



### Step 1 Configure the hostname, passwords and interfaces on the GAD router

- a. On the GAD router, enter the global configuration mode and configure the hostname as shown in the chart. Then configure the console, virtual terminal and enable passwords. If there is a problem doing this, refer to the Configuring Router Passwords lab. Configure interfaces as shown in the table.

### Step 2 Configure the routing protocol on the GAD router

- a. Go to the proper command mode and enter the following:

```
GAD(config)#router rip
GAD(config-router)#network 192.168.1.0
GAD(config-router)#network 192.168.2.0
GAD(config-router)#exit
GAD(config)#exit
```

### Step 3 Save the GAD router configuration

```
GAD#copy running-config startup-config
Destination filename [startup-config]? [Enter]
```

### Step 4 Configure the hostname and passwords on the BHM router

- a. On the BHM router, enter the global configuration mode and configure the hostname as shown in the chart. Then configure the console, virtual terminal and enable passwords. Finally, configure the interfaces on each router.

### Step 5 Configure the routing protocol on the BHM router

- a. Go to the proper command mode and enter the following:

```
BHM(config)#router rip
BHM(config-router)#network 192.168.2.0
BHM(config-router)#network 192.168.1.0
BHM(config-router)#exit
BHM(config)#exit
```

### Step 6 Save the BHM router configuration

```
BHM#copy running-config startup-config
Destination filename [startup-config]? [Enter]
```

### Step 7 Verify that the internetwork is functioning by pinging the FastEthernet interface of the other router

- a. From GAD, is it possible to ping the BHM router FastEthernet interface? \_\_\_\_\_
- b. From BHM, is it possible to ping the GAD router FastEthernet interface? \_\_\_\_\_

### Step 8 Examine the routing table

- a. After an unsuccessful ping, check the routing table with the **show ip route** command. From the GAD router, type the following:

```
GAD#show ip route
```

- b. Is there a route to the BHM Ethernet LAN? \_\_\_\_\_

### Step 9 Examine the routing protocol status

- a. After examining the routing tables, it is discovered that there is no route to the BHM Ethernet LAN. So use the **show ip protocols** command to view the routing protocol status. From the BHM router, type the following:

```
BHM#show ip protocols
```

- b. What networks is RIP routing? \_\_\_\_\_
- c. Are these the correct networks? \_\_\_\_\_

### Step 10 Change the configuration to route correct networks

- a. After examining the **show ip protocols** command results, it is noticed that the network on the Ethernet LAN is not being routed. After examining it further, it is found that there is a network that does not belong has been configured to be advertised. It is decided this is a typo, and it is necessary to correct it. Enter the router RIP configuration mode and make the appropriate changes. From the BHM router, type the following:

```
BHM#configure terminal
BHM(config)#router rip
BHM(config-router)#no network 192.168.1.0
BHM(config-router)#network 192.168.3.0
BHM(config-router)#^Z
```

### Step 11 Confirm RIP is routing the correct networks

- a. Now confirm the new statement corrected the RIP configuration problem. So again type the **show ip protocols** command to observe what networks are being routed.
- b. From the BHM router, type the following:

```
BHM#show ip protocols
```

- c. What networks is RIP routing? \_\_\_\_\_
- d. Are these the correct networks? \_\_\_\_\_

### Step 12 Verify the routing table

- a. Now having confirmed that the configuration problem is corrected, verify that the proper routes are now in the routing table. So again issue the **show ip route** command to verify that the router now has the proper route.
- b. From the GAD router, type the following:

```
GAD#show ip route
```

- c. Is there a route to the BHM LAN? \_\_\_\_\_

### Step 13 Verify connectivity between GAD router and host in BHM

- a. Use the **ping** command to verify connectivity from GAD router to a host in BHM.
- b. From the GAD router, type the following:

```
GAD#ping host-ip
```

For example for host with IP Address, type the following:

```
GAD#ping 192.168.3.2
```

- c. Was the ping successful? \_\_\_\_\_

Upon completion of the previous steps, log off by typing **exit** and 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.

<b>Router Interface Summary</b>					
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>					