

RIP Routing Protocol:

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1BM19CS404

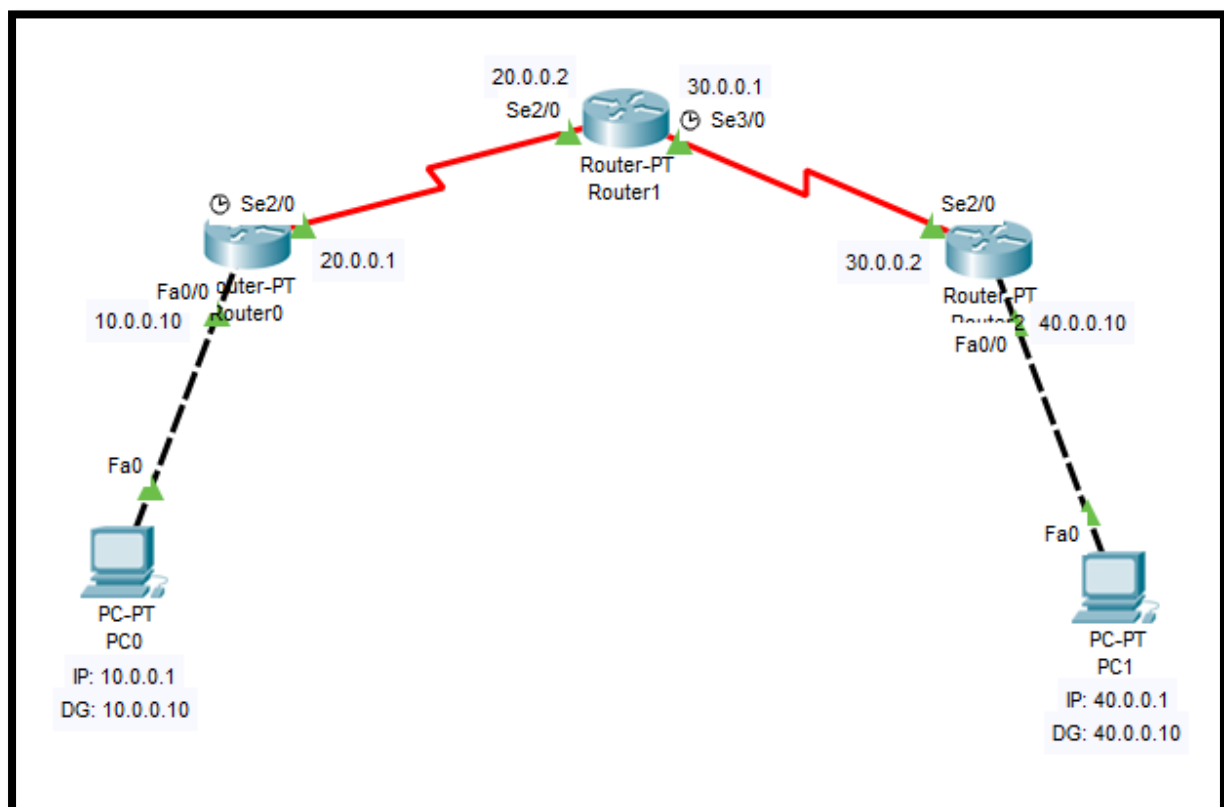
Aim: Configuring RIP Routing Protocol in Routers.

Procedure:

1. Create a topology as shown in the figure below.
2. Configure the IP address to both the PC's & interface all the Router.
3. Configure RIP to all the routers.
4. Check router table of a router.
5. Ping 40.0.0.10 from 10.0.0.10

Observation: Ping message is successful.

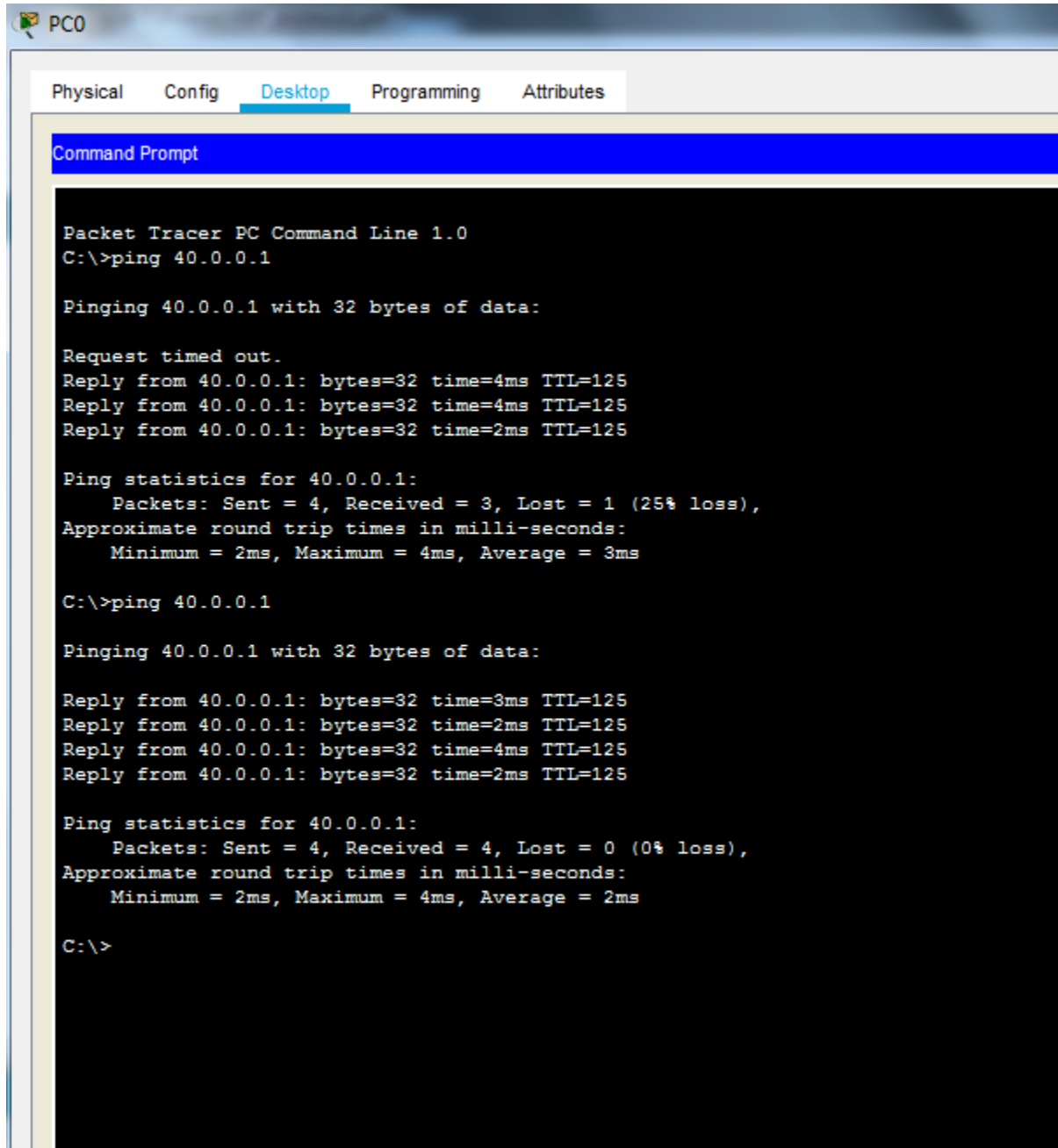
Topology:



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Ping from 10.0.0.10 to 40.0.0.10



The screenshot shows a Packet Tracer PC Command Line window for PC0. The 'Desktop' tab is selected. The command prompt shows the execution of a ping command from 10.0.0.10 to 40.0.0.10. The first ping attempt shows a 25% loss (1 packet lost). The second ping attempt shows 0% loss (all 4 packets received).

```
Packet Tracer PC Command Line 1.0
C:\>ping 40.0.0.1

Pinging 40.0.0.1 with 32 bytes of data:

Request timed out.
Reply from 40.0.0.1: bytes=32 time=4ms TTL=125
Reply from 40.0.0.1: bytes=32 time=4ms TTL=125
Reply from 40.0.0.1: bytes=32 time=2ms TTL=125

Ping statistics for 40.0.0.1:
    Packets: Sent = 4, Received = 3, Lost = 1 (25% loss),
Approximate round trip times in milli-seconds:
    Minimum = 2ms, Maximum = 4ms, Average = 3ms

C:\>ping 40.0.0.1

Pinging 40.0.0.1 with 32 bytes of data:

Reply from 40.0.0.1: bytes=32 time=3ms TTL=125
Reply from 40.0.0.1: bytes=32 time=2ms TTL=125
Reply from 40.0.0.1: bytes=32 time=4ms TTL=125
Reply from 40.0.0.1: bytes=32 time=2ms TTL=125

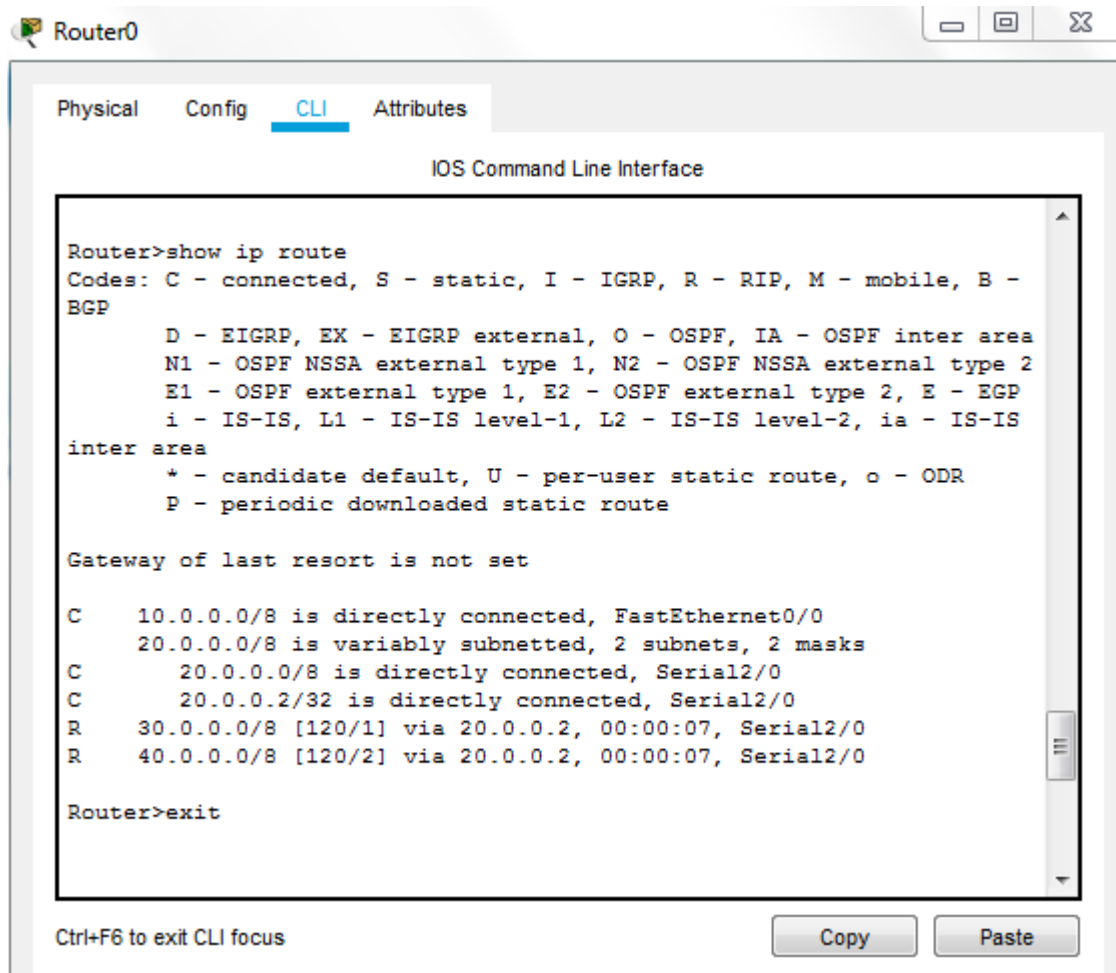
Ping statistics for 40.0.0.1:
    Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),
Approximate round trip times in milli-seconds:
    Minimum = 2ms, Maximum = 4ms, Average = 2ms

C:\>
```

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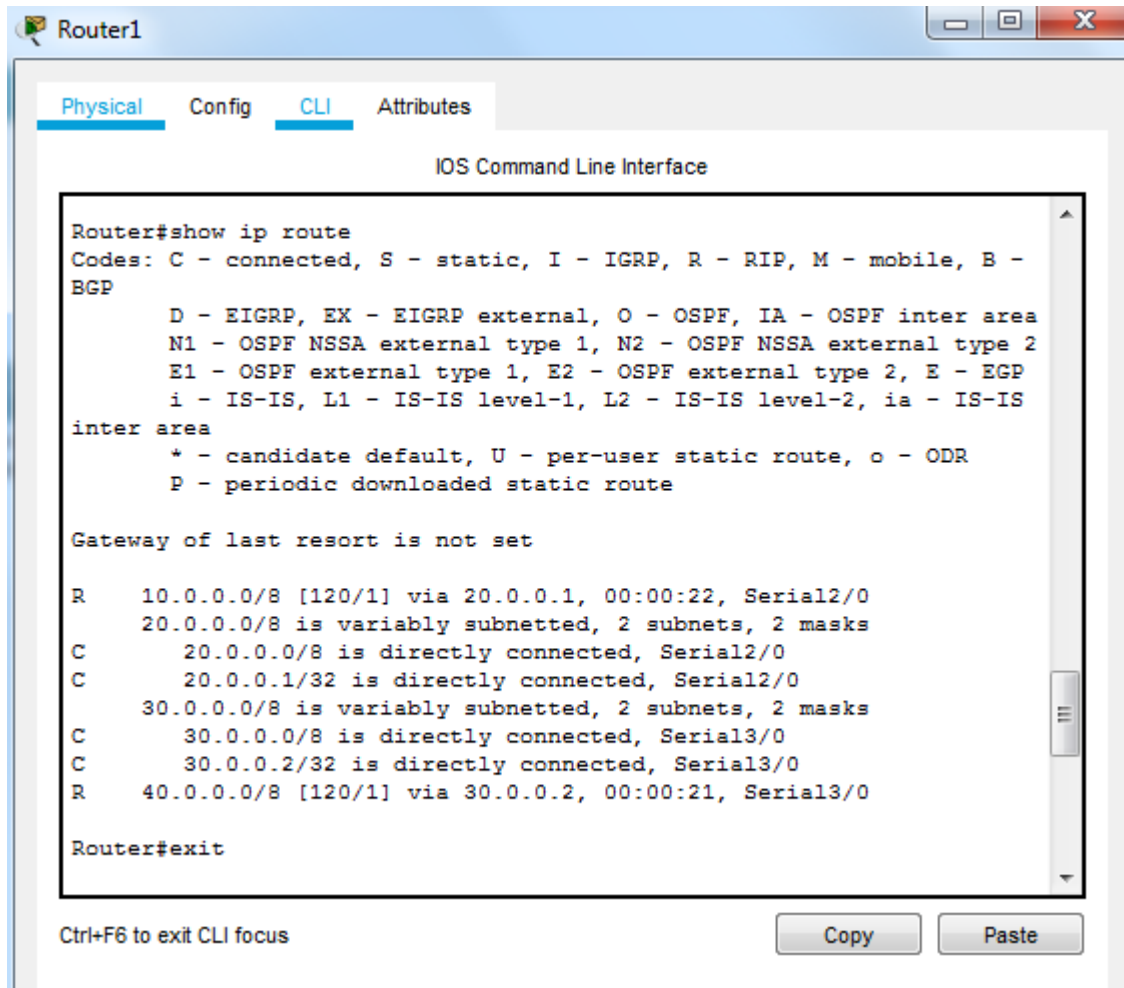
Router-0:



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Router-1:



The screenshot shows a window titled 'Router1' with tabs for 'Physical', 'Config', 'CLI', and 'Attributes'. The 'CLI' tab is active, displaying the 'IOS Command Line Interface'. The command 'Router#show ip route' has been entered, and the output is shown. The output includes a legend for route codes, a message about the gateway of last resort, and a list of routes. The routes are: 10.0.0.0/8 [120/1] via 20.0.0.1, 00:00:22, Serial2/0; 20.0.0.0/8 is variably subnetted, 2 subnets, 2 masks; 20.0.0.0/8 is directly connected, Serial2/0; 20.0.0.1/32 is directly connected, Serial2/0; 30.0.0.0/8 is variably subnetted, 2 subnets, 2 masks; 30.0.0.0/8 is directly connected, Serial3/0; 30.0.0.2/32 is directly connected, Serial3/0; and 40.0.0.0/8 [120/1] via 30.0.0.2, 00:00:21, Serial3/0. The prompt 'Router#exit' is at the bottom of the CLI window. Below the CLI window, there is a 'Ctrl+F6 to exit CLI focus' message and 'Copy' and 'Paste' buttons.

```
Router1
Physical Config CLI Attributes
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 not set

R    10.0.0.0/8 [120/1] via 20.0.0.1, 00:00:22, Serial2/0
     20.0.0.0/8 is variably subnetted, 2 subnets, 2 masks
C    20.0.0.0/8 is directly connected, Serial2/0
C    20.0.0.1/32 is directly connected, Serial2/0
     30.0.0.0/8 is variably subnetted, 2 subnets, 2 masks
C    30.0.0.0/8 is directly connected, Serial3/0
C    30.0.0.2/32 is directly connected, Serial3/0
R    40.0.0.0/8 [120/1] via 30.0.0.2, 00:00:21, Serial3/0

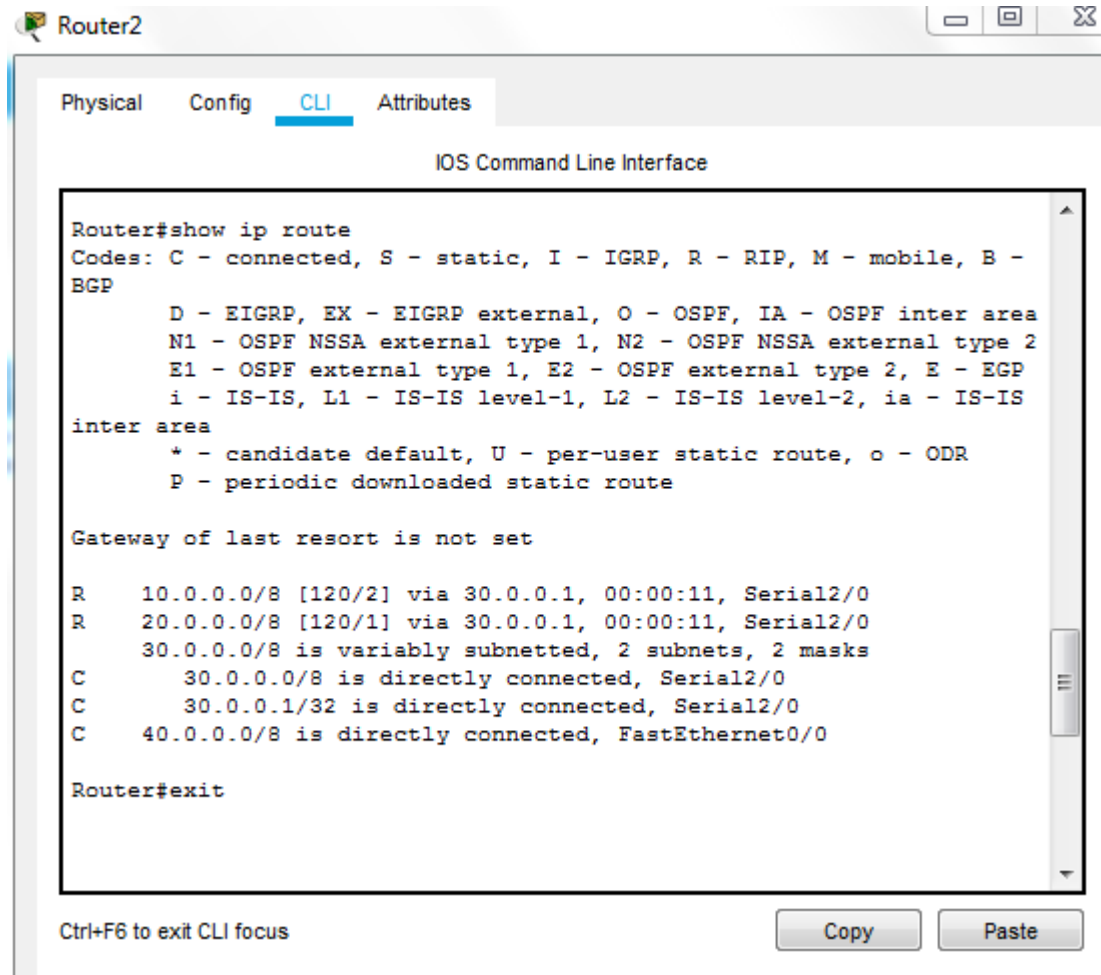
Router#exit

Ctrl+F6 to exit CLI focus
```

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Router-2:



```
Router2
Physical Config CLI Attributes
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 not set

R    10.0.0.0/8 [120/2] via 30.0.0.1, 00:00:11, Serial2/0
R    20.0.0.0/8 [120/1] via 30.0.0.1, 00:00:11, Serial2/0
     30.0.0.0/8 is variably subnetted, 2 subnets, 2 masks
C     30.0.0.0/8 is directly connected, Serial2/0
C     30.0.0.1/32 is directly connected, Serial2/0
C    40.0.0.0/8 is directly connected, FastEthernet0/0

Router#exit

Ctrl+F6 to exit CLI focus
```