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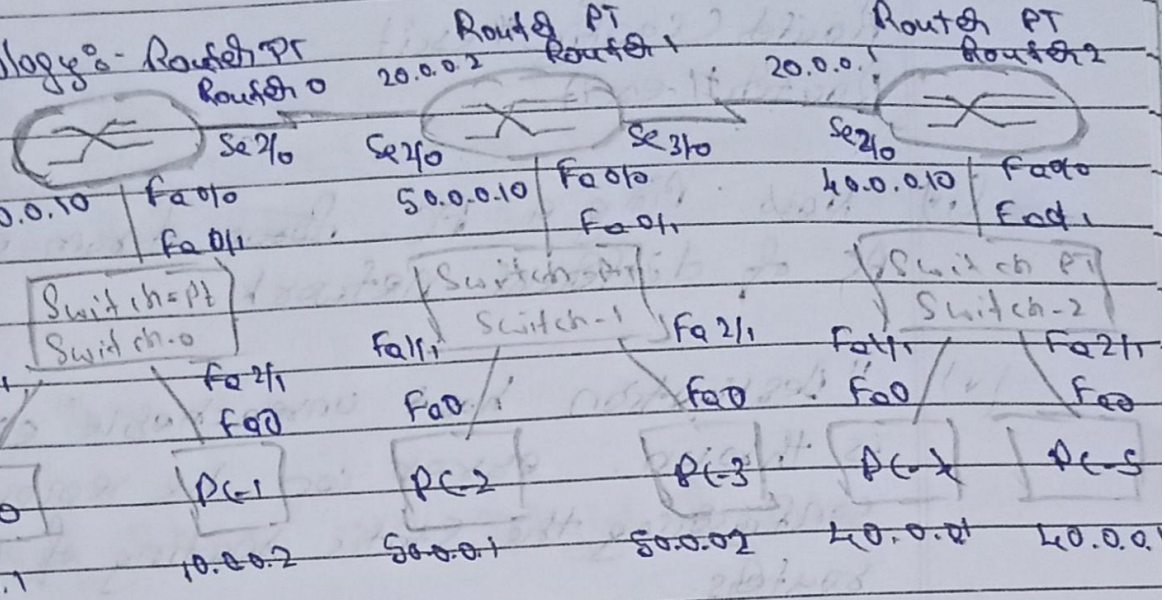
Experiment-3

Aim:- Configuring default route to the routers

Topology:-



Procedure:-

(i) 3-Routers, 3-Switches & 6-PC's

(ii) ~~Add three~~ Configure the IP's address of all the PC's for the following networks 10.0.0.0, 50.0.0.0 & 40.0.0.0. Connect the PC's to Switches and Switches to Routers using copper Straight through wire. Connect the Routers Respectively using serial DCE.

(iii) For all the routers follow the following commands in CLI:-

Router> enable
Router# config t
Router(config)# interface fastethernet 0/0
Router(config-if)# no shut
Router(config-if)# exit

Router(config)# interface Serial 2/0
Router(config-if)# ip address 20.0.0.1 255.0.0.0
Router(config-if)# no shut
Router(config-if)# exit
Router(config)# exit
Router# exit.

(iv) Now Ping a PC from a PC of different network

(v) "Destination host unreachable" error is thrown. error can be removed by configuring the Static routing of all routers.

Router 0:-
Router(config)# ip route 0.0.0.0 0.0.0.0 20.0.0.2

Router 1:-
Router(config)# ip route 0.0.0.0 0.0.0.0 30.0.0.1
in Router 1 set the next hop for the two networks:-
Router(config)# ip route 10.0.0.0 255.0.0.0 20.0.0.1
Router(config)# ip route 40.0.0.0 255.0.0.0 30.0.0.1

(vi) Now Pinging with yeild result.

Observation:- After configuring Static routing, when we Ping initially it gives request timed out, when Pinged again Results are shown.

Result:-

Ping 50.0.0.1

Pinging 50.0.0.1 with 32 bytes of data.

Request timed Out
Reply from 50.0.0.1 bytes = 32, Time = 1ms, TTL = 126
Reply from 50.0.0.1 bytes = 32, Time = 2ms, TTL = 126
Reply from 50.0.0.1 bytes = 32, Time = 3ms, TTL = 126

Ping 50.0.0.1

Pinging 50.0.0.1 with 32 bytes of data:

Reply from 50.0.0.1 : bytes = 32 time 3ms TTL = 126
Reply from 50.0.0.1 bytes = 32 time 3ms TTL = 126
Reply from 50.0.0.1 bytes = 32 time 8ms TTL = 126
Reply from 50.0.0.1 bytes = 32 time = 2ms TTL = 126

Ping Statistics for 50.0.0.1
Packets Sent = 4, Recieved = 4, Lost = 0 (0% Loss)
Approximate round trip time in millisecond
Minimum = 2ms, Maximum = 16ms, Average 8ms

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