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LLDP commands

cdp voice-vlan

Use **cdp voice-vlan** to set the voice VLAN ID carried in CDP frames.

Use **undo cdp voice-vlan** to restore the default.

Syntax

cdp voice-vlan *vlan-id*

undo cdp voice-vlan

Default

No voice VLAN ID is configured to be carried in CDP frames.

Views

Layer 2 Ethernet interface view

Default command level

network-admin

Parameters

vlan-id: Specifies a voice VLAN ID to be advertised, in the range of 1 to 4094.

Usage guidelines

With this command configured, CDP frames sent to IP phones from the interface carry the voice VLAN ID specified in this command. IP phones use the voice VLAN ID to send voice traffic.

Examples

```
# Set the voice VLAN ID carried in CDP frames to 100.  
<Sysname> system-view  
[Sysname] interface ten-gigabitethernet 1/0/1  
[Sysname-Ten-GigabitEthernet1/0/1] cdp voice-vlan 100
```

dcbx version

Use **dcbx version** to set the DCBX version.

Use **undo dcbx version** to restore the default.

Syntax

dcbx version { **rev100** | **rev101** | **standard** }

undo dcbx version

Default

The DCBX version is not configured. It is autonegotiated by the local port and peer port.

Views

Layer 2 Ethernet interface view

Predefined user roles

network-admin

Parameters

rev100: Specifies DCBX Rev 1.00.

rev101: Specifies DCBX Rev 1.01.

standard: Specifies the IEEE Std 802.1Qaz-2011.

Usage guidelines

For DCBX to work correctly, set the same DCBX version on the local port and peer port. As a best practice, set the highest version supported on both ends. IEEE Std 802.1Qaz-2011, DCBX Rev 1.01, and DCBX Rev 1.00 are in descending order.

After the configuration, LLDP frames sent by the local port carry information about the configured DCBX version. The local port and peer port do not negotiate the DCBX version.

When the DCBX version is autonegotiated, the version IEEE Std 802.1Qaz-2011 is preferentially negotiated.

Examples

```
# Set the DCBX version to Rev. 1.01 on interface Ten-GigabitEthernet 1/0/1.
```

```
<Sysname> system-view
```

```
[Sysname] interface ten-gigabitethernet 1/0/1
```

```
[Sysname-Ten-GigabitEthernet1/0/1] dcbx version rev101
```

Related commands

lldp tlv-enable

display lldp local-information

Use **display lldp local-information** to display local LLDP information.

Syntax

```
display lldp local-information [ global | interface interface-type interface-number ]
```

Views

Any view

Predefined user roles

network-admin

network-operator

Parameters

global: Displays the global local LLDP information.

interface *interface-type interface-number*: Specifies a port by its type and number.

Usage guidelines

If you do not specify any keywords or arguments, the command displays all local LLDP information, which includes the following:

- The global LLDP information.
- The LLDP information about the LLDP-enabled ports in up state.

Examples

```
# Display all local LLDP information.
```

```
<Sysname> display lldp local-information
```

```
Global LLDP local-information:
```

```

Chassis ID          : 00e0-fc00-5600
System name         : Sysname
System description  : H3C Comware Platform Software, Software Version 7.1.070,
                    Feature 2607
                    H3C S6860-54HT
                    Copyright (c) 2004-2017 New H3C Technologies Co., Ltd. All
                    rights reserved.

System capabilities supported : Bridge, Router, Customer Bridge, Service Bridge
System capabilities enabled   : Bridge, Router, Service Bridge
MED information:
Device class           : Connectivity device
MED inventory information of master board:
HardwareRev           : REV.A
FirmwareRev           : 109
SoftwareRev           : 7.1.070 Demo 2602
SerialNum             : NONE
Manufacturer name     : H3C
Model name            : H3C S6860-54HT
Asset tracking identifier : Unknown
LLDP local-information of port 52[Ten-GigabitEthernet1/0/3]:
Port ID type          : Interface name
Port ID              : Ten-GigabitEthernet1/0/3
Port description     : Ten-GigabitEthernet1/0/3 Interface
LLDP agent nearest-bridge management address:
Management address type : IPv4
Management address     : 192.168.80.60
Management address interface type : IfIndex
Management address interface ID : Unknown
Management address OID : 0
LLDP agent nearest-nontpnr management address:
Management address type : IPv4
Management address     : 192.168.80.61
Management address interface type : IfIndex
Management address interface ID : Unknown
Management address OID : 0
LLDP agent nearest-customer management address:
Management address type : IPv4
Management address     : 192.168.80.62
Management address interface type : IfIndex
Management address interface ID : Unknown
Management address OID : 0
DCBX Control info:
Oper version          : Standard
DCBX ETS configuration info:
CBS                  : False
Max TCs              : 8
CoS      Local Priority   Percentage   TSA
0           0             15             ETS

```

1	1	0	SP
2	2	15	ETS
3	3	14	ETS
4	4	14	ETS
5	5	14	ETS
6	6	14	ETS
7	7	14	ETS

DCBX ETS recommendation info:

CoS	Local Priority	Percentage	TSA
0	0	15	ETS
1	1	0	SP
2	2	15	ETS
3	3	14	ETS
4	4	14	ETS
5	5	14	ETS
6	6	14	ETS
7	7	14	ETS

DCBX PFC info:

P0-0	P1-1	P2-1	P3-1	P4-0	P5-0	P6-0	P7-0
------	------	------	------	------	------	------	------

Number of traffic classes supported: 8
Value of MBC: 0

DCBX APP info:

Selected Field	Protocol ID	Priority
UDP/DCCP	100	0x3
TCP/SCTP	200	0x3
Ethertype	0x1234	0x3
Ethertype	0x8906	0x3

Port VLAN ID(PVID): 1

Port and protocol VLAN ID(PPVID) : 12

Port and protocol VLAN supported : Yes

Port and protocol VLAN enabled : Yes

VLAN name of VLAN 12: VLAN 0012

Management VLAN ID : 5

Link aggregation supported : Yes

Link aggregation enabled : Yes

Aggregation port ID : 52

Auto-negotiation supported : Yes

Auto-negotiation enabled : Yes

OperMau : Speed(10000)/Duplex(Full)

Power port class : PSE

PSE power supported : NO

PSE power enabled : NO

PSE pairs control ability : NO

Power pairs : Signal

Port power classification : Class 0

Maximum frame size : 10000

Table 1 Command output

Field	Description
Chassis ID	Bridge MAC address of the device.
System capabilities supported	Supported capabilities: <ul style="list-style-type: none"> • Bridge—Switching is supported. • Router—Routing is supported. • Repeater—Signal repeating is supported. • Telephone—The local device can act as a telephone. • DocsisCableDevice—The local device can act as a DOCSIS-compliant cable device. • StationOnly—The local device can act as a station only. • Customer Bridge—The customer bridge feature is supported. • Service Bridge—The service bridge feature is supported. • TPMR—The TPMR feature is supported. • Other—Features other than those listed above are supported.
System capabilities enabled	Enabled capabilities: <ul style="list-style-type: none"> • Bridge—Switching is enabled. • Router—Routing is enabled. • Repeater—Signal repeating is enabled. • Telephone—The local device is acting as a telephone. • DocsisCableDevice—The local device is acting as a DOCSIS-compliant cable device. • StationOnly—The local device is acting as a station only. • Customer Bridge—The customer bridge feature is enabled. • Service Bridge—The service bridge feature is enabled. • TPMR—The TPMR feature is enabled. • Other—Features other than those listed above are enabled.
Device class	MED device class: <ul style="list-style-type: none"> • Connectivity device—Network device. • Class I—Normal terminal device. It requires the basic LLDP discovery services. • Class II—Media terminal device. It supports media streams, and can also act as a normal terminal device. • Class III—Communication terminal device. It supports the IP communication systems of end users, and can also act as a normal terminal device or media terminal device.
HardwareRev	Hardware version.
FirmwareRev	Firmware version.
SoftwareRev	Software version.
SerialNum	Serial number.
Manufacturer name	Device manufacturer.
Model name	Device model.
Port ID type	Port ID type: <ul style="list-style-type: none"> • MAC address. • Interface name.
Port ID	Port ID, the value of which depends on the port ID type.
Management address interface type	Numbering type of the interface identified by the management address.

Field	Description
Management address interface ID	Index of the interface identified by the management address.
Management address OID	Management address object ID.
DCBX control info	Displayed as version information in IEEE Std 802.1Qaz-2011.
Oper version	DCBX version number.
Sequence number	Number of DCBX TLV content changes.
Acknowledge number	Times of synchronizing configurations by the peer device.
DCBX ETS info	CoS-to-local priority mapping and bandwidth allocation.
Percentage	Percentage of bandwidth allocated.
P0- P1- P2- P3- P4- P5- P6- P7-	Number of supported priorities configured by using the priority-flow-control no-drop dot1p dot1p-list command at the local end.
Number of traffic classes supported	Number of traffic classes supported by PFC (displayed only in Rev 1.01).
Protocol ID	Application protocol number.
CoS map	Application protocol-to-CoS mapping.
CBS	Indicates whether the token bucket mechanism is supported on the port: <ul style="list-style-type: none"> • False—The token bucket mechanism is not supported. • True—The token bucket mechanism is supported.
Max TCs	Maximum number of priorities supported.
TSA	Transmission selection algorithm.
Value of MBC	The device does not support MACsec in the current software version. MBC indicates the ability of packets to bypass MACsec. It is 1-bit long. <ul style="list-style-type: none"> • 0—Packets can bypass MACsec when MACsec is disabled. • 1—Packets cannot bypass MACsec when MACsec is disabled.
Link aggregation supported	Indicates whether link aggregation is supported on the port.
Link aggregation enabled	Indicates whether link aggregation is enabled on the port.
Aggregation port ID	Member port ID, which is 0 when link aggregation is disabled.
Auto-negotiation supported	Indicates whether autonegotiation is supported on the port.
Auto-negotiation enabled	Indicates whether autonegotiation is enabled on the port.
OperMau	Speed and duplex state of the port. The field cannot display the correct speed and duplex state for a PEX device port if the command is executed on a parent device in an IRF 3.1 system.
Power port class	PoE port class: <ul style="list-style-type: none"> • PSE—Power sourcing equipment. • PD—Powered device.
PSE power supported	Indicates whether the device can operate as a PSE.
PSE power enabled	Indicates whether the device is operating as a PSE.
PSE pairs control ability	Indicates whether the pair selection ability is available.
Power pairs	Power supply mode:

Field	Description
	<ul style="list-style-type: none"> • Signal—Uses data pairs to supply power. • Spare—Uses spare pairs to supply power.
Port power classification	Power class of the PD: <ul style="list-style-type: none"> • Class 0. • Class 1. • Class 2. • Class 3. • Class 4.
Port PSE priority	PoE power supply priority of PSE ports: <ul style="list-style-type: none"> • Unknown. • Critical. • High. • Low.
Port PD priority	PoE power receiving priority of PD ports: <ul style="list-style-type: none"> • Unknown. • Critical. • High. • Low.
Port available power value	Available PoE power on PSE ports, or power needed on PD ports, in watts.
Transmit Tw	Sleep time of the local client, in μ s.
Receive Tw	Sleep time of the peer client expected by the local client, in μ s.
Fallback Tw	Candidate sleep time of the peer client expected by the local client, in μ s.
Echo Transmit Tw	Sleep time of the peer client, in μ s. This field displays zero when one of the following cases occurs: <ul style="list-style-type: none"> • The local client has not received the sleep time of the peer client. • The sleep time of the peer client is 0 μs.
Echo Receive Tw	Sleep time of the local client expected by the peer client, in μ s. This field displays zero when one of the following cases occurs: <ul style="list-style-type: none"> • The local client has not received the expected sleep time from the peer client. • The sleep time of the local client expected by the peer client is 0 μs.

display lldp neighbor-information

Use **display lldp neighbor-information** to display the LLDP information received from the neighboring devices.

Syntax

```
display lldp neighbor-information [ [ [ interface interface-type interface-number ] [ agent
{ nearest-bridge | nearest-customer | nearest-nontpmr } ] [ verbose ] ] | list [ system-name
system-name ] ]
```

Views

Any view

Predefined user roles

network-admin

network-operator

Parameters

interface *interface-type interface-number*: Specifies a port by its type and number. If you do not specify this option, the command displays the LLDP information that all ports receive from the neighboring devices.

agent: Specifies an agent type. If you do not specify an agent type, the command displays the LLDP information that all LLDP agents receive from the neighboring devices.

nearest-bridge: Specifies nearest bridge agents.

nearest-customer: Specifies nearest customer bridge agents.

nearest-nontpmr: Specifies nearest non-TPMR bridge agents.

verbose: Displays the detailed LLDP information that the local device receives from the neighboring devices. If you do not specify this keyword, the command displays the brief LLDP information that the local device receives from the neighboring devices.

list: Displays the LLDP information that the local device receives from the neighboring devices in the form of a list.

system-name *system-name*: Displays the LLDP information that the local device receives from a neighboring device specified by its system name. The *system-name* argument is a string of 1 to 255 characters. If you do not specify this option, the command displays the LLDP information that the local device receives from all neighboring devices in a list.

Examples

Display the detailed LLDP information that the nearest bridge agents on all ports received from the neighboring devices.

```
<Sysname> display lldp neighbor-information agent nearest-bridge verbose
LLDP neighbor-information of port 1[Ten-GigabitEthernet1/0/1]:
LLDP agent nearest-bridge:
  LLDP Neighbor index : 1
  Update time         : 0 days, 0 hours, 1 minutes, 1 seconds
  Chassis type        : MAC address
  Chassis ID          : 000f-0055-0002
  Port ID type        : Interface name
  Port ID              : Ten-GigabitEthernet1/0/1
  Time to live        : 121
  Port description    : Ten-GigabitEthernet1/0/1 Interface
  System name         : Sysname
  System description  : H3C Comware Platform Software, Software Version 7.1.070,
                        Feature 2607
                        H3C S6860-54HT
                        Copyright (c) 2004-2017 New H3C Technologies Co., Ltd. All
                        rights reserved.
  System capabilities supported : Bridge, Router, Customer Bridge, Service Bridge
  System capabilities enabled   : Bridge, Router, Customer Bridge
  Management address type      : IPv4
  Management address          : 192.168.1.55
  Management address interface type : IfIndex
  Management address interface ID : Unknown
  Management address OID       : 0
  DCBX Control info:
```

Oper version : Standard

DCBX ETS configuration info:

CBS : False

Max TCs : 8

CoS	Local priority	Percentage	TSA
0	0	15	ETS
1	1	0	SP
2	2	15	ETS
3	3	14	ETS
4	4	14	ETS
5	5	14	ETS
6	6	14	ETS
7	7	14	ETS

DCBX ETS recommendation info:

CoS	Local priority	Percentage	TSA
0	0	15	ETS
1	1	0	SP
2	2	15	ETS
3	3	14	ETS
4	4	14	ETS
5	5	14	ETS
6	6	14	ETS
7	7	14	ETS

DCBX PFC info:

P0-0 P1-1 P2-1 P3-1 P4-0 P5-0 P6-0 P7-0

Number of traffic classes supported: 8

Value of MBC: 0

DCBX APP info:

Selected Field	Protocol ID	Priority
UDP/ DCCP	100	0x3
TCP/SCTP	200	0x3
Ethertype	0x1234	0x3
Ethertype	0x8906	0x3

Port VLAN ID(PVID): 1

Port and protocol VLAN ID(PPVID) : 12

Port and protocol VLAN supported : Yes

Port and protocol VLAN enabled : Yes

VLAN name of VLAN 12: VLAN 0012

Link aggregation supported : Yes

Link aggregation enabled : Yes

Aggregation port ID : 52

Management VLAN ID : 5

Auto-negotiation supported : Yes

Auto-negotiation enabled : Yes

OperMau : Speed(10000)/Duplex(Full)

Power port class : PD

PSE power supported : Yes

PSE power enabled : Yes

PSE pairs control ability : Yes
Power pairs : Signal
Port power classification : Class 0
Maximum frame size : 10000

Display the detailed LLDP information that all LLDP agents on all ports received from the neighboring devices.

<Sysname> display lldp neighbor-information verbose

LLDP neighbor-information of port 1[Ten-GigabitEthernet1/0/1]:

LLDP agent nearest-bridge:

LLDP Neighbor index : 1
Update time : 0 days, 0 hours, 1 minutes, 1 seconds
Chassis type : MAC address
Chassis ID : 000f-0055-0002
Port ID type : Interface name
Port ID : Ten-GigabitEthernet1/0/1
Time to live : 121
Port description : Ten-GigabitEthernet1/0/1 Interface
System name : Sysname

System description : H3C Comware Platform Software, Software Version 7.1.070,
Feature 2607
H3C S6860-54HT
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System capabilities supported : Bridge, Router, Customer Bridge, Service Bridge

System capabilities enabled : Bridge, Router, Customer Bridge

Management address type : IPv4
Management address : 192.168.1.55
Management address interface type : IfIndex
Management address interface ID : Unknown
Management address OID : 0

DCBX control info:

Oper version : Standard

DCBX ETS configuration info:

CBS : False

Max TCs : 8

CoS	Local Priority	Percentage	TSA
0	0	15	ETS
1	1	0	SP
2	2	15	ETS
3	3	14	ETS
4	4	14	ETS
5	5	14	ETS
6	6	14	ETS
7	7	14	ETS

DCBX ETS recommendation info:

CoS	Local Priority	Percentage	TSA
0	0	15	ETS
1	1	0	SP

2	2	15	ETS
3	3	14	ETS
4	4	14	ETS
5	5	14	ETS
6	6	14	ETS
7	7	14	ETS

DCBX PFC info:

P0-0 P1-1 P2-1 P3-1 P4-0 P5-0 P6-0 P7-0

Number of traffic classes supported: 8

Value of MBC: 0

DCBX APP info:

Selected Field	Protocol ID	Priority
UDP/DCCP	100	0x3
TCP/SCTP	200	0x3
Ethertype	0x1234	0x3
Ethertype	0x8906	0x3

Port VLAN ID(PVID): 1

Port and protocol VLAN ID(PPVID) : 12

Port and protocol VLAN supported : Yes

Port and protocol VLAN enabled : Yes

VLAN name of VLAN 12: VLAN 0012

Link aggregation supported : Yes

Link aggregation enabled : Yes

Aggregation port ID : 52

Management VLAN ID : 5

Auto-negotiation supported : Yes

Auto-negotiation enabled : Yes

OperMau : Speed(10000)/Duplex(Full)

Power port class : PD

PSE power supported : Yes

PSE power enabled : Yes

PSE pairs control ability : Yes

Power pairs : Signal

Port power classification : Class 0

Maximum frame size : 10000

LLDP neighbor-information of port 1[Ten-GigabitEthernet1/0/1]:

LLDP agent nearest-nontpmr:

LLDP Neighbor index : 1

Update time : 0 days, 0 hours, 1 minutes, 1 seconds

Chassis type : MAC address

Chassis ID : 000f-0055-0002

Port ID type : Interface name

Port ID : Ten-GigabitEthernet1/0/1

Time to live : 121

Port description : Ten-GigabitEthernet1/0/1 Interface

System name : Sysname

System description : H3C Comware Platform Software, Software Version 7.1.070,
Feature 2607

H3C S6860-54HT

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System capabilities supported : Bridge, Router, Customer Bridge, Service Bridge
System capabilities enabled : Bridge, Router, Customer Bridge
Management address type : IPv4
Management address : 192.168.1.55
Management address interface type : IfIndex
Management address interface ID : Unknown
Management address OID : 0
Port VLAN ID(PVID): 1
Port and protocol VLAN ID(PPVID) : 12
Port and protocol VLAN supported : Yes
Port and protocol VLAN enabled : Yes
VLAN name of VLAN 12: VLAN 0012
Link aggregation supported : Yes
Link aggregation enabled : Yes
Aggregation port ID : 52
Auto-negotiation supported : Yes
Auto-negotiation enabled : Yes
OperMau : Speed(10000)/Duplex(Full)
Power port class : PD
PSE power supported : Yes
PSE power enabled : Yes
PSE pairs control ability : Yes
Power pairs : Signal
Port power classification : Class 0
Maximum frame size : 10000

Display the brief LLDP information that all LLDP agents on all ports received from the neighboring devices.

<Sysname> display lldp neighbor-information

LLDP neighbor-information of port 52[Ten-GigabitEthernet1/0/3]:

LLDP agent nearest-bridge:

LLDP neighbor index : 3
ChassisID/subtype : 0011-2233-4400/MAC address
PortID/subtype : 000c-29f5-c71f/MAC address
Capabilities : Bridge, Router, Customer Bridge

LLDP neighbor index : 6
ChassisID/subtype : 0011-2233-4400/MAC address
PortID/subtype : 000c-29f5-c715/MAC address
Capabilities : None

CDP neighbor-information of port 52[Ten-GigabitEthernet1/0/3]:

LLDP agent nearest-bridge:

CDP neighbor index : 4
Chassis ID : SEP00260B5C0548
Port ID : Port 1

```

CDP neighbor index : 5
Chassis ID          : 0011-2233-4400
Port ID             : Ten-GigabitEthernet1/0/4

```

LLDP neighbor-information of port 52[Ten-GigabitEthernet1/0/3]:

```

LLDP agent nearest-nontpmr:
  LLDP neighbor index : 6
  ChassisID/subtype   : 0011-2233-4400/MAC address
  PortID/subtype      : 000c-29f5-c715/MAC address
  Capabilities        : None

```

Display the brief LLDP information that all LLDP agents received from all neighboring devices in a list.

```

<Sysname> display lldp neighbor-information list
Chassis ID : * -- --Nearest nontpmr bridge neighbor
             # -- --Nearest customer bridge neighbor
             Default -- -- Nearest bridge neighbor
Local Interface  Chassis ID      Port ID                System Name
XGE1/0/1        000f-e25d-ee91    Ten-GigabitEthernet1/0/1  System1

```

Table 2 Command output

Field	Description
LLDP neighbor-information of port 1	LLDP information received through port 1.
Update time	Time when LLDP information about a neighboring device was last updated.
LLDP mac type	Type of the neighbor MAC address: <ul style="list-style-type: none"> • Nearest bridge. • Nearest customer bridge. • Nearest non-TPMR bridge.
Chassis type	Chassis ID type: <ul style="list-style-type: none"> • Chassis component. • Interface alias. • Port component. • MAC address. • Network address (ipv4). • Interface name. • Locally assigned—Locally-defined chassis type other than those listed above.
Chassis ID	ID that identifies the LLDP sending device, which can be a MAC address, a network address, an interface, or some other value, depending on the chassis ID type of the neighboring device.
Port ID type	Port ID type: <ul style="list-style-type: none"> • Interface alias. • Port component. • MAC address. • Network address (ipv4). • Interface name. • Agent circuit ID. • Locally assigned—Locally-defined port ID type other than

Field	Description
	those listed above.
Port ID	Value of the type of the port ID.
System name	System name of the neighboring device.
System description	System description of the neighboring device.
System capabilities supported	<p>Capabilities supported on the neighboring device:</p> <ul style="list-style-type: none"> • Repeater—Signal repeating is supported. • Bridge—Switching is supported. • Router—Routing is supported. • Telephone—The neighboring device can act as a telephone. • DocsisCableDevice—The neighboring device can act as a DOCSIS-compliant cable device. • StationOnly—The neighboring device can act as a station only. • Customer Bridge—The customer bridge feature is enabled. • Service Bridge—The service bridge feature is enabled. • TPMR—The TPMR feature is enabled. • Other—Features other than those listed above are supported.
System capabilities enabled	<p>Capabilities enabled on the neighboring device:</p> <ul style="list-style-type: none"> • Repeater—Signal repeating is enabled. • Bridge—Switching is enabled. • Router—Routing is enabled. • Telephone—The neighboring device is acting as a telephone. • DocsisCableDevice—The neighboring device is acting as a DOCSIS-compliant cable device. • StationOnly—The neighboring device is acting as a station only. • Customer Bridge—The customer bridge feature is enabled. • Service Bridge—The service bridge feature is enabled. • TPMR—The TPMR feature is enabled. • Other—Features other than those listed above are supported.
Management address OID	Management address object ID.
DCBX control info	Displayed as version information in IEEE Std 802.1Qaz-2011.
Oper version	DCBX version number.
Sequence number	Number of DCBX TLV content changes.
Acknowledge number	Times of synchronizing configurations by the peer device.
DCBX ETS info	CoS-to-local priority mapping and bandwidth allocation.
Percentage	Percentage of bandwidth allocated.
P0- P1- P2- P3- P4- P5- P6- P7-	Number of supported priorities configured by using the priority-flow-control no-drop dot1p dot1p-list command on the neighbor.
Number of traffic classes supported	Capability set supported by PFC (displayed only in Rev 1.01 and IEEE Std 802.1Qaz-2011).
CoS map	Application protocol-to-CoS mapping.
CBS	<p>Indicates whether the token bucket mechanism is supported on the port:</p> <ul style="list-style-type: none"> • False—The token bucket mechanism is not supported.

Field	Description
	<ul style="list-style-type: none"> • True—The token bucket mechanism is supported.
Max TCs	Maximum number of priorities supported.
TSA	Transmission selection algorithm.
Value of MBC	<p>The device does not support MACsec in the current software version.</p> <p>MBC indicates the ability of packets to bypass MACsec. It is 1-bit long.</p> <ul style="list-style-type: none"> • 0—Packets can bypass MACsec when MACsec is disabled. • 1—Packets cannot bypass MACsec when MACsec is disabled.
Port and protocol VLAN ID(PPVID)	Port protocol VLAN ID.
Port and protocol VLAN supported	Indicates whether protocol VLAN is supported on the port.
Port and protocol VLAN enabled	Indicates whether protocol VLAN is enabled on the port.
VLAN name of VLAN 12	Name of VLAN 12.
Link aggregation supported	Indicates whether link aggregation is supported.
Link aggregation enabled	Indicates whether link aggregation is enabled.
Aggregation port ID	Member port ID, which is 0 when link aggregation is disabled.
Auto-negotiation supported	Indicates whether autonegotiation is supported on the port.
Auto-negotiation enabled	Indicates whether autonegotiation is enabled on the port.
OperMau	Speed and duplex state on the port.
Power port class	<p>PoE port class:</p> <ul style="list-style-type: none"> • PSE—Power sourcing equipment. • PD—Powered device.
PSE power supported	Indicates whether the device can operate as a PSE.
PSE power enabled	Indicates whether the device is operating as a PSE.
PSE pairs control ability	Indicates whether the pair selection ability is available.
Power pairs	<p>Power supply mode:</p> <ul style="list-style-type: none"> • Signal—Uses data pairs to supply power. • Spare—Uses spare pairs to supply power.
Port power classification	<p>Power class of the PD:</p> <ul style="list-style-type: none"> • Class 0. • Class 1. • Class 2. • Class 3. • Class 4.
TLV type	Unknown basic TLV type.
TLV information	Information contained in the unknown basic TLV type.
Unknown organizationally-defined TLV	Unknown organizationally specific TLV.
TLV OUI	OUI of the unknown organizationally specific TLV.
TLV subtype	Unknown organizationally specific TLV subtype.
Index	Unknown organization index.

Field	Description
Capabilities	<p>Capabilities enabled on the neighboring device:</p> <ul style="list-style-type: none"> • Repeater—Signal repeating is enabled. • Bridge—Switching is enabled. • Router—Routing is enabled. • Telephone—The neighboring device is acting as a telephone. • DocsisCableDevice—The neighboring device is acting as a DOCSIS-compliant cable device. • StationOnly—The neighboring device is acting as a station only. • Other—Features other than those listed above are supported. • None—The neighboring device does not advertise this TLV.
Local Interface	Local port that receives the LLDP information.
Chassis ID : * -- -- Nearest nontpmr bridge neighbor #-- -- Nearest customer bridge neighbor	<p>Chassis ID flag:</p> <ul style="list-style-type: none"> • An asterisk (*) indicates the nearest non-TPMR bridge neighbor. • A pound sign (#) indicates the nearest customer bridge neighbor.

display lldp statistics

Use **display lldp statistics** to display the global LLDP statistics or the LLDP statistics of a port.

Syntax

```
display lldp statistics [ global | [ interface interface-type interface-number ] [ agent { nearest-bridge | nearest-customer | nearest-nontpmr } ] ]
```

Views

Any view

Predefined user roles

network-admin
network-operator

Parameters

global: Displays the global LLDP statistics.

interface *interface-type interface-number*: Specifies a port by its type and number.

agent: Specifies an LLDP agent type. If you do not specify an agent type, the command displays the statistics for all LLDP agents.

nearest-bridge: Specifies nearest bridge agents.

nearest-customer: Specifies nearest customer bridge agents.

nearest-nontpmr: Specifies nearest non-TPMR bridge agents.

Usage guidelines

If you do not specify any keywords or arguments, the command displays the global LLDP statistics and the LLDP statistics of all ports.

Examples

```
# Display the global LLDP statistics and the LLDP statistics of all ports.
<Sysname> display lldp statistics
```

LLDP statistics global information:

LLDP neighbor information last change time:0 days, 0 hours, 4 minutes, 40 seconds

The number of LLDP neighbor information inserted : 1

The number of LLDP neighbor information deleted : 1

The number of LLDP neighbor information dropped : 0

The number of LLDP neighbor information aged out : 1

LLDP statistics information of port 1 [Ten-GigabitEthernet1/0/1]:

LLDP agent nearest-bridge:

The number of LLDP frames transmitted : 0

The number of LLDP frames received : 0

The number of LLDP frames discarded : 0

The number of LLDP error frames : 0

The number of LLDP TLVs discarded : 0

The number of LLDP TLVs unrecognized : 0

The number of LLDP neighbor information aged out : 0

The number of CDP frames transmitted : 0

The number of CDP frames received : 0

The number of CDP frames discarded : 0

The number of CDP error frames : 0

LLDP agent nearest-nontpmr:

The number of LLDP frames transmitted : 0

The number of LLDP frames received : 0

The number of LLDP frames discarded : 0

The number of LLDP error frames : 0

The number of LLDP TLVs discarded : 0

The number of LLDP TLVs unrecognized : 0

The number of LLDP neighbor information aged out : 0

The number of CDP frames transmitted : 0

The number of CDP frames received : 0

The number of CDP frames discarded : 0

The number of CDP error frames : 0

LLDP agent nearest-customer:

The number of LLDP frames transmitted : 0

The number of LLDP frames received : 0

The number of LLDP frames discarded : 0

The number of LLDP error frames : 0

The number of LLDP TLVs discarded : 0

The number of LLDP TLVs unrecognized : 0

The number of LLDP neighbor information aged out : 0

The number of CDP frames transmitted : 0

The number of CDP frames received : 0

The number of CDP frames discarded : 0

The number of CDP error frames : 0

Display the LLDP statistics for the nearest customer bridge agents on Ten-GigabitEthernet 1/0/1.

```

<Sysname> display lldp statistics interface Ten-GigabitEthernet1/0/1 agent
nearest-customer
LLDP statistics information of port 1 [Ten-GigabitEthernet1/0/1]:
LLDP agent nearest-customer:
The number of LLDP frames transmitted           : 0
The number of LLDP frames received              : 0
The number of LLDP frames discarded             : 0
The number of LLDP error frames                 : 0
The number of LLDP TLVs discarded               : 0
The number of LLDP TLVs unrecognized           : 0
The number of LLDP neighbor information aged out : 0
The number of CDP frames transmitted            : 0
The number of CDP frames received              : 0
The number of CDP frames discarded             : 0
The number of CDP error frames                  : 0

```

Table 3 Command output

Field	Description
LLDP statistics global information	Global LLDP statistics.
LLDP neighbor information last change time	Time when the neighbor information was last updated.
The number of LLDP neighbor information inserted	Number of times neighbor information was added.
The number of LLDP neighbor information deleted	Number of times neighbor information was removed.
The number of LLDP neighbor information dropped	Number of times neighbor information was dropped due to lack of available memory space.

display lldp status

Use **display lldp status** to display LLDP status.

Syntax

```

display lldp status [ interface interface-type interface-number ] [ agent { nearest-bridge |
nearest-customer | nearest-nontpmr } ]

```

Views

Any view

Predefined user roles

network-admin
network-operator

Parameters

interface *interface-type interface-number*: Specifies a port by its type and number. If you do not specify this option, the command displays the global LLDP status and the LLDP status of all ports.

agent: Specifies an LLDP agent type. If you do not specify an agent type, the command displays the status information for all LLDP agents.

nearest-bridge: Specifies nearest bridge agents.

nearest-customer: Specifies nearest customer bridge agents.

nearest-nontpmr: Specifies nearest non-TPMR bridge agents.

Examples

Display the global LLDP status and the LLDP status of each port.

```
<Sysname> display lldp status
Global status of LLDP: Enable
Bridge mode of LLDP: customer-bridge
The current number of LLDP neighbors: 5
The current number of CDP neighbors: 0
LLDP neighbor information last changed time: 0 days, 0 hours, 4 minutes, 40 seconds
Transmit interval           : 30s
Fast transmit interval      : 1s
Transmit max credit        : 5
Hold multiplier            : 4
Reinit delay               : 2s
Trap interval              : 5s
Fast start times           : 3
```

LLDP status information of port 1 [Ten-GigabitEthernet1/0/1]:

```
LLDP agent nearest-bridge:
Port status of LLDP       : Enable
Admin status              : TX_RX
Trap flag                 : No
MED trap flag             : No
Polling interval          : 0s
Number of LLDP neighbors  : 5
Number of MED neighbors   : 2
Number of CDP neighbors   : 0
Number of sent optional TLV : 12
Number of received unknown TLV : 5
LLDP agent nearest-nontpmr:
Port status of LLDP       : Enable
Admin status              : TX_RX
Trap flag                 : No
MED trap flag             : No
Polling interval          : 0s
Number of LLDP neighbors  : 5
Number of MED neighbors   : 2
Number of CDP neighbors   : 0
Number of sent optional TLV : 12
Number of received unknown TLV : 5
Neighbor protection status : Port not protected
```

```
LLDP agent nearest-customer:
Port status of LLDP       : Enable
Admin status              : TX_RX
Trap flag                 : No
MED trap flag             : No
Polling interval          : 0s
```

```

Number of LLDP neighbors      : 5
Number of MED neighbors      : 2
Number of CDP neighbors      : 0
Number of sent optional TLV  : 12
Number of received unknown TLV : 5
Neighbor protection status   : Port not protected

```

Table 4 Command output

Field	Description
Bridge mode of LLDP	LLDP bridge mode: service-bridge or customer-bridge.
Global status of LLDP	Indicates whether LLDP is globally enabled.
LLDP neighbor information last changed time	Time when the neighbor information was last updated.
Transmit interval	LLDP frame transmission interval.
Hold multiplier	TTL multiplier.
Reinit delay	LLDP reinitialization delay.
Transmit max credit	Token bucket size for sending LLDP frames.
Trap interval	Trap transmission interval.
Fast start times	Number of LLDP frames sent each time fast LLDP frame transmission is triggered.
Port 1	LLDP status of port 1.
Port status of LLDP	Indicates whether LLDP is enabled on the port.
Admin status	LLDP operating mode of the port: <ul style="list-style-type: none"> • TX_RX—The port can send and receive LLDP frames. • Rx_Only—The port can only receive LLDP frames. • Tx_Only—The port can only send LLDP frames. • Disable—The port cannot send or receive LLDP frames.
Trap Flag	Indicates whether trapping is enabled.
Polling interval	LLDP polling interval, which is 0 when LLDP polling is disabled.
Number of neighbors	Number of LLDP neighbors connecting to the port.
Number of MED neighbors	Number of MED neighbors connecting to the port.
Number of CDP neighbors	Number of CDP neighbors connecting to the port.
Number of sent optional TLV	Number of optional TLVs contained in an LLDP frame sent through the port.
Number of received unknown TLV	Number of unknown TLVs contained in a received LLDP frame.
Neighbor protection status	Neighbor protection status on the port: <ul style="list-style-type: none"> • Port blocked (validation)—The port is blocked due to neighbor validation failure. • Port blocked (aging)—The port is blocked due to neighbor aging. • Port shutdown (aging)—The port is shut down due to neighbor aging. • Port not protected—Neither neighbor validation nor neighbor aging is enabled on the port.

display lldp tlv-config

Use **display lldp tlv-config** to display the types of advertisable optional LLDP TLVs of a port.

Syntax

```
display lldp tlv-config [ interface interface-type interface-number ] [ agent { nearest-bridge | nearest-customer | nearest-nontpmr } ]
```

Views

Any view

Predefined user roles

network-admin

network-operator

Parameters

interface *interface-type interface-number*: Specifies a port by its type and number. If you do not specify this option, the command displays the types of advertisable optional TLVs of all ports.

agent: Specifies an LLDP agent type. If you do not specify an agent type, the command displays the types of advertisable optional LLDP TLVs for all LLDP agents.

nearest-bridge: Specifies nearest bridge agents.

nearest-customer: Specifies nearest customer bridge agents.

nearest-nontpmr: Specifies nearest non-TPMR bridge agents.

Examples

Display the types of advertisable optional LLDP TLVs of Ten-GigabitEthernet 1/0/1.

```
<Sysname> display lldp tlv-config interface ten-gigabitethernet 1/0/1
```

```
LLDP tlv-config of port 1[Ten-GigabitEthernet1/0/1]:
```

```
LLDP agent nearest-bridge:
```

NAME	STATUS	DEFAULT
------	--------	---------

Basic optional TLV:

Port Description TLV	YES	YES
System Name TLV	YES	YES
System Description TLV	YES	YES
System Capabilities TLV	YES	YES
Management Address TLV	YES	YES

IEEE 802.1 extend TLV:

Port VLAN ID TLV	YES	YES
Port And Protocol VLAN ID TLV	NO	NO
VLAN Name TLV	NO	NO
DCBX TLV	NO	NO
EVB TLV	NO	NO
Link Aggregation TLV	YES	YES
Management VID TLV	NO	NO
Congestion notification TLV	NO	NO

IEEE 802.3 extend TLV:

MAC-Physic TLV	YES	YES
Power via MDI TLV	YES	YES
Maximum Frame Size TLV	YES	YES

LLDP-MED extend TLV:

Capabilities TLV	YES	YES
Network Policy TLV	YES	YES
Location Identification TLV	NO	NO
Extended Power via MDI TLV	YES	YES
Inventory TLV	YES	YES
LLDP agent nearest-nontpmr:		
NAME	STATUS	DEFAULT
Basic optional TLV:		
Port Description TLV	NO	NO
System Name TLV	NO	NO
System Description TLV	NO	NO
System Capabilities TLV	NO	NO
Management Address TLV	NO	NO
IEEE 802.1 extend TLV:		
Port VLAN ID TLV	NO	NO
Port And Protocol VLAN ID TLV	NO	NO
VLAN Name TLV	NO	NO
DCBX TLV	NO	NO
EVB TLV	YES	YES
Link Aggregation TLV	NO	NO
Management VID TLV	NO	NO
Congestion notification TLV	NO	NO
IEEE 802.3 extend TLV:		
MAC-Physic TLV	NO	NO
Power via MDI TLV	NO	NO
Maximum Frame Size TLV	NO	NO
LLDP-MED extend TLV:		
Capabilities TLV	NO	NO
Network Policy TLV	NO	NO
Location Identification TLV	NO	NO
Extended Power via MDI TLV	NO	NO
Inventory TLV	NO	NO
LLDP agent nearest-customer:		
NAME	STATUS	DEFAULT
Basic optional TLV:		
Port Description TLV	YES	YES
System Name TLV	YES	YES
System Description TLV	YES	YES
System Capabilities TLV	YES	YES
Management Address TLV	YES	YES
IEEE 802.1 extend TLV:		
Port VLAN ID TLV	YES	YES
Port And Protocol VLAN ID TLV	NO	NO
VLAN Name TLV	NO	NO
DCBX TLV	NO	NO
EVB TLV	NO	NO
Link Aggregation TLV	YES	YES
Management VID TLV	NO	NO

Congestion notification TLV	NO	NO
IEEE 802.3 extend TLV:		
MAC-Physic TLV	NO	NO
Power via MDI TLV	NO	NO
Maximum Frame Size TLV	NO	NO
LLDP-MED extend TLV:		
Capabilities TLV	NO	NO
Network Policy TLV	NO	NO
Location Identification TLV	NO	NO
Extended Power via MDI TLV	NO	NO
Inventory TLV	NO	NO

Table 5 Command output

Field	Description
LLDP tlv-config of port 1	Advertisable optional TLVs of port 1.
NAME	TLV type.
STATUS	Indicates whether the type of TLV is sent through a port.
DEFAULT	Indicates whether the type of TLV is sent through a port by default.
Basic optional TLV	Basic optional TLVs: <ul style="list-style-type: none"> • Port Description TLV. • System Name TLV. • System Description TLV. • System Capabilities TLV. • Management Address TLV. • Congestion notification TLV.
IEEE 802.1 extended TLV	IEEE 802.1 organizationally specific TLVs: <ul style="list-style-type: none"> • Port VLAN ID TLV. • Port and protocol VLAN ID TLV. • VLAN name TLV. • DCBX TLV. • EVB TLV. • Management VID TLV.
IEEE 802.3 extended TLV	IEEE 802.3 organizationally specific TLVs: <ul style="list-style-type: none"> • MAC-Physic TLV. • Power via MDI TLV. • Link aggregation TLV. • Maximum frame size TLV.
LLDP-MED extend TLV	LLDP-MED TLVs: <ul style="list-style-type: none"> • Capabilities TLV. • Network Policy TLV. • Extended Power-via-MDI TLV. • Location Identification TLV. • Inventory TLV.
Inventory TLV	Inventory TLVs: <ul style="list-style-type: none"> • Hardware Revision TLV. • Firmware Revision TLV. • Software Revision TLV.

Field	Description
	<ul style="list-style-type: none"> Serial Number TLV. Manufacturer Name TLV. Model name TLV. Asset ID TLV.

Ildp admin-status

Use **ildp admin-status** to set the LLDP operating mode.

Use **undo ildp admin-status** to restore the default.

Syntax

In Layer 2/Layer 3 Ethernet interface view or management Ethernet interface view:

```
ildp [ agent { nearest-customer | nearest-nontpmr } ] admin-status { disable | rx | tx | txrx }
```

```
undo ildp [ agent { nearest-customer | nearest-nontpmr } ] admin-status
```

In Layer 2/Layer 3 aggregate interface view:

```
ildp agent { nearest-customer | nearest-nontpmr } admin-status { disable | rx | tx | txrx }
```

```
undo ildp agent { nearest-customer | nearest-nontpmr } admin-status
```

In IRF physical interface view:

```
ildp admin-status { disable | rx | tx | txrx }
```

```
undo ildp admin-status
```

Default

The nearest bridge agent operates in **txrx** mode, and the nearest customer bridge agent and nearest non-TPMR bridge agent operate in **disable** mode.

Views

Layer 2 Ethernet interface view

Layer 3 Ethernet interface view

Management Ethernet interface view

Layer 2 aggregate interface view

Layer 3 aggregate interface view

IRF physical interface view

Predefined user roles

network-admin

Parameters

agent: Specifies an LLDP agent type. If you do not specify an agent type in Ethernet or management Ethernet interface view, the command sets the operating mode for nearest bridge agents.

nearest-customer: Specifies nearest customer bridge agents.

nearest-nontpmr: Specifies nearest non-TPMR bridge agents.

disable: Specifies the **Disable** mode. A port in this mode cannot send or receive LLDP frames.

rx: Specifies the **Rx** mode. A port in this mode can only receive LLDP frames.

tx: Specifies the **Tx** mode. A port in this mode can only send LLDP frames.

txrx: Specifies the **TxRx** mode. A port in this mode can send and receive LLDP frames.

Usage guidelines

In IRF physical interface view, only nearest bridge agents are supported.

Examples

```
# Set the LLDP operating mode to Rx for the nearest customer bridge agents on  
Ten-GigabitEthernet 1/0/1.
```

```
<Sysname> system-view
```

```
[Sysname] interface ten-gigabitethernet 1/0/1
```

```
[Sysname-Ten-GigabitEthernet1/0/1] lldp agent nearest-customer admin-status rx
```

Ildp check-change-interval

Use **lldp check-change-interval** to enable LLDP polling and set the polling interval.

Use **undo lldp check-change-interval** to disable LLDP polling.

Syntax

In Layer 2/Layer 3 Ethernet interface view or management Ethernet interface view:

```
lldp [ agent { nearest-customer | nearest-nontpmr } ] check-change-interval interval
```

```
undo lldp [ agent { nearest-customer | nearest-nontpmr } ] check-change-interval
```

In Layer 2/Layer 3 aggregate interface view:

```
lldp agent { nearest-customer | nearest-nontpmr } check-change-interval interval
```

```
undo lldp agent { nearest-customer | nearest-nontpmr } check-change-interval
```

In IRF physical interface view:

```
lldp check-change-interval interval
```

```
undo lldp check-change-interval
```

Default

LLDP polling is disabled.

Views

Layer 2 Ethernet interface view

Layer 3 Ethernet interface view

Management Ethernet interface view

Layer 2 aggregate interface view

Layer 3 aggregate interface view

IRF physical interface view

Predefined user roles

network-admin

Parameters

agent: Specifies an LLDP agent type. If you do not specify an agent type in Ethernet or management Ethernet interface view, the command enables LLDP polling and sets the polling interval for nearest bridge agents.

nearest-customer: Specifies nearest customer bridge agents.

nearest-nontpmr: Specifies nearest non-TPMR bridge agents.

interval: Sets the LLDP polling interval in the range of 1 to 30 seconds.

Examples

```
# Enable LLDP polling and set the polling interval to 30 seconds for the nearest customer bridge agents on Ten-GigabitEthernet 1/0/1.
```

```
<Sysname> system-view
[Sysname] interface ten-gigabitethernet 1/0/1
[Sysname-Ten-GigabitEthernet1/0/1] lldp agent nearest-customer check-change-interval 30
```

Ildp compliance admin-status cdp

Use **lldp compliance admin-status cdp** to set the operating mode of CDP-compatible LLDP.

Use **undo lldp compliance admin-status cdp** to restore the default.

Syntax

```
lldp compliance admin-status cdp { disable | rx | txrx }
```

```
undo lldp compliance admin-status cdp
```

Default

CDP-compatible LLDP operates in **disable** mode.

Views

Layer 2 Ethernet interface view

Layer 3 Ethernet interface view

Management Ethernet interface view

Predefined user roles

network-admin

Parameters

disable: Specifies the disable mode. CDP-compatible LLDP in this mode cannot receive or transmit CDP packets.

txrx: Specifies the TxRx mode. CDP-compatible LLDP in this mode can send and receive CDP packets.

rx: Specifies the Rx mode. CDP-compatible LLDP in this mode can receive but cannot send CDP packets.

Usage guidelines

For your device to work with Cisco IP phones, you must perform the following tasks:

- Enable CDP-compatible LLDP globally.
- Configure CDP-compatible LLDP to operate in TxRx mode on the specified ports.

Examples

```
# Enable CDP-compatible LLDP globally and configure CDP-compatible LLDP to operate in TxRx mode on Ten-GigabitEthernet 1/0/1.
```

```
<Sysname> system-view
[Sysname] lldp compliance cdp
[Sysname] interface ten-gigabitethernet 1/0/1
[Sysname-Ten-GigabitEthernet1/0/1] lldp compliance admin-status cdp txrx
```

Related commands

lldp compliance cdp

Ildp compliance cdp

Use **ildp compliance cdp** to enable CDP compatibility.

Use **undo ildp compliance cdp** to disable CDP compatibility.

Syntax

ildp compliance cdp

undo ildp compliance cdp

Default

CDP compatibility is disabled.

Views

System view

Predefined user roles

network-admin

Usage guidelines

The maximum TTL that CDP allows is 255 seconds. To make CDP-compatible LLDP work correctly with Cisco IP phones, set the LLDP frame transmission interval to be no more than 1/3 of the TTL value.

Examples

```
# Enable CDP compatibility.  
<Sysname> system-view  
[Sysname] ildp compliance cdp
```

Related commands

ildp hold-multiplier

ildp timer tx-interval

Ildp enable

Use **ildp enable** to enable LLDP on a port.

Use **undo ildp enable** to disable LLDP on a port.

Syntax

ildp enable

undo ildp enable

Default

LLDP is enabled on a port.

Views

Layer 2 Ethernet interface view

Layer 3 Ethernet interface view

Management Ethernet interface view

Layer 2 aggregate interface view

Layer 3 aggregate interface view

IRF physical interface view

Predefined user roles

network-admin

Usage guidelines

LLDP takes effect on a port only when LLDP is enabled both globally and on the port.

Examples

```
# Disable LLDP on Ten-GigabitEthernet 1/0/1.  
<Sysname> system-view  
[Sysname] interface ten-gigabitethernet 1/0/1  
[Sysname-Ten-GigabitEthernet1/0/1] undo lldp enable
```

Related commands

lldp global enable

lldp encapsulation snap

Use **lldp encapsulation snap** to set the encapsulation format for LLDP frames to SNAP.

Use **undo lldp encapsulation** to restore the default.

Syntax

In Layer 2/Layer 3 Ethernet interface view or management Ethernet interface view:

```
lldp [ agent { nearest-customer | nearest-nontpmr } ] encapsulation snap  
undo lldp [ agent { nearest-customer | nearest-nontpmr } ] encapsulation
```

In Layer 2/Layer 3 aggregate interface view:

```
lldp agent { nearest-customer | nearest-nontpmr } encapsulation snap  
undo lldp agent { nearest-customer | nearest-nontpmr } encapsulation
```

In IRF physical interface view:

```
lldp encapsulation snap  
undo lldp encapsulation
```

Default

The encapsulation format for LLDP frames is Ethernet II.

Views

Layer 2 Ethernet interface view
Layer 3 Ethernet interface view
Management Ethernet interface view
Layer 2 aggregate interface view
Layer 3 aggregate interface view
IRF physical interface view

Predefined user roles

network-admin

Parameters

agent: Specifies an LLDP agent type. If you do not specify an agent type in Ethernet or management Ethernet interface view, the command sets the LLDP frame encapsulation format for nearest bridge agents.

nearest-customer: Specifies nearest customer bridge agents.

nearest-nontpmr: Specifies nearest non-TPMR bridge agents.

Usage guidelines

LLDP-CDP packets use only SNAP encapsulation.

LLDP frames carrying the EVB module TLVs cannot be encapsulated in SNAP format.

Examples

```
# Set the encapsulation format for LLDP frames to SNAP on Ten-GigabitEthernet 1/0/1.
<Sysname> system-view
[Sysname] interface ten-gigabitethernet 1/0/1
[Sysname-Ten-GigabitEthernet1/0/1] lldp encapsulation snap
```

Ildp fast-count

Use **lldp fast-count** to set the number of LLDP frames sent each time fast LLDP frame transmission is triggered.

Use **undo lldp fast-count** to restore the default.

Syntax

lldp fast-count *count*

undo lldp fast-count

Default

Four LLDP frames are sent each time fast LLDP frame transmission is triggered.

Views

System view

Predefined user roles

network-admin

Parameters

count: Sets the number of LLDP frames sent each time fast LLDP frame transmission is triggered. The value range is 1 to 8.

Examples

```
# Configure the device to send five LLDP frames each time fast LLDP frame transmission is triggered.
<Sysname> system-view
[Sysname] lldp fast-count 5
```

Ildp global enable

Use **lldp global enable** to enable LLDP globally.

Use **undo lldp global enable** to disable LLDP globally.

Syntax

lldp global enable

undo lldp global enable

Default

If the device is started with the software default settings, LLDP is disabled globally.

If the device is started with the factory default settings, LLDP is enabled globally.

For more information about device startup with software or factory default settings, see *Fundamentals Configuration Guide*.

Views

System view

Predefined user roles

network-admin

Usage guidelines

LLDP takes effect on a port only when LLDP is enabled both globally and on the port.

Examples

```
# Disable LLDP globally.
<Sysname> system-view
[Sysname] undo lldp global enable
```

Related commands

lldp enable

Ildp global tlv-enable basic-tlv management-address-tlv

Use **lldp global tlv-enable basic-tlv management-address-tlv** to enable advertisement of the management address TLV globally and set the management address to be advertised.

Use **undo lldp global tlv-enable basic-tlv management-address-tlv** to restore the default.

Syntax

```
lldp [ agent { nearest-customer | nearest-nontpmr } ] global tlv-enable basic-tlv management-address-tlv [ ipv6 ] { ip-address | interface loopback interface-number | interface m-gigabitethernet interface-number | interface vlan-interface interface-number }
```

```
undo lldp [ agent { nearest-customer | nearest-nontpmr } ] global tlv-enable basic-tlv management-address-tlv
```

Default

Advertisement of the management address TLV is disabled globally.

Views

System view

Predefined user roles

network-admin

Parameters

agent: Specifies an LLDP agent type. If you do not specify an agent type, this command applies to the nearest bridge agent.

- **nearest-customer**: Specifies the nearest customer bridge agent.
- **nearest-nontpmr**: Specifies the nearest non-TPMR bridge agent.

ipv6: Specifies an IPv6 management address. If you do not specify this keyword, an IPv4 management address will be advertised.

ip-address: Specifies the management address to be advertised.

interface loopback *interface-number*: Specifies a loopback interface by its number in the range of 0 to 127. The IP address of the loopback interface will be advertised as the management address.

interface m-gigabitethernet *interface-number*: Specifies an M-GigabitEthernet interface by its number. The IP address of the M-GigabitEthernet interface will be advertised as the management address. This option is available in Release 2612P06 and later.

interface vlan-interface *interface-number*: Specifies a VLAN interface by its number in the range of 1 to 4094. The IP address of the VLAN interface will be advertised as the management address.

Usage guidelines

If you execute this command multiple times, the most recent configuration takes effect.

You can configure advertisement of the management address TLV globally or on a per-interface basis. The device selects the management address TLV advertisement setting for an interface in the following order:

1. Interface-based setting, configured by using the **lldp tlv-enable** command with the **management-address-tlv** keyword.
2. Global setting, configured by using the **lldp global tlv-enable basic-tlv management-address-tlv** command.
3. Default setting for the interface.

By default:

- The nearest bridge agent and nearest customer bridge agent advertise the management address TLV.
- The nearest non-TPMR bridge agent does not advertise the management address TLV.

The IPv4 or IPv6 address of the LLDP frame sending port will be advertised as the management address when the following conditions exist:

- The *ip-address* argument is not configured.
- The specified loopback interface, M-GigabitEthernet interface, or VLAN interface does not have an IPv4 or IPv6 address, or the specified interface does not exist.

If the LLDP frame sending port does not have an IP address, the MAC address of the port will be advertised.

Examples

```
# Enable advertisement of the management address TLV globally and set the advertised management address to 192.168.1.1.
```

```
<Sysname> system-view
```

```
[Sysname] lldp agent nearest-customer global tlv-enable basic-tlv management-address-tlv 192.168.1.1
```

Related commands

lldp tlv-enable

lldp hold-multiplier

Use **lldp hold-multiplier** to set the TTL multiplier.

Use **undo lldp hold-multiplier** to restore the default.

Syntax

lldp hold-multiplier *value*

undo lldp hold-multiplier

Default

The TTL multiplier is 4.

Views

System view

Predefined user roles

network-admin

Parameters

value: Sets the TTL multiplier in the range of 2 to 10.

Usage guidelines

The TTL TLV carried in an LLDPDU determines how long the device information carried in the LLDPDU can be saved on a recipient device.

By setting the TTL multiplier, you can set the TTL of locally sent LLDP frames. The TTL is expressed by using the following formula:

$$\text{TTL} = \text{Min} (65535, (\text{TTL multiplier} \times \text{LLDP frame transmission interval} + 1))$$

As the expression shows, the TTL can be up to 65535 seconds.

Examples

```
# Set the TTL multiplier to 6.
<Sysname> system-view
[Sysname] lldp hold-multiplier 6
```

Related commands

lldp timer tx-interval

lldp ignore-pvid-inconsistency

Use **lldp ignore-pvid-inconsistency** to disable LLDP PVID inconsistency check.

Use **undo lldp ignore-pvid-inconsistency** to enable LLDP PVID inconsistency check.

Syntax

```
lldp ignore-pvid-inconsistency
undo lldp ignore-pvid-inconsistency
```

Default

LLDP PVID inconsistency check is enabled.

Views

System view

Default command level

network-admin

Usage guidelines

By default, when the system receives an LLDP packet, it compares the PVID value contained in packet with the PVID configured on the receiving interface. If the two PVIDs do not match, a log message will be printed to notify the user.

You can disable PVID inconsistency check if different PVIDs are required on a link.

Examples

```
# Disable LLDP PVID inconsistency check.
<Sysname> system-view
[Sysname] lldp ignore-pvid-inconsistency
```

Ildp management-address

Use **lldp management-address** to enable the device to generate an ARP or ND entry after receiving an LLDP frame that carries a management address TLV.

Use **undo lldp management-address** to restore the default.

Syntax

```
lldp management-address { arp-learning | nd-learning } [ vlan vlan-id ]
undo lldp management-address { arp-learning | nd-learning }
```

Default

The device does not generate an ARP or ND entry after receiving an LLDP frame that carries a management address TLV.

Views

Layer 3 Ethernet interface view

Default command level

network-admin

Parameters

arp-learning: Generates an ARP entry if the received management address TLV contains an IPv4 address.

nd-learning: Generates an ND entry if the received management address TLV contains an IPv6 address.

vlan *vlan-id*: Specifies a VLAN ID in the range of 1 to 4094. Include this option in the command to generate the ARP or ND entry for the Layer 3 Ethernet subinterface identified by *interface-number.subnumber*, where *subnumber* is the specified VLAN ID. If the Layer 3 Ethernet subinterface does not exist or if this option is not specified, the device generates the entry for the Layer 3 Ethernet interface.

Usage guidelines

You can enable the device to generate both ARP entries and ND entries.

Examples

```
# Configure Ten-GigabitEthernet 1/0/1 to generate an ARP entry after receiving an LLDP frame
carrying an IPv4 management address TLV.
<Sysname> system-view
[Sysname] interface ten-gigabitethernet 1/0/1
[Sysname-Ten-GigabitEthernet1/0/1] lldp management-address arp-learning
```

Related commands

lldp source-mac vlan

Ildp management-address-format string

Use **lldp management-address-format string** to set the encoding format of the management address to string.

Use **undo lldp management-address-format** to restore the default.

Syntax

In Layer 2/Layer 3 Ethernet interface view or management Ethernet interface view:

```
lldp [ agent { nearest-customer | nearest-nontpmr } ] management-address-format string
```

```
undo lldp [ agent { nearest-customer | nearest-nontpmr } ] management-address-format
```

In Layer 2/Layer 3 aggregate interface view:

```
lldp agent { nearest-customer | nearest-nontpmr } management-address-format string
```

```
undo lldp agent { nearest-customer | nearest-nontpmr } management-address-format
```

Default

The encoding format of the management address is numeric.

Views

Layer 2 Ethernet interface view

Layer 3 Ethernet interface view

Management Ethernet interface view

Layer 2 aggregate interface view

Layer 3 aggregate interface view

Predefined user roles

network-admin

Parameters

agent: Specifies an LLDP agent type. If you do not specify an agent type in Ethernet or management Ethernet interface view, the command sets the encoding format of the management address for nearest bridge agents.

nearest-customer: Specifies nearest customer bridge agents.

nearest-nontpmr: Specifies nearest non-TPMR bridge agents.

Usage guidelines

LLDP neighbors must use the same encoding format for the management address.

The device supports only the numeric encoding format for IPv6 management addresses.

Examples

```
# Set the encoding format of the management address to string for the nearest customer bridge agents on Ten-GigabitEthernet 1/0/1.
```

```
<Sysname> system-view
```

```
[Sysname] interface ten-gigabitethernet 1/0/1
```

```
[Sysname-Ten-GigabitEthernet1/0/1] lldp agent nearest-customer  
management-address-format string
```

lldp max-credit

Use **lldp max-credit** to set the token bucket size for sending LLDP frames.

Use **undo lldp max-credit** to restore the default.

Syntax

```
lldp max-credit credit-value
```

undo lldp max-credit

Default

The token bucket size for sending LLDP frames is 5.

Views

System view

Predefined user roles

network-admin

Parameters

credit-value: Specifies the token bucket size for sending LLDP frames, in the range of 1 to 100.

Examples

```
# Set the token bucket size for sending LLDP frames to 10.  
<Sysname> system-view  
[Sysname] lldp max-credit 10
```

lldp mode

Use **lldp mode** to configure LLDP to operate in service bridge mode.

Use **undo lldp mode** to restore the default.

Syntax

lldp mode service-bridge

undo lldp mode

Default

LLDP operates in customer bridge mode.

Views

System view

Predefined user roles

network-admin

Parameters

service-bridge: Specifies the service bridge mode.

Usage guidelines

The LLDP agent types supported by LLDP depend on the LLDP bridge mode:

- **Service bridge mode**—LLDP supports nearest bridge agents and nearest non-TPMR bridge agents. LLDP processes the LLDP frames with destination MAC addresses for these agents and transparently transmits the LLDP frames with other destination MAC addresses in the VLAN.
- **Customer bridge mode**—LLDP supports nearest bridge agents, nearest non-TPMR bridge agents, and nearest customer bridge agents. LLDP processes the LLDP frames with destination MAC addresses for these agents and transparently transmits the LLDP frames with other destination MAC addresses in the VLAN.

The bridge mode configuration takes effect only when LLDP is enabled globally. If LLDP is disabled globally, LLDP can only operate in customer bridge mode.

Examples

```
# Configure LLDP to operate in service bridge mode.
<Sysname> system-view
[Sysname] lldp mode service-bridge
```

Related commands

lldp global enable

Ildp neighbor-identity chassis-id

Use **lldp neighbor-identity chassis-id** to configure the chassis ID TLV criterion for neighbor validation.

Use **undo lldp neighbor-identity chassis-id** to restore the default.

Syntax

lldp neighbor-identity chassis-id *chassis-id-subtype* *chassis-id*

undo lldp neighbor-identity chassis-id

Default

No chassis ID TLV criterion is configured on an interface for neighbor validation.

Views

Layer 2 Ethernet interface view

Layer 3 Ethernet interface view

Predefined user roles

network-admin

Parameters

chassis-id-subtype: Specifies the chassis ID subtype. The value is an integer in the range of 1 to 7. The chassis ID subtype indicates the type of identifier used for the chassis. [Table 6](#) lists the available chassis ID subtypes and the ID bases.

Table 6 Chassis ID subtypes

Chassis ID subtype	ID basis
1	Chassis component
2	Interface alias
3	Port component
4	MAC address
5	Network address
6	Interface name
7	Locally assigned

chassis-id: Specifies the chassis ID, a case-sensitive string of 1 to 255 characters.

Usage guidelines

The chassis ID TLV criterion configured on an interface takes effect only after the **lldp neighbor-protection validation** command is configured on the interface.

If you execute this command multiple times for an interface, the most recent configuration takes effect.

Examples

```
# Configure the chassis ID TLV criterion on Ten-GigabitEthernet1/0/1 for neighbor validation.
<Sysname> system-view
[Sysname] interface ten-gigabitethernet 1/0/1
[Sysname-Ten-GigabitEthernet1/0/1] lldp neighbor-identity chassis-id 4 0012-2255-7766
```

Related commands

Ildp neighbor-protection validation

Ildp neighbor-identity port-id

Use **lldp neighbor-identity port-id** to configure the port ID TLV criterion for neighbor validation.

Use **undo lldp neighbor-identity port-id** to restore the default.

Syntax

lldp neighbor-identity port-id *port-id-subtype* *port-id*

undo lldp neighbor-identity port-id

Default

No port ID TLV criterion is configured on an interface for neighbor validation.

Views

Layer 2 Ethernet interface view

Layer 3 Ethernet interface view

Predefined user roles

network-admin

Parameters

port-id-subtype: Specifies the port ID subtype. The value is an integer in the range of 1 to 7. The port ID subtype indicates the type of identifier used for the port. [Table 7](#) lists the available port ID subtypes and the ID bases.

Table 7 Port ID subtypes

Port ID subtype	ID basis
1	Interface alias
2	Port component
3	MAC address
4	Network address
5	Interface name
6	Agent circuit ID
7	Locally assigned

port-id: Specifies the port ID, a case-sensitive string of 1 to 255 characters.

Usage guidelines

The port ID TLV criterion configured on an interface takes effect only after the **lldp neighbor-protection validation** command is configured on the interface.

If you execute this command multiple times for an interface, the most recent configuration takes effect.

Examples

```
# Configure the port ID TLV on Ten-GigabitEthernet1/0/1 for neighbor validation.
```

```
<Sysname> system-view
[Sysname] interface ten-gigabitethernet 1/0/1
[Sysname-Ten-GigabitEthernet1/0/1] lldp neighbor-identity port-id 5
ten-gigabitethernet1/0/1
```

Related commands

lldp neighbor-protection validation

lldp neighbor-protection aging

Use **lldp neighbor-protection aging** to enable LLDP neighbor aging and configure the protection action on an interface.

Use **undo lldp neighbor-protection aging** to restore the default.

Syntax

lldp neighbor-protection aging { block | shutdown }

undo lldp neighbor-protection aging

Default

LLDP neighbor aging is disabled on an interface

Views

Layer 2 Ethernet interface view

Layer 3 Ethernet interface view

Predefined user roles

network-admin

Parameters

block: Blocks the interface. The **block** action places the data link layer protocol of the interface in **DOWN** state. In this state, the interface cannot transfer data packets. The data transfer capability is automatically recovered when the interface receives an LLDP packet.

shutdown: Shuts down the interface. The **shutdown** action places the interface in **LLDP DOWN** state. In this state, the interface can neither transfer data packets nor LLDP packets. You must manually execute the **undo lldp neighbor-protection aging** or **undo shutdown** command to bring up the interface.

Examples

```
# Enable LLDP neighbor aging on Ten-GigabitEthernet1/0/1 and set the protection action to block.
```

```
<Sysname> system-view
[Sysname] interface ten-gigabitethernet 1/0/1
[Sysname-Ten-GigabitEthernet1/0/1] lldp neighbor-protection aging block
```

Related commands

- **lldp hold-multiplier**

- **Ildp timer tx-interval**

Ildp neighbor-protection validation

Use **Ildp neighbor-protection validation** to enable neighbor validation on an interface.

Use **undo Ildp neighbor-protection validation** to disable neighbor validation on an interface.

Syntax

Ildp neighbor-protection validation

undo Ildp neighbor-protection validation

Default

Neighbor validation is disabled on an interface.

Views

Layer 2 Ethernet interface view

Layer 3 Ethernet interface view

Predefined user roles

network-admin

Usage guidelines

LLDP neighbor validation enables an interface to validate the identity of the neighbor based on the neighbor validation criteria configured on the interface. The neighbor validation criteria can be the chassis ID TLV, port ID TLV, or both. Each incoming LLDP packet must match all the validation criteria configured on the interface. If the neighbor information in a packet does not match the criteria, the system shuts down the data link layer and disables data transmission for the interface.

For neighbor validation to work, you must configure a minimum of one neighbor validation criterion on the interface by using the **Ildp neighbor-identity** command.

Examples

```
# Enable neighbor validation on Ten-GigabitEthernet1/0/1.  
<Sysname> system-view  
[Sysname] interface ten-gigabitethernet 1/0/1  
[Sysname-Ten-GigabitEthernet1/0/1] lldp neighbor-protection validation
```

Related commands

- **Ildp neighbor-identity chassis-id**
- **Ildp neighbor-identity port-id**

Ildp notification med-topology-change enable

Use **Ildp notification med-topology-change enable** to enable LLDP-MED trapping.

Use **undo Ildp notification med-topology-change enable** to disable LLDP-MED trapping.

Syntax

Ildp notification med-topology-change enable

undo Ildp notification med-topology-change enable

Default

LLDP-MED trapping is disabled.

Views

Layer 2 Ethernet interface view
Layer 3 Ethernet interface view
Management Ethernet interface view

Predefined user roles

network-admin

Examples

```
# Enable LLDP-MED trapping on Ten-GigabitEthernet 1/0/1.  
<Sysname> system-view  
[Sysname] interface ten-gigabitethernet 1/0/1  
[Sysname-Ten-GigabitEthernet1/0/1] lldp notification med-topology-change enable
```

Ildp notification remote-change enable

Use **lldp notification remote-change enable** to enable LLDP trapping.

Use **undo lldp notification remote-change enable** to disable LLDP trapping.

Syntax

In Layer 2/Layer 3 Ethernet interface view or management Ethernet interface view:

```
lldp [ agent { nearest-customer | nearest-nontpmr } ] notification remote-change enable  
undo lldp [ agent { nearest-customer | nearest-nontpmr } ] notification remote-change enable
```

In Layer 2/Layer 3 aggregate interface view:

```
lldp agent { nearest-customer | nearest-nontpmr } notification remote-change enable  
undo lldp agent { nearest-customer | nearest-nontpmr } notification remote-change enable
```

In IRF physical interface view:

```
lldp notification remote-change enable  
undo lldp notification remote-change enable
```

Default

LLDP trapping is disabled.

Views

Layer 2 Ethernet interface view
Layer 3 Ethernet interface view
Management Ethernet interface view
Layer 2 aggregate interface view
Layer 3 aggregate interface view
IRF physical interface view

Predefined user roles

network-admin

Parameters

agent: Specifies an LLDP agent type. If you do not specify an agent type in Ethernet or management Ethernet interface view, the command enables LLDP trapping for nearest bridge agents.

nearest-customer: Specifies nearest customer bridge agents.

nearest-nontpmr: Specifies nearest non-TPMR bridge agents.

Examples

```
# Enable LLDP trapping for the nearest customer bridge agent on Ten-GigabitEthernet 1/0/1.
<Sysname> system-view
[Sysname] interface Ten-GigabitEthernet 1/0/1
[Sysname-Ten-GigabitEthernet1/0/1] lldp agent nearest-customer notification
remote-change enable
```

Ildp source-mac vlan

Use **lldp source-mac vlan** to set the source MAC address of LLDP frames to the MAC address of a Layer 3 Ethernet subinterface.

Use **undo lldp source-mac vlan** to restore the default.

Syntax

lldp source-mac vlan *vlan-id*

undo lldp source-mac vlan

Default

The source MAC address of LLDP frames is the MAC address of the Layer 3 Ethernet interface.

Views

Layer 3 Ethernet interface view

Default command level

network-admin

Parameters

vlan-id: Specifies a VLAN ID in the range of 1 to 4094. The VLAN ID is used as the *subnumber* element of the Layer 3 Ethernet subinterface number *interface-number.subnumber*. If the Layer 3 Ethernet subinterface does not exist, the MAC address of the Layer 3 Ethernet interface is used as the source MAC address of LLDP frames.

Examples

```
# Set the source MAC address of LLDP frames to the MAC address of the Layer 3 Ethernet
subinterface.
<Sysname> system-view
[Sysname] interface ten-gigabitethernet 1/0/1
[Sysname-Ten-GigabitEthernet1/0/1] lldp source-mac vlan 4094
```

Related commands

lldp management-address arp-learning

Ildp timer fast-interval

Use **lldp timer fast-interval** to set an interval for fast LLDP frame transmission.

Use **undo lldp timer fast-interval** to restore the default.

Syntax

lldp timer fast-interval *interval*

undo lldp timer fast-interval

Default

The interval for fast LLDP frame transmission is 1 second.

Views

System view

Predefined user roles

network-admin

Parameters

interval: Sets an interval for fast LLDP frame transmission, in the range of 1 to 3600 seconds.

Examples

```
# Set the interval for fast LLDP frame transmission to 2 seconds.
<Sysname> system-view
[Sysname] lldp timer fast-interval 2
```

lldp timer notification-interval

Use **lldp timer notification-interval** to set the LLDP trap and LLDP-MED trap transmission interval.

Use **undo lldp timer notification-interval** to restore the default.

Syntax

lldp timer notification-interval *interval*

undo lldp timer notification-interval

Default

The LLDP trap and LLDP-MED trap transmission interval is 30 seconds.

Views

System view

Predefined user roles

network-admin

Parameters

interval: Sets the LLDP trap and LLDP-MED trap transmission interval in the range of 5 to 3600 seconds.

Examples

```
# Set both the LLDP trap and LLDP-MED trap transmission interval to 8 seconds.
<Sysname> system-view
[Sysname] lldp timer notification-interval 8
```

lldp timer reinit-delay

Use **lldp timer reinit-delay** to set the LLDP reinitialization delay.

Use **undo lldp timer reinit-delay** to restore the default.

Syntax

lldp timer reinit-delay *delay*

undo lldp timer reinit-delay

Default

The LLDP reinitialization delay is 2 seconds.

Views

System view

Predefined user roles

network-admin

Parameters

delay: Sets the LLDP reinitialization delay in the range of 1 to 10 seconds.

Examples

```
# Set the LLDP reinitialization delay to 4 seconds.  
<Sysname> system-view  
[Sysname] lldp timer reinit-delay 4
```

lldp timer tx-interval

Use **lldp timer tx-interval** to set the LLDP frame transmission interval.

Use **undo lldp timer tx-interval** to restore the default.

Syntax

lldp timer tx-interval *interval*

undo lldp timer tx-interval

Default

The LLDP frame transmission interval is 30 seconds.

Views

System view

Predefined user roles

network-admin

Parameters

interval: Sets the LLDP frame transmission interval in the range of 1 to 32768 seconds.

Examples

```
# Set the LLDP frame transmission interval to 20 seconds.  
<Sysname> system-view  
[Sysname] lldp timer tx-interval 20
```

lldp tlv-enable

Use **lldp tlv-enable** to configure the types of advertisable TLVs on a port.

Use **undo lldp tlv-enable** to disable the advertising of the specified types of TLVs on a port.

Syntax

In Layer 2 Ethernet interface view:

- For nearest bridge agents:

```

lldp tlv-enable { basic-tlv { all | port-description | system-capability | system-description | system-name | management-address-tlv [ ipv6 ] [ ip-address ] } | dot1-tlv { all | congestion-notification | port-vlan-id | link-aggregation | dcbx | protocol-vlan-id [ vlan-id ] | vlan-name [ vlan-id ] | management-vid [ mvlan-id ] } | dot3-tlv { all | mac-physic | max-frame-size | power } | med-tlv { all | capability | inventory | network-policy [ vlan-id ] | power-over-ethernet | location-id { civic-address device-type country-code { ca-type ca-value }&<1-10> | elin-address tel-number } } }

```

```

undo lldp tlv-enable { basic-tlv { all | port-description | system-capability | system-description | system-name | management-address-tlv [ ipv6 ] [ ip-address ] } | dot1-tlv { all | congestion-notification | port-vlan-id | link-aggregation | dcbx | protocol-vlan-id | vlan-name | management-vid } | dot3-tlv { all | mac-physic | max-frame-size | power } | med-tlv { all | capability | inventory | network-policy [ vlan-id ] | power-over-ethernet | location-id } }

```

- For nearest non-TPMR bridge agents:

```

lldp agent nearest-nontpmr tlv-enable { basic-tlv { all | port-description | system-capability | system-description | system-name | management-address-tlv [ ipv6 ] [ ip-address ] } | dot1-tlv { all | congestion-notification | evb | port-vlan-id | link-aggregation } }

```

```

undo lldp agent nearest-nontpmr tlv-enable { basic-tlv { all | port-description | system-capability | system-description | system-name | management-address-tlv [ ipv6 ] [ ip-address ] } | dot1-tlv { all | congestion-notification | evb | port-vlan-id | link-aggregation } }

```

- For nearest customer bridge agents:

```

lldp agent nearest-customer tlv-enable { basic-tlv { all | port-description | system-capability | system-description | system-name | management-address-tlv [ ipv6 ] [ ip-address ] } | dot1-tlv { all | congestion-notification | port-vlan-id | link-aggregation } }

```

```

undo lldp agent nearest-customer tlv-enable { basic-tlv { all | port-description | system-capability | system-description | system-name | management-address-tlv [ ipv6 ] [ ip-address ] } | dot1-tlv { all | congestion-notification | port-vlan-id | link-aggregation } }

```

In Layer 3 Ethernet interface view:

```

lldp tlv-enable { basic-tlv { all | port-description | system-capability | system-description | system-name | management-address-tlv [ ipv6 ] [ ip-address | interface loopback interface-number ] } | dot1-tlv { all | link-aggregation } | dot3-tlv { all | mac-physic | max-frame-size | power } | med-tlv { all | capability | inventory | power-over-ethernet | location-id { civic-address device-type country-code { ca-type ca-value }&<1-10> | elin-address tel-number } } }

```

```

lldp agent { nearest-nontpmr | nearest-customer } tlv-enable { basic-tlv { all | port-description | system-capability | system-description | system-name | management-address-tlv [ ipv6 ] [ ip-address ] } | dot1-tlv { all | link-aggregation } }

```

```

undo lldp tlv-enable { basic-tlv { all | port-description | system-capability | system-description | system-name | management-address-tlv [ ipv6 ] [ ip-address | interface loopback interface-number ] } | dot1-tlv { all | link-aggregation } | dot3-tlv { all | mac-physic | max-frame-size | power } | med-tlv { all | capability | inventory | power-over-ethernet | location-id } }

```

```

undo lldp agent { nearest-nontpmr | nearest-customer } tlv-enable { basic-tlv { all | port-description | system-capability | system-description | system-name | management-address-tlv [ ipv6 ] [ ip-address ] } | dot1-tlv { all | link-aggregation } }

```

In management Ethernet interface view:

```

lldp tlv-enable { basic-tlv { all | port-description | system-capability | system-description | system-name | management-address-tlv [ ipv6 ] [ ip-address ] } | dot1-tlv { all | link-aggregation } | dot3-tlv { all | mac-physic | max-frame-size | power } | med-tlv { all | capability | inventory | power-over-ethernet | location-id { civic-address device-type country-code { ca-type ca-value }&<1-10> | elin-address tel-number } } }

```

```
lldp agent { nearest-nontpmr | nearest-customer } tlv-enable { basic-tlv { all | port-description | system-capability | system-description | system-name | management-address-tlv [ ipv6 ] [ ip-address ] } | dot1-tlv { all | link-aggregation } }
```

```
undo lldp tlv-enable { basic-tlv { all | port-description | system-capability | system-description | system-name | management-address-tlv [ ipv6 ] [ ip-address ] } | dot1-tlv { all | link-aggregation } | dot3-tlv { all | mac-physic | max-frame-size | power } | med-tlv { all | capability | inventory | power-over-ethernet | location-id } }
```

```
undo lldp agent { nearest-nontpmr | nearest-customer } tlv-enable { basic-tlv { all | port-description | system-capability | system-description | system-name | management-address-tlv [ ipv6 ] [ ip-address ] } | dot1-tlv { all | link-aggregation } }
```

In Layer 2 aggregate interface view:

```
lldp agent nearest-nontpmr tlv-enable { basic-tlv { all | management-address-tlv [ ipv6 ] [ ip-address ] | port-description | system-capability | system-description | system-name } | dot1-tlv { all | evb | port-vlan-id } }
```

```
lldp agent nearest-customer tlv-enable { basic-tlv { all | management-address-tlv [ ipv6 ] [ ip-address ] | port-description | system-capability | system-description | system-name } | dot1-tlv { all | port-vlan-id } }
```

```
lldp tlv-enable dot1-tlv { protocol-vlan-id [ vlan-id ] | vlan-name [ vlan-id ] | management-vid [ mvlan-id ] }
```

```
undo lldp agent nearest-nontpmr tlv-enable { basic-tlv { all | management-address-tlv [ ipv6 ] [ ip-address ] | port-description | system-capability | system-description | system-name } | dot1-tlv { all | evb | port-vlan-id } }
```

```
undo lldp agent nearest-customer tlv-enable { basic-tlv { all | management-address-tlv [ ipv6 ] [ ip-address ] | port-description | system-capability | system-description | system-name } | dot1-tlv { all | port-vlan-id } }
```

```
undo lldp tlv-enable dot1-tlv { protocol-vlan-id | vlan-name | management-vid }
```

In Layer 3 aggregate interface view:

```
lldp agent { nearest-customer | nearest-nontpmr } tlv-enable basic-tlv { all | management-address-tlv [ ipv6 ] [ ip-address ] | port-description | system-capability | system-description | system-name }
```

```
undo lldp agent { nearest-customer | nearest-nontpmr } tlv-enable basic-tlv { all | management-address-tlv [ ipv6 ] [ ip-address ] | port-description | system-capability | system-description | system-name }
```

In IRF physical interface view:

```
lldp tlv-enable basic-tlv { port-description | system-capability | system-description | system-name }
```

```
undo lldp tlv-enable basic-tlv { port-description | system-capability | system-description | system-name }
```

Default

On Layer 2 Ethernet interfaces:

- Nearest bridge agents can advertise all types of LLDP TLVs except the following types:
 - DCBX TLVs.
 - Location identification TLVs.
 - Port and protocol VLAN ID TLVs.
 - VLAN name TLVs.
 - Management VLAN ID TLVs.
- Nearest non-TPMR bridge agents can advertise only EVB TLVs.

- Nearest customer bridge agents can advertise basic TLVs and IEEE 802.1 organizationally specific TLVs.

On Layer 3 Ethernet interfaces or management Ethernet interfaces:

- Nearest bridge agents can advertise all types of LLDP TLVs (only link aggregation TLV is supported in 802.1 organizationally specific TLVs) except network policy TLVs.
- Nearest non-TPMR bridge agents do not advertise TLVs.
- Nearest customer bridge agents can advertise basic TLVs and IEEE 802.1 organizationally specific TLVs (only link aggregation TLV is supported).

On Layer 2 aggregate interfaces:

- Nearest non-TPMR bridge agents can advertise only EVB TLVs.
- Nearest customer bridge agents can advertise basic TLVs and IEEE 802.1 organizationally specific TLVs. Among the IEEE 802.1 organizationally specific TLVs, only port and protocol VLAN ID TLVs, VLAN name TLVs, and management VLAN ID TLVs are supported.

On Layer 3 aggregate interfaces:

- Nearest non-TPMR bridge agents do not advertise TLVs.
- Nearest customer bridge agents can advertise only basic TLVs.

IRF physical interfaces support all available types of TLVs.

Views

Layer 2 Ethernet interface view

Layer 3 Ethernet interface view

Management Ethernet interface view

Layer 2 aggregate interface view

Layer 3 aggregate interface view

IRF physical interface view

Predefined user roles

network-admin

Parameters

agent: Specifies an LLDP agent type. If you do not specify an agent type in Ethernet or management Ethernet interface view, the command configures the types of advertisable TLVs for nearest bridge agents.

nearest-customer: Specifies nearest customer bridge agents.

nearest-nontpmr: Specifies nearest non-TPMR bridge agents.

all: Advertises all TLVs of the specified type.

- Enables the interface to advertise the following TLVs:
 - All basic LLDP TLVs if the **all** keyword is specified for **basic-tlv**.
 - All IEEE 802.1 organizationally specific LLDP TLVs if the **all** keyword is specified for **dot1-tlv**.
 - All IEEE 802.3 organizationally specific LLDP TLVs if the **all** keyword is specified for **dot3-tlv**.
- Enables the interface to advertise all LLDP-MED TLVs except location identification TLVs if the **all** keyword is specified for **med-tlv**.

basic-tlv: Advertises basic LLDP TLVs.

management-address-tlv [ipv6] [ip-address | interface loopback interface-number]: Advertises management address TLVs. The **ipv6** keyword indicates that the management address to be

advertised is in IPv6 format. If you do not specify this keyword, the management address in IPv4 format will be advertised. The *ip-address* argument specifies the management address to be advertised. The **interface loopback** *interface-number* option specifies the management address as the IP address of a loopback interface specified by its number. By default, the following rules apply:

- When you execute the **lldp tlv-enable** command:
 - For a Layer 2 Ethernet or aggregate interface, the management address is the IPv4/IPv6 address of the VLAN interface meeting the following requirements:
 - In up state.
 - The corresponding VLAN ID is the lowest among the VLANs permitted on the port.If you specify the **ipv6** keyword, the management address is the IPv6 address. If you do not specify the **ipv6** keyword, the management address is the IPv4 address.
If none of the VLAN interfaces of the permitted VLANs is assigned an IP address or all VLAN interfaces are down, the MAC address of the port will be advertised.
 - For a Layer 3 Ethernet interface, the IPv4/IPv6 address of the port will be advertised when the following conditions exist:
 - The *ip-address* argument is not configured.
 - The specified loopback interface does not have an IPv4/IPv6 address, or the specified loopback interface does not exist.If you specify the **ipv6** keyword, the management address is the IPv6 address. If you do not specify the **ipv6** keyword, the management address is the IPv4 address.
If the port does not have an IP address, the MAC address of the port will be advertised.
 - For a Layer 3 aggregate interface, or management Ethernet interface, the IPv4/IPv6 address of the port will be advertised when the *ip-address* argument is not configured.
If you specify the **ipv6** keyword, the management address is the IPv6 address. If you do not specify the **ipv6** keyword, the management address is the IPv4 address.
If the port does not have an IP address, the MAC address of the port will be advertised.
- When you execute the **undo lldp tlv-enable** command:
For a Layer 2/Layer 3 Ethernet interface, management Ethernet interface, or Layer 2/Layer 3 aggregate interface:
 - If you do not specify *ip-address*, **ipv6**, and **interface loopback** *interface-number*, the port does not advertise any management address TLVs.
 - If you specify *ip-address*, **ipv6**, or **interface loopback** *interface-number*, the port advertises the default management address TLVs.

port-description: Advertises port description TLVs.

system-capability: Advertises system capabilities TLVs.

system-description: Advertises system description TLVs.

system-name: Advertises system name TLVs.

dot1-tlv: Advertises IEEE 802.1 organizationally specific LLDP TLVs.

congestion-notification: Advertises QCN TLVs. Only the nearest bridge LLDP interfaces can advertise QCN TLVs.

dcbx: Advertises the DCBX TLVs.

evb: Advertises the EVB module TLVs.

port-vlan-id: Advertises port VLAN ID TLVs.

protocol-vlan-id [*vlan-id*]: Advertises port and protocol VLAN ID TLVs. The *vlan-id* argument specifies a VLAN ID in the TLVs to be advertised. The VLAN ID is in the range of 1 to 4094, and the default is the lowest VLAN ID on the port.

vlan-name [*vlan-id*]: Advertises VLAN name TLVs. The *vlan-id* argument specifies a VLAN ID in the TLVs to be advertised. The VLAN ID is in the range of 1 to 4094, and the default is the lowest VLAN ID on the port. If you do not specify a VLAN ID and the port is not assigned to any VLAN, the PVID of the port is advertised.

management-vid [*mvlan-id*]: Advertises management VLAN ID TLVs. The *mvlan-id* argument specifies a management VLAN ID in the TLVs to be advertised. The management VLAN ID is in the range of 1 to 4094. If you do not specify this option, the value 0 is advertised, which means that the LLDP agent is not configured with a management VLAN ID.

dot3-tlv: Advertises IEEE 802.3 organizationally specific LLDP TLVs.

link-aggregation: Advertises link aggregation TLVs.

mac-physic: Advertises MAC/PHY configuration/status TLVs.

max-frame-size: Advertises maximum frame size TLVs.

power: Advertises power in MDI TLVs and power stateful control TLVs.

med-tlv: Advertises LLDP-MED TLVs.

capability: Advertises LLDP-MED capabilities TLVs.

inventory: Advertises the following TLVs: hardware revision, firmware revision, software revision, serial number, manufacturer name, model name, and asset ID.

location-id: Advertises location identification TLVs.

civic-address: Inserts the typical address information about the network device in location identification TLVs .

device-type: Sets a device type value in the range of 0 to 2:

- Value 0 specifies a DHCP server.
- Value 1 specifies a network device.
- Value 2 specifies an LLDP-MED endpoint.

country-code: Sets a country code defined in ISO 3166.

{ *ca-type ca-value* }&<1-10>: Configures address information. *ca-type* represents the address information type in the range of 0 to 255. *ca-value* represents address information, a string of 1 to 250 characters. &<1-10> indicates that you can specify up to 10 *ca-type ca-value* pairs.

elin-address: Inserts telephone numbers for emergencies in location identification TLVs.

tel-number: Sets the telephone number for emergencies, a string of 10 to 25 characters.

network-policy [*vlan-id*]: Advertises network policy TLVs. The *vlan-id* argument specifies the voice VLAN ID to be advertised, in the range of 1 to 4094.

power-over-ethernet: Advertises extended power-via-MDI TLVs.

Usage guidelines

Nearest bridge agents are not supported on aggregate interfaces.

You can enable the device to advertise multiple types of TLVs by using this command without the **all** keyword specified.

If the MAC/PHY configuration/status TLV is not advertisable, none of the LLDP-MED TLVs will be advertised whether or not they are advertisable. If the LLDP-MED capabilities TLV is not advertisable, the other LLDP-MED TLVs will not be advertised regardless of whether or not they are advertisable.

The port and protocol VLAN ID, VLAN name, and management VLAN ID TLVs in IEEE 802.1 organizationally specific LLDP TLVs can be configured only for nearest bridge agents. The configuration can be inherited by nearest customer bridge agents and nearest non-TPMR bridge agents.

Examples

Enable the nearest customer bridge agents on Ten-GigabitEthernet 1/0/1 to advertise link aggregation TLVs of the IEEE 802.1 organizationally specific TLVs.

```
<Sysname> system-view
```

```
[Sysname] interface ten-gigabitethernet 1/0/1
```

```
[Sysname-Ten-GigabitEthernet1/0/1] lldp agent nearest-customer tlv-enable dot1-tlv  
link-aggregation
```