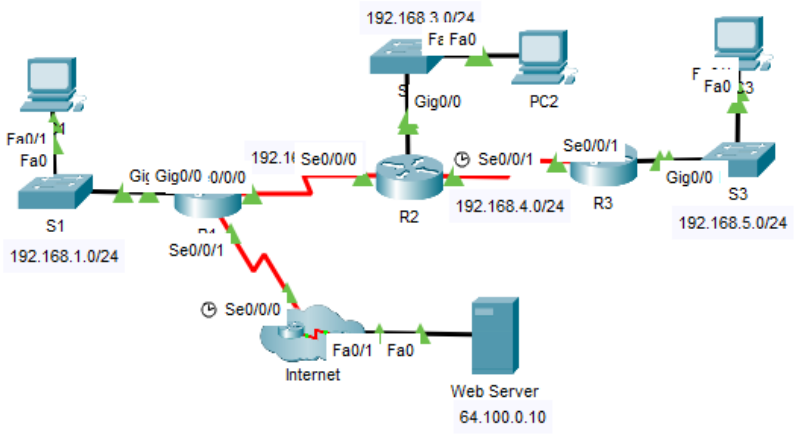
Configure RIPv2 in Packet Tracer.

R M P U RAJAPAKSHA

Contents

Configure RIPv2 in Packet Tracer.



Configure R1

Create a Default Route

- Click on R1
- Go to the **CLI** tab.
- Enter privileged EXEC mode
  Command : **en**

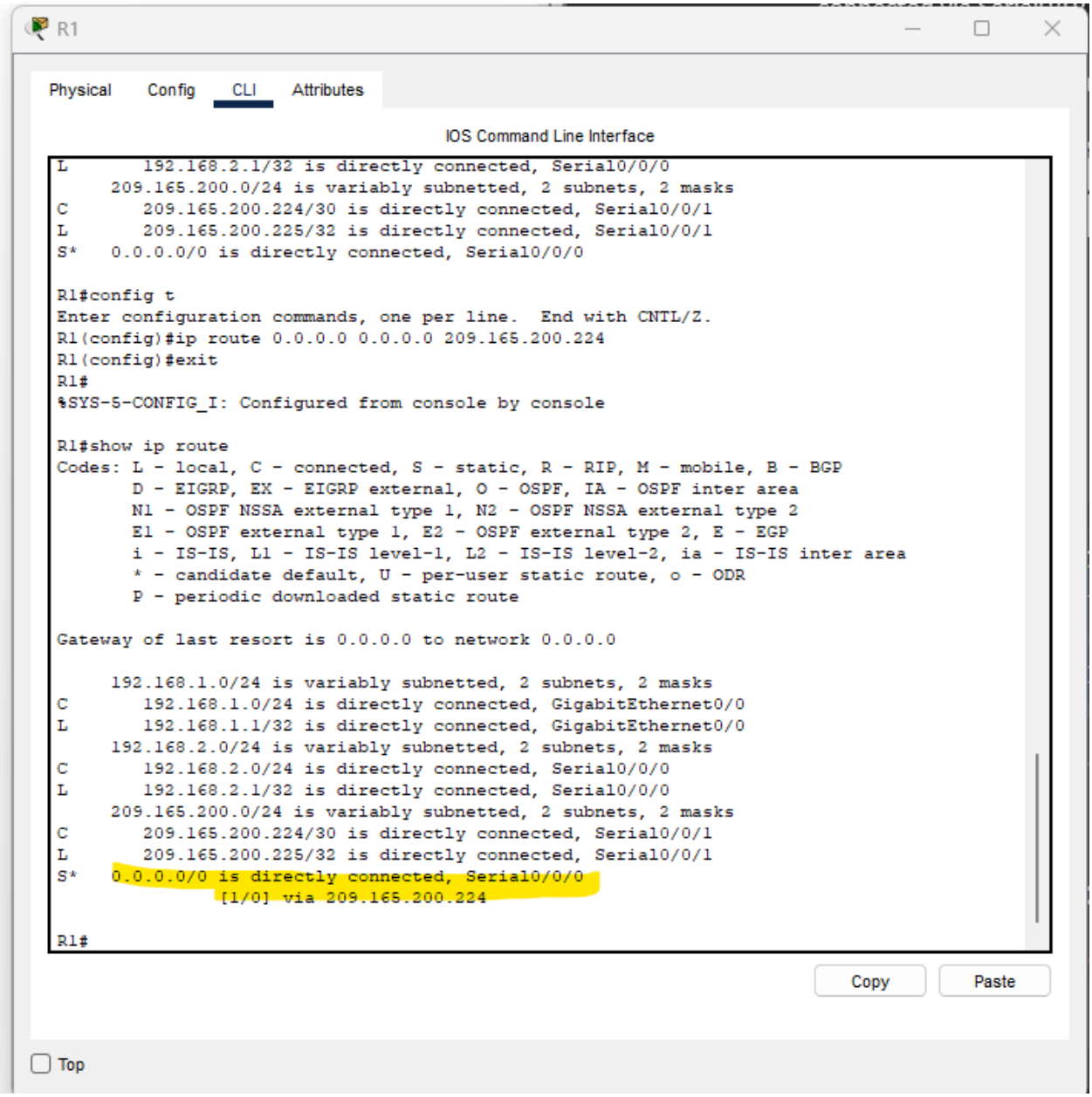
- Enter global configuration mode
  Command : **config t**

- Create a default route that sends all traffic to the next-hop address (assuming the ISP is connected via Serial0/0/1):

  Command : **ip route 0.0.0.0 0.0.0.0 <NEXT-HOP-IP>**

```
R1(config)#ip route 0.0.0.0 0.0.0.0 209.165.200.224
R1(config)#
```

- Now you can see default router is enabled



Enable RIPv2

- Enter RIP configuration mode:
  Command : **router rip**

```
R1(config)#router rip
R1(config-router)#
```

- Enable version 2
  Command : **version 2**

```
R1(config-router)#version 2
R1(config-router)#
```

- Disable automatic route summarization:
  Command : **no auto-summary**

```
R1(config-router)#no auto-summary
R1(config-router)#
```

- Configure RIP Networks
  Use the **network** command for each network interface.
  Command : **network <ip address of directly connected>**

```
R1(config-router)#network 192.168.1.0
R1(config-router)#network 192.168.2.0
R1(config-router)#network 209.165.200.224
R1(config-router)#
```

- Set Passive Interfaces

Prevent RIP updates from being sent on LAN interfaces (assuming GigabitEthernet0/0 is the LAN interface):

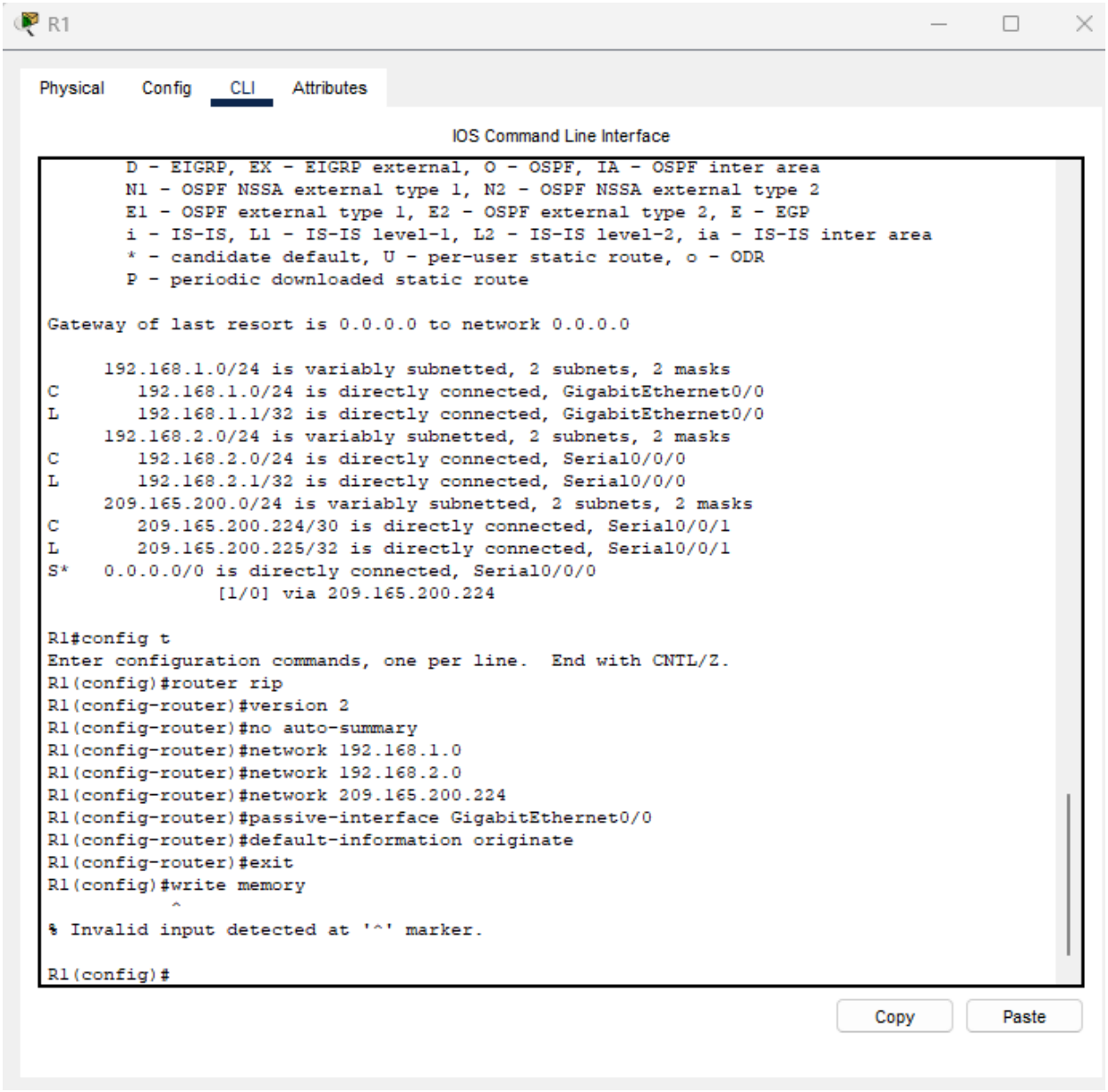
```
R1(config-router)#passive-interface GigabitEthernet0/0
R1(config-router)#
```

- Advertise the Default Route

Command : **default-information originate**
so that R1 shares its default route with other routers:

```
R1(config-router)#default-information originate
R1(config-router)#
```

- Basically what we are done in the R1 is following :



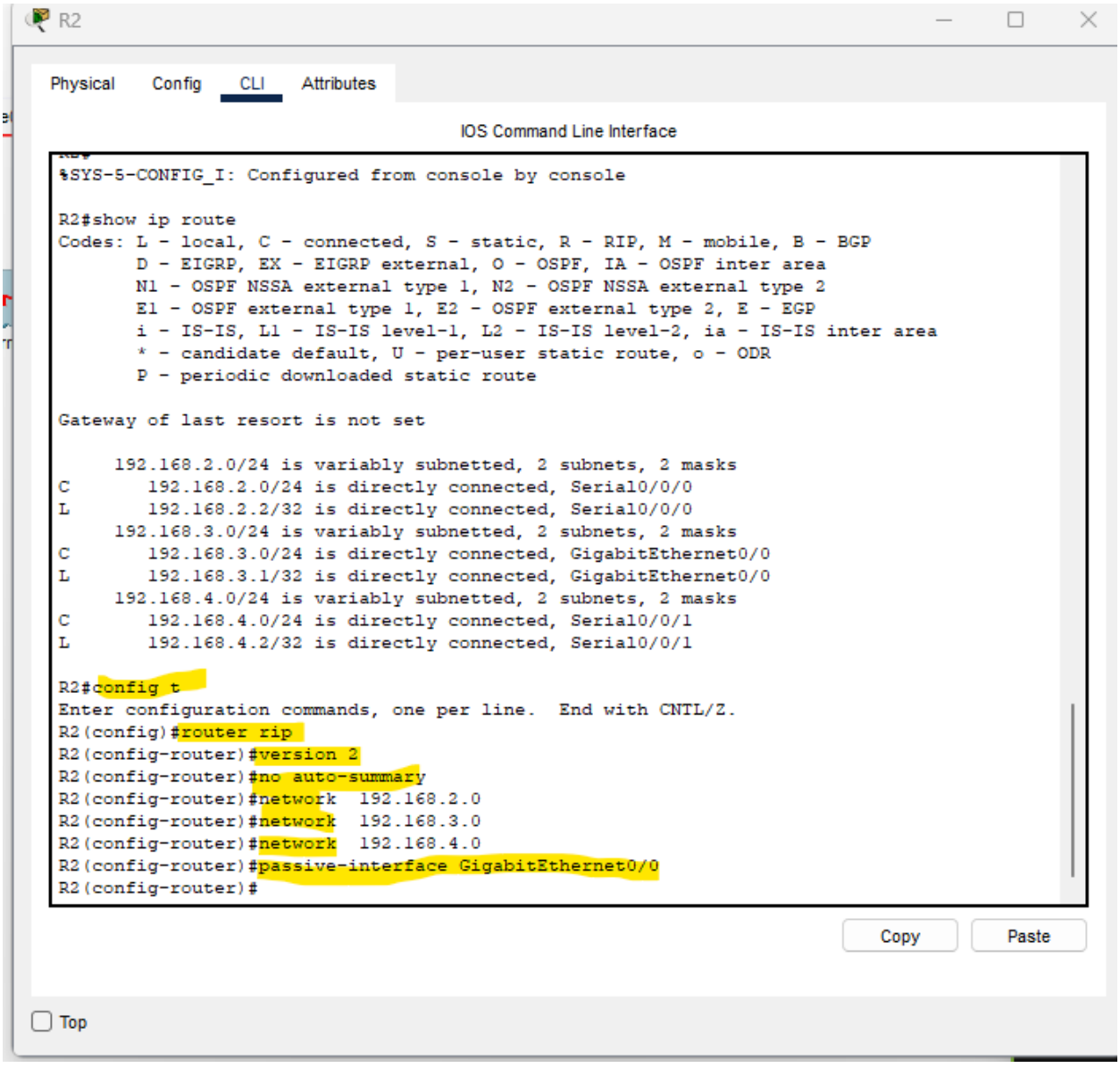
Configure RIPv2 on R2

- Check what are the network here
  command : **show ip route**

```
R2#show ip route
Codes: L - local, C - connected, S - static, 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

     192.168.2.0/24 is variably subnetted, 2 subnets, 2 masks
C       192.168.2.0/24 is directly connected, Serial0/0/0
L       192.168.2.2/32 is directly connected, Serial0/0/0
     192.168.3.0/24 is variably subnetted, 2 subnets, 2 masks
C       192.168.3.0/24 is directly connected, GigabitEthernet0/0
L       192.168.3.1/32 is directly connected, GigabitEthernet0/0
     192.168.4.0/24 is variably subnetted, 2 subnets, 2 masks
C       192.168.4.0/24 is directly connected, Serial0/0/1
L       192.168.4.2/32 is directly connected, Serial0/0/1

R2#
```

Copy Paste

- Then configure R2 as previously

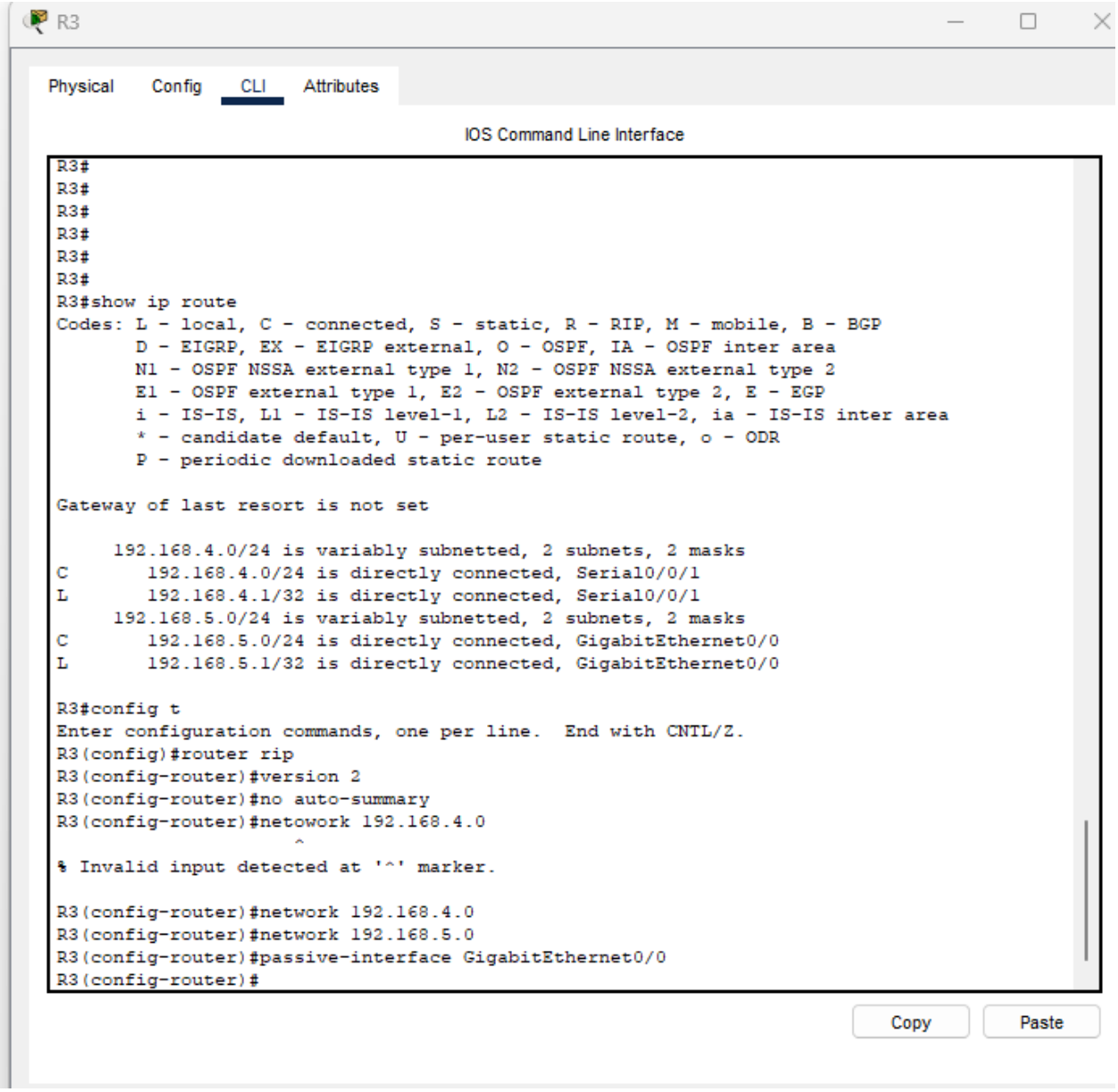


Configure RIPv2 on R3

- Check what the networks in there
  Command : **show ip route**

```
R3#show ip route
Codes: L - local, C - connected, S - static, 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

     192.168.4.0/24 is variably subnetted, 2 subnets, 2 masks
C       192.168.4.0/24 is directly connected, Serial0/0/1
L       192.168.4.1/32 is directly connected, Serial0/0/1
     192.168.5.0/24 is variably subnetted, 2 subnets, 2 masks
C       192.168.5.0/24 is directly connected, GigabitEthernet0/0
L       192.168.5.1/32 is directly connected, GigabitEthernet0/0
```

- Then configure as previous

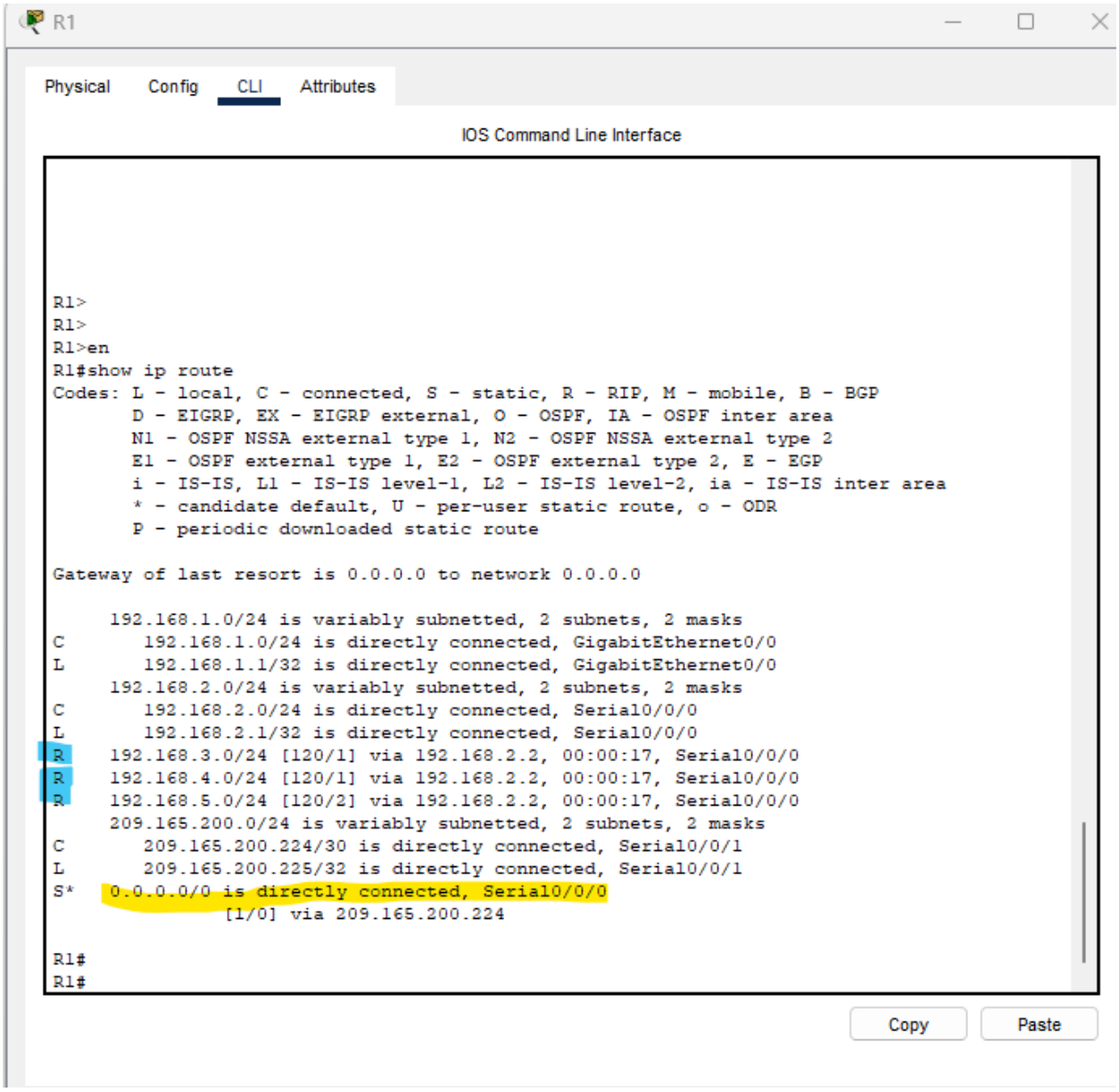


Verify Configurations

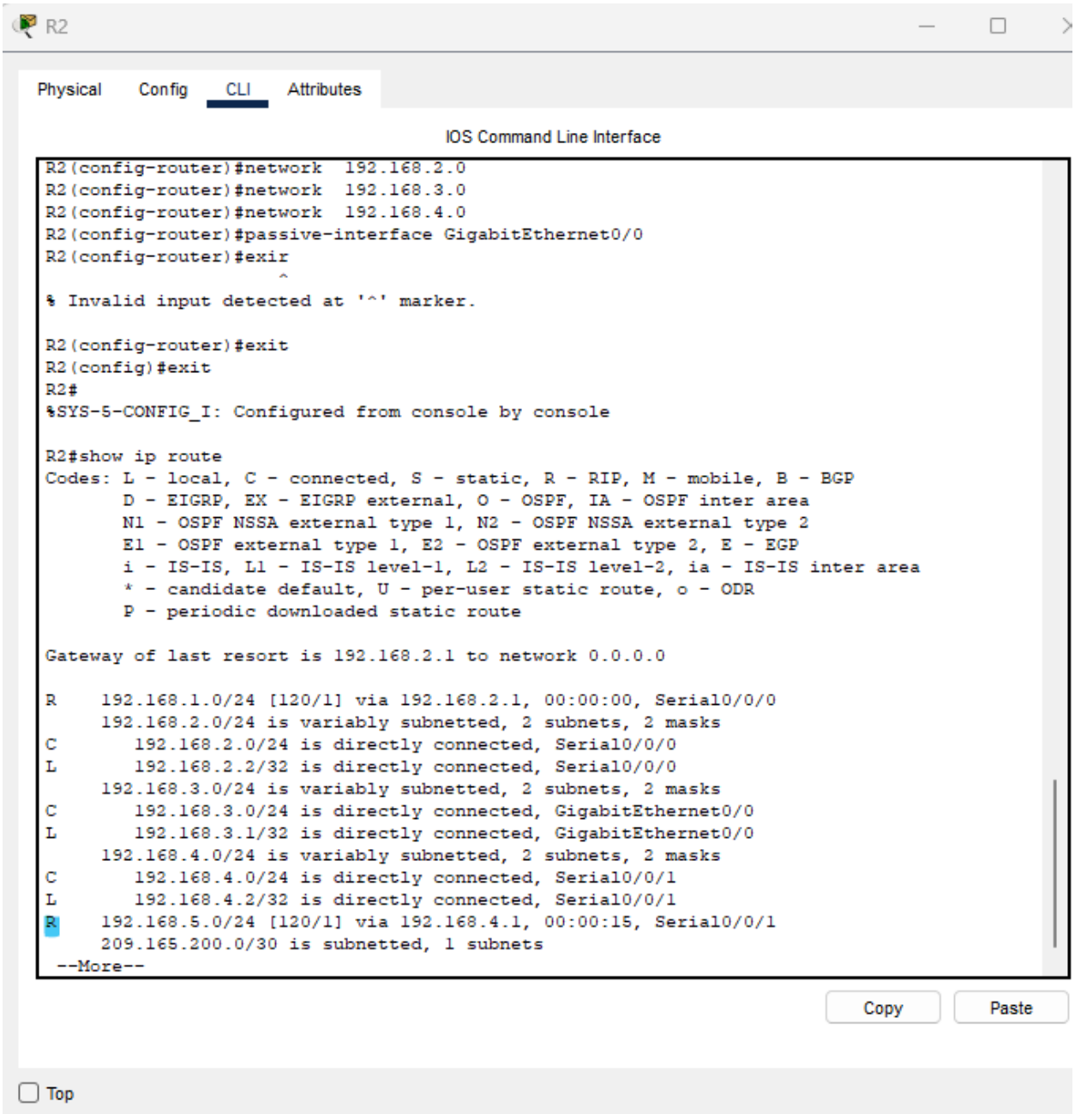
- Check Routing Tables
  Command : show ip route

    - Check all three routers .
    - You should see RIP (R) entries for all networks.
    - A default route (0.0.0.0/0) should be visible.

Router1



Router2


R2
Physical
Config
CLI
Attributes
IOS Command Line Interface
R2(config-router)#network 192.168.2.0
R2(config-router)#network 192.168.3.0
R2(config-router)#network 192.168.4.0
R2(config-router)#passive-interface GigabitEthernet0/0
R2(config-router)#exir
                    ^
% Invalid input detected at '^' marker.
R2(config-router)#exit
R2(config)#exit
R2#
%SYS-5-CONFIG_I: Configured from console by console
R2#show ip route
Codes: L - local, C - connected, S - static, 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 192.168.2.1 to network 0.0.0.0
R 192.168.1.0/24 [120/1] via 192.168.2.1, 00:00:00, Serial0/0/0
192.168.2.0/24 is variably subnetted, 2 subnets, 2 masks
C 192.168.2.0/24 is directly connected, Serial0/0/0
L 192.168.2.2/32 is directly connected, Serial0/0/0
192.168.3.0/24 is variably subnetted, 2 subnets, 2 masks
C 192.168.3.0/24 is directly connected, GigabitEthernet0/0
L 192.168.3.1/32 is directly connected, GigabitEthernet0/0
192.168.4.0/24 is variably subnetted, 2 subnets, 2 masks
C 192.168.4.0/24 is directly connected, Serial0/0/1
L 192.168.4.2/32 is directly connected, Serial0/0/1
R 192.168.5.0/24 [120/1] via 192.168.4.1, 00:00:15, Serial0/0/1
209.165.200.0/30 is subnetted, 1 subnets
--More--
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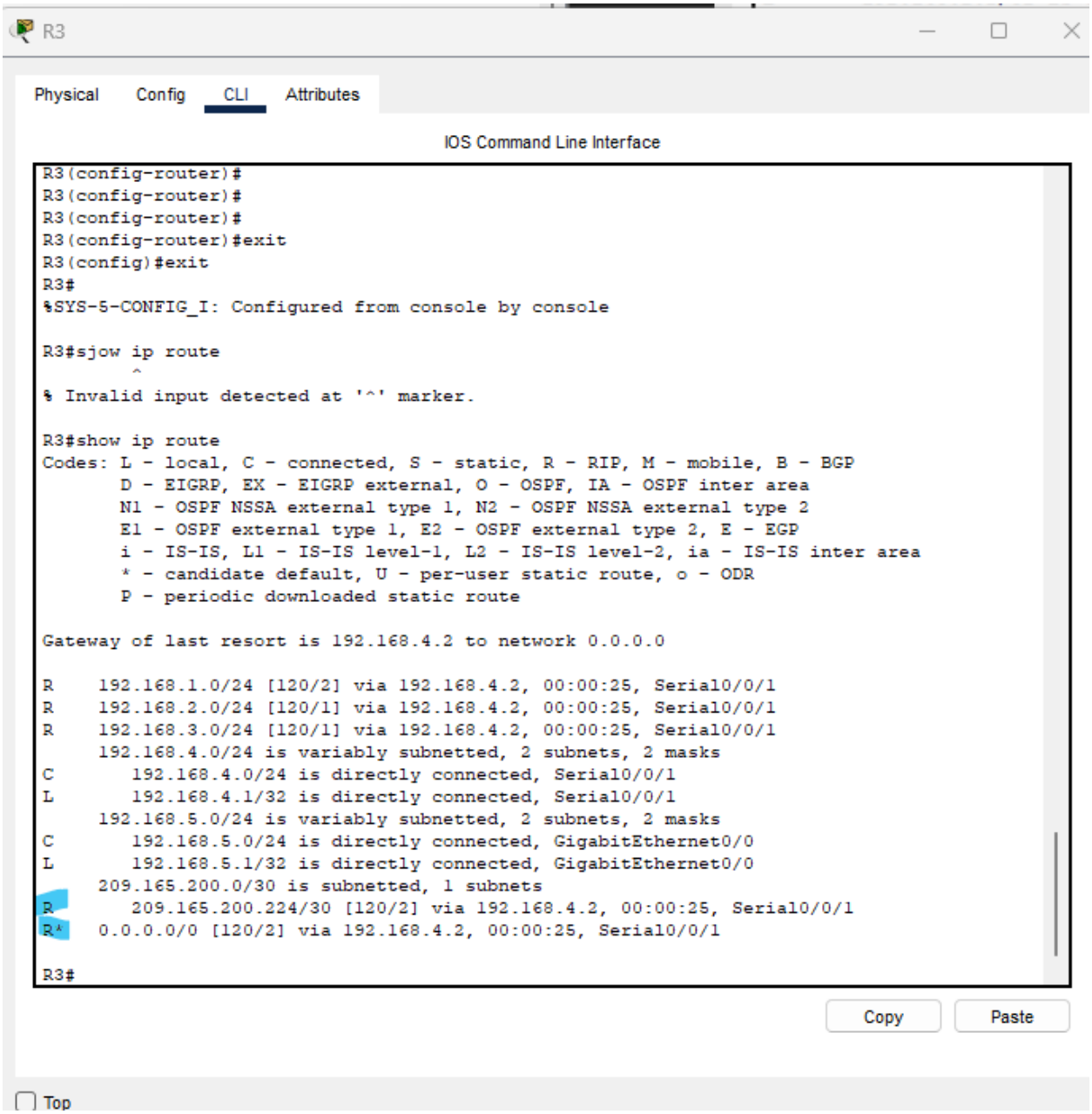
Top

Router3


R3
Physical
Config
CLI
Attributes
IOS Command Line Interface
R3(config-router)#
R3(config-router)#
R3(config-router)#
R3(config-router)#exit
R3(config)#exit
R3#
%SYS-5-CONFIG_I: Configured from console by console
R3#sjow ip route
^
% Invalid input detected at '^' marker.
R3#show ip route
Codes: L - local, C - connected, S - static, 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 192.168.4.2 to network 0.0.0.0
R 192.168.1.0/24 [120/2] via 192.168.4.2, 00:00:25, Serial0/0/1
R 192.168.2.0/24 [120/1] via 192.168.4.2, 00:00:25, Serial0/0/1
R 192.168.3.0/24 [120/1] via 192.168.4.2, 00:00:25, Serial0/0/1
192.168.4.0/24 is variably subnetted, 2 subnets, 2 masks
C 192.168.4.0/24 is directly connected, Serial0/0/1
L 192.168.4.1/32 is directly connected, Serial0/0/1
192.168.5.0/24 is variably subnetted, 2 subnets, 2 masks
C 192.168.5.0/24 is directly connected, GigabitEthernet0/0
L 192.168.5.1/32 is directly connected, GigabitEthernet0/0
209.165.200.0/30 is subnetted, 1 subnets
R 209.165.200.224/30 [120/2] via 192.168.4.2, 00:00:25, Serial0/0/1
R* 0.0.0.0/0 [120/2] via 192.168.4.2, 00:00:25, Serial0/0/1
R3#
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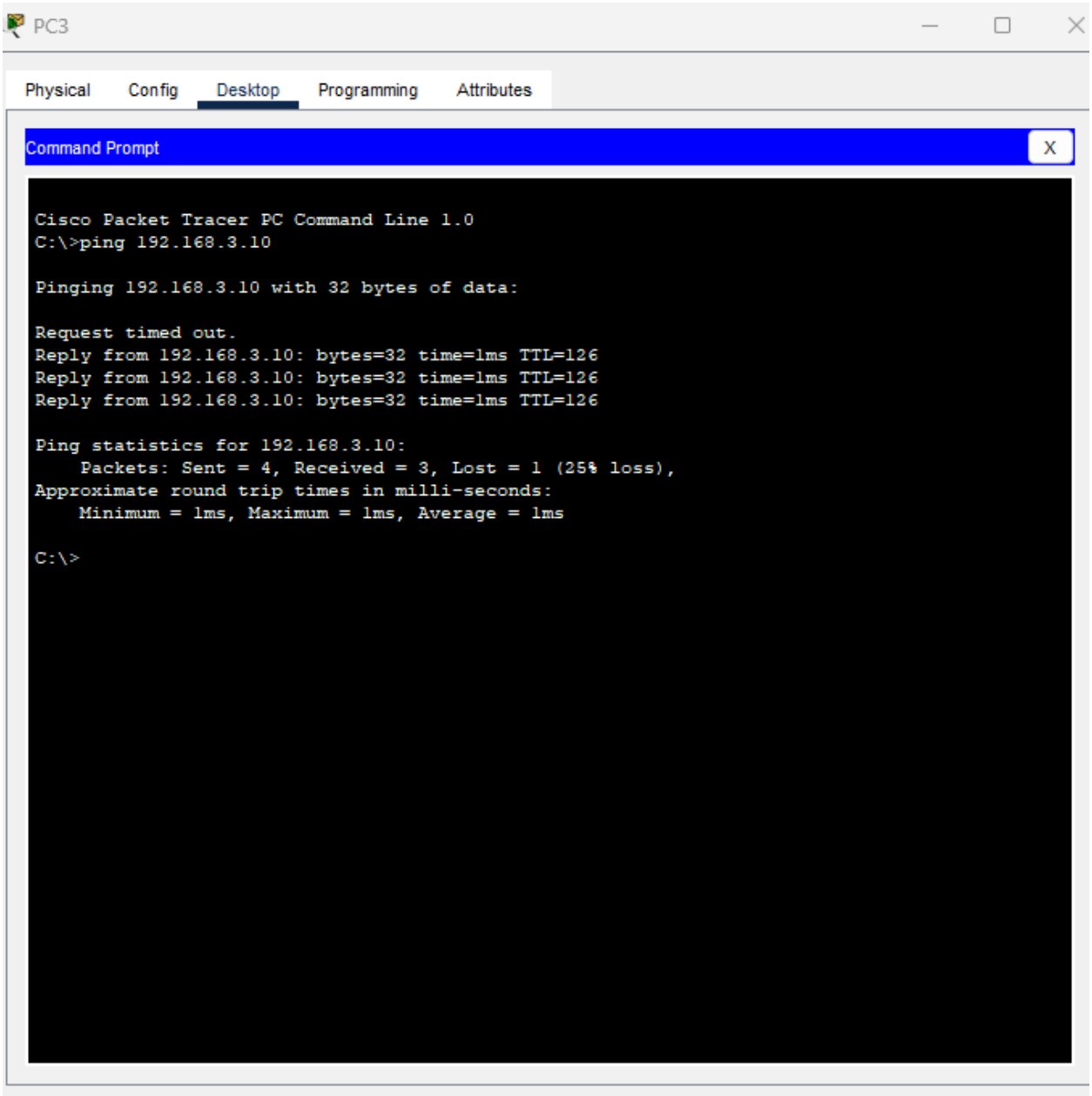
Top

Test Connectivity

- Open the **PC/End Devices**.
- Go to the **Command Prompt** on each device.
- Test connectivity with **ping**



- You can see its working