EXP-5

AIM

Configure RIP routing protocol in routers

TOPOLOGY :-

```
              ┌──────────────┐
              │  20.0.0.20   │
              │   Router 2   │
┌──────────────┐          ┌──────────────┐
│  20.0.0.10   │  30.0.0.10   │  30.0.0.20   │
│   Router 1   │          │   Router 3   │
│  10.0.0.10   │          │  40.0.0.10   │
└──────────────┘          └──────────────┘
```

```
┌──────────────┐                    ┌──────────────┐
│ End device   │                    │ End device   │
│ 10.0.0.1     │                    │ 40.0.0.1     │
└──────────────┘                    └──────────────┘
```
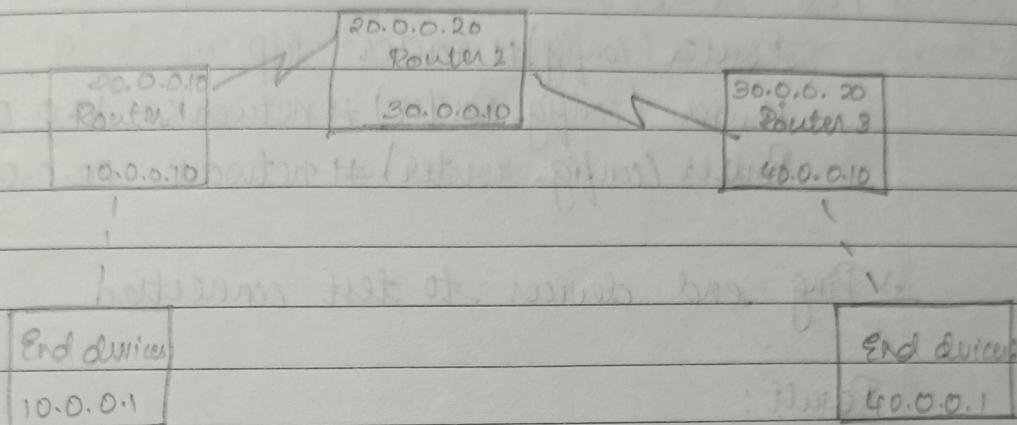
PROCEDURE

→ Convert 3 routers and 2 end devices.

→ Assign IP addresses to both end devices

→ Assign IP addresses to all routers. Use the the following commands.

    Router > enable

    Router #config t

    Router (config)# interface < port>

    Router (config-if) # ip address < ip address> < subnet mask>

    Router (config-if)# no shut

    Router (config-if) # exit

→ Set gateways to end devices

    End device 1. 10.0.0.10

    End device 2. 40.0.0.10

> Assign router to all routers. move to configure mode of router and use the following commands.

Router (config) # router rip
Router (config-router) # network <network address>
Router (config-router) # network <network address>

For Router 1.

Router (config) # router rip
Router (config-router) # network 10.0.0.0
Router (config-router) # network 20.0.0.0

> Ping end devices to test connection.

Result :

> ping 20.0.0.1

pinging 20.0.0.1 with 32 bytes of data?

Request timed out
Reply from 10.0.0.1 : bytes = 32   time = 5ms   TTL = 125
Reply from 10.0.0.1 : Bytes - 32   time = 21ms   TTL = 125
Reply from 10.0.0.1 : bytes = 32   time = 2ms   TTL = 125

Ping statistics for 10.0.0.1 :
Packets : Sent = 4   Recieved = 3   lost = 1 (25% loss)

Approximate round trip times in milli-seconds
Minimum = 2ms   Maximum = 21ms   Average = 10ms

OBSERVATION

Routing Information Protocol (RIP) is a dynamic routing protocol that uses loop count as routing metric to find but path between source and destination networks. Hop count in the number routers occuring in between source and destination networks.