

**Date**

## **EXPERIMENT-3**

### **IMPLEMENTATION OF BUS TOPOLOGY USING PACKET TRACER**

**Aim:** To Implement a Bus topology using packet tracer and hence to transmit data between the devices connected using Bus 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 2950-24 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**

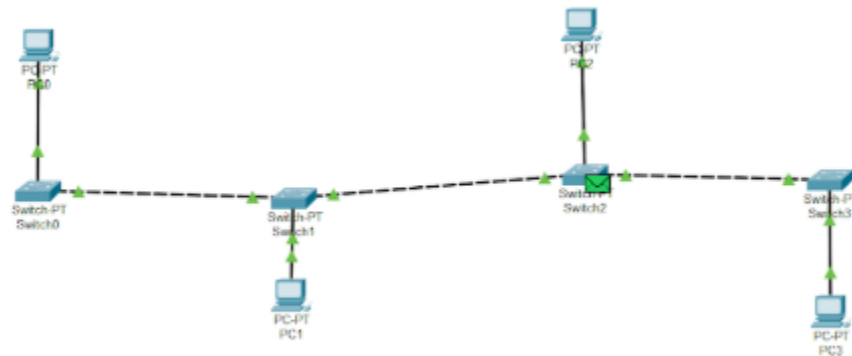
To start communication between the hosts IP Addresses and Subnet Masks had to be configured on the devices. Click once on PC0. Choose the Config tab and click on FastEthernet0. Type the IP address in its field. Click on the subnet mask it will be generated automatically.

**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 statistics will be displayed.

**Diagram:**



**OUT PUT:**

The screenshot displays the Packet Tracer simulation environment. The main workspace shows the bus topology diagram. On the right, the 'Simulation Panel' is open, featuring an 'Event List' table and 'Play Controls'.

Vis.	Time(sec)	Last Device
	0.000	-
	0.001	PC0
	0.002	Switch0
	0.003	Switch1
Visible	0.004	Switch2

Below the Event List, there are 'Reset Simulation', 'Constant Delay', and 'Capturing...' buttons. The 'Play Controls' section includes play, pause, and stop buttons. A list of 'Event List Filters - Visible Events' is provided, including ACL Filter, ARP, BGP, Bluetooth, CAPWAP, CDP, DHCP, DHCPv6, DNS, DTP, EAPOL, EIGRP, EIGRPv6, FTP, H.323, HSRP, HSRPv6, HTTP, HTTPS, ICMP, ICMPv6, IPsec, ISAKMP, IoT, IoT TOP, LACP, LLDP, Meraki, NDP, NETFLOW, NTP, OSPF, OSPFv6, PaGP, POP3, PPP, PPPoE, PTP, RADIUS, REP, RIP, RIPng, RTP, SCCP, SMTP, SNMP, SSH, STP, SYSLOG, TACACS, TCP, TFTP, Telnet, UDP, USB, and VTP. At the bottom, there are 'Edit Filters' and 'Show All/None' buttons.

The bottom status bar shows 'Time: 00:03:52.146' and 'PLAY CONTROLS'. A 'Copper Straight-Through' cable is selected. The 'Scenario 0' tab is active, showing a table with columns: Fire, Last Status, Source, Destination, Type, Color, Time(sec), Periodic, Num, Edit, and Delete. The table contains one entry: 'In Progress', 'PC0', 'PC2', 'ICMP', with a green color and time of 0.000.

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