

CDP and LLDP

Topology



Initial Configuration Commands

SW1:

```
enable
conf t
host SW1
no banner motd
no banner login
no banner exec
no banner incoming
line vty 0 15
password cisco
login
line con 0
logging synchronous
exit
int gig 0/0
shutdown
exit
no ip domain-lookup
end
copy run star
```

R1:

```
enable
conf t
host R1
no banner motd
no banner login
no banner exec
no banner incoming
```

```
line vty 0 15
password cisco
login
exec-timeout 0 0
line con 0
logging synchronous
exit
no ip domain-lookup
lldp run
int gig 0/1
ip address 10.1.1.1 255.255.255.0
no shutdown
int gig 0/0
no shutdown
end
copy run star
```

Lab Tasks

- Identify neighboring devices by using the “show cdp neighbors” command on SW1.
- Find detailed information about R1 by using CDP.
- Enable LLDP on SW1.
- Identify SW1 by using the “show lldp neighbors” command on R1.
- Keep Gig 0/0 on R1 from receiving and transmitting LLDP information.
- Identify tlv (type length value) information that we can turn on or off on R1.
- Find detailed information about SW1 by using LLDP.

Solution

Step 1: Identify neighboring devices by using the “show cdp neighbors” command on SW1.

```
SW1#show cdp neighbors
```

```
Capability Codes: R - Router, T - Trans Bridge, B - Source Route Bridge
                  S - Switch, H - Host, I - IGMP, r - Repeater, P - Phone,
                  D - Remote, C - CVTA, M - Two-port Mac Relay
```

Device ID	Local Intrfce	Holdtme	Capability	Platform	Port ID
R1	Gig 0/1	163	R B		Gig 0/1

```
Total cdp entries displayed : 1
```

Step 2: Find detailed information about R1 by using CDP.

```
SW1#show cdp neighbors detail
```

```
-----  
Device ID: R1  
Entry address(es):  
  IP address: 10.1.1.1  
Platform: Cisco , Capabilities: Router Source-Route-Bridge  
Interface: GigabitEthernet0/1, Port ID (outgoing port): GigabitEthernet0/1  
Holdtime : 159 sec  
  
Version :  
Cisco IOS Software, IOSv Software (VIOS-ADVENTERPRISEK9-M), Version  
15.9(3)M4, RELEASE SOFTWARE (fc3)  
Technical Support: http://www.cisco.com/techsupport  
Copyright (c) 1986-2021 by Cisco Systems, Inc.  
Compiled Wed 04-Aug-21 08:13 by mcpre  
  
advertisement version: 2  
Management address(es):  
  IP address: 10.1.1.1
```

```
Total cdp entries displayed : 1
```

Step 3: Enable LLDP on SW1.

```
SW1#conf t
```

```
Enter configuration commands, one per line.  End with CNTL/Z.
```

```
SW1(config)#lldp run
```

```
SW1(config)#exit
```

Step 4: Identify SW1 by using the “show lldp neighbors” command on R1.

```
R1#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
SW1	Gi0/1	120	R	Gi0/1

```
Total entries displayed: 1
```

Step 5: Keep Gig 0/0 on R1 from receiving and transmitting LLDP information.

```
R1#conf t
Enter configuration commands, one per line.  End with CNTL/Z.
R1(config)#int gig 0/0
R1(config-if)#no lldp transmit
R1(config-if)#no lldp receive
R1(config-if)#end
```

Step 6: Identify tlv (type length value) information that we can turn on or off on R1.

```
R1#conf t
Enter configuration commands, one per line.  End with CNTL/Z.
R1(config)#no lldp ?
  holdtime      Specify the holdtime (in sec) to be sent in packets
  reinit        Delay (in sec) for LLDP initialization on any interface
  run           Enable LLDP
  timer         Specify the rate at which LLDP packets are sent (in sec)
  tlv-select    Selection of LLDP TLVs to send
```

```
R1(config)#no lldp tlv-select ?
  mac-phy-cfg      IEEE 802.3 MAC/Phy Configuration/status TLV
  management-address Management Address TLV
  port-description Port Description TLV
  port-vlan        Port VLAN ID TLV
  power-management IEEE 802.3 DTE Power via MDI TLV
  system-capabilities System Capabilities TLV
  system-description System Description TLV
  system-name      System Name TLV
```

```
R1(config)#end
```

Step 7: Find detailed information about SW1 by using LLDP.

```
R1#show lldp neighbors detail
-----
Local Intf: Gi0/1
Chassis id: 5254.0014.abde
Port id: Gi0/1
Port Description: GigabitEthernet0/1
System Name: SW1

System Description:
Cisco IOS Software, vios_12 Software (vios_12-ADVENTERPRISEK9-M),
Experimental Version 15.2(20200924:215240) [sweickge-sep24-2020-l2iol-release
135]
Copyright (c) 1986-2020 by Cisco Systems, Inc.
Compiled Tue 29-Sep-20 11:53 by sweickge

Time remaining: 112 seconds
System Capabilities: B,R
Enabled Capabilities: R
```

Management Addresses - not advertised
Auto Negotiation - not supported
Physical media capabilities - not advertised
Media Attachment Unit type - not advertised
Vlan ID: - not advertised

Total entries displayed: 1