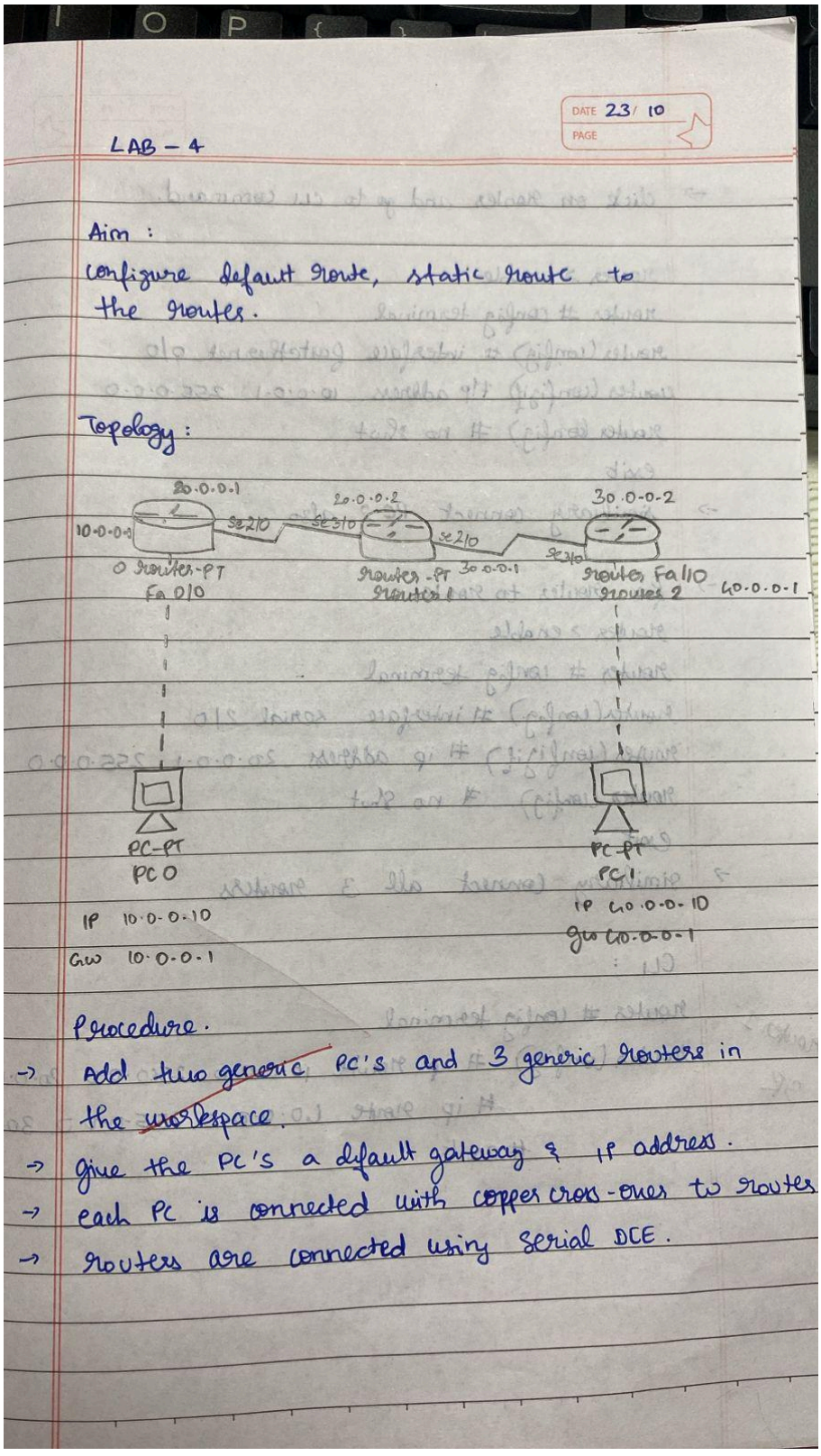
LAB 4
23/10/24



DATE 23/10
PAGE

LAB – 4

Aim :

Configure default route, static route to the routers.

Topology :

Procedure.

→ Add two ~~generic~~ PC's and 3 generic routers in the ~~workspace~~.

→ Give the PC's a default gateway & IP address.

→ Each PC is connected with copper cross-over to routers

→ Routers are connected using Serial DCE.

→ click on router and go to CLI command.

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) # no shut
exit

→ similiary connect PC 2 also

→ for routers to routers
router > enable
router # config terminal
router (config) # interface serial 2/0
router (config-if) # ip address 20.0.0.1 255.0.0.0
router (config) # no shut
exit

→ similiary connect all 3 routers

CLI :

router 1
SR

router # config terminal
router (config) # ip route 10.0.0.0 255.0.0.0 20.0.0.1
ip route 40.0.0.0 255.0.0.0 30.0.0
exit

Router 0 DR: R(config) # ip route 0.0.0.0 0.0.0.0 20.0.0.2

Router 2 DR: R(config) # ip route 0.0.0.0 0.0.0.0 30.0.0.1

Observation:

In command prompt of PC0

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=7ms TTL=125

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=8ms TTL=125

Ping statistics for 40.0.0.10:

packets: Sent=4, recieved=4, lost=0 (0% loss),

approx. round trip times in milli-seconds:

minimum = 6ms, max = 8ms, Avg = 6ms

In router 0 CLI

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

S* 0.0.0.0/0 [1/0] via 20.0.0.2

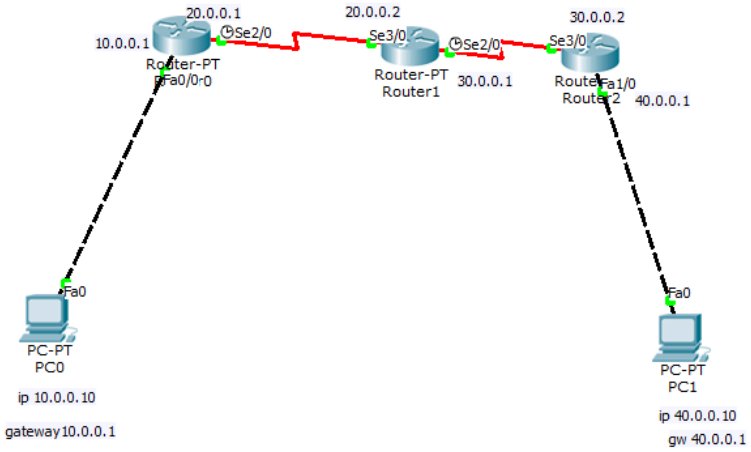
In router 2 CLI Router > show IP route

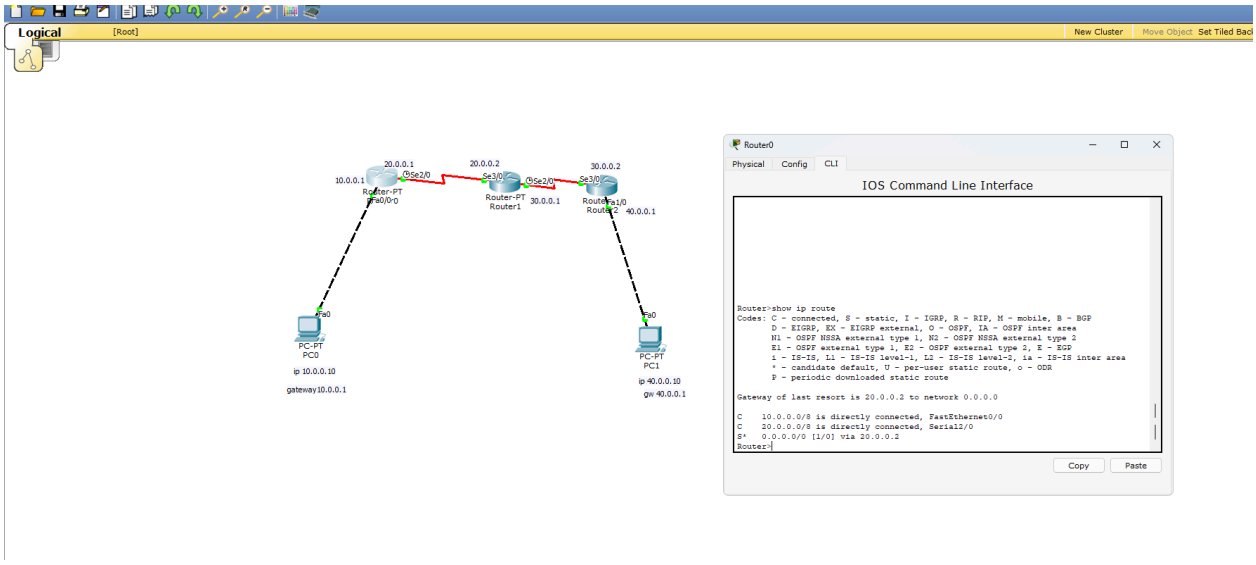
C 30.0.0.0/8 is directly connected, serial 3/0

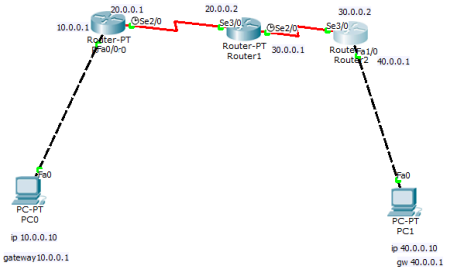
C 40.0.0.0/8 is directly connected, fastethrnet 1/0

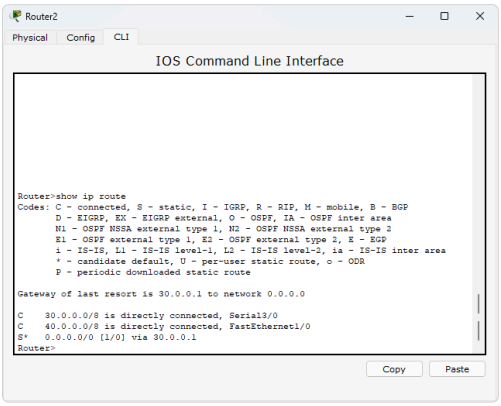
S* 0.0.0.0/0 [1/0] via 30.0.0.1

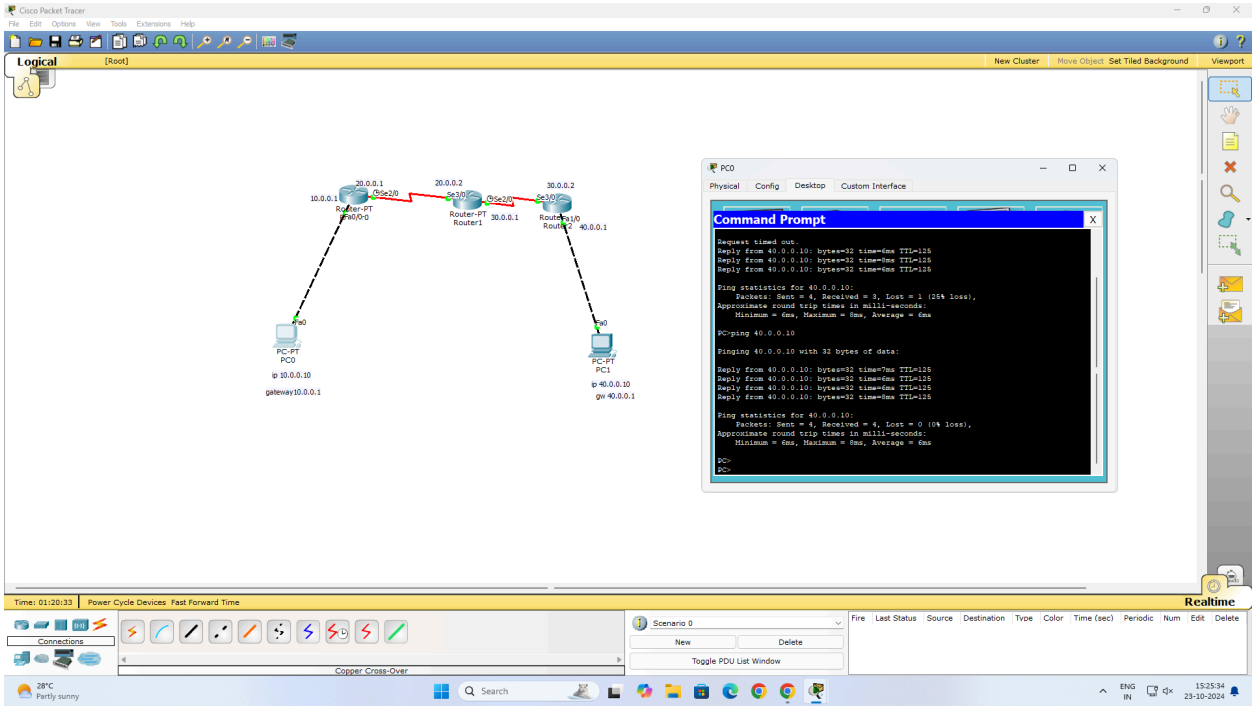
Result: Each PC is now connected to all the 3 routers & other PC. So packet can be sent.

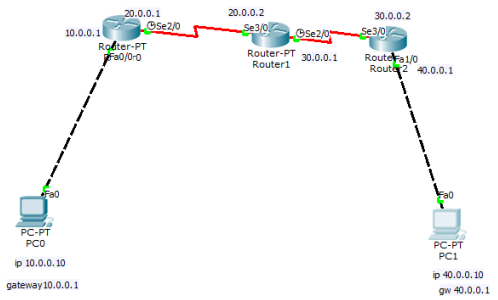

20.0.0.1
10.0.0.1
Se2/0
20.0.0.2
Se3/0
Se2/0
30.0.0.2
Se3/0
Router-PT
Fa0/0
Router-PT
Router1
30.0.0.1
Router
Fa1/0
Router2
40.0.0.1
Fa0
PC-PT
PC0
ip 10.0.0.10
gateway 10.0.0.1
Fa0
PC-PT
PC1
ip 40.0.0.10
gw 40.0.0.1

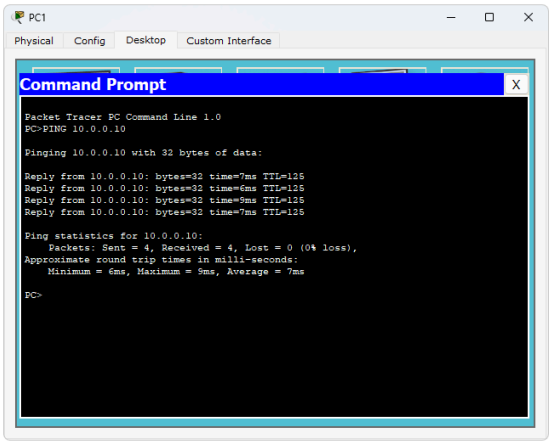

Logical
[Root]
New Cluster
Move Object
Set Tiled Back
Router0
Physical
Config
CLI
IOS Command Line Interface
Router>show ip route
Codes: C - connected, S - static, I - IGRP, R - RIP, M - mobile, B - BGP
D - EIGRP, EX - EIGRP external, O - OSPF, IA - OSPF inter area
N1 - OSPF NSSA external type 1, N2 - OSPF NSSA external type 2
E1 - OSPF external type 1, E2 - OSPF external type 2, E - EGP
i - IS-IS, L1 - IS-IS level-1, L2 - IS-IS level-2, ia - IS-IS inter area
* - candidate default, U - per-user static route, o - ODR
P - periodic downloaded static route
Gateway of last resort is 20.0.0.2 to network 0.0.0.0
C 10.0.0.0/8 is directly connected, FastEthernet0/0
C 20.0.0.0/8 is directly connected, Serial2/0
S* 0.0.0.0/0 [1/0] via 20.0.0.2
Router>
Copy
Paste


20.0.0.1
Se2/0
20.0.0.2
Se3/0
Se2/0
30.0.0.2
Se3/0
10.0.0.1
Router-PT
Fa0/0-0
Router-PT
Router1
30.0.0.1
Router2
Fa1/0
40.0.0.1
Fa0
PC-PT
PC0
ip 10.0.0.10
gateway10.0.0.1
Fa0
PC-PT
PC1
ip 40.0.0.10
gw 40.0.0.1


Router2
Physical
Config
CLI
IOS Command Line Interface
Router>show ip route
Codes: C - connected, S - static, I - IGRP, R - RIP, M - mobile, B - BGP
D - EIGRP, EX - EIGRP external, O - OSPF, IA - OSPF inter area
N1 - OSPF NSSA external type 1, N2 - OSPF NSSA external type 2
E1 - OSPF external type 1, E2 - OSPF external type 2, E - EGP
i - IS-IS, L1 - IS-IS level-1, L2 - IS-IS level-2, ia - IS-IS inter area
* - candidate default, U - per-user static route, o - ODR
P - periodic downloaded static route
Gateway of last resort is 30.0.0.1 to network 0.0.0.0
C 30.0.0.0/8 is directly connected, Serial3/0
C 40.0.0.0/8 is directly connected, FastEthernet1/0
S* 0.0.0.0/0 [1/0] via 30.0.0.1
Router>
Copy
Paste


Cisco Packet Tracer
Logical
[Root]
New Cluster
Move Object
Set Tiled Background
Viewport
PC0
Physical
Config
Desktop
Custom Interface
Command Prompt
Request timed out.
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=6ms 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 = 6ms, Maximum = 6ms, Average = 6ms
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=7ms TTL=125
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=6ms TTL=125
Ping statistics for 40.0.0.10:
Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),
Approximate round trip times in milli-seconds:
Minimum = 6ms, Maximum = 6ms, Average = 6ms
PC>
PC>
Time: 01:20:33
Power Cycle Devices
Fast Forward Time
Realtime
Connections
Copper Cross-Over
Scenario 0
New
Delete
Toggle PDU List Window
Fire
Last Status
Source
Destination
Type
Color
Time (sec)
Periodic
Num
Edit
Delete
28°C
Partly sunny
Search
ENG
IN
15:25:34
23-10-2024


20.0.0.1
10.0.0.1
Se2/0
20.0.0.2
Se3/0
Se2/0
30.0.0.2
Se3/0
Router-PT
Fa0/0-0
Router-PT
Router1
30.0.0.1
Router2
Fa1/0
40.0.0.1
Fa0
PC-PT
PC0
ip 10.0.0.10
gateway 10.0.0.1
Fa0
PC-PT
PC1
ip 40.0.0.10
gw 40.0.0.1


PC1
Physical
Config
Desktop
Custom Interface
Command Prompt
X
Packet Tracer PC Command Line 1.0
PC>PING 10.0.0.10
Pinging 10.0.0.10 with 32 bytes of data:
Reply from 10.0.0.10: bytes=32 time=7ms TTL=125
Reply from 10.0.0.10: bytes=32 time=6ms TTL=125
Reply from 10.0.0.10: bytes=32 time=9ms TTL=125
Reply from 10.0.0.10: bytes=32 time=7ms TTL=125
Ping statistics for 10.0.0.10:
Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),
Approximate round trip times in milli-seconds:
Minimum = 6ms, Maximum = 9ms, Average = 7ms
PC>