Experiment: 2

Configuration of LAN using Hub and Switch

Aim: To analyse the performance of various configurations and protocols using Hub and Switches in

LAN Requirements

Windows pc – 4Nos

CISCO Packet Tracer Software (Student Version)

6 port hub – 1 No

8 port switch – 1 No

Cat-5 LAN cable

Procedure:

1) Configuration of LAN using Hub

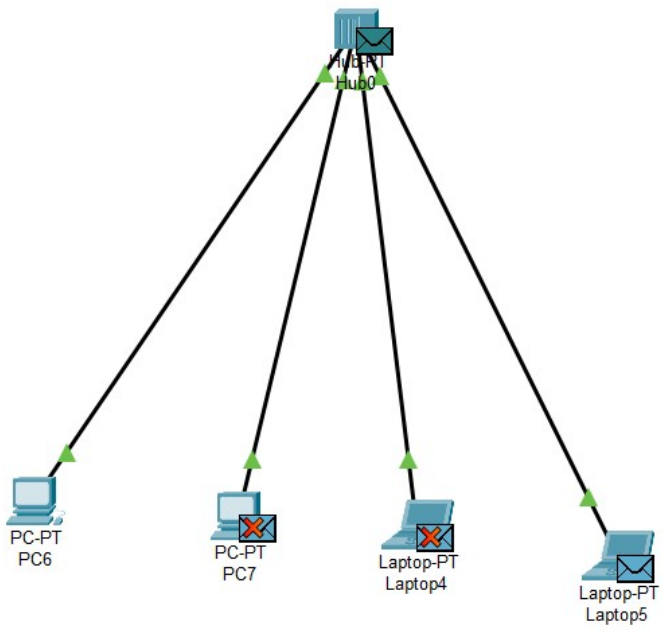
Open the CISCO Packet tracer software

Drag and drop 4 pcs using End Device Icons on the left corner

Select 6 port Hub from Hub icon list in the left bottom corner

Make the connections using Straight through Ethernet cables

Give IP address of the PC1, PC2, PC3 and PC4 as 192.168.1.1, 192.168.1.2, 192.168.1.3 and 192.168.1.4 respectively, ping between PCs and observe the transfer of data packets in real and simulation mode.



2) Configuration of LAN using Switch

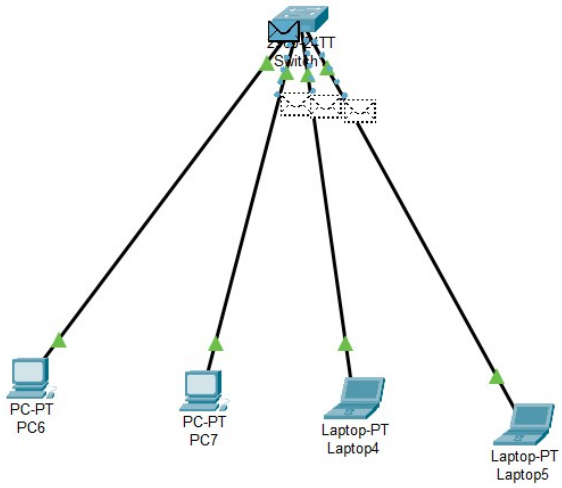
Open the CISCO Packet tracer software

Drag and drop 4 pcs using End Device Icons on the left corner

Select 8 port Switch from Switch icon list in the left bottom corner

Make the connections using Straight through Ethernet cables

Give IP address of the PC1, PC2, PC3 and PC4 as 192.168.1.1, 192.168.1.2, 192.168.1.3 and 192.168.1.4 respectively, ping between PCs and observe the transfer of data packets in real and simulation mode.



PC0	PC1	PC2	PC3
IP Add: 192.168.1.1	IP Add:192.168.1.2	IP Add:192.168.1.3	IP Add:192.168.1.4
Gateway: 255.255.255.0	Gateway:255.255.255.0	Gateway:255.255.255.0	Gateway:255.255.255.0

LAN OUTPUT WINDOW: (PINGING FROM PC0-PC1 or Anyother node)

Packet Tracer PC Command Line 1.0

C:\>ping 192.168.1.2

Pinging 192.168.1.2 with 32 bytes of data:

Reply from 192.168.1.2: bytes=32 time=8ms TTL=128

Reply from 192.168.1.2: bytes=32 time=4ms TTL=128

Reply from 192.168.1.2: bytes=32 time=4ms TTL=128

Reply from 192.168.1.2: bytes=32 time=4ms TTL=128

Ping statistics for 192.168.1.2:

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

Approximate round trip times in milli-seconds:

Minimum = 4ms, Maximum = 8ms, Average = 5ms