

## LAB 6

Configure RIP routing Protocol in Routers.

OBSERVATION:

Lab-5(ii)

RIP - Routing Information Protocol:

Aim: Configuring RIP - Routing Protocol in routers.

Topology:

```

graph LR
    R0((Router-PT Router 0)) --- R1((Router-PT Router 1))
    R1 --- R2((Router-PT Router 2))
    R0 --- PC0[PC-PT PC0]
    R2 --- PC1[PC-PT PC1]
  
```

Procedure:

- 1) Three routers & 2 PC's are connected as shown in topology.
- 2) Configure the PC's with proper IP address & 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
- clock rate 64000.
- no shut.

Note: The encapsulation PPP should be given to all 3 routers & clock rate 64000.

Command should be only given to the clock symbol side of the router (i.e. open sides)

→ for making the routers to know about the other devices in the previous 2 experiments we used static IP of the other with dynamic address, but here we use a routing protocol Algorithm that itself makes the router to know other devices.

→ router srip  
→ network 20.0.0.0 } router 2  
→ network 30.0.0.0 }

→ router srip  
→ network 30.0.0.0 } router 3  
→ network 40.0.0.0 }

→ router srip  
→ network 10.0.0.0 } router 1  
→ network 20.0.0.0 }

### Ping output:

PC > ping 40.0.0.1

Pinging 40.0.0.1 with 32 byte of data  
Reply from 40.0.0.1: byte = 32 time: 0ms TTL: 128  
Reply from 40.0.0.1: byte = 32 time: 0ms TTL: 128  
Reply from 40.0.0.1: byte = 32 time: 0ms TTL: 128  
Reply from 40.0.0.1: byte = 32 time: 0ms TTL: 128

Ping statistics from 40.0.0.1

Packets sent = 4 Received 4 (loss = 0 (0% loss))  
Approximate round trip times in ms  
minimum = 0ms, maximum: 0ms Average = 0ms

Observation:

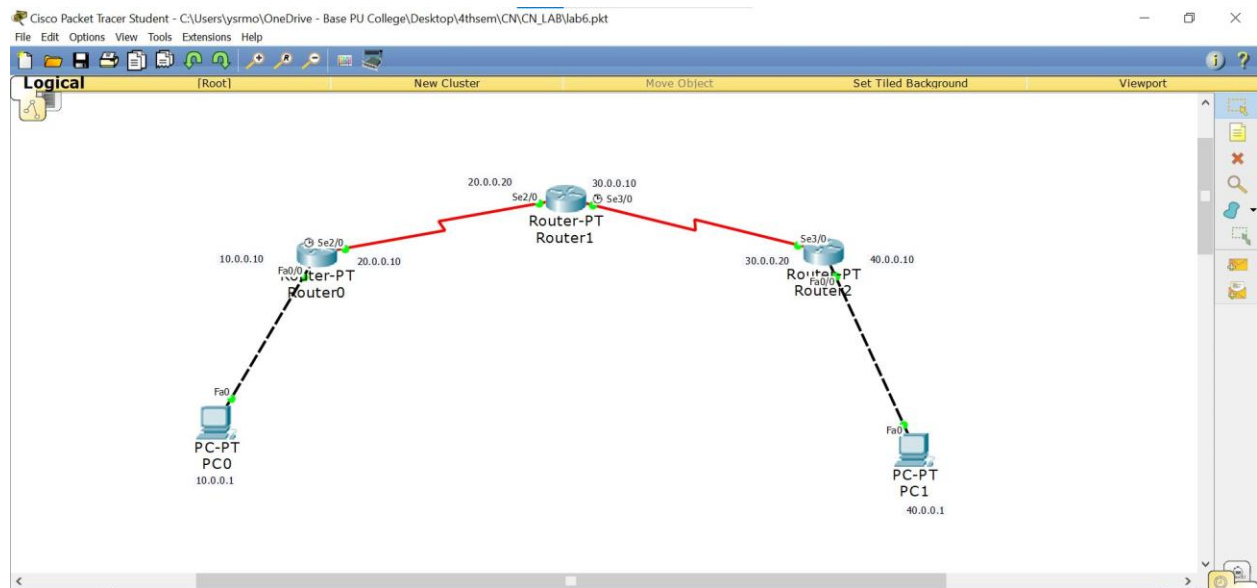
RIP is the Routing Information Protocol as a distance vector protocol that uses hop count as its primary metric. RIP defines how routers should share information when moving traffic among an interconnected group of local area network.

→ The RIP protocol here, used to connect the routers to one other & PC's using RIP procedure protocol & message is pinged successfully.

MD  
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## 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 (Fa0/0), 20.0.0.10 (Se2/0), 20.0.0.10 (Fa0/0)

Router1: 20.0.0.20 (Se2/0), 30.0.0.10 (Se3/0)

Router2: 30.0.0.20 (Se3/0), 40.0.0.10 (Fa0/0)

PC-PT PC0: 10.0.0.1

PC-PT PC1: 40.0.0.1

Simulation Panel

Event List

Vis.	Time(sec)	Last De	At Dev	Type	Info
	0.006	Router2	Router1	ICMP	
	0.007	Router1	Router2	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, CDP, DHCP, DNS, DTP, EIGRP, EIGRPv6, FTP, H.323, HSRP, HSRPv6, HTTP, HTTPS, ICMP, ICMPv6, IPsec, ISAKMP, LACP, ND, NETFLOW, NTP, OSPF, OSPFv6, PAgg, POP3, RADIUS, RIP, RIPng, RTP, SCCP, SMTP, SNMP, SSH, STP, SYSLOG, TACACS, TCB, 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

File	Last Stat	Sourc	Destinatic	Type	Colo	Time(s)	Period	Num	Edit	Delete
Successful	PC0	PC1	IC...			0.000	N	0	(ed...	(delete)