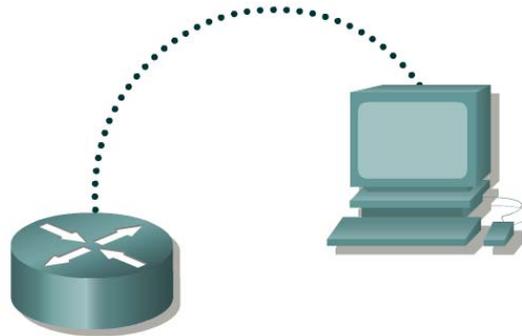


### Lab 3.1.6 Making Configuration Changes



Router Name	Router Type	Serial 0 Address	Subnet mask	Enable Secret password	Enable/VTY/Console passwords
GAD		192.168.14.1	255.255.255.0	class	cisco

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

#### Objective

- Configure some basic router settings.
- Bring interfaces up and down.
- Make changes to the router configuration.

#### Background/Preparation

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 Basic Router Configuration

- a. Connect the router as shown in the diagram. This lab requires a console (rollover) and a serial cable.

## Step 2 Configure hostname and passwords

- a. On the GAD router, enter the global configuration mode. Configure the hostname as shown in the chart. Configure the console, virtual terminal and enable passwords.

## Step 3 Configure interface Serial 0

- a. From the global configuration mode, configure serial interface 0 on Router GAD. Refer to interface chart.

```
GAD(config)#interface Serial 0
GAD(config-if)#ip address 192.168.14.1 255.255.255.0
GAD(config-if)#no shutdown
GAD(config-if)#description Connection to the host
GAD(config-if)#exit
GAD(config)#exit
```

## Step 4 Save the configuration

- a. Save the running configuration to the startup configuration at the privileged EXEC mode.

```
GAD#copy running-config startup-config
```

**Note:** Save the running configuration for the next time that the router is restarted. The router can be restarted either by a software `reload` command or a power shutdown. The running configuration will be lost if the running configuration is not saved. The router uses the startup configuration when the router is started.

## Step 5 Verify the configuration

- a. Issue the `show running-config` command from the privileged EXEC mode
- b. If the configuration is not correct, reenter any incorrect commands.

## Step 6 Modify the configuration

- a. Based on the new table, reconfigure the GAD router. Change the router hostname. Change the enable/VTY/console passwords. Remove the secret password and interface description. To remove an old command, go to the proper command mode and retype the command exactly as it was entered with the word `no` in front of it. For example:

```
GAD(config-if)#description Connection to the host
```

```
GAD(config-if)#no description Connection to the host
```

**Note:** Before making changes to the interface IP address and subnet mask bring the interface down as shown in Step 7.

Router Name	Serial 0 Address	Subnet mask	Enable Secret password	Enable/VTY/Console passwords
GAD	172.16.0.1	255.255.0.0		Cisco1

- b. To change information, go to the proper command mode and retype the command with the new information.

### Step 7 Bring down Serial interface 0

- a. Bring the interface down for maintenance by entering:

```
GAD(config)#interface Serial 0
GAD(config-if)#shutdown
GAD(config-if)#exit
GAD(config)#exit
GAD#
```

- b. Issue the `show interface Serial 0` and note the interface status.  
c. Issue the `show running-config` command and note the status of interface Serial 0:

### Step 8 Bring up Serial interface 0

- a. To make the interface operational, enable the interface by entering:

```
GAD(config)#interface Serial 0
GAD(config-if)#no shutdown
GAD(config-if)#exit
GAD (config)#exit
```

- b. Issue the `show interface Serial 0` and note the interface status.  
c. Serial 0 is \_\_\_\_\_. Line protocol is \_\_\_\_\_.

### Step 9 Verify the configuration

- a. Issue a `show running-config` command from the privileged EXEC mode to see if the modifications were properly made. If the configuration is not correct, reenter any incorrect commands and verify again.

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#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>					