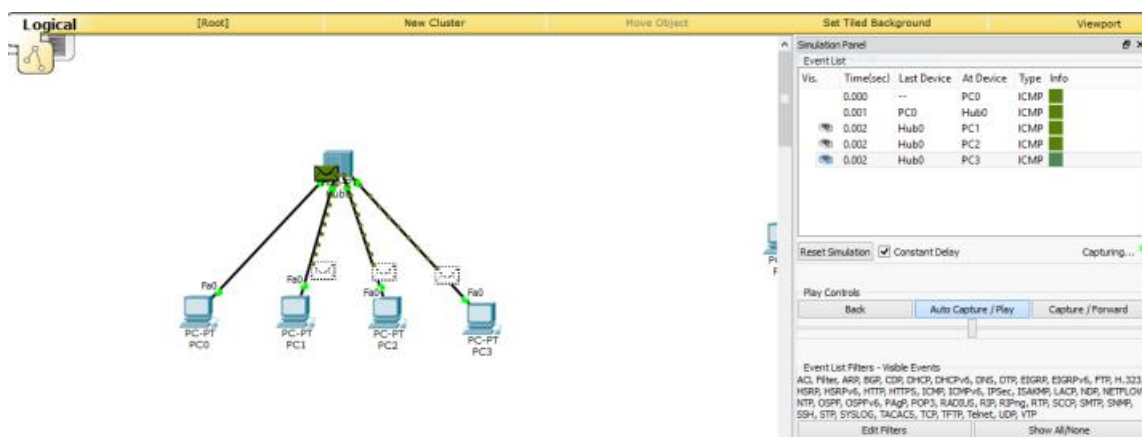


Experiment -1

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



```
Command Prompt
PC>reset
Invalid Command.

PC>clear
Invalid Command.

PC>cls
Invalid Command.

PC>cli
Invalid Command.

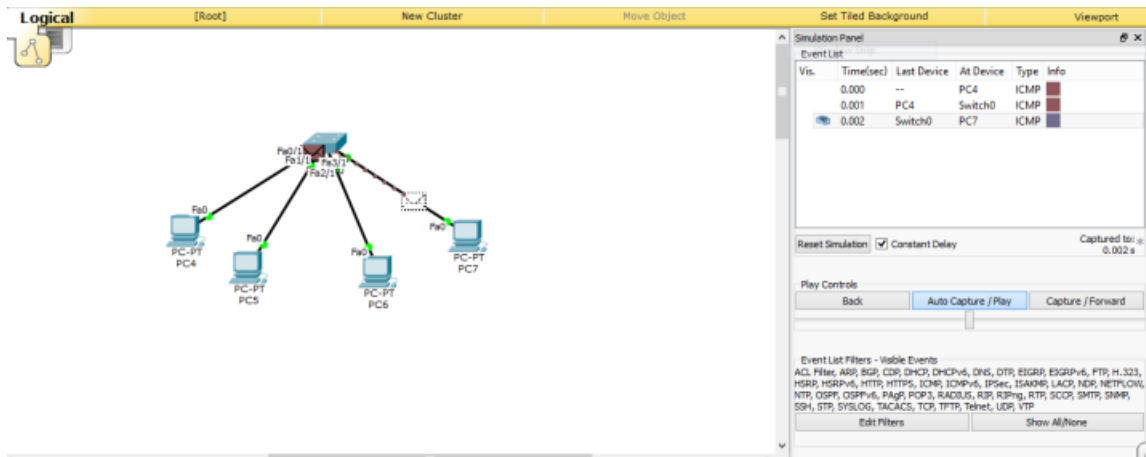
PC>
PC>
PC>ping 10.0.0.3

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=0ms 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 = 0ms, Average = 0ms

PC>
```



Command Prompt

```
PC>ping 10.0.0.11

Pinging 10.0.0.11 with 32 bytes of data:

Request timed out.

Ping statistics for 10.0.0.11:
    Packets: Sent = 1, Received = 0, Lost = 1 (100% loss),

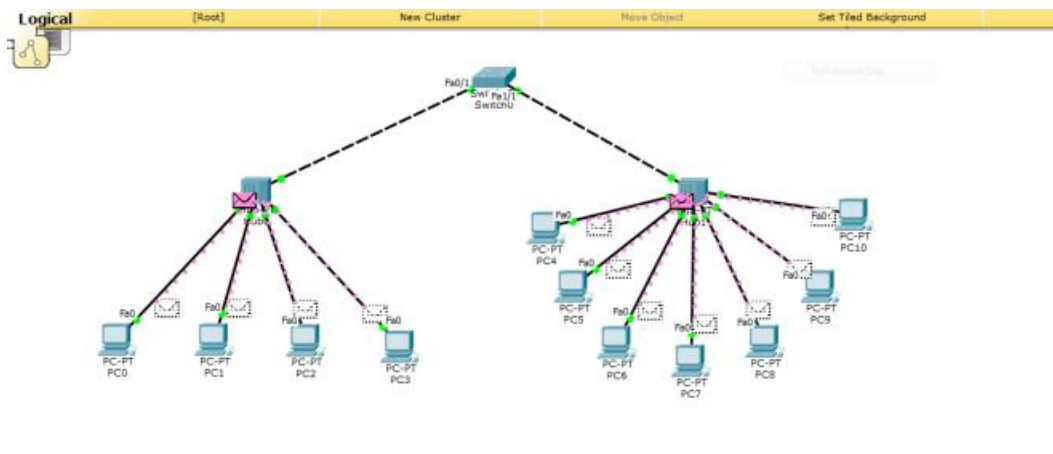
Control-C
^C
PC>
PC>ping 10.0.0.
Ping request could not find host 10.0.0.. Please check the name and try again.
PC>ping 10.0.0.8

Pinging 10.0.0.8 with 32 bytes of data:

Reply from 10.0.0.8: bytes=32 time=1ms 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 = 1ms, Average = 0ms

PC>
```



Command Prompt



Packet Tracer PC Command Line 1.0

PC>ping 10.0.0.10

Pinging 10.0.0.10 with 32 bytes of data:

Reply from 10.0.0.10: bytes=32 time=0ms TTL=128

Reply from 10.0.0.10: bytes=32 time=5ms TTL=128

Reply from 10.0.0.10: bytes=32 time=0ms TTL=128

Reply from 10.0.0.10: bytes=32 time=0ms TTL=128

Ping statistics for 10.0.0.10:

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

Approximate round trip times in milli-seconds:

Minimum = 0ms, Maximum = 5ms, Average = 1ms

PC>|

(1) Create the Topology hence simulate sending the simple PDU from source to destination using a simple hub and switch as connecting device.

Aim :- Create the topology & hence simulate sending the simple PDU from source to destination using a simple hub and switch as connecting device.

Topology:

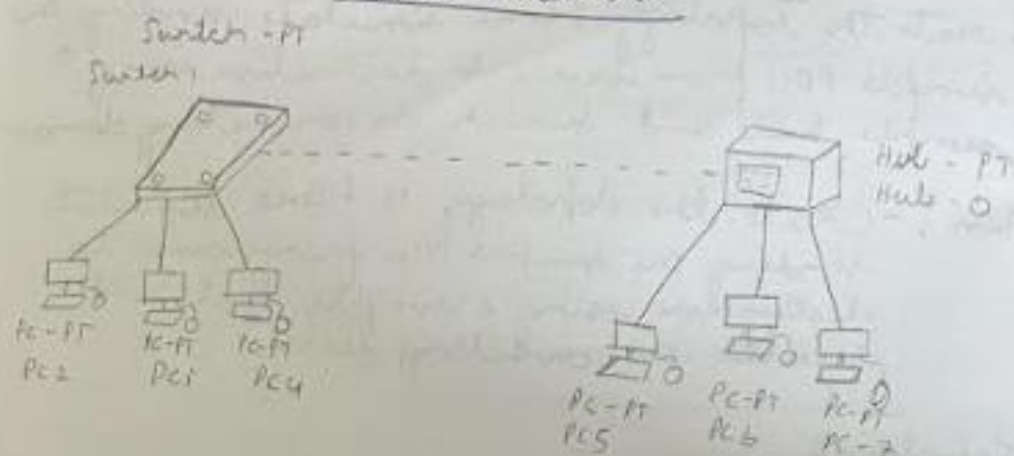
switch



Hub:



Mixed Network



Procedure

Switch - PC

- Place 3 generic PC's (PC2, PC3, PC4) and a generic switch (Switch PT - switch-1)
- Connect the switch ports with all PC's using Copper-straight Through wire
- Configure the IP address of the PC's
 - PC2 (10.0.0.1)
 - PC3 (10.0.0.2)
 - PC4 (10.0.0.3)
- Click the add simple PDU option, select the source as PC2 and destination as PC4
- On Running the simulation the packet is traced from source to destination.

Hub - PC's

- follow the procedure as in the switch-PC replace the switch with the hub.
- set IP address PC 5 (~~10.0.0.4~~) (10.0.0.4)
PC 6 (10.0.0.5)
PC 7 (10.0.0.6)
- Now connect the ~~switch~~ and the Hub with copper cross over cable.
- ~~Stimulate~~ Stimulate the packet triangle from source to destination.

Output

PC > ping 10.0.0.3

Pinging 10.0.0.3 with 32 bytes of data:

Reply from 10.0.0.3: byte = 32 time = 0ms TTL = 128

Reply from 10.0.0.3: byte = 32 time = 2ms TTL = 128

Reply from 10.0.0.3: byte = 32 time = 0ms TTL = 128

Reply from 10.0.0.3: byte = 32 time = 0ms TTL = 128

Ping statistics for 10.0.0.3

Packets: sent = 4, Received = 4, lost = 0

Approx = Round trip time is milliseconds.

minimum = 0ms, maximum = 2ms,

Average = 0ms.

~~Observations~~

NP
3/8/2025