WEEK 6

Configure RIP routing Protocol in Routers.

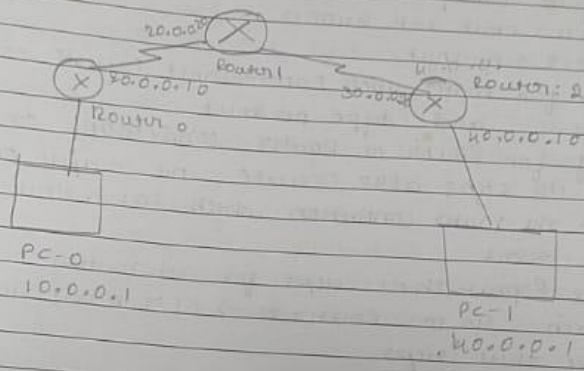
OBSERVATION

DATE: 20-7-23 PAGE

Aim -

Configure RIP routing protocal in Routers

Topology



Procedure

- Create a Network using 3 routers and 2PC's connect routers using serial DCE cable and PC to router using copper-cross over cable
- Set the IP address and gateway no of both PC's as

10.0.0.1 IP 10.0.0.10 gateway - PC 0
40.0.0.1 IP 40.0.0.10 gateway - PC 1

- Go to Router -> CLI mode and execute the following commands

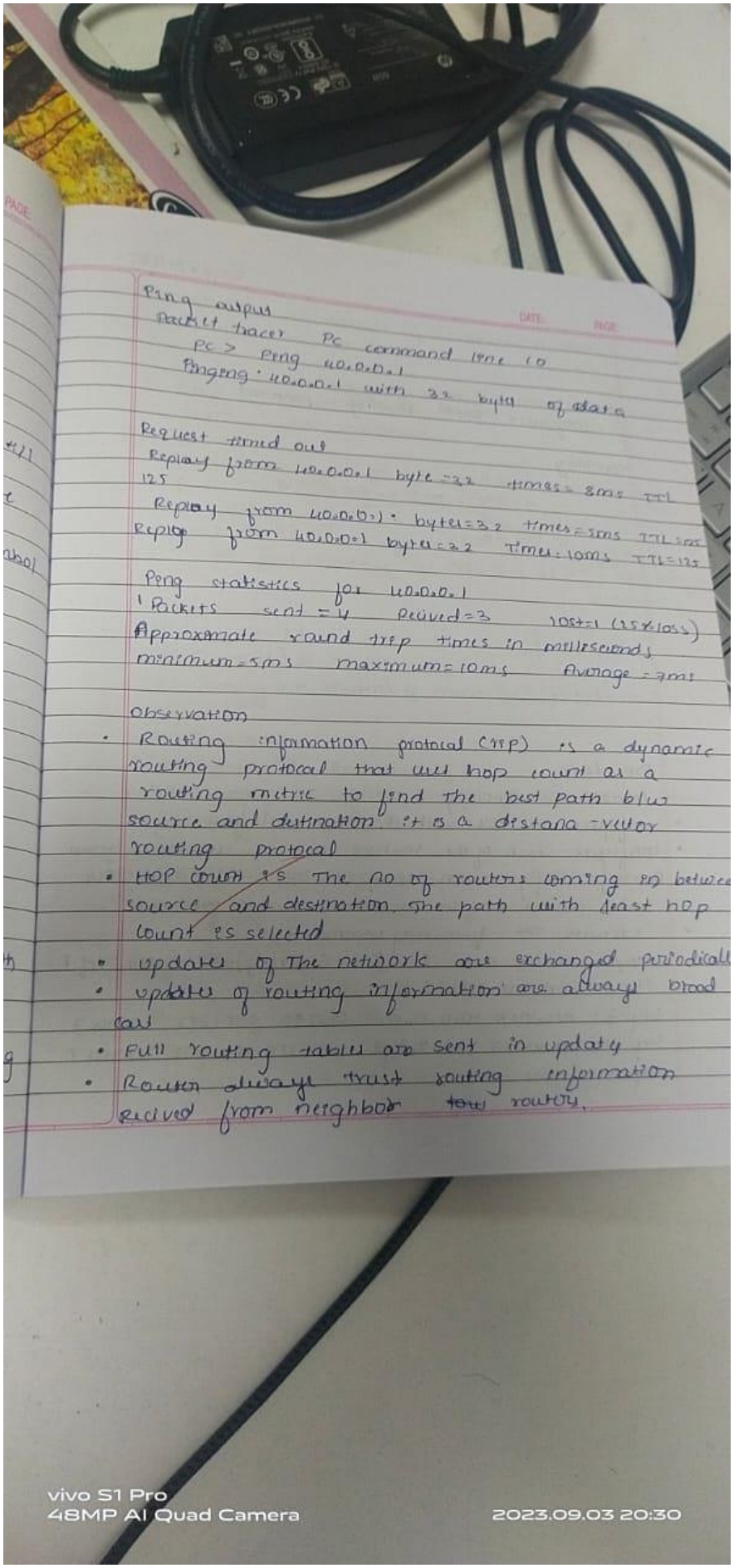
Step 1 : en
Step 2 : Enable
Step 3 : config T
Step 4 : interface FastEthernet 0/0

Step 5 : IP address 10.0.0.10 255.0.0.0
Step 6 : no shut
Step 7 : exit
Step 8 : Interface se2/0
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

- Here for Router with FastEthernet execute only till Step 9 and type no shut
- Only for Router to Router connection execute all the steps also execute the step 11 only for the router connection which has a clock symbol at start
- Repeat these steps for all routers
- Again go to Router 0 → CLI mode and type these steps

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
- At last now go to each router and type show IP route Here the IP address associated with that router will be labelled as C and other IP addresses are labelled as R
- Lastly go to PC0 and ping msg to PC1 using ping destination IP address command



Ping output

Packet tracer PC command line 10

PC > Ping 40.0.0.1

Pinging 40.0.0.1 with 32 bytes of data

Request timed out

Reply from 40.0.0.1 byte=32 times=8ms TTL 125

Reply from 40.0.0.1 byte=32 times=5ms TTL=125

Reply from 40.0.0.1 byte=32 times=10ms TTL=125

Ping statistics for 40.0.0.1

Packets sent = 4 Recived=3 lost=1 (25% loss)

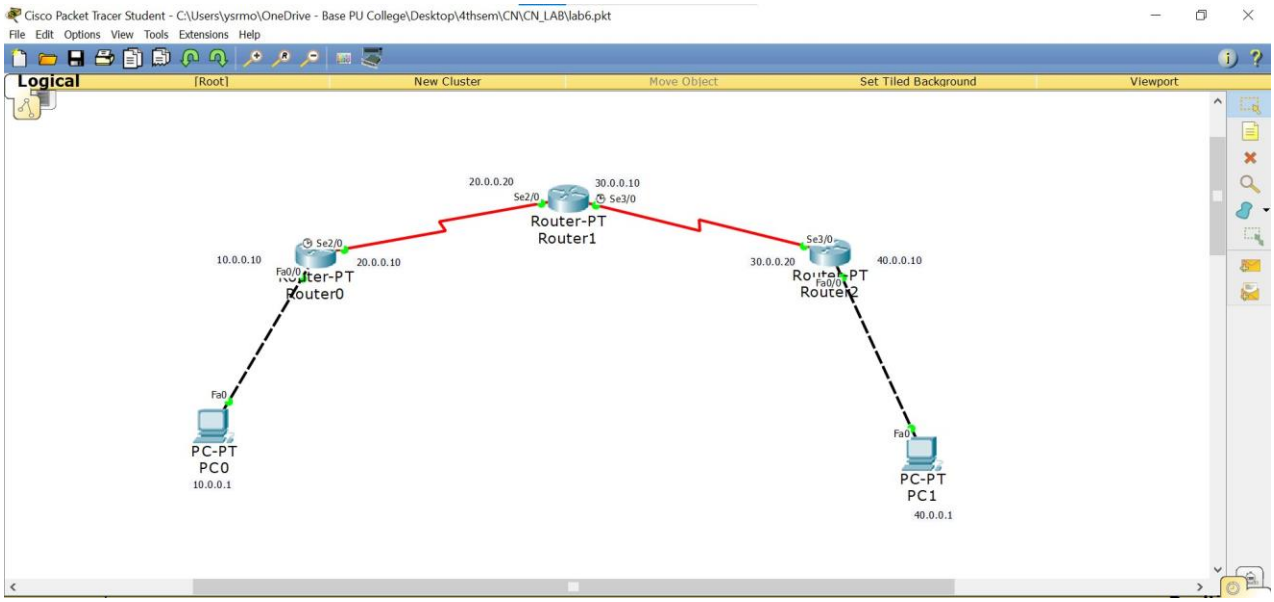
Approximate round trip times in milliseconds

minimum=5ms maximum=10ms Average = 7ms

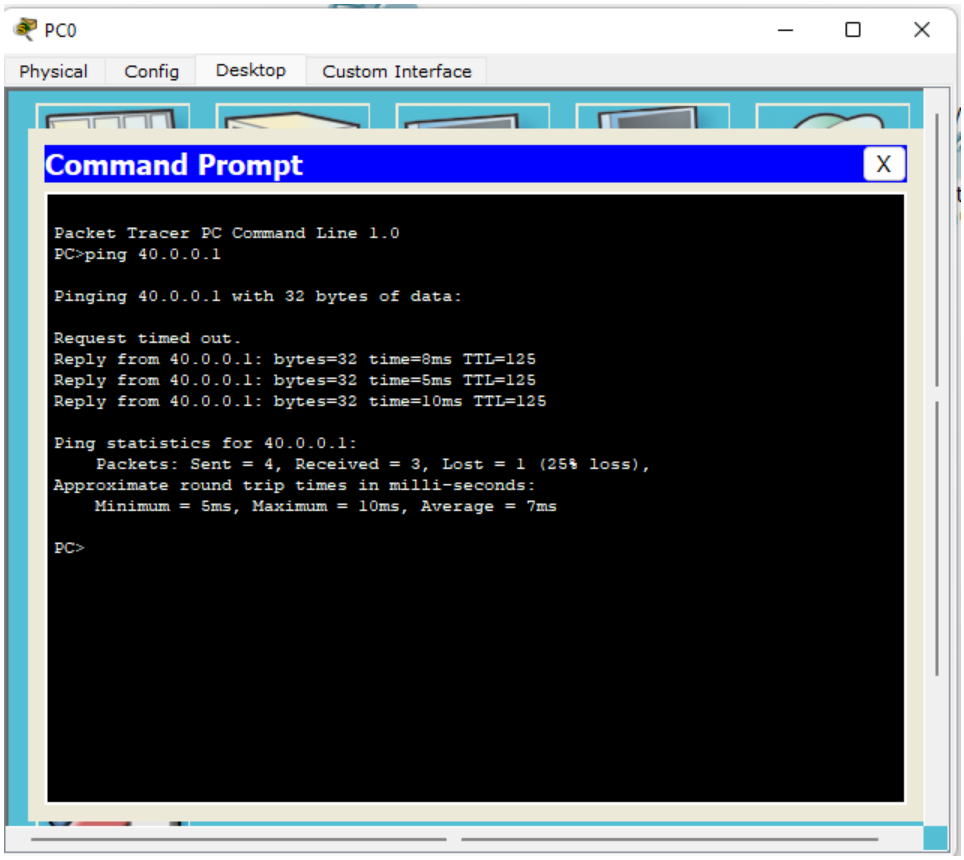
Observation

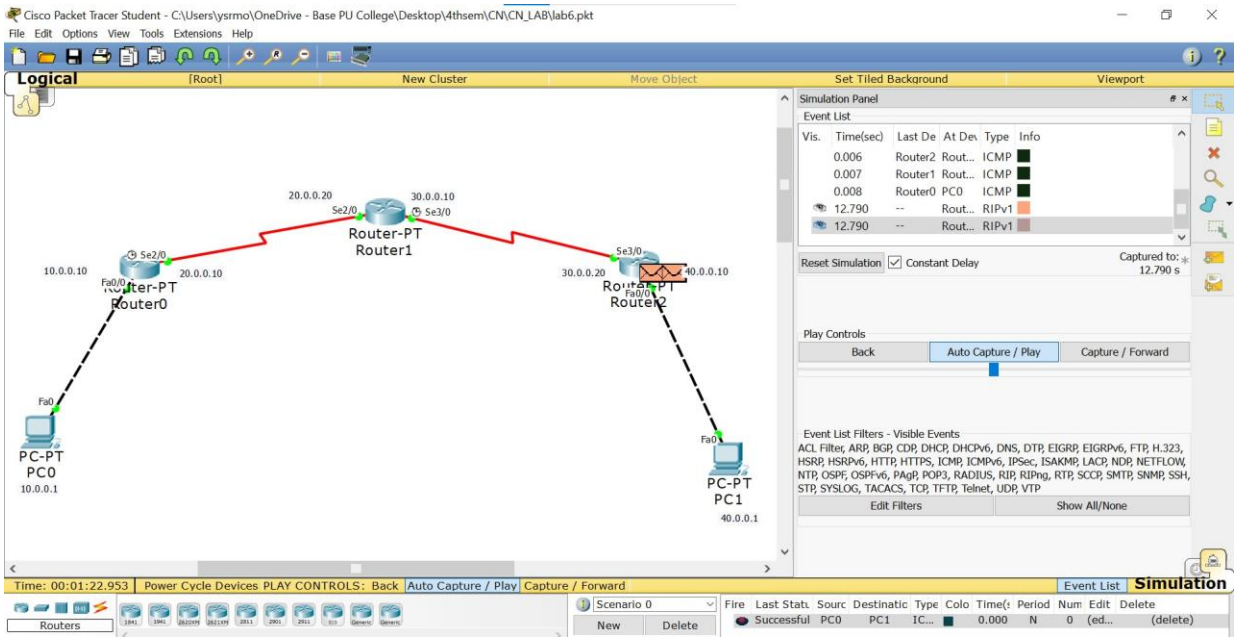
- Routing information protocal (RIP) is a dynamic routing protocal that use hop count as a routing metric to find the best path b/w source and distination it is a distance-vector routing protocal
- HOP count is The no of routers coming in between source and destination the path with least hop count is selected
- updates of The network are exchanged periodically
- updates of routing information are always broad cast
- Full routing tables are sent in updates
- Router always trust routing information Recived from neighbor routers.

TOPOLOGY:



OUTPUT:




Cisco Packet Tracer Student - C:\Users\ysrmo\OneDrive - Base PU College\Desktop\4thsem\CN\CN_LAB\lab6.pkt
File Edit Options View Tools Extensions Help
Logical
[Root]
New Cluster
Move Object
Set Tiled Background
Viewport
Router-PT
Router1
Router-PT
Router0
Router-PT
Router2
PC-PT
PC0
10.0.0.1
PC-PT
PC1
40.0.0.1
20.0.0.20
30.0.0.10
Se2/0
Se3/0
10.0.0.10
20.0.0.10
30.0.0.20
40.0.0.10
Fa0/0
Fa0
Simulation Panel
Event List
Vis. Time(sec) Last De At De Type Info
0.006 Router2 Rout... ICMP
0.007 Router1 Rout... ICMP
0.008 Router0 PC0 ICMP
12.790 -- Rout... RIPv1
12.790 -- Rout... RIPv1
Reset Simulation
Constant Delay
Captured to: 12.790 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, NTP, OSPF, OSPFv6, PAgP, POP3, RADIUS, RIP, RIPng, RTP, SCCP, SMTP, SNMP, SSH, STP, SYSLOG, TACACS, TCP, TFTP, Telnet, UDP, VTP
Edit Filters
Show All/None
Time: 00:01:22.953
Power Cycle Devices PLAY CONTROLS: Back
Auto Capture / Play
Capture / Forward
Event List
Simulation
Routers
Scenario 0
New
Delete
Fire Last Statu Sourc Destinatic Type Colo Time(s Period Num Edit Delete
Successful PC0 PC1 IC... 0.000 N 0 (ed... (delete)