Routers share their routing table

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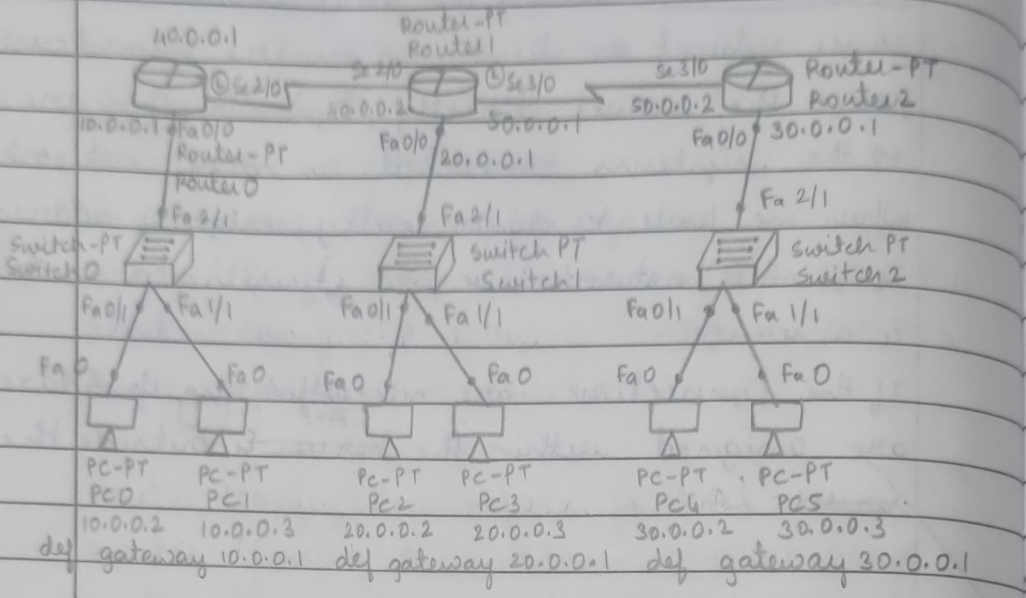
Experiment - 5

Q. Configure Routing information protocol in routers

Aim: To configure routing info protocol in routers



Topology:

1. Switch 0 connected to router 0 interface Fa 0/0 using copper-straight through cable from Fa 2/1
2. Similarly, switch1 & switch 2 connected to router2 interface Fa 0/0 & router 2 interface Fa0/0 resp.
3. Router 2 connected to router0 & router1 via Se 2/0 & Se 3/0 interface resp.
4. PC0, PC1 connected to switch0 via copper straight cable with ip address 10.0.0.2, 10.0.0.3 resp.
5. PC2, PC 3 connected to switch1 via copper straight cable with ip address 20.0.0.2, 2.0.0.0.3 resp

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6. PC4, PC5 connected to switch2 via copper straight cable with ip address 30.0.0.2 and 30.0.0.3 resp.

Procedure:

1. Open cisco packet tracer and drag the following components:
Routers: Place 3 routers in the middle.
Switch: Place 3 switches & connect them to the routers with Fa 2/1 interface using copper-straight cable.
PC: Place 6 PCs, two of them connected to each of the 3 switches via Fa 0/0 interface using copper straight cable.
Connect the routers using serial-dct cable.

2 Configure all the 3 routers:

* Router 0:

```
Router > enable
Router # > config terminal
Router (config) # interface serial 2/0
Router (config-if) # ip address 30.0.0.1 255.0.0.0
Router (config) # no shut
Router (config) # exit
```

* Router 1:

```
Router (config) # interface serial 2/0
Router (config-if) # ip address 40.0.0.1 255.0.0.0
Router (config-if) # no shut
Router (config-if) # exit

Router (config) # interface Fa0/0
Router (config-if) # ip address 20.0.0.1 255.0.0.0
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Router(config-if)# No shut
Router (config-if)# exit

Router(config)# interface se 3/0
Router(config-if)# ip address 50.0.0.1 255.0.0.0
Router(config-if)# no shut
Router(config-if)# exit

* Router 2:

Router(config)# interface Fa 0/0
Router(config-if)# ip address 30.0.0.1 255.0.0.0
Router(config-if)# No shut
Router(config-if)# exit

Router(config)# interface se 2/0
Router(config-if)# ip address 50.0.0.2 255.0.0.0
Router(config-if)# no shut
Router(config-if)# exit.

3. Set the ip address & default gateway for all the 6 PCs.

4. Configure RIP for all routers.

* Router 0:

Router(config)# router rip
Router(config-router)# network 10.0.0.0
Router(config-router)# network 30.0.0.0

* Router 1:

Router(config)# router rip
Router(config-router)# network 40.0.0.0
Router(config-router)# network 20.0.0.0
Router(config-router)# network 50.0.0.0

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- Router 2:

Router (config) # router rip
Router (config-router) # network 30.0.0.0
Router (config-router) # network 50.0.0.0

5. ~~Close~~ Ping the PCs to check the connections.

Observation:

The routers communicate with each other and share ~~it~~ each of their routing table after they are configured with routing info protocol.

Once RIP is activated in Routers, every router share its routing protocol with its immediate neighbours. Hence in iterations every router will know about all PCs that their neighbours are connected to.