

LLDP Configuration Commands

As our products undergo continuous development the specifications are subject to change without prior notice.

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Chapter 1 LLDP Configuration Commands

1.1 LLDP Commands

1.1.1 lldp run

Syntax

lldp run

no lldp run

To start up LLDP, run **lldp run**; to Disable LLDP, run **no lldp run**.

Parameter

None

Default

Disabled

Usage Guidelines

None

Command Mode

Global configuration mode

Example

The following command is used to start up LLDP.

```
Switch_config# lldp run
```

1.1.2 lldp holdtime

Syntax

lldp holdtime *time*

no lldp holdtime

To configure the ttl value of LLDP, run **lldp holdtime *time***. To resume the default transmission delay, run **no lldp holdtime**.

Parameter

Parameter	Description
<i>time</i>	Storage time of the transmitted message, ranging between zero to 65535 seconds

Default

120s

Usage Guidelines

In normal, the remote information stored in the MIB will be updated before its aging. But the update frame may be lost during the transmission process, causing the information in the MIB to age. To prevent this, set the TTL value so that it updates the LLDP frame multiple times during the aging time.

Command Mode

Global configuration mode

Example

The following example shows how to set the ttl value of LLDP to 100 seconds.

```
Switch_config# lldp holdtime 100
Switch_config#
```

1.1.3 lldp timer

Syntax

lldp timer *time*

no lldp timer

To configure the transmission interval of LLDP, run **lldp timer *time***. To resume the default transmission delay, run **no lldptimer**.

Parameter

Parameter	Description
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<i>time</i>	Interval for transmitting the LLDP message, ranging between 5 to 65534 seconds.
-------------	---

Default

30s

Usage Guidelines

The transmission interval of the LLDP message must be shorter than its storage time, ensuring multiple updates in the storage time and preventing error which is led by packet loss.

Command Mode

Global configuration mode

Example

The following example shows how to configure the transmission interval of LLDP to 24 seconds.

```
Switch_config# lldp timer 24
Switch_config#
```

1.1.4 lldp reinit

Syntax

lldp reinit *time*

no lldp reinit

To configure the transmission delay of LLDP, run **lldp reinit time**. To resume the default transmission delay, run **no lldp reinit**.

Parameter

Parameter	Description
<i>time</i>	Transmission delay of LLDP, whose values range from two to five seconds

Default

2s

Usage Guidelines

LLDP information is automatically sent when the status or value of one or more information elements (managed objects) in the local system changes and the transmission timer expires. Since a single information change requires sending LLDP packets, a series of continuous information changes may trigger the transmission of many LLDP frames. Only one change is reported in each frame. To avoid this situation, network management defines waiting time between two consecutively sending LLDP frames.

Command Mode

Global configuration mode

Example

The following example shows how to set the transmission delay of LLDP to five seconds.

```
Switch_config# lldp reinit 5
Switch_config#
```

1.1.5 lldp tlv-select

Syntax

lldp tlv-select *tlv-type*

no lldp tlv-select *tlv-type*

To add TLV which is transmitted by the LLDP message, run **lldp tlv-select** *tlv-type*. To delete TLV which is transmitted by the LLDP message, run **no lldp tlv-select** *tlv-type*.

Parameter

Parameter	Description
<i>tlv-type</i>	TLV that can be sent or not whose values are:
	management-address management address TLV
	port-description , port description TLV
	system-capabilities system capabilities TLV
	system-description, system description TLV
	system-name system name TLV

Default

All TLVs are sent.

Usage Guidelines

Three mandatory TLVs must be sent.

Command Mode

Global configuration mode

Example

The following example shows how to enable the port description not to be transmitted in the message.

```
Switch_config#no lldp tlv-select port-description
Switch_config#
```

1.1.6 lldp dot1-tlv-select

Syntax

lldp dot1-tlv-select *tlv-type*

no lldp dot1-tlv-select *tlv-type*

To add TLV which is transmitted by the LLDP message, run **lldp dot1-tlv-select** *tlv-type*. To return to the default setting, use the no form of this command.

Parameter

Parameter	Description
<i>tlv-type</i>	Stands for TLV that are available for selective transmission. The value is:
port-vlan-id	port vlan address TLV
protocol-vlan-id	port and protocol VLAN ID TLV
vlan-name	vlan name TLV
protocol-identity	Protocol-identity TLV

Default

All TLVs are sent.

Usage Guidelines

The TLV of the protocol identity does not support transmission but supports reception.

Command Mode

Port Configuration Mode

Example

The following example shows how to enable the TLV not to be transmitted by deletion of the VLAN address of a port in the transmitted packet.

```
switch_config#int g0/1
switch_config_g0/1#no lldp dot1-tlv-select port-vlan-id
switch_config_g0/1#
```

1.1.7 lldp dot3-tlv-select

Syntax

lldp dot3-tlv-select *tlv-type*

no lldp dot3-tlv-select *tlv-type*

To add TLV which is transmitted by the LLDP message, run **lldp dot3-tlv-select** *tlv-type*. To return to the default setting, use the no form of this command.

Parameter

Parameter	Description
<i>tlv-type</i>	Stands for TLV that are available for selective transmission. The value is:
link-aggregation	link aggregation TLV
macphy-config	MAC/Phy configuration/status TLV
max-frame-size	max frame size TLV
power	Power Via MDI TLV

Default

All TLVs are sent.

Usage Guidelines

None

Command Mode

Port Configuration Mode

Example

The following example shows how to enable the TLV not to be transmitted by deletion of the MAC/Phy configuration/status of a port in the transmitted packet.

```
switch_config#int g0/1
switch_config_g0/1#no lldp dot3-tlv-select macphy-config
switch_config_g0/1#
```

1.1.8 lldp med-tlv-select

Syntax

lldp med-tlv-select *tlv-type*

no lldp med-tlv-select *tlv-type*

To add TLV which is transmitted by the LLDP message, run `lldp med-tlv-select tlv-type`. To return to the default setting, use the `no` form of this command.

Parameter

Parameter	Description
<i>tlv-type</i>	Stands for TLV that are available for selective transmission. The value is:
network-policy	network policy TLV
inventory	detailed inventory management TLV
location	Location trace TLV
power-management	Expand Power Via MDI TLV

Default

All TLVs are sent.

Usage Guidelines

When the TLV of MED need be transmitted, the MED capability TLV must be transmitted. Hence it does not fall into the choice.

Command Mode

Port Configuration Mode

Example

The following example shows how to enable the TLV not to be transmitted by deletion of the detailed list management in a transmitted packet.

```
switch_config#int g0/1
switch_config_g0/1#no lldp med-tlv-select inventory
switch_config_g0/1#
```

1.1.9 lldp transmit

Syntax

lldp transmit

no lldp transmit

To set the port to send the LLDP message, run **lldp transmit**. To forbid receiving the LLDP message, run **no lldp transmit**.

Parameter

None

Default

Transmittable LLDP message mode

Usage Guidelines

Only after the LLDP module is started can the command be valid.

Command Mode

Port configuration mode

Example

The following example shows how to set port g0/1 not to send the LLDP message.

```
switch_config_g0/1# no lldp transmit
switch_config_g0/1#
```

1.1.10 lldp receive

Syntax

lldp receive

no lldp receive

To set the port to the receivable LLDP message mode, run **lldp receive**. To forbid receiving the LLDP message, run **no lldp receive**.

Parameter

None

Default

Receivable LLDP message mode

Usage Guidelines

Only after the LLDP module is started can the configuration be valid.

Command Mode

Port configuration mode

Example

The following example shows how to set port g0/1 to the LLDP message mode.

```
switch_config_g0/1# no lldp receive
switch_config_g0/1#
```

1.1.11 lldp management-ip

Syntax

lldp management-ip A.B.C.D

no lldp management-ip

To configure the management address of the LLDP port, run **lldp management-ip A.B.C.D**. To resume the default transmission delay, run **no lldp management-ip**.

Parameter

Parameter	Description
<i>A.B.C.D</i>	Stands for the management IP address that will be specified.

Default

The default management address is the IP of vlan interface corresponding to pvid. If the IP is not existed, the default management address is 0.0.0.0.

Usage Guidelines

The configured management IP address should be the IP address related with a port.

Command Mode

Interface configuration mode

Example

The following example shows how to set the management IP address of the port g0/1 to 90.0.0.99:

```
switch_config_g0/1# lldp management-ip 90.0.0.99
```

```
switch_config_g0/1#
```

1.1.12 lldp trap-send

Syntax

lldp trap-send lldp-mib

To send trap notification to lldp mib base, run the above command.

lldp trap-send ptopo-mib

To send trap notification to ptopo mib base, run the above command.

Parameter

None

Default

None

Usage Guidelines

None

Command Mode

Global Configuration mode

Example

The following example shows how to send trap notification to lldp mib base, run the following commands.

```
switch_config#lldp trap-send lldp-mib
```

```
switch_config#
```

The following example shows how to send trap notification to ptopo mib base, run the following command.

```
switch_config#lldp trap-send ptopo-mib
```

```
switch_config#
```

1.1.13 location elin identifier id WORD

Syntax

location elin identifier *id* **WORD**

no location elin identifier *id*

To add the elin information, run **location elin identifier id WORD**; to delete the elin information, run **no location elin identifier id**.

Parameter

Parameter	Description
<i>id</i>	Stands for the ID of the to-be-set elin, which ranges from 1 to 65535.
<i>WORD</i>	Stands for the content of the configured elin, which ranges from 10 to 25 bytes.

Default

None

Usage Guidelines

None

Command Mode

Global configuration mode

Example

The following example shows how to set the identifier to 1 and the content of elin to 1234567890.

```
switch_config# location elin identifier 1 1234567890
```

```
switch_config#
```

1.1.14 location civic identifier id

Syntax

location civic identifier *id*

no location civic identifier *id*

To enter the location configuration mode and set the civic information, run **location civic identifier id**. To return to the default setting, use the no form of this command.

Parameter

Parameter	Description
<i>id</i>	Stands for the ID of the to-be-set civic, which ranges from 1 to 65535.

Default

None

Usage Guidelines

After the system enters the location configuration mode, you can run the following commands to conduct the corresponding configuration to the civic of the ID. To return to the default setting, use the no form of this command.

Command	Purpose
(no) language WORD	Sets the language
(no) state WORD	Sets the state's (administrative district, district,

	province) name, such as shanghai.
(no) county WORD	Sets the name of a county.
(no) city WORD	Sets the name of a city.
(no) division WORD	Sets the name of a division.
(no) neighborhood WORD	Sets the name of neighborhood.
(no) street WORD	Sets the name of a street.
(no) leading-street-dir WORD	Sets the direction of a main street, such as N (north).
(no) trailing-street-suffix WORD	Sets the suffix of a small street, such as SW.
(no) street-suffix WORD	Sets the suffix of a street, such as platz.
(no) number WORD	Sets the street number, such as number 123.
(no) street-number-suffix WORD	Sets the suffix of the street number, such as number 1/2 of A road.
(no) landmark WORD	Sets the landmark, such as Colombia University.
(no) additional-location WORD	Sets the additional location.
(no) name WORD	Sets the information about a resident, such as Joe's haircut shop.
(no) postal-code WORD	Sets the postal code.
(no) building WORD	Sets the information about a building.
(no) unit WORD	Sets the information about a unit.
(no) floor WORD	Sets the information about a floor.
(no) room WORD	Sets the information about a room.
(no) type-of-place WORD	Sets the type of a place, such as office.
(no) postal-community WORD	Sets the name of a postal office.
(no) post-office-box WORD	Sets the name of a postal box, such as 12345.
(no) additional-code WORD	Sets the additional code.
(no) country WORD	Sets the name of a country.
(no) script WORD	Sets the script.

Command Mode

Global Configuration Mode

Example

The following example shows how to set the civic information of identifier 1.

```
Switch_config#location civic identifier 1
```

```
Switch_config_civic#language English
Switch_config_civic#city Shanghai
Switch_config_civic#street Curie
Switch_config_civic#script EN
Switch_config_civic#quit
Switch_config#
```

1.1.15 location elin/civic id

Syntax

location elin/civic *id*

no location elin/civic

To set the location for a port, run **location elin/civic id**. To delete the location of a port, run **no location elin/civic**.

Parameter

Parameter	Description
<i>id</i>	Stands for the ID of the to-be-set elin, which ranges from 1 to 65535.

Default

None

Usage Guidelines

None

Command Mode

Port Configuration Mode

Example

The following example shows how to set the elin and the civic for a port.

```
Switch_config#int g0/8
Switch_config_g0/8#location elin 1
Switch_config_g0/8#location civic 1
```


1.1.16 show lldp errors

Syntax

Show lldp errors

It is used to display the error information about the LLDP module.

Parameter

None

Default

None

Usage Guidelines

None

Command Mode

EXEC/Global configuration mode

Example

The following example shows how to view the error information of the lldp module.

```
switch_config#show lldp errors
LLDP errors/overflows:
    Total memory allocation failures: 0
    Total encapsulation failures: 0
    Total table overflows: 0
switch_config#
```

1.1.17 show lldp interface

Syntax

Show lldp interface *interface-name*

To check the transmission and reception mode, run **show lldp interface interface name**.

Parameter

Parameter	Description
<i>interface-name</i>	Name of the interface, such as g0/1 and GigaEthernet0/1

Default

None

Usage Guidelines

After LLDP is started, you can check the state of the port.

Command Mode

EXEC/global configuration mode

Example

The following example shows how to check the transmission and reception mode of port g0/1.

```
switch_config#show lldp interface g0/1
GigaEthernet0/1:
Rx: enabled
Tx: enabled
switch_config#
```

1.1.18 show lldp neighbors

Syntax

show lldp neighbors

It is used to display the simple information about neighbors.

Parameter

None

Default

None

Usage Guidelines

The command is used to display the simple information about neighbors.

Command Mode

EXEC / global configuration mode

Example

```
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	Gig0/2	115	Gig0/32	B
switch	Gig0/32	114	Gig0/2	B

Total entries displayed: 2

```
switch_config#
```

1.1.19 show lldp neighbors detail

Syntax

Show lldp neighbors detail

It is used to display the detailed information about the neighbor.

Parameter

None

Default

None

Usage Guidelines

None

Command Mode

EXEC/global configuration mode

Example

```
switch_config#show lldp neighbors detail
```

```
chassis id: 00e0.0f61.ca53
```

```
port id: Gig0/32
```

```
port description: GigaEthernet0/32
```

```
system name: switch
```

```
system description: s3448 software, Version 2.0.1K
```

```
serial: s35000456
```

```
Compiled: 2008-11-13 13:33:36 by 16170F032B9F
```

```
Time remaining: 98
```

```
system capabilities: R B
```

```
enabled capabilities: B
```

```
Managment Address:
```

```
IP: 192.168.213.62
```

```
Auto Negotiation -- supported,enabled
```

```
Physical media capabilitise:
```

```
100baseTX(FD)
```

```
100baseTX(HD)
```

```
10baseT(FD)
```

```
10baseT(HD)
```

```
Media Attachment Unit type: 16
```

```
-----  
chassis id: 00e0.0f61.ca35
```

```
port id: Gig0/2
```

```
port description: GigaEthernet0/2
```

```
system name: switch
```

```
system description: s3448 software, Version 2.0.1K
```

```
serial: s35000456
```

```
Compiled: 2008-11-13 13:33:36 by 16170F032B9F
```

```
Time remaining: 95
```

```
system capabilities: R B
```

```
enabled capabilities: B
```

```
Managment Address:
```

```
IP: 90.0.0.66
```

Auto Negotiation -- supported,enabled

Physical media capabilitise:

100baseTX(FD)

100baseTX(HD)

10baseT(FD)

10baseT(HD)

Media Attachment Unit type: 16

Total entries dispalyed: 2

switch#

1.1.20 show lldp traffic

Syntax

Show lldp traffic

To display all statistics information about LLDP, run **show lldp traffic**.

Parameter

None

Default

None

Usage Guidelines

None

Command Mode

EXEC/global configuration mode

Example

```
switch_config#show lldp traffic
```

LLDP traffic statistics:

Total frames out: 1599

Total entries aged: 0

Total frames in: 624

```
Total frames received in error: 0
Total frames discarded: 0
Total TLVs unrecognized: 0
switch_config#
```

1.1.21 show location elin

Syntax

```
show location elin
```

To display the elin configuration of the location, run the above command.

Parameter

None

Default

None

Usage Guidelines

None

Command Mode

EXEC/Global Configuration Mode

Example

```
Switch_config#show location elin
elin information:
  elin 2: 0987654321
  elin 1: 1234567890
total: 2
Switch_config#
```

1.1.22 show location civic [identifier *id*]

Syntax

```
show location civic [identifier id]
```

To display the civic information of the location, run the above command.

Parameter

Parameter	Description
<i>id</i>	Stands for the ID of the to-be-set civic, which ranges from 1 to 65535.

Default

None

Usage Guidelines

None

Command Mode

Exec/ Global Configuration Mode

Example

```
Switch_config#show location civic
civic address information:
  identifier: 2
  Language: Chinese
  Script: CN
-----
  identifier: 1
  City: Shanghai
  Language: English
  Script: EN
-----
total: 2
Switch_config#
```

1.1.23 clear lldp counters

Syntax

clear lldp counters

To clear the statistics information, run **clear lldp counters**.

Parameter

None

Default

None

Usage Guidelines

None

Command Mode

EXEC

Example

```
switch#clear lldp counters
switch#
switch#show lldp traffic
LLDP traffic statistics:
    Total frames out: 0
    Total entries aged: 0
    Total frames in: 0
    Total frames received in error: 0
    Total frames discarded: 0
    Total TLVs unrecognized: 0
switch#
switch#show lldp errors
LLDP errors/overflows:
    Total memory allocation failures: 0
    Total encapsulation failures: 0
    Total table overflows: 0
switch#
```

1.1.24 clear lldp table

Syntax

clear lldp table

To remove the neighbor list, run **clear lldp table**.

Parameter

None

Default

None

Usage Guidelines

None

Command Mode

EXEC

Example

```
switch#clear lldp table
```

```
switch#
```

```
switch#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
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Total entries displayed: 0