Chapter 2 Solutions

Review Questions

1. The Netstat command indicates that POP3 is in use on a remote server. Which port is the remote server most likely using?

b. port 110

2. At a Windows XP computer, what command can you enter to show all open ports being used?

a. Netstat

3. Which protocol uses UDP?

d. TFTP

4. Which protocol offers guaranteed delivery and is connection-oriented?

c. TCP

5. TCP communication could be likened to which of the following?

d. telephone conversation

6. Which of the following protocols is connectionless? (Choose all that apply.)

a. UDP

b. IP

7. Which command verifies the existence of a node on a network?

a. Ping

8. FTP offers more security than TFTP. True or False?

True

9. List the three components of the TCP/IP three-way handshake.

SYN, SYN-ACK, and ACK

10. What protocol is used for reporting or informational purposes?

c. ICMP

11. List the six flags of a TCP packet.

SYN, ACK, PSH, URG, RST, FIN

12. A UDP packet is usually smaller than a TCP packet. True or False?

True

13. What port, other than port 110, is used to retrieve e-mail?

b. port 143

14. What port does DNS use?

d. port 53

15. What command is used to log on to a remote server, computer, or router?

b. Telnet

16. Which of the following is not a valid octal number?

c. 3482

17. The initial sequence number (ISN) is set at what step of the TCP three-way handshake?

d. 1 and 2

18. A Ping command initially uses which ICMP type code?

b. type 8

19. "Destination Unreachable" is designated by which ICMP type code?

c. type 3

20. What is the hexadecimal equivalent of the binary number 1111 1111?

a. FF

Activities

Activity 2-4

1. Octal values are 4, 7, 5, 3, and 2.

2. You should have written the binary number 101, which converts to the octal number 5 (1 + 0 + 4).

3. You use 111 000 000 in binary and 700 in octal.

4. You use 111 110 100 in binary and 764 in octal.

5. Your calculation should be 777 - 020 = 757. Converting octal 757 gives you the directory permissions rwxr-xrwx.

6. You should have done the following to solve this problem:

Default permission: 666

umask 022

Result: 644

Permissions: rw-r--r--

Case Projects

Case Project 2-1: Determining the Services Running on a Network

Answers may vary. The memo should include the most obvious services that would be running on a corporate network such as K.J. Williams. At the very least, the network would be running e-mail (POP3, IMAP4, SMTP) and Web services.

Case Project 2-2: Investigating Possible E-mail Fraud

Answers may vary. The memo should include the syntax for connecting to an e-mail server and sending an e-mail message to another student, using a different From address.