

STUDENT ACTIVITY 3.2_KEY: NETWORKING FUNDAMENTALS

MTA Course: 98-366 Networking Fundamentals

Topic: Understanding IPv4.

File name: NetFund_SA_3.2_Key

Lesson Objective

3.2: Understand IPv4. *This objective may include but is not limited to:* addressing; subnetting; NAT, static IP, gateway; APIPA; network classes, classful/classless IP addressing; reserved address ranges for local use (including local loopback ip).

Directions to the student: Select the best answer to complete the following.

Content

1. What contributes to the problems associated with IP V4?

- ☐ a. Most of Class C are too small to be useful and Class B addresses have already been assigned
- ☐ b. Even though there is a field for TOS in the IPV4 header, routers do not pay attention to it.
- ☐ c. IP packets can be easily snooped from the network.
- ☐ d. No standard for authentication of the user to a server or encryption of data in packets
- ☐ e. Maximum packet size is $2^{16}-1$ (65,535); packets may be too small considering newer, faster networks.
- ☐ f. All of the above.

Answer: F, All of the above

2. IPv4 uses what size addresses

a. 16 bit

→b. 32 bit

→c. 48 bit

→d. 64 bit

Answer: B, 32 bit

3. IPv4 addresses are usually written in

a. dot-decimal notation

→b. with no notation

→c. five octets of the address

→d. base format

Answer: A, dot-decimal notation

4. Supernetting allows

a. route aggregation

→b. five octets of the address

→c. 48 bit

→d. base format

Answer: A, route aggregation

5. The number of local networks IANA reserved IP address space for private internets

a. 8 blocks

→b. 6 blocks

→c. 7 blocks

→d. 3 blocks

Answer: D, 3 blocks

6. Virtual private networks are needed to communicate between

a. two private networks

~~b.~~ military networks

~~c.~~ education networks

~~d.~~ two public networks

Answer: D, two public networks

7. A broadcast address is an address that allows

a. information to be hidden

~~b.~~ information to be sent to all machines on a given subnet

~~c.~~ information kept on servers only

Answer: B, information to be sent to all machines on a given subnet