Date:

EXPERIMENT 6

IMPLEMENTATION OF TREE TOPOLOGY USING PACKET TRACER

Aim: To implement a tree topology using packet tracer and hence to transmit data between the devices connected using tree topology.

Software / Apparatus required: Packet Tracer / End devices, Hubs, connectors.

Procedure:

Steps for building topology:

Step 1: Start Packet Tracer

Step 2: Choosing Devices and Connections

Step 3: Building the Topology – Adding Hosts

       Single click on the **End Devices**

       Single click on the **Generic** host.

       Move the cursor into topology area.

       Single click in the topology area and it copies the device.

Step 4: Building the Star Topology – Connecting the Hosts to Hubs

       Select a Hub, by clicking once on **Hub** and once on a **generic Hub**

       Add the Hub by moving the plus sign "+"

Step 5: Connect PC's to Hub by first choosing Connections

Click once on the Automatic cable selector

       Click once on PC2

       Choose Fast Ethernet

       Drag the cursor to **Hub0**

       Click once on Hub0

Proceeding in this way create three star topologies

Step 6: Building the Tree Topology – Connecting the Hubs to Active Hub

       Connect the hubs of star topologies to active hub to create tree topology.

Step 7: Configuring IP Addresses and Subnet Masks on the Hosts

       To start communication between the hosts IP Addresses and Subnet Masks had to be configured on the devices. Click once on PC0, Choose the Config tab and click on Fast Ethernet0. Type the IP address in its field. Click on the subnet mask. It will be

generated automatically.

Step 8: Verifying Connectivity in Real time Mode

Be sure you are in **Real time mode.**

Select the **Add Simple PDU** tool used to ping devices.

Click once on PC0, then once on PC3.

The PDU Last Status should show as Successful.

Step 9: Verifying Connectivity in Simulation Mode

Be sure you are in **Simulation** mode.

Deselect all filters (All/None) and select only ICMP.

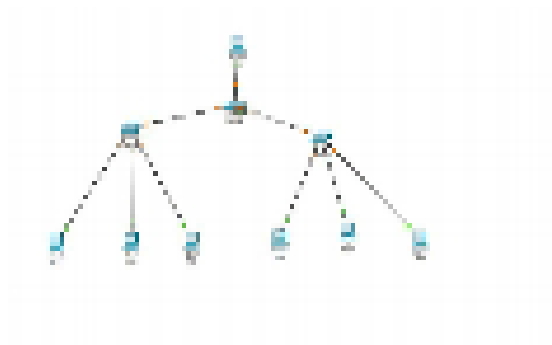Select the **Add Simple PDU** tool used to ping devices.

Click once on PC0, then once on PC3.

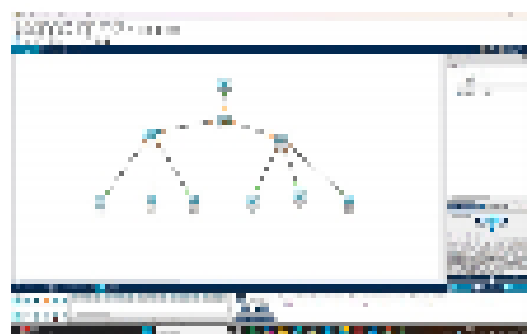Continue clicking **Capture/Forward** button until the ICMP ping is completed. You should see the ICMP messages move between the hosts, hub and switch. The PDU last status should show as Successful.

Diagram:

Output:

Result: Thus the Tree topology is implemented with Packet Tracer emulation Tool