

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

MTA Course: 98-366 Networking Hardware

Topic: Understand switches

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

**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.

**Answer: A,** A computer networking device that connect network segments.

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.

**Answer: B,** A family of frame-based computer networking technologies for local area 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.

**Answer: C,** It allows all traffic to go all through 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.

**Answer: A,** Does not crossover the transmit and receive pins.

5. A managed switch
- a. Has its own IP address.
  - b. Does not have telnet.
  - c. Does not have a web-based interface.

**Answer: A**

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.

**Answer: B,** It transmits the packet to all of its ports and, thus, to all of the other PCs on the network.

7. A crossover cable
- a. has different ends.
  - b. has identical ends.

**Answer: A,** has different ends

**8. A layer is**

- a.** Defined when services are received from the layer above it and provided to the layer below it.
- b.** A way of subdividing a communications system into smaller parts.
- c.** Uses an “instance” to provide service to all associated layers.

**Answer: A,** Defined when services are received from the layer above it and provided to the layer below it.

**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.

**Answer: A,** Break up different ports on a switch into different switches.

**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.

**Answer: B,** Is a LAN device that connects the data link layer 2 of the OSI reference model.