

EXPERIMENT-5

IMPLEMENTATION OF MESH TOPOLOGY USING PACKET TRACER

Aim: To Implement a Mesh topology using packet tracer and hence to transmit data between the devices connected using Mesh topology. Software / Apparatus required: Packet Tracer / End devices, Hubs, Connectors. 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 Topology – Connecting the Hosts to Switches Select a switch, by clicking once on Switches and once on a 2960-24 switch. Add the switch by moving the plus sign “+”

Step 5: Connect PCs to switch by first choosing connections Click once on the Copper Straight-through cable Click once on PC2 Choose Fast Ethernet Drag the cursor to Switch0 Click once on Switch0 Notice the green link lights on PC Ethernet NIC and amber light Switch port. The switch port is temporarily not forwarding frames, while it goes through the stages for the Spanning Tree Protocol (STP) process. After about 30 seconds the amber light will change to green indicating that the port has entered the forwarding stage. Frames can now forward out the switch port.

Step 6: 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 FastEthernet0. Type the IP address in its field. Click on the subnet mask it will be generated automatically.

Step 7: To confirm Data transfer between the devices, Click on the node. Select desktop option and then command prompt. Once the window pops up, ping the IP address of the device to which node0 is connected. Ping statistic will be displayed.

NOTE:

IP ADDRESS:

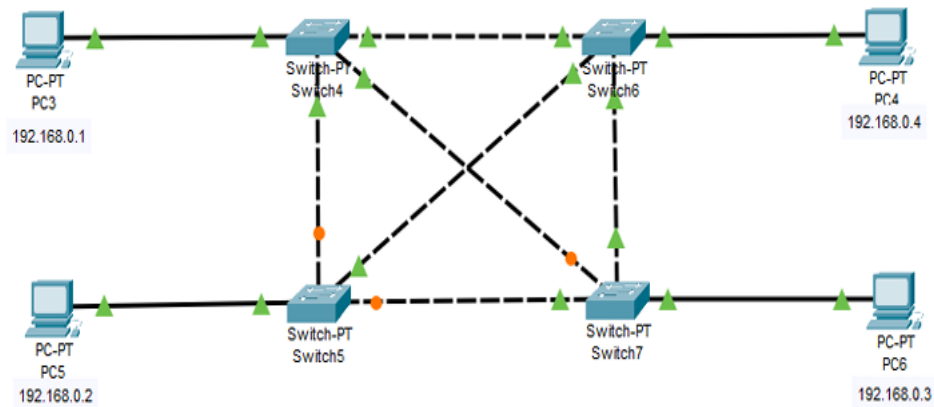
PC0=33.44.12.67

PC1=33.44.12.66

PC2=33.44.12.65

PC3=33.44.12.61

Diagram:



Output:

The screenshot shows the Packet Tracer interface with the network diagram and the Event List panel. The Event List panel displays the following data:

Via	Time(sec)	Last Device
0.802	Switch7	
2.714	Switch7	
2.715	Switch7	
2.715	Switch7	
2.715	Switch7	
2.715	Switch7	
Visible 2.716	Switch6	
Visible 2.716	Switch6	
Visible 2.716	Switch4	
Visible 2.716	Switch4	
Visible 2.716	Switch4	
Visible 2.716	Switch4	

The simulation is running in Realtime mode, and the Event List panel shows a list of events with columns for Via, Time(sec), and Last Device. The simulation is running in Realtime mode.

Result: Thus, the Mesh topology is implemented with Packet Tracer simulation Tool.