

# LAB PROGRAM 1

Q) Create a topology and simulate sending a simple PDU from source to destination using hub and switch as connecting devices and demonstrate ping message.

## 1) Hub

### Procedure :

COMPASS  
Date: 15/06/23

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⇒ Q Create a topology and simulate sending a simple PDU from source to destination using hub and switch as connecting devices and demonstrate ping message.

Setup HUB  
Aim: To create a topology and simulate sending a simple PDU from source to destination using HUB, as switch, (combination of both) connecting device.

① Topology: (HUB)

```
graph TD; Hub[Hub] --- PC0[PC 0  
10.0.0.1]; Hub --- PC1[PC 1  
10.0.0.2]; Hub --- PC2[PC 2  
10.0.0.3];
```

Procedure:

Step 1: Create a network by selecting 3 generic PC's as your end device. Set the IP Address's of these device. [Config → FastEthernet → IP Address] [10.0.0.1, 10.0.0.2, 10.0.0.3]

Step 2: Add Hub as the connecting device and connect the end devices to the hub by using a Copper-Straight Through wire.

Step 3: Add a Simple PDU from one PC to Another and Switch to Simulation mode. click the Auto/Capture play button to start simulation.

Step 4: The data packet is broadcasted to all the devices in the network and only the destination device Accept the data packet and sends acknowledgment.



```
PC0
Physical Config Desktop Custom Interface
Command Prompt
Packet Tracer PC Command Line 1.0
PC>ping 10.0.0.3

Pinging 10.0.0.3 with 32 bytes of data:

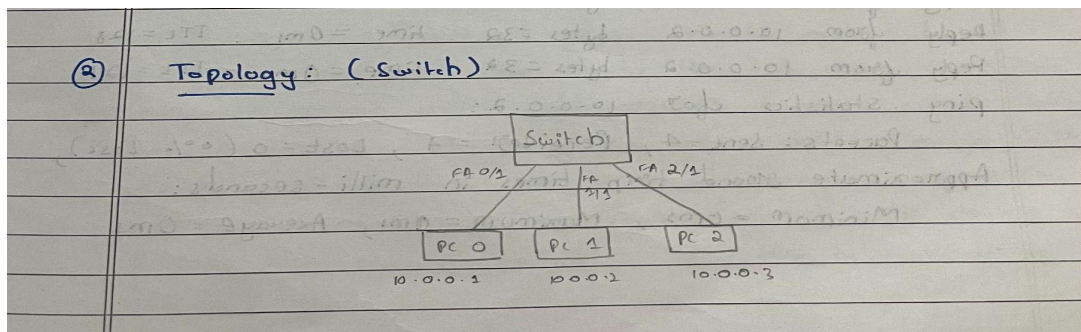
Reply from 10.0.0.3: bytes=32 time=0ms TTL=128
Reply from 10.0.0.3: bytes=32 time=1ms TTL=128
Reply from 10.0.0.3: bytes=32 time=0ms TTL=128
Reply from 10.0.0.3: bytes=32 time=0ms TTL=128

Ping statistics for 10.0.0.3:
    Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),
    Approximate round trip times in milli-seconds:
        Minimum = 0ms, Maximum = 1ms, Average = 0ms

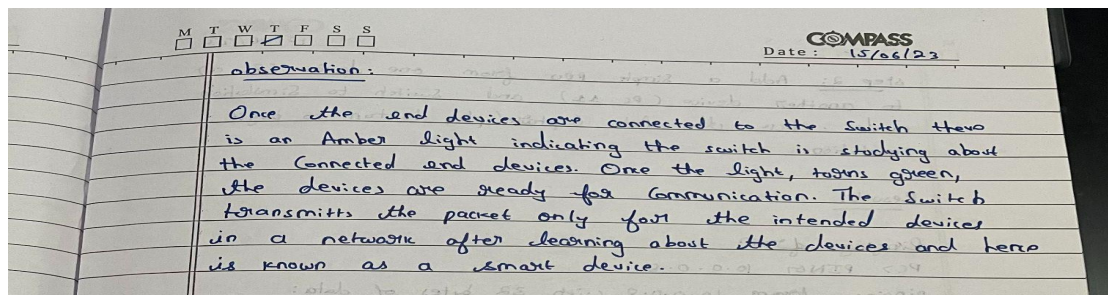
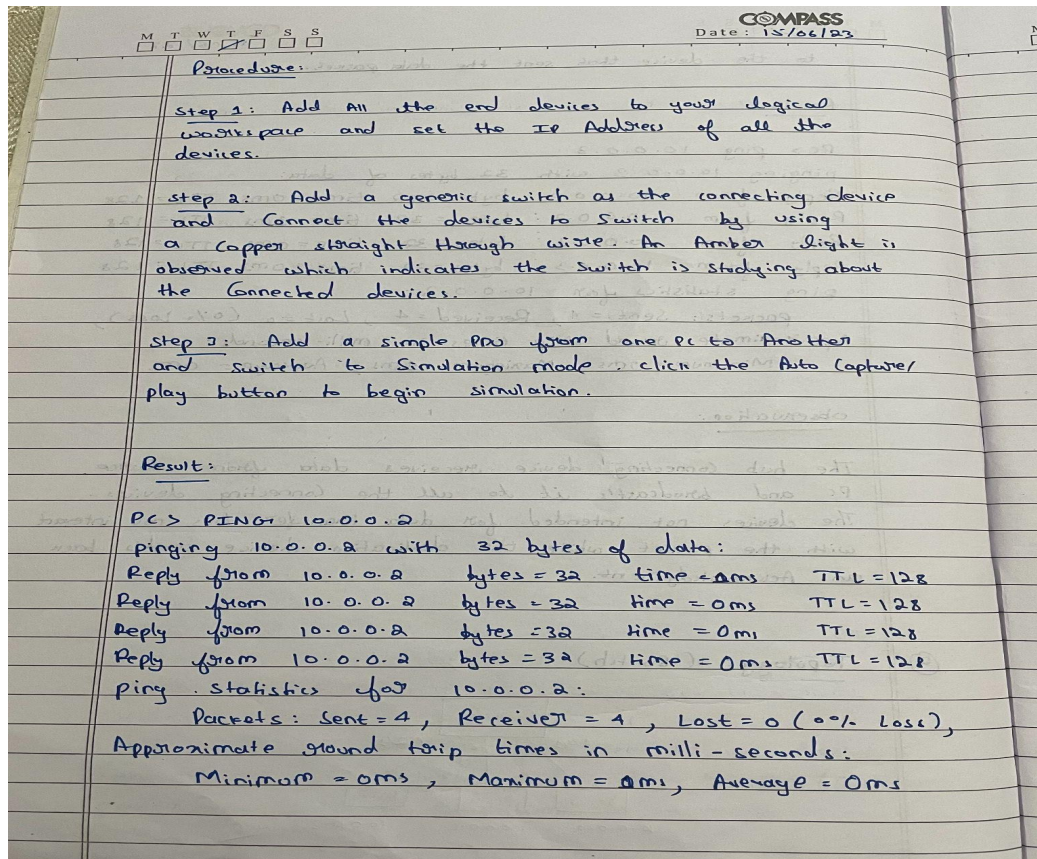
PC>
```

## 2) Switch

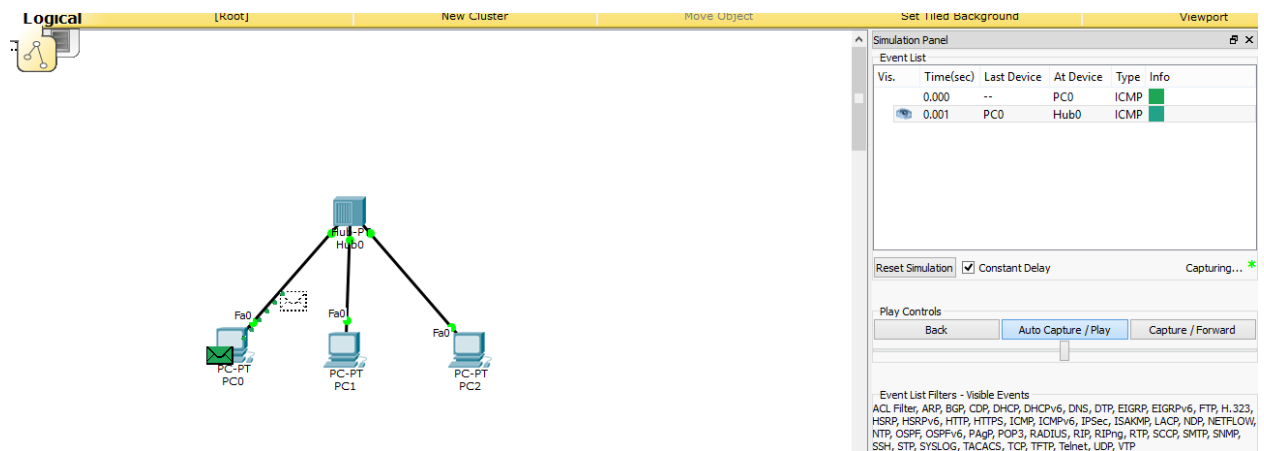
Procedure :







**Topology :**



## Ping Results :

PC5

Physical Config Desktop Custom Interface

**Command Prompt**

```

Packet Tracer PC Command Line 1.0
PC>ping 10.0.0.2

Pinging 10.0.0.2 with 32 bytes of data:

Reply from 10.0.0.2: bytes=32 time=1ms TTL=128
Reply from 10.0.0.2: bytes=32 time=0ms TTL=128
Reply from 10.0.0.2: bytes=32 time=0ms TTL=128
Reply from 10.0.0.2: bytes=32 time=0ms TTL=128

Ping statistics for 10.0.0.2:
    Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),
    Approximate round trip times in milli-seconds:
        Minimum = 0ms, Maximum = 1ms, Average = 0ms

PC>

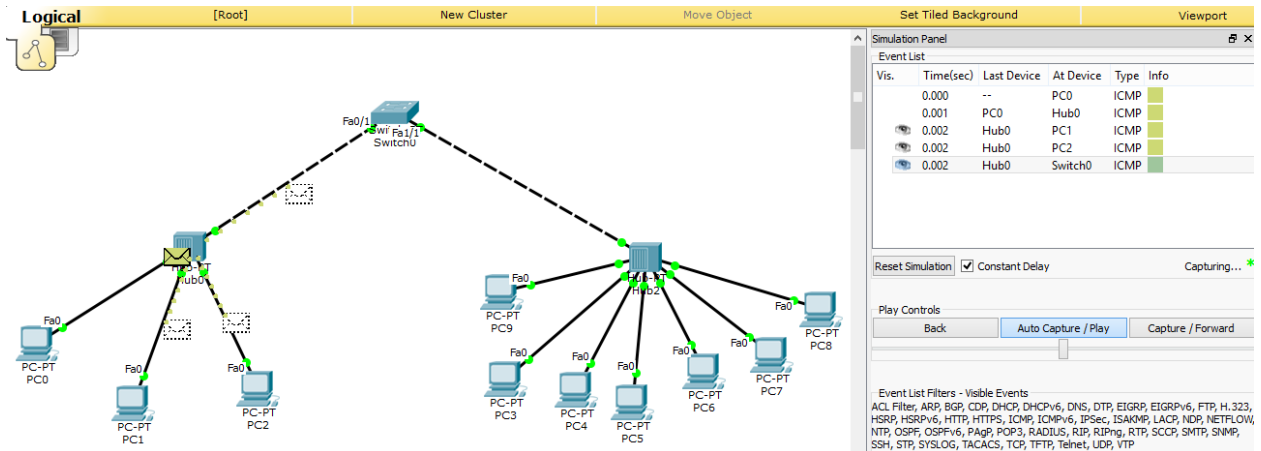
```

### 3) Hybrid( Hub and Switch ) Procedure :





## Topology :



## Ping Result :

```
PC>ping 10.0.0.8

Pinging 10.0.0.8 with 32 bytes of data:

Reply from 10.0.0.8: bytes=32 time=0ms TTL=128
Reply from 10.0.0.8: bytes=32 time=0ms TTL=128
Reply from 10.0.0.8: bytes=32 time=0ms TTL=128
Reply from 10.0.0.8: bytes=32 time=0ms TTL=128

Ping statistics for 10.0.0.8:
    Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),
    Approximate round trip times in milli-seconds:
        Minimum = 0ms, Maximum = 0ms, Average = 0ms

PC>
```