COMPUTER NETWORK LABORATORY

LAB 2:

Date: 16/06/2022

1. Create a topology and simulate sending a simple PDU from source to destination using simple hub and switch as connecting domains.

Step 1: Drag and drop 6 PCs, 1 Hub and 1 Switch to workspace

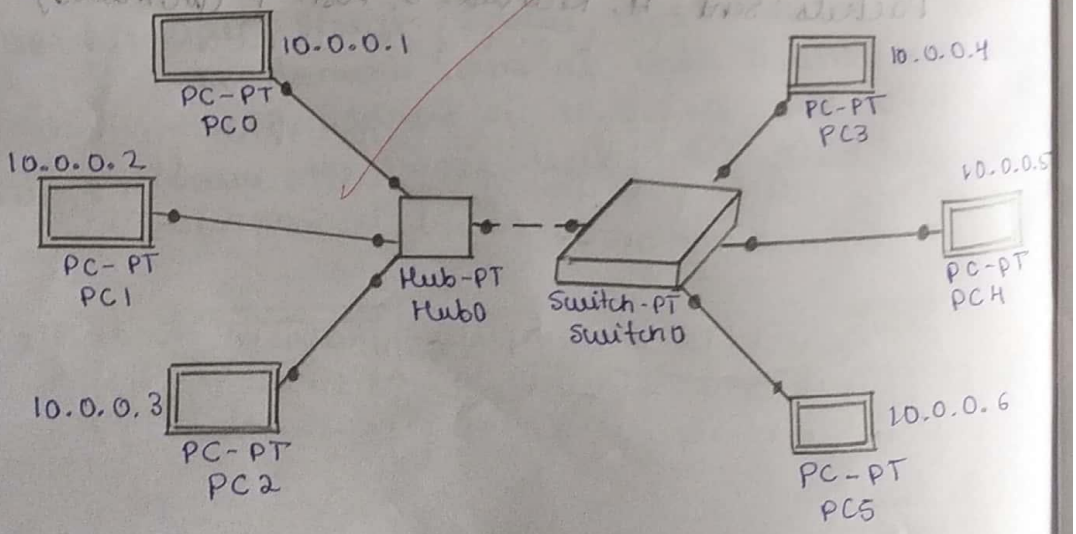
Step 2: Set the IP address to all 6 PCs

Step 3: Take a packet, then select the source and destination PCs, In simulation mode, select Auto Capture/Play. If connection is proper, it will be successful.

Step 4: Take a packet, then select the source and distination PCs in the network connected by only Hub. In simulation mode, select play. If connection is proper, event will be successful. In real mode, Ping with IP address of other.

Step 5: Off the switch, then repeat step 4. Since switch is off, the event will be failed.

Step 6: Do the above operations in real mode.



5. Command prompt:

When switch is off,

ping 10.0.0.1 (in 10.0.0.4)

Pinging 10.0.0.1 with 32 bytes of data:

Request timed out
Request timed out
Request timed out
Request timed out

Ping statistics for 10.0.0.1:

Packets: Sent = 4, Received = 0, Lost = 4 (100% loss),

Packet transfer via Hub & Switch:

ping 10.0.0.5 (in 10.0.0.3)

Pinging 10.0.0.5 with 32 bytes of data:

Reply from 10.0.0.5: bytes=32 time=0ms TTL=128
Reply from 10.0.0.5: bytes=32 time=0ms TTL=128
Reply from 10.0.0.5: bytes=32 time=0ms TTL=128
Reply from 10.0.0.5: bytes=32 time=0ms TTL=128

Ping statistics for 10.0.0.5:

Packets: Sent = 4, Received = 4, Lost = 0 (0% Loss)

Approximate round trip times in milli-seconds:

Minimum = 0ms, Maximum = 0ms, Average = 0ms,

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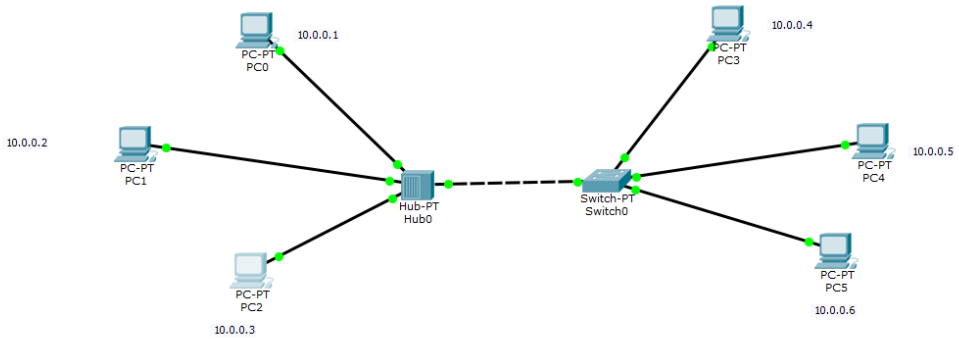
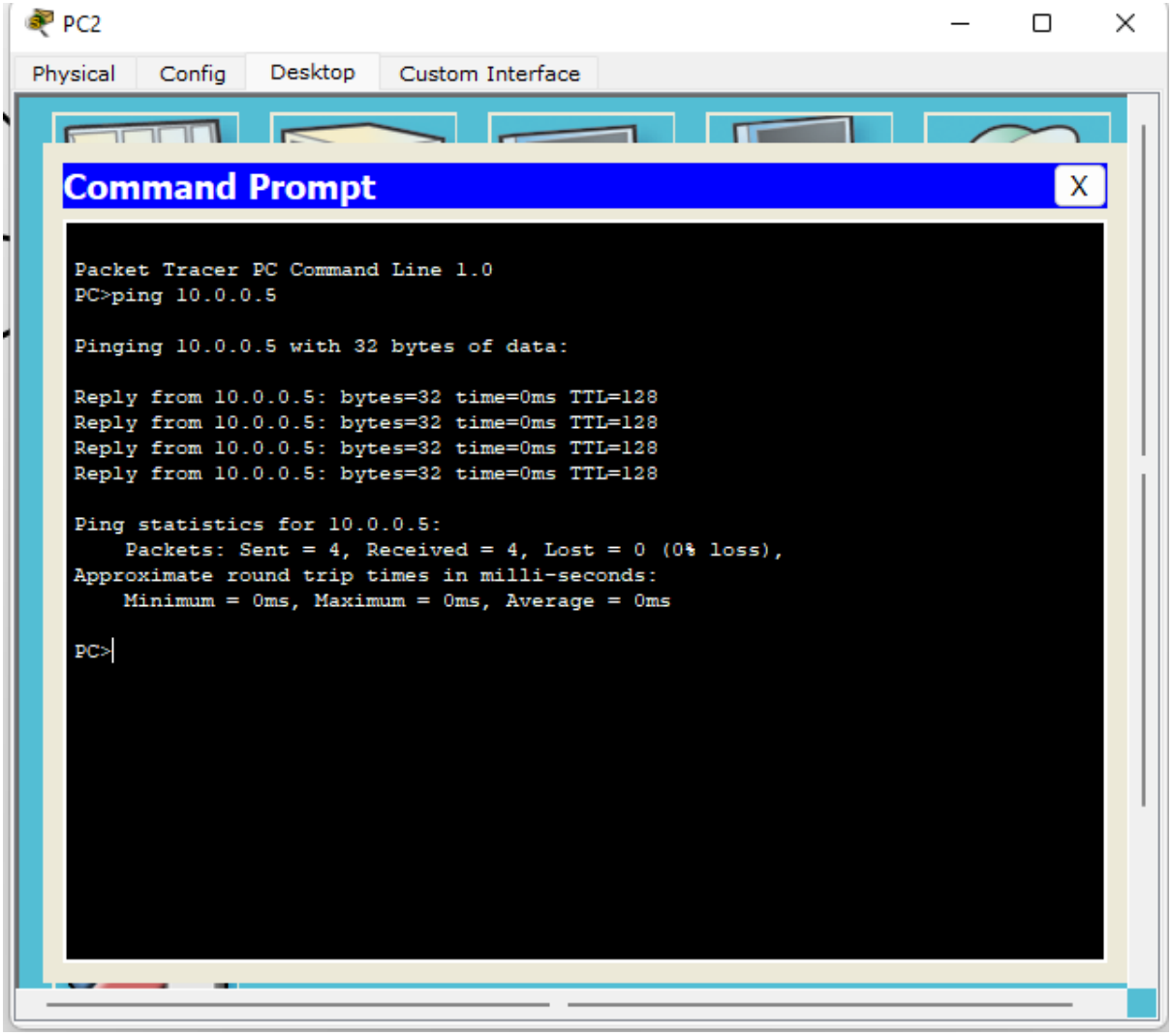
TOPOLOGY:

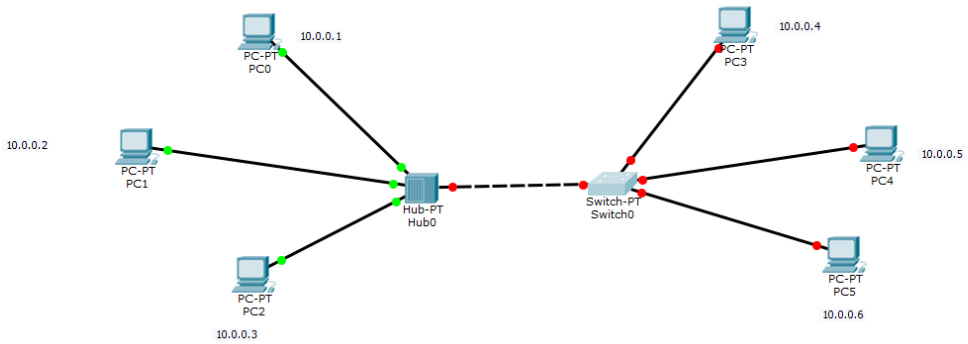
SCENARIO 1: Switch is on



COMMAND PROMPT OUTPUT:



SCENARIO 2: Switch is off



COMMAND PROMPT OUTPUT: