PRACTICAL 5

AIM :

Using Packet Tracer, create a network with three routers with RIPv1 and each router associated network will have a minimum of three PCs. Show Connectivity

Routing Information Protocol (RIP)

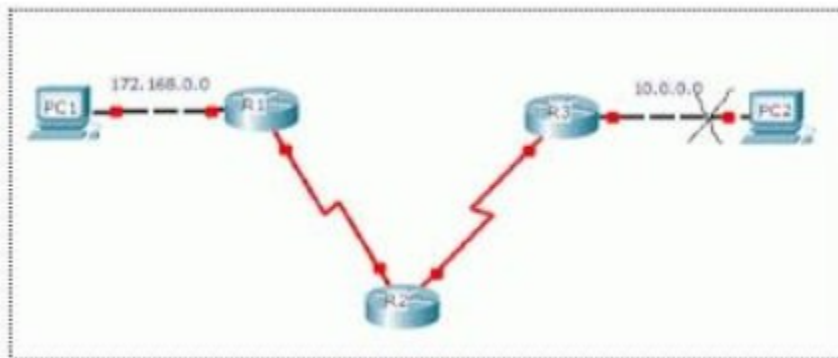There are two versions of RIP: RIPv1 and RIPv2.
Comparing between RIPv1 and RIPv2
1. Both RIPv1 and RIPv2 have the Administrative distance 120.
2. Both RIPv1 and RIPv2 are distance vector routing protocol.
Both RIPv1 and RIPv2's metric is hop count. Maximum hop count = 15. Max routers = 16.

Consider the following case

Here all routers are running RIP and network 10.0.0.0 goes down. After hold timer expires, that network will be advertised by metric 16 and everyone will know that the network is down and that network will be seen in routing table as possibly down.
4. Both RIPv1 and RIPv2 send routing updates or complete routing table or broadcast every 30 seconds. i.e. The default routing update period for both version of RIP is 30 seconds. i.e. Both have the same timers.

5. Both RIPv1 and RIPv2 use split horizon to prevent routing loops.
6. Both RIPv1 and RIPv2 are configured with router rip.
7. Network command tells both RIPv1 and RIPv2 to send hellos, out an interface, to find neighbors and to advertise routes.

Consider the following example of RIP using packet tracer
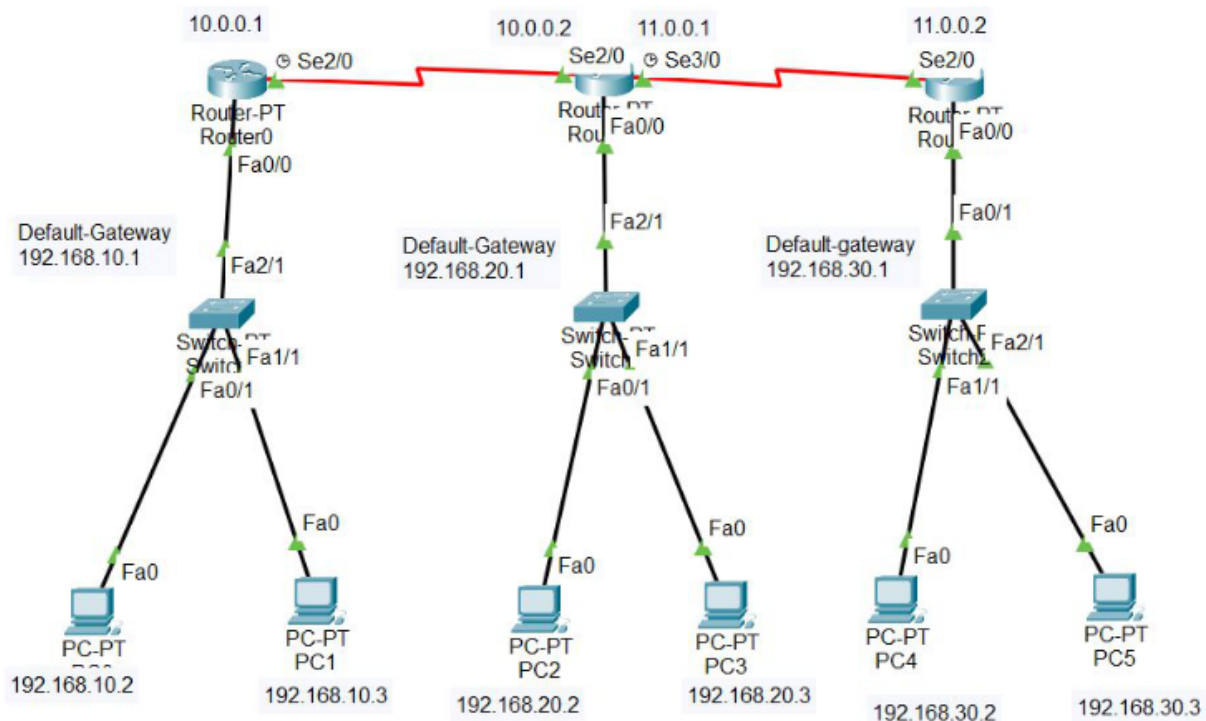
Now we configure the PC's and Routers as follow

RIP Routes for Router0 are given below:

```
Router(config)#network 192.168.10.0
Router(config)#network 10.0.0.0
```

RIP Routes for Router1 are given below:

```
Router(config)#network 192.168.20.0
Router(config)#network 10.0.0.0
Router(config)#network 11.0.0.0
```

RIP Routes for Router2 are given below:

```
Router(config)#network 192.168.30.0
```

Step 4: (configure Router 0)
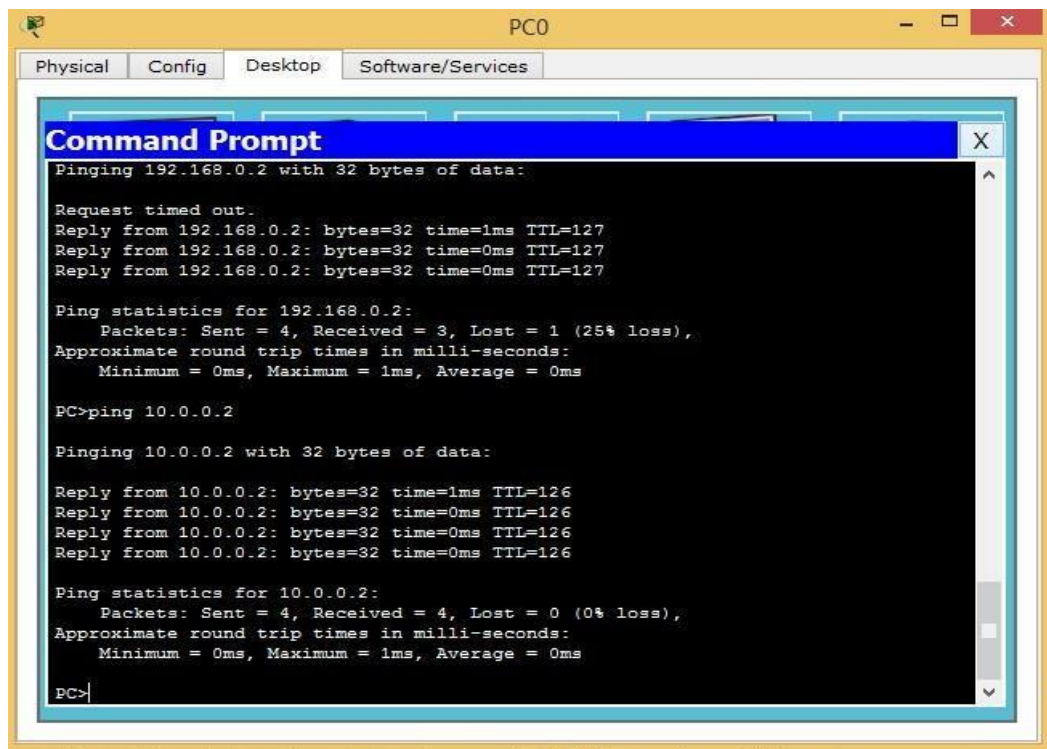
Step 5: (configure Router 1)

Now we configure the routing table for both the routers

Routing table for Router 1

Routing table for Router 2

Now we use the ping command to check the working

Hence the RIP protocol has been studied.