5. Aim: Configuring RIP routing Protocol in routers.

RIP: Topology:

10.0.0.10   20.0.0.10   20.0.0.20   30.0.0.10   30.0.0.20

Fa0/0   Se2/0   Se2/0   se3/0   se 2/0   40.0.0.

Router-PT   Router-PT   Fa0/0   Router-PT
router 0   router 1   router 2

PC-PT   PC-PT
PC0   PC1

10.0.0.1   40.0.0.1
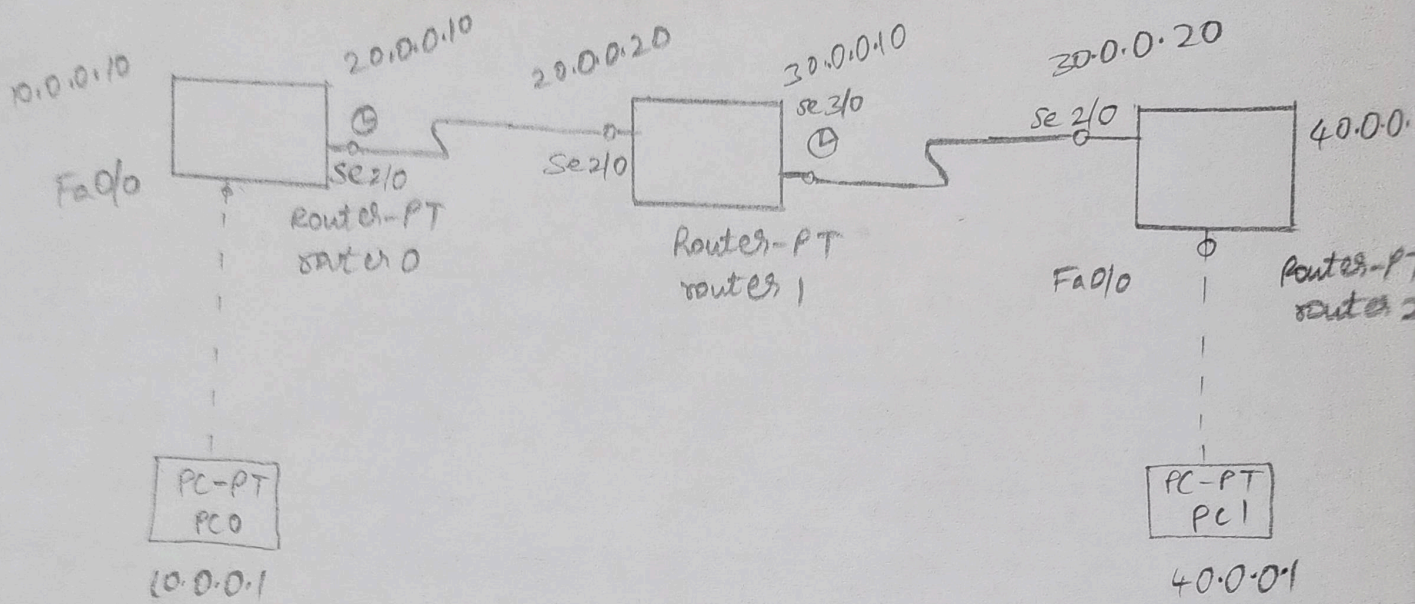
Procedure: 1) place 3 generic routers & 2 generic PCs in workspace

2) Connect routers & two PCs using Copper cross over

3) Connect the routers using serial DCI with clock signal symbol

4) Place notes near PCs & routers

5) Select IP address of PC0 & PC1 as well as their subnet mask & default gateway.

6) Go to CLI of router 0 & enter following Commands

   - enable
   - config t
   - interface fastethernet 0/0
   - ip address 10.0.0.10 255.0.0.0
   - no shut

Connection should show green. Repeat for PC1 & router 2 as well.

(Connection should) ✗

Now, open CLI of router 0 & enter the following commands:

- enable
- config t
- interface serial 2/0
- encapsulation PPP
- clock rate 64000
- no shut

Open CLI of router 1

- enable
- config t
- interface serial 2/0
- ip address 20.0.20.20   255.0.0.0
- encapsulation PPP
- no shut

Connection will turn green:

Open CLI of router 2 again:

- enable
- config t
- interface serial 3/0
- ip address 30.0.0.10   255.0.0.0
- encapsulation
- clock rate 64000
- no shut

Open CLI for router 2:

- enable
- config t
- interface serial 2/0
- ip address 30.0.0.20   255.0.0.0
- encapsulation PPP
- no shut

Now,
open CLI of router 0 & enter following commands:
(Config)# router rip
(config - router # network 10.0.0.0
config - router # network 20.0.0.0
config - router # exit
show ip route

Similarly repeat for router 1 & router 2 with networks
20 & 30 and 30 & 40.

Simulation mode: Add simple PDU by selecting the
PCs & click on auto Capture from right panel.
Real time mode: simple PCO go to command prompt and
select destination address 40.0.0.1

Observation:
Leaving outcome: Routing information protocol is a protocol
that routers use to exchange information of topology
among the network.

It is used when in place of static IP routing
because with help of rip protocol routing it
becomes easy when large scale of routers is present

Result:
PC > Ping 40.0.0.1
Request timed out
Reply from 40.0.0.1 : bytes = 32   time = 6 ms   TTL = 125
Reply from
                2 times

Ping statistics for 40.0.0.1 :
    packets : Sent = 4, received = 3, Lost = 1 (25% loss)

2) 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 = 19 ms   TTL = 125

[3 more times

ping statistics for 40.0.0.1:

packets: sent = 4, Received = 4, lost = 0   (0% loss)

Approximate round tip times in milli-seconds:

Minimum = 2ms, maximum = 19ms, Average = 10ms