

STUDENT ACTIVITY 3.6: COMPARING NETWORKS

MTA Course: 98-366 Networking Fundamentals

Topic: Understand TCP/IP

File name: NetFund_SA_3.6

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
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

3. Packets in the IP layer are called _____.
 - a. segments
 - b. datagrams
 - c. frames
 - d. None of the above
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
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

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
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1. _____ Range of 169.254.0.0 to 169.254.255.255
 2. _____ Show the route taken by packets across an IP network

3. _____ Displays the degree of packet loss at any given router or link
4. _____ Displays current TCP/IP network connections and protocol values
5. _____ A protocol used on local area networks, a terminal emulation program for TCP/IP networks
6. _____ One of the core protocols of the Internet Protocol Suite that provides reliable, ordered delivery of a stream of bytes
7. _____ Used to test the TCP/IP protocol implementation on a host using a special range of addresses
8. _____ Displays all current TCP/IP network configuration values and refreshes DHCP and DNS settings
9. _____ A formal description of message formats and the rules for exchanging those messages