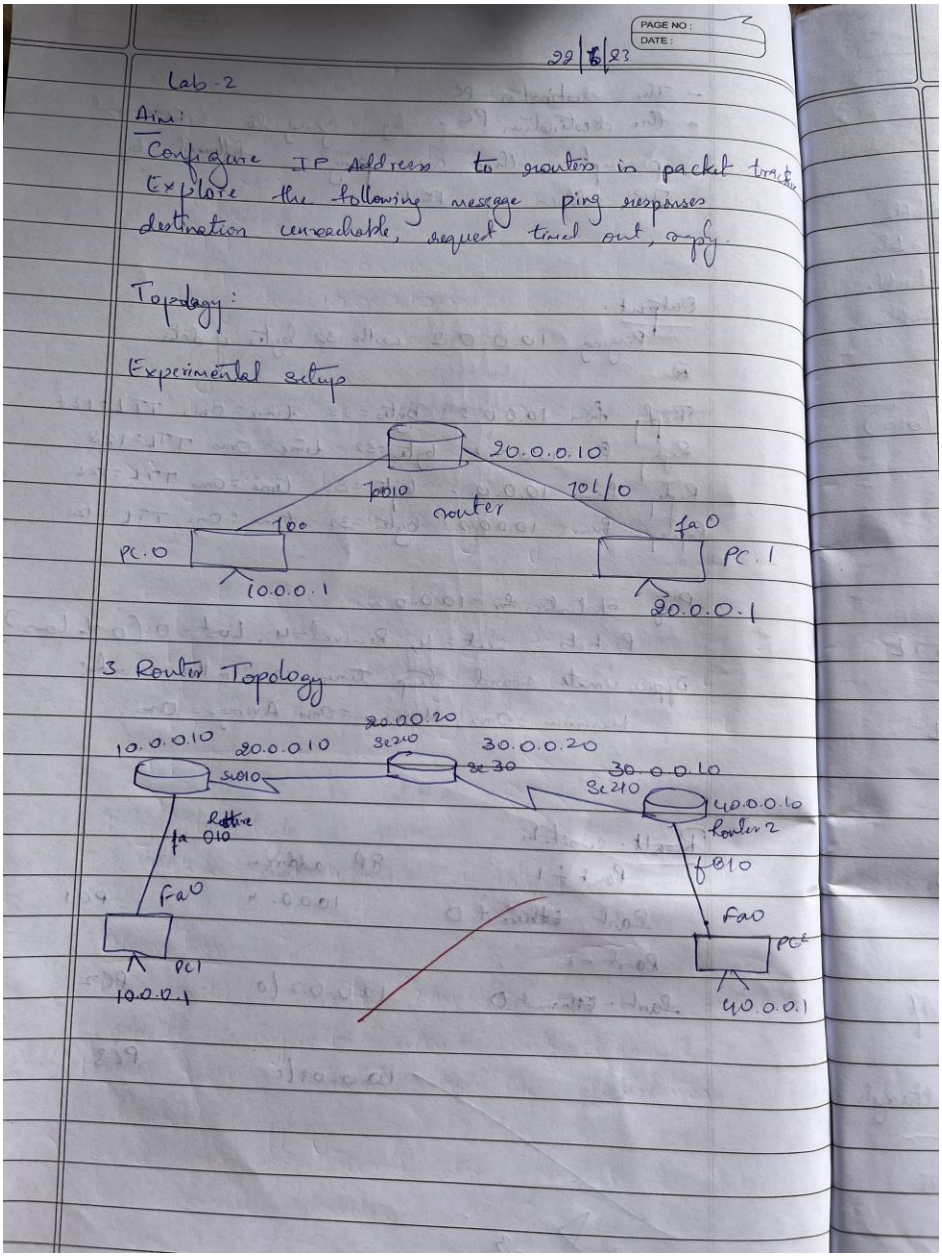
LAB 2

Configure IP address to routers (one and three) in packet tracer. Explore the following messages: ping responses, destination unreachable, request timed out, reply.

OBSERVATION:



DATE :

Result

(i) > ping 40.0.0.1

Pinging 40.0.0.1 with 32 bytes of data

Reply from 10.0.0.10: Destination host unreachable

Reply from 10.0.0.10: Destination host unreachable

Reply from 10.0.0.10: Destination host unreachable

Reply from 10.0.0.10: Destination host unreachable

Ping statistics:

Packets sent = 4: Recieved = 0: Loss = 4 (100: Loss)

> ping 40.0.0.1

pinging 40.0.0.1 with 32 bytes of data

Request timed out

Reply from 40.0.0.10 bytes = 32 time = 2ms TTL

Reply from 40.0.0.10 bytes = 32 time = 2ms TTL

Reply from 40.0.0.10 bytes = 32 time = 2ms TTL

~~Reply from 40.0.0.10 by~~

NLA 13/9/2023

Ping statistics

Packets sent = 4: Recieved = 1, Loss = 1 (25% loss)

Observation:

The router connects LAN to the internet. It connects different networks with different ids. Packets are forwarded to the destination through network hopping.

Serial pass are used to connect 2 router the connecting cables.

in packet tracer
responses
et, copy.

fa0
PC.1
20.0.0.1

0.10
40.0.0.10
Router 2
f0/0
fa0
PC
40.0.0.1

PAGE NO :
DATE :

Procedure:

Take 2 PC and place them as shown in the topology, 2 different IP address (10.0.0.1 and 40.0.0.1) as they belong to 2 different networks.

Place 2 routers belonging to these 2 networks (10.0.0.10 and 40.0.0.10) bring their gateways and place the 3rd router in between to connect the 2 networks.

Set gateways for 2 PCs and then going to the CLI interface for each router specify the IP router for file to transfer using the commands

router > enable
Router > # config terminal
Router config : interface <port>
Router config-if : IP address <ip> <subnet mask (1)>
Router (config) : no shut

Do this for all three routers

Then go to terminal of either PC and try to ping to the either one, the message fails to deliver due to not setting up network static routers and next hop.

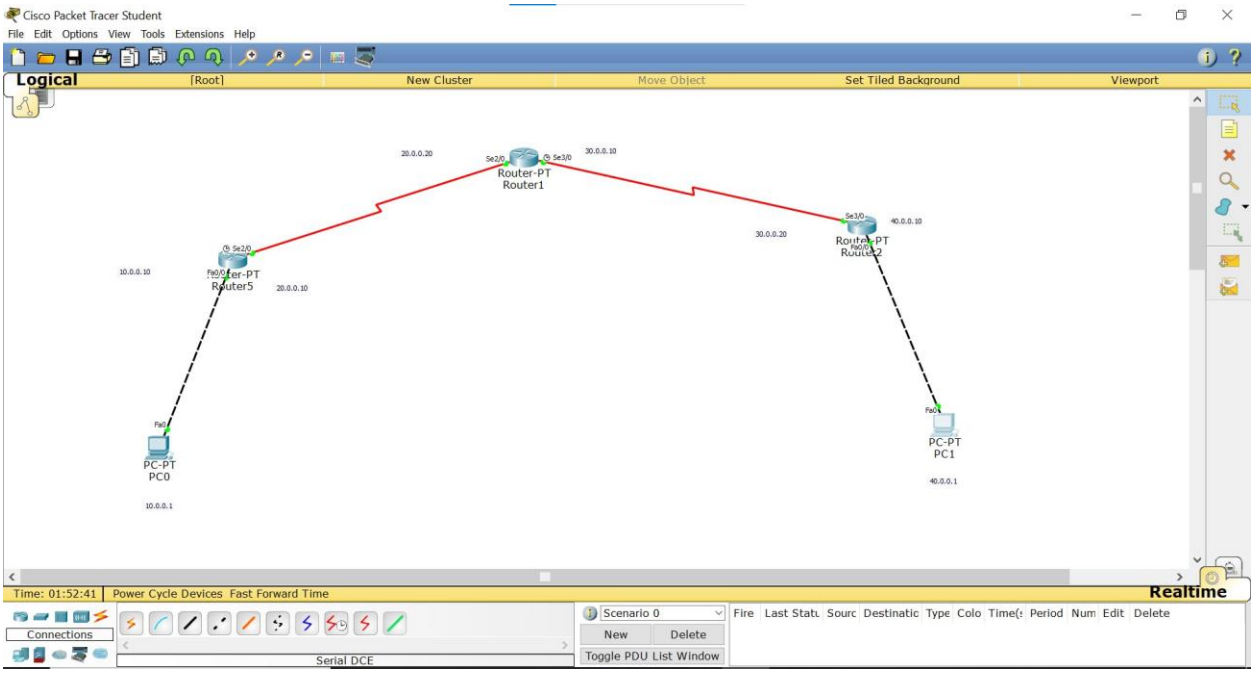
We again go for the CLI of each router and setup the "not hop" using the commands

> ip route <network id> <mask> <next-hop>

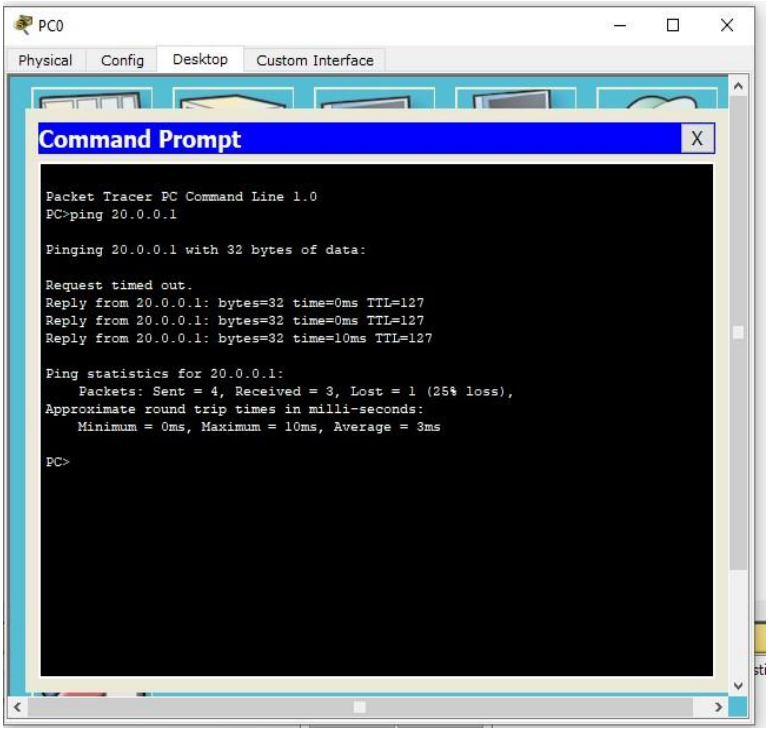
> ip route 40.0.0.0 255.0.0.0 20.0.0.20
(for router 1)

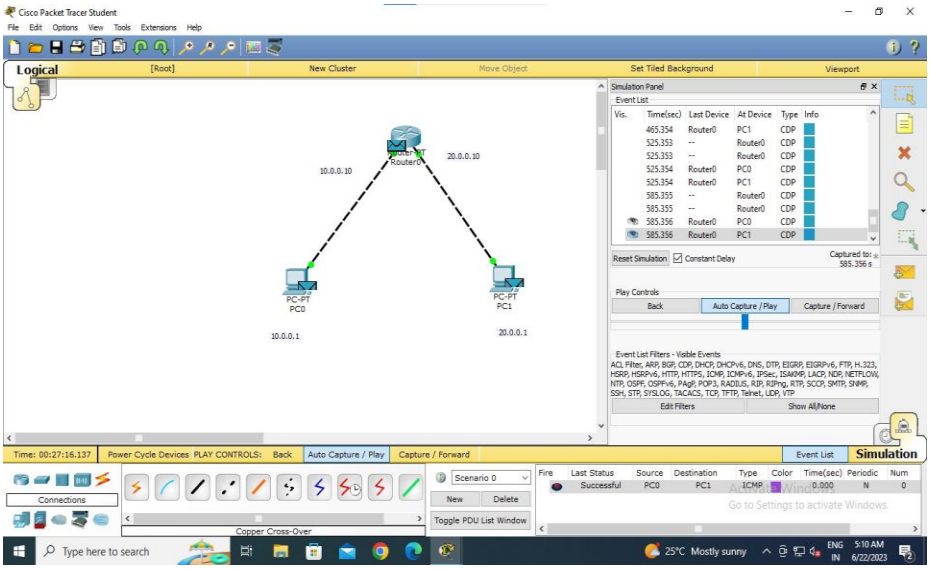
This is done so that router recognises which pathway to take when packet is required for particular destination

TOPOLOGY:


Cisco Packet Tracer Student
File Edit Options View Tools Extensions Help
Logical
[Root]
New Cluster
Move Object
Set Tiled Background
Viewport
Router-PT
Router1
Router-PT
Router5
Router-PT
Router2
PC-PT
PC0
PC-PT
PC1
20.0.0.20
30.0.0.10
30.0.0.20
40.0.0.10
10.0.0.10
20.0.0.10
10.0.0.1
40.0.0.1
Time: 01:52:41
Power Cycle Devices Fast Forward Time
Realtime
Connections
Serial DCE
Scenario 0
New
Delete
Toggle PDU List Window
Fire
Last Statu
Sourc
Destinatic
Type
Colo
Time(s
Period
Num
Edit
Delete

OUTPUT:


PC0
Physical
Config
Desktop
Custom Interface
Command Prompt
X
Packet Tracer PC Command Line 1.0
PC>ping 20.0.0.1
Pinging 20.0.0.1 with 32 bytes of data:
Request timed out.
Reply from 20.0.0.1: bytes=32 time=0ms TTL=127
Reply from 20.0.0.1: bytes=32 time=0ms TTL=127
Reply from 20.0.0.1: bytes=32 time=10ms TTL=127
Ping statistics for 20.0.0.1:
Packets: Sent = 4, Received = 3, Lost = 1 (25% loss),
Approximate round trip times in milli-seconds:
Minimum = 0ms, Maximum = 10ms, Average = 3ms
PC>


Cisco Packet Tracer Student
Logical
10.0.0.10
20.0.0.10
PC-PT PC0
PC-PT PC1
10.0.0.1
20.0.0.1
Simulation