STUDENT ACTIVITY 3.6_KEY: COMPARING NETWORKS

MTA Course: 98-366 Networking Fundamentals
Topic: Understand TCP/IP
File name: NetFund_SA_3.6_Key

Lesson Objective

3.6: Understand TCP/IP. *This objective may include but is not limited to:* tools such as ping; tracert; pathping; Telnet; Ipconfig; netstat, reserved address ranges for local use (including local loopback IP); protocols

Resources, software, and additional files needed for this lesson

- None

Directions to the student

Select the best answer to following questions.

Content

1. Which element is vital for a computer in a TCP/IP network?
   - **a.** IP address
   - **b.** Default gateway
   - **c.** Subnet mask
   - **d.** DNS server

   Answer: A, IP address

2. Which IP address is reserved for software loopback?

a. 224.x.x.x

b. 127.x.x.x

c. 0.0.0.0

d. 255.255.255.255

Answer: B, 127.x.x.x

3. Packets in the IP layer are called _____.

a. segments

b. datagrams

c. frames

d. None of the above

Answer: B, datagrams

4. A TCP segment is encapsulated in _____.

a. an IP datagram

b. an Ethernet frame

c. a UDP user datagram

d. None of the above

Answer: A, an IP datagram

5. The timer prevents a long idle connection between two TCPs and is called ____.

a. retransmission

b. persistence

c. keep alive

d. None of the above

Answer: C, keep alive

Match the definitions to the correct term.

a. TCP/IP

b. Tracert

c. Telnet

d. Netstat

e. Addresses for local use

f. Local loopback IP

g. Ping

h. Pathping

i. Protocol

j. Ipconfig

1. e Range of 169.254.0.0 to 169.254.255.255

2. b Show the route taken by packets across an IP network

3. h Displays the degree of packet loss at any given router or link

4. d Displays current TCP/IP network connections and protocol values

5. c A protocol used on local area networks, a terminal emulation program for TCP/IP networks

6. a One of the core protocols of the Internet Protocol Suite that provides reliable, ordered delivery of a stream of bytes

7. f Used to test the TCP/IP protocol implementation on a host using a special range of addresses

8. j Displays all current TCP/IP network configuration values and refreshes DHCP and DNS settings

9. i A formal description of message formats and the rules for exchanging those messages