

18/02/25

EXPERIMENT-6

IMPLEMENTATION OF HYBRID TOPOLOGY (BUS AND RING TOPOLOGY) USING PACKET TRACER

Aim: To Implement a hybrid 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.

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 Bus 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: Building the Ring 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 “+”

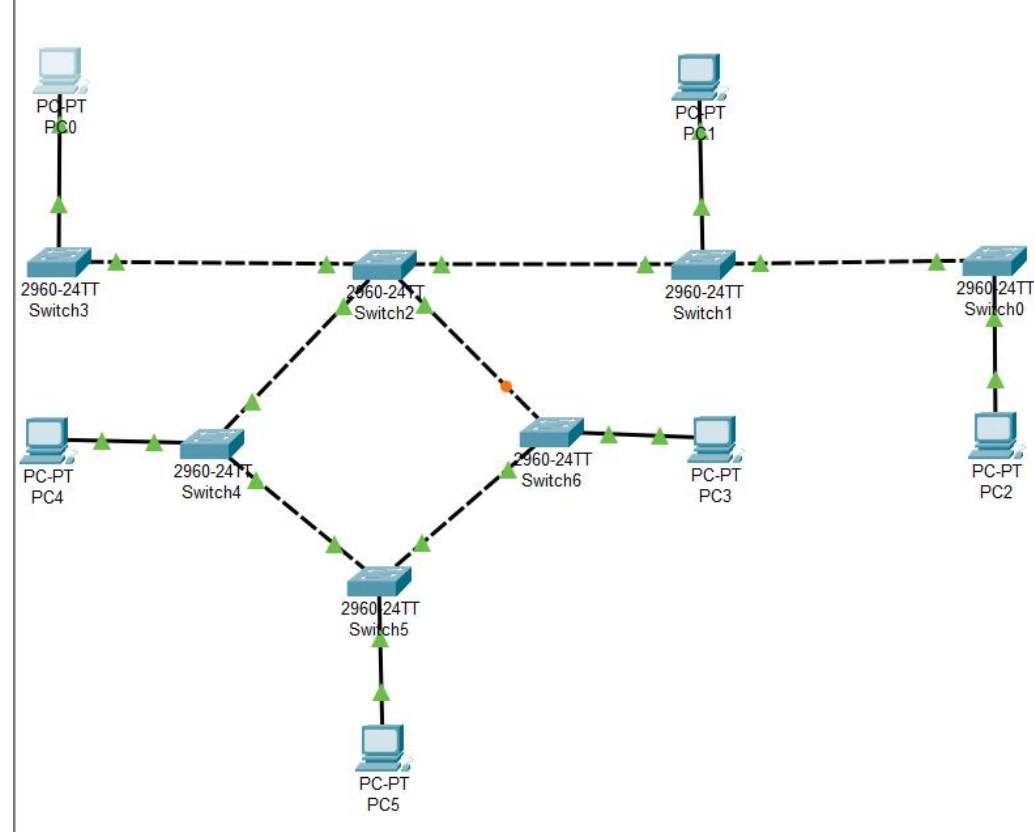
Step 5: Connect PCs to Hub by first choosing Connections Click once on the Automatic cable selector Click once on PC2 Choose Fast Ethernet Drag the cursor to Hub0 Click once on Hub0 Proceeding in this way create three Bus topologies Step 6: Building the Tree Topology – Connecting the Hubs to Active Hub 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 FastEthernet0. Type the IP address in its field. Click on the subnet mask. It will be Generated automatically.

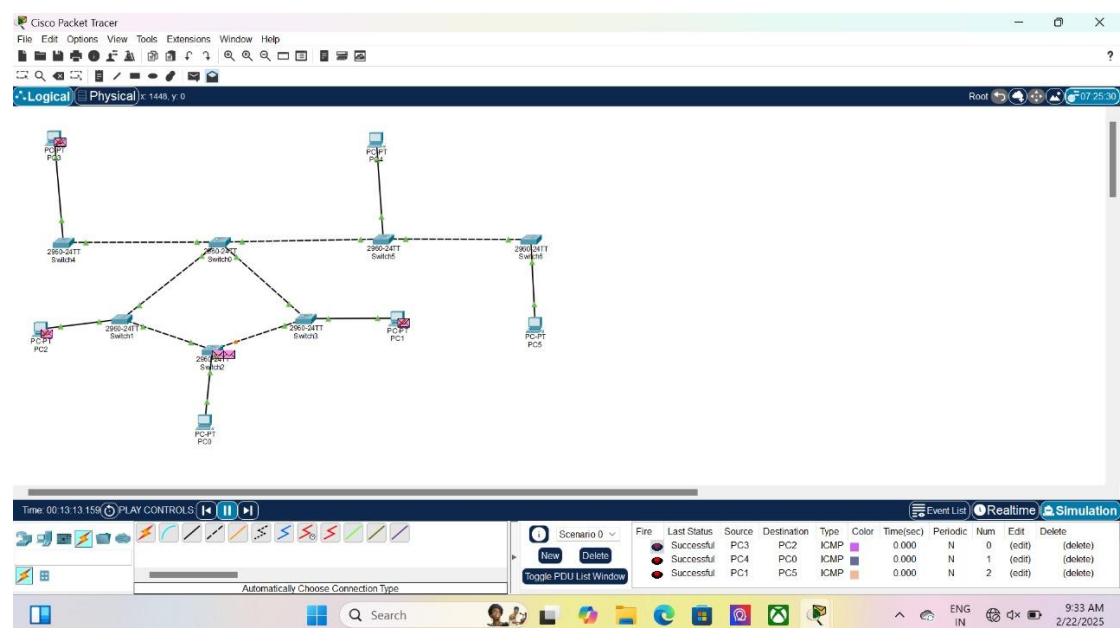
Step 8: Verifying Connectivity in Realtime Mode Be sure you are in Realtime mode. Select the Add Simple PDU tool used to ping devices. Click once on PC0, then once on PC3. The PDU Last Status should show as Successful.

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. The ICMP messages move between the hosts, hub and switch. The PDU Last Status should show as Successful.

Diagram:



Output-



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