**Net 1060 Introduction to Networks Lab: # 1.5.5**

**Name: Andrew Koenig**

**Follow the instructions down below for the lab itself. For this lab, all answers need to be in blue font. For the questions right below, answer in complete sentences. Ensure you paste the screen shot of your score page at the bottom of the document. Even if this does not let you see your grade, still take a screen shot of the score page showing congratulations “your name” you have completed the exercise is pasted at the bottom of this document. You will then need to upload both this word document and your packet tracer file to the assignments link within Netacad. Let the instructor know if you have any questions.**

***Lab Analysis Report***

1. Using complete sentences summarize work you completed during the lab.

This lab was mostly identifying hardware and different networks.

2. Using complete sentences describe what you learned from the lab. Hint; look at the lab objectives listed at the top of the lab section.

I identified different types of devices, and different types of networks. I also learned the different uses for those devices.

***Problems Encountered***

1. Using complete sentences describe any problem(s) experienced during lab.

No problems

2. Using complete sentences describe how you solved your problem(s).

No problems

3. Using complete sentences explain if you needed any assistance with the lab; then list what you learned from that assistance. None needed

Packet Tracer - Network Representation

# Objectives

The network model in this activity incorporates many of the technologies that you will master in your CCNA studies. It represents a simplified version of how a small to medium-sized business network might look. Feel free to explore the network on your own. When you are ready, proceed through the following steps and answer the questions.

**Note**: It is not important that you understand everything you see and do in this activity. Feel free to explore the network on your own. If you wish to proceed more systematically, follow the steps below. Answer the questions to the best of your ability.

# Instructions

## Identify common components of a network as represented in Packet Tracer.

The icon toolbar at the bottom left hand corner has various categories of networking components. You should see categories that correspond to intermediary devices, end devices, and media. The **Connections** category (with the lightning bolt icon) represents the networking media supported by Packet Tracer. There is also an **End Devices** category and two categories specific to Packet Tracer: **Custom Made Devices** and **Multiuser Connection**.

### Questions:

List the intermediary device categories. Routers, switches, hubs, wireless, WAN emulation, security

Type your answers here.

Without entering into the internet cloud or intranet cloud, how many icons in the topology represent endpoint devices (only one connection leading to them)? 15 Icons

Type your answers here.

Without counting the two clouds, how many icons in the topology represent intermediary devices (multiple connections leading to them)? 13 Icons

Type your answers here.

How many end devices are **not** desktop computers? 8 Devices

Type your answers here.

How many different types of media connections are used in this network topology? 4 Types

Type your answers here.

## Explain the purpose of the devices.

### Questions:

* + 1. In Packet Tracer, only the Server-PT device can act as a server. Desktop or Laptop PCs cannot act as a server. Based on your studies so far, explain the client-server model. The server is the hardware that stores information for the clients to request.

Type your answers here.

* + 1. List at least two functions of intermediary devices. These devices provide connection between networks, they also ensure data flows securely.

Type your answers here.

* + 1. List at least two criteria for choosing a network media type. How far you need to send a signal, and what type of environment you need to send it through.

Type your answers here.

## Compare and contrast LANs and WANs.

### Questions:

* + 1. Explain the difference between a LAN and a WAN. Give examples of each. A LAN is a Local area network, this would be the routers and servers connected throughout a building. A WAN is a wide area network, these are what connect LAN’s together, this is would be your ISP connecting you to other LAN’s that contain the information you try to access.
    2. In the Packet Tracer network, how many WANs do you see? 2 WANs

Type your answers here.

* + 1. How many LANs do you see? 3 LANs

Type your answers here.

* + 1. The internet in this Packet Tracer network is overly simplified and does not represent the structure and form of the real internet. Briefly describe the internet. The internet is the connections between all the different services and servers around the world. Internet literally means “connected networks”.
    2. What are some of the common ways a home user connects to the internet? A home user would probably use a wireless wifi connection or an ethernet cable to connect to a router, which connects to a modem, and is then connected however your ISP connects to your LAN, for me I have Starlink Internet so I have a satellite dish that communicates with their satellites.
    3. What are some common methods that businesses use to connect to the internet in your area? Larger businesses usually need to pass more information at any given time, so they will use fiber optic cables.

Type your answers here.

# Challenge Question

Now that you have had an opportunity to explore the network represented in this Packet Tracer activity, you may have picked up a few skills that you would like to try out. Or maybe you would like the opportunity to explore this network in more detail. Realizing that most of what you see and experience in Packet Tracer is currently beyond your skill level, here are some challenges you might want to attempt. Do not worry if you cannot do them all. You will be a Packet Tracer master user and network designer soon enough.

* Add an end device to the topology and connect it to one of the LANs with a media connection. What else does this device need to send data to other end users? Can you provide the information? Is there a way to verify that you correctly connected the device?
* The device would still need login information to connect to the network.
* Add a new intermediary device to one of the networks and connect it to one of the LANs or WANs with a media connection. What else does this device need to serve as an intermediary to other devices in the network? It still needs configured

