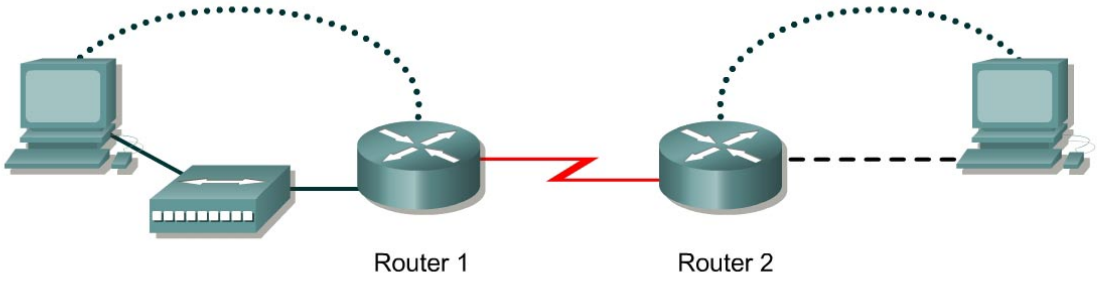
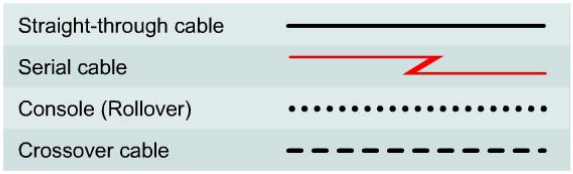
Lab 4.2.3 Suspending and Disconnecting Telnet Sessions – Instructor Version 2500



Router ID	Router Name	Fast Ethernet 0 Address	Interface type	Serial 0 Address	Subnet mask	Routing protocol	Enable secret password	Enable, VTY and console password
Router 1	GAD	192.168.14.1	DCE	192.168.15.1	255.255.255.0	RIP	class	cisco
Router 2	BHM	192.168.16.1	DTE	192.168.15.2	255.255.255.0	RIP	class	cisco



Objective

- Establish a Telnet session with a remote router.
- Suspend and reestablish a Telnet session.
- Display active Telnet sessions.
- Disconnect a Telnet session.

Background/Preparation

This lab focuses on the ability to Telnet to a router, suspend that session, return to the local router console, and then reestablish the previous connection.

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 Configure the routers

a. If there are any difficulties configuring hostname or passwords, refer to the Configuring Router Passwords lab. If there are any difficulties configuring interfaces or the routing protocol, refer to the Configuring Host Tables lab.

Step 2 Login to Router 1 and verify the connection to Router 2

a. Login to the GAD router.

b. Verify the connection between the two routers. Ping the serial 0 interface of the BHM router. If the ping is not successful, return to Step 1 and troubleshoot the configuration.

Step 3 Telnet to a remote router

a. Enter `telnet` BHM `if IP host tables were configured.` Otherwise, enter the *`IP address`* at the router prompt to connect to a remote router.

Enter the password **cisco** to enter the router.

b. What prompt did the router display? BHM>

Step 4 Look at the interfaces on the remote router

a. Enter **`show interface`** at the router prompt.

b. Are both the serial 0 and the ~~Fast~~Ethernet 0 interfaces up? Yes, both are up.

Step 5 Suspend the current Telnet session

a. Enter **Ctrl+Shift+6** followed by the **x** key.

This only suspends the session and returns to the previous router. It does not disconnect from this router.

b. What prompt did the router display? GAD>

Step 6 Resume a Telnet session

a. Press the **Enter** key at the router prompt. The router will respond with:

```
[Resuming connection 1 to 192.168.15.2 ... ]
```

b. Press the **Enter** key.

This will resume the Telnet session that was previously suspended in Step 4.

c. What prompt did the router display? BHM>

Step 7 Close a Telnet session

a. Enter the command **`exit`** while in a Telnet session.

This will terminate the Telnet session.

b. What prompt did the router display? GAD>

Note: To disconnect from a suspended Telnet session, type **disconnect** and press **Enter**.

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)#reloadRouter#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)	
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.					


```
GAD>telnet 192.168.15.2
Trying 192.168.15.2 ... Open


User Access Verification

Password:
BHM>
BHM>


GAD#
[Resuming connection 1 to 192.168.15.2 ... ]

BHM>exit

[Connection to 192.168.15.2 closed by foreign host]
```

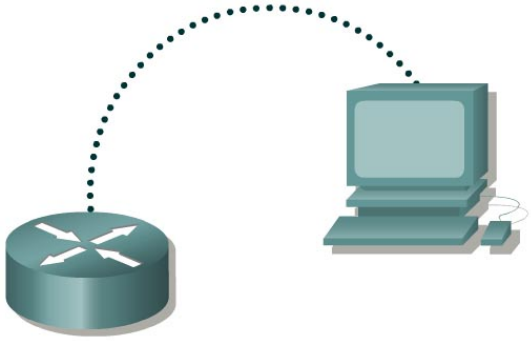


```
GAD#show running-config
Building configuration...

Current configuration : 628 bytes
!
version 12.1
no service single-slot-reload-enable
service timestamps debug uptime
service timestamps log uptime
no service password-encryption
!
hostname GAD
!
enable secret 5 $1$3paR$r57FdEaxs5i8TmC6/p7Gu1
enable password cisco
!
ip subnet-zero
!
interface Ethernet0
 ip address 192.168.14.1 255.255.255.0
!
interface Serial0
 ip address 192.168.15.1 255.255.255.0
 no fair-queue
 clockrate 56000
!
interface Serial1
 no ip address
!
router rip
 network 192.168.14.0
 network 192.168.15.0
!
ip classless
ip http server
!
line con 0
 password cisco
 login
line aux 0
line vty 0 4
 password cisco
 login
!
end

GAD#
```


Lab 3.2.3 Configuring Interface Descriptions – Instructor Version 2600



Router Designation	Router Name	Fast Ethernet 0 Address	Serial 0 Address	Subnet mask for both interfaces	Enable Secret password	Enable/VTY/ Console passwords
Router 1	GAD	192.168.14.1	192.168.15.1	255.255.255.0	class	cisco

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

Objective

- Choose a description for an interface and use interface configuration mode to enter that description.
- Set up a network similar to the one in the previous diagram.

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 Configure the hostname and passwords on the router

a. On the router, enter the global configuration mode. Configure the hostname as shown in the chart. Then configure the console, virtual terminal and enable passwords. If there are any difficulties, refer to the Configuring router passwords lab.

b. What is the router command to view the current running configuration?

show running-config

c. What command mode must be used to enter the command listed in the last question?

Privileged EXEC mode

d. Enter the command from the previous question to verify the configuration that was just entered. If the configuration is not correct, fix the errors. Verify it again until correct.

Step 2 Enter Global Configuration mode

a. Enter **configure terminal** at the router prompt. Notice the change in the router prompt.

What did the router prompt change to? GAD(config)#

Step 3 Enter Interface Configuration mode

a. Enter **interface serial 0** at the global configuration prompt. Refer to interface chart.

What does the router prompt look like in interface configuration mode?

GAD(config-if)#

Step 4 Display help for the description command

a. Enter **description ?** at the router prompt.

What is the maximum number of characters in an interface description? 240

Step 5 Choose a description for the interface

a. An interface description includes the purpose and location of the interface, other devices or locations connected to the interface, and circuit identifiers. Descriptions help the support personnel better understand the scope of problems related to an interface. Descriptions also allow for a faster resolution of problems.

b. Given the following circuit information, choose a description for the serial 0 interface for GAD. Use the following form to document the choice.

Link	Carrier	Circuit ID	Speed
GAD to BHM -	BellSouth	10DHDG551170	1.544Mbits/sec

Step 6 Enter a description for interface serial 0

a. From the interface configuration mode for serial 0, enter the description text. The text is the description from the previous step. Then enter **Ctrl-z** or type **end** to return to the privileged EXEC mode.

Note: this would be the same as typing **exit** to leave the interface configuration mode and **exit** again to leave Global Configuration mode. This is a keyboard shortcut.

Step 7 Examine the active configuration file

a. From the privileged EXEC mode, enter the command that will show the running configuration. The privileged EXEC mode is also called enable mode. The router will display information on how it is currently configured.

b. What command was entered? **show running-config**

c. What is the description for interface serial 0?

Link - GAD to BHM, Carrier - BellSouth, Circuit ID - 10DHDG551170, Speed - 1.544Mbits/sec

Step 8 Confirm interface description is correct

a. From the enable mode, enter the **show interfaces serial 0/0** command. The router displays information about the interface. Examine this output to confirm that the description entered is the correct description.

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.

Router Interface Summary					
Router Model	Ethernet Interface #1	Ethernet Interface #2	Serial Interface #1	Serial Interface #2	Interface #5
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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)	
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.					


```
GAD#show running-config
Building configuration...

Current configuration : 773 bytes
!
version 12.2
service timestamps debug uptime
service timestamps log uptime
no service password-encryption
!
hostname GAD
!
enable secret 5 $1$Qdps$OOiudQJpvWNEAjpa6ySVk.
!
ip subnet-zero
!
call rsvp-sync
!
interface FastEthernet0/0
 ip address 192.168.14.1 255.255.255.0
 duplex auto
 speed auto
!
interface Serial0/0
 description Link - GAD to BHM, Carrier - BellSouth, Circuit ID - 10DHDG551170,
Speed - 1.544Mbits/sec
 ip address 192.168.15.1 255.255.255.0
 clockrate 56000
!
interface FastEthernet0/1
 no ip address
 shutdown
 duplex auto
 speed auto
!
interface Serial0/1
 no ip address
 shutdown
!
ip classless
ip http server
!
!
dial-peer cor custom
!
!
!
line con 0
 password cisco
 login
line aux 0
line vty 0 4
 password cisco
 login
!
end
```



```
GAD#show interfaces serial 0/0
Serial0/0 is up, line protocol is up
  Hardware is PowerQUICC Serial
  Description: Link - GAD to BHM, Carrier - BellSouth, Circuit ID -
10DHDG551170, Speed - 1.544Mbits/sec
  Internet address is 192.168.15.1/24
  MTU 1500 bytes, BW 128 Kbit, DLY 20000 usec,
     reliability 255/255, txload 1/255, rxload 1/255
  Encapsulation HDLC, loopback not set
  Keepalive set (10 sec)
  Last input 00:00:00, output 00:00:06, output hang never
  Last clearing of "show interface" counters 00:31:04
  Input queue: 0/75/0/0 (size/max/drops/flushes); Total output drops: 0
  Queueing strategy: weighted fair
  Output queue: 0/1000/64/0 (size/max total/threshold/drops)
     Conversations  0/2/32 (active/max active/max total)
     Reserved Conversations 0/0 (allocated/max allocated)
     Available Bandwidth 96 kilobits/sec
  5 minute input rate 0 bits/sec, 0 packets/sec
  5 minute output rate 0 bits/sec, 0 packets/sec
     102 packets input, 3414 bytes, 0 no buffer
     Received 102 broadcasts, 0 runts, 0 giants, 0 throttles
     0 input errors, 0 CRC, 0 frame, 0 overrun, 0 ignored, 0 abort
     42 packets output, 2068 bytes, 0 underruns
     0 output errors, 0 collisions, 3 interface resets
     0 output buffer failures, 0 output buffers swapped out
     0 carrier transitions
     DCD=up  DSR=up  DTR=up  RTS=up  CTS=up

GAD#
```

