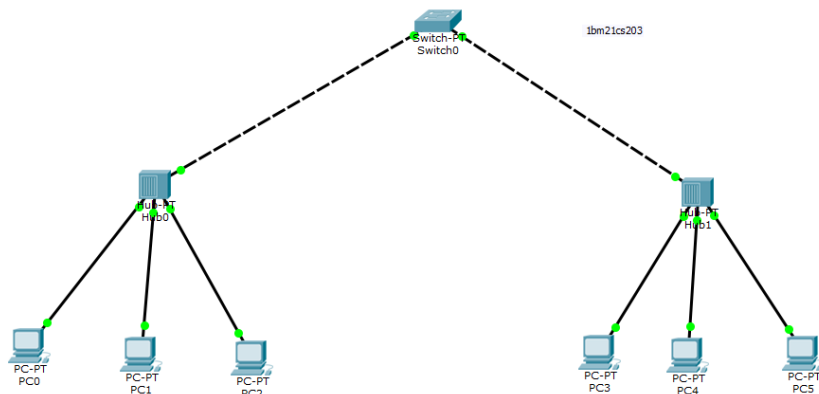


COMPUTER NETWORKS LAB 1

Create a topology consisting of two or more end devices connected with the help of hub and switch and simulate a simple PDU.

1) Switch and hub hybrid



Output

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

FastEthernet0 Connection:(default port)

    Link-local IPv6 Address.....: FE80::202:4AFF:FE4D:2D1B
    IP Address.....: 10.0.0.1
    Subnet Mask.....: 255.0.0.0
    Default Gateway.....: 0.0.0.0

PC>ping 10.0.0.5

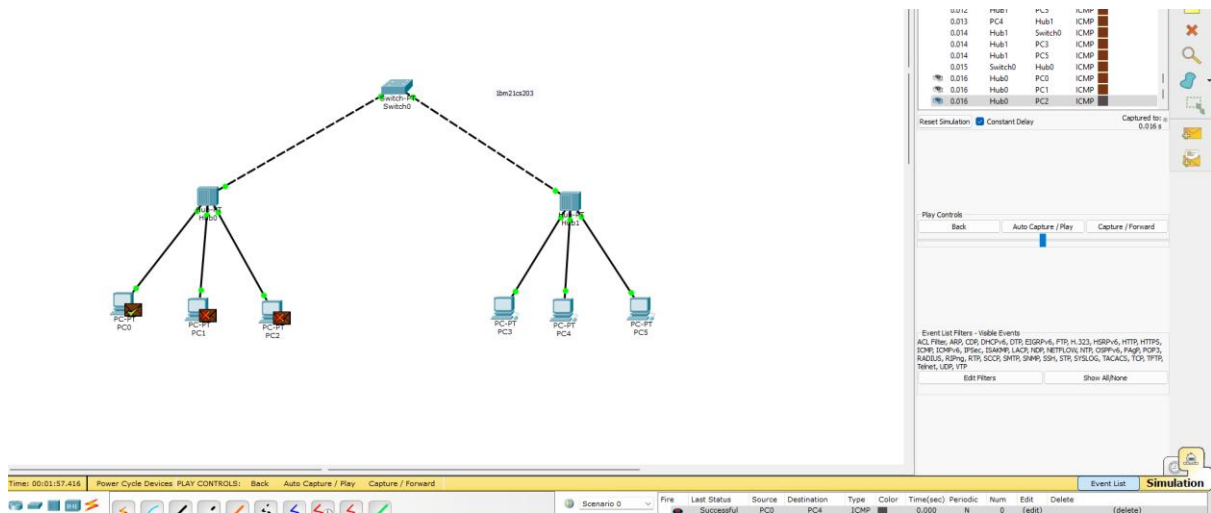
Pinging 10.0.0.5 with 32 bytes of data:

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

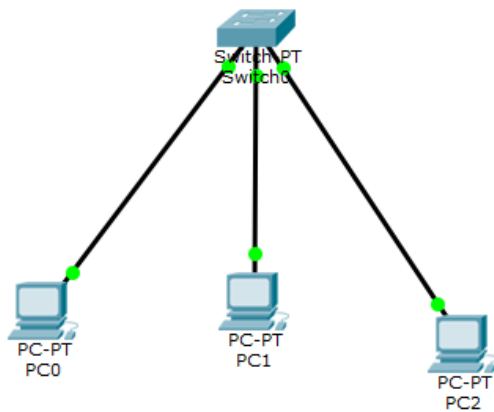
Ping statistics for 10.0.0.5:
    Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),
    Approximate round trip times in milli-seconds:
        Minimum = 0ms, Maximum = 0ms, Average = 0ms

PC>
```

Simulation:

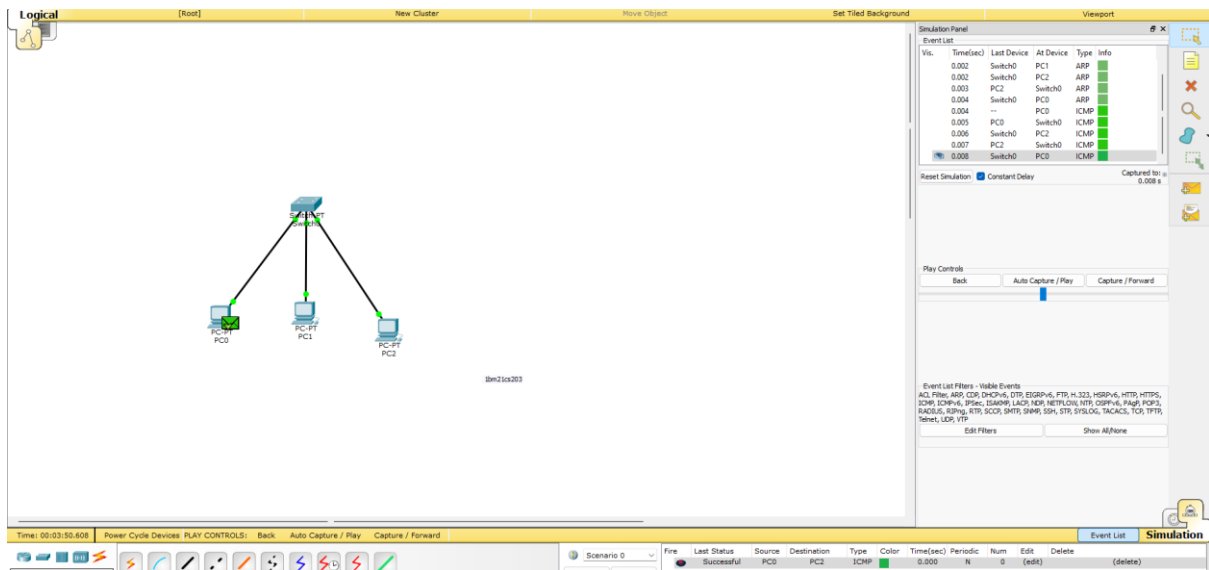


2)Switch



1bm21cs203

Simulation:



Output:

The screenshot shows the PC0 Command Prompt window. The output of the commands is as follows:

```

Packet Tracer PC Command Line 1.0
PC>ipconfig

FastEthernet0 Connection:(default port)

    Link-local IPv6 Address.....: FE80::260:47FF:FED4:A764
    IP Address.....: 10.0.0.1
    Subnet Mask.....: 255.0.0.0
    Default Gateway.....: 0.0.0.0

PC>ping 10.0.0.3

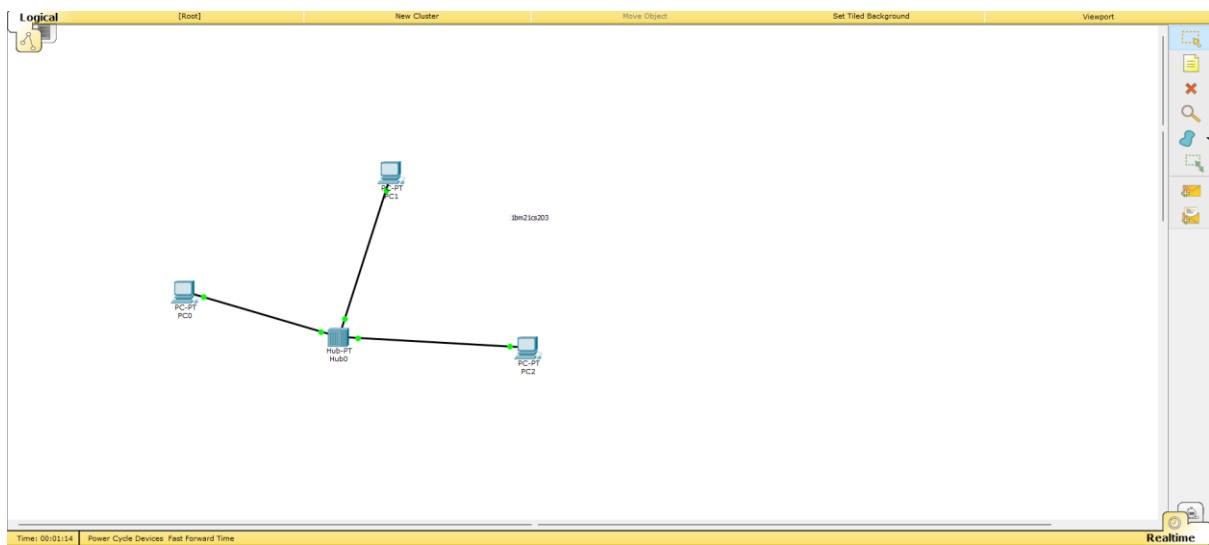
Pinging 10.0.0.3 with 32 bytes of data:

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

3)Hub:



Output:

The screenshot shows a 'PC0' window with tabs for 'Physical', 'Config', 'Desktop', and 'Custom Interface'. The 'Desktop' tab is active, displaying a 'Command Prompt' window. The command prompt shows the following output:

```
Packet Tracer PC Command Line 1.0
PC>ping 10.0.0.3

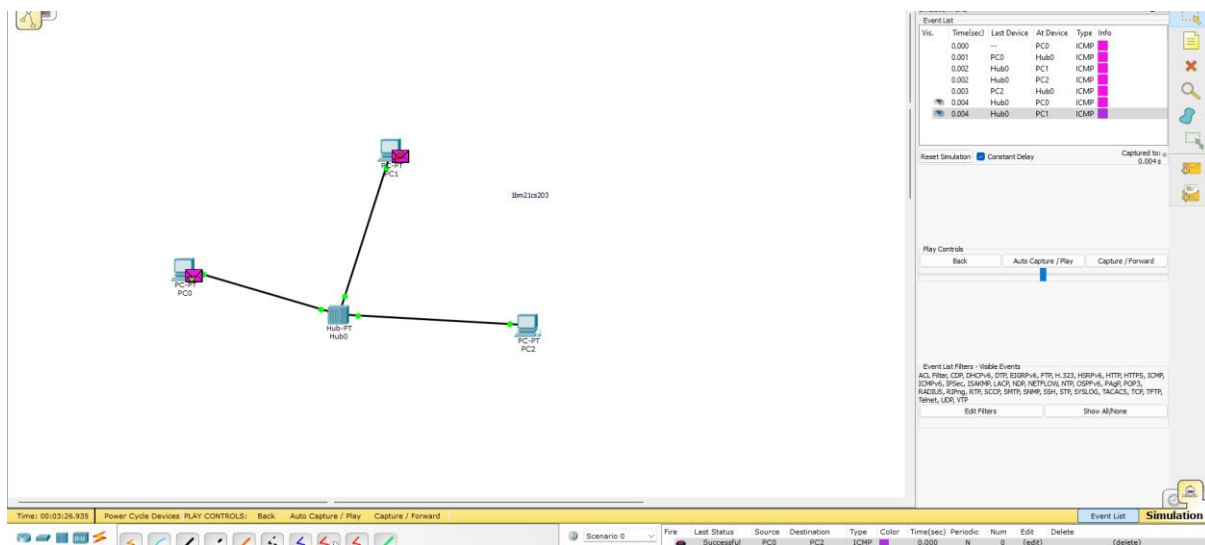
Pinging 10.0.0.3 with 32 bytes of data:

Reply from 10.0.0.3: bytes=32 time=0ms TTL=128
Reply from 10.0.0.3: bytes=32 time=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>|
```

Simulation:



Outcome:

Outcome with Hub:

In real time, when we use ping command, we notice that response is received from destination.

In simulation mode, hub gets PDU, it broadcast to all the connected devices, then one device accepts the others drop or reject.

Outcome with Switch:

In simulation mode, as it receives the PDU, switch only transmits or forwards to the destination/ mentioned end device.

Outcome with Hybrid:

The hub broadcasts to all the connected devices including the switch, then the switch, then the switch forwards the PDU only to destination drive.

By,

Shivani Sathyanarayanan

1BM21CS203

4D