IFT 259 Introduction to Internet Networking

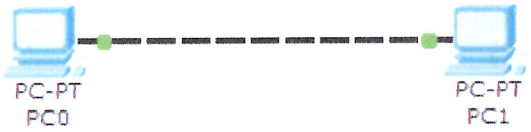
Lab 7
Peer-to-Peer, Hub & Switch based LANs

After you complete each step, put a '√' or 'x' in the completed box

Build a Peer-to-Peer Network

Objectives: create a simple peer-to-peer network. Identify the proper cable to connect the two PCs. Configure workstation IP address information. Test connectivity using the Ping command.

1. Setup the following topology



What type of cable did you use for the connection and why?

Copper Cross over because both pc are in the same category

2. Configure the PCs with the following IP address information
3.

Computer	IP Address	Subnet Mask	Default Gateway
PC0	192.168.1.1	255.255.255.0	Not required
PC1	192.168.1.2	255.255.255.0	Not required

4. All machines on the same LAN should share the same network portion

5. You do not need the default gateway IP address as these computers are directly connected. You only need the default gateway on LANs that are connected to a router

6. Confirm your TCP/IP network settings via ipconfig command

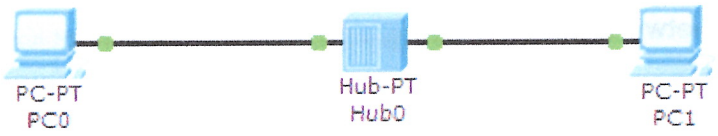
7. Verify that the PCs can communicate via the ping command

Completed ☒

Build a Hub Based Network

Objectives: create a simple network with 2 PCs using a hub. Identify the proper cable to connect the two PCs to the hub. Configure workstation IP address information. Test connectivity using the Ping command.

1. Setup the following topology



What type of cable did you use for the connections and why?

Copper straight through because it connects the PC's to the hubs

2. Configure the PCs with the following IP address information
3.

Computer	IP Address	Subnet Mask	Default Gateway
PC0	192.168.1.1	255.255.255.0	Not required
PC1	192.168.1.2	255.255.255.0	Not required

4. Confirm your TCP/IP network settings via ipconfig command

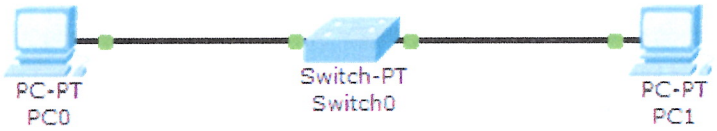
5. Verify that the PCs can communicate via the ping command

Completed ☒

Build a Switch Based Network

Objectives: create a simple network with 2 PCs using a switch. Identify the proper cable to connect the two PCs to the Switch. Configure workstation IP address information. Test connectivity using the Ping command.

1. Setup the following topology



What type of cable did you use for the connections and why?

copper straight through because it is connected to a switch

2. Configure the PCs with the following IP address information
3.

Computer	IP Address	Subnet Mask	Default Gateway
PC0	192.168.1.1	255.255.255.0	Not required
PC1	192.168.1.2	255.255.255.0	Not required

4. Confirm your TCP/IP network settings via ipconfig command

5. Verify that the PCs can communicate via the ping command

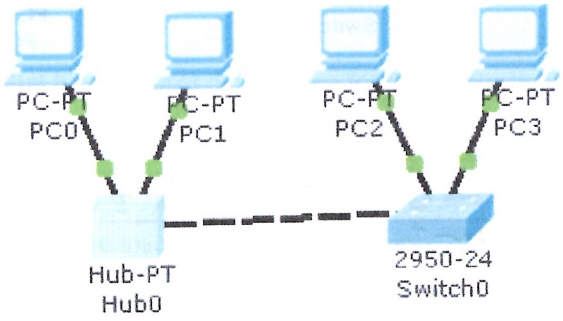
Completed ☒

Final Scenario

1. Setup the following star topology network.

   - PC0: 192.168.0.1 255.255.255.0
   - PC1: 192.168.0.2 255.255.255.0
   - PC2: 192.168.0.3 255.255.255.0
   - PC3: 192.168.0.4 255.255.255.0

2. Run simulation to show how the packet travels from PC0 to PC3.



Completed ☒