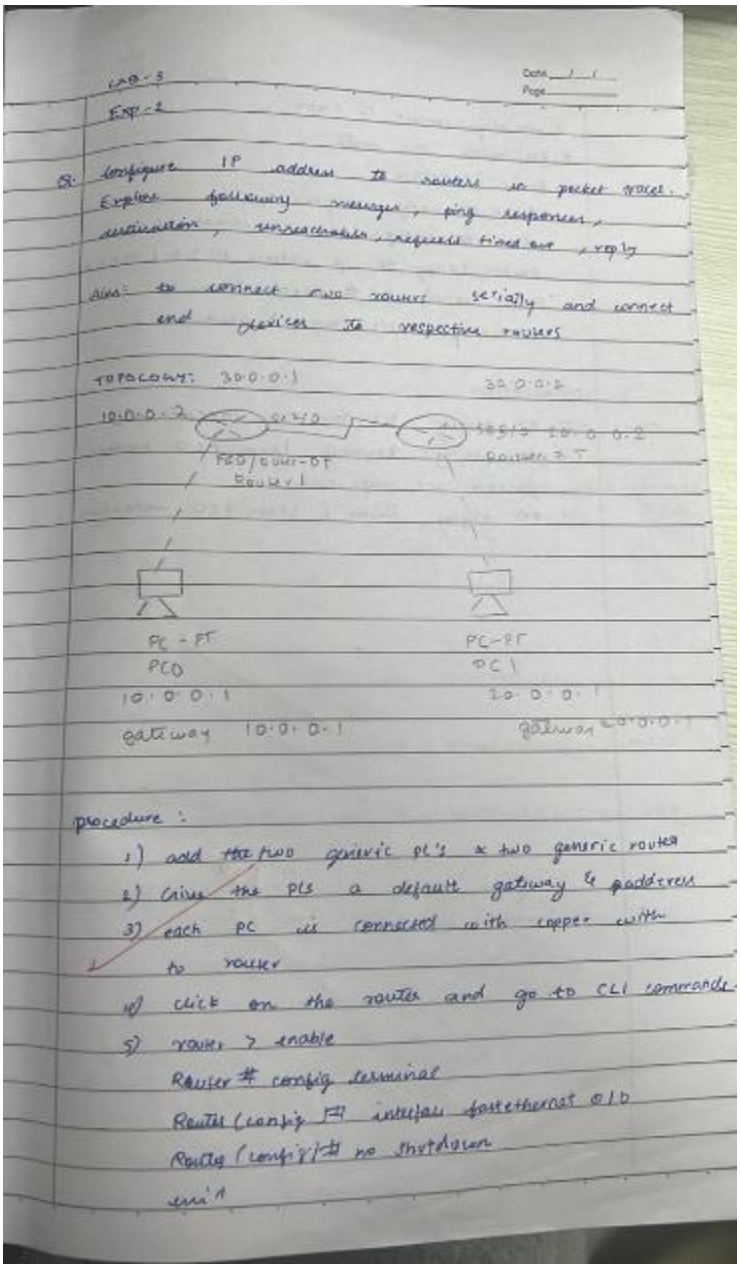
LAB-3



LAB-5

Exp-2

Q. Configure IP address to routers in packet tracer. Explore following messages, ping responses, destination, unreachable, request timed out, reply

Aim: to connect two routers serially and connect end devices to respective routers

TOPOLOGY: 30.0.0.1 — 30.0.0.2

10.0.0.2 — S2/0 — S2/0 — 10.0.0.2

PC0/Router-0 — Router-1 — Router-1

PC-PT PC0 — 10.0.0.1 — gateway 10.0.0.1

PC-PT PC1 — 10.0.0.1 — gateway 10.0.0.1

procedure:

1) add two generic pc's & two generic routers
2) Give the pcs a default gateway & address
3) each pc is connected with copper with to router
4) click on the router and go to CLI commands
5) router > enable
   Router # config terminal
   Router (config) # interface fastethernet 0/0
   Router (config-if) # no shutdown
   exit

Date / /
Page

→ similarly connect PC 2 also
→ for routers to routers
→ Router > enable
Router # config terminal
Router # config interface serial 0/0
Router config # ip address 30.0.0.1 255.0.0.0
Router (config-if) # no shutdown
→ similarly config router 2 also

OBSERVATION

→ on pinging PC1 from PC0 unreachable
→ on pinging Router0 from PC0 message packets are ~~pinged~~ sent
→ on pinging Router 1 from PC0 unreachable

EXP: 3

Date __/__/__
Page

3) configure default route, static route to router

→ same as previous experiment

Procedure:

CLI:

Router (config) # ip route 20.0.0.0 255.0.0.0 30.0.0.2

Router# show ip route

10.0.0.0/8 is directly connected, Fast ethernet 0/0

20.0.0.0/8 [1/0] via 30.0.0.2

30.0.0.0/8 is directly connected

Ping:

ping 20.0.0.1

packets: sent = 4, recieved = 4, lost = 0

ping 30.0.0.1

packets: sent = 4, Received = 4, lost = 0

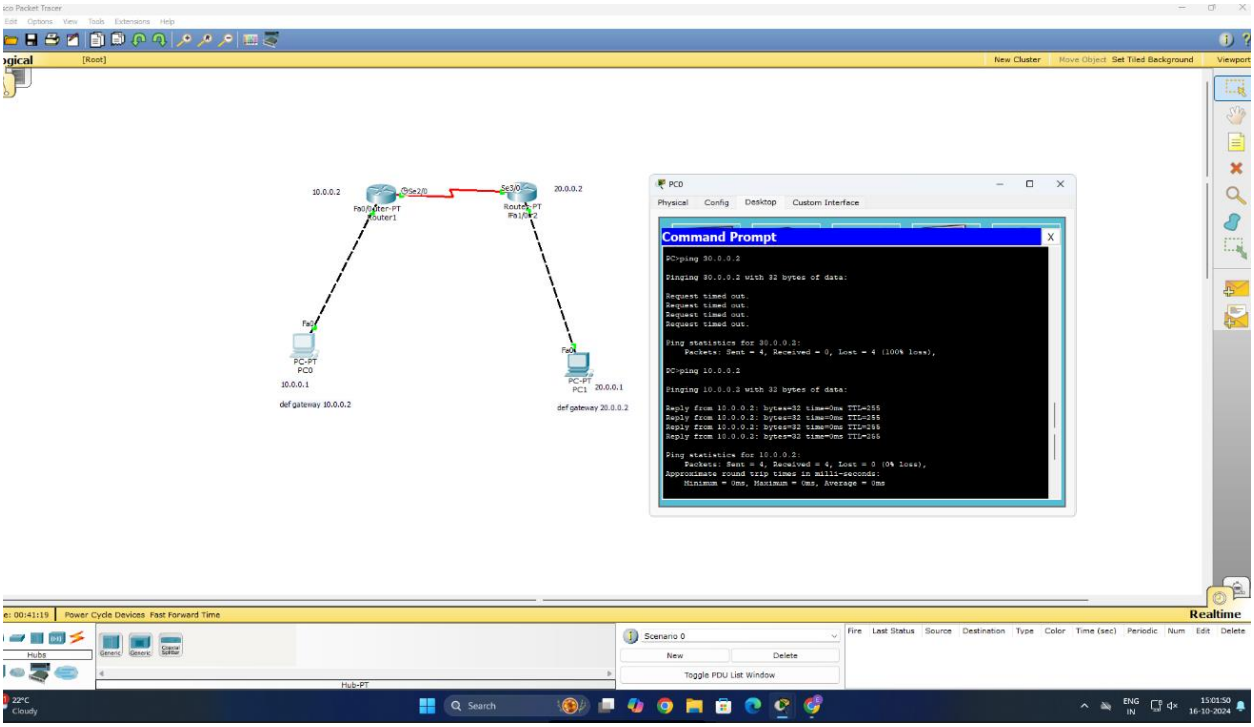
ping 30.0.0.2

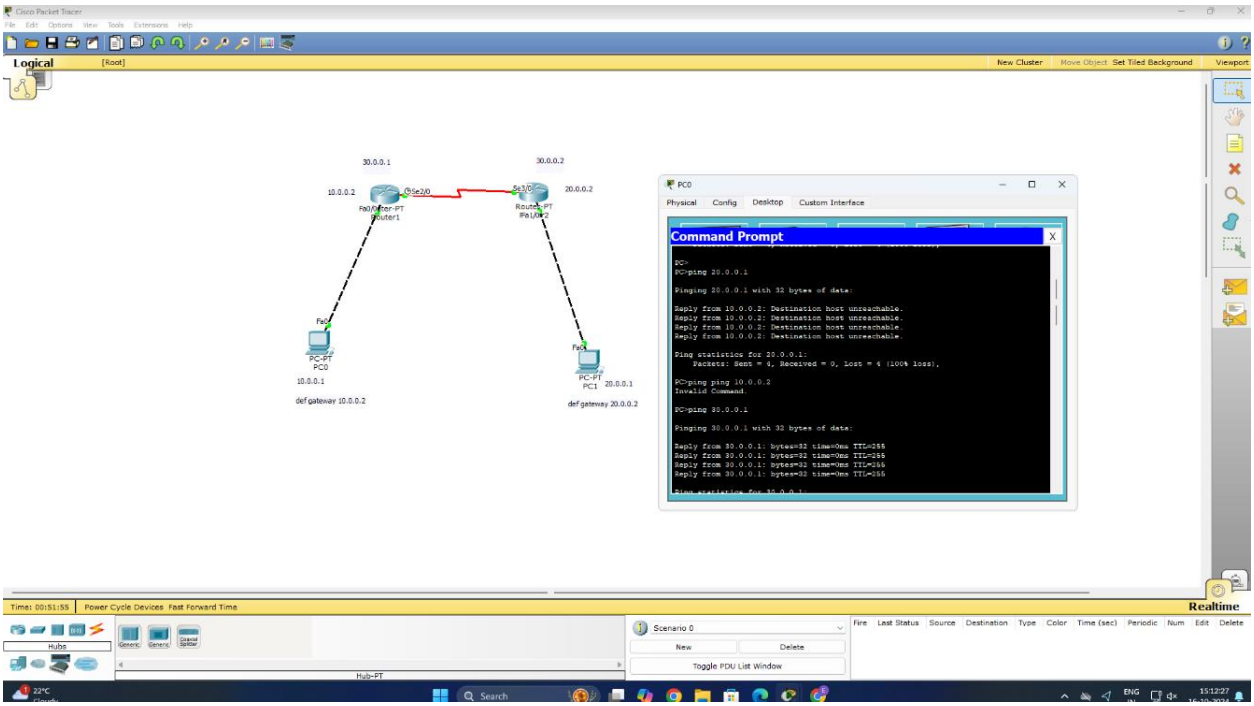
packets: sent = 4, recieved = 4, lost = 0

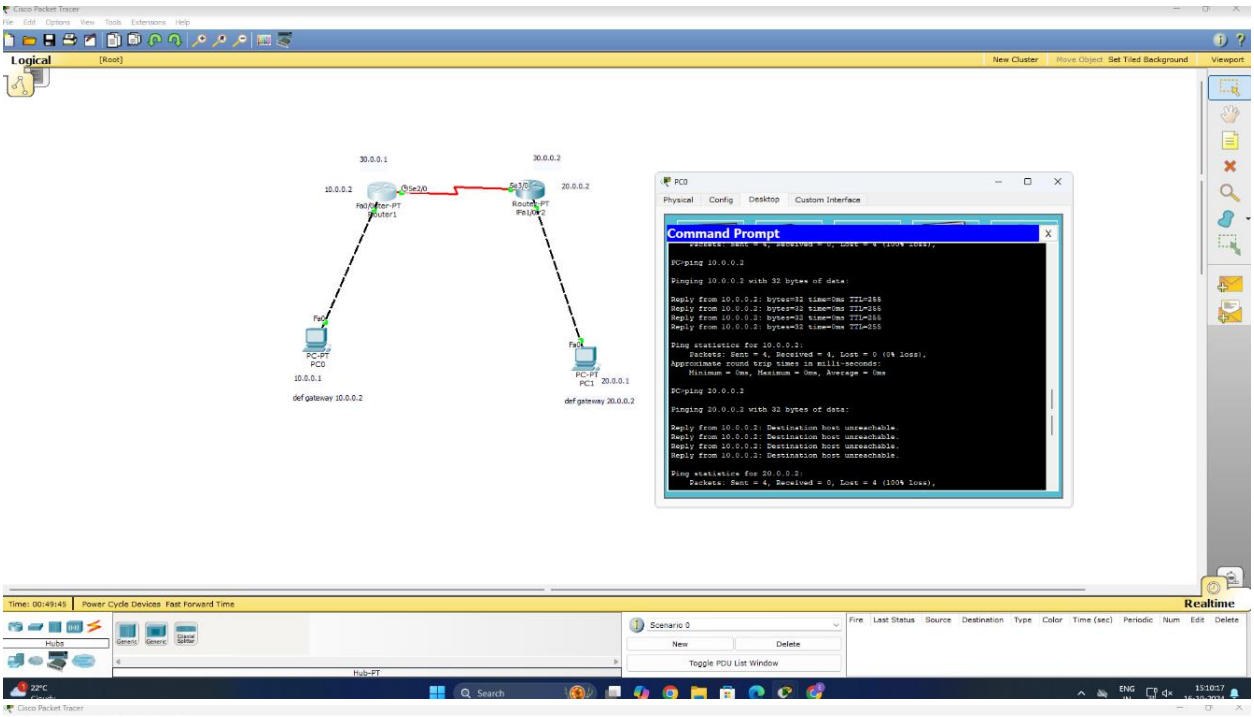
Observations:

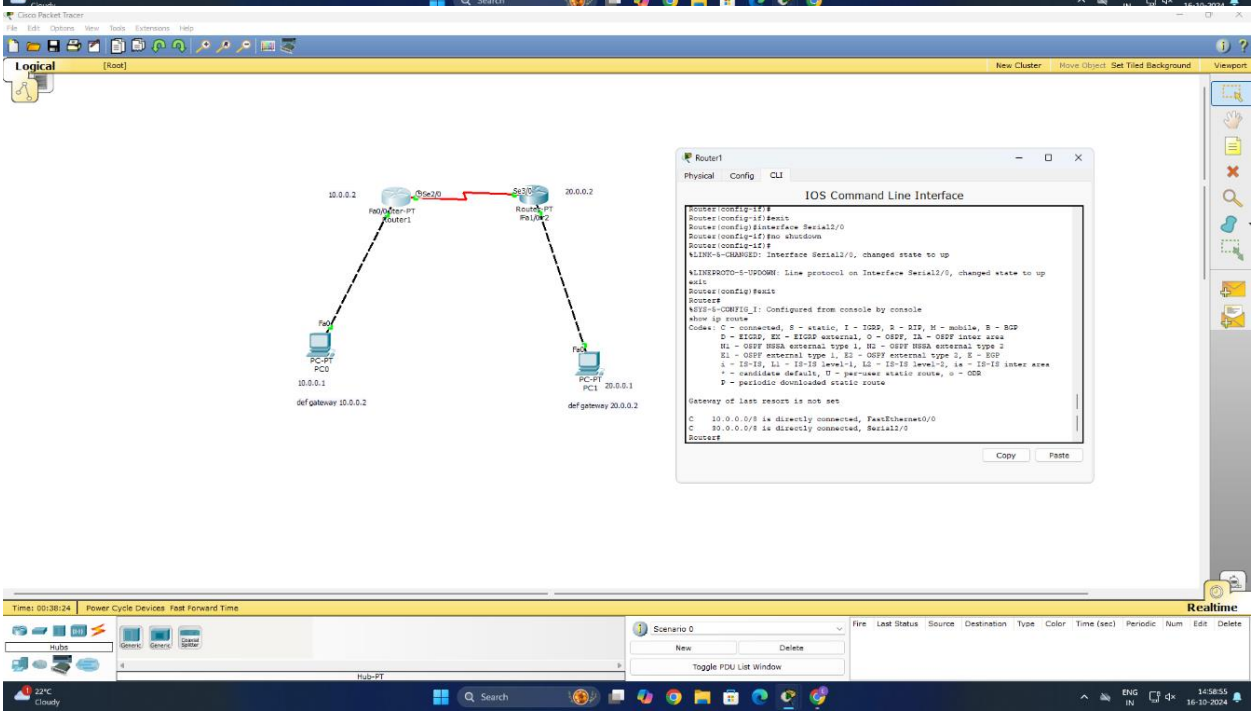
routers are successfully communicate with their nodes

16/10/24


10.0.0.2
Se2/0
Se3/0
20.0.0.2
Router-PT
Router1
Router-PT
PC-PT
PC0
10.0.0.1
def gateway 10.0.0.2
PC-PT
PC1
20.0.0.1
def gateway 20.0.0.2
PC0
Physical
Config
Desktop
Custom Interface
Command Prompt
PC>ping 30.0.0.2
Pinging 30.0.0.2 with 32 bytes of data:
Request timed out.
Request timed out.
Request timed out.
Request timed out.
Ping statistics for 30.0.0.2:
Packets: Sent = 4, Received = 0, Lost = 4 (100% loss),
PC>ping 10.0.0.2
Pinging 10.0.0.2 with 32 bytes of data:
Reply from 10.0.0.2: bytes=32 time=0ms TTL=255
Reply from 10.0.0.2: bytes=32 time=0ms TTL=255
Reply from 10.0.0.2: bytes=32 time=0ms TTL=255
Reply from 10.0.0.2: bytes=32 time=0ms TTL=255
Ping statistics for 10.0.0.2:
Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),
Approximate round trip times in milli-seconds:
Minimum = 0ms, Maximum = 0ms, Average = 0ms
Power Cycle Devices
Fast Forward Time
Realtime
Hubs
Hub-PT
Scenario 0
New
Delete
Toggle PDU List Window
Fire
Last Status
Source
Destination
Type
Color
Time (sec)
Periodic
Num
Edit
Delete
Search
ENG
IN
15:01:50
16-10-2024


30.0.0.1
30.0.0.2
10.0.0.2
Se2/0
Se3/0
20.0.0.2
Router-PT
Router1
Router-PT
PC-PT
PC0
10.0.0.1
def gateway 10.0.0.2
PC-PT
PC1
20.0.0.1
def gateway 20.0.0.2
PC0
Physical
Config
Desktop
Custom Interface
Command Prompt
PC>ping 20.0.0.1
Pinging 20.0.0.1 with 32 bytes of data:
Reply from 10.0.0.2: Destination host unreachable.
Reply from 10.0.0.2: Destination host unreachable.
Reply from 10.0.0.2: Destination host unreachable.
Reply from 10.0.0.2: Destination host unreachable.
Ping statistics for 20.0.0.1:
Packets: Sent = 4, Received = 0, Lost = 4 (100% loss),
PC>ping ping 10.0.0.2
Invalid Command.
PC>ping 30.0.0.1
Pinging 30.0.0.1 with 32 bytes of data:
Reply from 30.0.0.1: bytes=32 time=0ms TTL=255
Reply from 30.0.0.1: bytes=32 time=0ms TTL=255
Reply from 30.0.0.1: bytes=32 time=0ms TTL=255
Reply from 30.0.0.1: bytes=32 time=0ms TTL=255
Time: 00:51:55
Power Cycle Devices
Fast Forward Time
Realtime
Hubs
Hub-PT
Scenario 0
New
Delete
Toggle PDU List Window
Fire
Last Status
Source
Destination
Type
Color
Time (sec)
Periodic
Num
Edit
Delete
Search
ENG
15:12:27


Logical
[Root]
30.0.0.1
30.0.0.2
10.0.0.2
20.0.0.2
Router1
PC0
PC1
10.0.0.1
20.0.0.1
def gateway 10.0.0.2
def gateway 20.0.0.2
PC0
Physical
Config
Desktop
Custom Interface
Command Prompt
PC>ping 10.0.0.2
Pinging 10.0.0.2 with 32 bytes of data:
Reply from 10.0.0.2: bytes=32 time=0ms TTL=255
Reply from 10.0.0.2: bytes=32 time=0ms TTL=255
Reply from 10.0.0.2: bytes=32 time=0ms TTL=255
Reply from 10.0.0.2: bytes=32 time=0ms TTL=255
Ping statistics for 10.0.0.2:
Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),
Approximate round trip times in milli-seconds:
Minimum = 0ms, Maximum = 0ms, Average = 0ms
PC>ping 20.0.0.2
Pinging 20.0.0.2 with 32 bytes of data:
Reply from 10.0.0.2: Destination host unreachable.
Reply from 10.0.0.2: Destination host unreachable.
Reply from 10.0.0.2: Destination host unreachable.
Reply from 10.0.0.2: Destination host unreachable.
Ping statistics for 20.0.0.2:
Packets: Sent = 4, Received = 0, Lost = 4 (100% loss),
Time: 00:49:45
Power Cycle Devices
Fast Forward Time
Realtime
Scenario 0
New
Delete
Toggle PDU List Window


Logical
[Root]
10.0.0.2
20.0.0.2
Router1
PC0
PC1
10.0.0.1
20.0.0.1
def gateway 10.0.0.2
def gateway 20.0.0.2
Router1
Physical
Config
CLI
IOS Command Line Interface
Router(config-if)#
Router(config-if)#exit
Router(config)#interface Serial2/0
Router(config-if)#no shutdown
Router(config-if)#
%LINK-5-CHANGED: Interface Serial2/0, changed state to up
%LINEPROTO-5-UPDOWN: Line protocol on Interface Serial2/0, changed state to up
exit
Router(config)#exit
Router#
%SYS-5-CONFIG_I: Configured from console by console
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 not set
C 10.0.0.0/8 is directly connected, FastEthernet0/0
C 30.0.0.0/8 is directly connected, Serial2/0
Router#
Copy
Paste
Time: 00:38:24
Power Cycle Devices
Fast Forward Time
Realtime
Scenario 0
New
Delete
Toggle PDU List Window