

LAB 6

Configure RIP routing Protocol in Routers.

OBSERVATION:

LAB - 05 [ii]
RIP Routing Internet Protocol

Aim: configuring RIP Routing Protocol in Router.

Topology:-

```
graph LR
    R1((ROUTER-PT  
ROUTER 1)) --- R2((ROUTER-PT  
ROUTER 2))
    R1 --- R3((ROUTER-PT  
ROUTER 0))
    R3 --- PC0[PC-PT  
PC0]
    R2 --- PC1[PC-PT  
PC1]
```

PROCEDURE:-

- 1) Three routers and 2 PCs are connected as shown in the topology.
- 2) configure the PC's with proper IP address and gateway address.
- 3) Similarly, configure the Routers with the proper IP address in CLI mode.
 - N. Enable
 - config t
 - interface Fast Ethernet 0/0

- IP address 10.0.0.1 255.0.0.0
- Encapsulation PPP
- clockrate 64000
- NO shut

note:- The Encapsulation PPP should be given to all the routers and 'clockrate 64000' command should be only given to the clocksymbolised sides of the router (i.e. open sides).

→ For making the router to know about the other devices, in the previous 2 experiments we used device In the 1st Static and the other with dynamic address but these here we use a Routing Protocol algorithm that itself makes the router to know other devices

→ router RIP

→ network 20.0.0.0 } Router 2

→ network 30.0.0.0 }

→ router RIP

→ network 30.0.0.0 }

→ network 40.0.0.0 } Router 3

→ router RIP

→ network 10.0.0.0 }

→ network 20.0.0.0 } Router 1.

PING OUTPUT:

PC> Ping 40.0.0.0

Pinging 40.0.0.1 with 32 bytes of data:

Reply from 40.0.0.1: bytes = 32 time: 0ms
TTL: 128

Reply from 40.0.0.1: bytes = 32 time: 0ms; TTL: 128

Reply from 40.0.0.1: bytes = 32 time: 0ms; TTL: 128

Reply from 40.0.0.1: bytes = 32 time: 0ms; TTL: 128

Ping statistics from 40.0.0.1

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

Approximate Round Trip times in ms

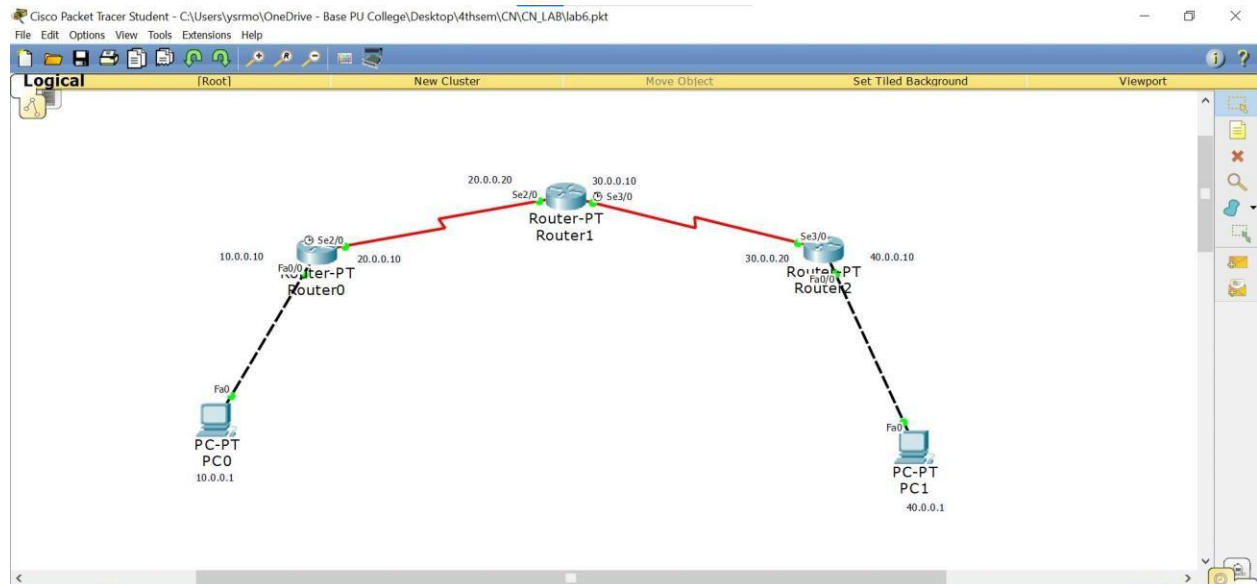
Minimum = 0ms, Maximum = 0ms, Average = 0ms.

OBSERVATIONS:-

RIP is the Routing Information Protocol is a distance vector protocol that uses hop count as its primary metric. RIP defines how routers should share information when moving traffic among an interconnected group of local area Networks.

→ The RIP Protocol here used to connect the routers to one other and PC's using RIP Protocol and message is pinged successfully.

TOPOLOGY:



OUTPUT:

```
PC0
Physical Config Desktop Custom Interface
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:

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>
```

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

Router0 (10.0.0.10) is connected to Router1 (20.0.0.20) via S2/0/0 and 20.0.0.10. Router1 (30.0.0.10) is connected to Router2 (30.0.0.20) via S3/0/0 and 30.0.0.10. Router2 (40.0.0.10) is connected to PC1 (40.0.0.1) via Fa0/0/0. Router0 (10.0.0.10) is connected to PC0 (10.0.0.1) via Fa0/0/0.

Simulation Panel

Event List

| Vis: | Time(sec) | Last De | At Dev | Type | Info |
|------|-----------|---------|-----------|-------|------|
| | 0.006 | Router2 | Router1 | ICMP | |
| | 0.007 | Router1 | Router0 | ICMP | |
| | 0.008 | Router0 | PC0 | ICMP | |
| | 12.790 | -- | Router... | RIPv1 | |
| | 12.790 | -- | Router... | 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, CD, DHCP, DNS, DTP, EIGRP, EIGRPv6, FTP, H.323, HSRP, HSRPv6, HTTP, HTTPS, ICMP, ICMPv6, IPsec, ISAKMP, LACP, NTP, NETFLOW, NTP, OSPF, OSPFv6, PAgg, 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

Scenario 0

New Delete

Fire Last Stat: Sours Destination Type Colo Time(Period Num Edit Delete

Successful PC0 PC1 IC... 0.000 N 0 (ed... (delete)