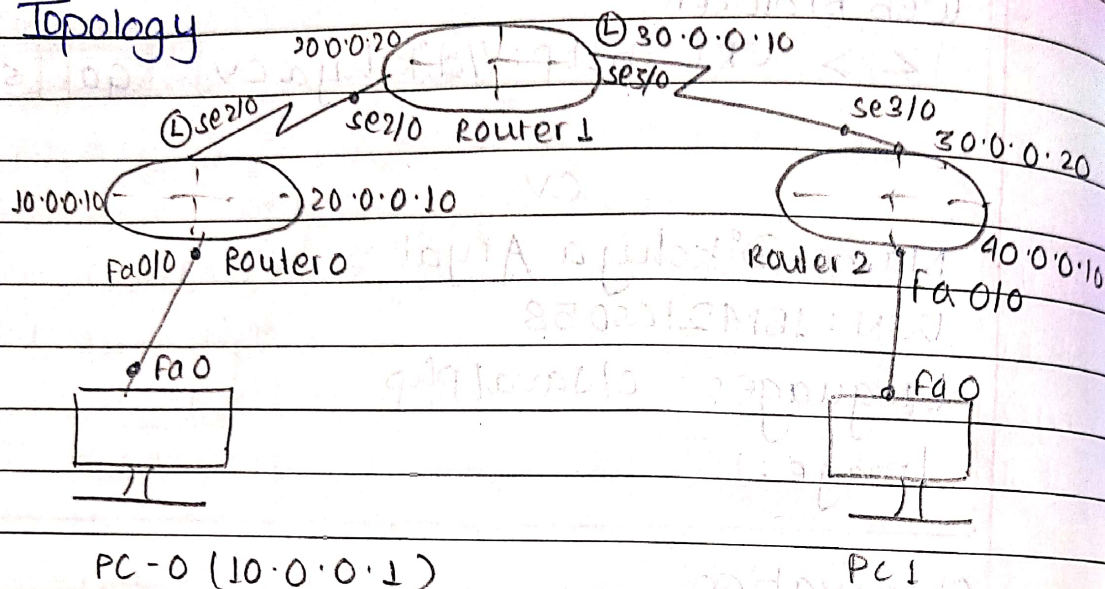


## Configure RIP routing Protocols in Routers.

Aim: Configure RIP routing protocols in routers

### Topology



### Procedure

1. Create a Network using 3 routers and 2 PC's. connect routers using serial DCE cable and PC to router using copper-crossover cable.
2. Set the IP address and gateway no for both PC's as  
 10.0.0.1 - IP    10.0.0.10 - gateway → PC0  
 40.0.0.1 - IP    40.0.0.10 - gateway → PC1.  
 respectively.
3. Go to router → CLI mode and execute following commands.
  1. No
  2. Enable
  3. Config T
  4. Interface fast Ethernet 0/0.
  5. IP address 10.0.0.10    255.0.0.0
  6. No shut
  7. Exit
  8. Interface se 2/0
  9. IP address 20.0.0.10    255.0.0.0



10. Encapsulation PPP.
11. clock rate 64000
12. No shut.
4. Here for router with fast ethernet execute only till step 9 and type no shut.
5. Only for fouter to router connection execute all steps, also execute the step 11 only for the router connection which has a clock symbol at start. Repeat the steps for all routers.
6. Again go to router 0 → cli mode and type these steps.
  1. config t
  2. router rip
  3. Network 10.0.0.0
  4. Network 20.0.0.0
  5. Exit.
7. Repeat these steps for all the routers.
8. At last now go to each router and type show IP route. Here the IP addresses associated with the router will be labelled as C and other IP addresses will be labelled as R.
9. Lastly go to PC0 and ping a message to PC1 using ping destination IP address command.

### Ping output

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 times=8ms TTL=125

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

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



Ping statistics for 40.0.0.1

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

Appion. round trip time 8 in miliseconds

Minimum= 5ms, Maximum= 10ms, Average= 7ms

### Observation

Routing Info protocol is a dynamic routing protocol that uses hop count as a routing metric to find the best path between source and destination. It is a distance-vector routing protocol.

Hop count is the no. of routers coming between the source and destination. The path with least hop count is selected.

Updates of network are exchanged periodically.

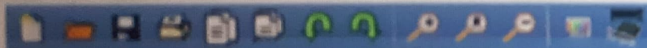
Updates of routing info are always broadcast.

Full routing tables are sent in updates.

Routers always trust routing info. received from neighbour routers.

*Shit*





Logical

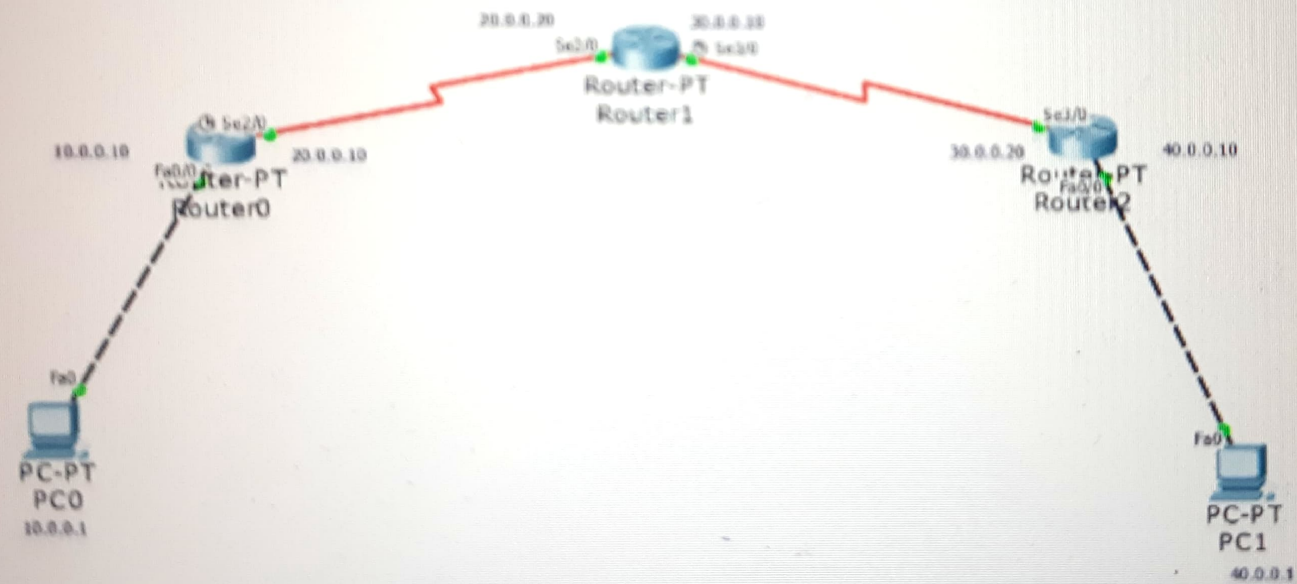
[Root]

New Cluster

Move Object

Set Tiled Background

Viewport



# 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>