14/11/22 LAB PROGRAM : 2

Aim :-

Q. Configuring IP address to Routers in Packet Tracer. Explore the following messages: Ping responses, Destination unreachable Request timed out Reply.

Procedure:

Continue with configuration dialog (yes/n

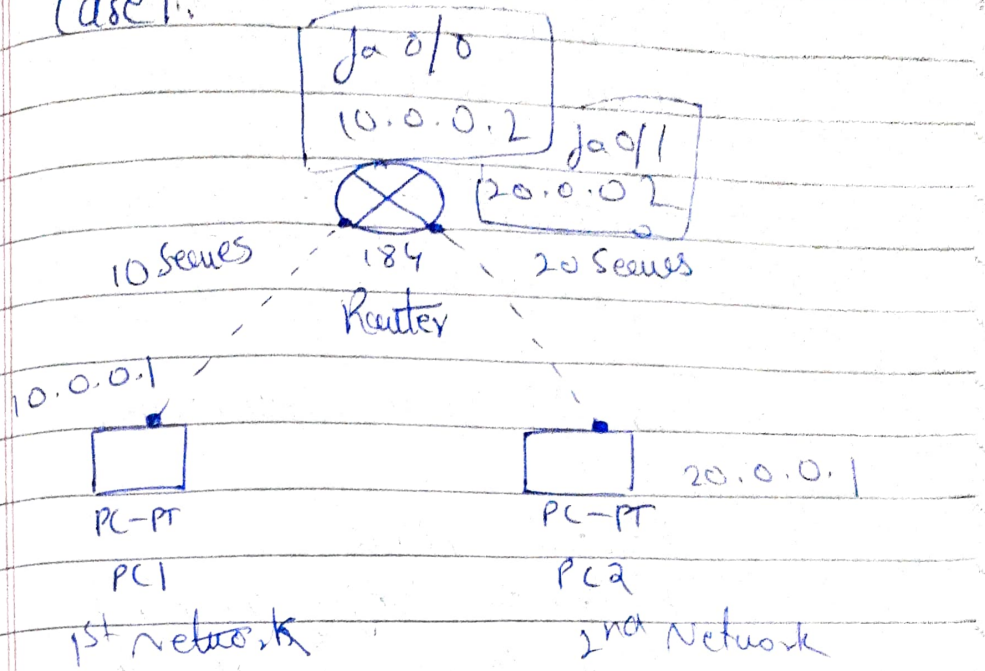
Router > enable
Router # config terminal
Enter configuration mode
Router (config) # interface fa0/0
Router (config-if) # ip address
10.0.0.2 255.0.0.0
Router
Router (config-if) # no shutdown

up [Enter]

Router (config-if) # exit

outcome:

Case 1:



From 1st PC to router

PC> ping 10.0.0.2

Pinging 10.0.0.2 with 3

Reply from 10.0.0.2: bytes 32 TTL=255

Reply from 10.0.0.2: bytes 32 TTL:255

Reply from 10.0.0.2: bytes 32 TTL:255

Reply from 10.0.0.2: bytes 32 TTL:255

PC 1 → Router is one configuration

PC 2 → Router is second configuration

For PC1 gateway will the ip address of router 10.0.0.2

For PC2 gateway will be ip address of router of 20 series i.e 20.0.0.2

Fast ethernet 0/0 → IP address will be 10.0.0.2

Fast ethernet 0/1 → IP address will be 20.0.0.2

For 20 series connection

Router> enable
Router # config Terminal
Enter Configuration Mode
Router (config) # interface fa0/1
Router (config-if) #
ip address 20.0.0.2
255.0.0.1

Router (config-if) # NO shutdown

up [Enter]
Router (config-if) # exit

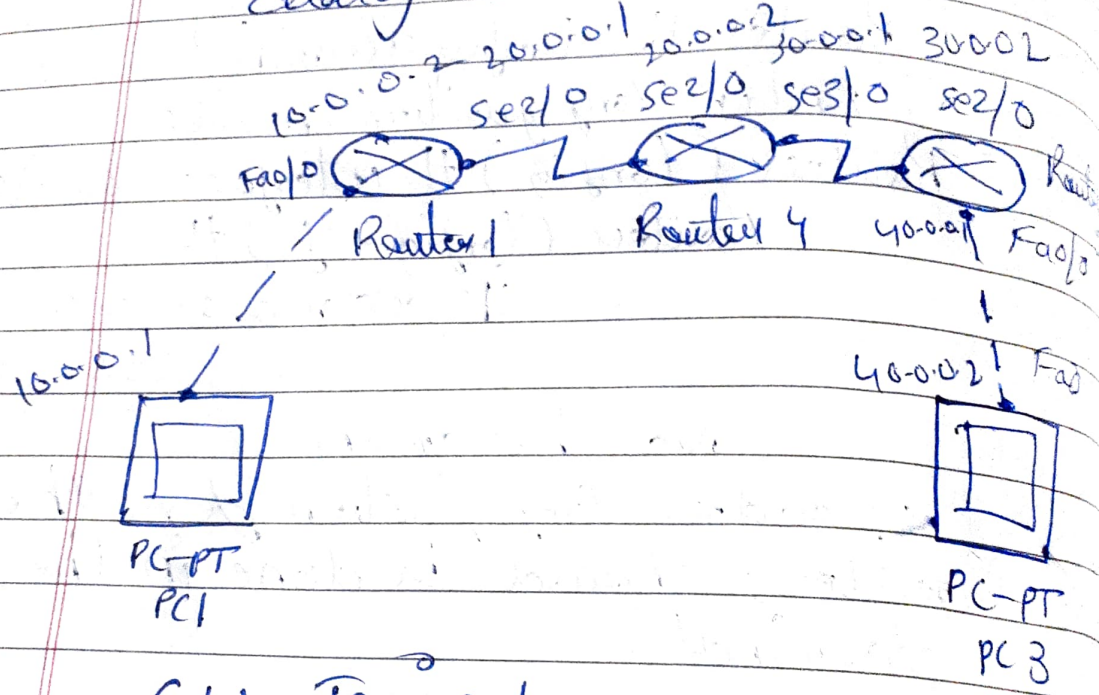
→ If Gateway not specified then the message "Request timedout" is shown..

19/11/22 Experiment: 2 LAB PROGRAM 2

continuation Case: 2

Aim: Configuring a Route to Route with 2 end devices using static Routing

Procedure: Continue with the configuration dialog.



CLI Terminal

PC → Router

Router > enable

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

Sent = 4, Received = 0, Lost = 4, 100% Loss

* the packets were not sent because the router R1 is not aware about the router R2.

outcomes:

Giving Gateways

From PC 1 to PC 2.

Gateway : PC1 → Router 1
10.0.0.2

Command Prompt

PC> Ping 40.0.0.1

Pinging 40.0.0.1 with 32 bytes of data

Reply from 40.0.0.1 bytes = 32 time = 19ms
TTL = 125

Reply from 40.0.0.1 bytes = 32 time = 9ms
Reply from 40.0.0.1 bytes = 32 time = 8ms
Reply from 40.0.0.1 bytes = 32 time = 11ms
TTL = 125

Minimum = 8 ms, Maximum = 19ms,
Average = 11 ms

∴ The data moves from PC1 to PC2 only after the gateways are specified between PC1 and Router 1 and PC2 to Router 3.

If the gateways are not specified or IP routing is not done then if the message Request timed out.

To configure one Router to another Router i.e we should make one router aware of another router.

Commands to be given:

I) To make Router 1 aware of 30 and 40 series networks.

R1(config) IP route 30.0.0.0 255.0.0.
R1(config) IP route 40.0.0.0 255.0.0.

II) To make Router 2 aware of 10 and 40 series Network.

R2(config) IP route 10.0.0.0 255.0.0.0
R2(config) IP route 40.0.0.0 255.0.0.

III) To make Router 3 aware of 10 and 20 series networks.

R3(config) IP route 10.0.0.0 255.0.0.0
R3(config) IP route 20.0.0.0 255.0.0.0

Gateway from PC2 to Router 5
→ 40.0.0.1

Configuring Routers to routers:

Commands: (considering Router 1 & Router 4

Router > enable
Router # Config Terminal
Entered Configuration mode
Router (Config) # interface se 2/0

IP address 20.0.0.1 255.0.0.0
no shut down

up [Enter]