Chapter 32. LLDP

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Chapter 32 LLDP

32.1 LLDP Overview

LLDP (Link Layer Discovery Protocol), a L2 protocol, defined by IEEE802.1AB-2005 standard has nothing to do with the manufacturer. It announces its information to other neighbor devices in the network, receives the neighbor's information and saves to standard MIB of LLDP for users to check the downlink devices and connected ports for easy network maintenance and management. Network administrator can know L2 connections by accessing.

32.1.1 LLDP Fundamentals

LLDP devices announce their own information through multicast address 01-80-c2-00-00-0e. LLDP devices will send 2 LLDP notice and the sending interval is set by hello-time. After receiving neighbor's advertisement, LLDP device will read the advertisement content and save in LLDP neighbor table. LLDP neighbor table can be aged with TTL value being aging time. If neighbor's LLDP advertisement cannot be received within aging time, the neighbor entry will be removed.

32.1.2 LLDP Timer

Hello-time: The time interval for sending LLDP packet.

Hold-time: LLDP aging time granularity for neighbor entry.

TTL: TTL equals to hello-time ties hold-time which means aging time of neighbor entry.

32.2 Configure LLDP

32.2.1 LLDP Configuration List

Configuration Task	Description	Detailed Configuration
Enable LLDP	Required	32.2.2
Configure LLDP Hello-time	Optional	32.2.3
Configure LLDP Hold-time	Optional	32.2.4
Configure LLDP packet sending & receiving mode	Optional	32.2.5
Configure LLDP managementaddress	Optional	32.2.6
LLDP display and debugging	Optional	32.2.7

32.2.2 Enable LLDP

Only after enabling global LLDP, all related configurations can be effective. Global and port LLDP can be configured and saved no matter the LLDP is enabled. When global LLDP is enabled, the configuration is effective.

Operation	Command	Remarks
Enter global configuration mode	**system-view**	
Enable LLDP	**lldp**	
Disable LLDP	**undo lldp**	Disabled by default
Enter port configuration mode	**interface ethernet** *interface-num*	
Disable interface LLDP	**undo lldp**	Enabled by default

32.2.3 ConfigureLLDP Hello-Time

By default, LLDP Hello-time is 30S.

Operation	Command	Remarks
Enter global configuration mode	**system-view**	-
Configure LLDP Hello-time	**lldp hello-time** *time*	hello-time: <5-32768>(seconds)
Configure default LLDP Hello-time	**undo lldp hello-time**	

32.2.4 ConfigureLLDP Hold-Time

By default, LLDP Hold-time is 4S.

Operation	Command	Remarks
Enter global configuration mode	**system-view**	
Configure LLDP Hello-time	**lldp hold-time** *time*	hold-time: <2-10>(seconds)
Configure default LLDP Hello-time	**undo lldp hold-time**	

32.2.5 Configure LLDP Packet Transferring and Receiving Mode on Port

There are three types of mode:

Rx: receiving only.

Tx: transferring only.

Rxtx: transferring and receiving.

By default, the mode for all ports is rxtx, that is, transferring and receiving all LLDP packets.

Operation	Command	Remarks
Enter global configuration mode	**system-view**	
Enter port configuration mode	**interface ethernet** *interface-num*	

Configure LLDP packet transferring and receiving mode on port	**lldp** { **rx** | **rxtx** | **tx** }	

32.2.6 Configure LLDP Management Address

Management address is the IP address of the device.LLDP devices use the vlan-interface IP address to encapsulate the LLDP packet and send the packet to the neighbor.

Operation	Command	Remarks
Enter global configuration mode	**system-view**	
Enter port configuration mode	**interface ethernet** *interface-num*	
Configuremanagementaddress	**lldp management-address** { vlan-interface | supervlan-interface } *vlan-id*	
Delete managementaddress	**undo lldp management-address**	

32.2.7 LLDP Display and Debugging

After the above configurations, you can execute the display commands in any configuration mode to display information, so as to verify your configurations.

Operation	Command	Remarks
Display LLDP status	**display lldp** [interface ethernet *interface-num*]	