

## **EXPERIMENT-4**

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

**Aim:** To Implement a Ring topology using packet tracer and hence to transmit data between the devices connected using Ring 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.

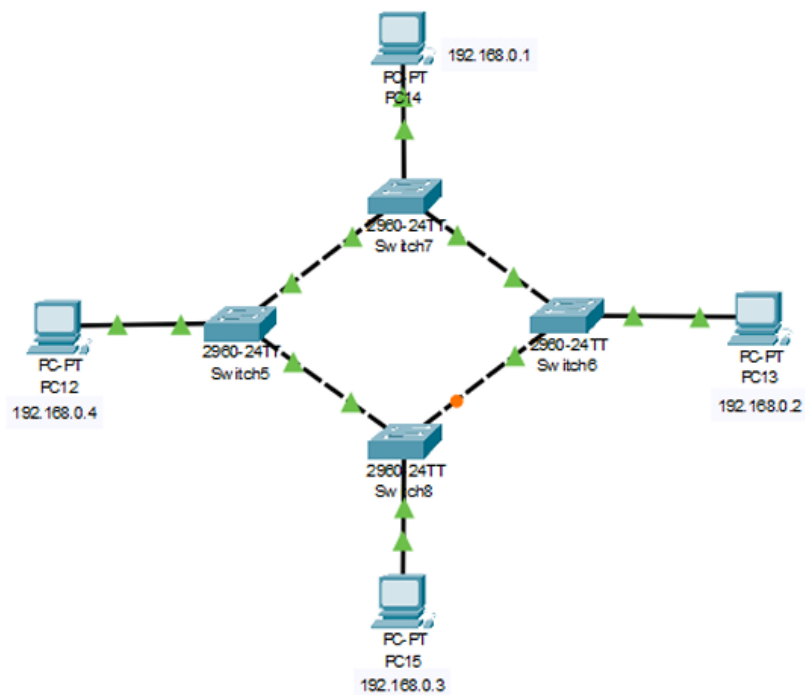
**Step 4:** Building the Topology – Connecting the Hosts to Switches Select a switch, by clicking once on Switches and once on a 2960-24 switch. Add the switch by moving the plus sign “+”

**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 statistics will be displayed.

## Diagram:



## Output

The screenshot shows the Packet Tracer interface with the network diagram and the Event List panel. The Event List panel displays a list of events captured during the simulation.

Via	Time(sec)	Last Device
8.634	Switch2	
8.634	Switch2	
8.634	Switch3	
8.634	Switch3	
8.635	Switch0	
8.968	--	
8.969	Switch3	
8.976	--	
8.977	Switch0	
8.987	--	
8.988	Switch0	
10.630		

Reset Simulation Constant Delay Captured to: 10.630 s

Play Controls

Event List Filters - Visible Events

- 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, Icmp, Icmpv6, LACP, LLDP, Meraki, NDP, NETFLOW, NTP, OSPF, OSPFv6, PAgP, POP3, PPP, PPPoE, PTP, RADIUS, REP, RFP, RIPv2, RIPv3, SMTP, SNMP, SSH, SIP, SYSLOG, TACACS, TCP, TFTP, Telnet, UDP, USB, VTP

Event List

Fire	Last Status	Source	Destination	Type	Color	Time(sec)	Periodic	Num	Edit	Delete
Fire	Successful	PC0	PC3	ICMP		0.000	N	0	(edit)	(delete)

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