Chapter 1 — Introduction to Switched Networks

1.0.1.2 Class Activity – Sent or Received

Objectives

Describe convergence of data, voice, and video in the context of switched networks.

Scenario

Individually, or in groups (per the instructor's decision), discuss various ways hosts send and receive data, voice, and streaming video.

- Develop a matrix (table) listing network data types that can be sent and received. Provide five examples.

Your matrix table might look something like this:

Sent	Received
Client requests a web page from a web server.	Web server send web page to requesting client.

Save your work in either hard- or soft-copy format. Be prepared to discuss your matrix and statements in a class discussion.

Resources

Internet connectivity

Reflection

1. If you are receiving data, how do you think a switch assists in that process?

   _____

2. If you are sending network data, how do you think a switch assists in that process?

   _____

1.3.1.1 Class Activity – It's Network Access Time

Objectives

Describe features available for switches to support requirements of a small- to medium-sized business network.

Scenario

Use Packet Tracer for this activity. Work with a classmate to create two network designs to accommodate the following scenarios:

Scenario 1 – Classroom Design (LAN)

- 15 student end devices represented by 1 or 2 PCs.

- 1 instructor end device; a server is preferred.

- Device capability to stream video presentations over LAN connection. Internet connectivity is not required in this design.

Scenario 2 – Administrative Design (WAN)

- All requirements as listed in Scenario 1.

- Add access to and from a remote administrative server for video presentations and pushed updates for network application software.

Both the LAN and WAN designs should fit on to one Packet Tracer file screen. All intermediary devices should be labeled with the switch model (or name) and the router model (or name).

Save your work and be ready to justify your device decisions and layout to your instructor and the class.

Reflection

1. What are some problems that may be encountered if you receive streaming video from your instructor's server through a low-end switch?

   _____

2. How would the traffic flow be determined: multicast or broadcast – in transmission?

   _____

3. What would influence your decision on the type of switch to use for voice, streaming video and regular data these types of transmissions?

    _____

4. As you learned in the first course of the Academy, video and voice use a special TCP/IP model, transport layer protocol. What protocol is used in this layer and why is it important to voice and video streaming?

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