LAB - 4

Mohammad Arafat khan
(1BM18CS136)

Q4a) Configuring default Route for a Router?

→ Topology


```
                        30.0.0.1
        20.0.0.2   ▭
                        Router 1      30.0.0.2
        20.0.0.1
                                        ▭
10.0.0.10  ▭   Router 0         40.0.0.10    Router2

  PC0                              PC1

10.0.0.1                          40.0.0.1
```
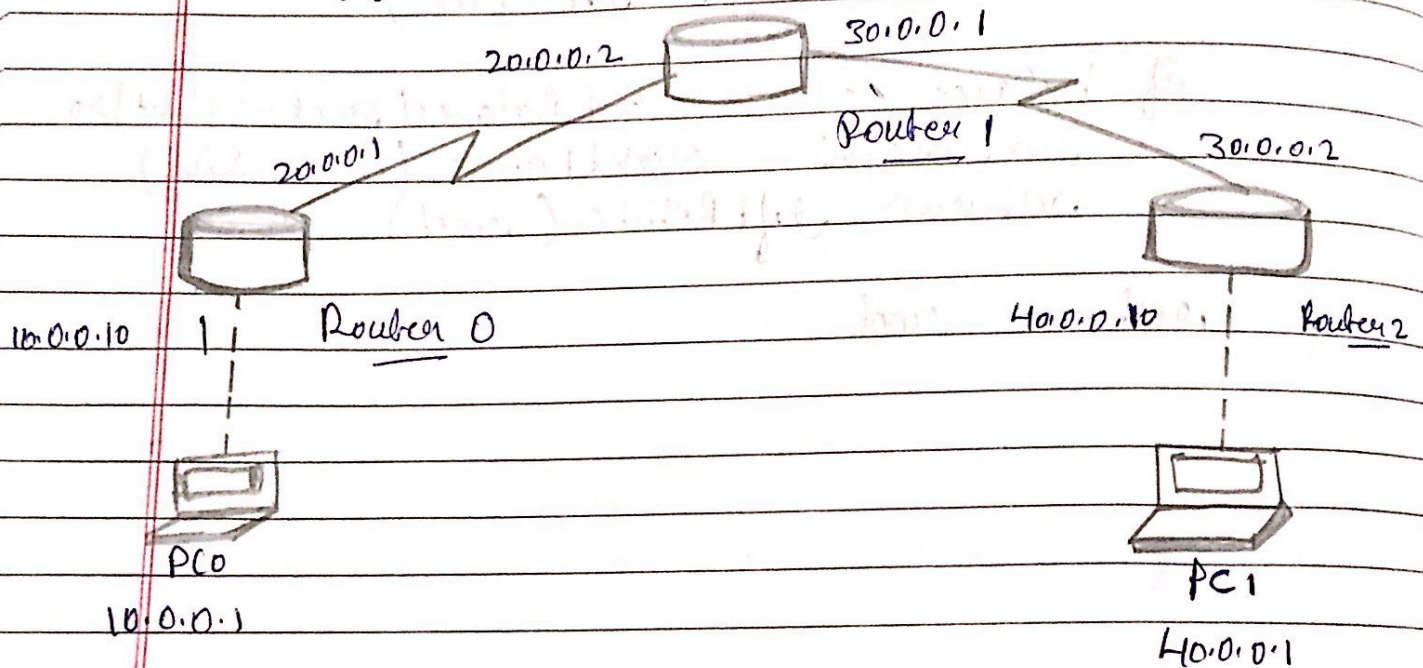
Procedure

Connection

→ Connect PC0, PC1 with router 0 & router 2
→ Connect Router0 to Router1
→   "   Router1 to Router2
→ Use copper-crossed for connection b/w Router | PC
→ Use ~~optical~~ Serial-DCE for connecting b/w Router 0.

IP Configuration

→ Set the IP address for both the PC's
  along with the Subnet mask and Default
  Gateway.

→ Configure the gateway for all the Routers.
→ Check all the Connections.
→ We now perform Static Routing by specifying a default gateway for Router 0 and Router 2 as 20.0.0.2 and 30.0.0.1. Do normal Static Routing from ~~Router~~ Router 1.
→ After setting up the ~~con~~ Default Gateways we ping from PC0 to PC1 or vice-versa to check if the Packets are being transferred.

Observation

(i) Before doing Static Routing if we ~~trying~~ tried pinging we would get host Unreachable message.

(ii) To fix it we do Static Routing.

(iii) Once the Routing is done all 4 Packets will be pinged.

CLI - Commands

(i) For Router Gateway Configuration.

→ enable
→ config terminal
→ interface Fast Ethernet 0/0
→ ip address 10.0.0.10 255.0.0.0
→ no shut
→ exit

(ii) Static Routing for Router 0 (Default Routing)

→ enable
→ Config terminal
→ ip route 0.0.0.0 0.0.0.0 20.0.0.2

(iii) Static Routing for Router 2 (Default Routing)

→ enable
→ config terminal
→ ip route 0.0.0.0 0.0.0.0 30.0.0.1

(iv) Static Routing for Router 1

ip route 40.0.0.0 255.0.0.0 30.0.0.2
ip route 10.0.0.0 255.0.0.0 20.0.0.1