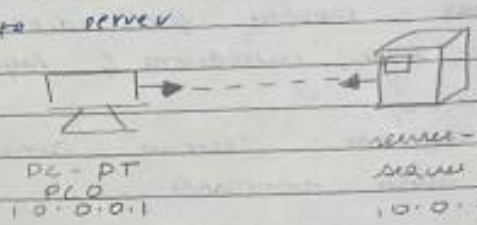
LAB-1

Expt 1

1. PC to server



Aim: to set up a point to point network b/w a PC & a server, facilitating direct communication to observe data exchange

Topology: A PC is connected to server using a crossover ethernet cable

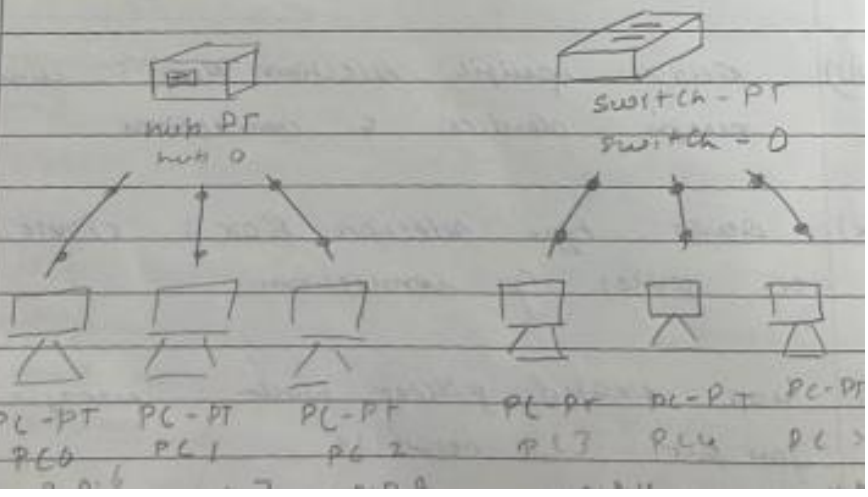
IP address of PC - 10.0.0.1

server - 10.0.0.2

Expt 2

Observation: Direct connection allows PC to communicate with server, which is typical in small networks for tasks

Hub & Switch



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Page

Aim: To create network consisting of 3 PCs connected to a central hub & another network with 3 pcs connected to a switch. The connection will be observe the behaviours of data transmission using hub & switch device

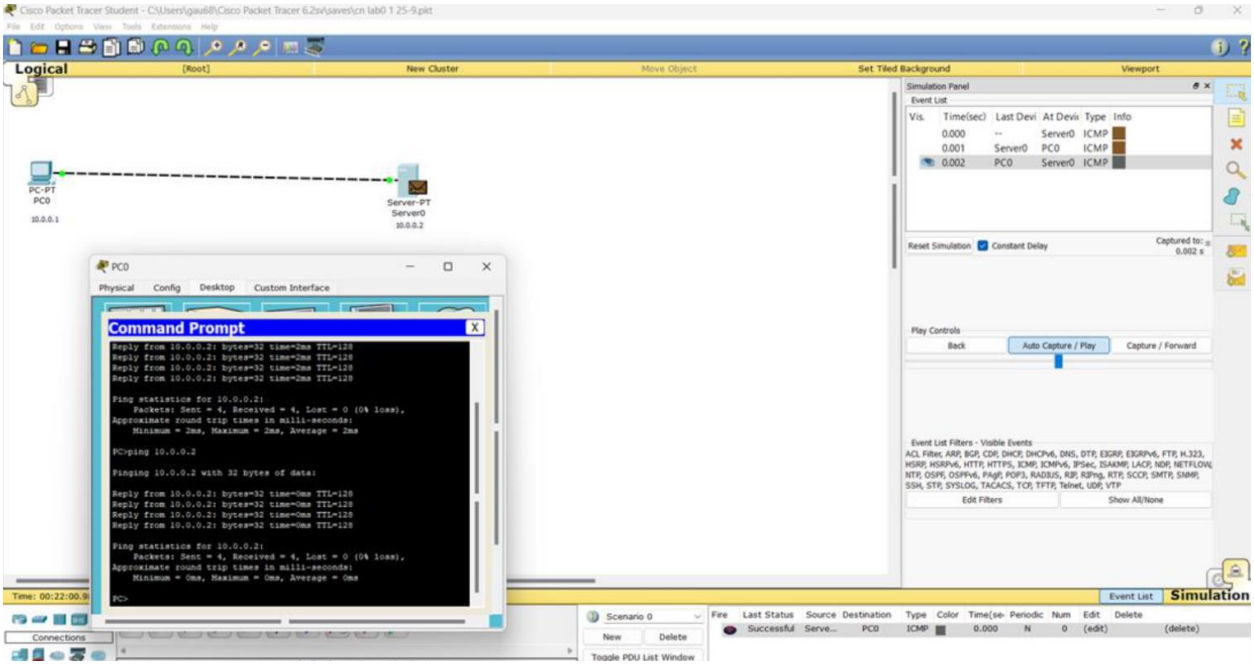
Topology: 3 pcs are connected to a hub hub & switch using straight through ethereal cables.

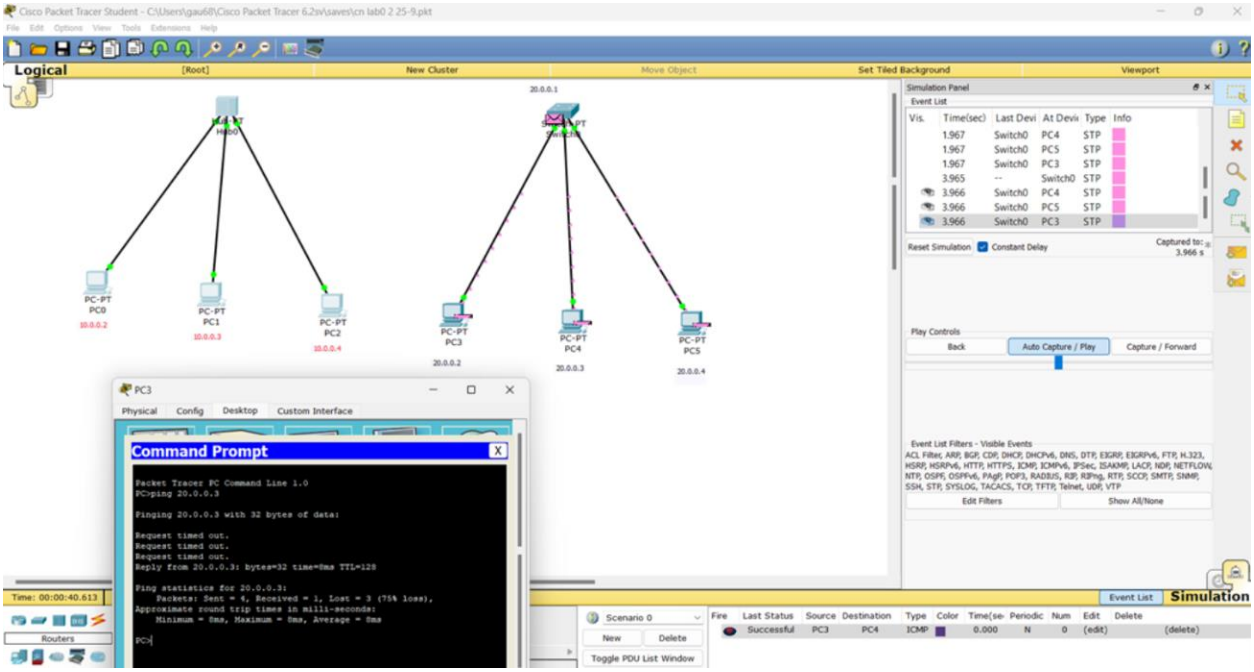
Observation: hub broadcasts packets to devices which may cause unnecessary traffic. Switch forwards packets only to appropriate devices by learning MAC address making it more efficient by reducing traffic

9/10/24

difference HUB & switch

HUB	SWITCH
→ operates at layer 1	→ forwards data only to specific device for when it intended
→ broadcasts to all connected devices doesn't filter or manage traffic	→ more efficient, reduces collisions
→ limited efficiency, more collisions	→ operates on layer 2


Cisco Packet Tracer Student - C:\Users\gau68\Cisco Packet Tracer 6.2sv\saves\cn lab0 1 25-9.pkt
Logical
[Root]
New Cluster
Move Object
Set Tiled Background
Viewport
PC-PT
PC0
10.0.0.1
Server-PT
Server0
10.0.0.2
PC0
Physical
Config
Desktop
Custom Interface
Command Prompt
Reply from 10.0.0.2: bytes=32 time=2ms TTL=128
Reply from 10.0.0.2: bytes=32 time=2ms TTL=128
Reply from 10.0.0.2: bytes=32 time=2ms TTL=128
Reply from 10.0.0.2: bytes=32 time=2ms 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 = 2ms, Maximum = 2ms, Average = 2ms
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=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
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 = 0ms, Average = 0ms
PC>
Simulation Panel
Event List
Vis. Time(sec) Last Devi At Devi Type Info
0.000 -- Server0 ICMP
0.001 Server0 PC0 ICMP
0.002 PC0 Server0 ICMP
Reset Simulation
Constant Delay
Captured to: 0.002 s
Play Controls
Back
Auto Capture / Play
Capture / Forward
Event List Filters - Visible Events
Edit Filters
Show All/None
Time: 00:22:00.9
Event List
Simulation
Connections
Scenario 0
New
Delete
Toggle PDU List Window
Fire Last Status Source Destination Type Color Time(se Periodic Num Edit Delete
Successful Serve... PC0 ICMP 0.000 N 0 (edit) (delete)


Cisco Packet Tracer Student - C:\Users\gau68\Cisco Packet Tracer 6.2sv\saves\cn lab0 2 25-9.pkt
Logical
[Root]
New Cluster
Move Object
Set Tiled Background
Viewport
20.0.0.1
PC-PT
PC0
10.0.0.2
PC-PT
PC1
10.0.0.3
PC-PT
PC2
10.0.0.4
PC-PT
PC3
20.0.0.2
PC-PT
PC4
20.0.0.3
PC-PT
PC5
20.0.0.4
PC3
Physical
Config
Desktop
Custom Interface
Command Prompt
Packet Tracer PC Command Line 1.0
PC>ping 20.0.0.3
Pinging 20.0.0.3 with 32 bytes of data:
Request timed out.
Request timed out.
Request timed out.
Reply from 20.0.0.3: bytes=32 time=0ms TTL=128
Ping statistics for 20.0.0.3:
Packets: Sent = 4, Received = 1, Lost = 3 (75% loss),
Approximate round trip times in milli-seconds:
Minimum = 0ms, Maximum = 0ms, Average = 0ms
PC>
Simulation Panel
Event List
Vis. Time(sec) Last Devi At Devi Type Info
1.967 Switch0 PC4 STP
1.967 Switch0 PC5 STP
1.967 Switch0 PC3 STP
3.965 -- Switch0 STP
3.966 Switch0 PC4 STP
3.966 Switch0 PC5 STP
3.966 Switch0 PC3 STP
Reset Simulation
Constant Delay
Captured to: 3.966 s
Play Controls
Back
Auto Capture / Play
Capture / Forward
Event List Filters - Visible Events
Edit Filters
Show All/None
Time: 00:00:40.613
Event List
Simulation
Routers
Scenario 0
New
Delete
Toggle PDU List Window
Fire Last Status Source Destination Type Color Time(se Periodic Num Edit Delete
Successful PC3 PC4 ICMP 0.000 N 0 (edit) (delete)