

# LLDP Configuration Commands

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# Chapter 1 LLDP Configuration Commands

## 1.1 LLDP Commands

### 1.1.1 lldp run

#### Description

**lldp run**

**no lldp run**

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

#### Parameter

None

#### Default

Shut down

#### Explanation

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

#### Description

**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

#### Explanation

None

#### 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

#### Description

**lldp timer** *time*

**no lldp timer**

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

## Parameter

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

## Default

30s

## Explanation

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

## Description

**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**

2 s

**Explanation**

None

**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****Description**

**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: macphy-config ,management-address port-description ,port-vlan ,system-capabilities system-description ,system-name

**Default**

All TLVs are sent.

### Explanation

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 transmit

### Description

**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

### Explanation

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 f0/0 not to send the LLDP message.

```
Switch_config_f0/0# no lldp transmit
```

Switch\_config\_f0/0#

### 1.1.7 lldp receive

#### Description

**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

#### Explanation

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 f0/0 to the LLDP message mode.

```
Switch_config_f0/0# no lldp receive
```

```
Switch_config_f0/0#
```

### 1.1.8 Show lldp errors

#### Description

**Show lldp errors**

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



**Parameter**

None

**Default**

None

**Explanation**

None

**Command mode**

EXEC/Global configuration mode

**Example**

The following example shows how to set port f0/0 to the LLDP message mode.

```
switch_config#show lldp errors
```

```
LLDP errors/overflows:
```

```
    Total memory allocation failures: 0
```

```
    Total encapsulation failures: 0
```

```
    Total table overflows: 0
```

```
switch_config#
```

**1.1.9 Show lldp interface****Description**

**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 f0/1 and fastethernet0/1

**Default**

None

**Explanation**

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 f0/1.

```
switch_config#show lldp interface f0/1
FastEthernet0/1:
Rx: enabled
Tx: enabled
switch_config#
```

**1.1.10 show lldp neighbors****Description**

**show lldp neighbors**

It is used to display the simple information about neighbors.

**Parameter**

None

**Default**

None

**Explanation**

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         Fas0/2          115         Fas0/32      B
switch         Fas0/32         114         Fas0/2       B

Total entries dispalyed: 2
switch_config#

```

**1.1.11 Show lldp neighbors detail****Description****Show lldp neighbors detail**

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

**Parameter**

None

**Default**

None

**Explanation**

None

**Command mode**

EXEC/global configuration mode

## Example

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

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

```
port id: Fas0/32
```

```
port description: FastEthernet0/32
```

```
system name: switch.
```

```
system description: (tm) S3448 Software, Version 2.0.1K
```

```
Serial: S35000456
```

```
Copyright by Shanghai Baud Data Communication CO. LTD.
```

```
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: Fas0/2
```

```
port description: FastEthernet0/2
```

```
system name: switch.
```

```
system description: (tm) S3448 Software, Version 2.0.1K
```

```
Serial: S35000456
```

```
Copyright by Shanghai Baud Data Communication CO. LTD.
```

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

Time remaining: 95  
system capabilities: R B  
enabled capabilities: B  
Management Address:  
IP: 90.0.0.66

Auto Negotiation -- supported,enabled  
Physical media capabilities:  
100baseTX(FD)  
100baseTX(HD)  
10baseT(FD)  
10baseT(HD)  
Media Attachment Unit type: 16

-----

Total entries displayed: 2  
switch#

#### 1.1.12 Show lldp traffic

##### Description

##### **Show lldp traffic**

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

##### Parameter

None

##### Default

None

##### Explanation

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#
```

### 1.1.13 clear lldp counters

#### Description

**clear lldp counters**

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

#### Parameter

None

#### Default

None

#### Explanation

None

#### Command mode

EXEC

## Example

```
switch#clear lldp counters
switch#
```

### 1.1.14 clear lldp table

#### Description

**clear lldp table**

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

#### Parameter

None

#### Default

None

#### Explanation

None

#### Command mode

EXEC

#### Example

```
switch#clear lldp table  
switch#
```

### 1.1.15 debug lldp errors

#### Description

**debug lldp errors**

To report some error information about the LLDP module, run **debug lldp errors**.

#### Parameter

None

#### Default

None

**Explanation**

None

**Command mode**

EXEC

**Example**

```
switch#debug lldp errors
debug lldp errors on
switch#show debug
lldp errors debugging is on
switch#Nov 14 09:39:04LLDP recive a bad frame on interface FastEthernet0/2
Nov 14 09:49:44LLDP transmit fail on interface FastEthernet0/2
```

**1.1.16 debug lldp events****Description****debug lldp events**

To report some special events about the LLDP module, run **debug lldp events**.

**Parameter**

None

**Default**

None

**Explanation**

None

**Command mode**

EXEC

**Example**

```
switch#debug lldp events
debug lldp events on
switch#show debug
```



```
lldp event debugging is on
switch#config
switch_config#int f0/2
switch_config_f0/2#no lldp tr
switch_config_f0/2#Nov 14 09:39:04 LLDP transmit a end packet on interface FastEthernet0/2
Nov 14 09:44:08LLDP recive a unrecognized tlv frame on interface FastEthernet0/2
```

### 1.1.17 debug lldp packets

#### Description

##### **debug lldp packets**

To report the message transmission event of the LLDP module, run **debug lldp packets**.

#### Parameter

None

#### Default

None

#### Explanation

None

#### Command mode

EXEC

#### Example

```
switch#debug lldp packets
debug lldp packets on
switch#show debug
lldp packet debugging is on
switch#Nov 13 16:38:20 LLDP advertisement packet TX'd on intf FastEthernet0/2
Nov 13 16:38:20 LLDP advertisement packet RX'd on intf FastEthernet0/32
```

### 1.1.18 debug lldp states

#### Description

**debug lldp states**

To report the information about the state of the LLDP port, run **debug lldp states**.

#### Parameter

None

#### Default

None

#### Explanation

None

#### Command mode

EXEC

#### Example

```
switch#debug lldp states
debug lldp states on
switch#show debug
lldp state debugging is on
switch#Nov 13 16:39:51 LLDP transmit state on FastEthernet0/2 set to TX FRAME
Nov 13 16:39:51 LLDP transmit state on FastEthernet0/2 set to IDLE
Nov 13 16:39:51 LLDP receive state on FastEthernet0/32 set to RX FRAME
Nov 13 16:39:51 LLDP receive state on FastEthernet0/32 set to WAIT FOR FRAME
```