

Ex: 03 -  
31/7/24

## Practical - 3.

Aim: To study the packet tracer tool installation and User Interface.

1. Analyse the behaviour of network devices using CISCO PACKET TRACER Simulator.

1. From the network component box, click and drag - and drop the bellow components:

a. 4 Generic PCs and One Hub.

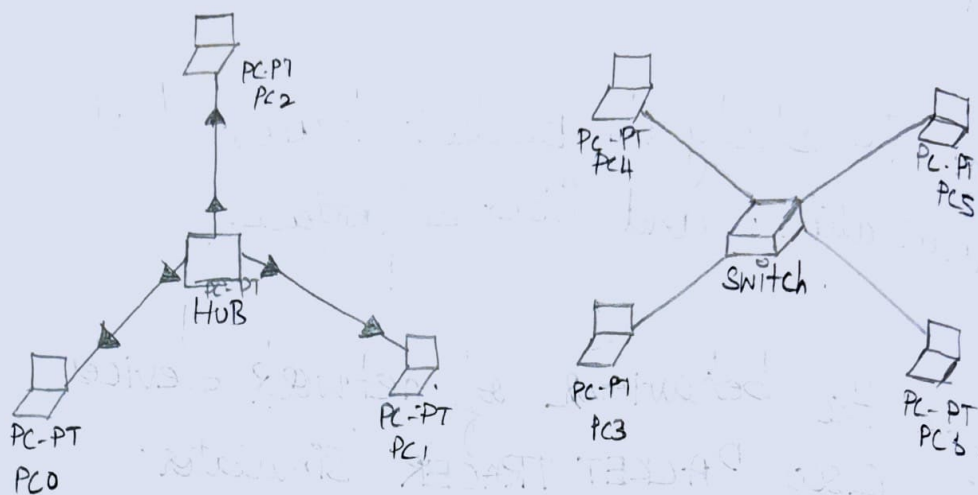
b. 4 Generic PCs and one switch.

2. Click on Connections:

a. click on Copper Straight-Through cable.

b. Select one of the PC and connect it to HUB using the cable. The link LED should glow in green, indicating that the link is up. Similarly connect remaining 3 PCs to the HUB.

c. Similarly connect 4 PCs to the switch using Copper straight-through cable



3. Click on the PC connected to hub, go to the Desktop tab, click on IP Configuration and enter an IP address and subnet mask. Here, the default gateway and DNS server information is not needed as there are only two end devices in the network.

Click on the PDU (message icon) from the common tool bar,

a). Drag and drop it on one of PC (source machine) and then drop it on another PC (destination machine) connected to the HUB.

4. Observe the flow of PDU from source PC to destination PC by selecting the Realtime mode of simulation.

5. Repeat step #3 to step #5 for the PCs connected to the Switch.



6. Observe how HUB and switch are forwarding the PDU and write your observation and conclusion about the behaviors of switch and HUB.

PC0

PC1

IP configuration  
○ DHCP    ○ Static  
IP address. 10.1.1.1  
Subnet Mask 255.0.0.0  
Default gateway  
DNS Server

IP Configuration  
○ DHCP    ○ Static  
IP Address 10.1.1.2  
Subnetmask 255.0.0.0  
Default gateway  
DNS Server

### Student observation

a). From your observation write down the behaviors of switch and hub in terms of forwarding the packets received by them.

Hub:

- \* Broadcasts packets to all ports.
- \* less efficient, causes collisions

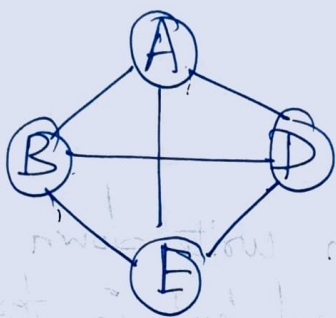
Switch: packets to specific ports based on mac address

Result: Thus, the behavior of  
\* more efficient, reduces collision

b). find out the network topology implemented in your college & draw and label that topology in your observation book

Mesh topology:

All the nodes are directly connected to each other



Result: Thus, the behaviour of network devices using Cisco Packet Tracer Simulator is analysed.

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3/11/24