 10.10.0.0/24 192.168.3.5 impl-null connected
E > 192.168.3.0/24 non-existent none connected
NL 192.168.3.0/24 192.168.3.5 impl-null connected
E > 192.168.4.0/24 non-existent none connected
NL 192.168.4.0/24 192.168.3.5 impl-null connected
NL 192.168.5.0/24 192.168.3.5 impl-null invalid
```

Related Commands

None

1.40 show ldp interface

Use this command to display information for all interfaces, or detailed information for a specific interface.

Command Syntax

show ldp interface (*IFNAME*|)

IFNAME	The name of the interface, the format follows below: eth-0-1, agg1, vlan1, etc

Command Mode

Privileged Exec

Defaults

None

Examples

In the following example, the **show ldp interface** command is used to display detailed information for a specific interface:

Switch# show ldp interface eth-0-1

```
Status : Enabled
Primary IP Address : 192.168.3.4
Interface Type : Ethernet
Label Merge Capability : Merge Capable
Hello Interval : 5
Targeted Hello Interval : 15
Hold Time : 15
Targeted Hold Time : 45
Keepalive Interval : 10
Keepalive Timeout : 30
Advertisement Mode : Downstream On Demand
Label Retention Mode : Liberal
Administrative Groups : Cen1: Cen2
```

Related Commands

None

1.41 show ldp lsp

Use this command to display LDP LSP and, optionally, advertise-label information.

Command Syntax

show ldp lsp

Command Mode

Privileged Exec

Defaults

None

Examples

In the following example, the show ldp lsp command is used to display LDP LSP and, optionally, advertise-label information:

Switch# show ldp lsp

```
Advertisement spec:
Prefix acl = pfx1; Peer acl = pfx1
```

```
Prevent the distribution of any assigned labels
FEC IPV4:1.1.1.0/30 -> 0.0.0.0
Downstream state: Established Label: impl-null RequestID: 0 Peer: 50.50.50.50 Attr:
Advert acl(s): Prevent the distribution of any assigned labels
FEC IPV4:3.3.3.0/30 -> 0.0.0.0
Advert acl(s): Prevent the distribution of any assigned labels
FEC IPV4:10.30.0.0/24 -> 0.0.0.0
Downstream state: Established Label: impl-null RequestID: 0 Peer: 50.50.50.50 Attr:
Advert acl(s): Prevent the distribution of any assigned labels
FEC IPV4:50.50.50.50/32 -> 1.1.1.1
Advert acl(s): Prefix acl = pfx1; Peer acl = pfx1
FEC IPV4:55.55.55.55/32 -> 3.3.3.2
Advert acl(s): Prevent the distribution of any assigned labels
FEC IPV4:169.254.0.0/16 -> 0.0.0.0
Downstream state: Established Label: impl-null RequestID: 0 Peer: 50.50.50.50 Attr:
Advert acl(s): Prevent the distribution of any assigned labels
```

Related Commands

show ldp lsp host

show ldp lsp prefix

show ldp lsp cr-lsp

1.42 show ldp mpls-l2-circuit

Use this command to display summarized Layer-2 Virtual Circuit information.

Command Syntax

show ldp mpls-l2-circuit (**detail** | *Virtual_Circuit_ID*|)

detail	Show detailed information
Virtual_Circuit_ID	Specify the MPLS Layer-2 Virtual Circuit by circuit identifier, the range is 1 to 4294967295

Command Mode

Privileged Exec

Defaults

None

Examples

In the following example, the show ldp mpls-l2-circuit command is used to display summarized Layer-2 Virtual Circuit information:

Switch# show ldp mpls-l2-circuit detail

Switch# show ldp mpls-l2-circuit 34 detail

Related Commands

None

1.43 show ldp session

Use this command to display sessions established between the current LSR and other LSRs.

Command Syntax

show ldp session (*A.B.C.D*|)

A.B.C.D	The IPv4 address of the peer for which information is to be shown

Command Mode

Privileged Exec

Defaults

None

Examples

In the following example, the show ldp session command is used to display sessions established between the current LSR and other LSRs:

Switch# show ldp session

```
Peer IP Address IF Name My Role State KeepAlive
192.168.11.50 eth1 Passive OPERATIONAL 30
192.168.13.60 eth2 Passive OPERATIONAL 30
```

```
In the following example, the show ldp session command is used to display sessions established between
the current LSR and other LSRs:
Switch# show ldp session 192.168.3.5
Session state : OPERATIONAL
Session role : Passive
```

```
TCP Connection : Established
IP Address for TCP : 192.168.3.5
Interface being used : eth1
Peer LDP ID : 10.10.0.18:0
Adjacencies : 192.168.3.5
192.168.4.5
Advertisement mode : Downstream Unsolicited
Label retention mode : Liberal
Keepalive Timeout : 30
Reconnect Interval : 15
Address List received : 192.168.3.5
192.168.4.5
Received Labels : Fec Label Maps To
IPV4:10.10.0.0/24 impl-null none
IPV4:192.168.3.0/24 impl-null none
IPV4:192.168.4.0/24 impl-null none
IPV4:192.168.5.0/24 impl-null none
Sent Labels : Fec Label Maps To
IPV4:10.10.0.0/24 impl-null none
IPV4:192.168.3.0/24 impl-null none
IPV4:192.168.4.0/24 impl-null none
```

Related Commands

None

1.44 show ldp statistics

Use this command to display LDP packet statistics.

Command Syntax

show ldp statistics (advertise-labels|)

advertise-labels	Count per each operation filtered by an advertisement list.

Command Mode

Privileged Exec

Defaults

None

Examples

In the following example, the show ldp statistics command is used to display LDP packet statistics:

Switch# show ldp statistics

```
PacketType Total
Sent Received
Notification 0 0
Hello 3980 0
Initialization 1 1
Keepalive 1932 1932
Address 1 1
Address Withdraw 0 0
Label Mapping 7 7
Label Request 0 0
Label Withdraw 1 0
Label Release 0 1
Request About 0 0
```

```
In the following example, the show ldp statistics command is used to display LDP packet statistics:
Switch# show ldp statistics advertise-labels
Advertisement spec:
Prefix acl = pfx1; Peer acl = pfx1
Deny : Label Mapping = 2
Label Request = 0
Prevent the distribution of any assigned labels
Deny : Label Mapping = 9
Label Request = 3
```

Related Commands

clear ldp statistics advertise-labels

1.45 show ldp targeted-peers

Use this command to display the list of targeted peers configured on the current LSR.

Command Syntax

show ldp targeted-peers

Command Mode

Privileged Exec

Defaults

None

Examples

In the following example, the show ldp targeted-peers command is used to display the list of targeted peers configured on the current LSR:

Switch# show ldp targeted-peers

```
IP Address          Interface
1.1.1.3             eth-0-9
```

Related Commands

None

1.46 show ldp upstream

Use this command to display the status of all upstream sessions and label information exchanged.

Command Syntax

show ldp upstream

Command Mode

Privileged Exec

Defaults

None

Examples

In the following example, the show ldp upstream command is used to display the status of all upstream sessions and label information exchanged:

Switch# show ldp upstream

```
Session peer 192.168.11.50:
Upstream state: Established Label: impl-null RequestID: 0 Peer: 192.168.11.50 Attr:
Upstream state: Established Label: impl-null RequestID: 0 Peer: 192.168.11.50 Attr:
Upstream state: Established Label: impl-null RequestID: 0 Peer: 192.168.11.50 Attr:
Session peer 192.168.13.60:
Upstream state: Established Label: impl-null RequestID: 0 Peer: 192.168.13.60 Attr:
None
Upstream state: Established Label: impl-null RequestID: 0 Peer: 192.168.13.60 Attr:
None
Upstream state: Established Label: impl-null RequestID: 0 Peer: 192.168.13.60 Attr:
None
Upstream state: Established Label: 16 RequestID: 0 Peer: 192.168.13.60 Attr: None
Upstream state: Established Label: 17 RequestID: 0 Peer: 192.168.13.60 Attr: None
Upstream state: Established Label: impl-null RequestID: 0 Peer: 192.168.13.60 Attr:
None
Upstream state: Established Label: 18 RequestID: 0 Peer: 192.168.13.60 Attr: None
Upstream state: Established Label: 19 RequestID: 0 Peer: 192.168.13.60 Attr: N --Mo
```

Related Commands

None

1.47 show memory ldp

Use this command to display memory statistics for the LDP.

Command Syntax

show memory ldp

Command Mode

Privileged Exec

Defaults

None

Examples

In the following example, the show memory ldp command is used to display memory statistics for the LDP:

Switch# show memory ldp

```
Memory type : Alloc count Alloc memory
============================================================
LDP structure : 1 116
LDP interface : 5 500
LDP Adjacencies : 2 72
LDP Sessions : 2 16608
LDP FECs : 10 480
LDP FEC element : 0 1008
LDP Request : 0 0
LDP Attr. Info : 0 0
LDP Remote Addresses : 1 48
LDP Upstream : 10 960
LDP Downstream : 19 1380
LDP USM Param. : 0 1200
LDP DSM Param. : 0 1328
LDP IPV4 NextHop : 10 120
LDP Temp memory : 0 95
LDP Path Vector : 0 0
LDP Attributes : 20 444
LDP CR Attributes : 0 0
LDP TLV ER hop : 0 0
LDP ER : 0 0
LDP ER hop : 0 0
```

```
LDP path : 0 0
LDP trunk : 0 0
LDP trunk admin group : 0
```

Related Commands

None

1.48 targeted-peer

Use this command to specify or delete a targeted LDP peer.

Command Syntax

targeted-peer *A.B.C.D*

no targeted-peer *A.B.C.D*

A.B.C.D	Specifies the IPv4 address of the targeted peer

Command Mode

Router

Defaults

None

Examples

In the following example, the targeted-peer command is used to specify a targeted LDP peer:

Switch# configure terminal

Switch(config)# router ldp

Switch(config-router)# targeted-peer 10.10.10.10

Related Commands

None

1.49 targeted-peer-hello-interval

Use this command to set the interval for sending unicast hello packets to targeted peers. Use the no parameter with this command to revert to the default targeted-peer hello-interval value.

Command Syntax

targeted-peer-hello-interval *INTERVAL*

no targeted-peer-hello-interval

INTERVAL	Specifies the interval in seconds, the range is 1 to 21845

Command Mode

Router

Defaults

The default is 15 seconds.

Examples

In the following example, the targeted-peer-hello-interval command is used to set the interval for sending unicast hello packets to targeted peers:

Switch# configure terminal

Switch(config)# router ldp

Switch(config-router)# targeted-peer-hello-interval 100

Related Commands

show ldp

targeted-peer-hello-interval

1.50 targeted-peer-hello-receipt

Use this command to toggle the receipt of targeted hello packets. Use the no parameter to disable the processing of targeted hello packets.

Command Syntax

targeted-peer-hello-receipt

no targeted-peer-hello-receipt

Command Mode

Router

Defaults

None

Examples

In the following example, the targeted-peer-hello-receipt command is used to toggle the receipt of targeted hello packets:

Switch# configure router

Switch(config)# router ldp

Switch(config-router)# targeted-peer-hello-receipt

Related Commands

None

1.51 targeted-peer-hold-time

Use this command to set the time-out value that is the time that the router waits before rejecting an adjacency with targeted peers. Use the no parameter to revert to the default targeted-peer hold-time value.

Command Syntax

targeted-peer-hold-time *TIME*

no targeted-peer-hold-time

TIME	Specifies the interval in seconds, the range is 3 to 65535

Command Mode

Router

Defaults

The default is 45 seconds.

Examples

In the following example, the targeted-peer-hold-time command is used to set the time-out value that is the time that the router waits before rejecting an adjacency with targeted peers:

Switch# configure terminal

Switch(config)# router ldp

Switch(config-router)# targeted-peer-hold-time 100

Related Commands

show ldp

ldp targeted-peer-hold-time

1.52 transport-address

Use this command to configure the transport address for a label space. Use the no parameter to stop using the transport-address as the IPv4 transport address. If the label-space is not specified in either form of this command, a label-space of zero is assumed.

Command Syntax

transport-address *A.B.C.D*

no transport-address

A.B.C.D	The IPv4 address to be used as the transport address. Only addresses bound to a loopback interface are valid for manual transport address configuration

Command Mode

Router

Defaults

By default, transport addresses are chosen for label spaces. These addresses might either be bound to a loopback interface, or to a physical interface that is bound to the label space in question.

Examples

In the following example, the transport-address command is used to configure the transport address for a label space:

Switch# configure router

Switch(config)# router ldp

Switch(config-router)# transport-address 10.10.0.5

Related Commands

None

1.53 show ldp vpls

Use this command to display information about all VPLS instances. Specify the VPLS ID to display information about a specific VPLS instance.

Command Syntax

show ldp vpls (detail | *VPLS_ID*|)

VPLS_ID	Specifies the VPLS identifier, the range is 1 to 4294967295
detail	Show detailed information

Command Mode

Privileged Exec

Defaults

None

Examples

In the following example, the show ldp vpls command is used to display information about all VPLS instances:

Switch# show ldp vpls

```
VPLS-ID Peer Address State Type Label-Sent Label-Rcvd
1 192.168.0.80 Up vpls 16 640
1 192.168.0.90 Up vpls 18 642
2 192.168.0.80 Up vpls 19 641
2 192.168.0.90 Up vpls 17 643
```

Related Commands

None

2 VPLS Commands

2.1 mpls vpls

Use this command to create a VPLS instance and come into the VPLS instance mode. This command will create a VPLS instance, and come into this instance mode. If the instance have been created, without inputting the VPLS-ID, it comes into the instance mode without creating VPLS instance.

Command Syntax

mpls vpls *NAME* (*VPLS-ID*)

no mpls vpls *NAME*

NAME	Identifying string for VPLS instance
VPLS-ID	Identifying value for VPLS instance, the range should be from 1 to 4294967295

Command Mode

Global Configure

Defaults

None

Examples

In the following example, the mpls vpls command is used to create a VPLS instance and come into the VPLS instance mode:

Switch # configure terminal

Switch (config)# mpls vpls vpls1 1

Switch (config-vpls)#

Related Commands

None

2.2 vpls-description

Use this command to add characters describing for VPLS instance.

Command Syntax

vpls-description *LINE*

no vpls-description

LINE	Characters describing the VPLS instance

Command Mode

VPLS

Examples

In the following example, the vpls-description command is used to add characters describing for VPLS instance:

Switch# configure terminal

Switch (config)# mpls vpls vpls1 1

Switch (config-vpls)# vpls-description this is a good vpls instance

Related Commands

None

2.3 vpls-mtu

Use this command to set mtu for VPLS instance. If set the MTU value for the VPLS instance, LDP will advertise this value to peers in the instance.

Command Syntax

vpls-mtu *MTU*

no vpls-mtu

MTU	MTU value for the VPLS instance, the range is from 576 to 65535

Command Mode

VPLS

Defaults

None

Examples

In the following example, the vpls-mtu command is used to set mtu for VPLS instance:

Switch# configure terminal

Switch(config)# mpls vpls vpls1 1

Switch(config-vpls)# vpls-mtu 55555

Related Commands

None

2.4 vpls-peer

Use this command to add a remote PE for VPLS instance. If configure this command use key word –manual, the PW to this peer will not issue by LDP or BGP, otherwise, the PW issued by LDP or BGP, can not create PW fib manually.

Command Syntax

vpls-peer *A.B.C.D* (**raw** | **tagged**) (**control-word**|) (**manual**|)

no vpls-peer *A.B.C.D*

A.B.C.D	IP address of the peer node to be added
raw	Set Peer Virtual Circuits type to Raw mode
tagged	Set Peer Virtual Circuits type to Tagged mode

control-word	Control-word for Peer Vircual Circuits
manual	PW for peer will created manually

Command Mode

VPLS

Defaults

None

Examples

In the following example, the vpls-peer command is used to add a remote PE for VPLS instance:

Switch# configure terminal

Switch (config)# mpls vpls vpls1 1

Switch (config-vpls)# vpls-peer 100.100.100.1 raw manual

Related Commands

no vpls-peer

2.5 vpls-fib-add

Use this command to add a static PW for a PE in a VPLS instance. The peer should be added in VPLS instance use key-word “manual”.

Command Syntax

vpls-fib-add *NAME* **peer** *A.B.C.D IN-LABLE OUT-LABEL*

vpls-fib-delete *NAME* **peer** *A.B.C.D*

NAME	Identifying string for VPLS instance
A.B.C.D	IP address of PE
IN-LABLE	Incoming label, the range should be from 16 to 1048575
OUT-LABEL	Outgoing label, the range should be from 16 to 1048575

Command Mode

Global Configure

Defaults

None

Examples

In the following example, the vpls-fib-add command is used to add a static PW for a PE in a VPLS instance:

Switch# configure terminal

Switch (config)# vpls-fib-add vpls1 peer 100.100.100.1 101 102

Related Commands

vpls-fib-delete

2.6 mpls-vpls

Use this command to bind an interface to a VPLS instance. The interface can not bind to same VPLS instance twice with different vlan tag; the interface can not bind to VPLS instance and MPLS Layer 2 Virtual Circuit both.

Command Syntax

mpls-vpls *NAME* (**vlan** *VLANID*)

no mpls-vpls *NAME* (**vlan** *VLANID*)

NAME	Identifying string for VPLS instance
VLANID	Vlan identifier, the range should be from 1 to 4094

Command Mode

Interface

Defaults

Bind to VPLS instance without vlan tag.

Examples

In the following example, the mpls-vpls command is used to bind an interface to a VPLS instance:

Switch# configure terminal

Switch(config)# interface eth-0-1

Switch(config-if)# mpls-vpls vpls1 vlan 100

Related Commands

None

2.7 vpls-mac-learning

Use this command to enable or disable VPLS mac learning with a VPLS instance.

Command Syntax

vpls-mac-learning (enable|disable)

Command Mode

VPLS

Defaults

Enable vpls mac learning with a VPLS instance by default.

Examples

In the following example, the vpls-mac-learning command is used to disable VPLS mac learning with a VPLS instance:

Switch# configure terminal

Switch(config)# mpls vpls vpls1 1

Switch(config-vpls)# vpls-mac-learning disable

Related Commands

None

2.8 vpls-mac-limit

Use this command to set VPLS mac limit maximum, and VPLS mac limit action.

Command Syntax

vpls-mac-limit maximum *MAXIMUM*

no vpls-mac-limit maximum

vpls-mac-limit action warn

no vpls-mac-limit action warn

MAXIMUM	MAXIMUM value for the VPLS instance, the range is from 1 to 4294967295

Command Mode

VPLS

Defaults

VPLS-mac-limit is not enabled by default.

Examples

In the following example, the vpls-mac-limit command is used to set VPLS mac limit maximum with a VPLS instance:

Switch# configure terminal

Switch(config)# mpls vpls vpls1 1

Switch(config-vpls)# vpls-mac-limit maximum 100

Related Commands

None

2.9 mpls l2-bundling

Use this command to enable bundling on the interface.

Command Syntax

mpls l2-bundling

no mpls l2-bundling

Command Mode

Interface

Defaults

L2-bundling is not enabled by default.

Examples

In the following example, the mpls l2-bundling command is used to enable bundling

Switch# configure terminal

Switch(config)# interface eth-0-1

Switch(config-if)# mpls l2-bundling

Related Commands

None

2.10 clear mpls vpls mac-addresses

Use this command to remove MAC addresses that have been dynamically learned for faster convergence, and this is accomplished by sending an LDP Withdraw Message to all other PEs over the corresponding LDP session.

Command Syntax

clear mpls vpls *NAME* **mac-addresses**

NAME	Clear data for VPLS instance with specified name

Command Mode

Privileged Exec

Defaults

None

Examples

In the following example, the clear mpls vpls command is used to remove MAC addresses that have been dynamically learned for faster convergence:

Switch# clear mpls vpls vpls1 mac-addresse

Related Commands

None

2.11 clear mac address-table vpls

Use this command to remove MAC addresses of Virtual Private Lan Service.

Command Syntax

clear mac address-table vpls (**address** *MACADDR*| **interface** *INTERFACE*| **name** *VPLS* | **peer** *A.B.C.D*|)

address	Clear the specified MAC address
interface	Clear all MAC address for the specified interface
name	Clear all MAC address for the specified VPLS
peer	Clear the specified peer fdb
MACADDR	MAC address
INTERFACE	agg Aggregation interface.agg<1-127> eth Physical interface
VPLS	VPLS name

Command Mode

Privileged Exec

Defaults

None

Examples

In the following example, the clear mac address-table vpls command is used to remove MAC addresses.

Switch# clear mac address-table vpls peer 1.1.1.1

Related Commands

None

2.12 show mpls vpls

Use this command to display MPLS VPLS instance information.

Command Syntax

show mpls vpls (*NAME* **| detail | mesh)**

NAME	Identifying string for VPLS
detail	Show detailed VPLS information
mesh	Show MPLS VPLS Mesh Forwarding information

Command Mode

Privileged Exec

Examples

- In the following example, the **show mpls vpls** command is used to display MPLS VPLS instance information:

Switch# show mpls vpls

```
Name                VPLS-ID     MPeers(R) MPeers(T) SPeers    State
v1                  200         1         0         0         Active
```

- In the following example, the show mpls vpls detail command is used to display detailed VPLS information:

Switch# show mpls vpls detail

```
Virtual Private LAN Service Instance: v1, ID: 200
 Group ID: 0, Configured MTU: NULL
 Description: none
 AC interface : none
 Mesh Peers :
  Peer           TYPE State C-Word  Tunnel name         LSP name
  3.3.3.3         RAW  UP    Disable tun                lsp1
 Vpls-mac-learning enable
Vpls-mac-limit maximum 100
Vpls-mac-limit action warn
 Discard flooding disabled
 Discard unknown-unicast disabled
 Discard multicast disabled
```

- In the following example, the show mpls vpls mesh command is used to display MPLS VPLS Mesh Forwarding information:

Switch# show mpls vpls mesh

```
VPLS-ID    Peer Addr       In-Label   Out-Intf   Out-Label  Type      Lkps/St
200        3.3.3.3         25         eth-0-9    26         RAW       2/Up
```

Related Commands

None

2.13 show mac address-table vpls

Use this command to display FDB learned by VPLS.

Command Syntax

show mac address-table vpls (address *MAC* **| count | interface** *IFNAME*| **name** *NAME* | **peer** *A.B.C.D*|)

address	Query FDB by address
count	Count of MAC address-table entries
interface	Query FDB by interface
name	Query FDB by VPLS instance
peer	Query FDB by peer ip address

Command Mode

Privileged Exec

Examples

In the following example, the show mac address-table vpls command is used to display FDB learned by VPLS:

Switch# show mac address-table vpls

```
vpls       peer           mac             static
1000       eth-0-1         0001.001f.aa12 0
1000       eth-0-1         407a.a718.3400 0
```

Related Commands

None

2.14 mpls l2vpn default-vlan

Use this command to set VPLS and VPWS default vlan.

Command Syntax

mpls l2vpn default-vlan *VLAN*

no mpls l2vpn default-vlan *VLAN*

l2vpn	l2-circuit or vpls
default-vlan	default vlan identifier

Command Mode

Interface

Examples

In the following example, the mpls l2vpn default-vlan command is used to set VPLS and VPWS default vlan:

DUT1(config)# interface eth-0-1

DUT1(config-if)# switchport

DUT1(config-if)# switchport mode trunk

DUT1(config-if)# mpls-vpls vpls1 vlan 10

DUT1(config-if)# mpls l2vpn default-vlan 10

Related Commands

None

2.15 mac-address-table

Use this command on the switch to add static addresses to the MAC address table for a VSI. Use the no form of this command to remove static entries from the table.

Command Syntax

mac-address-table *MAC-ADDR* **forward (interface-id | peer** *A.B.C.D*)

mac-address-table *MAC-ADDR* **discard**

no mac-address-table *MAC-ADDR*

MAC-ADDR	Destination MAC address (unicast) to add to the address table. Packets with this destination address received in the specified VSI are discarded or forwarded to the specified interface or peer node
INTERFACE-ID	Interface to which the received packet is forwarded. Valid interfaces include physical ports and link aggregation ports
A.B.C.D	IP address of the peer node to which the received packet is forwarded

Command Mode

VPLS

Defaults

No static addresses are configured.

Examples

In the following example, the mac-table-address forward command is used to add the static address c2f3.220a.12f4 to the MAC address table. When a packet is received in VPLS v1 with this MAC address as its destination, the packet is forwarded to the specified peer node; the mac-table-address discard command is used to add a MAC blackhole c2f3.220a.12f5 to the MAC address table. When a packet is received in VPLS v1 with this MAC address as its destination, it will be discarded:

DUT1(config)# mpls vpls v1

DUT1(config-vpls)# mac-address-table c2f3.220a.12f4 forward peer 1.1.1.2

DUT1(config-vpls)# mac-address-table c2f3.220a.12f5 discard

Related Commands

show mac address-table vpls

2.16 discard

Use this command on the switch to set VPLS flood control. Use the no form of this command to unset VPLS flood control.

Command Syntax

discard (flooding | unknown-unicast | multicast)

no discard (flooding | unknown-unicast | multicast)

flooding	All packets that will be flooded in the VSI, including broadcast, multicast and unknown unicast packets
unknown-unicast	Unknown unicast packets
multicast	Multicast packets

Command Mode

VPLS

Defaults

Discard flooding is disabled.

Discard unknown-unicast is disabled.

Discard multicast is disabled.

Examples

In the following example, the discard command is used to discard all flooding packets in the VSI:

DUT1(config)# mpls vpls v1

DUT1(config-vpls)# discard flooding

Related Commands

show mpls vpls detail

3 VPWS Commands

3.1 mpls l2-circuit

Use this command to create an instance of MPLS Layer 2 Virtual Circuit.

Command Syntax

mpls l2-circuit *NAME VC-ID NEXTHOP* **(control-word|) (manual|) (mtu** *MTU* |**) (raw | tagged |)**

no mpls l2-circuit *NAME*

NAME	Identifying string for MPLS Layer-2 Virtual Circuit
VC-ID	Identifying value for MPLS Layer-2 Virtual Circuit, should be <1-4294967295>
NEXTHOP	IPv4 Address for end-point for MPLS Layer-2 Virtual Circuit
control-word	Control-word for MPLS Layer-2 Virtual Circuit
manual	Layer-2 Virtual Circuit will created manually
mtu	Layer-2 Virtual Circuit mtu
MTU	Layer-2 Virtual Circuit mtu value, should be <576-65535>
raw	PW raw mode
tagged	PW tagged mode

Command Modes

Global Configure

Examples

Switch# configure terminal

Switch(config)# mpls l2-circuit pw1 1 100.100.100.1 manual

Related Commands

no mpls l2-circuit

3.2 mpls-l2-circuit

Use this command to bind an interface to a MPLS Layer 2 Virtual Circuit.

Command Syntax

mpls-l2-circuit *NAME* **(ethernet|vlan** *VLANID***|)**

no mpls-l2-circuit *NAME*

NAME	Identifying string for MPLS Layer-2 Virtual Circuit
VLANID	Vlan identifier, should be <1-4094>

Command Modes

Interface

Defaults

PW type is ethernet.

Examples

Switch# configure terminal

Switch(config)# interface eth-0-1

Switch(config-if)# mpls-l2-circuit pw1 vlan 100

Related Commands

no mpls-l2-circuit

3.3 mpls l2-circuit-fib-entry

Use this command to add a Layer 2 Virtual Circuit FIB entry.

Command Syntax

mpls l2-circuit-fib-entry *NAME INLABEL OUTLABEL*

no mpls l2-circuit-fib-entry *NAME*

NAME	Identifying string for MPLS Layer-2 Virtual Circuit
INLABEL	Incoming label, should be <16-1048575>
OUTLABEL	Outgoing label, should be <16-1048575>

Command Modes

Global Configure

Usage Guidelines

The MPLS Layer 2 Virtual Circuit should be added use key-word “manual”.

Examples

Switch# configure terminal

Switch(config)# mpls l2-circuit-fib-entry pw1 100 200

Related Commands

no mpls l2-circuit-fib-entry

3.4 show mpls l2-circuit

Use this command to show mpls l2 ciriuit information.

Command Syntax

show mpls l2-circuit (*NAME*|)

NAME	Identifying string for MPLS Layer-2 Virtual Circuit

Command Modes

Privileged Exec

Examples

Switch# show mpls l2-circuit

```
VC-Name       VC-ID     Interface    AC-type       VLAN   PW-mode   Manual
pw1           100       eth-0-1      Ethernet      N/A    Raw       Yes
```

Switch# show mpls l2-circuit pw1

```
MPLS Layer-2 Virtual Circuit: pw1, id: 100
 Endpoint: 11.11.3.3
 Control Word: 0
 MPLS Layer-2 Virtual Circuit Group: none
 Bound to interface: eth-0-1
 Virtual Circuit Type: Ethernet
 Owner: manual
   Virtual Circuit is configured as Primary
```

Related Commands

mpls l2-circuit

3.5 show mpls vc-table

Use this command to show mpls vc forwarding information.

Command Syntax

show mpls vc-table (detail|)

vc-table	MPLS Layer-2 Virtual Circuit table
detail	Show detailed Layer-2 Virtual Circuit information

Command Modes

Privileged Exec

Examples

switch# show mpls vc-table

```
VC-ID      PW Intf   AC Intf   L/R Label      EndPoint       Status   Manual
100        eth-0-9   eth-0-1   22/33          11.11.3.3      Active   Yes  Switch# show mpls
vc-table detail
mpls l2-curcuit: test              ID: 100
Manual: Yes                        Configured MTU: NULL
AC interface: eth-0-9              PW interface: eth-0-1
Tunnel-name: tun                   LSP-name: lsp1
```

```
Peer Address: 3.3.3.3                In lable/Out label: 23/24
PW type: Raw                         AC type: Ethernet
```

Related Commands

mpls l2-circuit