

**STUDENT ACTIVITY 2.1\_A: UNDERSTANDING SWITCHES**

MTA Course: 98-366 Networking Hardware

Topic: Understand switches

File name: NetFund\_SA\_2.1\_A

**Lesson Objective**

**2.1\_A:** Understand switches. *This objective may include but is not limited to:* transmission speed; number and type of ports; number of uplinks; speed of uplinks; managed or unmanaged switches; VLAN capabilities

**Resources, software, and additional files needed for this lesson**

- None

**Directions to the student**

Select the correct answer to the questions below.

Content:

1. A network switch is
  - a. A computer networking device that connects network segments.
  - b. An electronic device that receives a signal and retransmits it onto the other side of an obstruction or at a higher level or power.
  - c. A networking device that connects only a whole campus to a corporation
2. An Ethernet is
  - a. A physical network segment where data packets are linked.
  - b. A family of frame-based computer networking technologies for local area networks.
  - c. A network in which the nodes are linked exclusively by wireless networks.

3. An unmanaged switch is also called “dumb” because
  - a. The system administrator can take control of the network and allow ports to talk to other ports or none at all.
  - b. It uses full bandwidth to each port.
  - c. It allows all traffic to go all through the network and the administrator has no control.
4. An uplink port
  - a. Does not crossover the transmit and receive pins.
  - b. Cannot be configured to act as trunk ports by connecting the access switch with the distribution switch.
  - c. Can be connected to another uplink port with a straight-thru cable and to a regular port with a crossover cable to connect a PC.
5. A managed switch
  - a. Has its own IP address.
  - b. Does not have telnet.
  - c. Does not have a web-based interface.
6. When a hub receives a packet of data at one of its ports from a PC on the network,
  - a. It transmits the packet to all of its ports and collision occurs on all of the other PCs on the network.
  - b. It transmits the packet to all of its ports and, thus, to all of the other PCs on the network.
  - c. It must notify all other PCs on the network.
7. A crossover cable
  - a. Has different ends.
  - b. Has identical ends.
8. A layer
  - a. Is defined when services are received from the layer above it and provided to the layer below it.
  - b. Is a way of subdividing a system into smaller parts.
  - c. Uses an “instance” to provide service to all associated layers.

**9. Virtual LANS (VLANs)**

- a.** Break up different ports on a switch into different switches.
- b.** Make a pretend local area network.
- c.** Is not an accepted kind of network in the business world.

**10. A bridge switch**

- a.** Is media access control (MAC).
- b.** Is a LAN device that connects at the data link layer 2 of the OSI reference model.
- c.** Only works with a frame interface.