

LLDP Configuration

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Chapter 1 LLDP

1.1 LLDP Overview

The link layer discovery protocol (LLDP) at 802.1AB helps to detect network troubles easily and maintain the network topology. LLDP is a unidirectional protocol. One LLDP agent transmits its state information and functions through its connected MSAP, or receives the current state information or function information about the neighbor. However, the LLDP agent cannot request any information from the peer through the protocol.

During message exchange, message transmission and reception do not affect each other. You can configure only message transmission or reception or both.

LLDP is a useful management tool, providing management personnel exact network mapping, traffic data and trouble detection information.

1.2 LLDP Configuration Task List

- Disabling/enabling LLDP
- Configuring Hellotime
- oldtime
- imer
- imer
- Configuring Reinit
- reinit
- Configuring the to-be-sent tlv
- Configuring the Transmission or Reception Mode
- Configuring Show-Relative Commands
- Configuring the Deletion Commands
- Configuring the debugging command

1.3 LLDP Configuration Tasks

1.3.1 Forbidding/enabling LLDP

LLDP is disabled by default. You need start up LLDP before it runs.

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

Command	Purpose
lldp run	Runs LLDP.

Run the following command to disable LLDP:

Command	Purpose
no lldp run	Disables LLDP.

1.3.2 Configuring Hellotime

You can control the timeout time of transmitting the LLDP message through modifying **holdtime**:

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

Command	Purpose
lldp holdtime <i>time</i>	Configures the timeout time of LLDP.
no lldp holdtime	Resumes the timeout time to the default value, 120 seconds.

1.3.3 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
lldp timer <i>time</i>	Configures the interval of message transmission of LLDP.
no lldp timer	Resumes the default interval, that is, 30 seconds.

1.3.4 Configuring Reinit

You can control the interval of the switch to continuously transmit two messages by configuring **reinit** of LLDP.

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

Command	Purpose
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lldp reinit time	Configures the interval of LLDP to continuously transmit message.
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 **tlv** of LLDP:

Command	Purpose
lldp tlv-select tlv-type	Tlvs or tlv-types which needs to be added include: macphy-confg (802.3-defined tlv) management-address (management address of tlv) port-description (port description of tlv) port-vlan (802.1-defined tlv) system-capabilities (system performance of tlv) system-description (system description of tlv) system-name (system name of tlv)
no lldp tlv-select tlv-type	Tlvs or tlv-types which needs to be deleted include: macphy-confg (802.3-defined tlv) management-address (management address of tlv) port-description (port description of tlv) port-vlan (802.1-defined tlv) system-capabilities (system performance of tlv) system-description (system description of tlv) system-name (system name of tlv)

1.3.6 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 configure the working mode of LLDP:

Command	Purpose
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[no] lldp transmit	Sets the port to the transmit-only mode or disables the transmit-only mode of the port.
[no] lldp receive	Sets the port to the receive-only mode or disables the receive-only mode of the port.

1.3.7 Configuring 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 EXEC or global configuration mode:

Command	Purpose
Show lldp errors	Displays the error information about the LLDP module.
Show lldp interface <i>interface-name</i>	Displays the information about port state, that is, the transmission mode and the reception mode.
Show lldp neighbors	Displays the abstract information about the neighbor.
Show lldp neighbors detail	Displays the detailed information about the neighbor.
Show lldp traffic	Displays all received and transmitted statistics information.

1.3.8 Configuring the Deletion Commands

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

Run the following commands in EXEC mode:

Command	Purpose
clear lldp counters	Deletes all statistics data.
clear lldp table	Deletes all received neighbor information.

1.3.9 Configuring the Debugging Command

To easily monitor the LLDP module, run the following commands in EXEC mode:

Command	Purpose
debug lldp errors	Reports some error information about the LLDP module.
debug lldp events	Reports some special events about the LLDP module.
debug lldp packets	Reports the message transmission event of the LLDP module.
debug lldp states	Reports the information about the state of the LLDP port.

