



Faculty of Engineering and Technology
Electrical and Computer Engineering Department
ENCS4130 // Computer Networks Laboratory
TODO #2 on EXP. No. 3. Dynamic Routing 1
(Distance Vector Routing Protocols)

RIP & EIGRP

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Section: 2

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Configuring EIGRP Routing

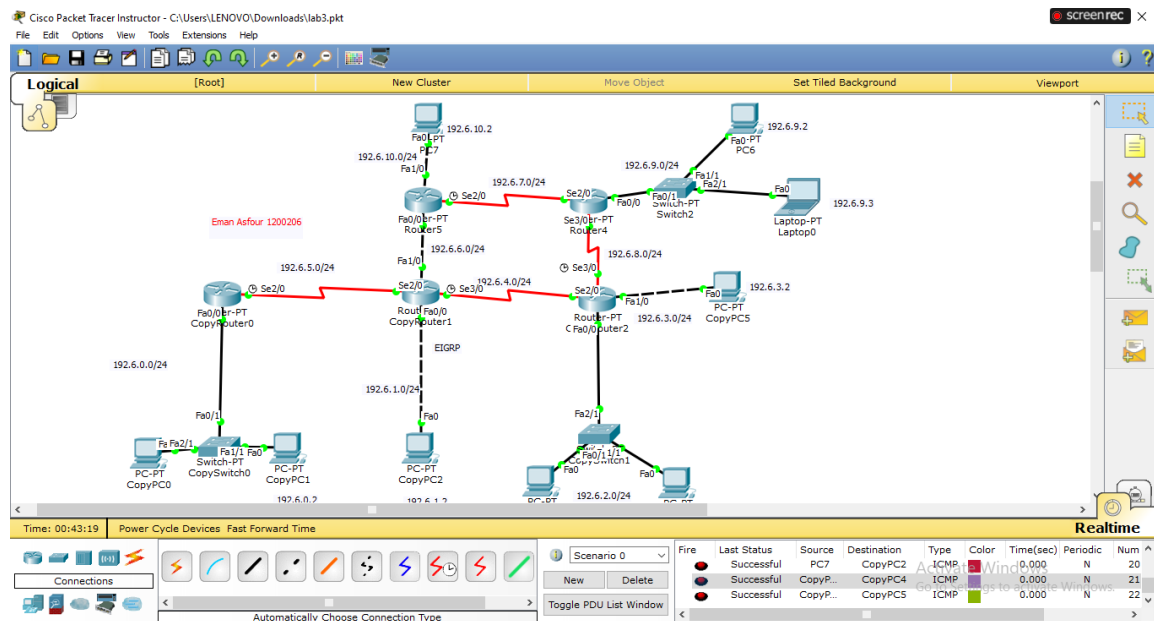


Figure 1: The network topology

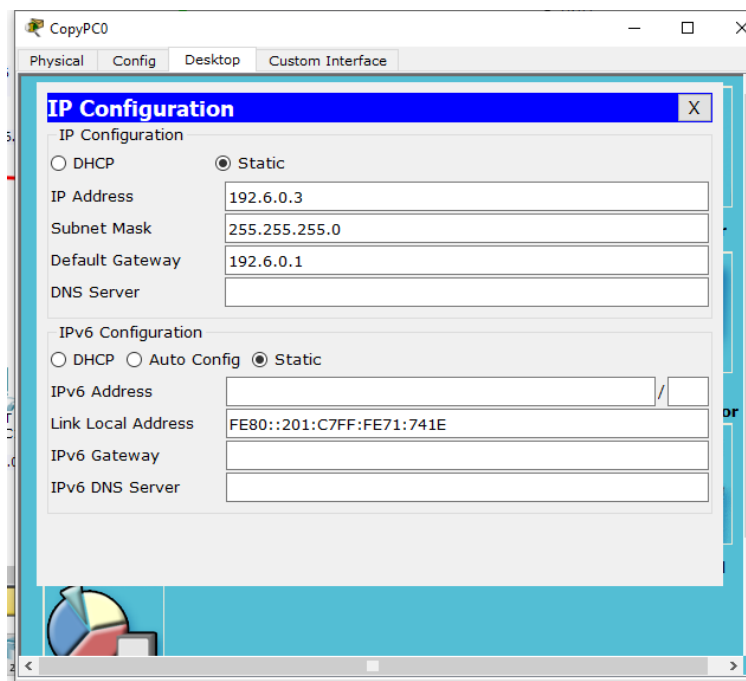


Figure 2: IP addressing for PC0

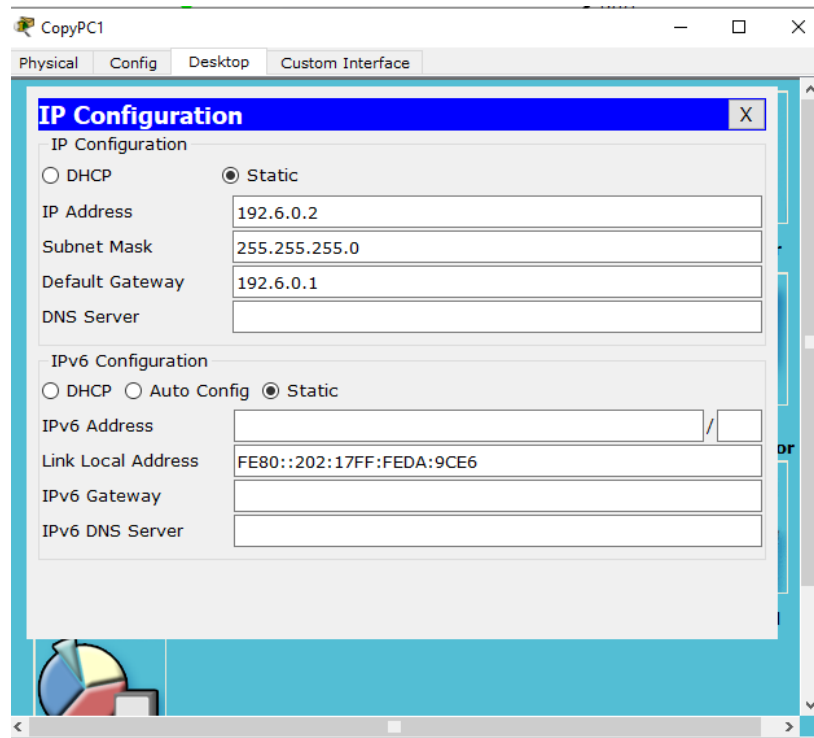


Figure 3: IP addressing PC1

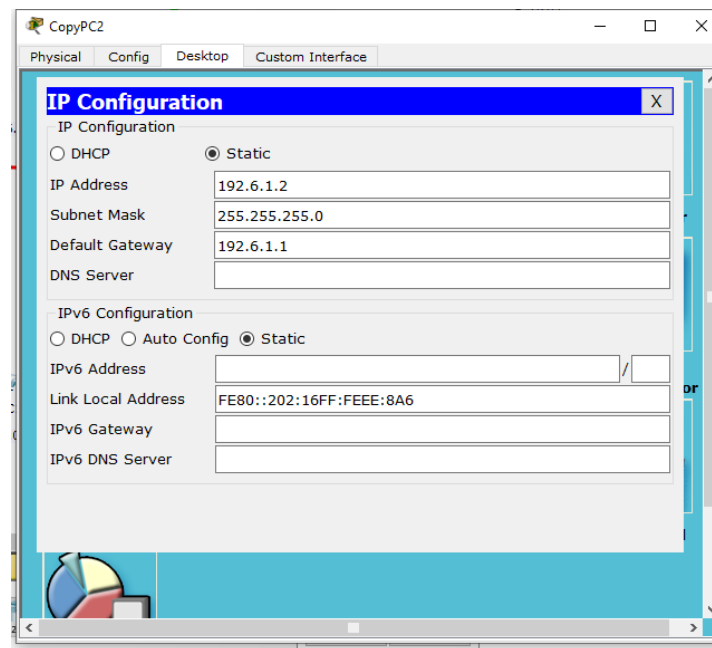


Figure 4: Addressing IP for PC2

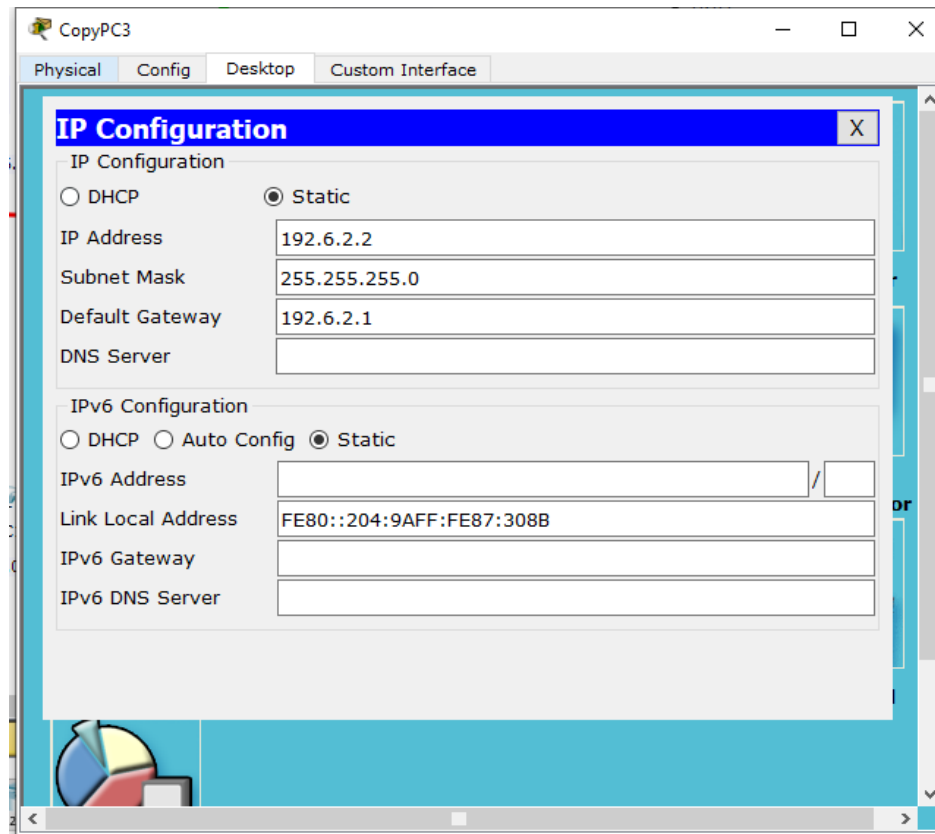


Figure 5: IP addressing for PC3

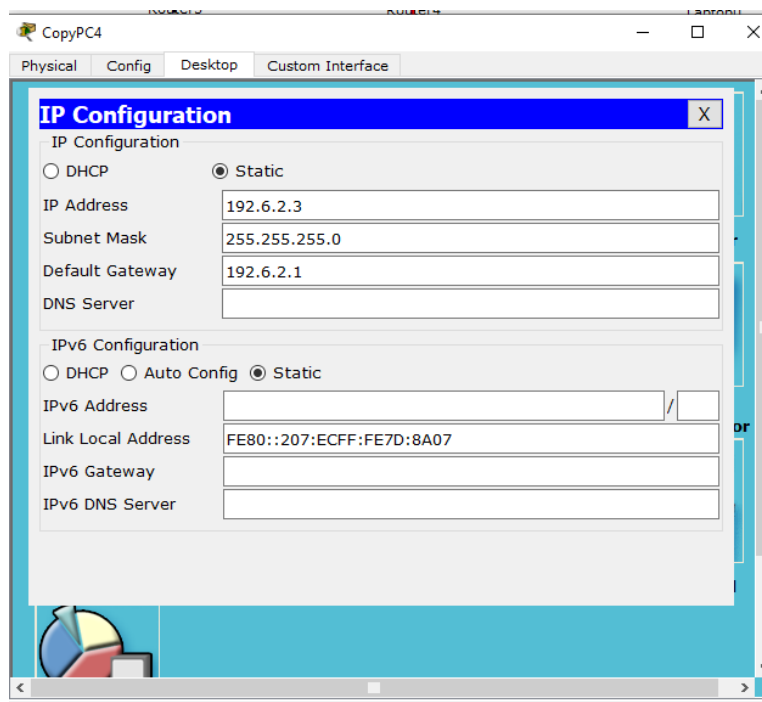


Figure 6: IP addressing for PC4

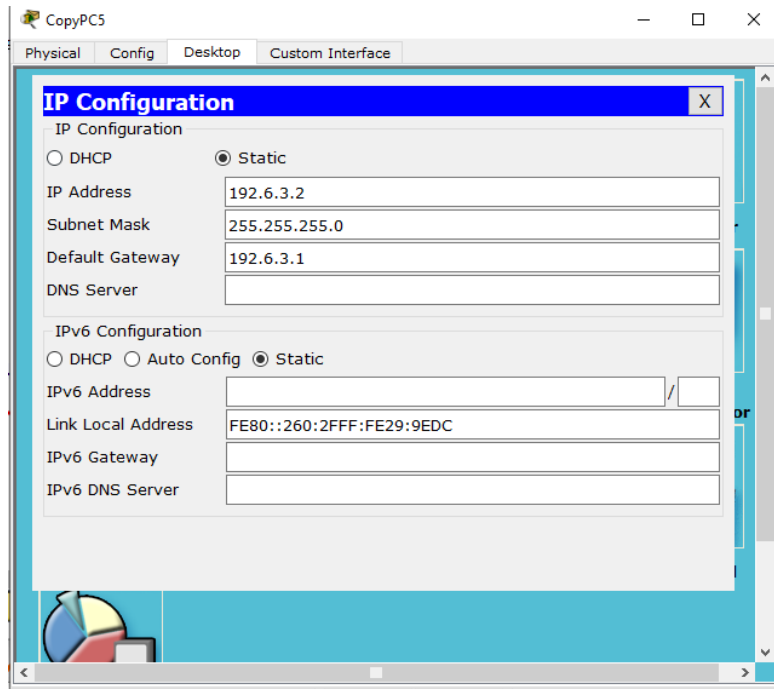


Figure 7: IP addressing for PC5

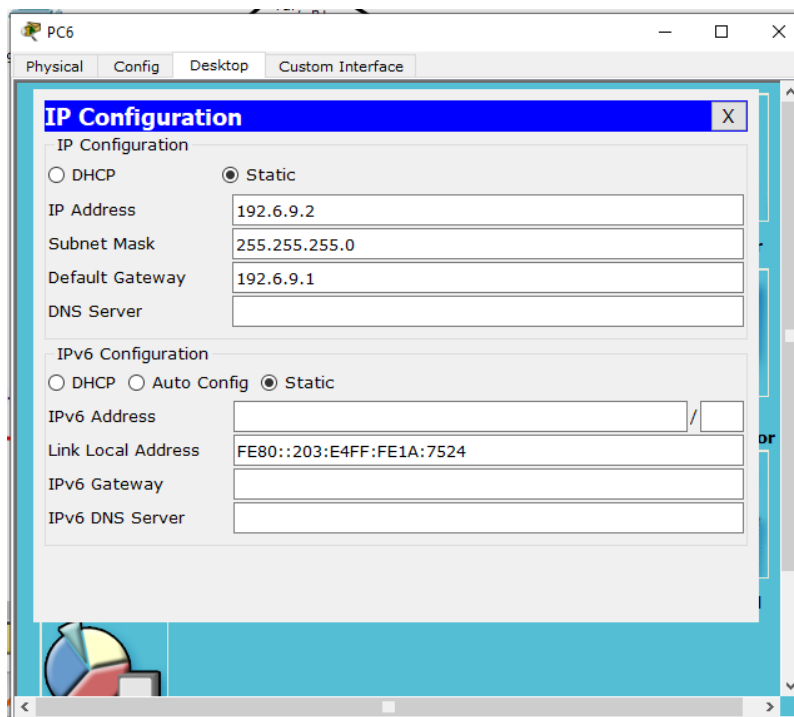


Figure 8: IP Addressing for PC6

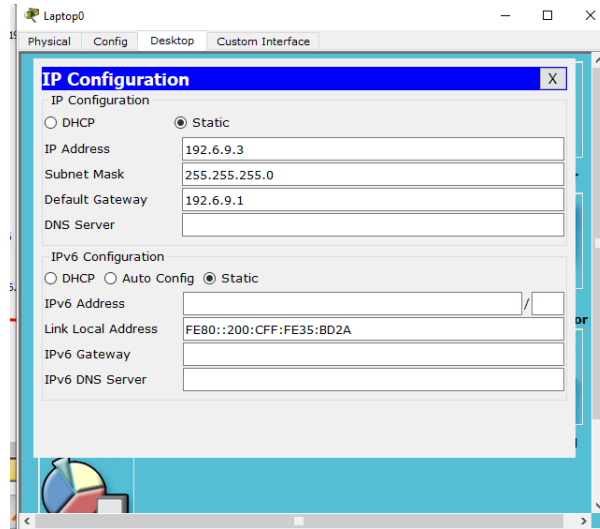


Figure 9: IP Addressing for laptop0

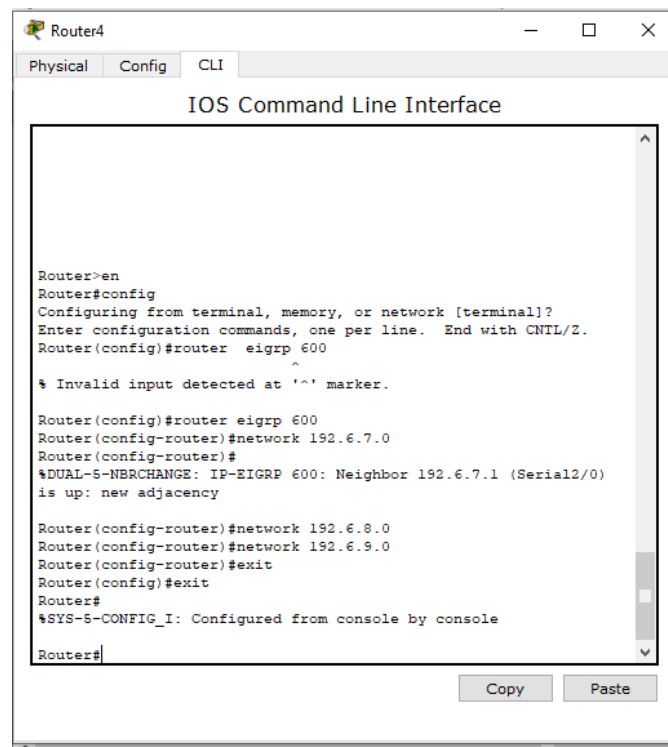


Figure 10: EIGRP for new router

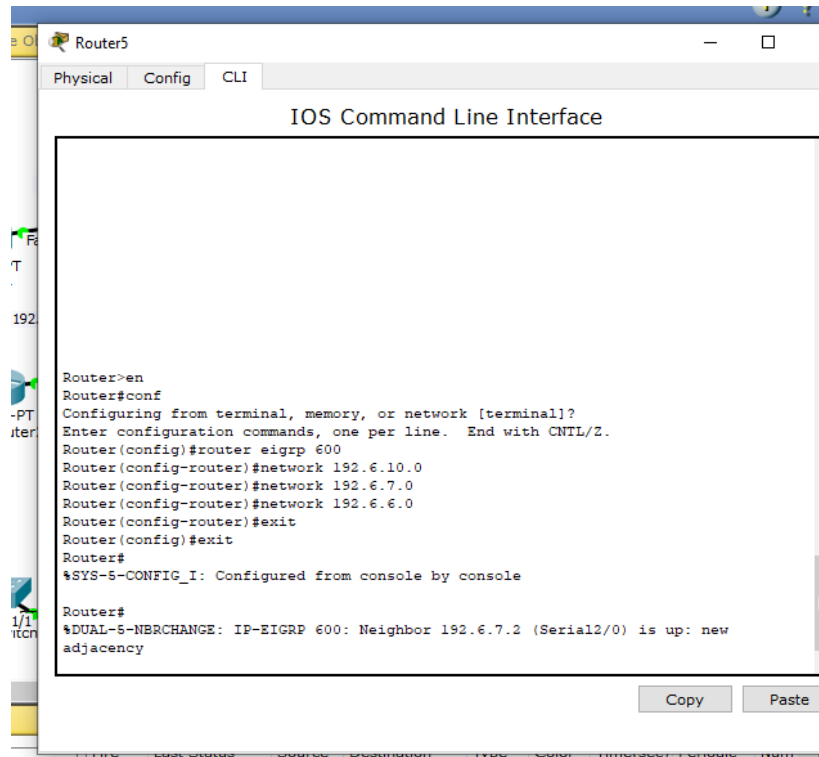


Figure 11: EIGRP for router 5

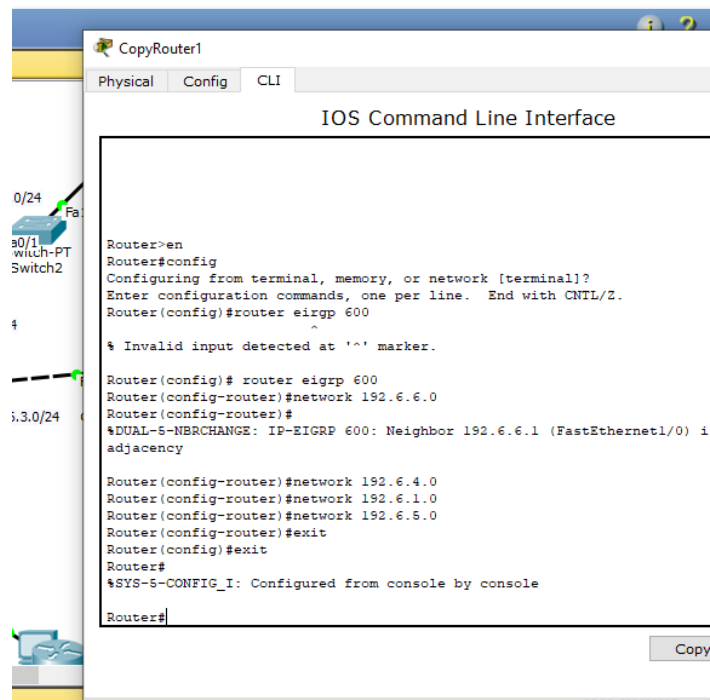


Figure 12: EIGRP for router 1

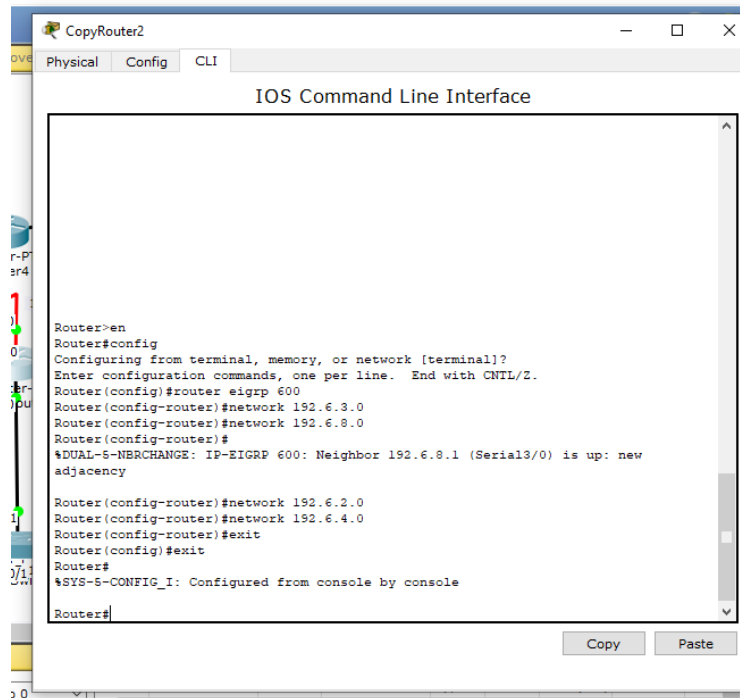


Figure 13: EIGRP for router 2

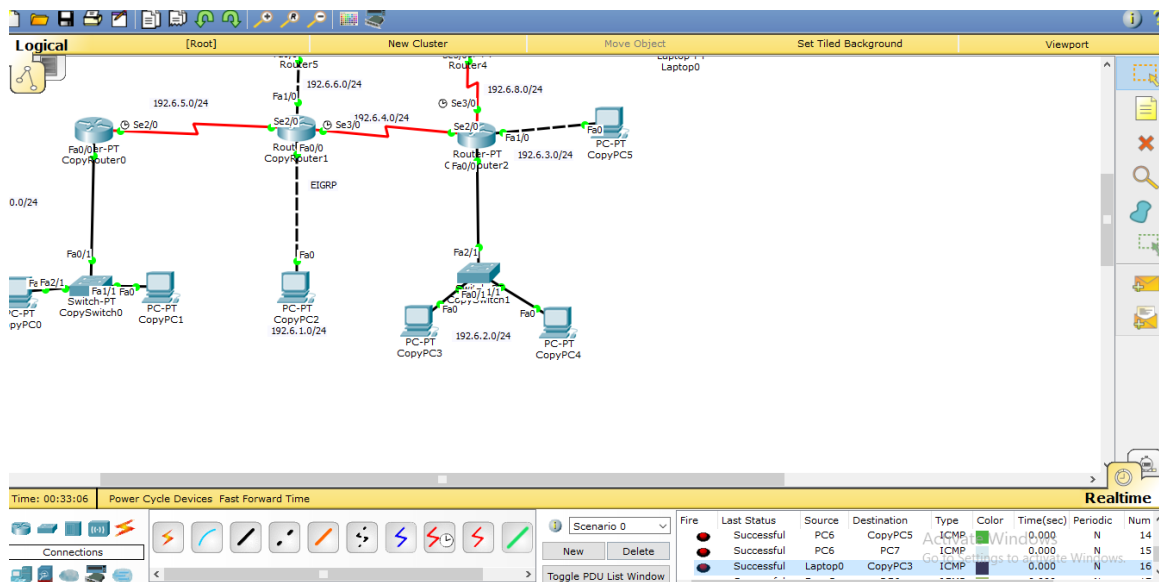


Figure 14: testing by packet for check EIGRP

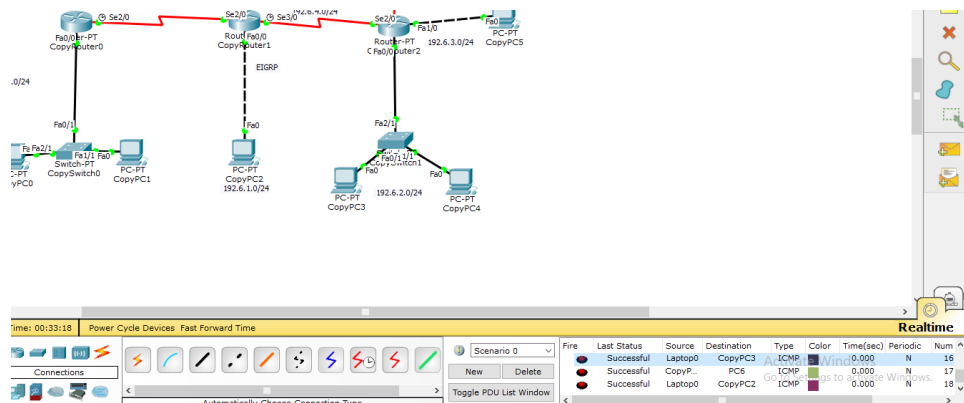


Figure 15: Testing for EIGRP

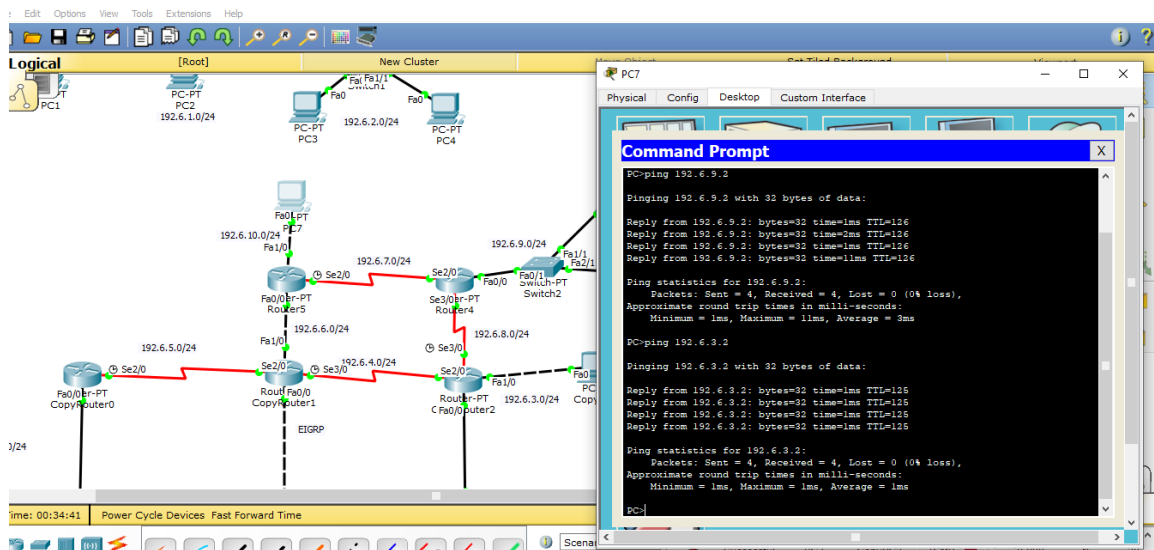


Figure 16: Testing by ping command

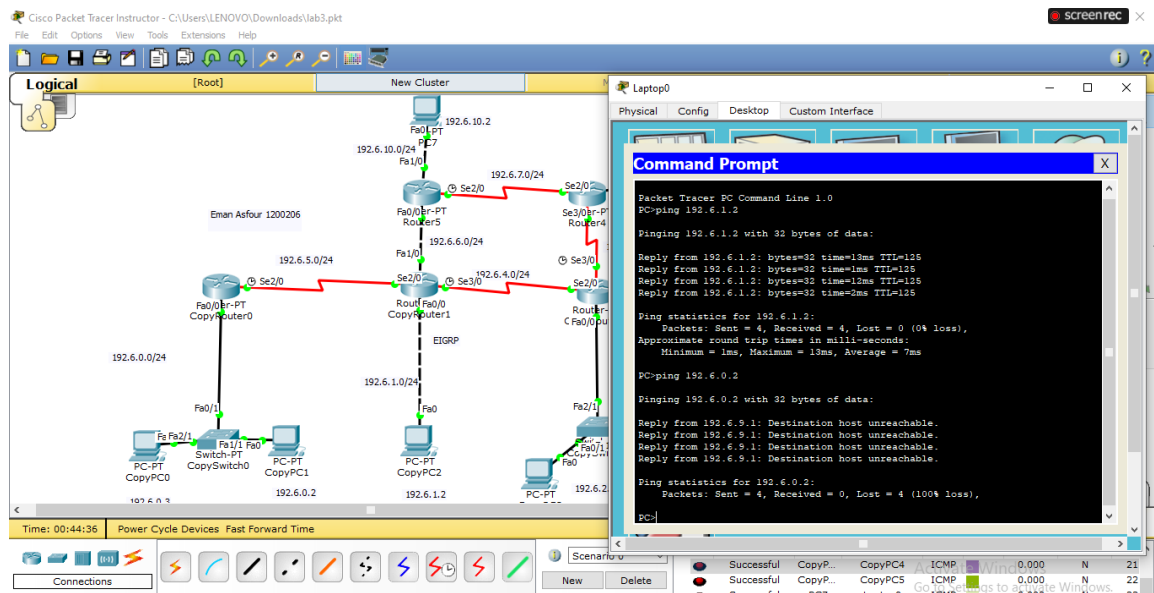


Figure 17: testing command

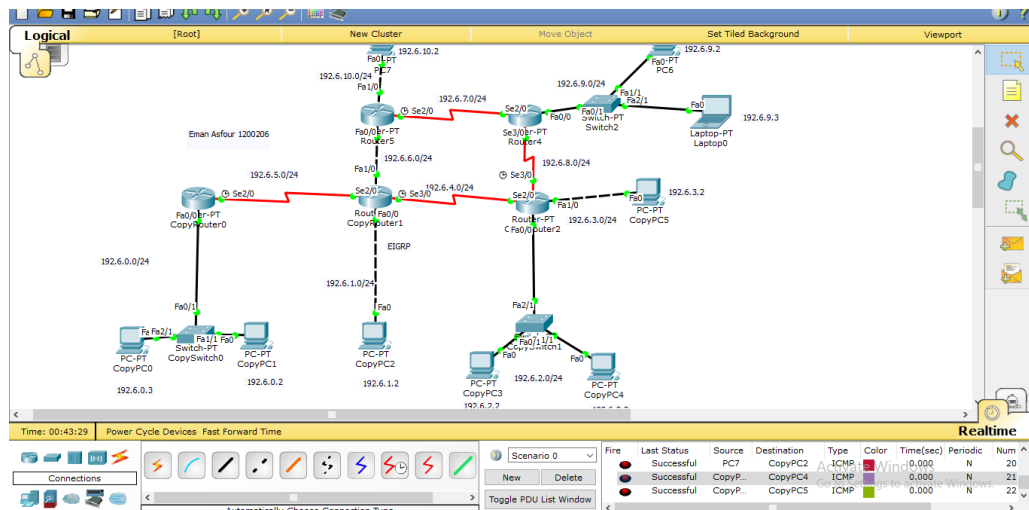


Figure 18: Sending packet

```
Command Prompt

Packet Tracer PC Command Line 1.0
PC>tracert 192.6.10.2

Tracing route to 192.6.10.2 over a maximum of 30 hops:

  1  1 ms    1 ms    0 ms    192.6.2.1
  2  2 ms    0 ms    3 ms    192.6.4.1
  3  0 ms    1 ms    0 ms    192.6.6.1
  4  1 ms    1 ms    1 ms    192.6.10.2

Trace complete.

PC>tracert 192.6.1.2

Tracing route to 192.6.1.2 over a maximum of 30 hops:

  1  0 ms    0 ms    0 ms    192.6.2.1
  2  1 ms    1 ms    0 ms    192.6.4.1
  3  1 ms    0 ms    1 ms    192.6.1.2

Trace complete.

PC>tracert 192.6.0.2

Tracing route to 192.6.0.2 over a maximum of 30 hops:

  1  1 ms    0 ms    0 ms    192.6.2.1
  2  1 ms    *        0 ms    192.6.2.1
  3  *        1 ms    *        Request timed out.
  4  0 ms    *        0 ms    192.6.2.1
  5  *        1 ms    *        Request timed out.
  6  0 ms    *        0 ms    192.6.2.1
  7  *        0 ms    *        Request timed out.
  8  0 ms    *        32 ms   192.6.2.1
  9  *        0 ms    *        Request timed out.
 10 1 ms    *        0 ms    192.6.2.1
 11 *        1 ms    *        Request timed out.
 12 1 ms    *        0 ms    192.6.2.1
 13 *        0 ms    *        Request timed out.
 14 *        0 ms    *        Request timed out.
 15 *        0 ms    *        Request timed out.
 16 0 ms    *        0 ms    192.6.2.1
 17 *        0 ms    *        Request timed out.
 18 1 ms    *        1 ms    192.6.2.1
 19 *        0 ms    *        Request timed out.
 20 2 ms    *        0 ms    192.6.2.1
 21 *        0 ms    *        Request timed out.
 22 0 ms    *        0 ms    192.6.2.1
 23 *        0 ms    *        Request timed out.
 24 1 ms    *        1 ms    192.6.2.1
 25 *        1 ms    *        Request timed out.
 26 0 ms    *        1 ms    192.6.2.1
 27 *        1 ms    *        Request timed out.
 28 0 ms    *        1 ms    192.6.2.1
 29 *        0 ms    *        Request timed out.
 30 1 ms    *        1 ms    192.6.2.1

Trace complete.
```

Figure 19: trace for EIGRP

```
Trace complete.

PC>tracert 192.6.0.2

Tracing route to 192.6.0.2 over a maximum of 30 hops:

  1  1 ms    0 ms    0 ms    192.6.2.1
  2  1 ms    *        0 ms    192.6.2.1
  3  *        1 ms    *        Request timed out.
  4  0 ms    *        0 ms    192.6.2.1
  5  *        1 ms    *        Request timed out.
  6  0 ms    *        0 ms    192.6.2.1
  7  *        0 ms    *        Request timed out.
  8  0 ms    *        32 ms   192.6.2.1
  9  *        0 ms    *        Request timed out.
 10 1 ms    *        0 ms    192.6.2.1
 11 *        1 ms    *        Request timed out.
 12 1 ms    *        0 ms    192.6.2.1
 13 *        0 ms    *        Request timed out.
 14 0 ms    *        0 ms    192.6.2.1
 15 *        0 ms    *        Request timed out.
 16 0 ms    *        0 ms    192.6.2.1
 17 *        0 ms    *        Request timed out.
 18 1 ms    *        1 ms    192.6.2.1
 19 *        0 ms    *        Request timed out.
 20 2 ms    *        0 ms    192.6.2.1
 21 *        0 ms    *        Request timed out.
 22 0 ms    *        0 ms    192.6.2.1
 23 *        0 ms    *        Request timed out.
 24 1 ms    *        1 ms    192.6.2.1
 25 *        1 ms    *        Request timed out.
 26 0 ms    *        1 ms    192.6.2.1
 27 *        1 ms    *        Request timed out.
 28 0 ms    *        1 ms    192.6.2.1
 29 *        0 ms    *        Request timed out.
 30 1 ms    *        1 ms    192.6.2.1

Trace complete.

PC>
```

Figure 20: testing

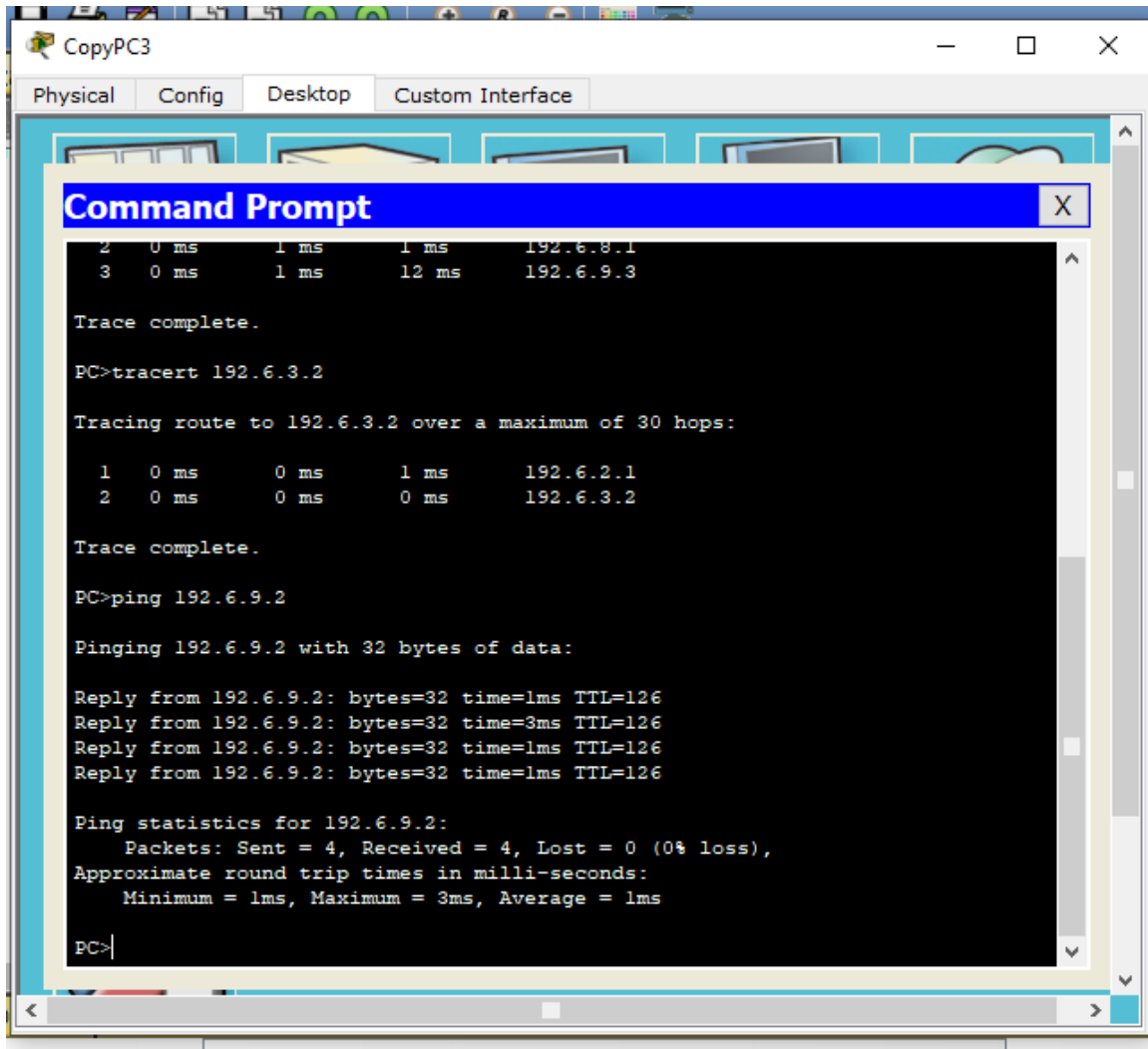


Figure 23 : ping command

Type	Network	Port	Next Hop IP	Metric
D	192.6.1.0/24	Serial2/0	192.6.7.1	90/20517120
D	192.6.2.0/24	Serial3/0	192.6.8.2	90/20514560
D	192.6.3.0/24	Serial3/0	192.6.8.2	90/20514560
D	192.6.4.0/24	Serial3/0	192.6.8.2	90/21024000
D	192.6.5.0/24	Serial2/0	192.6.7.1	90/21026560
D	192.6.6.0/24	Serial2/0	192.6.7.1	90/20514560
C	192.6.7.0/24	Serial2/0	---	0/0
C	192.6.8.0/24	Serial3/0	---	0/0
C	192.6.9.0/24	FastEthernet0/0	---	0/0

Figure 24: Inspect for router

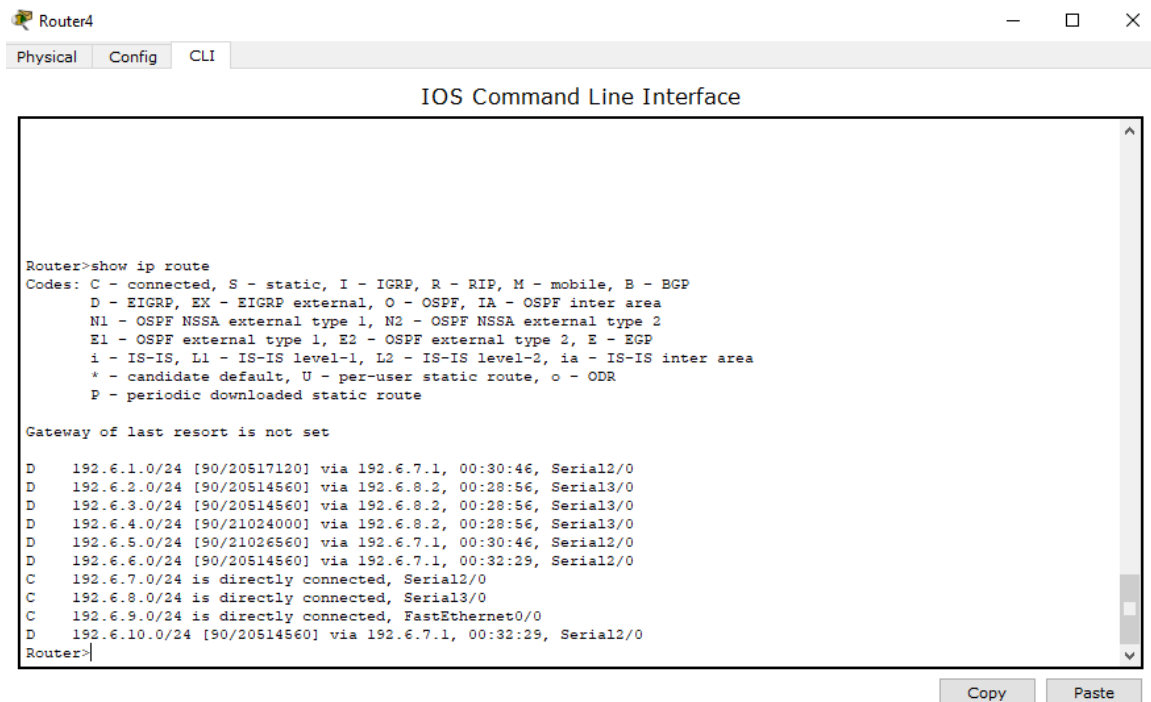


Figure 25: Show IP route for router 4

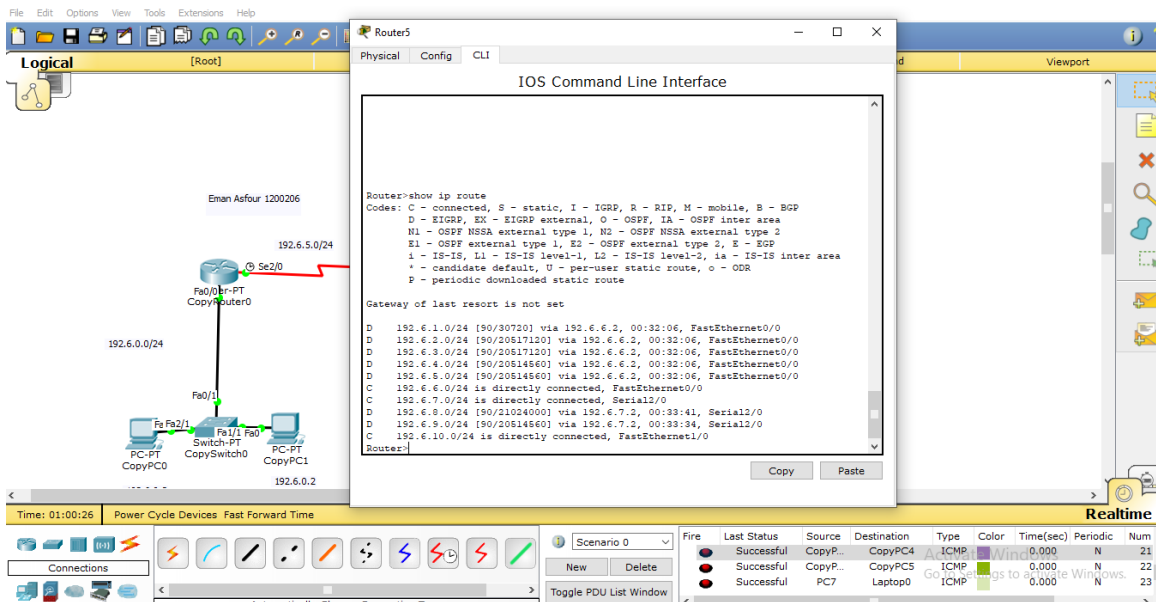


Figure 26: Show IP route for router 5

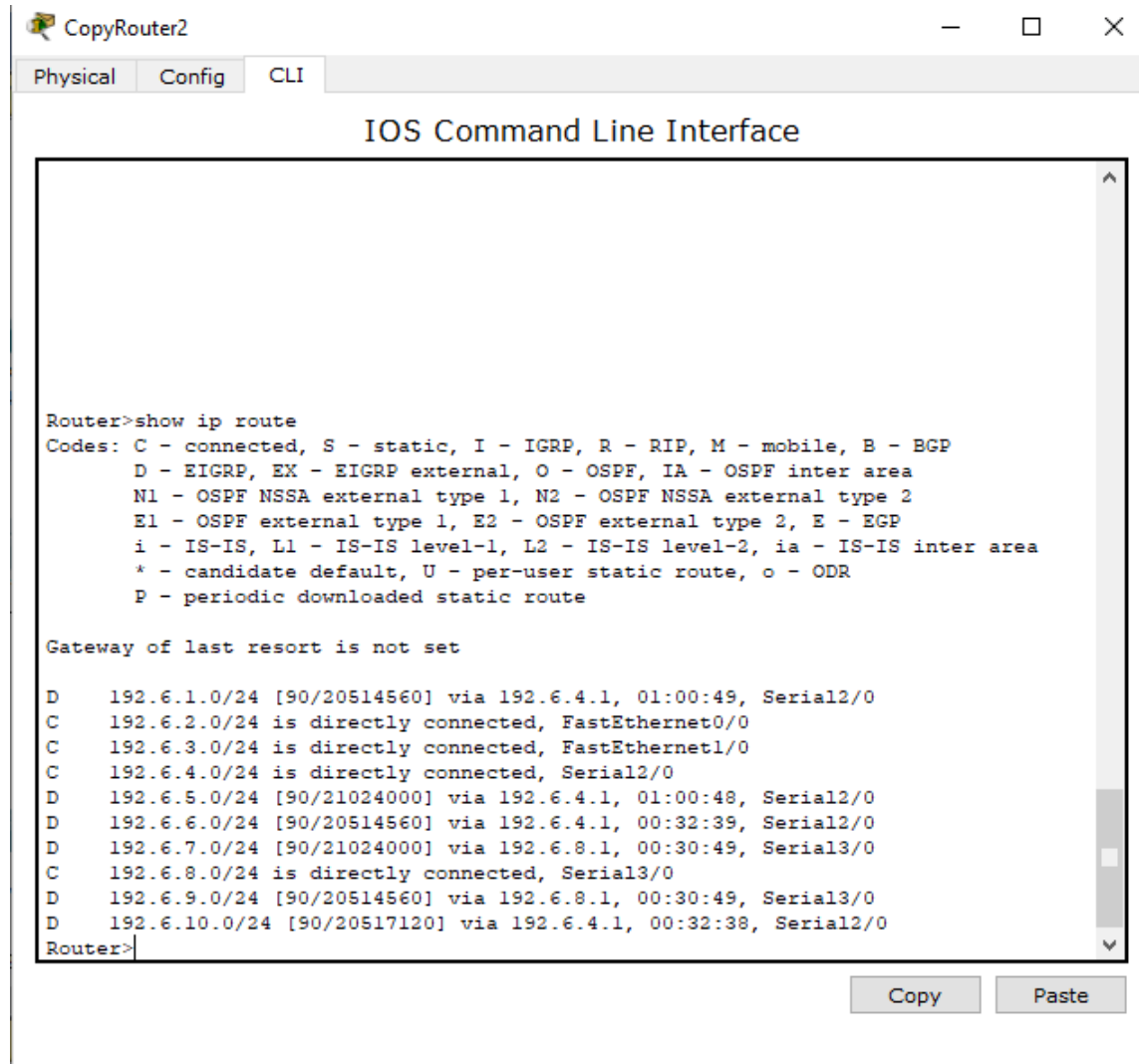


Figure 27: Show IP route for router 2

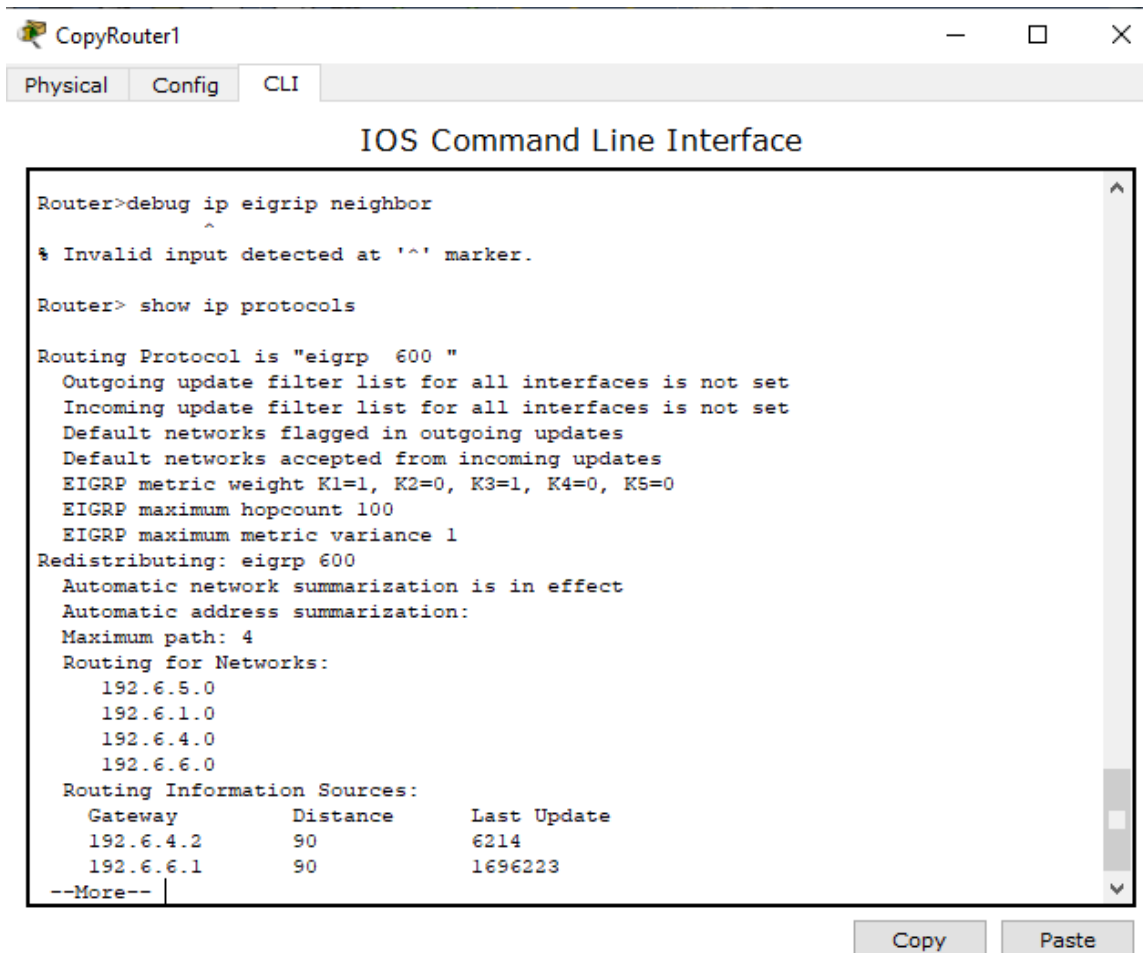


Figure 28: show IP protocols

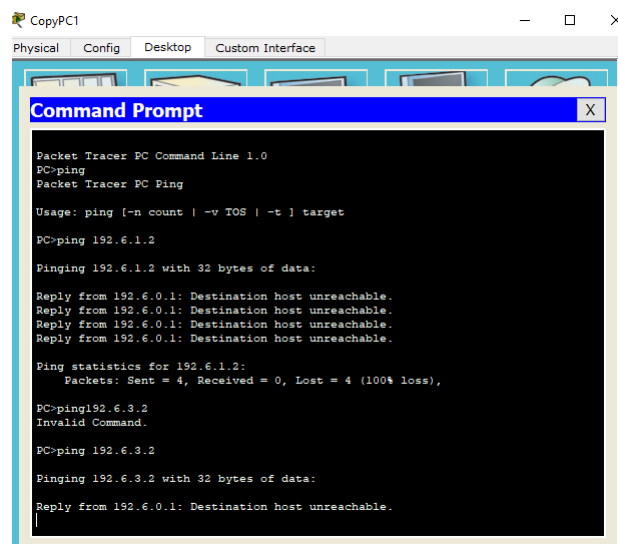


Figure 29:failed ping

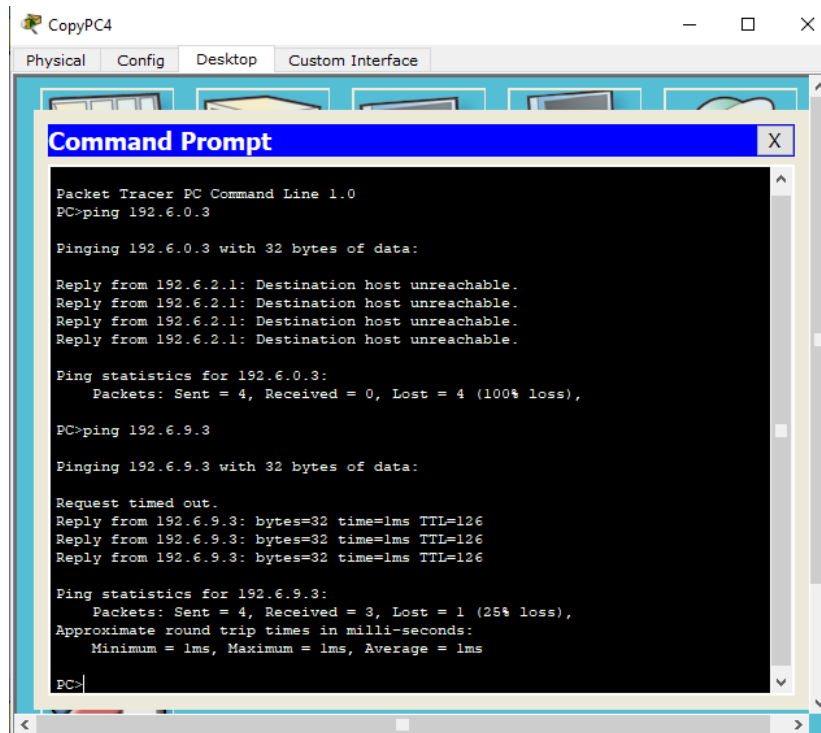


Figure 30: ping test

As depicted in Figure 30, the ping to 192.6.0.3 has failed, while the ping to 192.6.9.3 was successful. It's noteworthy that the entire network has been meticulously defined using EIGRP, and all addressing configurations have been completed. This comprehensive setup underscores our proficiency in network design and implementation, despite encountering an issue with one of the pings.

In our network setup, thorough testing within Network 0 revealed that all pings timed out, indicating an issue that needs further investigation. Despite this, we successfully defined all addresses and implemented both EIGRP and RIP protocols. This hands-on experience has solidified our understanding of addressing configuration and dynamic routing protocols. Overall, our network configuration demonstrates our proficiency in network design and troubleshooting.

