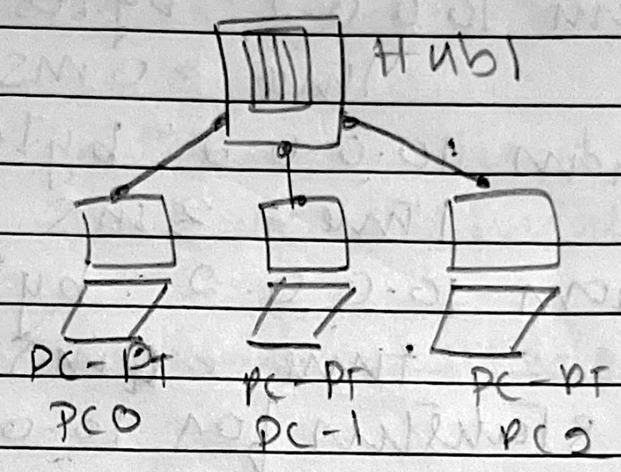
LAB 1

OBSERVATION

Page

Aim: Create a topology, here simulate sending a simple PDV, from source to destination using a simple hub and switch as connecting domain.

Topology Hub to PC



Procedure

1) Select hub and three ~~switches~~ PCs

2) Connect the hub to the individual switches using a copper straight

3) Go to config and write its unique IP address (10.0.0.1, 10.0.0.2, 10.0.0.3)

4) Select the packet and select the source and the destination PC.

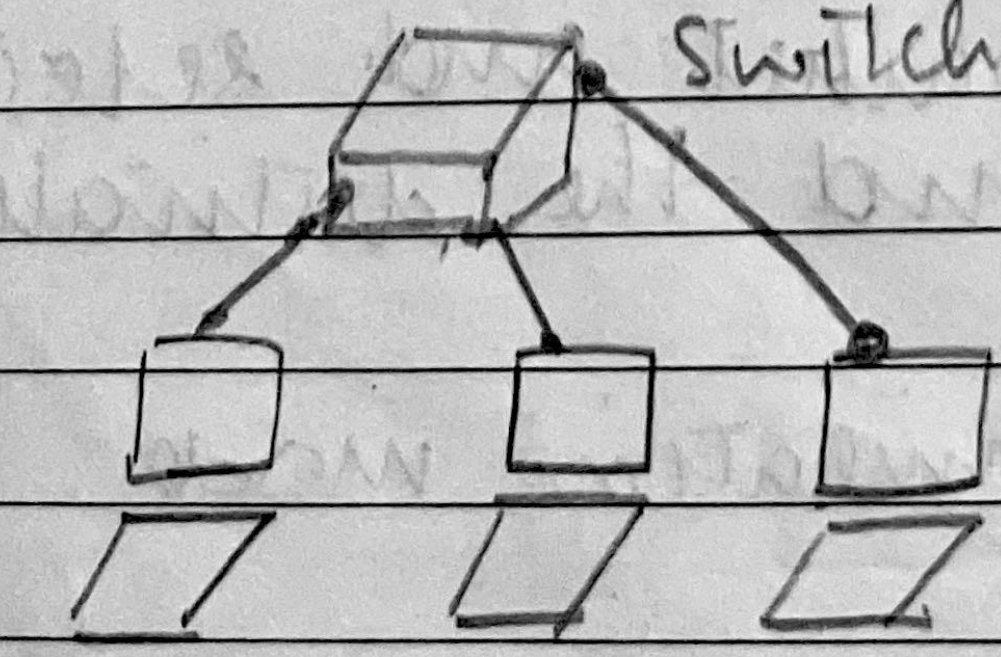
Observation in simulation mode

- PC0 sends packet to hub and hub sends it to both PC1 and PC2.
- PC1 discards the message while PC2 accepts it.

- PC2 sends acknowledgment packe
each to hub.
- Hub again sends it to PC0 and
- PC1 discards it and PC0 accep

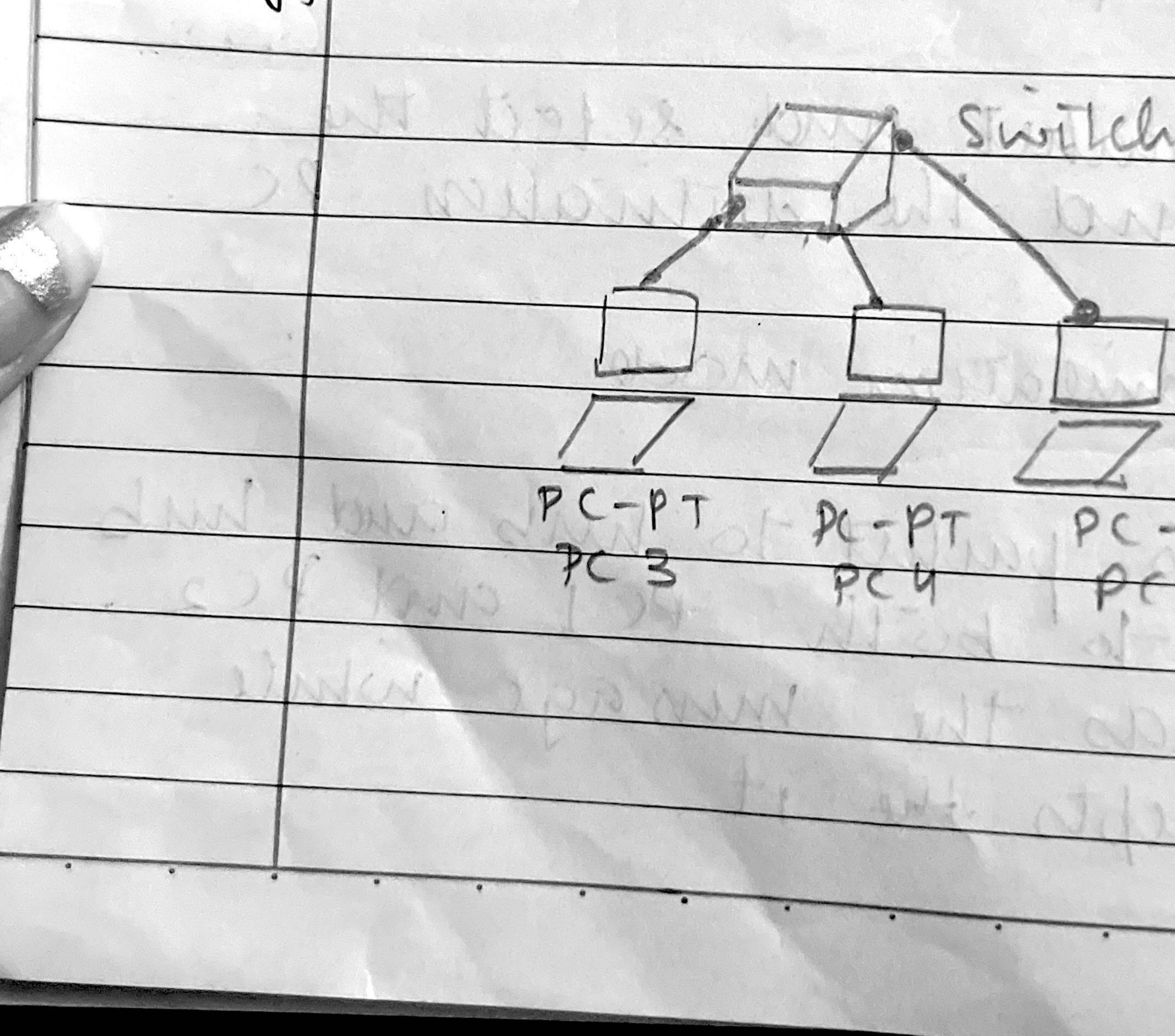
tput. Reply from 10.0.0.2: bytes = 32
time = 5ms TTL = 12
Reply from 10.0.0.2: bytes = 32
time = 0 ms TTL = 128
Reply from 10.0.0.2: bytes = 32
time = 3 ms TTL = 128
Reply from 10.0.0.2: bytes = 32
time = 0ms TTL = 128
Pings statistics for 10.0.0.2:
Packet: Sent = 4, Received = 4,
lost = 0 (0% loss),
Approximate round trip times in
milli seconds:
minimum = 0ms, Maximum = 5ms,
Average = 0ms.

ogy Switch to PC.



TGST 20 (0% loss),
Approxmate round trip Time
milli seconds.
Minimum = 0ms, Maximum = 3
Average = 0ms.

Topology Switch to PC.



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Procedure

1) Select a switch and 3 PCs
2) ~~fi~~
2) Connect the switch to the individual PCs using a copper straight.
3) Select config and give its unique IP address (10.0.0.4, 10.0.0.5, 10.0.0.6)
4) Select the Dupacket and select the Source and the destination PC.

Observation in Simulation mode:

- PC3 sends packet

Output

Reply from 10.0.0.5: bytes = 32 Time = 0m
TTL = 128
Reply from 10.0.0.5: bytes = 32 Time = 0m
TTL = 128
Reply from 10.0.0.5: bytes = 32 Time = 3m
TTL = 128
Ping statistics for 10.0.0.5;
Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),
Approximate round trip Time in milli-seconds:
Minimum = 0 ms, Maximum = 3 ms,
Average = 0 ms.

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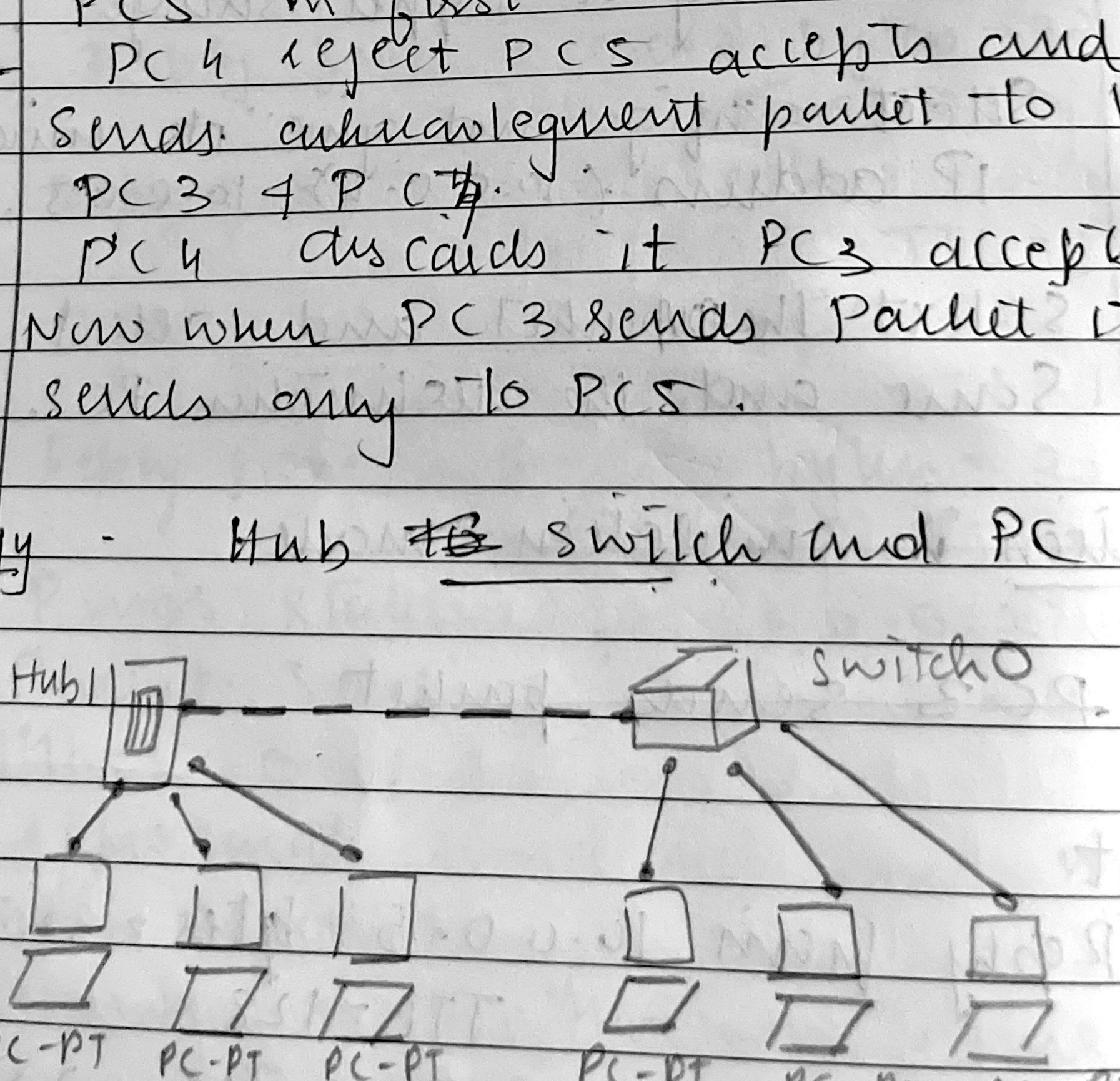
Observation in simulation mode.

- PC 3 sends packet to switch and it sends to both PC 4 To PC 5 in first round.
- PC 4 reject PC 5 accepts and sends acknowledgement packet to both PC 3 & PC 5.
PC 4 discards it PC 3 accepts it.
Now when PC 3 sends packet it sends only to PC 5.

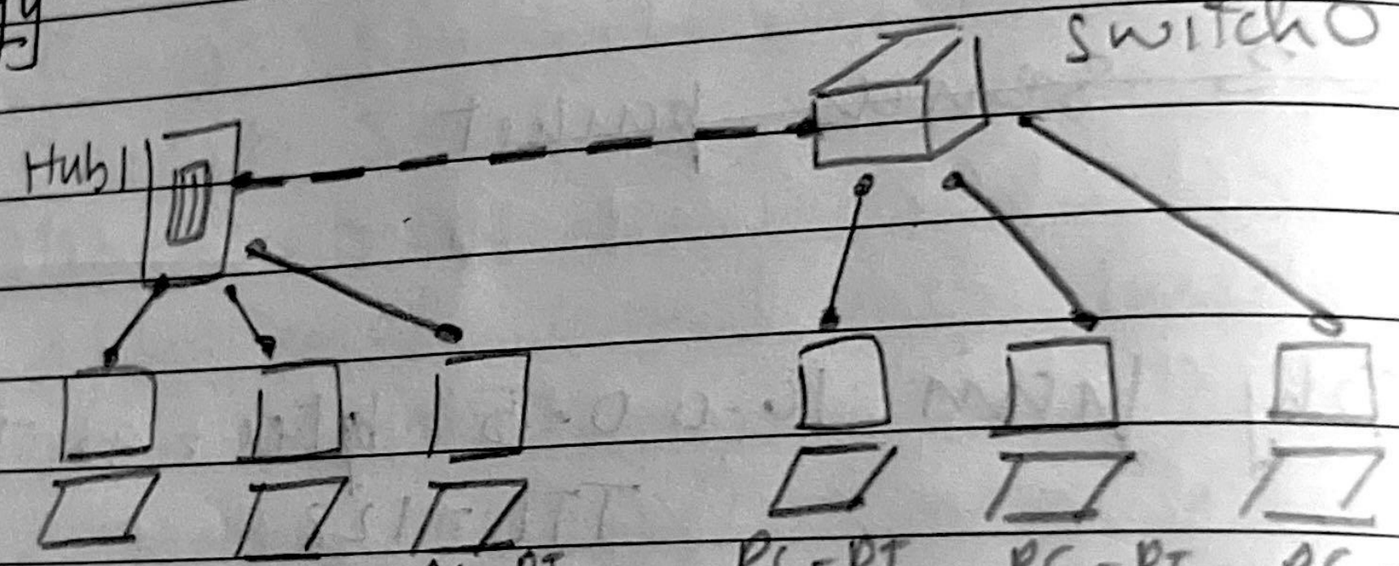
Topology - Hub ~~to~~ switch and PC



Observation in simulation

- PC 3 sends packet to switch and it sends to both PC 4 To PC 5 in first round.
- PC 4 reject PC 5 accepts and sends acknowledgement packet to both PC 3 & PC 4.
- PC 4 discards it PC 3 accepts it Now when PC 3 sends packet it sends only to PC 5.

Topology - Hub & switch and PC



Procedure

1) Connect the hub and the switch using a copper cross-over.
2) Connect the 3 PC each to hub and switch and give IP address (10.0.0.1, 10.0.0.2 . . . 10.0.0.6)
3) Select a source PC from the one that is connected to the hub Select a destination PC that is connected to the switch.

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4) Select ~~to~~ PDU packet ~~and~~ to the Source and click on the destination. (from PC0 To PC4).

output: Reply from 10.0.0.4: byte = 32 time = 0ms TTL = 128
Reply from 10.0.0.4: byte = 32 time = 0 ms TTL = 128
Reply from 10.0.0.4: byte = 32 time = 4 ms TTL = 128
Reply from 10.0.0.4: byte = 32 time = 0ms TTL = 128
Ping statistics for 10.0.0.4:
Packets: sent = 4, Recieved = 4, lost = 0 (0% loss),
Approximate round trip times in milli seconds:
Minimum = 0 ms, Maximum = 4 ms, Average = 1 ms.

Observation in Simulation mode.

In simulation mode PC0 sends packet To hub. Hub sends it to PC1, PC2 and switch.
Switch broadcasts it To PC3, PC4, PC5.
PC1, PC2, PC4 and PC5 discards ~~item~~ Them.
PC3 accepts and Sends acknowledgments To The hub Through switch.

25°C
Partly cloudy

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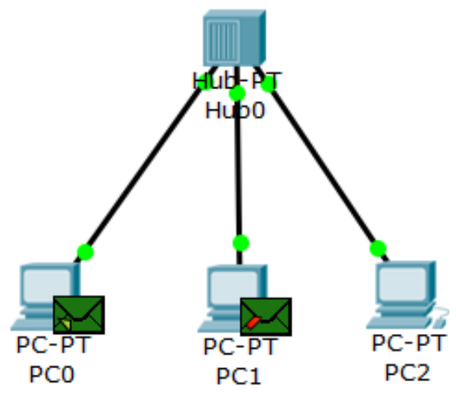
Hub is broadcast if to all 3 PCs only PC0 accepts it and others discard.
on second round PC0 sends packet to hub.
at broad casts to PC1, PC2, switch.
Now switch broad casts it only to PC3. This switch is a smart device.

TOPOLOGY AND OUTPUT

HUB AND PCs



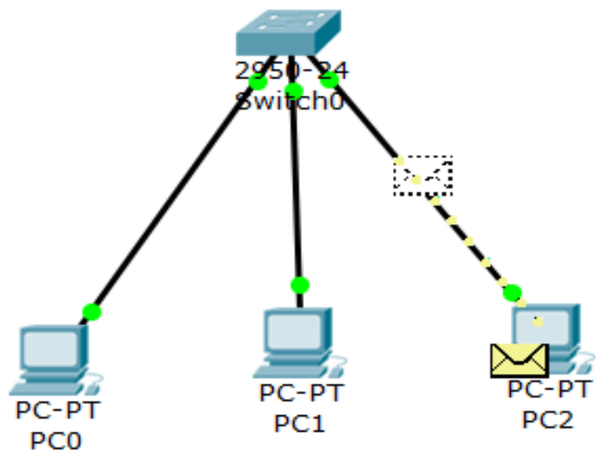
Simulation Panel

Event List

Vis.	Time(sec)	Last Devi	At Devi	Type	Info
	0.000	--	PC0	ICMP	
	0.001	PC0	Hub0	ICMP	
	0.002	Hub0	PC1	ICMP	
	0.002	Hub0	PC2	ICMP	
	0.003	PC2	Hub0	ICMP	
	0.004	Hub0	PC0	ICMP	
	0.004	Hub0	PC1	ICMP	

```
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=1ms TTL=128
Reply from 10.0.0.3: bytes=32 time=2ms 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 = 2ms, Average = 0ms

PC>
```

SWITCH AND PCs



Simulation Panel

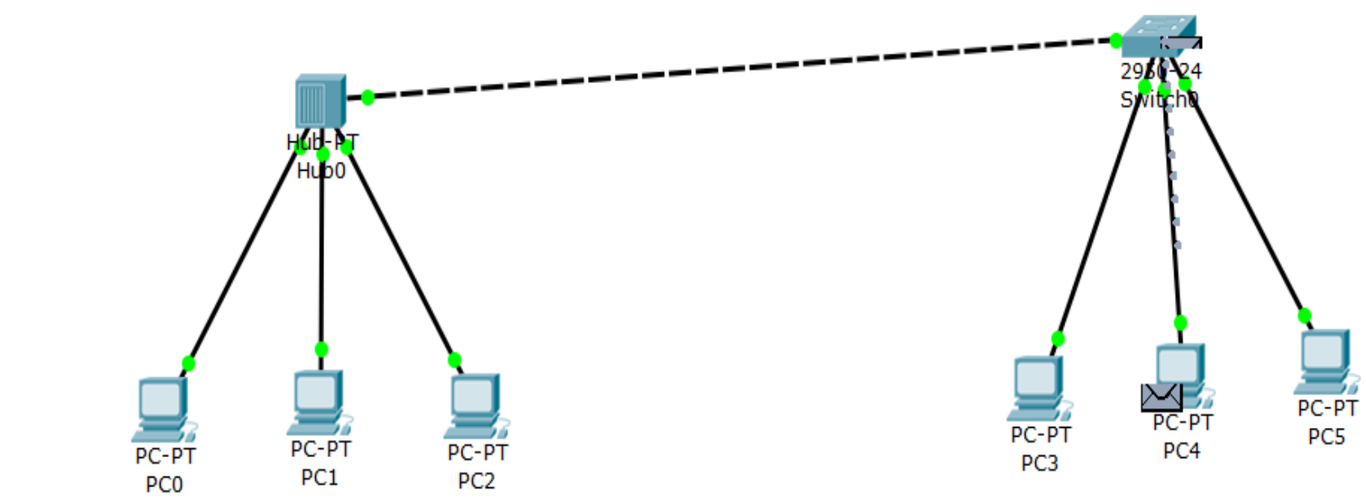
Event List

Vis.	Time(sec)	Last Devi	At Devi	Type	Info
	0.978	Switch0	PC2	STP	
	0.978	Switch0	PC1	STP	
	0.978	Switch0	PC0	STP	
	2.977	--	Switch0	STP	
	2.978	Switch0	PC2	STP	
	2.978	Switch0	PC1	STP	
	2.978	Switch0	PC0	STP	

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=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
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>
```

HUB ,SWITCH AND PCs



Simulation Panel

Event List

Vis.	Time(sec)	Last Devi	At Devi	Type	Info
	1.582	--	Switch0	CDP	
	1.582	--	Switch0	CDP	
	1.582	--	Switch0	CDP	
	1.583	Switch0	PC3	CDP	
	1.583	Switch0	PC4	CDP	
	1.583	Switch0	PC5	CDP	
	1.583	Switch0	Hub0	CDP	

```
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=1ms TTL=128
Reply from 10.0.0.5: bytes=32 time=1ms 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 = 1ms, Average = 0ms

PC>
```