STUDENT ACTIVITY 3.3_A: NETWORKING FUNDAMENTALS

MTA Course: 98-366 Networking Fundamentals
Topic: Understand IPv6. Addressing, dual IP stack, and gateway
File name: NetFund_SA_3.3_A

Lesson Objective

3.3_A: Understand IPv6. Addressing, dual IP stack, and gateway.

3.3_A: Understand IPv6. *This objective may include but is not limited to:* subnetting; Ipconfig; why use IPv6; addressing; ipv4toipv6 tunneling protocols to ensure backwards compatibility; dual IP stack; subnetmask; gateway; ports; packets; reserved address ranges for local use (including local loopback IP).

Directions to the student

Select the best answer to each of the following questions.

Content:

1. What is the current IP standard?
   - **a.** IPv4
   - **b.** IPv5
   - **c.** IPv6
2. What is the main reason for IPv6 being developed?
   - **a.** Not enough MAC numbers in earlier versions
   - **b.** To make more addressing available for new or additional use
   - **c.** Newer hardware required the change
3. How many bits does the new addressing provide?
   - **a.** 16 bit
   - **b.** 24 bit
   - **c.** 32 bit
   - **d.** 40 bit
   - **e.** 128 bit

4. What benefits does IPv6 provide?
   a. IPv6 solves the International Address Allocation problem.
   b. IPv6 restores end-to-end communication—makes NATs no longer necessary.
   c. IPv6 solves the address depletion problem.
   d. All of the above
5. What are the different classifications of IPv6 addresses?
   a. Unicast, videocast, and anycast
   b. Audiocasat, multicast, and anycast
   c. Unicast, multicast, and simulcast
   d. Unicast, multicast, and anycast
6. What is unicast?
   a. Communication between a single host and a single receiver
   b. Communication between a single host and multiple receivers
   c. Communication between a single sender and a list of addresses
   d. Both a and c
7. What is multicast?
   a. Communication between a single host and a single receiver
   b. Communication between a single host and multiple receivers
   c. Communication between a single sender and a list of addresses
   d. Both b and c
8. What is anycast?
   a. Communication between a single host and a single receiver
   b. Communication between a single host and multiple receivers
   c. Communication between a single sender and a list of addresses
   d. Both b and c