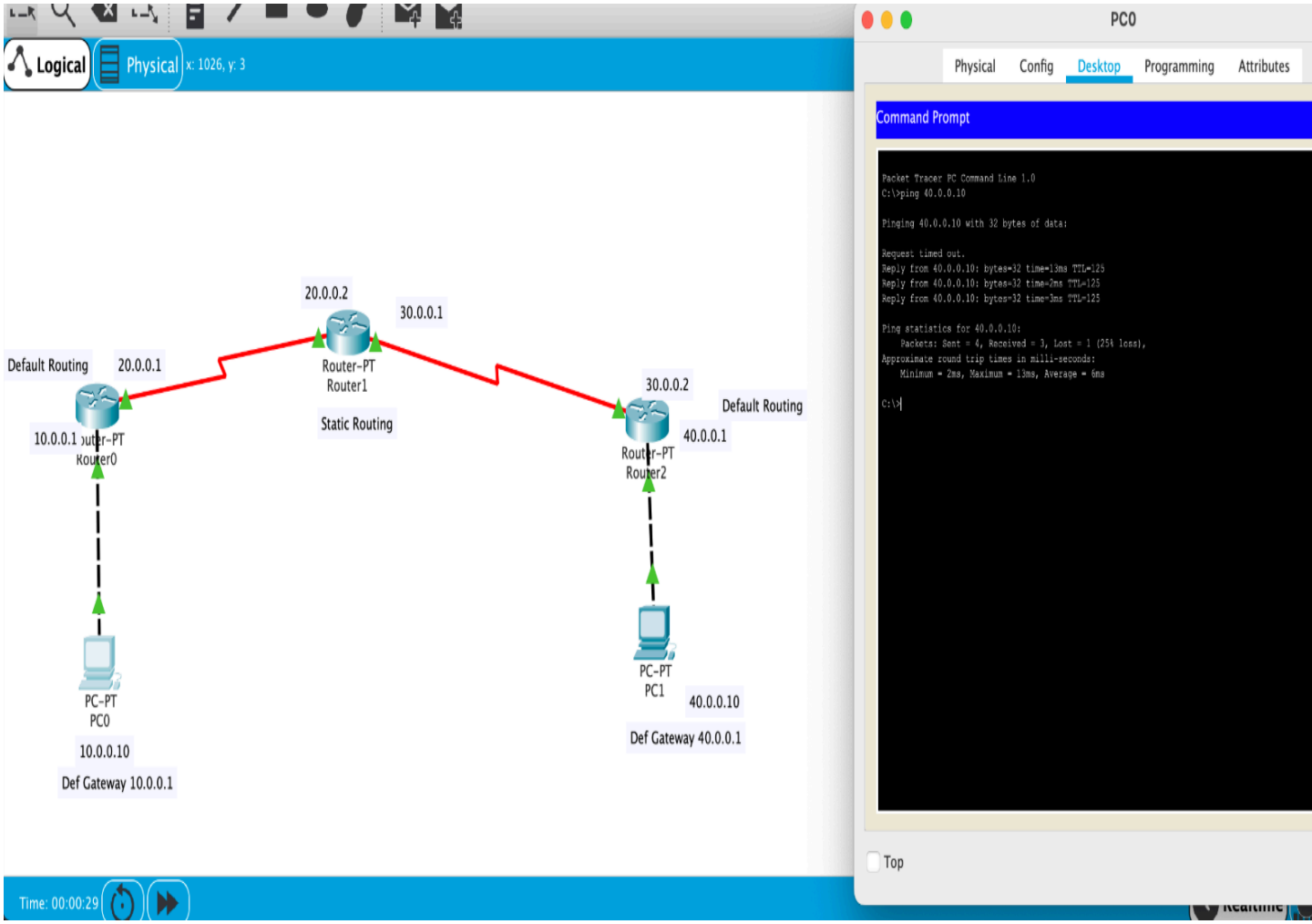
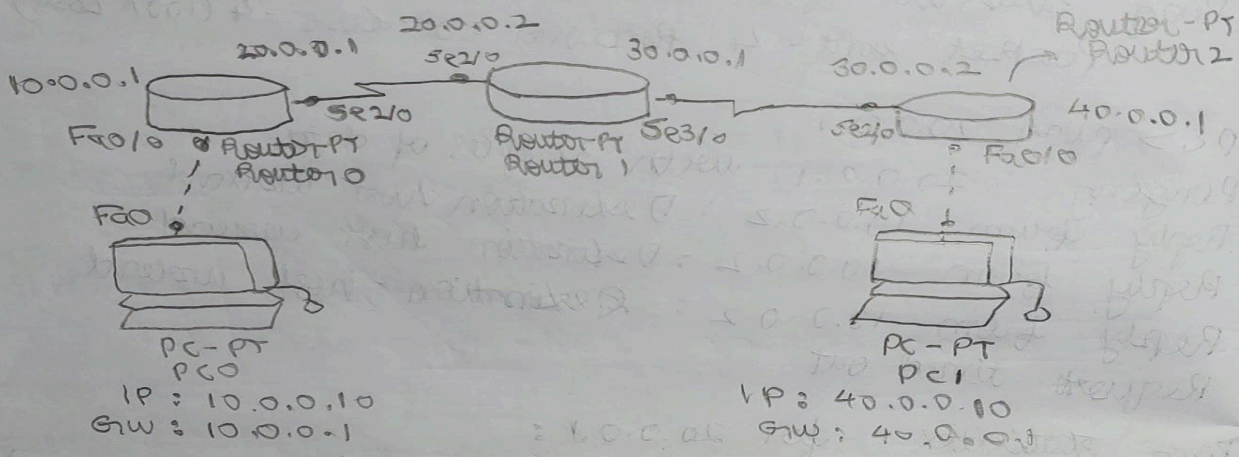

Logical
Physical
x: 1026, y: 3
20.0.0.2
30.0.0.1
Default Routing
20.0.0.1
Router-PT
Router1
Static Routing
30.0.0.2
Default Routing
10.0.0.1
Router0
40.0.0.1
Router-PT
Router2
PC-PT
PC0
10.0.0.10
Def Gateway 10.0.0.1
PC-PT
PC1
40.0.0.10
Def Gateway 40.0.0.1
Time: 00:00:29
PC0
Physical
Config
Desktop
Programming
Attributes
Command Prompt
Packet Tracer PC Command Line 1.0
C:\>ping 40.0.0.10
Pinging 40.0.0.10 with 32 bytes of data:
Request timed out.
Reply from 40.0.0.10: bytes=32 time=13ms TTL=125
Reply from 40.0.0.10: bytes=32 time=2ms TTL=125
Reply from 40.0.0.10: bytes=32 time=3ms TTL=125
Ping statistics for 40.0.0.10:
Packets: Sent = 4, Received = 3, Lost = 1 (25% loss),
Approximate round trip times in milli-seconds:
Minimum = 2ms, Maximum = 13ms, Average = 6ms
C:\>
Top

LAB-4 EXPERIMENT 3 23/10/24

Configure default routing using 3 routers

AIM : To connect 2 PC's and 2 different networks via 3 different routers - DEFAULT ROUTIN

TOPOLOGY :



1) PC0 : Connected to router 0's interface Fa0/0 using a cross over cable
IP address : 10.0.0.10
Default gateway : 10.0.0.1

2) PC1 : Connected to router 2's interface Fa0/0 using a cross over cable
IP address : 40.0.0.10
Default gateway : 40.0.0.1

3) Router 0 : Interface Fa0/0 connected to PC0
Interface Se2/0 connected to Router 1
IP address of Fa0/0 : 10.0.0.1
IP address of Se2/0 : 20.0.0.1

Interface Se3/0 connected to Router 2
IP address of Se2/0 : 20.0.0.2
IP address of Se3/0 : 30.0.0.1

5) Router 2 : Interface Se2/0 connected to Router 1
Interface Fa0/0 connected to PC1
IP address of Se2/0 : 30.0.0.2
IP address of Fa0/0 : 40.0.0.1

~~OBSERVATIONS~~ :

PROCEDURE :

Open cisco packet tracer and place the following components.
Router : Place 3 routers in the middle
PC : Place 2 PCs on either side of the routers

Use crossover cables to join the following
PC0 → Router1 Fa0/0 interface
PC1 → Router2 Fa0/0 interface

2) Configure Router 0 by clicking on the router and enter CLI
Assign IP addresses to the router interfaces
Router > enable
Router # config terminal
Router (config) # ip address interface serial 2/0
Router (config-if)# ip address 20.0.0.2 255.0.0.0
Router (config-if) # no shut
Router (config) # interface serial 3/0
Router (config) # ip address 30.0.0.1 255.0.0.0
Router (config) # no shut

3) Configure Router1 in the following way
Router > enable
Router # config terminal

Router(config)# interface fastethernet 0/0
Router(config-if)# ip address 10.0.0.1 255.0.0.0
Router(config-if)# no shut

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

3) Configure the two PC's -
PC0: Click on PC0 and set IP address to 10.0.0.2 and subnet mask to 255.0.0.0 and default gateway 10.0.0.1

PC1: Click on PC1 and set up IP address to 40.0.0.2 and subnet mask to 255.0.0.0 and default gateway 40.0.0.1

Router 1 - Default Routing:
Router(config)# ip route 0.0.0.0 0.0.0.0 20.0.0.2

Router 2 - Default Routing:
Router(config)# ip route 0.0.0.0 0.0.0.0 30.0.0.1

Router 1 - Static Routing:
Router(config)# ip route 10.0.0.0 255.0.0.0 20.0.0.1

Router 2 - Static Routing:
Router(config)# ip route 40.0.0.0 255.0.0.0 30.0.0.2

OBSERVATION:

1) If configuration and cabling are correct, you will receive successful ping replies between the two PC's
2) Router: show ip routes
gateway of last resort is 20.0.0.2 to network 0.0.0.0

C 10.0.0.0/8 is directly connected, FastEthernet 0/0
C 20.0.0.0/8 is directly connected, Serial 2/0
S 0.0.0.0.0/0 [1/0] via 20.0.0.2

The ping results are as follows:

PC > ping 40.0.0.10

Pinging 40.0.0.10 with 32 bytes of data:

Reply from 40.0.0.10 bytes = 32 time = 6ms TTL = 125
Reply from 40.0.0.10 bytes = 32 time = 6ms TTL = 125
Reply from 40.0.0.10 bytes = 32 time = 10ms TTL = 125
Reply from 40.0.0.10 bytes = 32 time = 9ms TTL = 125

Ping statistics for 40.0.0.10
Packets: Sent = 4, Received = 4, Lost = 0 (0% loss)
Approximate round trip times in milliseconds:
Minimum = 6ms, Maximum = 10ms, Average = 7ms

N
23/10/24