Network+ Guide to Networks, 6th Edition, Lab Manual

Chapter 2 Solutions

# Lab 2.1 Review Questions

1. A host has been overwhelming your Web server. You look up the IP address on *www.arin.net* to determine its owner, but ARIN’s Web site tells you that LACNIC owns the IP address. What should you do?

a. Complain to the owner of the [*www.lacnic.net*](http://www.lacnic.net)Web site.

b. Look up LACNIC in the Regional Internet Registry.

c. Look up the owner of the IP address on the LACNIC Web site.

d. Look up the owner of the IP address on the APNIC Web site.

2. What might happen if no organization were responsible for IP addressing on the Internet? (Choose all that apply.)

a. Organizations might try to use the same ranges of IP addresses.

b. Addressing on the Internet would be physically impossible.

c. Nothing

d. The Internet would use another protocol besides IP.

3. You look up an IP address on *www.arin.net* and two organizations are listed. What does this mean?

a. The two organizations share the IP address assignment.

b. One organization sold the IP address to the second.

c. The RIR made a mistake.

d. One organization delegated the IP address to the second.

4. What is a Regional Internet Registry responsible for?

a. Maintaining Internet connectivity

b. Registering Internets

c. Assigning IP addresses

d. Signing up users with ISP accounts

5. Which of the following are situations when contacting the owner of an IP address would be useful? (Choose all that apply.)

a. A host outside your network has been attempting to log on to your servers without your permission.

b. A host inside your network has been attempting to log on to your servers without your permission.

c. A host outside your network has been attempting to send large amounts of unsolicited commercial e-mail, or spam.

d. A host outside your network has been accessing your Web site once an hour.

# Lab 2.2 Review Questions

1. Which of the following information is included in the results of the ping command? (Choose all that apply.)

a. The operating system used by the remote computer

b. The IP address or name of the remote computer

c. The number of packets that were lost

d. The time it took for the reply to be received

2. Which of the following commands can you use to print information about a computer’s Network layer configuration?

a. netstat

b. ipconfig

c. arp

d. ping

3. How can you verify that two hosts are connected and communicating properly?

a. From one host, run the ping command to the other host.

b. From a third host, run the ping command to both hosts.

c. Run the arp command on both hosts.

d. Run the ipconfig command on both hosts.

4. What type of protocol does the ping command use?

a. TCP/IP

b. UDP

c. ICMP

d. ARP

1. A Dynamic Host Control Protocol (DHCP) server can be used to assign IP addresses automatically. Why might this be useful to a network administrator?

The administrator doesn’t have to manually configure large numbers of IP addresses on workstations.

1. On many networks, DHCP is used to assign workstations their IP addresses. However, DHCP is rarely used to assign addresses for servers. Why?

a. DHCP is too expensive.

b. DHCP is not scalable enough.

c. Servers are frequently moved around, whereas workstations are not.

d. Workstations are frequently moved around, whereas servers are not.

# Lab 2.3 Review Questions

1. What do the first six characters of a MAC address indicate?

a. The device ID assigned by the vendor

b. The block ID assigned by IEEE

c. The logical address assigned by DHCP

d. The logical address assigned by DNS

2. Which of the following is a valid MAC address?

a. 01-ba-cd-dh-83-21

b. 01-ba-cd-de-83-21-42

c. 01-ba-cd-de-83-21-42-a0

d. 01-ba-cd-de-83-21

3. Which of the following commands can you use to find a Windows XP computer’s MAC address from a command prompt window on that computer?

a. ipconfig

b. ipconfig /all

c. arp -a

d. netstat

4. Which of the following commands can you use to find the MAC address of another computer on the same network?

a. ipconfig

b. ipconfig /all

c. arp -a

d. netstat

5. Under what circumstances is it possible for a computer to have more than one MAC address?

a. Never

b. If a computer has more than one NIC

c. If a computer has more than one NIC, but only if it is acting as a router

d. If a computer is a router

6. You have just replaced the NIC on a server, making no other changes. It can communicate with all the computers on its network but one. What is the most likely explanation for this?

a. The new NIC is not working properly.

b. Both computers have the same MAC address.

c. The remote computer has the old MAC address entry in its ARP cache.

d. The remote computer has a bad NIC.

7. Which of the following is a function of the Data Link layer?

a. Arranging data in proper sequence at the destination

b. Encrypting data prior to transmission

c. Dividing data into distinct frames

d. Issuing electrical signals onto a wire

8. What part of a data frame checks to make sure that the data arrived exactly as it was sent?

a. CRC

b. Start delimiter

c. Payload

d. Padding

# Lab 2.4 Review Questions

1. What protocol does Remote Desktop Connection use?

a. ICMP

b. TCP

c. UDP

d. IP

2. About which protocols does the netstat -s command print information? (Choose all that apply.)

a. ARP

b. ICMP

c. TCP

d. UDP

3. At what layer of the OSI model does TCP work?

a. Physical layer

b. Data Link layer

c. Network layer

d. Transport layer

4. At what layer of the OSI model does IP work?

a. Physical layer

b. Data Link layer

c. Network layer

d. Transport layer

5. A user is having difficulty connecting to a remote Web site. After the user attempts to connect, the netstat command tells you that the connection state is established. Where in the OSI model is the problem probably located?

a. The Data Link layer

b. The Network layer

c. The Transport layer

d. Somewhere above the Transport layer

6. Why doesn’t the netstat command display any information about ICMP connections?

a. ICMP does not function at the Transport layer.

b. ICMP is not a true protocol.

c. ICMP is a connectionless protocol.

d. ICMP is considered unimportant.

# Lab 2.5 Review Questions

1. At what layer in the OSI model were the source and destination addresses for the packet in Step 11 located?

The Data Link layer

2. In the frame you examined in Steps 9 through 14, which portions of the packet calculated a CRC checksum? What layers of the OSI model do they correspond to?

Ethernet (Data Link) and ICMP (Transport)

3. A user is unable to reach your company’s Web site. From the user’s workstation, you can ping the remote Web server. How might you use Network Monitor or another network protocol analyzer to troubleshoot the problem? (Choose all that apply.)

a. By checking to see if the workstation is sending packets to the Web server

b. By checking to see if the server is sending packets to the workstation

c. By checking the workstation’s IP configuration

d. By checking the workstation’s ARP configuration

4. Which protocols can be seen using Network Monitor? (Choose all that apply.)

a. ICMP

b. ARP

c. TCP

d. UDP

5. About which OSI layer does Network Monitor *not* provide information?

a. Physical layer

b. Data Link layer

c. Network layer

d. Transport layer