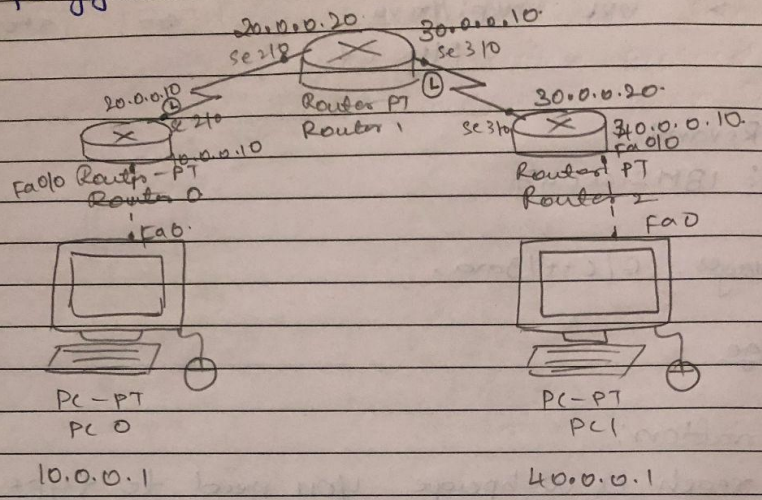
Aim: Configure RIP routing Protocol in Routers

Observation:

2017/23

Aim: Configure RIP routing protocol in Router.

Topology:



Procedure:

1. Create a Network using 3 routers & 2 PC's. Routers are connected using Serial DCE Cable & connection between PC & router is using copper-cross over cable.
2. Set IP address & gateway of both PC's
   10.0.0.1 10.0.0.10 — PC 0.
   40.0.0.1 40.0.0.10 — PC1 respectively.
3. Go to CLI of Routers & follow these commands.
   (i) No
   (ii) Enable
   (iii) config t
   (iv) interface fa 0/0
   (v) ip address 10.0.0.10 255.0.0.0.
   (vi) no Shut
   (vii) Exit
   (viii) interface Serial 2/0

(ix) ~~interface~~ ip address 20.0.0.10 255.0.0.0.
(x) Encapsulation ppp.
(xi) clock rate 64000.
(xii) no Shut.

4. Go to router 0 CLI & follow these steps:
   (i) config T
   (ii) router rip.
   (iii) network 10.0.0.0
   (iv) network 20.0.0.0
   (v) exit.
5. Repeat these to all routers.
6. Go to PC 0 command prompt and ping PC 1.

Output:

pc > ping 40.0.0.1
pinging 40.0.0.1 with 32 bytes of data:

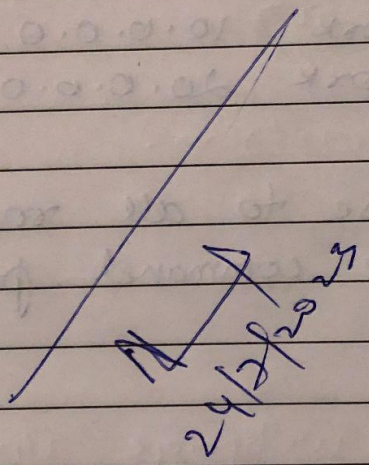
Request timed out.
Reply from 40.0.0.1 : bytes = 32 time : 8ms TTL = 125
Reply from 40.0.0.1 : bytes = 32 time : 5ms TTL = 125
Reply from 40.0.0.1 : bytes = 32. time : 10 ms TTL = 125

Ping Statistics for 40.0.0.1 :
Packets : Sent 4, Received = 3, Lost = 1 (25% loss).
Approximate ~~round~~ trip times in milliseconds.
Minimum = 5 ms, Maximum = 10ms, Average = 7ms.

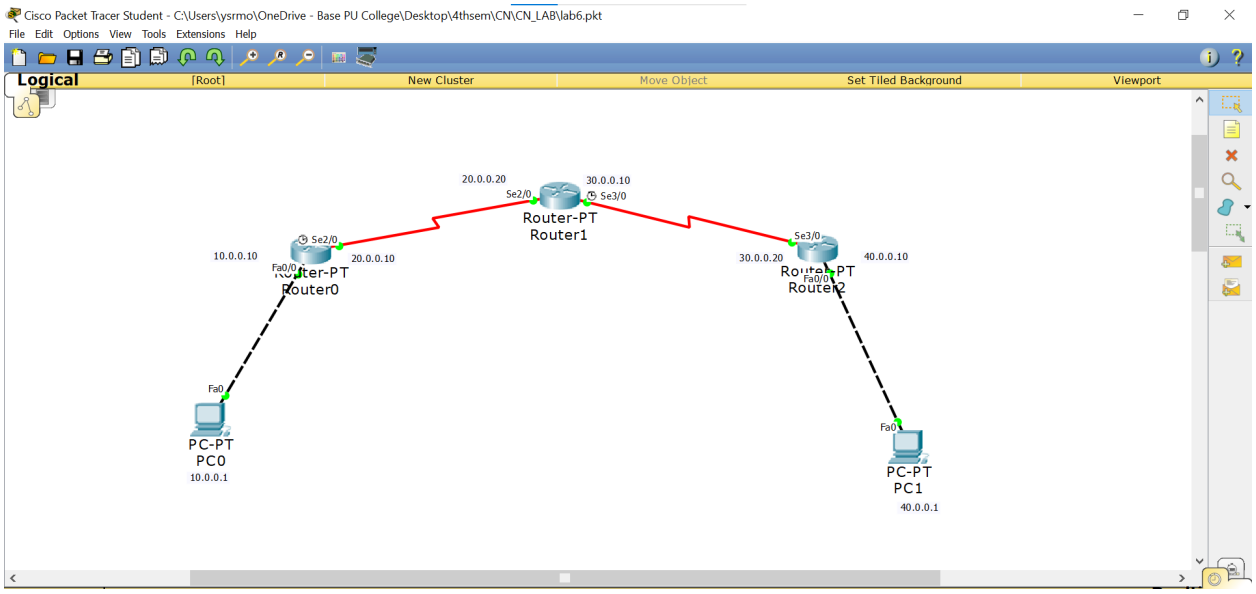
Observation:

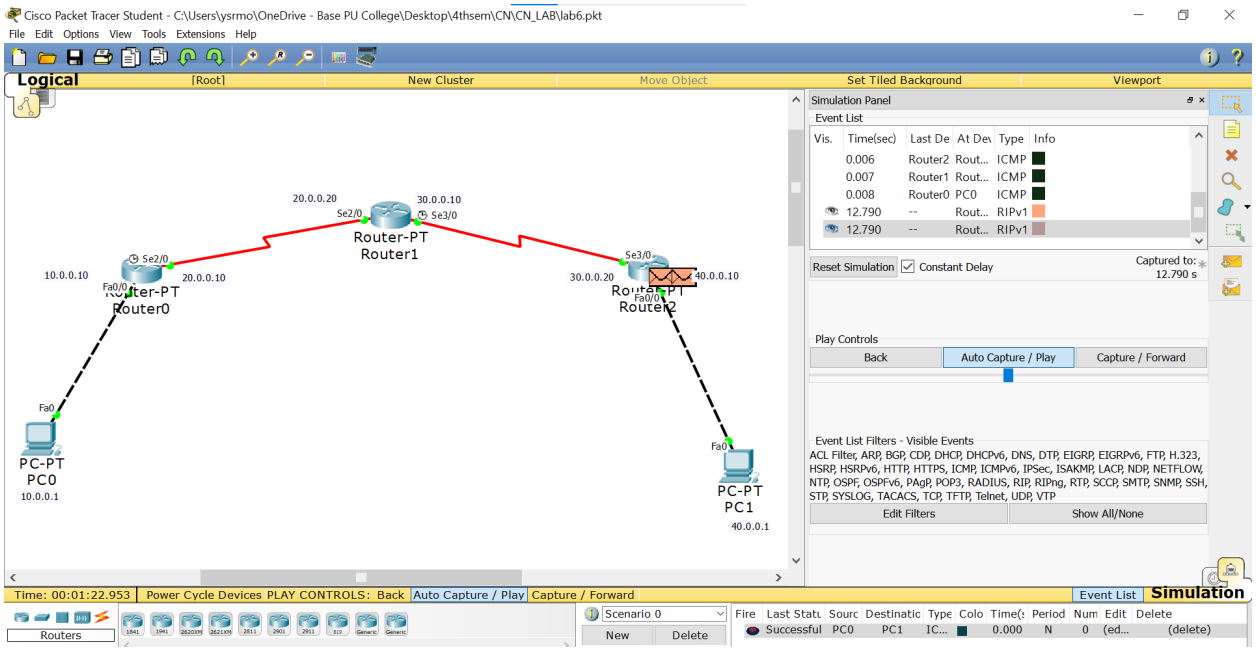
Routing Information Protocol (RIP) is a dynamic routing protocol that uses hop count as routing metric to find best path between source & destination. It is a distance vector routing protocol.

Hop count is no. of routers between source & destination.

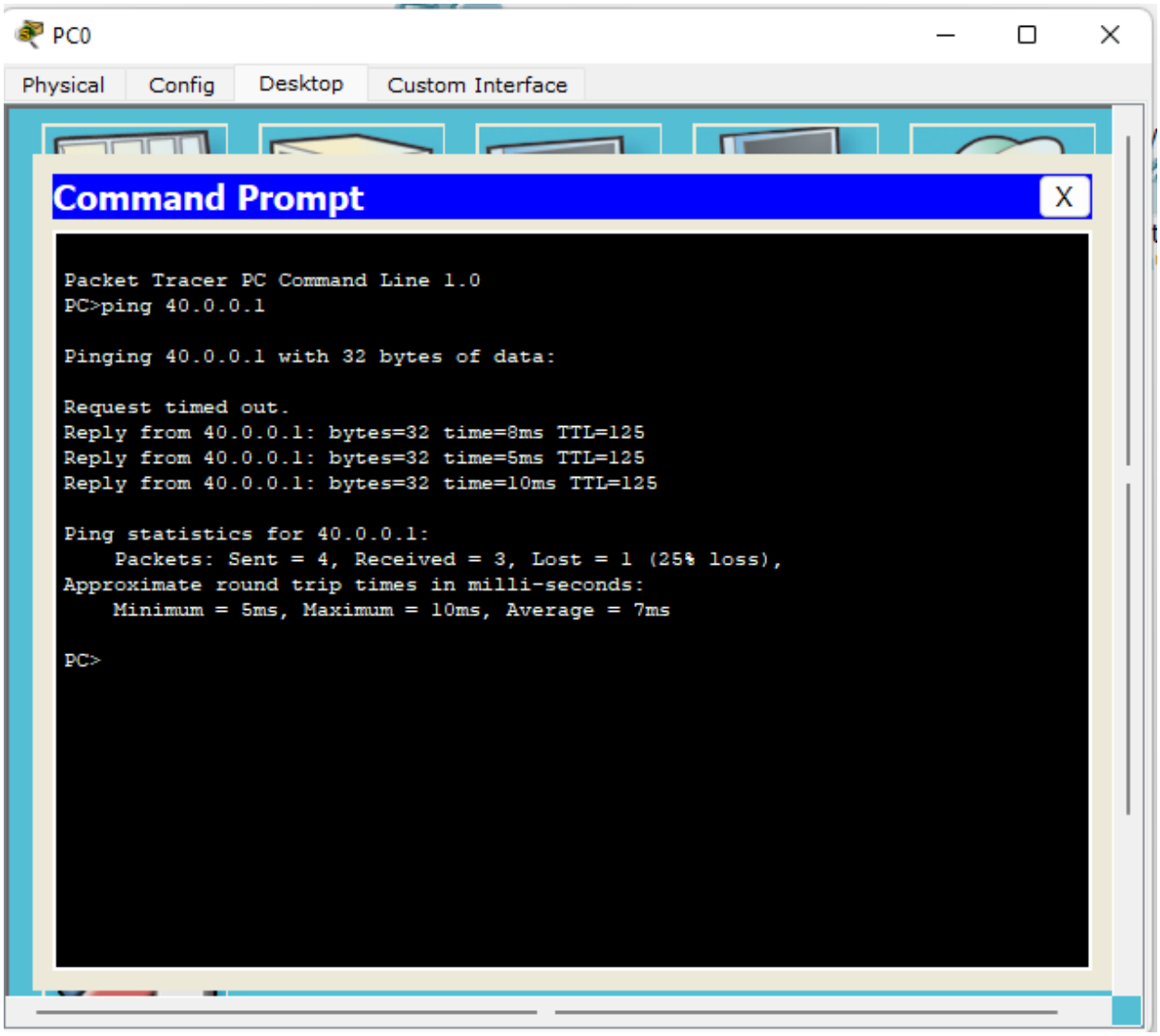


Topology:


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
20.0.0.20
30.0.0.10
Se2/0
Se3/0
Router-PT
Router1
10.0.0.10
20.0.0.10
30.0.0.20
40.0.0.10
Fa0/0
Router-PT
Router0
Router-PT
Router2
Fa0
PC-PT
PC0
10.0.0.1
PC-PT
PC1
40.0.0.1


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
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(Period Num Edit Delete
Successful PC0 PC1 IC... 0.000 N 0 (ed... (delete)

Output:


PC0
Physical
Config
Desktop
Custom Interface
Command Prompt
X
Packet Tracer PC Command Line 1.0
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: bytes=32 time=8ms 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 times in milli-seconds:
Minimum = 5ms, Maximum = 10ms, Average = 7ms
PC>