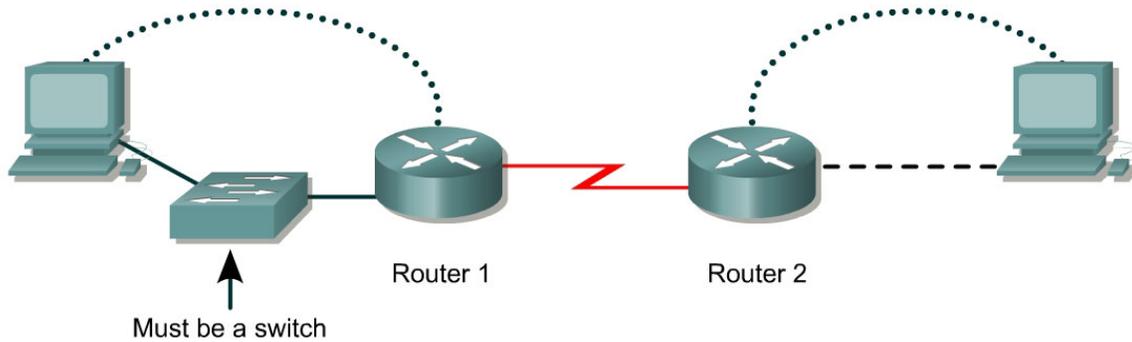


Lab 4.1.4 Creating a Network Map using CDP



Router Designation	Router Name	Interface type	Serial 0 Clock	Serial 0 Address	Ethernet 0 Address	Subnet mask (all interfaces)
Router 1	GAD	DCE	56000	192.168.15.1	192.168.14.1	255.255.255.0
Router 2	BHM	DTE	Not set	192.168.15.2	192.168.16.1	255.255.255.0

Straight-through cable	
Serial cable	
Console (Rollover)	
Crossover cable	

Objective

- Use Cisco Discovery Protocol (CDP) commands to get information about neighboring network devices.

Background/Preparation

CDP discovers and shows information about directly connected Cisco devices, including routers and switches.

Cable a network similar to the one in the diagram. Any router that meets the interface requirements may be used. Possible routers include 800, 1600, 1700, 2500, 2600 routers, or a combination. Refer to the chart at the end of the lab to correctly identify the interface identifiers to be used based on the equipment in the lab. The configuration output used in this lab is produced from 1721 series routers. Any other router used may produce slightly different output. The following steps are intended to be executed on each router unless specifically instructed otherwise.

Start a HyperTerminal session as performed in the Establishing a HyperTerminal session lab.

Note: Go to the erase and reload instructions at the end of this lab. Perform those steps on all routers in this lab assignment before continuing.

Step 1 Log on to Router 1 (GAD)

- a. Why is it necessary to log on to Router 1 in order to see all of the devices (routers and switches) in the network shown above?
-

Step 2 Configured the routers

- a. Configure the routers according to the information in the table above in order for CDP to be able to collect information about them. Refer to prior labs on configuring serial and Ethernet interfaces and making changes to configurations if you need help.
 - b. What is the clock rate to be set to and which interface is it set on?
-

- c. Why is it necessary to use the `no shutdown` command on all interfaces?
-

Step 3 Gather information about the router interfaces

- a. Enter `show interface` command at either the user EXEC or the privileged EXEC router prompt.
- b. How many interfaces are present? _____
- c. What type are they? _____

Step 4 Display the CDP updates received on the local router

- a. Enter `show cdp neighbors` command at the router prompt.
- b. Fill in the following table:

Device and Port ID	Local Interface	Hold Time	Capability	Platform

Upon completion of the previous steps, logoff by typing `exit`. Turn the router off.

Erasing and reloading the router

Enter into the privileged EXEC mode by typing **enable**.

If prompted for a password, enter **class**. If “class” does not work, ask the instructor for assistance.

```
Router>enable
```

At the privileged EXEC mode, enter the command **erase startup-config**.

```
Router#erase startup-config
```

The responding line prompt will be:

```
Erasing the nvram filesystem will remove all files! Continue?  
[confirm]
```

Press **Enter** to confirm.

The response should be:

```
Erase of nvram: complete
```

Now at the privileged EXEC mode, enter the command **reload**.

```
Router(config)#reload
```

The responding line prompt will be:

```
System configuration has been modified. Save? [yes/no]:
```

Type **n** and then press **Enter**.

The responding line prompt will be:

```
Proceed with reload? [confirm]
```

Press **Enter** to confirm.

In the first line of the response will be:

```
Reload requested by console.
```

After the router has reloaded the line prompt will be:

```
Would you like to enter the initial configuration dialog? [yes/no]:
```

Type **n** and then press **Enter**.

The responding line prompt will be:

```
Press RETURN to get started!
```

Press **Enter**.

The router is ready for the assigned lab to be performed.

Router Interface Summary					
Router Model	Ethernet Interface #1	Ethernet Interface #2	Serial Interface #1	Serial Interface #2	Interface #5
800 (806)	Ethernet 0 (E0)	Ethernet 1 (E1)			
1600	Ethernet 0 (E0)	Ethernet 1 (E1)	Serial 0 (S0)	Serial 1 (S1)	
1700	FastEthernet 0 (FA0)	FastEthernet 1 (FA1)	Serial 0 (S0)	Serial 1 (S1)	
2500	Ethernet 0 (E0)	Ethernet 1 (E1)	Serial 0 (S0)	Serial 1 (S1)	
2600	FastEthernet 0/0 (FA0/0)	FastEthernet 0/1 (FA0/1)	Serial 0/0 (S0/0)	Serial 0/1 (S0/1)	
<p>In order to find out exactly how the router is configured, look at the interfaces. This will identify the type of router as well as how many interfaces the router has. There is no way to effectively list all of the combinations of configurations for each router class. What is provided are the identifiers for the possible combinations of interfaces in the device. This interface chart does not include any other type of interface even though a specific router may contain one. An example of this might be an ISDN BRI interface. The string in parenthesis is the legal abbreviation that can be used in IOS command to represent the interface.</p>					