24/7/25

Experiment - 3

Aim : To study the packet tracer tool Installation and user Interface Overview.

c) To understand environment of CISCO PACKET TRACER to design simple network.

Introduction :

A simulator, as the name suggests, simulates network devices and its environment. Packet Tracer is an exciting network design, simulation and modelling tool.

1. It allows you to model complex systems without the need for dedicated equipment.
2. It helps you to practice your network configuration and troubleshooting skills via computer or an Android or iOS based mobile device.
3. It is available for both the Linux and Windows desktop environments.
4. Protocols in Packet Tracer are coded to work and behave in the same way as they would on real hardware.

d) Analyse the behaviour of network devices using CISCO PACKET TRACER simulator.

1. From the network component box, click and drag -and- drop the below 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 greed, 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.

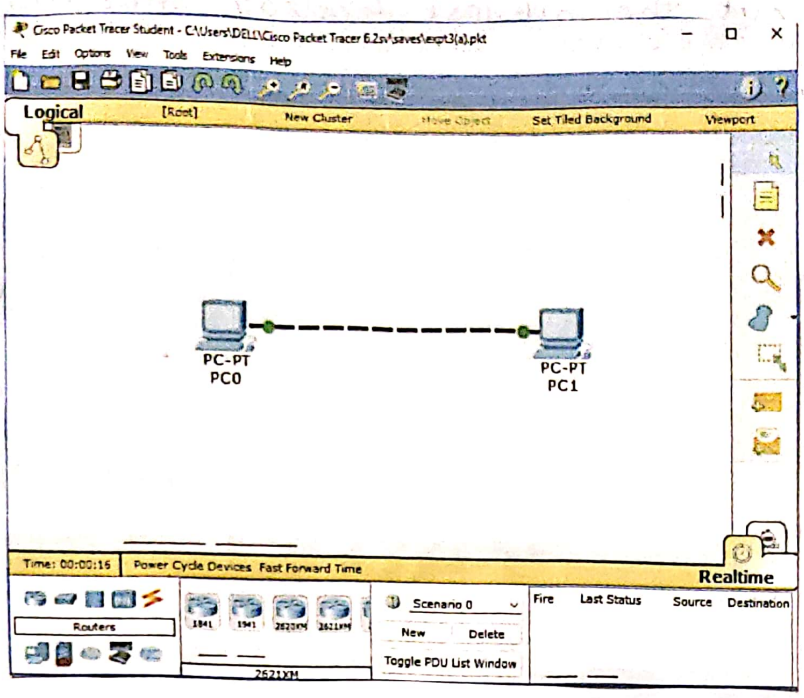
3. Click on the PCs connected to hub, go to the Desktop tab, click on IP configuration, and enter an IP address and subnet mask. Here, the default gateway and DNS server information is not needed as there are only two end devices in the network. click on the PDU (message icon) from the common tool bar,

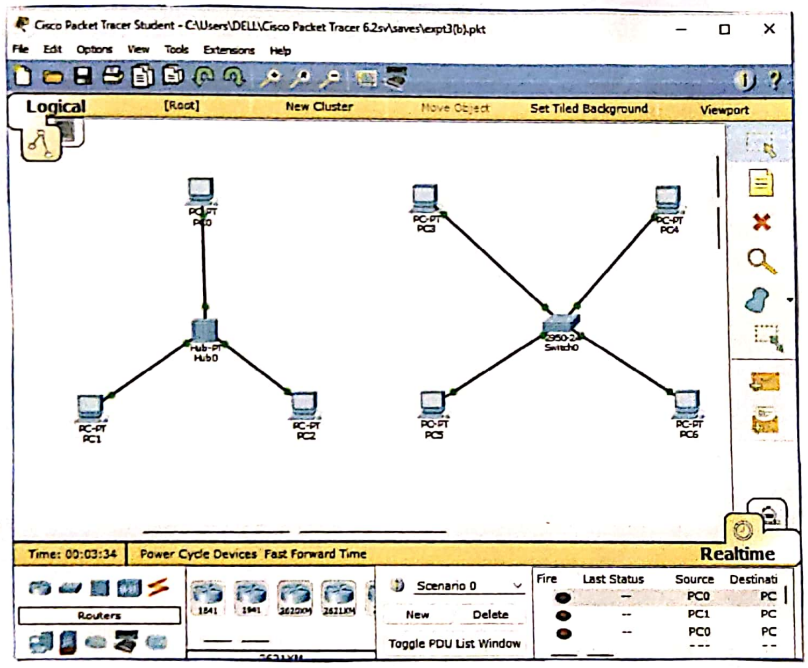
a) Drag and drop it on one of PC (source machine) and then drop it on another PC (destination machine) connected to the HUB.

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.





Student Observation :

a) From your observation write down the behaviour of switch and HUB in terms of forwarding the packet received by them.

d) A switch forwards packets only to the specific device (port) based on MAC address, while a hub broadcasts packets to all connected devices.

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

d) The network topology commonly used in colleges is star topology, where all devices are connected to a central switch or hub.

Result: The packet tracer tool installation and user interface overview is studied.

4/12/24