

## **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.

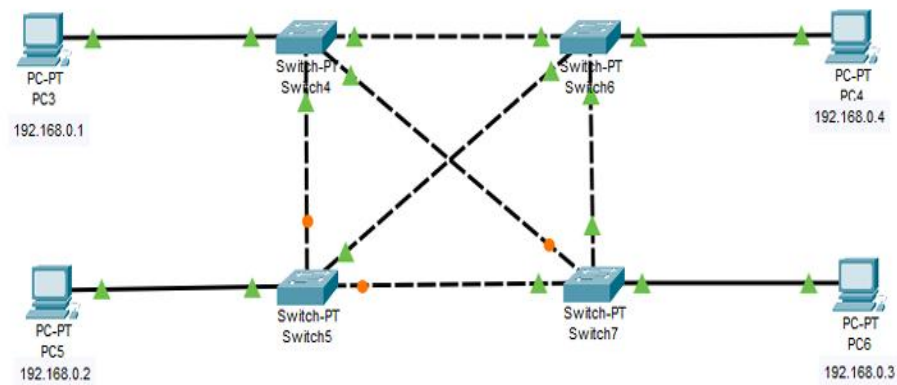
**Step 4:** Building the Topology – Connecting the Hosts to Switches Select a switch, by clicking once on Switches and once on a 2960-24 switch. Add the switch by moving the plus sign “+”

**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.

**Diagram:**



**Output:**

The screenshot shows the Packet Tracer simulation interface. The main window displays the network diagram with four switches (Switch4, Switch5, Switch6, Switch7) and four PCs (PC3, PC4, PC5, PC6) connected in a mesh topology. The Event List panel on the right shows a list of events, including visible events and captured packets. The bottom status bar shows the simulation time as 00:12:24.288 and the play controls.

Vis	Time(sec)	Last Device
	0.802	Switch7
	2.716	-
	2.716	Switch7
	2.716	Switch7
	2.716	Switch7
	2.716	Switch7
Visible	2.716	Switch6
Visible	2.716	Switch6
Visible	2.716	Switch4
Visible	2.716	Switch4
Visible	2.716	Switch4
Visible	2.716	Switch6

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