

LLDP Commands

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clear lldp statistics

Use the **clear lldp statistics** command in Privileged EXEC mode to clear LLDP statistics on device.

Syntax

clear lldp statistics [**global** | *interface-id*]

Parameters

- **global**—(Optional) clears only the global LLDP table statistics.
- ***interface-id***—(Optional) Clears the counters only for specified port ID

Default Configuration

Clears all LLDP statistics - global statistics and all interface counters.

Command Mode

Privileged EXEC mode

User Guidelines

Use the command **clear lldp statistics** without parameters to clear all LLDP statistics on device. This clears both global LLDP table statistics and all the interface counters.

Use the **clear lldp statistics global** to clear only the global LLDP table statistics.

Use the **clear lldp statistics** *interface-id* command to clear the counters of the given interface.

Examples

The following example clears lldp counter from interface gi1/0/1

```
switchxxxxxx#  clear lldp statistics gi1/0/1
```

clear lldp table

To clear the neighbors table for all ports or for a specific port, use the **clear lldp table** command in Privileged EXEC mode.

Syntax

clear lldp table *[interface-id]*

Parameters

interface-id—(Optional) Specifies a port ID.

Default Configuration

If no interface is specified, the default is to clear the LLDP table for all ports.

Command Mode

Privileged EXEC mode

Example

```
switchxxxxxx#  clear lldp table gi1/0/1
```

lldp chassis-id

To configure the source of the chassis ID of the port, use the **lldp chassis-id** Global Configuration mode command. To restore the chassis ID source to default, use the **no** form of this command.

Syntax

lldp chassis-id *{***mac-address** | **host-name***}*

no lldp chassis-id

Parameters

- **mac-address**—Specifies the chassis ID to use the device MAC address.
- **host-name**—Specifies the chassis ID to use the device configured host name.

Default Configuration

MAC address.

Command Mode

Global Configuration mode

User Guidelines

The host name should be configured to be a unique value.

If the chassis ID configured to be used in LLDP packets is empty, LLDP uses the default chassis ID (specified above).

Example

The following example configures the chassis ID to be the MAC address.

```
switchxxxxxx(config)#  lldp chassis-id mac-address
```

lldp hold-multiplier

To specify how long the receiving device holds a LLDP packet before discarding it, use the **lldp hold-multiplier** Global Configuration mode command. To restore the default configuration, use the **no** form of this command.

Syntax

lldp hold-multiplier *number*

no lldp hold-multiplier

Parameters

hold-multiplier *number*—Specifies the LLDP packet hold time interval as a multiple of the LLDP timer value (range: 2-10).

Default Configuration

The default LLDP hold multiplier is 4.

Command Mode

Global Configuration mode

User Guidelines

The actual Time-To-Live (TTL) value of LLDP frames is calculated by the following formula:

TTL = min(65535, LLDP-Timer * LLDP-hold-multiplier)

For example, if the value of the LLDP timer is 30 seconds, and the value of the LLDP hold multiplier is 4, then the value 120 is encoded in the TTL field of the LLDP header.

Example

The following example sets the LLDP packet hold time interval to 90 seconds.

```
switchxxxxxx(config)#  lldp timer 30
switchxxxxxx(config)#  lldp hold-multiplier 3
```

lldp lldpdu

To define LLDP packet handling when LLDP is globally disabled, use the **lldp lldpdu** Global Configuration mode command. To restore the default configuration, use the **no** form of this command.

Syntax

lldp lldpdu {***filtering*** | ***flooding***}

no lldp lldpdu

Parameters

- **filtering**—Specifies that when LLDP is globally disabled, LLDP packets are filtered (deleted).
- **flooding**—Specifies that when LLDP is globally disabled, LLDP packets are flooded (forwarded to all interfaces).

Default Configuration

LLDP packets are filtered when LLDP is globally disabled.

Command Mode

Global Configuration mode

User Guidelines

If the STP mode is MSTP, the LLDP packet handling mode cannot be set to **flooding** and vice versa.

If LLDP is globally disabled, and the LLDP packet handling mode is **flooding**, LLDP packets are treated as data packets with the following exceptions:

- VLAN ingress rules are not applied to LLDP packets. The LLDP packets are trapped on all ports for which the STP state is Forwarding.
- Default **deny-all** rules are not applied to LLDP packets.
- VLAN egress rules are not applied to LLDP packets. The LLDP packets are flooded to all ports for which the STP state is Forwarding.
- LLDP packets are sent as untagged.

Example

The following example sets the LLDP packet handling mode to Flooding when LLDP is globally disabled.

```
switchxxxxxx(config)#  lldp lldpdu flooding
```

lldp management-address

To specify the management address advertised by an interface, use the **lldp management-address** Interface (Ethernet) Configuration mode command. To stop advertising management address information, use the **no** form of this command.

Syntax

lldp management-address *{ip-address* | **none** | **automatic** *[interface-id]}*

no lldp management-address

Parameters

- **ip-address**—Specifies the static management address to advertise.
- **none**—Specifies that no address is advertised.
- **automatic**—Specifies that the software automatically selects a management address to advertise from all the IP addresses of the product. In case of multiple IP addresses, the software selects the lowest IP address among the dynamic IP addresses. If there are no dynamic addresses, the software selects the lowest IP address among the static IP addresses.
- **automatic** *interface-id*—Specifies that the software automatically selects a management address to advertise from the IP addresses that are configured on the interface ID. In case of multiple IP addresses, the software selects the lowest IP address among the dynamic IP addresses of the interface. If there are no dynamic addresses, the software selects the lowest IP address among the static IP addresses of the interface. The interface ID can be one of the following types: Ethernet port, port-channel or VLAN. Note that if the port or port- channel are members in a VLAN that has an IP address, that address is not included because the address is associated with the VLAN.

Default Configuration

No IP address is advertised.

The default advertisement is **automatic**.

Command Mode

Interface (Ethernet) Configuration mode

User Guidelines

Each port can advertise one IP address.

Example

The following example sets the LLDP management address advertisement mode to **automatic** on gi1/0/2.

```
switchxxxxxx(config)#  interface gi1/0/2
switchxxxxxx(config-if)#  lldp management-address automatic
```

lldp med

To enable or disable LLDP Media Endpoint Discovery (MED) on a port, use the **lldp med** Interface (Ethernet) Configuration mode command. To return to the default state, use the **no** form of this command.

Syntax

lldp med {*enable* [*tlv … tlv4*] | ***disable***}

no lldp med

Parameters

- **enable**—Enable LLDP MED
- **tlv**—Specifies the TLV that should be included. Available TLVs are: Network-Policy, Location, and POE-PSE, Inventory. The Capabilities TLV is always included if LLDP-MED is enabled.
- **disable**—Disable LLDP MED on the port

Default Configuration

Enabled with network-policy TLV

Command Mode

Interface (Ethernet) Configuration mode

Example

The following example enables LLDP MED with the **location** TLV on gi1/0/3.

```
switchxxxxxx(config)#  interface gi1/0/3
switchxxxxxx(config-if)#  lldp med enable location
```

lldp med notifications topology-change

To enable sending LLDP MED topology change notifications on a port, use the **lldp med notifications topology-change** Interface (Ethernet) Configuration mode command. To restore the default configuration, use the **no** form of this command.

Syntax

lldp med notifications topology-change *{***enable** | **disable***}*

no lldp med notifications topology-change

Parameters

- **enable**—Enables sending LLDP MED topology change notifications.
- **disable**—Disables sending LLDP MED topology change notifications.

Default Configuration

Disable is the default.

Command Mode

Interface (Ethernet) Configuration mode

Example

The following example enables sending LLDP MED topology change notifications on gi1/0/2.

```
switchxxxxxx(config)#  interface gi1/0/2
switchxxxxxx(config-if)#  lldp med notifications topology-change enable
```

lldp med fast-start repeat-count

When a port comes up, LLDP can send packets more quickly than usual using its fast-start mechanism.

To configure the number of packets that is sent during the activation of the fast start mechanism, use the **lldp med fast-start repeat-count** Global Configuration mode command. To return to default, use the **no** form of this command.

Syntax

lldp med fast-start repeat-count *number*

no lldp med fast-start repeat-count

Parameters

repeat-count *number*—Specifies the number of times the fast start LLDPDU is being sent during the activation of the fast start mechanism. The range is 1-10.

Default Configuration

3

Command Mode

Global Configuration mode

Example

```
switchxxxxxx(config)#  lldp med fast-start repeat-count 4
```

lldp med location

To configure the location information for the LLDP Media Endpoint Discovery (MED) for a port, use the **lldp med location** Interface (Ethernet) Configuration mode command. To delete location information for a port, use the **no** form of this command.

Syntax

lldp med location *{{***coordinate** *data}* | *{***civic-address** *data}* | *{***ecs-elin** *data}}*

no lldp med location *{***coordinate** | **civic-address** | **ecs-elin***}*

Parameters

- **coordinate** *data*—Specifies the location data as coordinates in hexadecimal format.
- **civic-address** *data*—Specifies the location data as a civic address in hexadecimal format.
- **ecs-elin** *data*—Specifies the location data as an Emergency Call Service Emergency Location Identification Number (ECS ELIN) in hexadecimal format.
- **data**—Specifies the location data in the format defined in ANSI/TIA 1057: dotted hexadecimal data: Each byte in a hexadecimal character string is two hexadecimal digits. Bytes are separated by a period or colon. (Length: coordinate: 16 bytes. Civic-address: 6-160 bytes. Ecs-elin: 10-25 bytes)

Default Configuration

The location is not configured.

Command Mode

Interface (Ethernet) Configuration mode

Example

The following example configures the LLDP MED location information on gi1/0/2 as a civic address.

```
switchxxxxxx(config)#  interface gi1/0/2
switchxxxxxx(config-if)#  lldp med location civic-address 616263646566
```

lldp med network-policy (global)

To define a LLDP MED network policy, use the **lldp med network-policy** Global Configuration mode command. For voice applications, it is simpler to use lldp med network-policy voice auto, on page 15.

The **lldp med network-policy** command creates the network policy, which is attached to a port by lldp med network-policy (interface), on page 14.

The network policy defines how LLDP packets are constructed.

To remove LLDP MED network policy, use the **no** form of this command.

Syntax

lldp med network-policy *number application [***vlan** *vlan-id] [***vlan-type** *{***tagged** | **untagged***}] [***up** *priority] [***dscp** *value]*

no lldp med network-policy *number*

Parameters

- **number**—Network policy sequential number. The range is 1-32.
- **application**—The name or the number of the primary function of the application defined for this network policy. Available application names are:
  - voice
  - voice-signaling
  - guest-voice
  - guest-voice-signaling
  - softphone-voice
  - video-conferencing
  - streaming-video
  - video-signaling
- **vlan** *vlan-id*—(Optional) VLAN identifier for the application.
- **vlan-type**—(Optional) Specifies if the application is using a tagged or an untagged VLAN.
- **up** *priority*—(Optional) User Priority (Layer 2 priority) to be used for the specified application.
- **dscp** *value*—(Optional) DSCP value to be used for the specified application.

Default Configuration

No network policy is defined.

Command Mode

Global Configuration mode

User Guidelines

Use the **lldp med network-policy** Interface Configuration command to attach a network policy to a port.

Up to 32 network policies can be defined.

Example

This example creates a network policy for the voice-signal application and attaches it to port 1. LLDP packets sent on port 1 will contain the information defined in the network policy.

```
switchxxxxxx(config)#  lldp med network-policy 1 voice-signaling vlan 1 vlan-type untagged
 up 1 dscp 2
switchxxxxxx(config)#  interface gi1/0/1
switchxxxxxx(config-if)#  lldp med network-policy add 1
```

lldp med network-policy (interface)

To attach or remove an LLDP MED network policy on a port, use the **lldp med network-policy** Interface (Ethernet) Configuration mode command. Network policies are created in lldp med network-policy (global), on page 12.

To remove all the LLDP MED network policies from the port, use the **no** form of this command.

Syntax

lldp med network-policy *{***add** | **remove***}* *number*

no lldp med network-policy *number*

Parameters

- **add/remove** *number*—Attaches/removes the specified network policy to the interface.
- **number**—Specifies the network policy sequential number. The range is 1-32

Default Configuration

No network policy is attached to the interface.

Command Mode

Interface (Ethernet) Configuration mode

User Guidelines

For each port, only one network policy per application (voice, voice-signaling, etc.) can be defined.

Example

This example creates a network policy for the voice-signally application and attaches it to port 1. LLDP packets sent on port 1 will contain the information defined in the network policy.

```
switchxxxxxx(config)#  lldp med network-policy 1 voice-signaling vlan 1 vlan-type untagged
 up 1 dscp 2
switchxxxxxx(config)#  interface gi1/0/1
switchxxxxxx(config-if)#  lldp med network-policy add 1
```

lldp med network-policy voice auto

A network policy for voice LLDP packets can be created by using the lldp med network-policy (global), on page 12. The **lldp med network-policy voice au**to Global Configuration mode is simpler in that it uses the configuration of the Voice application to create the network policy instead of the user having to manually configure it.

This command generates an LLDP MED network policy for voice, if the voice VLAN operation mode is **auto voice VLAN**. The voice VLAN, 802.1p priority, and the DSCP of the voice VLAN are used in the policy.

To disable this mode, use the **no** form of this command.

The network policy is attached automatically to the voice VLAN.

Syntax

lldp med network-policy voice auto

no lldp med network-policy voice auto

Parameters

This command has no arguments or keywords.

Default Configuration

None

Command Mode

Global Configuration mode

User Guidelines

In Auto mode, the Voice VLAN feature determines on which interfaces to advertise the network policy TLV with application type **voice**, and controls the parameters of that TLV.

To enable the auto generation of a network policy based on the auto voice VLAN, there must be no manually pre-configured network policies for the voice application

In Auto mode, you cannot manually define a network policy for the voice application using the lldp med network-policy (global), on page 12 command.

Example

```
switchxxxxxx(config)#  lldp med network-policy voice auto
```

lldp notifications

To enable/disable sending LLDP notifications on an interface, use the **lldp notifications** Interface (Ethernet) Configuration mode command. To restore the default configuration, use the **no** form of this command.

Syntax

lldp notifications *{***enable** | **disable***}*

no lldp notifications

Parameters

- **enable**—Enables sending LLDP notifications.
- **disable**—Disables sending LLDP notifications.

Default Configuration

Disabled.

Command Mode

Interface (Ethernet) Configuration mode

Example

The following example enables sending LLDP notifications on gi1/0/1.

```
switchxxxxxx(config)#  interface gi1/0/1
switchxxxxxx(config-if)#  lldp notifications enable
```

lldp notifications interval

To configure the maximum transmission rate of LLDP notifications, use the **lldp notifications interval** Global Configuration mode command. To return to the default, use the **no** form of this command.

Syntax

lldp notifications interval *seconds*

no lldp notifications interval

Parameters

interval *seconds*—The device does not send more than a single notification in the indicated period (range: 5–3600).

Default Configuration

5 seconds

Command Mode

Global Configuration mode

Example

```
switchxxxxxx(config#  lldp notifications interval 10
```

lldp optional-tlv

To specify which optional TLVs are transmitted, use the **lldp optional-tlv** Interface (Ethernet) Configuration mode command. To restore the default configuration, use the **no** form of this command.

Syntax

lldp optional-tlv *tlv* [*tlv2 … tlv5* | ***none***]

Parameters

- **tlv**—Specifies the TLVs to be included. Available optional TLVs are: port-desc, sys-name, sys-desc, sys-cap, 802.3-mac-phy, 802.3-lag, 802.3-max-frame-size, Power-via-MDI , 4-wirePower-via-MDI.

  none—(Optional) Clear all optional TLVs from the interface.

If the 802.1 protocol is selected, see the command below.

Default Configuration

The following TLV are transmitted:

- sys-name
- sys-cap

Command Mode

Interface (Ethernet) Configuration mode

Example

The following example specifies that the port description TLV is transmitted on gi1/0/2.

```
switchxxxxxx(config)#  interface gi1/0/2
switchxxxxxx(config-if)#  lldp optional-tlv port-desc
```

lldp optional-tlv 802.1

To specify whether to transmit the 802.1 TLV, use the **lldp optional-tlv 802.1** Interface (Ethernet) Configuration mode command. To revert to the default setting, use the **no** form of this command.

Syntax

lldp optional-tlv 802.1 pvid ***{enable*** | ***disable}*** - The PVID is advertised or not advertised.

no lldp optional-tlv 802.1 pvid - The PVID advertise state is returned to default.

lldp optional-tlv 802.1 ppvid *add ppvid* - The Protocol Port VLAN ID (PPVID) is advertised. The PPVID is the PVID that is used depending on the packet's protocol.

lldp optional-tlv 802.1 ppvid *remove ppvid* - The PPVID is not advertised.

lldp optional-tlv 802.1 vlan *add vlan-id* - This *vlan-id* is advertised.

lldp optional-tlv 802.1 vlan *remove vlan-id* - This *vlan-id* is not advertised.

lldp optional-tlv 802.1 protocol *add {**stp*** | ***rstp*** | ***mstp*** | ***pause*** | ***802.1x*** | ***lacp*** | ***gvrp}*** - The protocols selected are advertised.

lldp optional-tlv 802.1 protocol *remove {***stp** | **rstp** | **mstp** | **pause** | **802.1x** | **lacp** | **gvrp***}* - The protocols selected are not advertised.

Parameters

- **lldp optional-tlv 802.1 pvid** ***{enable*** | ***disable}***—Advertises or stop advertize the PVID of the port.
- **lldp optional-tlv 802.1 ppvid add/remove** *ppvid* —Adds/removes PPVID for advertising. (range: 0–4094). PPVID = 0 indicates that the port is not capable of supporting port and protocol VLANs and/or the port is not enabled with any protocol VLANs.
- **add/remove** *vlan-id*—Adds/removes VLAN for advertising (range: 1–4094).
- **add/remove** ***{stp*** | ***rstp*** | ***mstp*** | ***pause*** | ***802.1x*** | ***lacp*** | ***gvrp}***—Add specifies to advertise the specified protocols; remove specifies not to advertise the specified protocol.

Default Configuration

The following 802.1 TLV is transmitted:

Command Mode

Interface (Ethernet) Configuration mode

Example

```
switchxxxxxx(config)#  lldp optional-tlv 802.1 protocol add stp
```

lldp run

To enable LLDP, use the **lldp run** Global Configuration mode command. To disable LLDP, use the **no** form of this command.

Syntax

lldp run

no lldp run

Parameters

This command has no arguments or keywords.

Default Configuration

Enabled

Command Mode

Global Configuration mode

Example

```
switchxxxxxx(config)#  lldp run
```

lldp receive

To enable receiving LLDP on an interface, use the **lldp receive** Interface (Ethernet) Configuration mode command. To stop receiving LLDP on an Interface (Ethernet) Configuration mode interface, use the **no** form of this command.

Syntax

lldp receive

no lldp receive

Parameters

This command has no arguments or keywords.

Default Configuration

Enabled

Command Mode

Interface (Ethernet) Configuration mode

User Guidelines

LLDP manages LAG ports individually. LLDP data received through LAG ports is stored individually per port.

LLDP operation on a port is not dependent on the STP state of a port. I.e. LLDP frames are received on blocked ports.

If a port is controlled by 802.1x, LLDP operates only if the port is authorized.

Example

```
switchxxxxxx(config)#  interface gi1/0/1
switchxxxxxx(config-if)#  lldp receive
```

lldp reinit

To specify the minimum time an LLDP port waits before reinitializing LLDP transmission, use the **lldp reinit** Global Configuration mode command. To revert to the default setting, use the **no** form of this command.

Syntax

lldp reinit *seconds*

no lldp reinit

Parameters

reinit *seconds*—Specifies the minimum time in seconds an LLDP port waits before reinitializing LLDP transmission.(Range: 1–10)

Default Configuration

2 seconds

Command Mode

Global Configuration mode

Example

```
switchxxxxxx(config)#  lldp reinit 4
```

lldp timer

To specify how often the software sends LLDP updates, use the **lldp timer** Global Configuration mode command. To restore the default configuration, use the **no** form of this command.

Syntax

lldp timer *seconds*

no lldp timer

Parameters

timer *seconds*—Specifies, in seconds, how often the software sends LLDP updates (range: 5-32768 seconds).

Default Configuration

30 seconds.

Command Mode

Global Configuration mode

Example

The following example sets the interval for sending LLDP updates to 60 seconds.

```
switchxxxxxx(config)#  lldp timer 60
```

lldp transmit

To enable transmitting LLDP on an interface use the **lldp transmit** Interface (Ethernet) Configuration mode command. Use the **no** form of this command to stop transmitting LLDP on an interface,

Syntax

lldp transmit

no lldp transmit

Parameters

This command has no arguments or keywords.

Default Configuration

Enabled

Command Mode

Interface (Ethernet) Configuration mode

switchxxxxxx(config-if)#

User Guidelines

LLDP manages LAG ports individually. LLDP sends separate advertisements on each port in a LAG.

LLDP operation on a port is not dependent on the STP state of a port. I.e. LLDP frames are sent on blocked ports.

If a port is controlled by 802.1x, LLDP operates only if the port is authorized.

Example

```
switchxxxxxx(config)#  interface gi1/0/1
switchxxxxxx(config-if)#  lldp transmit
```

lldp tx-delay

To set the delay between successive LLDP frame transmissions initiated by value/status changes in the LLDP local systems MIB, use the **lldp tx-delay** Global Configuration mode command. To restore the default configuration, use the **no** form of this command.

Syntax

lldp tx-delay *seconds*

no lldp tx-delay

Parameters

tx-delay *seconds*—Specifies the delay in seconds between successive LLDP frame transmissions initiated by value/status changes in the LLDP local systems MIB (range: 1-8192 seconds).

Default Configuration

The default LLDP frame transmission delay is 2 seconds.

Command Mode

Global Configuration mode

User Guidelines

It is recommended that the tx-delay be less than 25% of the LLDP timer interval.

Example

The following example sets the LLDP transmission delay to 10 seconds.

```
switchxxxxxx(config)#  lldp tx-delay 10
```

show lldp configuration

To display the LLDP configuration for all ports or for a specific port, use the **show lldp configuration** Privileged EXEC mode command.

Syntax

show lldp configuration *[interface-id* | **detailed**]

Parameters

- **interface-id**—(Optional) Specifies the port ID.
- **detailed**—(Optional) Displays information for non-present ports in addition to present ports.

Default Configuration

Display for all ports. If detailed is not used, only present ports are displayed.

Command Mode

Privileged EXEC mode

Example 1 - Display LLDP configuration for all ports.

```
switchxxxxxx#  show lldp configuration
State: Enabled
Timer: 30 Seconds
Hold multiplier: 4
Reinit delay: 2 Seconds
Tx delay: 2 Seconds
Notifications interval: 5 seconds
LLDP packets handling: Filtering
Port      State  Optional TLVs      Address       Notifications
--------  -----  --------------     -----------   ------------
gi1/0/1       RX,TX  PD, SN, SD, SC , 4W      172.16.1.1    Disabled
gi1/0/2       TX     PD, SN              172.16.1.1    Disabled
gi1/0/3       RX,TX  PD, SN, SD, SC      None          Disabled
gi1/0/4       RX,TX  D,  SN, SD, SC      automatic     Disabled
```

Example 2 - Display LLDP configuration for port 1.

```
switchxxxxxx#  show lldp configuration gi1/0/1
State: Enabled
Timer: 30 Seconds
Hold multiplier: 4
Reinit delay: 2 Seconds
Tx delay: 2 Seconds
Notifications interval: 5 seconds
LLDP packets handling: Filtering
Chassis ID: mac-address
Port State      Optional TLVs     Address      Notifications
---- ---------- --------------    -----------  -----------
gi1/0/1  RX, TX     PD, SN, SD, SC, 4W    72.16.1.1    Disabled
802.3 optional TLVs: 802.3-mac-phy, 802.3-lag, 802.3-max-frame-size
802.1 optional TLVs
PVID: Enabled
PPVIDs: 0, 1, 92
```

```
VLANs: 1, 92
Protocols: 802.1x
```

The following table describes the significant fields shown in the display:

Field	Description
Timer	The time interval between LLDP updates.
Hold multiplier	The amount of time (as a multiple of the timer interval) that the receiving device holds a LLDP packet before discarding it.
Reinit timer	The minimum time interval an LLDP port waits before re-initializing an LLDP transmission.
Tx delay	The delay between successive LLDP frame transmissions initiated by value/status changes in the LLDP local systems MIB.
Port	The port number.
State	The port's LLDP state.
Optional TLVs	Optional TLVs that are advertised. Possible values are: PD - Port description SN - System name SD - System description SC - System capabilities 4W - 4 wire spare pair capability
Address	The management address that is advertised.
Notifications	Indicates whether LLDP notifications are enabled or disabled.
PVID	Port VLAN ID advertised.
PPVID	Protocol Port VLAN ID advertised.
Protocols	Protocols advertised.

show lldp local

To display the LLDP information that is advertised from a specific port, use the **show lldp local** Privileged EXEC mode command.

Syntax

show lldp local *interface-id*

Parameters

Interface-id— Specifies a port ID.

Default Configuration

N/A.

Command Mode

Privileged EXEC mode

Example

The following examples display LLDP information that is advertised from gi1/0/1 and 2.

```
switchxxxxxx#  show lldp local gi1/0/1
Device ID: 0060.704C.73FF
Port ID: gi1/0/1
Capabilities: Bridge
System Name: ts-7800-1
System description:
Port description:
Management address: 172.16.1.8
802.3 MAC/PHY Configuration/Status
Auto-negotiation support: Supported
Auto-negotiation status: Enabled
Auto-negotiation Advertised Capabilities: 100BASE-TX full duplex, 1000BASE-T full duplex
Operational MAU type: 1000BaseTFD
802.3 Link Aggregation
Aggregation capability: Capable of being aggregated
Aggregation status: Not currently in aggregation
Aggregation port ID: 1
802.3 Maximum Frame Size: 1522
Power Type: Type 1 PSE
Power Source: Primary Power Source
Power Priority: Unknown
PSE Allocated Power Value: 30
4-Pair POE supported: Yes
Spare Pair Detection/Classification required: Yes
PD Spare Pair Desired State: Enabled
802.3 EEE
Local Tx: 30 usec
Local Rx: 25 usec
Remote Tx Echo: 30 usec
Remote Rx Echo: 25 usec
802.1 PVID: 1
802.1 PPVID: 2 supported, enabled
802.1 VLAN: 2 (VLAN2)
```

```
802.1 Protocol: 88 08 00 01 (PAUSE)
LLDP-MED capabilities: Network Policy, Location Identification
LLDP-MED Device type: Network Connectivity
LLDP-MED Network policy
Application type: Voice
Flags: Tagged VLAN
VLAN ID: 2
Layer 2 priority: 0
DSCP: 0
LLDP-MED Power over Ethernet
Device Type: Power Sourcing Entity
Power source: Primary Power Source
Power priority: High
Power value: 9.6 Watts
LLDP-MED Location
Coordinates: 54:53:c1:f7:51:57:50:ba:5b:97:27:80:00:00:67:01
Hardware Revision: B1
Firmware Revision: A1
Software Revision: 3.8
Serial number: 7978399
Manufacturer name: Manufacturer
Model name: Model 1
Asset ID: Asset 123
switchxxxxxx#  show lldp local gi1/0/2
LLDP is disabled.
```

show lldp local tlvs-overloading

When an LLDP packet contains too much information for one packet, this is called overloading. To display the status of TLVs overloading of the LLDP on all ports or on a specific port, use the **show lldp local tlvs-overloading** EXEC mode command.

Syntax

show lldp local tlvs-overloading *[interface-id]*

Parameters

interface-id—(Optional) Specifies a port ID.

Default Configuration

If no port ID is entered, the command displays information for all ports.

Command Mode

User EXEC mode

User Guidelines

The command calculates the overloading status of the current LLDP configuration, and not for the last LLDP packet that was sent.

Example

```
switchxxxxxx#  show lldp local tlvs-overloading gi1/0/1
TLVs Group             Bytes       Status
------------           ------      --------------
Mandatory               31         Transmitted
LLDP-MED Capabilities   9          Transmitted
LLDP-MED Location       200        Transmitted
802.1                   1360       Overloading
Total: 1600 bytes
Left: 100 bytes
```

show lldp med configuration

To display the LLDP Media Endpoint Discovery (MED) configuration for all ports or for a specific port, use the **show lldp med configuration** Privileged EXEC mode command.

Syntax

show lldp med configuration *[interface-id* | **detailed**]

Parameters

- **interface-id**—(Optional) Specifies the port ID.
- **detailed**—(Optional) Displays information for non-present ports in addition to present ports.

Default Configuration

If no port ID is entered, the command displays information for all ports. If detailed is not used, only present ports are displayed.

Command Mode

Privileged EXEC mode

Example 1 - The following example displays the LLDP MED configuration for all interfaces.

```
switchxxxxxx#  show lldp med configuration
Fast Start Repeat Count: 4.
lldp med network-policy voice: manual
Network policy 1
-------------------
Application type: voiceSignaling
VLAN ID: 1  untagged
Layer 2 priority: 0
DSCP: 0
Port    Capabilities   Network Policy Location  Notifications  Inventory
------ -------------- -------------- ---------- -------------   --------
gi1/0/1    Yes             Yes            Yes         Enabled        Yes
gi1/0/2    Yes             Yes            No          Enabled        No
gi1/0/3    No              No             No          Enabled        No
```

Example 2 - The following example displays the LLDP MED configuration for gi1/0/1.

```
switchxxxxxx#  show lldp med configuration gi1/0/1
Port    Capabilities   Network Policy   Location  Notifications Inventory
------- -------------- ---------------- --------- ----------    --------
gi1/0/1     Yes             Yes             Yes       Enabled        Yes
Network policies:
Location:
Civic-address: 61:62:63:64:65:66
```

show lldp neighbors

To display information about neighboring devices discovered using LLDP, use the **show lldp neighbors** Privileged EXEC mode command. The information can be displayed for all ports or for a specific port.

Syntax

show lldp neighbors *[interface-id]*

Parameters

interface-id—(Optional) Specifies a port ID.

Default Configuration

If no port ID is entered, the command displays information for all ports.

Command Mode

Privileged EXEC mode

User Guidelines

A TLV value that cannot be displayed as an ASCII string is displayed as an hexadecimal string.

Example 1 - The following example displays information about neighboring devices discovered using LLDP on all ports on which LLDP is enabled and who are up.

Location information, if it exists, is also displayed.

```
switchxxxxxx#  show lldp neighbors
System capability legend:
B - Bridge; R - Router; W - Wlan Access Point; T - telephone;
D - DOCSIS Cable Device; H - Host; r - Repeater;
TP - Two Ports MAC Relay; S - S-VLAN; C - C-VLAN; O - Other
Port  Device ID         Port ID  System Name Capabilities TTL
----- ---------------   -------- ----------  -----------  ----
gi1/0/1 00:00:00:11:11:11 gi1/0/1 ts-7800-2 B 90
gi1/0/1 00:00:00:11:11:11 gi1/0/1 ts-7800-2 B 90
gi1/0/2 00:00:26:08:13:24 gi1/0/3 ts-7900-1 B,R 90
gi1/0/3 00:00:26:08:13:24 gi1/0/2 ts-7900-2 W 90
```

Example 2 - The following example displays information about neighboring devices discovered using LLDP on port 1.

```
switchxxxxxx#  show lldp neighbors gi1/0/1
Device ID: 00:00:00:11:11:11
Port ID: gi1/0/1
System Name: ts-7800-2
Capabilities: B
System description:
Port description:
Management address: 172.16.1.1
Time To Live: 90 seconds
802.3 MAC/PHY Configuration/Status
Auto-negotiation support: Supported.
Auto-negotiation status: Enabled.
Auto-negotiation Advertised Capabilities: 100BASE-TX full duplex, 1000BASE-T full duplex.
```

```
Operational MAU type: 1000BaseTFD
802.3 Power via MDI
MDI Power support Port Class: PD
PSE MDI Power Support: Not Supported
PSE MDI Power State: Not Enabled
PSE power pair control ability: Not supported.
PSE Power Pair: Signal
PSE Power class: 1
Power Type: Type 1 PSE
Power Source: Primary Power Source
Power Priority: Unknown
PD Requested Power Value: 30
4-Pair POE supported: Yes
Spare Pair Detection/Classification required: Yes
PD Spare Pair Desired State: Enabled
PD Spare Pair Operational State: Enabled
802.3 Link Aggregation
Aggregation capability: Capable of being aggregated
Aggregation status: Not currently in aggregation
Aggregation port ID: 1
802.3 Maximum Frame Size: 1522
802.3 EEE
Remote Tx: 25 usec
Remote Rx: 30 usec
Local Tx Echo: 30 usec
Local Rx Echo: 25 usec
802.1 PVID: 1
802.1 PPVID: 2 supported, enabled
802.1 VLAN: 2(VLAN2)
802.1 Protocol: 88 8E 01
LLDP-MED capabilities: Network Policy.
LLDP-MED Device type: Endpoint class 2.
LLDP-MED Network policy
Application type: Voice
Flags: Unknown policy
VLAN ID: 0
Layer 2 priority: 0
DSCP: 0
LLDP-MED Power over Ethernet
Device Type: Power Device
Power source: Primary power
Power priority: High
Power value: 9.6 Watts
Hardware revision: 2.1
Firmware revision: 2.3
Software revision: 2.7.1
Serial number: LM759846587
Manufacturer name: VP
Model name: TR12
Asset ID: 9
LLDP-MED Location
Coordinates: 54:53:c1:f7:51:57:50:ba:5b:97:27:80:00:00:67:01
```

The following table describes significant LLDP fields shown in the display:

Field	Description
LLDP MED	
LLDP MED - Network Policy	
LLDP MED - Power Over Ethernet	

Field	Description
LLDP MED - Location	
Port	The port number.
Device ID	The neighbor device's configured ID (name) or MAC address.
Port ID	The neighbor device's port ID.
System name	The neighbor device's administratively assigned name.
Capabilities	The capabilities discovered on the neighbor device. Possible values are: • B - Bridge • R - Router • W - WLAN Access Point • T - Telephone • D - DOCSIS cable device • H - Host • r - Repeater • O - Other
System description	The neighbor device's system description.
Port description	The neighbor device's port description.
Management address	The neighbor device's management address.
Auto-negotiation support	The auto-negotiation support status on the port. (supported or not supported)
Auto-negotiation status	The active status of auto-negotiation on the port. (enabled or disabled)
Auto-negotiation Advertised Capabilities	The port speed/duplex/flow-control capabilities advertised by the auto-negotiation.
Operational MAU type	The port MAU type.
Power Source	The power source utilized by a PSE or PD device. A PSE device advertises its power capability. The possible values are: Primary power source, Backup power source. Unknown Power source, PSE and local power source, Local Only power source and PSE only power source.
Capabilities	The sender's LLDP-MED capabilities.

Field	Description
Device type	The device type. Indicates whether the sender is a Network Connectivity Device or Endpoint Device, and if an Endpoint, to which Endpoint Class it belongs.
Application type	The primary function of the application defined for this network policy.
Flags	Flags. The possible values are: Unknown policy: Policy is required by the device, but is currently unknown. Tagged VLAN: The specified application type is using a tagged VLAN. Untagged VLAN: The specified application type is using an Untagged VLAN.
VLAN ID	The VLAN identifier for the application.
Layer 2 priority	The Layer 2 priority used for the specified application.
DSCP	The DSCP value used for the specified application.
Power type	The device power type. The possible values are: Power Sourcing Entity (PSE) or Power Device (PD).
Power Source	The power source utilized by a PSE or PD device. A PSE device advertises its power capability. The possible values are: Primary power source and Backup power source. A PD device advertises its power source. The possible values are: Primary power, Local power, Primary and Local power.
Power priority	The PD device priority. A PSE device advertises the power priority configured for the port. A PD device advertises the power priority configured for the device. The possible values are: Critical, High and Low.
Power value	The total power in watts required by a PD device from a PSE device, or the total power a PSE device is capable of sourcing over a maximum length cable based on its current configuration.
Coordinates, Civic address, ECS ELIN.	The location information raw data.

show lldp statistics

To display LLDP statistics on all ports or a specific port, use the show **lldp statistics** EXEC mode command.

Syntax

show lldp statistics *[interface-id* | **detailed**]

Parameters

- **interface-id**—(Optional) Specifies the port ID.
- **detailed**—(Optional) Displays information for non-present ports in addition to present ports.

Default Configuration

If no port ID is entered, the command displays information for all ports. If detailed is not used, only present ports are displayed.

Command Mode

User EXEC mode

Example

```
switchxxxxxx#  show lldp statistics
Tables Last Change Time: 14-Oct-2010 32:08:18
Tables Inserts: 26
Tables Deletes: 2
Tables Dropped: 0
Tables Ageouts: 1
       TX Frames      RX Frame                RX  TLVs        RX Ageouts
Port  Total Total Discarded Errors   Discarded   Unrecognized  Total
----- ---- ----- --------- --------- ---------   ---------    ------------
gi1/0/1   730   850    0       0         0             0          0
gi1/0/2   0       0    0       0         0               0          0
gi1/0/3   730     0    0       0         0               0          0
gi1/0/4   0       0    0       0         0               0          0
```

The following table describes significant LLDP fields shown in the display:

Field	Description
LLDP MED	
LLDP MED - Power Over Ethernet	
LLDP MED - Location	
Port	The port number.
Device ID	The neighbor device's configured ID (name) or MAC address.
Port ID	The neighbor device's port ID.

Field	Description
System name	The neighbor device's administratively assigned name.
Capabilities	The capabilities discovered on the neighbor device. Possible values are: • B - Bridge • R - Router • W - WLAN Access Point • T - Telephone • D - DOCSIS cable device • H - Host • r - Repeater • O - Other
System description	The neighbor device's system description.
Port description	The neighbor device's port description.
Management address	The neighbor device's management address.
Auto-negotiation support	The auto-negotiation support status on the port. (Supported or Not Supported)
Auto-negotiation status	The active status of auto-negotiation on the port. (Enabled or Disabled)
Auto-negotiation Advertised Capabilities	The port speed/duplex/flow-control capabilities advertised by the auto-negotiation.
Operational MAU type	The port MAU type.
Capabilities	The sender's LLDP-MED capabilities.
Device type	The device type. Indicates whether the sender is a Network Connectivity Device or Endpoint Device, and if an Endpoint, to which Endpoint Class it belongs.
`LLDP MED - Network Policy`	
Application type	The primary function of the application defined for this network policy.
Flags	Flags. The possible values are: Unknown policy: Policy is required by the device, but is currently unknown. Tagged VLAN: The specified application type is using a Tagged VLAN. Untagged VLAN: The specified application type is using an Untagged VLAN.

Field	Description
VLAN ID	The VLAN identifier for the application.
Layer 2 priority	The Layer 2 priority used for the specified application.
DSCP	The DSCP value used for the specified application.
Power type	The device power type. The possible values are: Power Sourcing Entity (PSE) or Power Device (PD).
Power Source	The power source utilized by a PSE or PD device. A PSE device advertises its power capability. The possible values are: Primary power source and Backup power source. A PD device advertises its power source. The possible values are: Primary power, Local power, Primary and Local power.
Power priority	The PD device priority. A PSE device advertises the power priority configured for the port. A PD device advertises the power priority configured for the device. The possible values are: Critical, High and Low.
Power value	The total power in watts required by a PD device from a PSE device, or the total power a PSE device is capable of sourcing over a maximum length cable based on its current configuration.
Coordinates, Civic address, ECS ELIN.	The location information raw data.