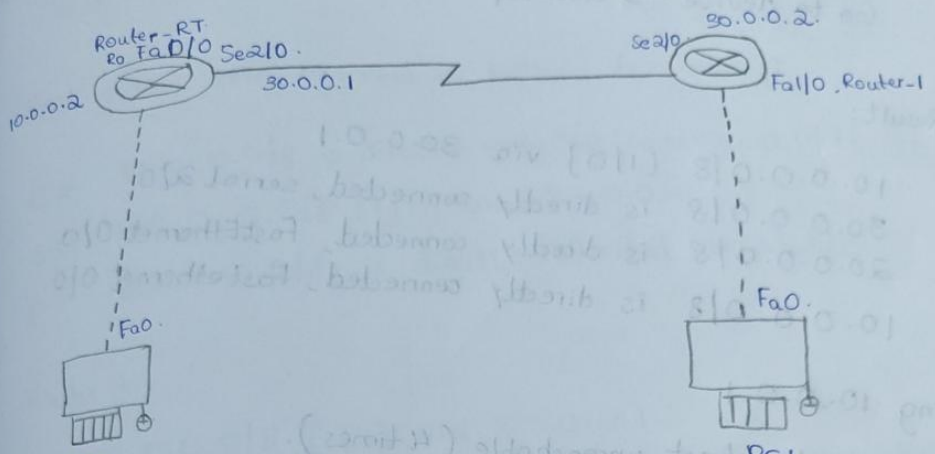
16/10/24

8). Config IP address to routers in packet tracer. Explore the following messages: ping responses, destination, unreachable, request timed out, reply.



Procedure:

1) Open packet tracer
2) Add two routers & two end devices.
3) Connect them using copper crossover (router-device) & serial DCE (router-router).
4) IP config to each device

	PC0	PC2
IP	10.0.0.10	20.0.0.10
Subnet	255.0.0.0	255.0.0.0
def gateway	10.0.0.1	20.0.0.1

⑤. Router CLI → Enter → No → Enable → config terminal → interface fast ethernet 0/0 or serial 2/0 (for router to router) → Enter IP & Subnet → No shutdown → exit → exit.

⑥. Go to device → desktop → command prompt → ping devi

Result:

S 10.0.0.0/8 [1/0] via 30.0.0.1
C 30.0.0.0/8 is directly connected, serial 2/0
C 20.0.0.0/8 is directly connected, FastEthernet 0/0
10.0.0.0/8 is directly connected, Fastethernet 0/0.

Ping 10.0.0.1

Destination host unreachable (4 times).

Ping 10.0.0.1

Reply from 10.0.0.1 : bytes; time, TTL. (4 times).

~~Same for rest~~.

Ping 30.0.0.2

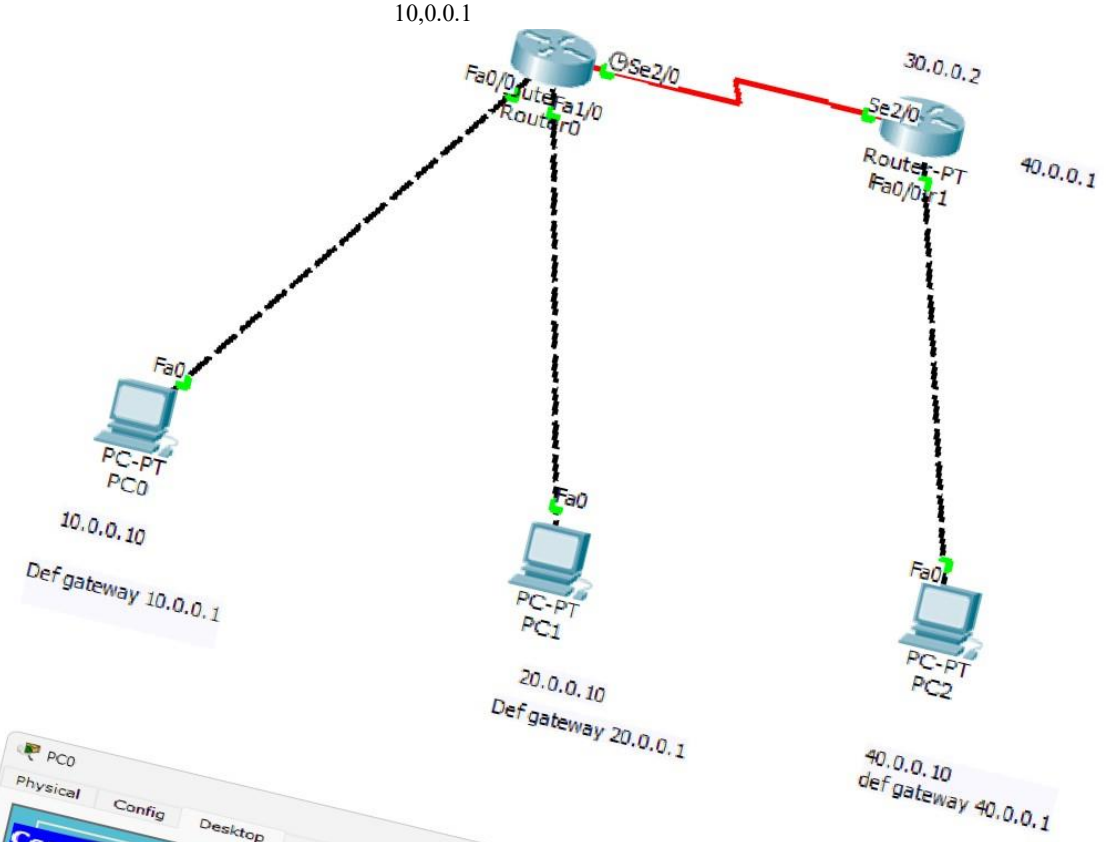
Timed out (4 times).

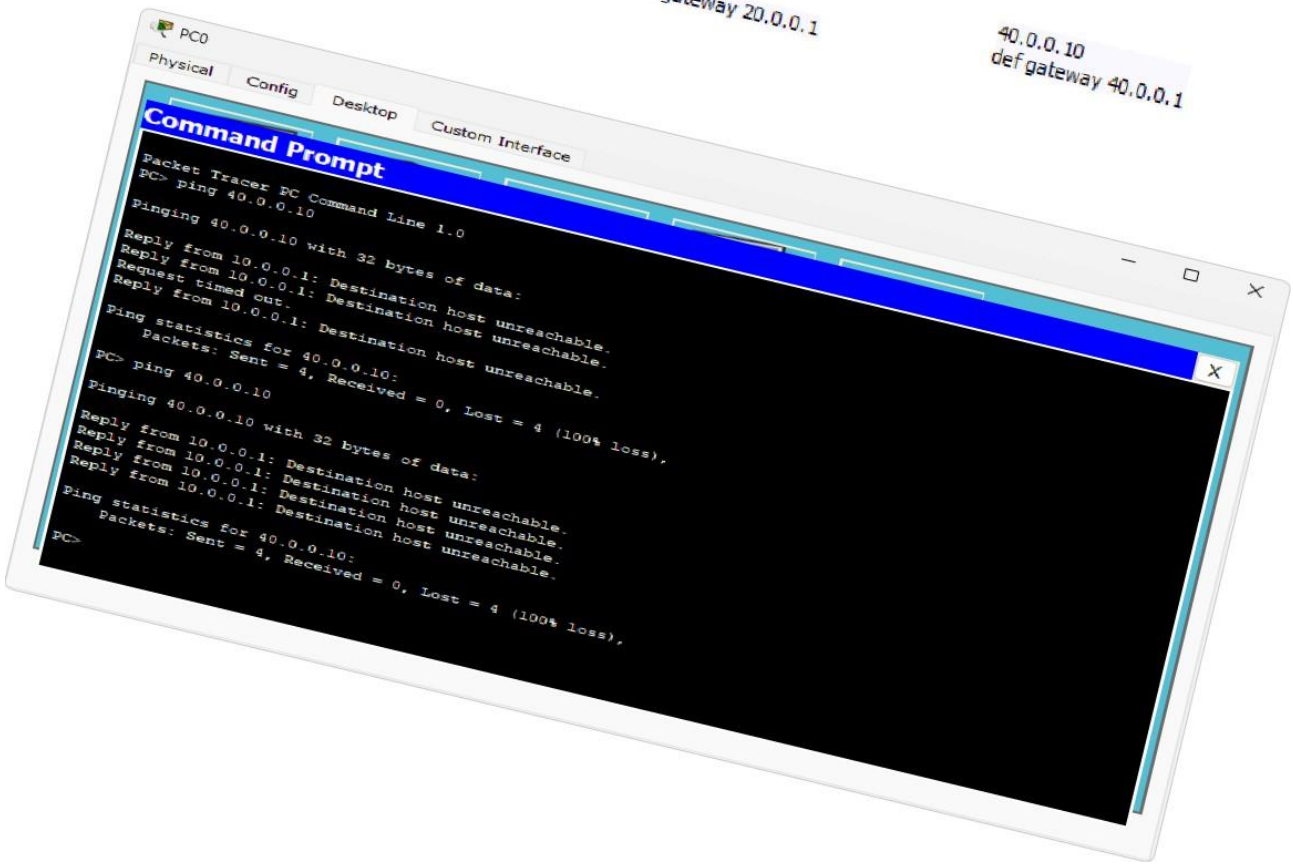
Received = 0, Lost = 4.

Ping 10.0.0.1

Received = 4, Lost = 0.

10,0.0.1


Fa0/0
Router0
Se2/0
30.0.0.2
Se2/0
Router-PT
Fa0/0
40.0.0.1
Fa0
PC-PT
PC0
10.0.0.10
Def gateway 10.0.0.1
Fa0
PC-PT
PC1
20.0.0.10
Def gateway 20.0.0.1
Fa0
PC-PT
PC2
40.0.0.10
def gateway 40.0.0.1


PC0
Physical
Config
Desktop
Custom Interface
Command Prompt
Packet Tracer PC Command Line 1.0
PC> ping 40.0.0.10
Pinging 40.0.0.10 with 32 bytes of data:
Reply from 10.0.0.1: Destination host unreachable.
Reply from 10.0.0.1: Destination host unreachable.
Request timed out.
Reply from 10.0.0.1: Destination host unreachable.
Ping statistics for 40.0.0.10:
Packets: Sent = 4, Received = 0, Lost = 4 (100% loss),
PC> ping 40.0.0.10
Pinging 40.0.0.10 with 32 bytes of data:
Reply from 10.0.0.1: Destination host unreachable.
Reply from 10.0.0.1: Destination host unreachable.
Reply from 10.0.0.1: Destination host unreachable.
Reply from 10.0.0.1: Destination host unreachable.
Ping statistics for 40.0.0.10:
Packets: Sent = 4, Received = 0, Lost = 4 (100% loss),
PC>

```
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

S    10.0.0.0/8 [1/0] via 30.0.0.1
C    30.0.0.0/8 is directly connected, Serial2/0
C    40.0.0.0/8 is directly connected, FastEthernet0/0
Router#
```

Copy Paste

Router0

Physical Config CLI

IOS Command Line Interface

```
%LINEPROTO-5-UPDOWN: Line protocol on Interface Serial2/0, changed state to up

Router#config terminal
Enter configuration commands, one per line.  End with CNTL/Z.
Router(config)#ip route 40.0.0.0 255.0.0.0 30.0.0.2
Router(config)#exit
Router#
%SYS-5-CONFIG_I: Configured from console by console

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 not set

C    10.0.0.0/8 is directly connected, FastEthernet0/0
C    20.0.0.0/8 is directly connected, FastEthernet1/0
C    30.0.0.0/8 is directly connected, Serial2/0
S    40.0.0.0/8 [1/0] via 30.0.0.2
Router#
```

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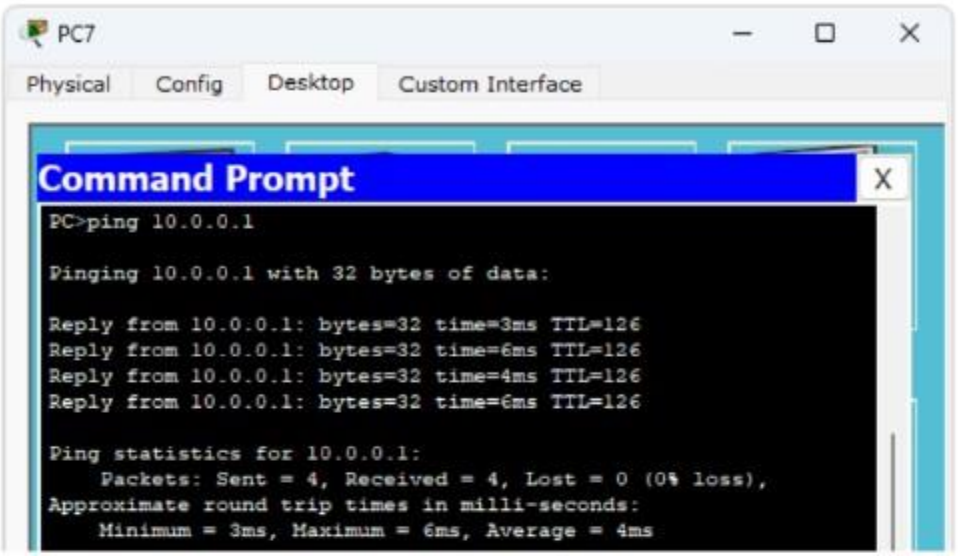
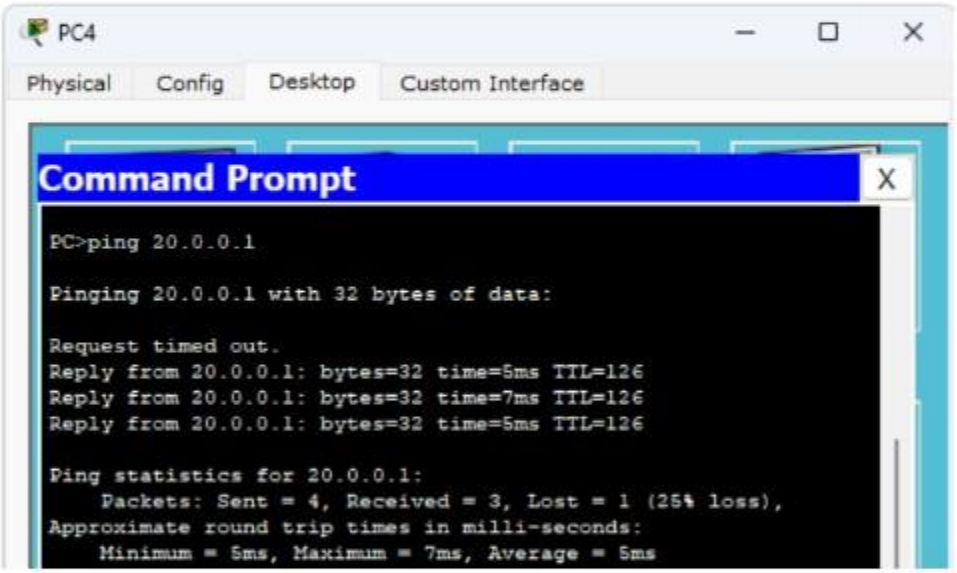

PC7
Physical
Config
Desktop
Custom Interface
Command Prompt
PC>ping 10.0.0.1
Pinging 10.0.0.1 with 32 bytes of data:
Reply from 10.0.0.1: bytes=32 time=3ms TTL=126
Reply from 10.0.0.1: bytes=32 time=6ms TTL=126
Reply from 10.0.0.1: bytes=32 time=4ms TTL=126
Reply from 10.0.0.1: bytes=32 time=6ms TTL=126
Ping statistics for 10.0.0.1:
Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),
Approximate round trip times in milli-seconds:
Minimum = 3ms, Maximum = 6ms, Average = 4ms


PC4
Physical
Config
Desktop
Custom Interface
Command Prompt
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=5ms TTL=126
Reply from 20.0.0.1: bytes=32 time=7ms TTL=126
Reply from 20.0.0.1: bytes=32 time=5ms TTL=126
Ping statistics for 20.0.0.1:
Packets: Sent = 4, Received = 3, Lost = 1 (25% loss),
Approximate round trip times in milli-seconds:
Minimum = 5ms, Maximum = 7ms, Average = 5ms