

Chapter 6 Solutions

Review Questions

1. From which of the following prompts can you change the enable secret password?
a. router(config)#
b. router#
c. router>
d. router(config)>
2. If you type “show ?” at the router> prompt, what is the result of the command?
a. You will see a list of usable show commands at the user mode prompt.
b. You will see a list of connected users.
c. You will see the current mode displayed.
d. You will see the configuration register settings.
3. If you need to abort a command in the middle of execution, which key sequence will you press simultaneously?
a. Ctrl+Esc
b. Ctrl+X
c. Ctrl+Shift+6
d. Ctrl+Alt+Del
4. Which of the following commands will allow you to type a banner for your router?
a. router(config-if)# banner message \$
b. router(config)# banner motd @
c. router(config)# banner msg #
d. router# banner config !
e. router# banner motd #
5. By default, which of the router’s components stores configuration files set up by the administrator?
a. ROM
b. Flash
c. IOS
d. NVRAM
6. If you are in global configuration mode, which router prompt will you see?
a. global#
b. router(config)#
c. router(config-if)#
d. router#
e. router(config-gl)#
7. By default (during normal boot operations), where does the router look first for a working version of the Cisco IOS?
a. NVRAM
b. TFTP
c. Flash
d. ROM
8. What three commands can be used in privileged EXEC mode to alter the router configuration?
a. setup, erase, and copy
b. enable, setup, and tftp
c. setup, show version, and show buffers
d. erase, copy, and show run
9. ROM in a router is nothing like ROM in a PC. True or **False**?
10. Which of the following are routing protocols? (Choose all that apply.)

- a. **RIP**
 - b. **IGRP**
 - c. IP route
 - d. Cisco IOS
 - e. TCP
11. From which of the following prompts can you modify the terminal VTY password?
- a. **router(config-line)#**
 - b. router#
 - c. router>
 - d. router(config)>
12. What does VTY 1 stand for?
- a. The first virtual Y connector
 - b. **Virtual terminal one**
 - c. Virtual test connection yes on 1
 - d. v-modem terminal 1
13. How do network administrators access a VTY?
- a. ftp
 - b. smtp
 - c. **telnet**
 - d. http
14. If, after connecting to the router via HyperTerminal, you see only illegible characters in the terminal window, what should you try?
- a. **Adjust the baud rate.**
 - b. Change connectors.
 - c. Use a telnet session.
 - d. Turn on parity.
15. If you enter a VTY password during the automated setup routine, to which VTY will it apply? (Choose all that apply.)
- a. **VTY 0**
 - b. **VTY 1**
 - c. **VTY 2**
 - d. **VTY 3**
 - e. **VTY 4**
16. What are the two different levels of setup when using the system configuration dialog?
- a. Initial and basic
 - b. Enable and enable secret
 - c. **Basic and extended**
 - d. None of the above
17. How do you save your changes to the configuration file to NVRAM?
- a. copy start run
 - b. **copy run start**
 - c. copy start flash
 - d. copy run flash
18. From the router# prompt and the terminal, what must you type to enter global configuration mode?
- a. CON 0
 - b. term gf
 - c. **conf t**
 - d. global conf
19. If you are at the router(config-if)# prompt and you press the Ctrl+Z keys simultaneously, which prompt will you see next?

- a. router>
 - b. router#**
 - c. router(config)#
 - d. Press Return to continue
20. Which of the following commands will allow you to enter privileged EXEC mode from the router> prompt? (Choose all that apply.)
- a. en**
 - b. ena**
 - c. enable**
 - d. enab**
 - e. enabl**
21. What does the sh ru command show you?
- a. Remote users
 - b. Running configuration**
 - c. Startup configuration
 - d. Remote boot procedure
22. Which password can be used instead of the enable password?
- a. VTY 0
 - b. console
 - c. AUX
 - d. enable secret**
 - e. login
23. Which password is encrypted by default?
- a. login
 - b. MD5
 - c. enable
 - d. enable secret**
 - e. console
 - f. VTY 0
24. If no host name has been configured on a 1900 series switch, which of the following illustrates how the prompt will display in global configuration mode?
- a. router(config)#
 - b. switch(config)#
 - c. (config)#**
 - d. (switch)#
25. Which of the following best describes the operating system of the Cisco 1900 series switch?
- a. Set-based
 - b. IOS-based**
 - c. Switch-based
 - d. IP-based

Case Projects

Case Project 1

Typically the router comes packaged with a rollover cable and RJ-45 to DB-9 and RJ-45 to DB-25 connectors to allow you to configure the router through the COM port of a PC. Jennifer and Moe will have to plug the rollover cable into the console port of the router. Then, they will have to plug the other end of the rollover cable into the RJ-45 to DB-25 (or RJ-45 to DB-9) connector. Finally, they will plug the DB-25 (or DB-9) connector into the COM2 port on the back of the PC.

Case Project 2

Moe and Jennifer should start Windows on the PC. Then they should click Start, then Programs, then Accessories, then Communications, and then HyperTerminal. The New Connection Wizard might come up or they may need to click on File and then New Connection menus. They will type any name they want for the connection name. They should choose the COM2 port in the "Connect Using" box since that is what is available on the PC. Then they should click on the Configure button and set the Bits per Second to 9600, the Data Bits to 8, the Stop Bits to 1, the Parity to None, and the Flow Control to None. Click OK to accept.

Case Project 3

If Moe and Jennifer configure the router initially using the system configuration dialog, they will be prompted for the enable secret password, the enable password, and the vty passwords. The enable secret password is a case sensitive, encrypted password that allows entry into Privileged EXEC mode. The enable password also allows entry in Privileged EXEC mode but isn't encrypted and is superceded by the enable secret password, if there is one. The vty passwords allow entry to a router via telnet. There are five vty passwords but they can be configured at once using the "line vty 0 4" command. Moe and Jennifer may want to add additional passwords such as the console password, which allows entry to the router via the console port. There is also the AUX password, which will be requested when a user attempt to access the router via a modem.

Case Project 4

You can retrieve previously typed commands by using the up arrow key or the [ctrl][p] key combination on the keyboard. You can go in the opposite direction by using the down arrow key of the [ctrl][n] combination. You can look at the 10 previously typed commands by typing the "show history" command. You can expand the command history buffer by typing "terminal history size #" where # is a number up to 256. If you have typed part of a command, using the TAB key will type out the rest of the command for you. To move along the command line quickly, use [ctrl][a] to move to the beginning of the line and [ctrl][e] to move to the end. Use [ctrl][f] to move forward one character to the right (also the right arrow) and [ctrl][b] to move one character to the left (also left arrow). Use [esc][f] to move one word forward and [esc][b] to move one word back. Also, remember that you only need to type characters to the point at which those characters define a unique command at that prompt.

Case Project 5

The important router components are ROM, flash memory, NVRAM, RAM, and the interfaces on the router. ROM is the read-only memory chips in the router that holds the bootstrap program. ROM is very much like the ROM in a PC. Flash memory is erasable, programmable ROM. It isn't typically modified, but it can be. Flash memory contains the current IOS. There is no equivalent PC component. Flash is often erased so the IOS can be upgraded. NVRAM is non-volatile RAM. It is a special type of RAM that is not cleared when the router is rebooted. The startup-configuration file for the router is contained in NVRAM. This file is loaded into RAM and becomes the running-configuration when the router boots up. Any changes made to the router's configuration file are made in RAM. In order to make this the configuration file that boots, this file must be copied over the startup configuration file in NVRAM. RAM in a router is very much like RAM in a PC. If you turn off the router or PC, anything you did is lost unless you saved it. A port is any entry or exit on a PC. The ports on a router are called interfaces. Information traveling to and from the router goes through the router's interfaces. A PC also has ports used for the same purpose.