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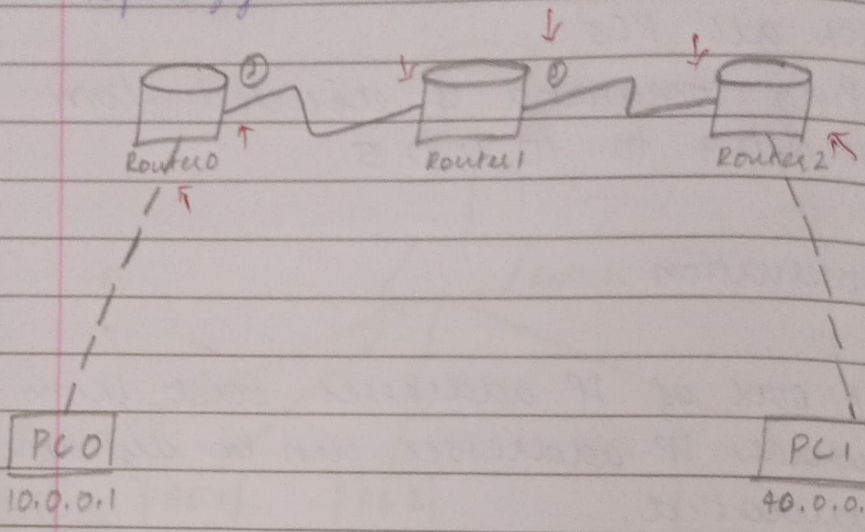
Experiment 5

Aim: Configuring RIP Routing Protocol in Routers

Topology:



Procedure:

RIP is the routing information Protocol

i) Place 3 generic routers and 2 generic PCs in the workspace
ii) Connect the PCs to the routers using copper cross over wire.
iii) Connect the routers to eachother using Serial DCE wire. In Seriel DCE connection, first device will be the DCE side and the second device will be automatically set to the DTE side
iv) Configure the PCs by setting the IP address, subnet mask and gateway

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v) Configure the routers by setting the IP addresses and subnet mask

vi) For the first router, after setting IP address go to CLI and execute:
#Encapsulation PPP
#clock rate 64000
#no shutdown

vii) Repeat the same for all routers. For the DTE side router connections, donot set the clock rate

viii) Select the first router, go to config, rip and add the respective networks that the router must learn about.

ix) Repeat the same for all routers

x) Ping command is executed from 10.0.0.1 to 40.0.0.1

Result:

ping 40.0.0.1

Pinging 40.0.0.1 with 32 bytes of data:
Reply from 40.0.0.1 : bytes = 32 time = 11ms TTL = 125
Reply from 40.0.0.1 : bytes = 32 time = 2ms TTL = 125
Reply from 40.0.0.1 : bytes = 32 time = 10ms TTL = 125
Reply from 40.0.0.1 : bytes = 32 time = 11ms TTL = 125

Ping statistics for 40.0.0.1 :
packets : sent = 4, received = 4, lost = 0

Observation:

RIP is router information protocol which is a dynamic routing protocol that uses

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hop count to find path between source and network. It has an advantage over static network when a huge number of routers are involved. The router learns the path on its own rather than the user teaching the path to the router.

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