Configuring LLDP

Configuring LLDP

Before you begin

Ensure that the Link Layer Discovery Protocol (LLDP) feature is enabled on the switch.

SUMMARY STEPS

1. switch# **configure terminal**
2. switch# **feature lldp**
3. switch(config)# **lldp** {**holdtime** *seconds* | **reinit** *seconds* | **timer** *seconds* | **tlv-select** {**dcbxp** | **management-address** | **power management** | **port-description** | **port-vlan** | **system-capabilities** | **system-description** | **system-name**}}
4. switch(config)# **no lldp** {**holdtime** | **reinit** | **timer**}
5. (Optional)switch# **show lldp**

DETAILED STEPS

	Command or Action	Purpose
Step 1	switch# **configure terminal**	Enters global configuration mode.
Step 2	switch# **feature lldp**	Enable LLDP.
Step 3	switch(config)# **lldp** {**holdtime** *seconds*	**reinit** *seconds*	**timer** *seconds*	**tlv-select** {**dcbxp**	**management-address**	**power management**	**port-description**	**port-vlan**	**system-capabilities**	**system-description**	**system-name**}}	Configures LLDP options. Use the **holdtime** option to set the length of time (10 to 255 seconds) that a device should save LLDP information received before discarding it. The default value is 120 seconds.

Command or Action	Purpose
	Use the **reinit** option to set the length of time (1 to 10 seconds) to wait before performing LLDP initialization on any interface. The default value is 2 seconds.
	Use the **timer** option to set the rate (5 to 254 seconds) at which LLDP packets are sent. The default value is 30 seconds.
	Use the **tlv-select** option to specify the type length value (TLV). The default is enabled to send and receive all TLVs.
	Use the **dcbxp** option to specify the Data Center Ethernet Parameter Exchange (DCBXP) TLV messages.
	Use the **management-address** option to specify the management address TLV messages.
	Use the **power management** option to specify the power management TLV for LLDP.
	Use the **port-description** option to specify the port description TLV messages.
	Use the **port-vlan** option to specify the port VLAN ID TLV messages.
	Use the **system-capabilities** option to specify the system capabilities TLV messages.
	Use the **system-description** option to specify the system description TLV messages.
	Use the **system-name** option to specify the system name TLV messages.
Step 4 switch(config)# **no lldp** {**holdtime**	**reinit**	**timer**}	Resets the LLDP values to their defaults.
Step 5 (Optional)switch# **show lldp**	Displays LLDP configurations.

Example

This example shows how to configure the global LLDP hold time to 200 seconds:

```
switch# configure terminal
switch(config)# lldp holdtime 200
switch(config)#
```

This example shows how to enable LLDP to send or receive the management address TLVs:

```
switch# configure terminal
switch(config)# lldp tlv-select management-address
switch(config)#
```

Configuring Interface LLDP

SUMMARY STEPS

1. switch# **configure terminal**
2. switch(config)# **interface** *type slot*/*port*
3. switch(config-if)# [**no**] **lldp** {**receive** | **transmit**}
4. (Optional) switch# **show lldp** {**interface** | **neighbors** [**detail** | **interface** | **system-detail**] | **timers** | **traffic**}

DETAILED STEPS

	Command or Action	Purpose
Step 1	switch# **configure terminal**	Enters global configuration mode.
Step 2	switch(config)# **interface** *type slot*/*port*	Selects the interface to change.
Step 3	switch(config-if)# [**no**] **lldp** {**receive**	**transmit**}	Sets the selected interface to either receive or transmit. The **no** form of the command disables the LLDP transmit or receive.
Step 4	(Optional) switch# **show lldp** {**interface**	**neighbors** [**detail**	**interface**	**system-detail**]	**timers**	**traffic**}	Displays LLDP configurations.

Example

This example shows how to set an interface to transmit LLDP packets:

```
switch# configure terminal
switch(config)# interface ethernet 1/2
switch(config-if)# lldp transmit
```

This example shows how to configure an interface to disable LLDP:

```
switch# configure terminal
switch(config)# interface ethernet 1/2
switch(config-if)# no lldp transmit
switch(config-if)# no lldp receive
```

This example shows how to display LLDP interface information:

```
switch# show lldp interface ethernet 1/2
tx_enabled: TRUE
rx_enabled: TRUE
dcbx_enabled: TRUE
Port MAC address:    00:0d:ec:a3:5f:48
Remote Peers Information
```

```
No remote peers exist
```

This example shows how to display LLDP neighbor information:

```
switch# show lldp neighbors
Capability codes:
  (R) Router, (B) Bridge, (T) Telephone, (C) DOCSIS Cable Device
  (W) WLAN Access Point, (P) Repeater, (S) Station, (O) Other
Device ID              Local Intf      Hold-time  Capability  Port ID
SW-INSBU-JWALA-PP52.cisco.com
                       mgmt0           120        B           Gi1/0/37
MTC-2                  Eth1/41         120        BR          Ethernet1/43
MTC-CR2                Eth1/42         120        BR          Ethernet1/43
MTC-CR2                Eth1/43         120        BR          Ethernet1/42
MTC-2                  Eth1/44         120        BR          Ethernet1/41
MTC-CR2                Eth1/45         120        BR          Ethernet1/41
MTC-2                  Eth1/46         120        BR          Ethernet1/44
MTC-2                  Eth1/47         120        BR          Ethernet1/42
MTC-CR2                Eth1/48         120        BR          Ethernet1/44
Total entries displayed: 9
```

This example shows how to display the system details about LLDP neighbors:

```
switch# sh lldp neighbors system-detail
Capability codes:
 (R) Router, (B) Bridge, (T) Telephone, (C) DOCSIS Cable Device
 (W) WLAN Access Point, (P) Repeater, (S) Station, (O) Other
Device ID Local Intf Chassis ID PortID Hold-time Capability

switch-2  Eth1/7   0005.73b7.37ce Eth1/7  120 B
switch-3  Eth/9    0005.73b7.37d0 Eth1/9  120 B
switch-4  Eth1/10 0005.73b7.37d1 Eth1/10 120 B
Total entries displayed: 3
```

This example shows how to display LLDP timer information:

```
switch# show lldp timers

LLDP Timers

holdtime 120 seconds

reinit 2 seconds

msg_tx_interval 30 seconds
```

This example shows how to display information about LLDP counters:

```
switch# show lldp traffic

LLDP traffic statistics:

    Total frames out: 8464

    Total Entries aged: 6

    Total frames in: 6342

    Total frames received in error: 2

    Total frames discarded: 2

    Total TLVs unrecognized: 0
```

MIBs for LLDP

MIB	Link
LLDP-MIB	ftp://ftp.cisco.com/pub/mibs/supportlists/nexus3000/Nexus3000MIBSupportList.html