

CCNA Quick Notes - NetworkManagement

1. What is the Cisco Discovery Protocol (CDP)? CDP is a Cisco proprietary protocol that runs on all Cisco IOS-enabled devices. It is used to gather information about directly connected neighboring devices. CDP operates at Layer 2 of the OSI model and is media-independent. With CDP, you can tell the hardware type, device identifier, address list, software version, and active interfaces on neighboring Cisco devices. CDP is enabled by default on all Cisco equipment. It uses a nonroutable SNAP frame to communicate between devices. Note: Because CDP is media-independent it can operate over most media types. The only media types CDP cannot operate over are X.25, because it doesn't support SNAP encapsulation, and Frame Relay point-to-multipoint interfaces.

2. What are three reasons to disable CDP? Three reasons to disable CDP are as follows:

- To save network bandwidth by not exchanging CDP frames.
- If you are connecting to non-Cisco devices.
- Security. CDP broadcasts information about the device every 60 seconds. Sniffers and other devices can view these broadcasts to discover information about your network.

3. How do you disable CDP on Cisco routers? Two commands disable CDP on a Cisco router. To disable CDP on the entire device, use the `no cdp run` global command: `RouterB(config)#no cdp run` To disable CDP on an interface only, use the `no cdp enable` interface command: `RouterB(config)#int e0 RouterB(config-if)#no cdp enable` This disables CDP on Ethernet interface 0.

4. What does the `show CDP` command display? The `show CDP` command displays global CDP information about the device. It tells you when the device will send CDP packets and the CDP holdtime: `RouterB#show cdp` Global CDP information: Sending CDP packets every 60 seconds Sending a holdtime value of 180 seconds Note: For the CCNA test, remember that the default time a device will send out CDP information is 60 seconds and the default holdtime is 180 seconds.

5. On a Cisco router, what does the `show cdp neighbors` command display? The `show cdp neighbors` command displays the following:

- Device ID (name of the device)
- The local interface (local outgoing port)
- The holdtime displayed in seconds
- The device's capability code (this tells you if the device is a router, switch, or repeater)
- Hardware platform of the neighboring device (what type of Cisco device it is and the model)
- Port ID of the neighboring device (remote port)

```
RouterB#show cdp neighbors
Capability Codes: R - Router, T - Trans Bridge, B - Source Route Bridge, S - Switch, H - Host, I - IGMP, r - Repeater
Device ID Local Interface Holdtime Capability Platform Port ID
RouterA Ser 0/146 R 2505 Ser 0/6
```

6. What does the `show cdp neighbors detail` command display? The `show cdp neighbors detail` and `show cdp entry *` commands show the same output. They both display the following:

- Device ID (host name) of the remote neighbor
- Layer 3 address of the remote device (if the device has more than one Layer 3 address on its interface, only the primary address is shown)
- Device platform and capabilities
- Local interface and outgoing port ID
- Remote device holdtime in seconds
- IOS type and version

```
RouterB#show cdp neighbors detail
-----
Device ID: RouterA
Entry address(es): IP address: 192.168.2.1 Platform: cisco 2505, Capabilities: Router Interface: Serial1, Port ID (outgoing port): Serial1 Holdtime : 164 sec Version :Cisco Internetwork Operating System Software IOS (tm) 2500 Software (C2500-D-L), Version 12.0(13), RELEASE SOFTWARE (fc1)Copyright (c) 1986-2000 by cisco Systems, Inc.Compiled Wed 06-Sep-00 01:08 by Linda
```

7. What does the `show cdp traffic` command display? The `show cdp traffic` command displays information about interface traffic. This includes the number of CDP packets sent and received and CDP errors: `RouterB#show cdp traffic` CDP counters : Packets output: 105, Input: 103 Hdr syntax: 0, Chksum error: 0, Encaps failed: No memory: 0, Invalid packet: 0, Fragmented: 0

8. What does the `show cdp interface` command display? The `show cdp interface` command displays the status of CDP on all interfaces on your device: `RouterB#show cdp interface` Ethernet0 is up, line protocol is down Encapsulation ARPA Sending CDP packets every 60 seconds Holdtime is 180 seconds Serial0 is up, line protocol is up Encapsulation HDLC Sending CDP packets every 60 seconds Holdtime is 180 seconds Serial1 is up, line protocol is up Encapsulation HDLC Sending CDP packets every 60 seconds Holdtime is 180 seconds

9. What Cisco IOS router command can you use to see a neighbor router's IP address? To see a neighbor router's IP address, you must use the `show cdp neighbor detail` or `show cdp entry *` user mode or EXEC command. (This one will probably be on the exam)

10. What IOS command do you use to view the active outbound telnet sessions for the current user on a Cisco router? The `show sessions` command displays the active outbound telnet sessions from that particular user on your router. `RouterA#show sessions` Conn Host Address Byte Idle Conn Name *1 192.168.1.2 192.168.1.2 0 0 192.168.1.2

11. What key sequence do you use to suspend a Telnet session on a remote system and return to your local router? To suspend a Telnet session, press Ctrl-Shift-6, and then press X.

12. How do you end a remote Telnet session on a Cisco router? To end a Telnet session, use the `exit` or `logout` command while you're on the remote device: `RouterB>exit` [Connection to 192.168.1.2 closed by foreign host] `RouterA#` Upon using the `ping EXEC` command, you receive one of the following responses:

- ! = Each period indicates that the network server timed out while waiting for a reply.
- ! = Each exclamation point indicates the receipt of a reply.
- ? = Unknown packet type.
- C = A congestion experienced packet was received.
- U = A destination unreachable error PDU was

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