

11/8/25
Ex no: 3 To study the Packet Tracer tool Installation and User Interface Overview.

Aim:

To study the packet tracer tool installation and user interface overview

Introduction:

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

1) It allows you to model complex systems without need for dedicated equipment.

2) It helps you to practice your network configuration & troubleshooting skills via computer or an android or ios based mobile device.

3) It is available for both linux & windows desktop environment.

4) Protocols in packet tracer are coded to work & behave in same way as they would on real hardware.

Analyze the behaviour of network devices using CISCO PACKET TRACER simulator.

1) From the network component box, click & drag & drop the below components:

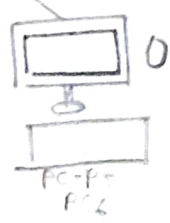
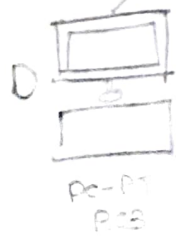
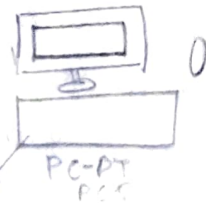
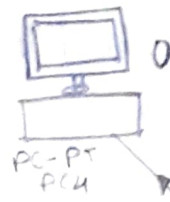
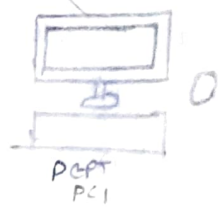
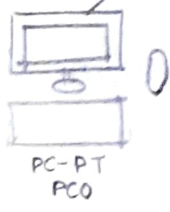
a) 4 Generic PCs & one HUB

b) 4 Generic PCs & 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 link is set up. Similarly connect remaining 3 PCs to HUB.



Handwritten notes in Hindi: "इस प्रकार हमने एक LAN का डिजाइन किया है।" (In this way, we have designed a LAN.)

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

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

Click on the PDU (message icon) from the common toolbar,

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

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

5) Repeat step #3 to step #5 for the PCs connected to the switch.

6) Observe how HUB & switch are forwarding the PDU & write your observation & conclusion about the behaviour of switch & HUB.

Student Observation:

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

Switch: Forwards packets only to device with the matching MAC address using MAC table. If unknown it sends to all ports except source.

HUB: Forwards packets to all devices on all ports regardless of destination.

Result:

The behavior of network devices (HUB & switch) was successfully analyzed using Cisco Packet Tracer.