



Name: Muhammad Fahad

Sap ID: 37125

Section: BSCS-5A

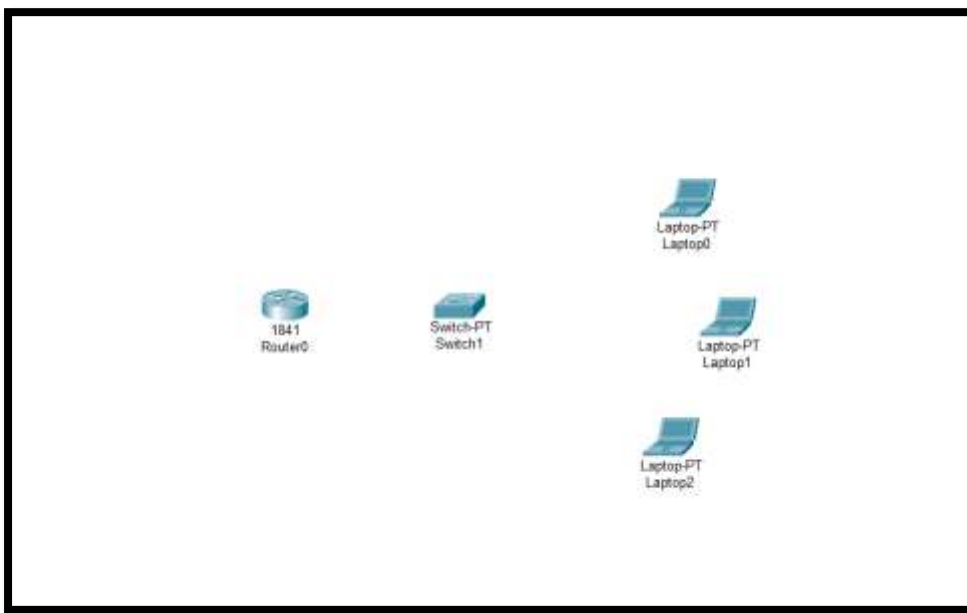
Course: Computer Networking

Lab task#2

Github Link: <https://github.com/fahadmoon/5th-Semester/tree/computernetworking/Lab%20Task/Lab%202>

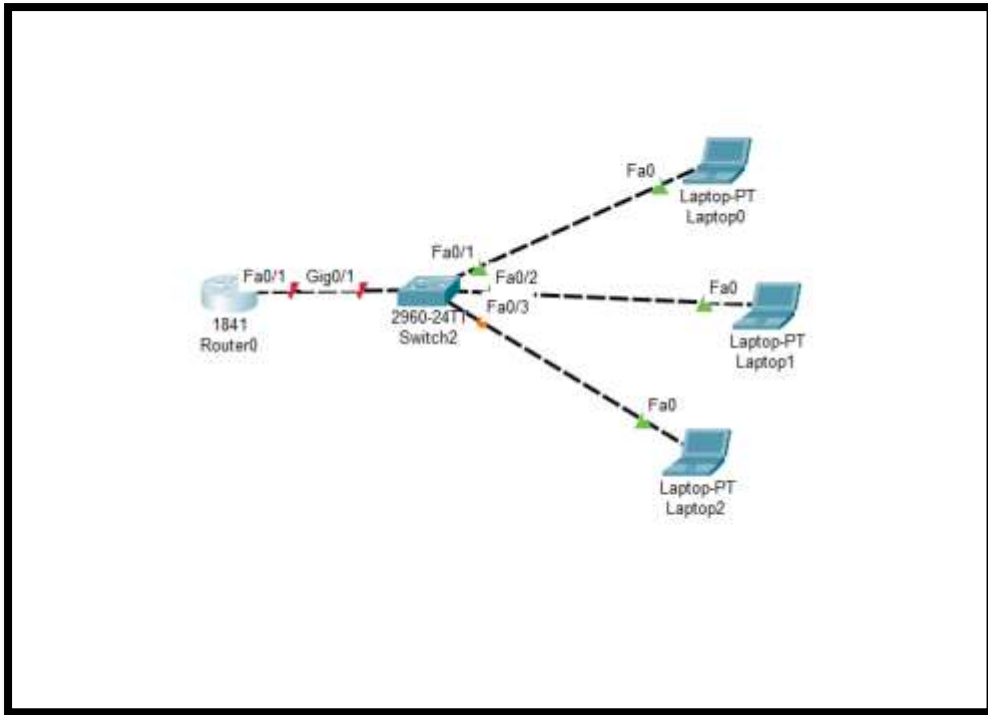
Task-1

Drag & Drop All the END devices & Intermediary devices.



Task-2

Connect these Devices with Copper Cross over cable.



Task-3

Write down the cable name which is use to connect same devices and which port you use to connect devices.

Cable Name for Connecting Similar Devices: Straight-Through Ethernet Cable or Patch Cable.

Port to Use for the Connection: When connecting similar devices with a straight-through Ethernet cable, you should use the standard Ethernet (RJ-45) port on the devices. These ports are commonly located on the back or sides of the devices and have an RJ-45 connector interface. Plug one end of the cable into the Ethernet port of the first device and the other end into the Ethernet port of the second device.

Task-4

Suppose you have two devices and they are connected with each other. How do you check the connectivity between them. Explain with working.

Solution:

1. **Open a Command Prompt or Terminal:**

On one of the devices (let's call it Device A), open a command prompt (for Windows) or terminal (for Unix-like systems).

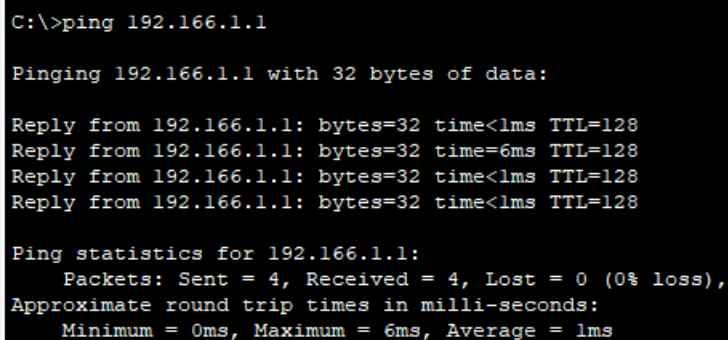
2. Identify the Target Device:

You need to know the IP address or hostname of the other device (Device B) to which you want to check connectivity. You can obtain this information from Device B or from your network configuration.

3. Use the Ping Command:

In the command prompt or terminal, type the following command and replace "target-IP" with the IP address or hostname of Device B:

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C:\>ping 192.166.1.1

Pinging 192.166.1.1 with 32 bytes of data:

Reply from 192.166.1.1: bytes=32 time<1ms TTL=128
Reply from 192.166.1.1: bytes=32 time=6ms TTL=128
Reply from 192.166.1.1: bytes=32 time<1ms TTL=128
Reply from 192.166.1.1: bytes=32 time<1ms TTL=128

Ping statistics for 192.166.1.1:
    Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),
    Approximate round trip times in milli-seconds:
        Minimum = 0ms, Maximum = 6ms, Average = 1ms
```

...

4. Press Enter:

Press the Enter key. Device A will start sending ICMP echo requests to Device B.

5. Observe the Results:

If there is connectivity between Device A and Device B, you will receive responses. Each response will include the following information:

- Round-trip time: The time it took for the packet to travel from Device A to Device B and back.
- TTL (Time to Live): The number of hops the packet can take before it times out.

- If Device B responds to the ICMP echo requests, it will acknowledge the receipt of each packet.

If there's a problem with connectivity, you may see "Request Timed Out" messages. This can happen for various reasons, including network configuration issues or firewall settings.

Task-5

After establishing the connectivity between all the devices check that all devices must be Showing GREEN signal.

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