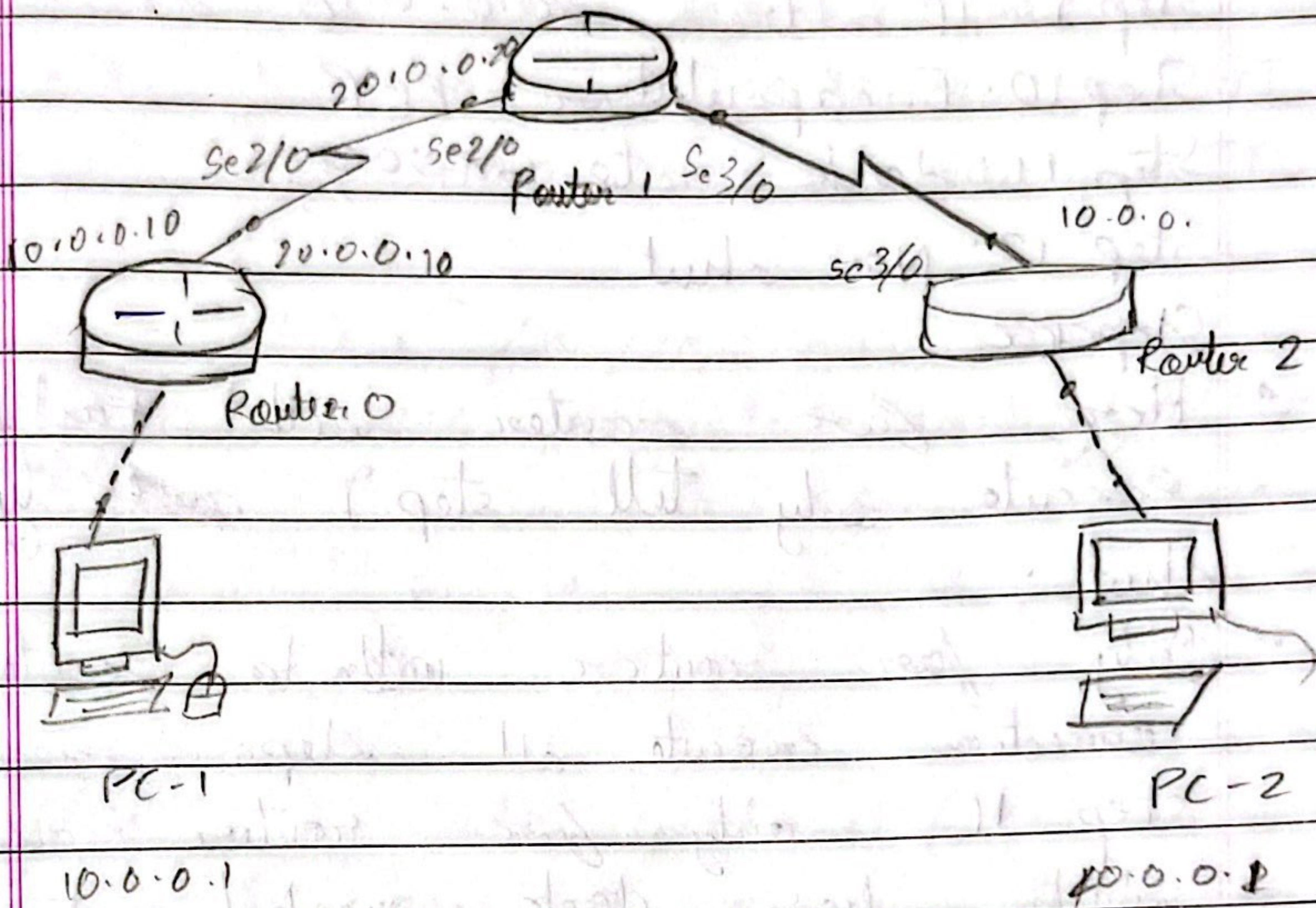


Lab 6

Aim:

Configure RIP routing protocol in routers

Topology:-



Procedure

- Create a network using 3 routers and 2 PCs. Connect routers using serial DCF cable and PC to router using copper crossover cable.
- Set IP and gateway no for both PCs as 10.0.0.1 - IP 10.0.0.10 - gateway - PC0 and 40.0.0.1 - IP 40.0.0.10 - gateway - PC1 respectively.
- Go to router CLI mode and execute commands
 Step 1 - No
 Step 2 - Enable

Step 3:- config T

Step 4:- ^{interface} Fast Ethernet 0/0

Step 5: IP address 10.0.0.10 255.0.0.0

Step 6: No shut

Step 7: Exit

Step 8:- Interface se 2/0

Step 9: IP address 20.0.0.10 255.0.0.0

Step 10: Encapsulation PPP

Step 11: clock rate 64000

Step 12: No shut

Step 13:

- Here for router with Fast Ethernet execute only till step 9 and type No shut.

- Only for router with to router connection execute all steps, execute step 11 only for router which has clock symbol at step. Repeat these steps for all routers.

- Again go to router 0 → CLI mode and type :-

Step 1: config T

Step 2:- router rip

Step 3:- Network 10.0.0.0

Step 4:- Network 20.0.0.0

Step 5:- Exit

- Repeat these steps for all routers

- Now go to each router and type show IP address

- Send message from PC to

Ping Output :-
 Packet tower PC command line 10
 PC > ping 40.0.0.1
 Pinging 40.0.0.1 with 32 bytes

Request timed out
 Reply from 40.0.0.1 : bytes=32 time=3ms TTL=125
 Reply from 40.0.0.1 : bytes=32 time=5ms TTL=125
 Reply from 40.0.0.1 : bytes=32 time=10ms TTL=125

Ping statistics for 40.0.0.1

Packets: Sent=4, received=3, lost=1 (25% loss)
 Approximate round trip time in milliseconds
 Minimum: 5ms, Maximum=10ms, Average=7ms

Observation:-

- Routing information protocol (rip) is a dynamic routing protocol that was has count as a routing metric to find the best path b/w source & destination.
- update of routing info are always broadcast.
- Full routing tables are sent in updates.
- Router always trust routing info received from neighbour routers.

27/12/2023

Logical

[Root]

New Cluster

Move Object

Set Tiled Background

Viewport

Router-PT
Router0

Se2/0

Router-PT
Router1

Se3/0

Router-PT
Router2

Se2/0

PC-PT
PC0

Fa0/0

PC-PT
PC1

Fa0/0

Simulation Panel

Event List

Vis.	Time(sec)	Last De	At Dev	Type	Info
	0.002	--	PC0	ICMP	
	0.003	PC0	Rout...	ICMP	
	0.004	Router0	Rout...	ICMP	
	0.005	Router1	Rout...	ICMP	
	0.005	--	Rout...	ARP	

Reset Simulation

☒ Constant Delay

Captured to: 0.005 s

Play Controls

Back

Auto Capture / Play

Capture / Forward

Event List Filters - Visible Events

ACL Filter, ARP, BGP, CDP, DHCP, DHCPv6, DNS, DTP, EIGRP, EIGRPv6, FTP, H.323, HSRP, HSRPv6, HTTP, HTTPS, ICMP, ICMPv6, IPsec, ISAKMP, LACP, NDP, NETFLOW, SCCP, SMTP, SNMP, SSH

Command Prompt

Packet Tracer PC Command Line 1.0

PC>ping 40.0.0.1

Pinging 40.0.0.1 with 32 bytes of data:

Reply from 40.0.0.1: bytes=32 time=13ms TTL=125

Reply from 40.0.0.1: bytes=32 time=2ms TTL=125

Reply from 40.0.0.1: bytes=32 time=9ms TTL=125

Reply from 40.0.0.1: bytes=32 time=12ms TTL=125

Ping statistics for 40.0.0.1:

Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),

Approximate round trip times in milli-seconds:

Minimum = 2ms, Maximum = 13ms, Average = 9ms

PC>|