LAB - 3

AIM: Configuring static ~~default~~ route to the Router.

TOPOLOGY:

Fa0/0 10.0.0.2   Se 2/0 30.0.0.1   Se.3/0 30.0.0.

Se2/0 20.0.0.1   Serial DCE   Se2/0 20.0.0.2   Fa0/0 40.0.0.2

PC-PT

10.0.0.1
Gateway~ 10.0.0.2

PC-PT

40.0.0.1
Gateway · 40.0.0.2
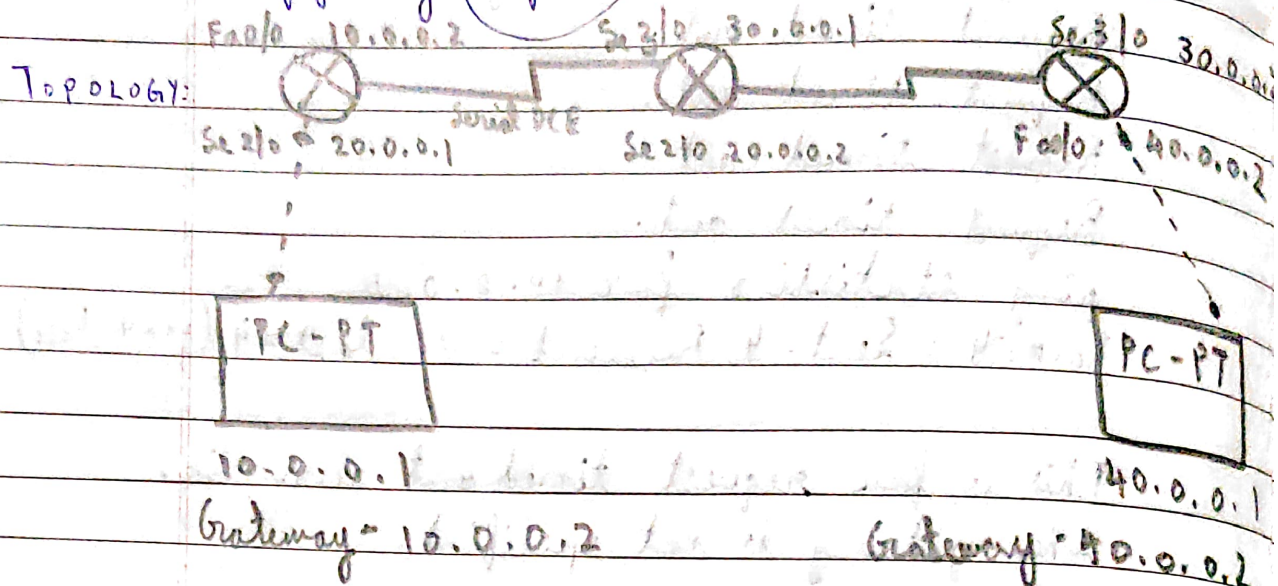
PROCEDURE: A topology was created with 3 generic routers and 2 generic end devices.
* For the router connection we used Serial DCE and for end devices to router, automatic connection.
* For Serial DCE we used Serial 2/0 & Serial 3/0
* For automatic connection, we used Faste thernet.
* Then we configure with different IP address.

OBSERVATION

* Creating a multiple router topology by connecting routers to serial ports & PC-router through fastethernet
* Assigning gateway to routers as we did in the previous lab.
* Pinging PC1 from PC0 at this state gives DESTINATION HOST UNREACHABLE.
* Viewing the routers ip routes using SHOW IP ROUTE.

* Adding static routes to the routers using ip ~~address~~ route < dest. network > < subnet mask > < next hop > in privileged (enable) configure (configure terminal) mode.

* Pinging PC1 from PC0 & PC0 from PC1 now works as expected.

* As we did show ip route we'll see that 10.0.0.0 & 20.0.0.0 is directly connected whereas the 30.0.0.0 & 40.0.0.0 were not connected successfully.

* So to avoid unreachable we use the above format to send successfully.

RESULT: In CLI, for 1st router,

\# show ip route

C   10.0.0.0 | 8 is directly connected, FastEthernet 0/0

C   20.0.0.0 | 8 is directly connected, Serial 2/0

* After using

\# ip ~~address~~ route 30.0.0.0 255.0.0.0 20.0.0.2
exit

\# ip ~~address~~ route 40.0.0.0 255.0.0.0 20.0.0.2
exit

o/p * C 10.0.0.0 | 8 is directly connected, FastEthernet 0/0

C 20.0.0.0 | 8 is directly conneted, Serial 2/0

S 30.0.0.0 | 8 [1/0] via 20.0.0.2

S 40.0.0.0 | 8 [1/0] via 20.0.0.2

Before
Gateway

PC > ping 40.0.0.1

Pinging 40.0.0.1 with 32 bytes of data:
Request timed out.
Request timed out.
Request timed out.
Packet sent = 4, Recieved = 0 (100% Loss)

After   Ping 40.0.0.1
Gateway   Raly from 140.0.0.2 : Destination host unreachable
               Reply from 140.0.0.2 : Destination host unreachable
               Packets : Sent = 4, Recieved = 0 (100% Loss)

→ After ip route config to all 3 routers.

Ping 40.0.0.1
Reply from 40.0.0.1 : bytes = 32, time = 20 ms TTL = 125
Reply from 40.0.0.1 : bytes = 32, time = 30 ms, TTL = 125
Ping statistics for 40.0.0.1 :
Packets : Sent = 4, Recieved = 3 (25% loss)

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