

# **LLDP Configuration Commands**

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# 1 LLDP Configuration Commands

The 802.1AB Link Layer Discovery Protocol makes it easier to troubleshoot enterprise network failures and enhances the ability of network management tools to discover and maintain accurate network topologies in a multi-vendor environment. It allows the neighboring device to send a notification of its status information to other devices, and each port of each device has stored the define information. If necessary, they can also directly connect with the neighboring devices and send updated information. The device stores the information in the standard SNMP MIBs. The network management system can query the current Layer 2 connection from the MIB. LLDP does not configure or control network elements or traffic. It only reports the configuration of the second layer.

In short, LLDP is a proximity discovery protocol. It defines a standard way for Ethernet network devices, such as switches, routers, and wireless LAN access points, to advertise their presence to other nodes in the network and to store discovery information for each neighboring device. Such as device configuration and device identification and other details can be announced by this agreement. Specifically, LLDP defines a general announcement information set, a protocol for transport announcements, and a method for storing the received announcement information. The device that advertises its own information can transmit multiple bulletin information within a LAN packet, in the form of a Type Length Value (TLV) field.

TLV contains three mandatory TLVs: Chassis ID TLV, Port ID TLV and Time To Live TLV, five optional TLVs: Port Description, System Name, System Description, System Capabilities, Management Address, and three extended TLVs: DOT1 (Port Vlan ID, Protocol Vlan ID, Vlan Name, Protocol Identity), DOT3 (MAC / PHY Configuration / Status, Power Via MDI, Link Aggregation, Max Frame Size), MED (MED Capability, Network Policy, Location Identification, Extended Power-via-MDI, Inventory (Hardware Revision, Firmware Revision, Software Revision, Serial Number, Manufacturer Name, Mode Name, Assert ID)).

LLDP is a one-way protocol, an LLDP agent can be associated with the MSAP to send their own system status and their own functions, but also can receive the current system status and function of adjacent devices. However, the LLDP agent cannot request any information from this party through this protocol. LLDP agent does not affect its sending and receiving messages, and can only configure the transmission or receiving, or both.

### 1.1.1 Protocol Initialization

The local LLDP agent may be configured to receive- only frames, transmit- only frames, and receive-and-transmit frames. Therefore, receive-and-transmit frames need independent protocol initialization. In the case of receive- only frames or transmit- only frames without configuration instructions, LLDP proxy is considered to be receive-and-transmit frames mode by default.

### 1.1.2 LLDP Send Mode Initialization

In interface mode, configure whether the interface is a transmit frame mode. When the frame mode is configured to transmit the frame mode, LLDP information is automatically sent when the status or value of one or more information elements (management objects) in the local system changes and the transmission timer is timed out; when the frame is not transmittable, the interface does not send LLDP packets to its neighbors.

### 1.1.3 LLDP Receive Mode Initialization

Configure the interface as receive frame mode in interface mode. The LLDP packets sent by neighbors can be received when the configuration is receive frame mode and the contents of tlv are stored in the remote MIB. When the frame is not receivable, the interface discards the LLDP packets directly after receiving the LLDP packets sent by neighbors.

### 1.1.4 Description of LLDP PDU Message Structure

LLDP PDUs should contain three mandatory TLVs in sequence, followed by one or more optional TLVs, and finally is the end the TLV. As shown in Figure 1:

Chassis ID TLV	Port ID TLV	Time To Live TLV	Optional TLV	...	Optional TLV	End of LLDPDU TLV
M	M	M				M

M is the TLV which must be contained.

(1) Three mandatory TLVs should appear at the beginning of the LLDP PDU in the following order:

1. Chassis ID TLV

2. Port ID TLV

3. Time To Live TLV

(2) Select an optional TLV from the network management, in any order, including:

4. Port Description

5. System Name

6. System Description

7. System Capabilities

8. Management Address

Three extended TLVs, with DOT1:

9. Port Vlan ID

10. Protocol Vlan ID

11. Vlan Name

12. Protocol Identity

DOT3:

13. MAC/PHY Configuration/Status

14. Power Via MDI

15. Link Aggregation

16. Max Frame Size

MED (By default, the TLV of the MED is not sent. When an LLDP packet with the MED TLV is received, the LLDP packet with the MED TLV will be sent.):

17. MED Capability (If the MED extension TLV is added, this TLV is required)

18. Network Policy

19. Location Identification

20. Extended Power-via-MDI

21. Inventory (including Hardware Revision、Firmware Revision、Software Revision、Serial Number、Manufacturer Name、Mode Name、Assert ID)

(3) The end of the TLV should be the last TLV in the LLDP PDU.

## 1.2 LLDP Configuration Task List

- Disabling/enabling LLDP
- Configuring holdtime
- Configuring the timer
- Configuring reinit
- Configuring the to-be-sent tlv
- Configuring the Transmission or Reception Mode
- Specifying the port management ip address
- Sending trap notification to mib library
- Configuring Show-Relative Commands
- Configuring the Deletion Commands

## 1.3 LLDP Configuration Tasks

### 1.3.1 Forbidding/enabling LLDP

LLDP is disabled by default. You need start up LLDP before it runs. After the LLDP function is enabled, the local port periodically sends the lldp frame to notify the local port information.

Run the following command in global configuration mode to enable LLDP:

Command	Purpose
<b>Config</b>	Enter the global configuration mode.
<b>lldp run</b>	Runs LLDP.

Run the following command to disable LLDP:

Command	Purpose
<b>Config</b>	Enter the global configuration mode.
<b>no lldp run</b>	Disables LLDP.

**Note:**

Only the lldp function can be used to process the received lldp packets, otherwise the lldp frame will be forwarded directly.

### 1.3.2 Configuring Holdtime

Normally, the remote information stored in the MIB will be updated before aging, but the information in the MIB will be degraded due to the possible loss of the frame. To prevent this, set the TTL value so that the updated LLDP frame is sent multiple times during the aging time. You can control the ttl timeout for sending lldp packets by changing the holdtime of the switch.

Run the following command in global configuration mode to configure **holdtime** of LLDP:

Command	Purpose
<b>config</b>	Enter the global configuration mode.
<b>lldp holdtime <i>time</i></b>	Configures the timeout time of LLDP. The range of the value is <0-65535>. The default value is 120s.

Resume the default timeout value.

Command	Purpose
<b>config</b>	Enter the global configuration mode.
<b>no lldp holdtime</b>	Resumes the timeout time to the default value,



	120 seconds.
--	--------------

Note:

The timeout should be longer than the interval of sending the lldp packet, so that the previous neighbor information is not lost when the next lldp frame is received.

### 1.3.3 Configuring Timer

You can control the interval of the switch to transmit message by configuring the timer of LLDP.

Run the following command in global configuration mode to configure **timer** of LLDP:

Command	Purpose
config	Enter the global configuration mode.
lldp timer time	Configures the interval of message transmission of LLDP.

Resume the default interval.

Command	Purpose
config	Enter the global configuration mode.
no lldp timer	Resumes the default interval, that is, 30 seconds.

### 1.3.4 Configuring Reinit

In the local systems, it will automatic send LLDP information when one or more of the information elements (management objects) state or value changes or send timer timeout in both cases. Since a single information change is required to send LLDP frames, a series of consecutive information changes may trigger a number of LLDP frames to be sent, and only one change is reported in each frame. To avoid this, network management defines two consecutive LLDP frames waiting time. By configuring the reinit of lldp, you can control the interval between two consecutive lldp packets.

Run the following command in global configuration mode to configure **reinit** of LLDP:

Command	Purpose
config	Enter the global configuration mode.

lldp reinit time	Configures the interval of LLDP to continuously transmit message. The range is <2-5>. And the default value is 2s.
------------------	--

Resume the default value for reinit.

Command	Purpose
config	Enter the global configuration mode.
no lldp reinit	Resumes the default interval of continuously transmitting message; the default interval value is two seconds.

### 1.3.5 Configuring the To-Be-Sent TLV

You can choose TLV which requires to be sent by configuring **tlv-select** of LLDP. By default, all TLVs are transmitted.

Run the following commands in global configuration mode to add or delete the to-be-sent tlvs.

Command	Purpose
Config	Enter the global configuration mode.
lldp tlv-select management-address	Optional. Send management address tlv. And the management address should be easy to manage the use of the general three-tier IP address.
lldp tlv-select port-description	Optional. Send port description tlv. Port Description uses numbers or letters to describe the port.
lldp tlv-select system-capabilities	Optional. Send system performance tlv, system performance refers to the system to send the message is a switch / router or other.
lldp tlv-select system-description	Optional. Send the system description tlv, the system describes the textual description of the network entities consisting of alphanumeric characters. The system description should include the full name of the system, the version definition of the system hardware type, the software operating system, and the network software.
lldp tlv-select system-name	Optional. Send system name tlv. The system name field is the name specified by the system administrator of the alphanumeric alphabet. The system name should be the name of the system administrator. The name of the switch.

Run the following commands in global configuration mode to add or delete the to-be-sent tlvs.

Run the following commands in global configuration mode to add or delete **tlv** of LLDP:

Command	Purpose
Config	Enter the global configuration mode.
No lldp tlv-select management-address	Optional. Send management address tlv. And the management address should be easy to manage the use of the general three-tier IP address.
No lldp tlv-select port-description	Optional. Send port description tlv. Port Description uses numbers or letters to describe the port.
No lldp tlv-select system-capabilities	Optional. Send system performance tlv, system performance refers to the system to send the message is a switch / router or other.
No lldp tlv-select system-description	Optional. Send the system description tlv, the system describes the textual description of the network entities consisting of alphanumeric characters. The system description should include the full name of the system, the version definition of the system hardware type, the software operating system, and the network software.
No lldp tlv-select system-name	Optional. Send system name tlv. The system name field is the name specified by the system administrator of the alphanumeric alphabet. The system name should be the name of the system administrator. The name of the switch.

### 1.3.6 Specifying the Port Management Ip Address

Select the to-be-send extended TLV to send by configuring lldp dot1-tlv-select / dot3-tlv-select / med-tlv-select in the interface. By default, the TLVs of DOT1 and DOT3 are sent, and the TLV of MED is not sent.

In the interface configuration mode, use the following command to configure the tlv to be sent:

Command	Purpose
Config	Enter the global configuration mode.
Interface intf-type intf-id	Enter the interface configuration mode.
Lldp dot1-tlv-select port-vlan-id	Optional, send the 802.1- organization custom tlv, inform the PVID of the port.
Lldp dot1-tlv-select protocol-vlan-id	Optional, send the 802.1- organization custom tlv, inform the PVID of the port
Lldp dot1-tlv-select vlan-name	Optional, send the 802.1- organization custom tlv, inform the vlan name of the port.
Lldp dot3-tlv-select macphy-config	Optional, send the 802.1- organization custom tlv, including:

	<ul style="list-style-type: none"> <li>a) the bit rate and the duplex of the physical layer;</li> <li>b) the current duplex and set bit rate;</li> <li>c) Indicates whether the setting is the result of the auto-negotiation of the connection initialization phase or the manual forced behavior.</li> </ul>
Lldp dot3-tlv-select power	Optional, send 802.3 organization custom tlv, show the port can allow the power to be provided to connect the system without power through the link.
Lldp dot3-tlv-select link-aggregation	Optional, send 802.3 organization custom tlv, indicating whether the port link can be aggregated, if so, then indicate the port to identify the aggregation.
Lldp dot3-tlv-select max-frame-size	Optional, send 802.3 organization custom tlv, indicating the maximum size (bytes) of the frame supported by the port.
Lldp med-tlv-select network-policy	Optional, send MED custom tlv, display port can effectively find and diagnose VLAN configuration error matching flow, and the related 2 and 3 layers property.
Lldp med-tlv-select location	<p>Optional, send MED custom tlv, specify the address, including:</p> <ul style="list-style-type: none"> <li>a) coordinate-based LCI, defined in IETF RFC 3825 [6];</li> <li>b) city address LCI, defined in IETF (refer to ANNEX B);</li> <li>c) Emergency call service ELIN number;</li> </ul>
Lldp med-tlv-select power-management	Optional, send MED custom tlv, display through the media dependent port of the extended power to find the media terminal and network connectivity device advertising detailed power information.
Lldp med-tlv-select inventory	Optional, send MED custom tlv, display found the related detailed inventory attributes with enable tracking and identify the terminal.

Use the following command to configure to delete the tlv to be sent in the global configuration mode:

Command	Purpose
Config	Enter the global configuration mode.
Interface intf-type intf-id	Enter the interface configuration mode.
No lldp dot1-tlv-select port-vlan-id	Optional, send the 802.1- organization custom tlv, inform the PVID of the port.
No lldp dot1-tlv-select protocol-vlan-id	Optional, send the 802.1- organization custom tlv, inform the

	PVID of the port.
No lldp dot1-tlv-select vlan-name	Optional, send the 802.1- organization custom tlv, inform the vlan name of the port.
No lldp dot3-tlv-select macphy-config	Optional, send the 802.1- organization custom tlv, including: <ul style="list-style-type: none"> <li>a) the bit rate and the duplex of the physical layer;</li> <li>b) the current duplex and set bit rate;</li> <li>c) Indicates whether the setting is the result of the auto-negotiation of the connection initialization phase or the manual forced behavior.</li> </ul>
No lldp dot3-tlv-select power	Optional, send 802.3 organization custom tlv, cancel the display the port can allow the power to be provided to connect the system without power through the link.
No lldp dot3-tlv-select link-aggregation	Optional, send 802.3 organization custom tlv, indicating whether the port link can be aggregated, if so, then indicate the port to identify the aggregation.
No lldp dot3-tlv-select max-frame-size	Optional, send 802.3 organization custom tlv, indicating the maximum size (bytes) of the frame supported by the port.
No lldp med-tlv-select network-policy	Optional, send MED custom tlv, cancel the display port can effectively find and diagnose VLAN configuration error matching flow, and the related 2 and 3 layers property.
No lldp med-tlv-select location	Optional, send MED custom tlv, specify the address, including: <ul style="list-style-type: none"> <li>a) coordinate-based LCI, defined in IETF RFC 3825 [6];</li> <li>b) city address LCI, defined in IETF (refer to ANNEX B);</li> <li>c) Emergency call service ELIN number;</li> </ul>
No lldp med-tlv-select power-management	Optional, send MED custom tlv, cancel the display through the media dependent port of the extended power to find the media terminal and network connectivity device advertising detailed power information.
No lldp med-tlv-select inventory	Optional, send MED custom tlv, cancel the display found the related detailed inventory attributes with enable tracking and identify the terminal.

### 1.3.7 Configuring the Transmission or Reception Mode

LLDP can work under three modes: transmit-only, receive-only and transmit-and-receive. By default, LLDP works under the transmit-and-receive mode. You can modify the working mode of LLDP through the following commands.

Run the following command in interface configuration mode to disable the transmit-only mode of the port:

Command	Purpose
config	Enter the global configuration mode.
Interface intf-type intf-id	Enter the interface configuration mode.
No lldp transmit	Disable the transmit-only mode of the port.
No lldp receive	Disable the receive-only mode of the port.

Run the following command in interface configuration mode to enable the transmit-only mode of the port:

Command	Purpose
config	Enter the global configuration mode.
Interface intf-type intf-id	Enter the interface configuration mode.
lldp transmit	Enable the transmit-only mode of the port.
lldp receive	Enable the receive-only mode of the port.

**Note:**

In addition to the above mode, it can also be set to receive-only mode or transmit-only mode.

### 1.3.8 Specifying the port management ip address

In the port configuration mode, the user can configure the management address of the port sent by the lldp packet. The management address should be a port-related ip address, so that the normal communication of the management address can be ensured.

Use the following command to configure the management ip address in the interface configuration mode:

Command	Purpose
Config	Enter the global configuration mode.
Interface intf-type intf-id	Enter the interface configuration mode.

Lldp management-ip A.B.C.D	Configure the management ip address of the port.
----------------------------	--

**Note:**

You can use **no lldp management-ip** to restore the default management address of the port. The default management address is the ip address of the vlan interface corresponding to port pvid. When the corresponding vlan interface does not exist, the management address is 0.0.0.0.

### 1.3.9 Sending trap notification to mib library

Send a trap notification to the lldp mib library or the ptopo mib library.

In the global configuration mode, use the following command to send a trap notification to the lldp mib library or the ptopo mib library:

Command	Purpose
Config	Enter the global configuration mode.
Ldp trap-send lldp-mib	Send trap notification to lldp mib library.
Ldp trap-send ptopo-mib	Send trap notification to ptopo mib library.

**Note:**

You can use **no lldp management-ip** to restore the default management address of the port. The default management address is the ip address of the vlan interface corresponding to port pvid. When the corresponding vlan interface does not exist, the management address is 0.0.0.0.

### 1.3.10 Configuring Location Information

Check the address information by configuring the location information.

Use the following command to configure the location information on the global configuration mode.

command	Purpose
Config	Enter global configuration mode.

Location elin identifier id WORD	Set location elin information. <b>Id</b> is the elin identifier number. <b>Word</b> is elin information, and the value ranges from 10 to 25bytes.
Location civic identifier id	Enter location configuration mode.
Language WORD	Set language.
State WORD	Set state (district, district, province, district) name, such as shanghai
County WORD	Set country name.
City WORD	Set city name.
Division WORD	Set division name.
Neighborhood WORD	Set neighborhood name.
Street WORD	Set street name.
Leading-street-dir WORD	Set the leading street direction, such as N (north).
Trailing-street-suffix WORD	Set the trailing street suffix, such as SW.
Street-suffix WORD	Set the street suffix, such as Platz Avenue.
Number WORD	Set the street number, such as NO.123.
Street-number-suffix WORD	Set the street number suffix, such A Road, No.1/2
Landmark WORD	Set up landmark information, such as Columbia University
Additional-location WORD	Set additional location information.
Name WORD	Set up resident information, such as Joe's barber shop
Postal-code WORD	Set postal-code.
Building WORD	Set building information.
Unit WORD	Set unit information.
Floor WORD	Set floor information.
Room WORD	Set room information.
Type-of-place WORD	Set the type of location, such as an office
Postal-community WORD	Set the postal community name



Post-office-box WORD	Set the mailbox name, such as 12345
Additional-code WORD	Set the additional code.
Country WORD	Set country name.
Script WORD	Set the script information.

Use the following command to delete the location information in global configuration mode.

command	Purpose
Config	Enter global configuration mode.
No location elin identifier id	Delete the location elin information which elin identifier number is id.
No location civic identifier id	Delete the location civic information which elin identifier number is id.
location civic identifier id	Enter location configuration mode.
No language	Delete language.
No state	Delete state (district, district, province, district) name, such as shanghai
No county	Delete country name.
No city	Delete city name.
No division	Delete division name.
No neighborhood	Delete neighborhood name.
No street	Delete street name.
No leading-street-dir	Delete the leading street direction, such as N (north).
No trailing-street-suffix	Delete the trailing street suffix, such as SW.
No street-suffix	Delete the street suffix, such as Platz Avenue.
No number	Delete the street number, such as NO.123.
No street-number-suffix	Delete the street number suffix, such A Road, No. 1/2
No landmark	Delete landmark information, such as Columbia University
No additional-location	Delete additional location information.

No name	Delete resident information, such as Joe's barber shop
No postal-code	Delete postal-code.
No building	Delete building information.
No unit	Delete unit information.
No floor	Delete floor information.
No room	Delete room information.
No type-of-place	Delete the type of location, such as an office
No postal-community	Delete the postal community name
No post-office-box	Delete the mailbox name, such as 12345
No additional-code	Delete the additional code.
No country	Delete country name.
No script	Delete the script information.

### 1.3.11 Specify the Port Configuration Location Information

Configure the location information for the port and the location information in the TLV information.

Use the following command to configure location information in the interface configuration mode:

command	purpose
Config	Enter the global configuration mode.
Interface intf-type intf-id	Enter the interface configuration mode.
Location civic id	Configure the location information which id is civic for the port.
Location elin id	Configure the location information which id is elin for the port.

Use the following command to delete location information in the interface configuration mode:

command	purpose
Config	Enter the global configuration mode.
Interface intf-type intf-id	Enter the interface configuration mode.
No location civic	Delete the location information which id is civic for the port.
No location elin	Delete the location information which id is elin for the port.

### 1.3.12 Show Relative Commands

You can observe the information about the neighbor, statistics or port state received by the LLDP module by running show-relative commands.

Run the following commands in management or global configuration mode:

Command	Purpose
Show lldp errors	Display the error information about the LLDP module.
Show lldp interface interface-name	Display the information about port state, that is, the transmission mode and the reception mode.
Show lldp neighbors	Display the abstract information about the neighbor.
Show lldp neighbors detail	Display the detailed information about the neighbor.
Show lldp traffic	Display all received and transmitted statistics information.
Show location elin	Display location elin information.
Show location civic	Display location civic information.

### 1.3.13 Configuring the Deletion Commands

You can delete the received neighbor lists and all statistics information by running the following command in management configuration mode.

Run the following commands in management configuration mode:

Command	Purpose
<b>Clear lldp counters</b>	Deletes all statistics data.
<b>Clear lldp table</b>	Deletes all received neighbor information.

## 1.4 Configuration Example

### 1.4.1 Network Environment Requirements

Configure the LLDP protocol on the ports connected to the two switches.

### 1.4.2 Network topology

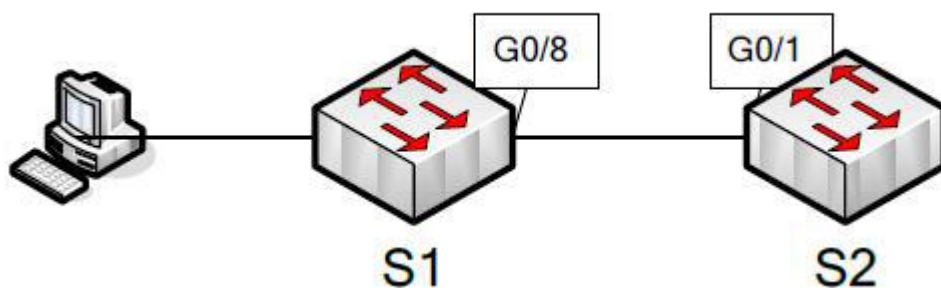


Figure 1 Network topology

### 1.4.3 Configuration Steps

#### 1. Basis configuration

Configure switch S1:

```
Switch_config#lldp run
```

```
Switch_config#
```

Configure switch S2:

```
Switch_config#lldp run
```

```
Switch_config#
```

Approximately one minute later, you can view the neighbor B information on Switch A.

The MED-TLV information is not sent by default.

S1:

Switch\_config#show lldp neighbors

Capability Codes:

(R)Router,(B)Bridge,(C)DOCSIS Cable Device,(T)Telephone

(W)WLAN Access Point, (P)Repeater,(S)Station,(O)Other

Device-ID	Local-Intf	Hldtme	Port-ID	Capability
Switch	Gig0/8	99	Gig0/1	B

Total entries displayed: 1

Switch\_config#show lldp neighbors detail

chassis id: 00e0.0fac.32ff

port id: Gig0/1

port description: GigaEthernet0/1

system name: Switch

system description: MRDCOM(tm) SWITCH Software, Version 4.1.0B

Serial: S24090103

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Time remaining: 96

system capabilities: R B

enabled capabilities: B

Management Address:

IP: 90.0.0.21

Port VLAN ID: 1

PPVID: 1

VLAN 1 name: Default

Auto Negotiation: supported,enabled

Physical media capabilities:

1000baseX(FD)

1000baseX(HD)

100baseTX(FD)

100baseTX(HD)

Operational MAU type: 2 pair category 5 UTP, full duplex mode(16)

Power Via MDI:

MDI power support --

PSE MDI power support: support

Port class: PSE

PSE MDI power state: enabled

PSE pairs selection control ability: can not be controlled

PSE power pair: signal

Power Classification: Class 0

Link Aggregation:

Aggregation capability: capable of being aggregated

Aggregation status: not currently in aggregation

Maximum frame size: 1500

-----

Total entries displayed: 1

## 2. TLV Configuration

Configure switch S1:

Switch\_config#lldp run

Switch\_config#

Configure switch S2:

Switch\_config#lldp run

Switch\_config# no lldp tlv-select system-name

Switch\_config#int g0/8

Switch\_config\_g0/8#no lldp dot1-tlv-select port-vlan-id

Switch\_config\_g0/8#no lldp dot3-tlv-select max-frame-size

Switch\_config\_g0/8#

Approximately one minute later, you can view the neighbor B information on Switch A, which is distinguished from the information displayed in the basic configuration of 1.4.3.1, in red and blue, respectively.

S1:

Switch\_config#show lldp neighbors

Capability Codes:

(R)Router,(B)Bridge,(C)DOCSIS Cable Device,(T)Telephone

(W)WLAN Access Point, (P)Repeater,(S)Station,(O)Other

Device-ID	Local-Intf	Hldtme	Port-ID	Capability
Switch	Gas0/8	92	Gig0/1	R B

Total entries displayed: 1

Switch\_config#show lldp neighbors detail

chassis id: 00e0.0fac.32ff

port id: Gig0/1

port description: GigaEthernet0/1

system name: -- not advertised

system description: MRDCOM(tm) SWITCH Software, Version 4.1.0B

Serial: S24090103

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Time remaining: 95

system capabilities: R B

enabled capabilities: B

Management Address:

IP: 90.0.0.21

Port VLAN ID -- not advertised

PPVID: 1

VLAN 1 name: Default

Auto Negotiation: supported,enabled

Physical media capabilities:

1000baseX(FD)

1000baseX(HD)

100baseTX(FD)

100baseTX(HD)

Operational MAU type: 2 pair category 5 UTP, full duplex mode(16)

Power Via MDI:

MDI power support --

PSE MDI power support: support

Port class: PSE

PSE MDI power state: enabled

PSE pairs selection control ability: can not be controlled

PSE power pair: signal

Power Classification: Class 0

Link Aggregation:

Aggregation capability: capable of being aggregated

Aggregation status: not currently in aggregation

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Total entries displayed: 1

### 3. Location Configuration

Configure Switch S1:

Switch\_config#lldp run

Switch\_config#

Configure Switch S2:

Switch\_config#lldp run

Switch\_config#location elin identifier 1 1234567890 //configure elin information

Switch\_config#location civic identifier 1 //enter location configuration mode

Switch\_config\_civic#language English

Switch\_config\_civic#city Shanghai

Switch\_config\_civic#street Curie

Switch\_config\_civic#script EN //configure civic information

Switch\_config\_civic#quit

Switch\_config#int g0/8

Switch\_config\_g0/8#location elin 1 // specify the elin id for the port

Switch\_config\_g0/8#location civic 1 // specify the civic id for the port

Switch\_config\_g0/8#show location elin //display elin configuration information

elin information:

elin 1: 1234567890

total: 1

Switch\_config\_g0/8#show location civic //display civic configuration information

civic address information:

identifier: 1

City: Shanghai

Language: English

Script: EN

Street: Curie

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total: 1

Switch\_config\_g0/8#

Approximately one minute later, you can view the neighbor B information on Switch A,

S1:

Switch\_config#show lldp neighbors

Capability Codes:

(R)Router,(B)Bridge,(C)DOCSIS Cable Device,(T)Telephone

(W)WLAN Access Point, (P)Repeater,(S)Station,(O)Other

Device-ID	Local-Intf	Hldtme	Port-ID	Capability
Switch	Gig0/8	115	Gig0/1	B

Total entries displayed: 1

Switch\_config#show lldp neighbors detail

chassis id: 00e0.0fac.32ff

port id: Gig0/1

port description: GigaEthernet0/1

system name: Switch

system description: MRDCOM(tm) SWITCH Software, Version 4.1.0B

Serial: S24090103

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Compiled: 2011-9-21 9:24:8 by WRL

Time remaining: 109

system capabilities: R B

enabled capabilities: B

Management Address:

IP: 90.0.0.21

Port VLAN ID: 1

Auto Negotiation: supported,enabled

Physical media capabilities:

1000baseX(FD)

1000baseX(HD)

100baseTX(FD)

100baseTX(HD)

Operational MAU type: 2 pair category 5 UTP, full duplex mode(16)

Power Via MDI:

MDI power support --

PSE MDI power support: support

Port class: PSE

PSE MDI power state: enabled

PSE pairs selection control ability: cannot be controlled

PSE power pair: signal

Power Classification: Class 0

MED Information:

MED Codes:

(CA)Capabilities, (NP)Network Policy, (LI)Location Identification

(PS)Power via MDI "CPSE, (PD)Power via MDI "CPD, (IN)Inventory

Hardware Revision: 0.4.0

Software Revision: 4.1.0B

Serial Number: S24090103

Manufacturer Name: MRDCOM

Model Name: SWITCH

Asset ID: S24090103

Capabilities: CA,NP,LI,PS,IN

Device type: Network Connectivity

Network Policy: Voice

Policy: Unknown

Power requirements:

Type: PSE Device

Source: Unknown

Priority: Low

Value: 150(0.1 Watts)

Civic address location:

Language: English

City: Shanghai

Street: Curie

Script: EN

ELIN location:

ELIN: 1234567890

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Total entries displayed: 1

Switch\_config#