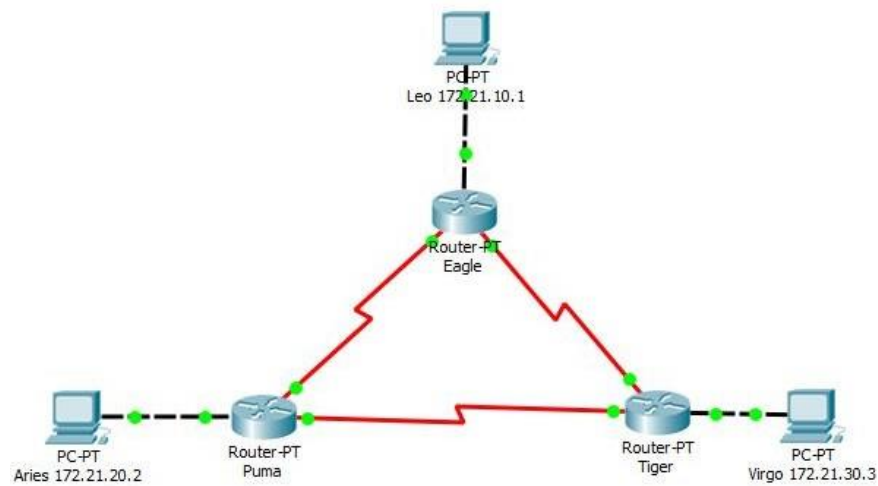
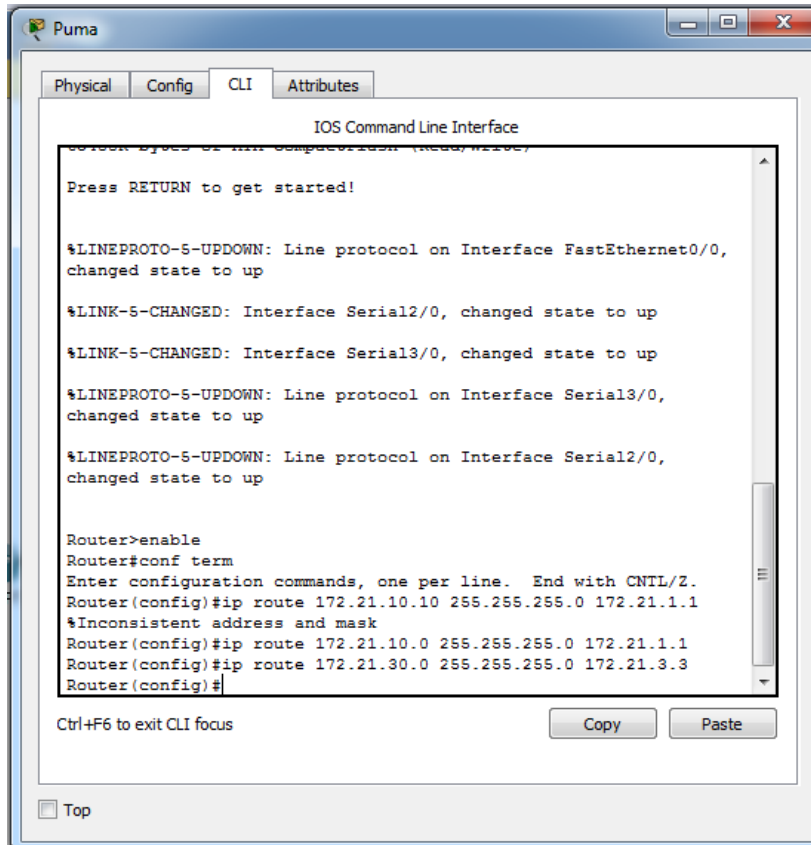
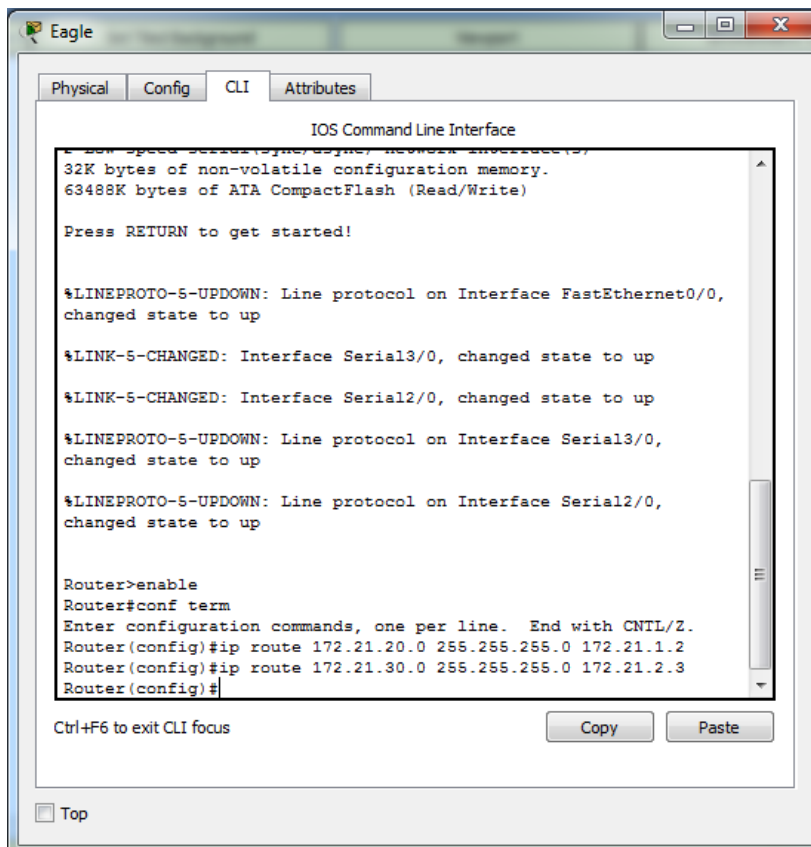


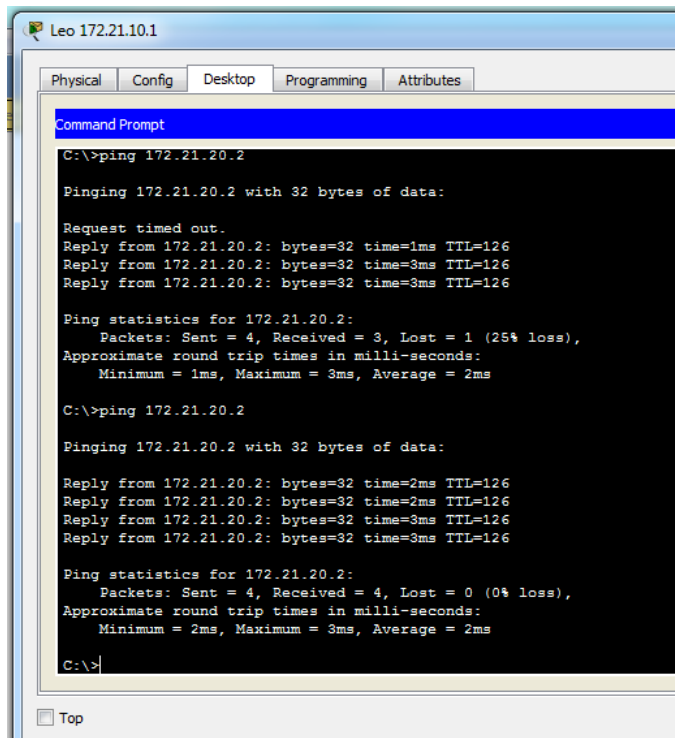
Name: Shidqi Aditya Falah
NIM : L202173001
Class : X

KEGIATAN 1



Tugas 11A:



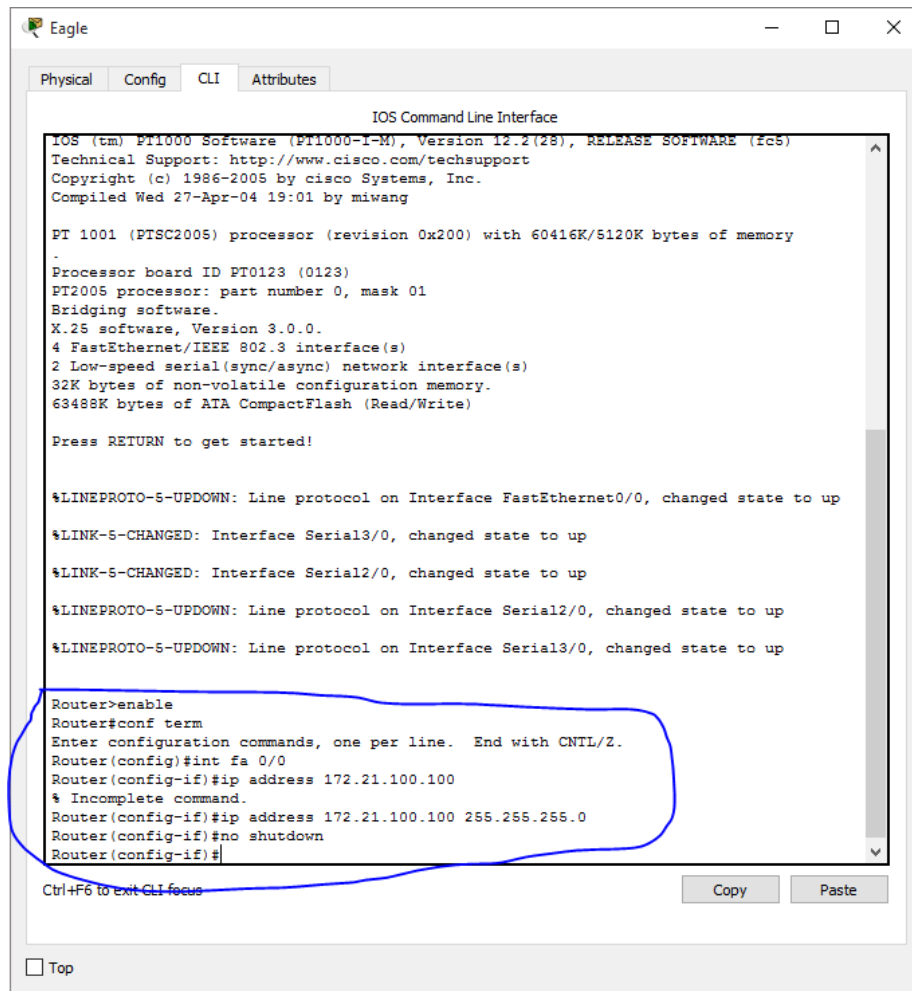


Tugas 12A:

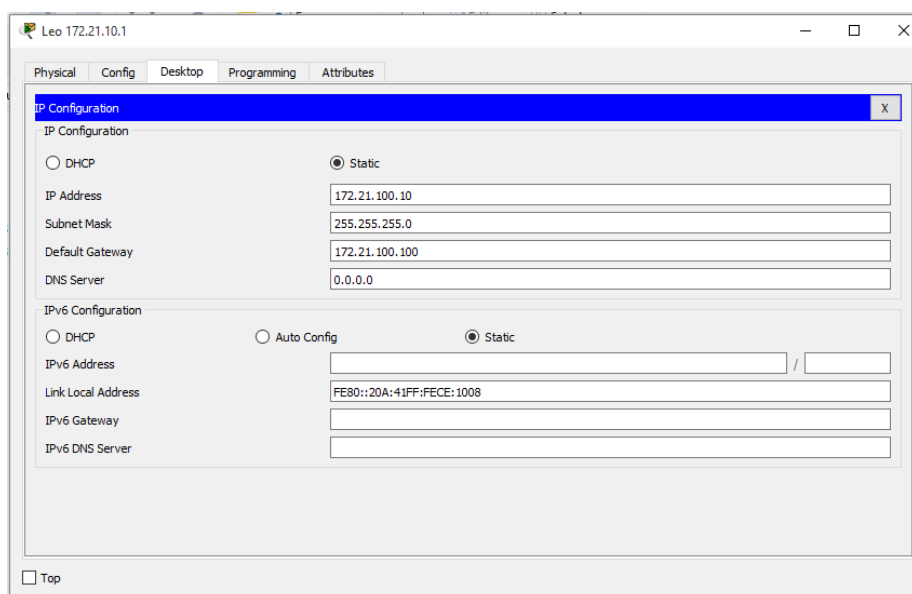
Iya mendapatkan tanggapan dari Puma. Hal ini dikarenakan telah dibuat peroutingan untuk data lewat melalui jalur yang mana.

Tugas 12B:

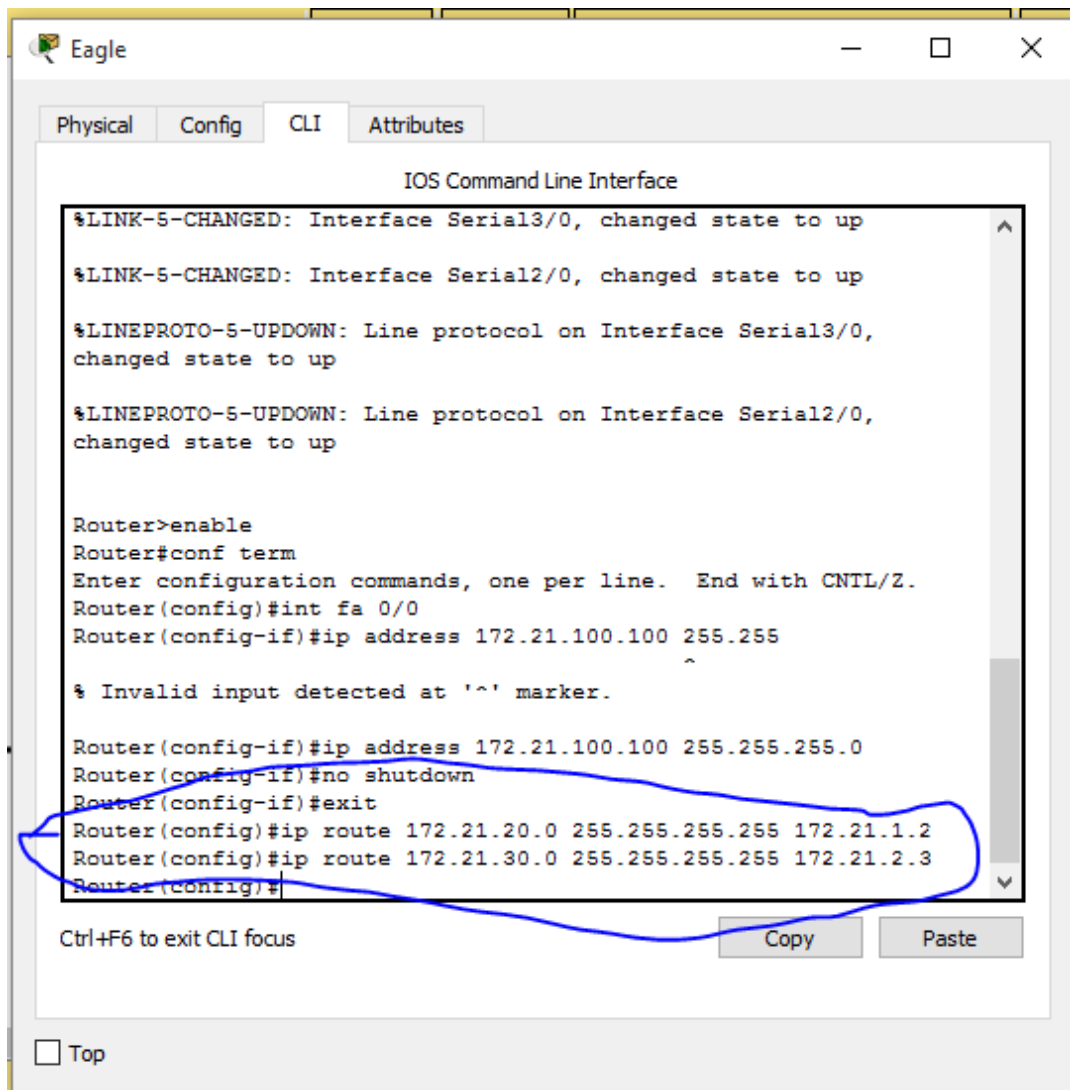
1. Lakukan konfigurasi untuk ip address pada router eagle

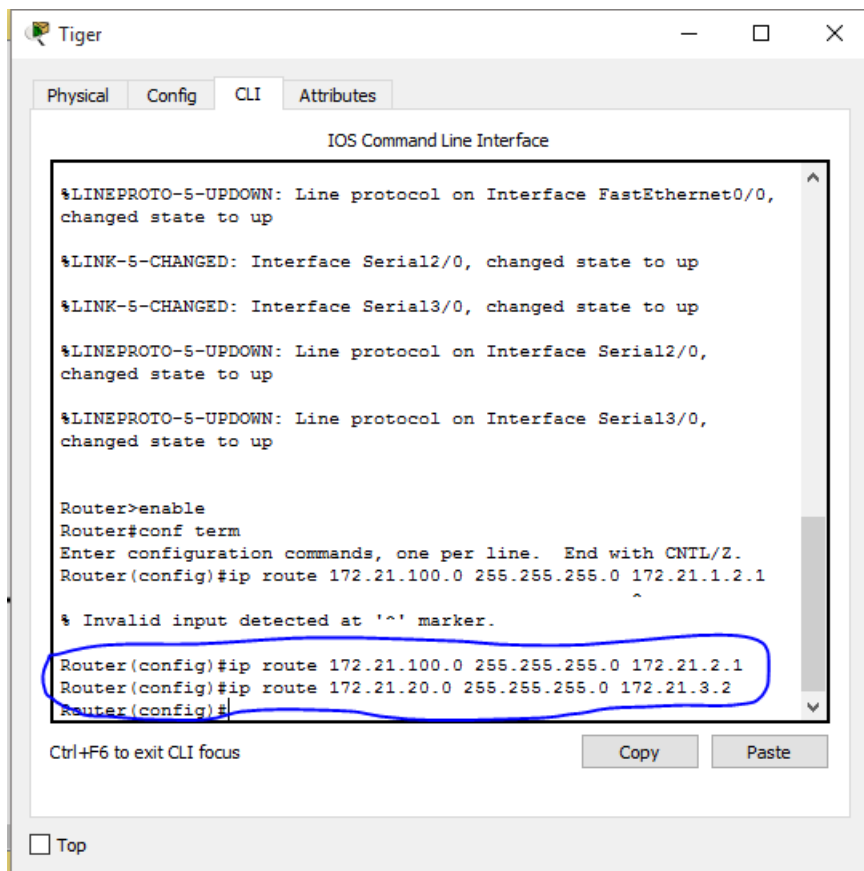
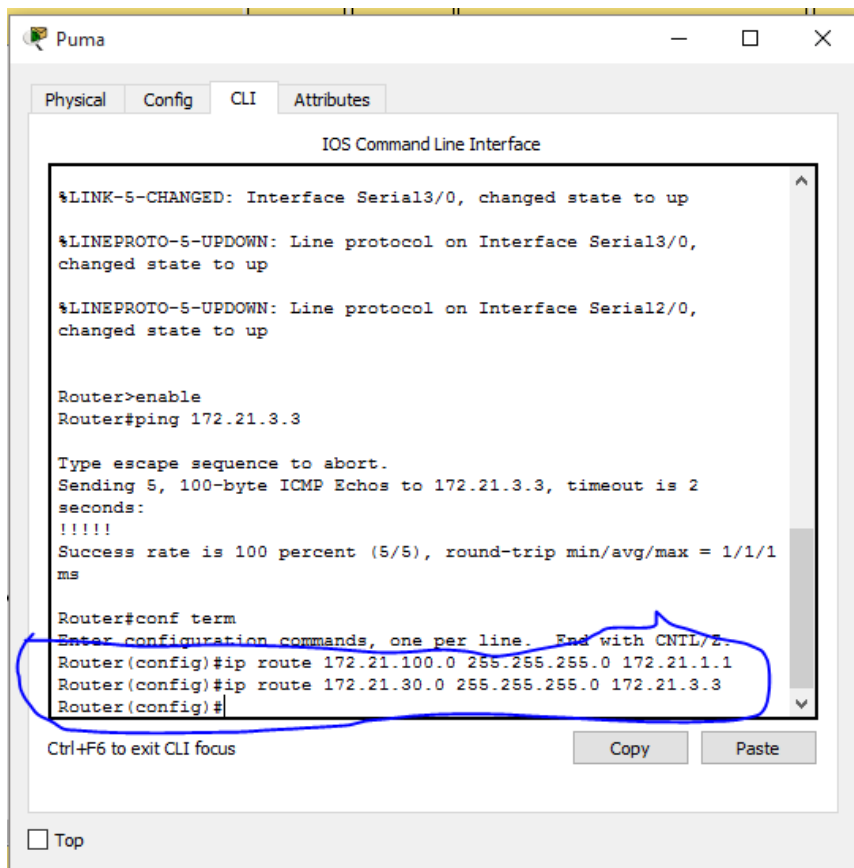


2. Lakukan konfigurasi ip pada pc leo dan ubah default gateway.

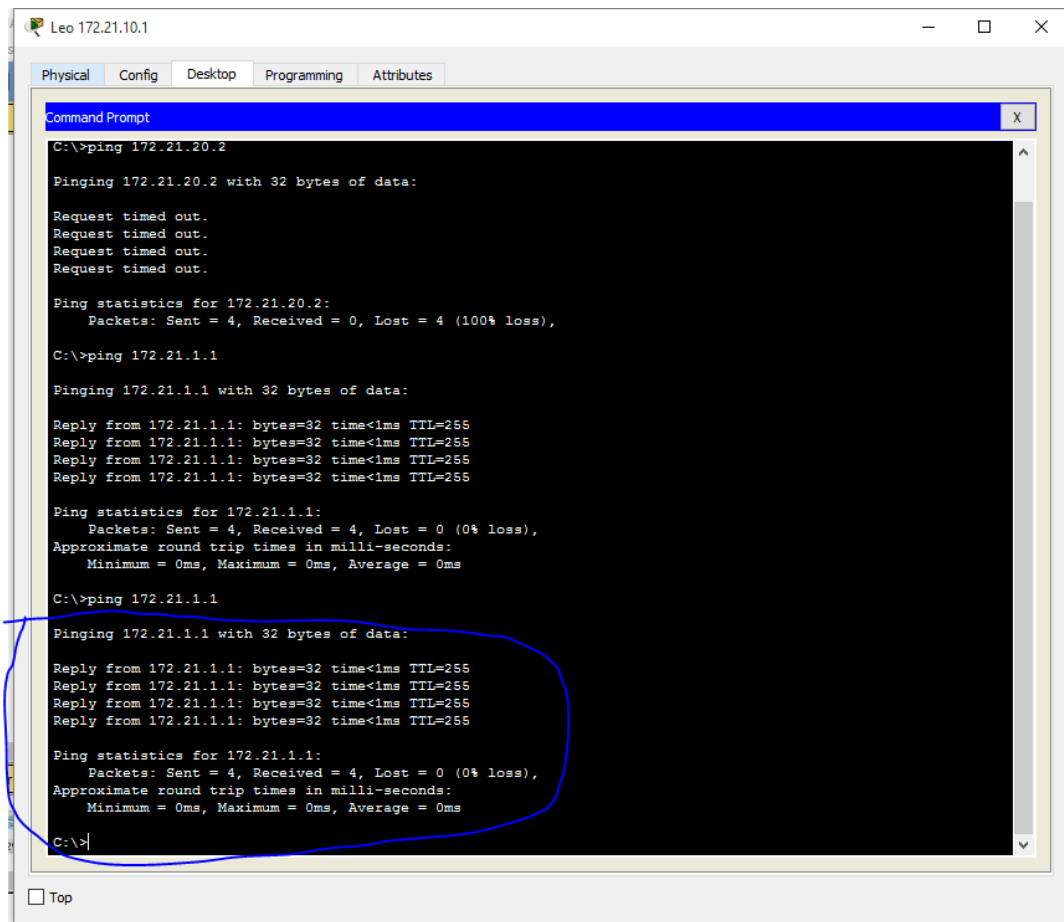


3. Lakukan peroutingan pada masing-masing router sesuai dengan blok ip pc





4. Lakukan pengecekan



```
Leo 172.21.10.1
Physical Config Desktop Programming Attributes
Command Prompt
C:\>ping 172.21.20.2

Pinging 172.21.20.2 with 32 bytes of data:

Request timed out.
Request timed out.
Request timed out.
Request timed out.

Ping statistics for 172.21.20.2:
    Packets: Sent = 4, Received = 0, Lost = 4 (100% loss),

C:\>ping 172.21.1.1

Pinging 172.21.1.1 with 32 bytes of data:

Reply from 172.21.1.1: bytes=32 time<1ms TTL=255
Reply from 172.21.1.1: bytes=32 time<1ms TTL=255
Reply from 172.21.1.1: bytes=32 time<1ms TTL=255
Reply from 172.21.1.1: bytes=32 time<1ms TTL=255

Ping statistics for 172.21.1.1:
    Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),
    Approximate round trip times in milli-seconds:
        Minimum = 0ms, Maximum = 0ms, Average = 0ms

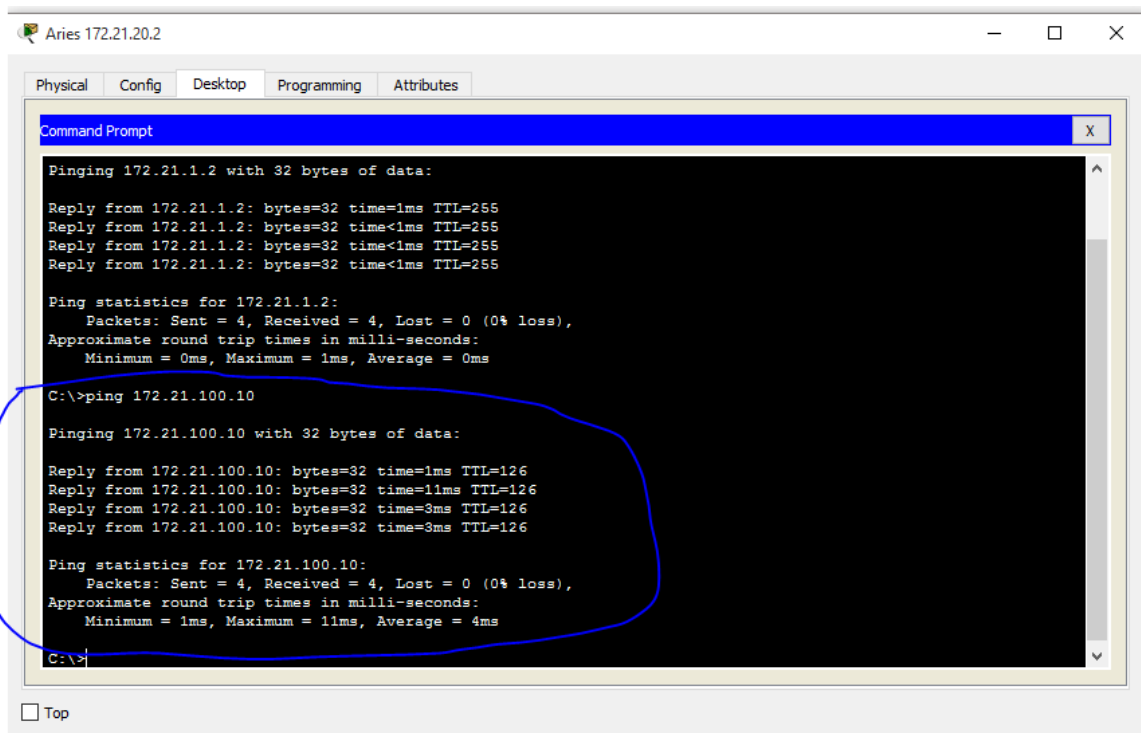
C:\>ping 172.21.1.1

Pinging 172.21.1.1 with 32 bytes of data:

Reply from 172.21.1.1: bytes=32 time<1ms TTL=255
Reply from 172.21.1.1: bytes=32 time<1ms TTL=255
Reply from 172.21.1.1: bytes=32 time<1ms TTL=255
Reply from 172.21.1.1: bytes=32 time<1ms TTL=255

Ping statistics for 172.21.1.1:
    Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),
    Approximate round trip times in milli-seconds:
        Minimum = 0ms, Maximum = 0ms, Average = 0ms

C:\>|
```



```
Aries 172.21.20.2
Physical Config Desktop Programming Attributes
Command Prompt

Pinging 172.21.1.2 with 32 bytes of data:

Reply from 172.21.1.2: bytes=32 time=1ms TTL=255
Reply from 172.21.1.2: bytes=32 time<1ms TTL=255
Reply from 172.21.1.2: bytes=32 time<1ms TTL=255
Reply from 172.21.1.2: bytes=32 time<1ms TTL=255

Ping statistics for 172.21.1.2:
    Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),
    Approximate round trip times in milli-seconds:
        Minimum = 0ms, Maximum = 1ms, Average = 0ms

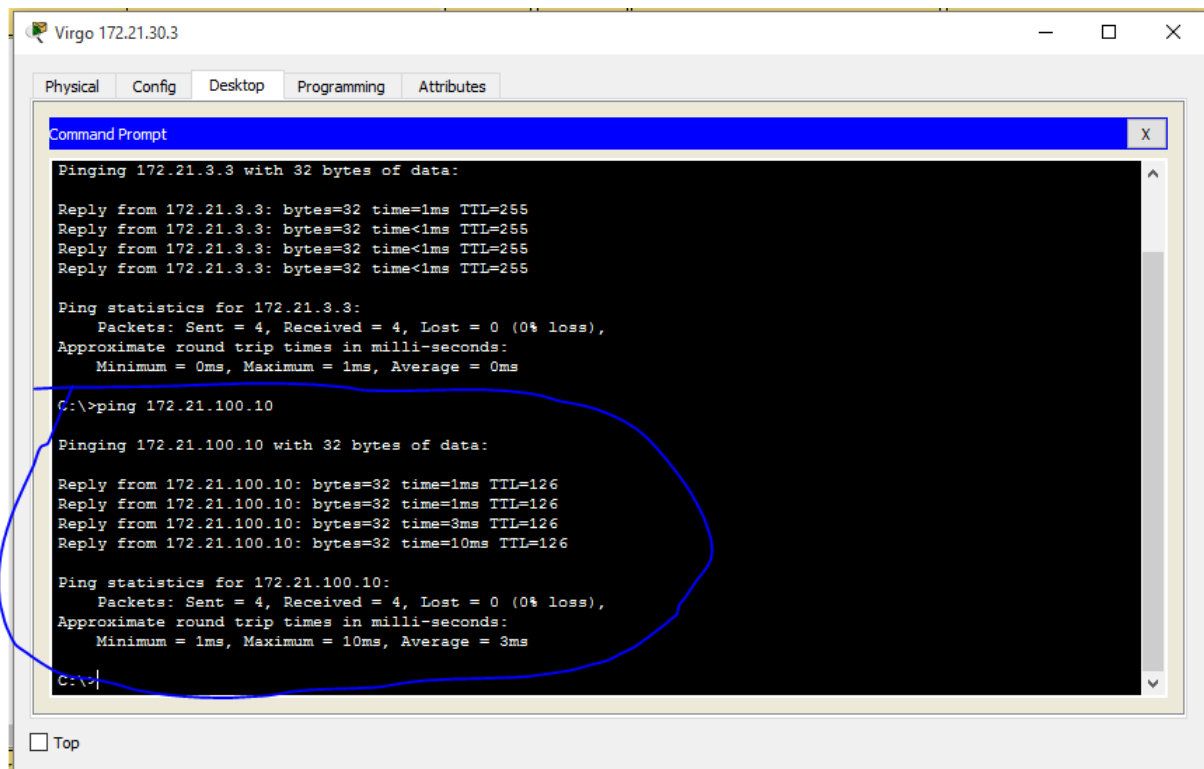
C:\>ping 172.21.100.10

Pinging 172.21.100.10 with 32 bytes of data:

Reply from 172.21.100.10: bytes=32 time=1ms TTL=126
Reply from 172.21.100.10: bytes=32 time=11ms TTL=126
Reply from 172.21.100.10: bytes=32 time=3ms TTL=126
Reply from 172.21.100.10: bytes=32 time=3ms TTL=126

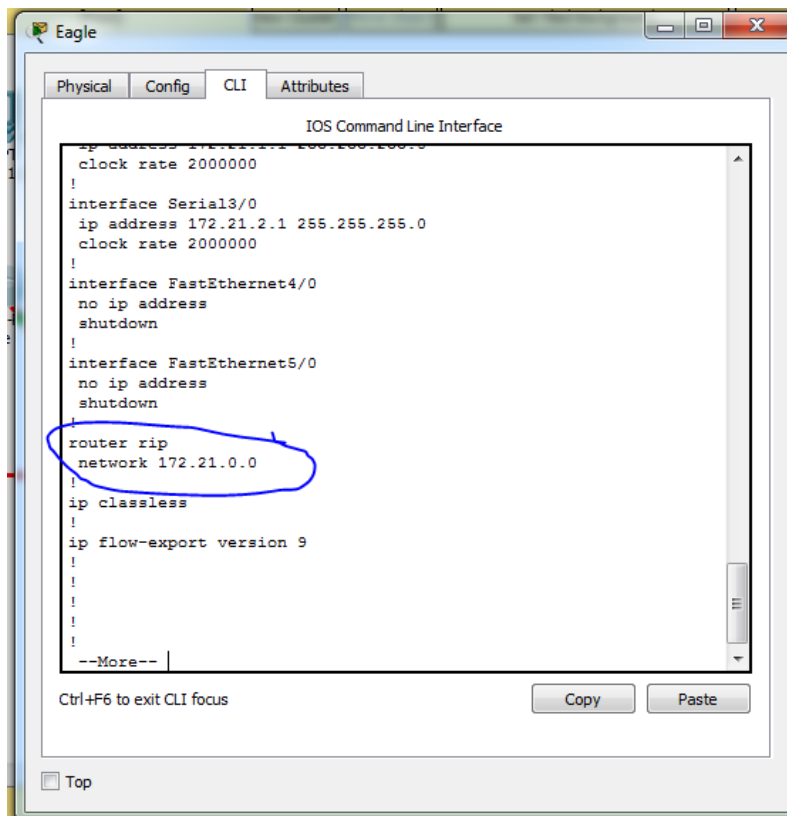
Ping statistics for 172.21.100.10:
    Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),
    Approximate round trip times in milli-seconds:
        Minimum = 1ms, Maximum = 11ms, Average = 4ms

C:\>|
```



KEGIATAN 2

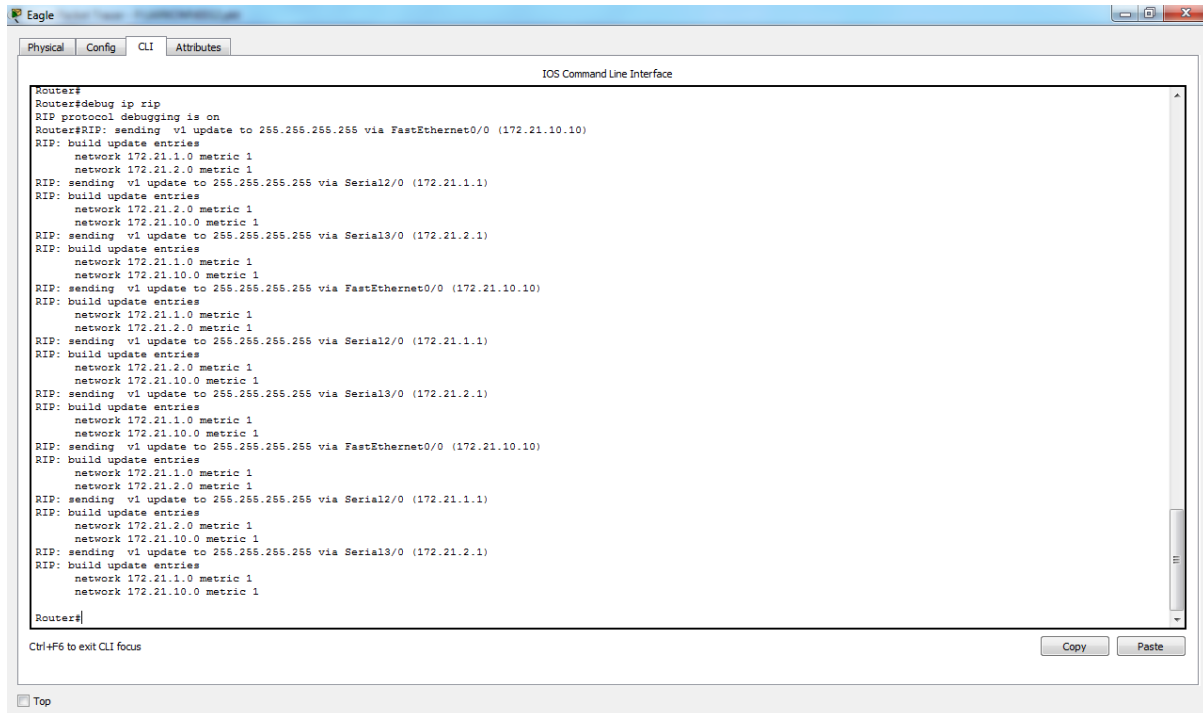
Tugas 4A:



Tugas 4B:

Karena network 172.21.0.0 sudah mencakup semua alamat jaringan lain.

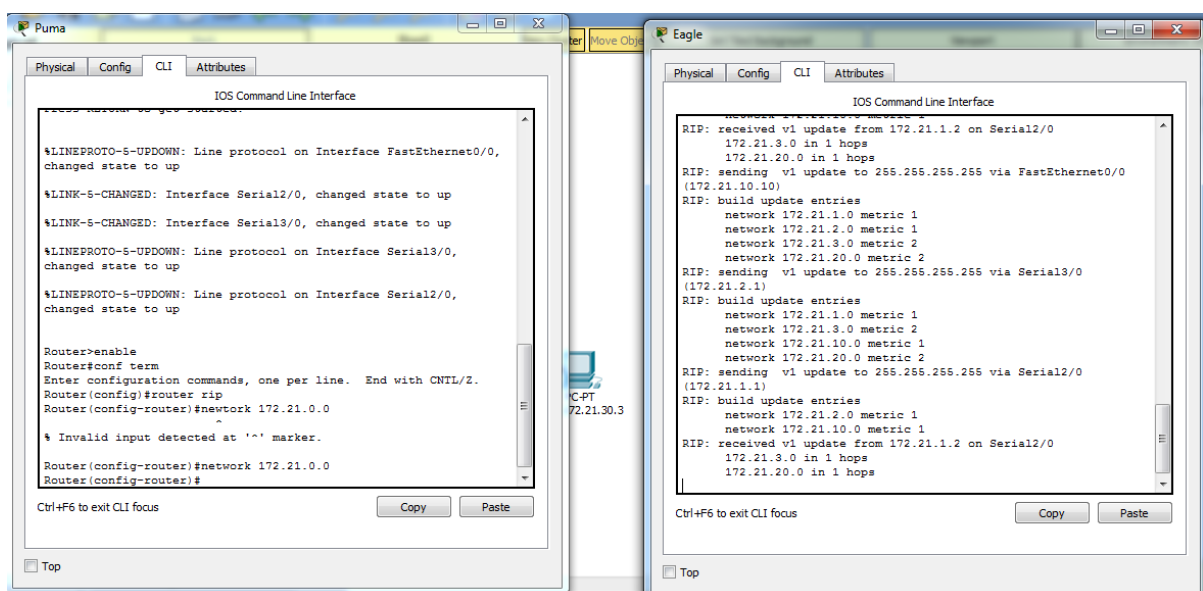
Tugas 5A:



```
Router#
Router#debug ip rip
RIP protocol debugging is on
Router#RIP: sending v1 update to 255.255.255.255 via FastEthernet0/0 (172.21.10.10)
RIP: build update entries
  network 172.21.1.0 metric 1
  network 172.21.2.0 metric 1
RIP: sending v1 update to 255.255.255.255 via Serial2/0 (172.21.1.1)
RIP: build update entries
  network 172.21.2.0 metric 1
  network 172.21.10.0 metric 1
RIP: sending v1 update to 255.255.255.255 via Serial3/0 (172.21.2.1)
RIP: build update entries
  network 172.21.1.0 metric 1
  network 172.21.10.0 metric 1
RIP: sending v1 update to 255.255.255.255 via FastEthernet0/0 (172.21.10.10)
RIP: build update entries
  network 172.21.1.0 metric 1
  network 172.21.2.0 metric 1
RIP: sending v1 update to 255.255.255.255 via Serial2/0 (172.21.1.1)
RIP: build update entries
  network 172.21.2.0 metric 1
  network 172.21.10.0 metric 1
RIP: sending v1 update to 255.255.255.255 via Serial3/0 (172.21.2.1)
RIP: build update entries
  network 172.21.1.0 metric 1
  network 172.21.10.0 metric 1
RIP: sending v1 update to 255.255.255.255 via FastEthernet0/0 (172.21.10.10)
RIP: build update entries
  network 172.21.1.0 metric 1
  network 172.21.2.0 metric 1
RIP: sending v1 update to 255.255.255.255 via Serial2/0 (172.21.1.1)
RIP: build update entries
  network 172.21.2.0 metric 1
  network 172.21.10.0 metric 1
RIP: sending v1 update to 255.255.255.255 via Serial3/0 (172.21.2.1)
RIP: build update entries
  network 172.21.1.0 metric 1
  network 172.21.10.0 metric 1
Router#
```

Debug berfungsi melihat transaksi yang terjadi.

Tugas 6A dan 6B:



```
Router#enable
Router#conf term
Enter configuration commands, one per line. End with CNTL/Z.
Router(config)#router rip
Router(config-router)#network 172.21.0.0
Router(config-router)#
Router(config-router)#

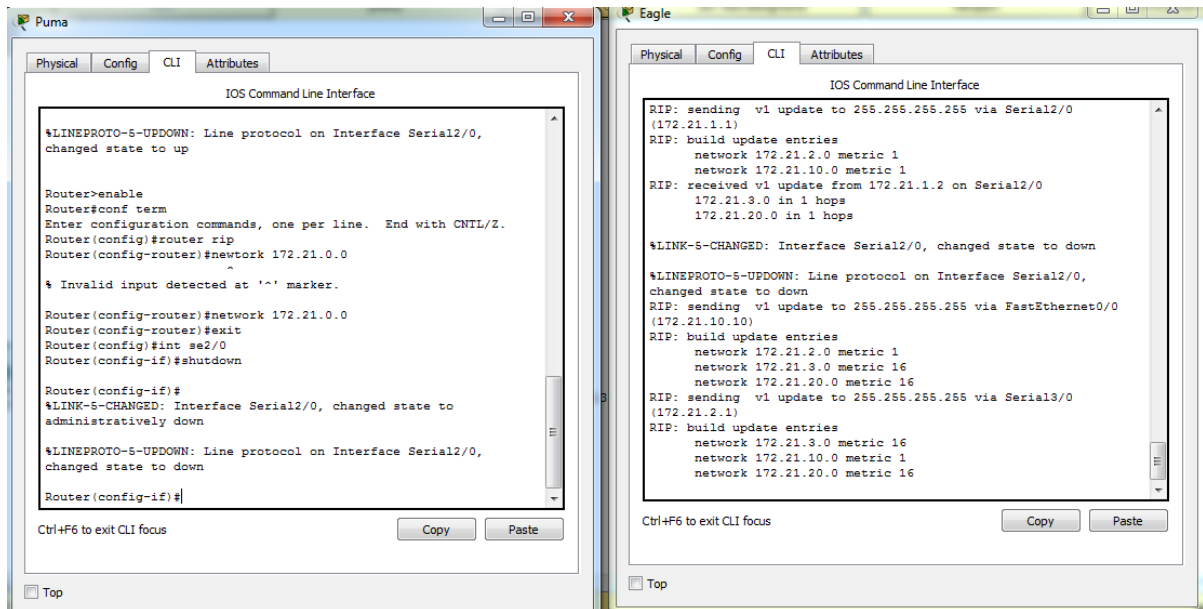
RIP: received v1 update from 172.21.1.2 on Serial2/0
172.21.3.0 in 1 hops
172.21.20.0 in 1 hops
RIP: sending v1 update to 255.255.255.255 via FastEthernet0/0 (172.21.10.10)
RIP: build update entries
  network 172.21.1.0 metric 1
  network 172.21.2.0 metric 1
  network 172.21.3.0 metric 2
  network 172.21.20.0 metric 2
RIP: sending v1 update to 255.255.255.255 via Serial3/0 (172.21.2.1)
RIP: build update entries
  network 172.21.1.0 metric 1
  network 172.21.3.0 metric 2
  network 172.21.10.0 metric 2
  network 172.21.20.0 metric 2
RIP: sending v1 update to 255.255.255.255 via Serial2/0 (172.21.1.1)
RIP: build update entries
  network 172.21.2.0 metric 1
  network 172.21.10.0 metric 1
RIP: received v1 update from 172.21.1.2 on Serial2/0
172.21.3.0 in 1 hops
172.21.20.0 in 1 hops
```

Setelah router Puma dilakukan routing rip maka pada router eagle secara otomatis mengupdate entries untuk routing rip.

Tugas 6C:

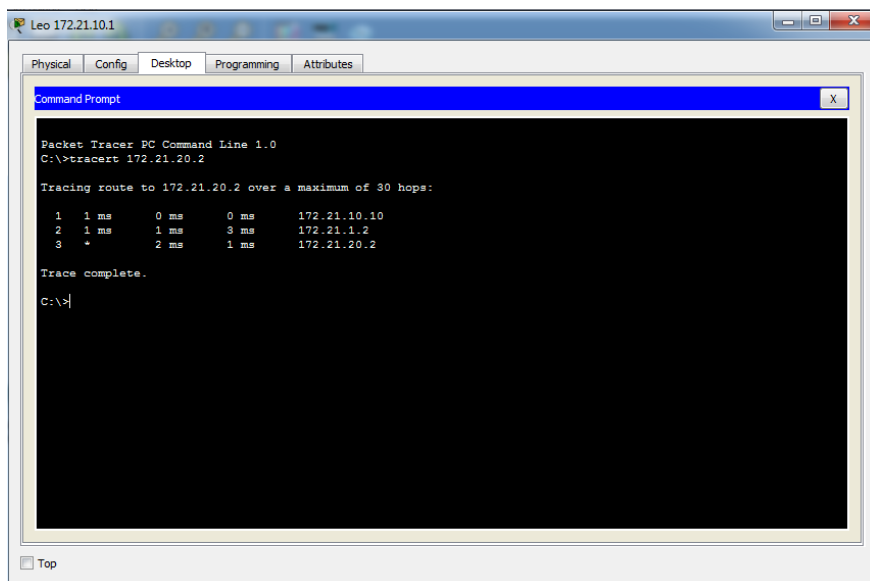
Tidak perlu. Hal tersebut karena network yang dipakai adalah 172.21.0.0 yang dimana masih dalam satu jaringan.

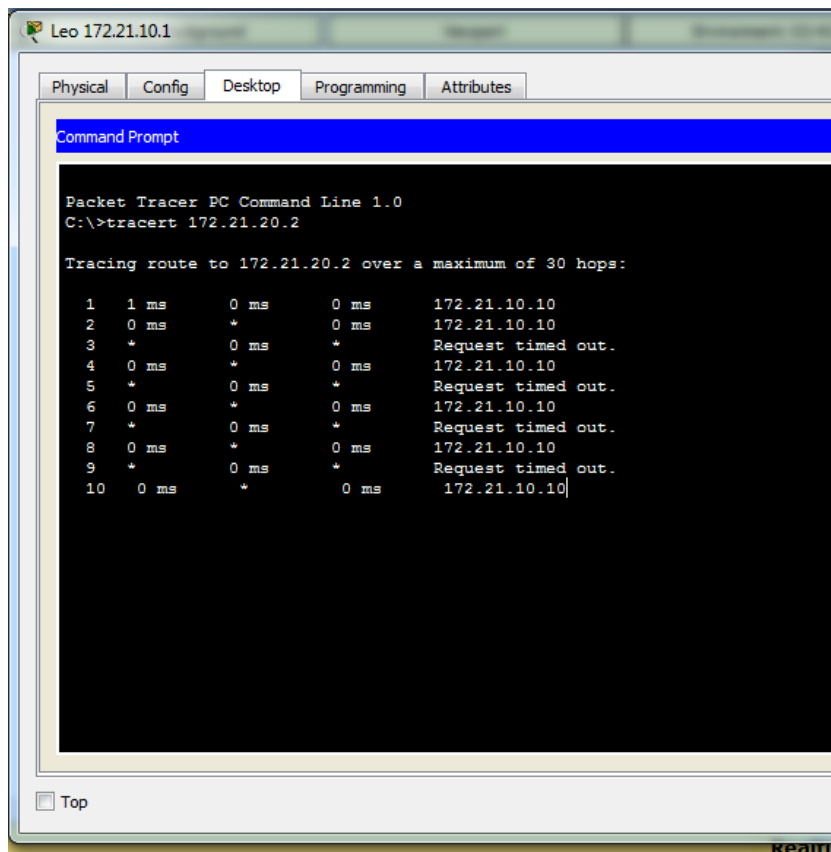
Tugas 8A:



Routing otomatis di downkan dan dimana melalui serial 3/0 yang terjadi di mana hops juga berubah.

Tugas 9A:

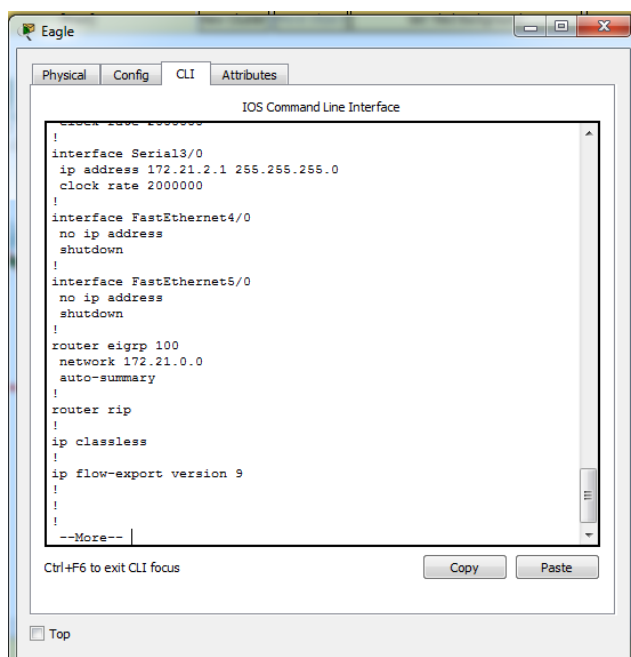




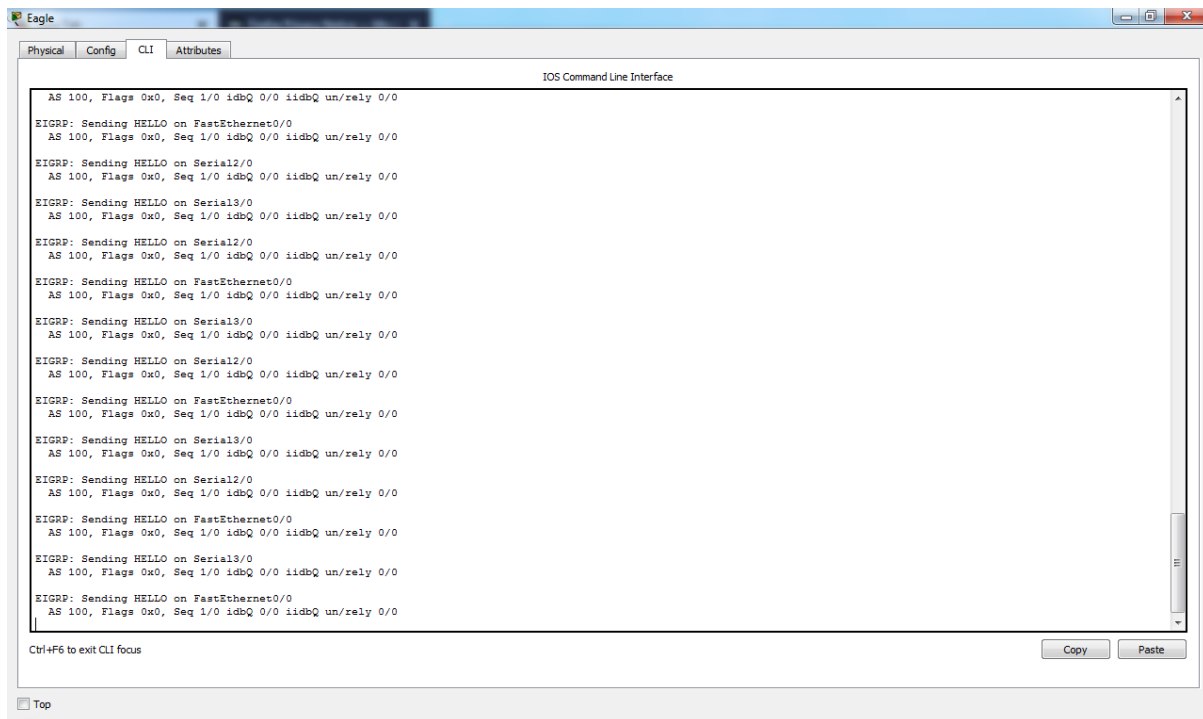
Dikarenakan hubungan di downkan maka hasil routing yang berawal dari dimulai menjadi berhenti dan menghasilkan RTO karena jaringan tidak terhubung.

KEGIATAN 3

Tugas 4A

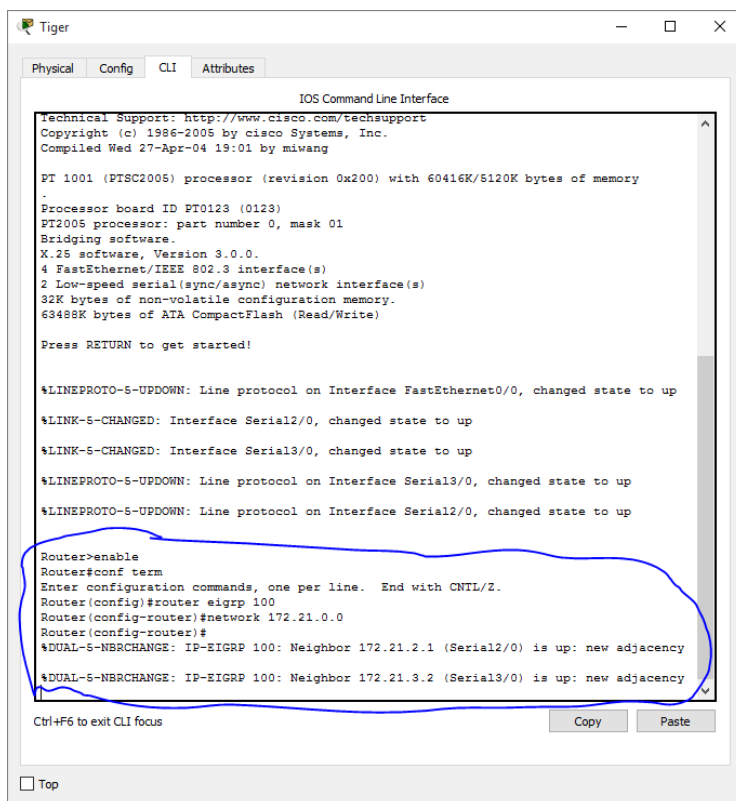


Tugas 5A:



Terjadi suatu transaksi yang mengiri tanda ataupun sapa untuk router lain dan komputer melalui fa dan serial.

Tugas 7A:



```
AS 100, Flags 0x0, Seq 0/5 idbQ 0/0 iibbQ un/rely 0/0
EIGRP: Received UPDATE on Serial3/0 nbr 172.21.2.3
AS 100, Flags 0x0, Seq 7/8 idbQ 0/0
iibbQ un/rely 0/0 peerQ un/rely 0/0
EIGRP: Sending ACK on Serial3/0 nbr 172.21.2.3
AS 100, Flags 0x0, Seq 0/7 idbQ 0/0 iibbQ un/rely 0/0
EIGRP: Received UPDATE on Serial3/0 nbr 172.21.2.3
AS 100, Flags 0x0, Seq 9/8 idbQ 0/0
iibbQ un/rely 0/0 peerQ un/rely 0/0
EIGRP: Sending ACK on Serial3/0 nbr 172.21.2.3
AS 100, Flags 0x0, Seq 0/9 idbQ 0/0 iibbQ un/rely 0/0
EIGRP: Received UPDATE on Serial2/0 nbr 172.21.1.2
AS 100, Flags 0x0, Seq 8/0 idbQ 0/0
iibbQ un/rely 0/0 peerQ un/rely 0/0
EIGRP: Sending ACK on Serial2/0 nbr 172.21.1.2
AS 100, Flags 0x0, Seq 0/8 idbQ 0/0 iibbQ un/rely 0/0
EIGRP: Received UPDATE on Serial2/0 nbr 172.21.1.2
AS 100, Flags 0x0, Seq 9/7 idbQ 0/0
iibbQ un/rely 0/0 peerQ un/rely 0/0
EIGRP: Sending ACK on Serial2/0 nbr 172.21.1.2
AS 100, Flags 0x0, Seq 0/9 idbQ 0/0 iibbQ un/rely 0/0
EIGRP: Sending HELLO on Serial2/0
AS 100, Flags 0x0, Seq 9/0 idbQ 0/0 iibbQ un/rely 0/0
EIGRP: Sending HELLO on Serial3/0
AS 100, Flags 0x0, Seq 9/0 idbQ 0/0 iibbQ un/rely 0/0
EIGRP: Sending HELLO on FastEthernet0/0
AS 100, Flags 0x0, Seq 9/0 idbQ 0/0 iibbQ un/rely 0/0
```

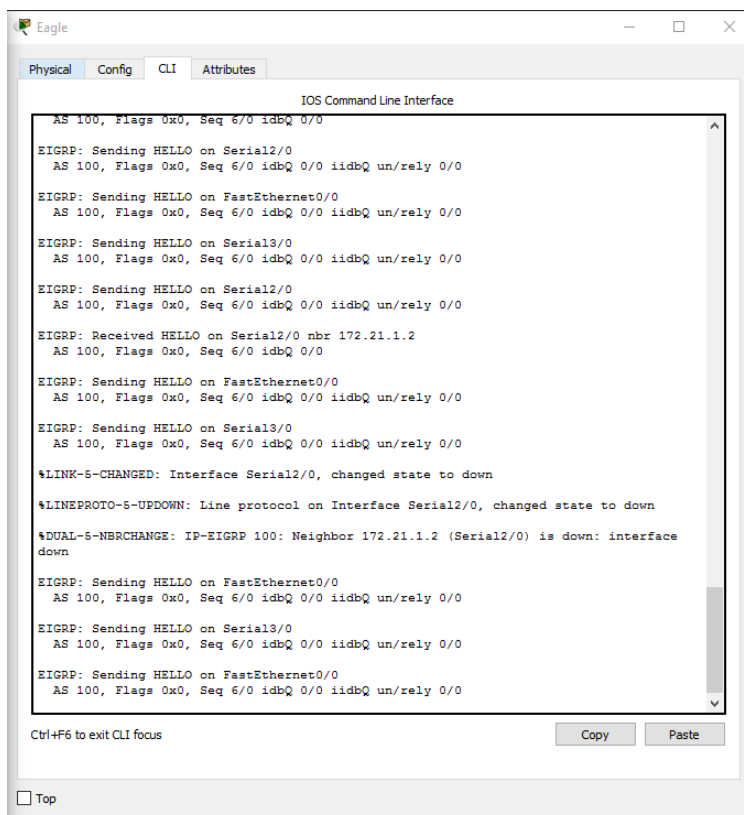
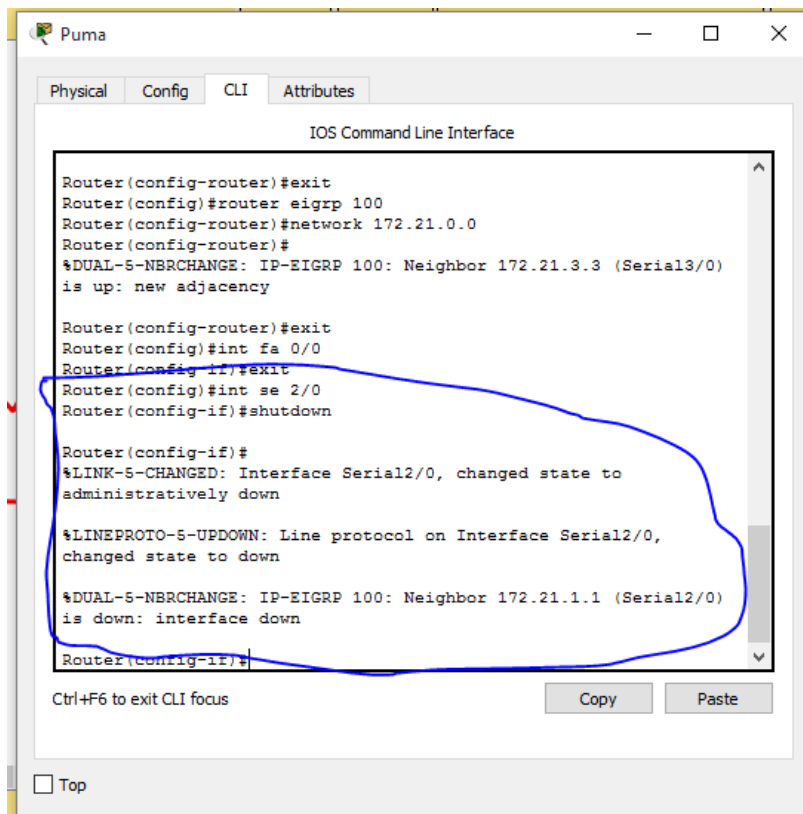
Tugas 7B:

Setelah router puma dikonfigurasi maka di router eagle otomatis meng-update kemudia mengirim ack dan seterusnya hingga proses selesai.

Tugas 7C:

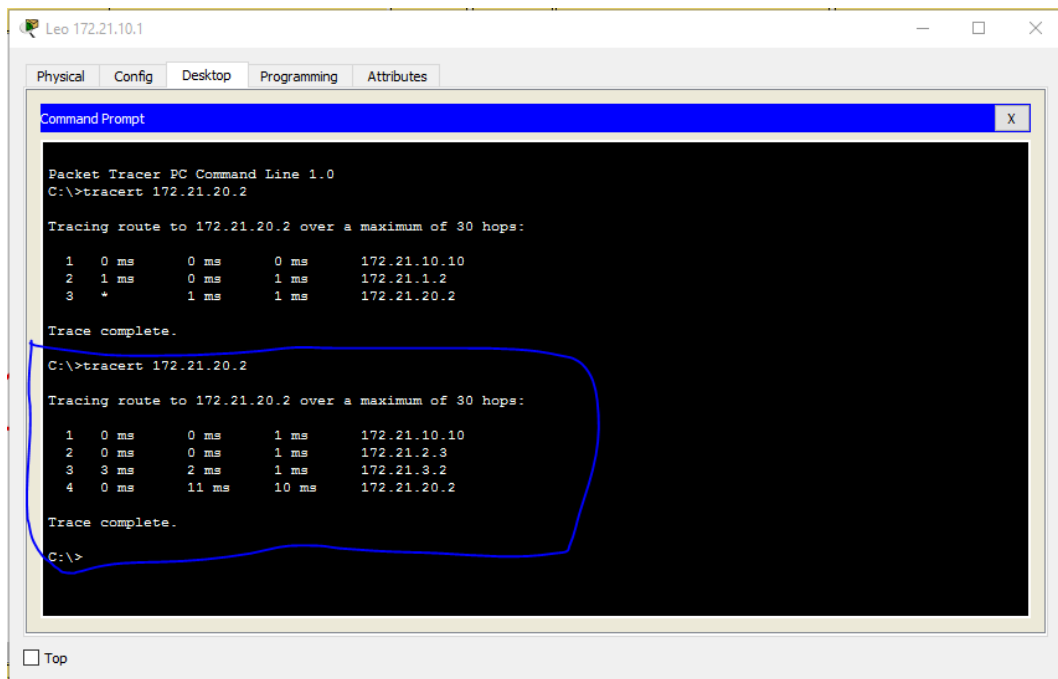
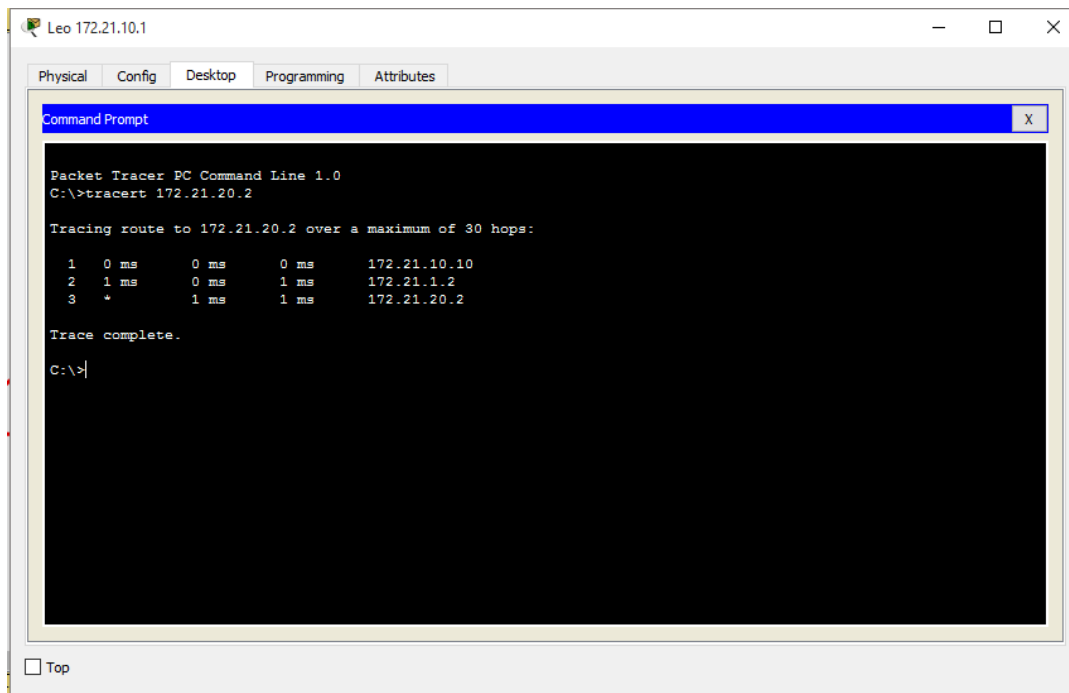
Tidak perlu. Kan tetap berada pada jaringan yang sama dan karena peroutingan sudah dinamis.

Tugas 9A:



Setelah hubungan antara router eagle dan puma di putus melalui router puma maka juga ada pemberitahuan dan update pada router eagle.

Tugas 10A:

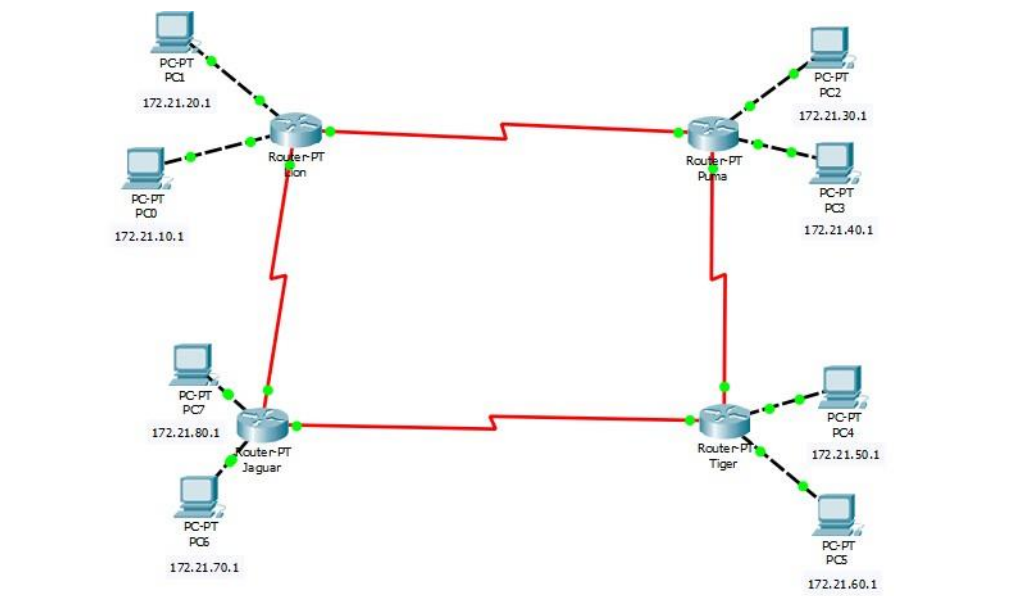


Setelah router terputus waktu yang dibutuhkan untuk mengirim data menjadi berbeda. Juga terdapat perbedaan pada hops atau jalan yang dilalui.

TUGAS MODUL 5

STATIC

1. Desain jaringan



2. Melakukan konfigurasi ip router dengan pembagian

a. Lion

- fa 0/0 = 172.21.10.10
- fa 1/0 = 172.21.20.20
- se 2/0 = 172.21.1.1
- se 3/0 = 172.21.2.1

b. Puma

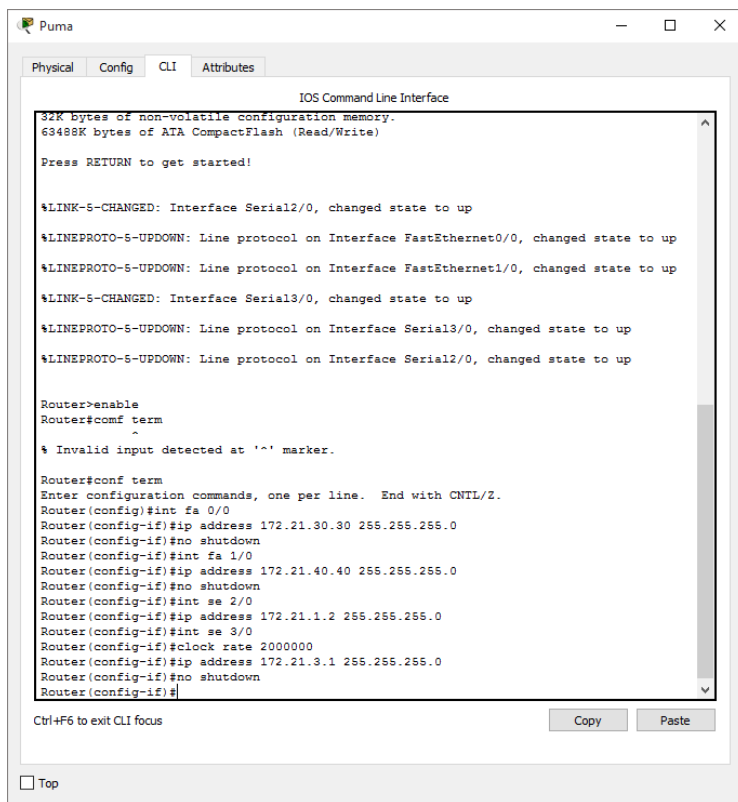
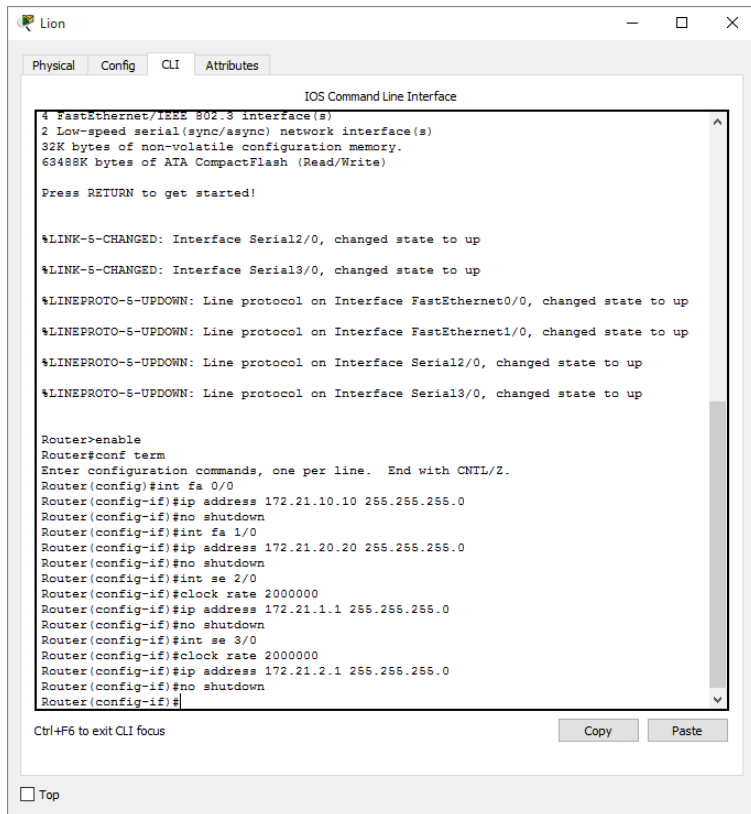
- fa 0/0 = 172.21.30.10
- fa 1/0 = 172.21.40.20
- se 2/0 = 172.21.1.2
- se 3/0 = 172.21.3.1

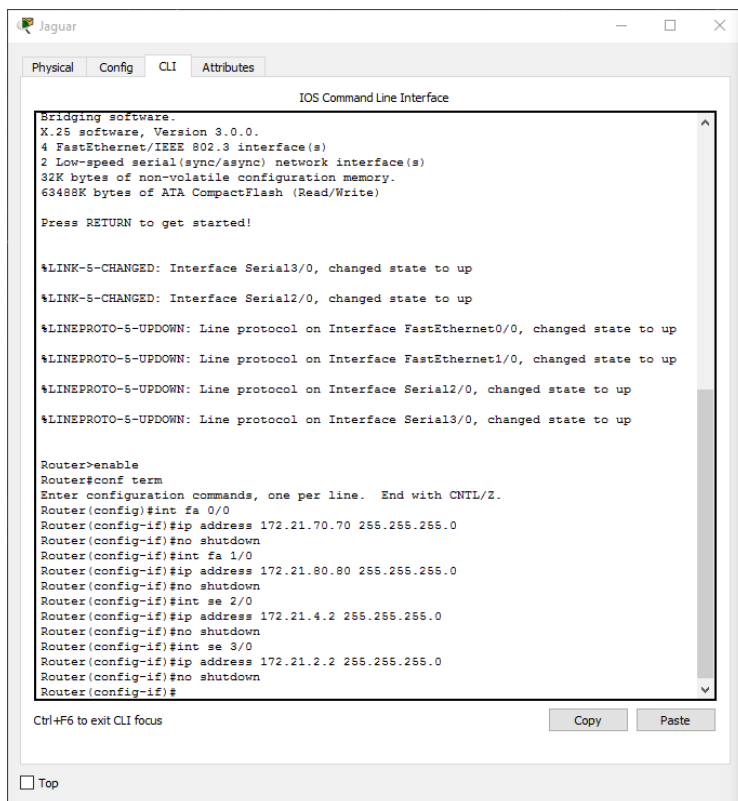
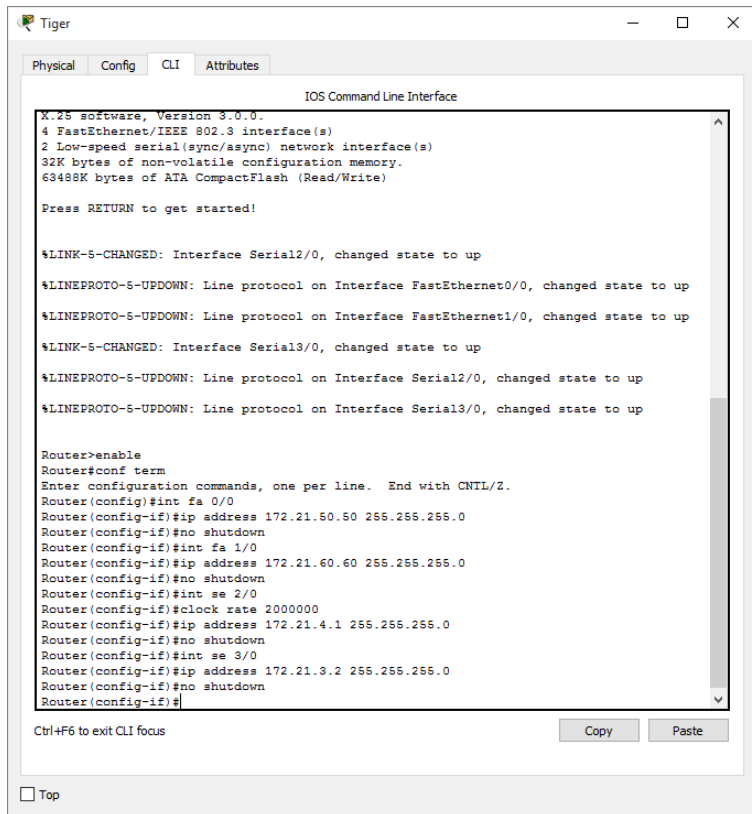
c. Tiger

- fa 0/0 = 172.21.50.10
- fa 1/0 = 172.21.60.20
- se 2/0 = 172.21.4.1
- se 3/0 = 172.21.3.2

d. Jaguar

- fa 0/0 = 172.21.70.10
- fa 1/0 = 172.21.80.20
- fa 2/0 = 172.21.4.2
- fa 3/0 = 172.21.2.2





3. Konfigurasi pada pc

PC0

Physical Config Desktop Programming Attributes

IP Configuration

IP Configuration

☐ DHCP ☒ Static

IP Address 172.21.10.1

Subnet Mask 255.255.255.0

Default Gateway 172.21.10.10

DNS Server 0.0.0.0

IPv6 Configuration

☐ DHCP ☐ Auto Config ☒ Static

IPv6 Address /

Link Local Address FE80::260:70FF:FE63:6708

IPv6 Gateway

IPv6 DNS Server

☐ Top

PC1

Physical Config Desktop Programming Attributes

IP Configuration

IP Configuration

☐ DHCP ☒ Static

IP Address 172.21.20.1

Subnet Mask 255.255.255.0

Default Gateway 172.21.20.20

DNS Server 0.0.0.0

IPv6 Configuration

☐ DHCP ☐ Auto Config ☒ Static

IPv6 Address

Link Local Address FE80::290:21FF:FE8E:9245

IPv6 Gateway

IPv6 DNS Server

☐ Top

PC2

Physical Config Desktop Programming Attributes

IP Configuration

IP Configuration

☐ DHCP ☒ Static

IP Address 172.21.30.1

Subnet Mask 255.255.255.0

Default Gateway 172.21.30.30

DNS Server 0.0.0.0

IPv6 Configuration

☐ DHCP ☐ Auto Config ☒ Static

IPv6 Address

Link Local Address FE80::2D0:58FF:FED7:5136

IPv6 Gateway

IPv6 DNS Server

☐ Top

PC3

Physical Config Desktop Programming Attributes

IP Configuration

IP Configuration

☐ DHCP ☒ Static

IP Address 172.21.40.1

Subnet Mask 255.255.255.0

Default Gateway 172.21.40.40

DNS Server 0.0.0.0

IPv6 Configuration

☐ DHCP ☐ Auto Config ☒ Static

IPv6 Address

Link Local Address FE80::290:CFF:FE69:5254

IPv6 Gateway

IPv6 DNS Server

☐ Top

PC4

Physical Config Desktop Programming Attributes

IP Configuration

IP Configuration

☐ DHCP ☒ Static

IP Address 172.21.50.1

Subnet Mask 255.255.255.0

Default Gateway 172.21.50.50

DNS Server 0.0.0.0

IPv6 Configuration

☐ DHCP ☐ Auto Config ☒ Static

IPv6 Address

Link Local Address FE80::201:C9FF:FE7A:685A

IPv6 Gateway

IPv6 DNS Server

☐ Top

PC5

Physical Config Desktop Programming Attributes

IP Configuration

IP Configuration

☐ DHCP ☒ Static

IP Address 172.21.60.1

Subnet Mask 255.255.255.0

Default Gateway 172.21.60.60

DNS Server 0.0.0.0

IPv6 Configuration

☐ DHCP ☐ Auto Config ☒ Static

IPv6 Address

Link Local Address FE80::2E0:B0FF:FE11:822A

IPv6 Gateway

IPv6 DNS Server

☐ Top

PC6

Physical Config Desktop Programming Attributes

IP Configuration

IP Configuration

☐ DHCP ☒ Static

IP Address 172.21.70.1

Subnet Mask 255.255.255.0

Default Gateway 172.21.70.70

DNS Server 0.0.0.0

IPv6 Configuration

☐ DHCP ☐ Auto Config ☒ Static

IPv6 Address

Link Local Address FE80::201:43FF:FEED:4DBE

IPv6 Gateway

IPv6 DNS Server

☐ Top

PC7

Physical Config Desktop Programming Attributes

IP Configuration

IP Configuration

☐ DHCP ☒ Static

IP Address 172.21.80.1

Subnet Mask 255.255.255.0

Default Gateway 172.21.80.80

DNS Server 0.0.0.0

IPv6 Configuration

☐ DHCP ☐ Auto Config ☒ Static

IPv6 Address

Link Local Address FE80::201:96FF:FE02:E108

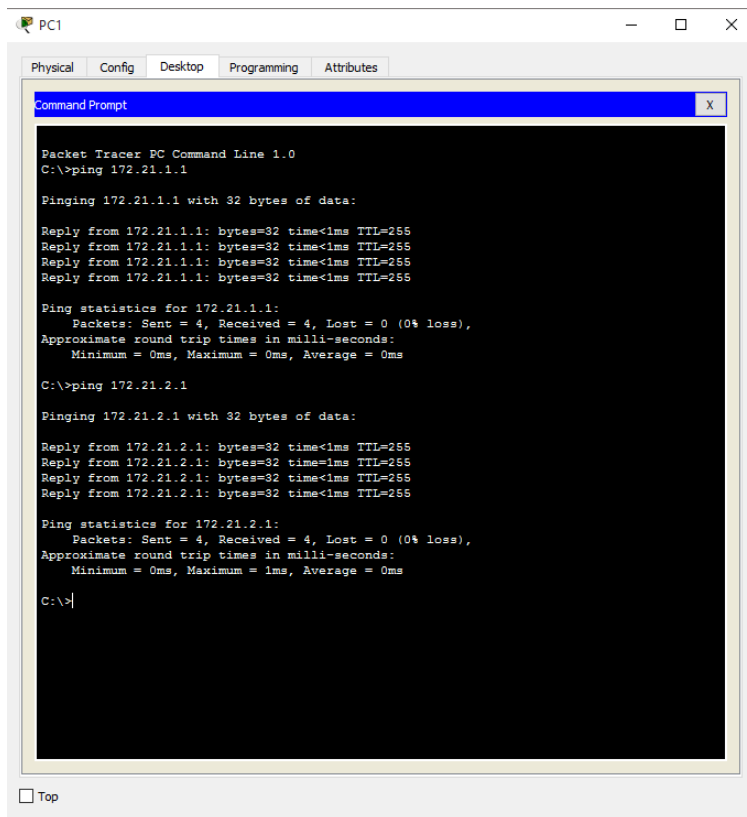
IPv6 Gateway

IPv6 DNS Server

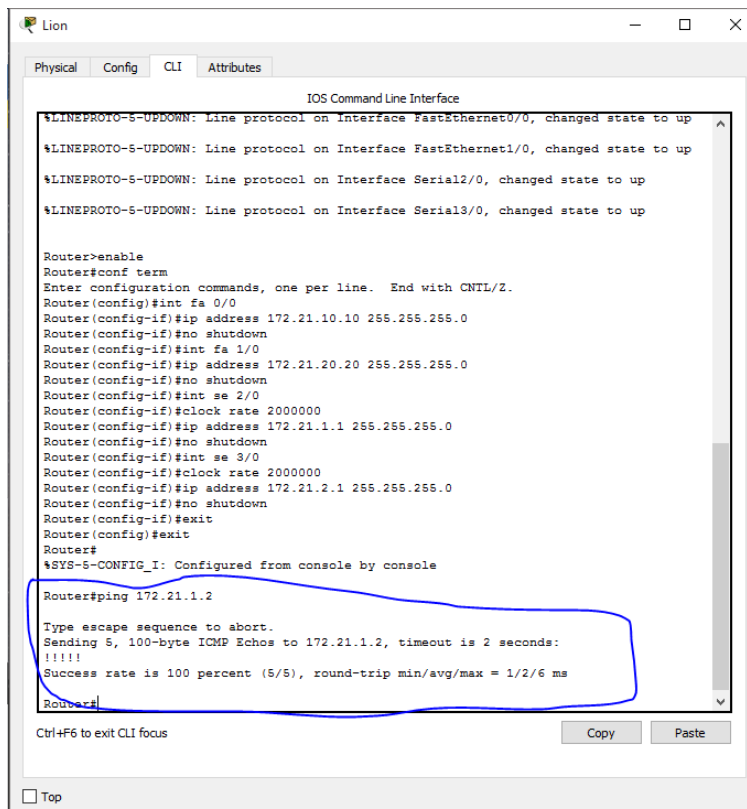
☐ Top

4. Melakukan cek koneksi

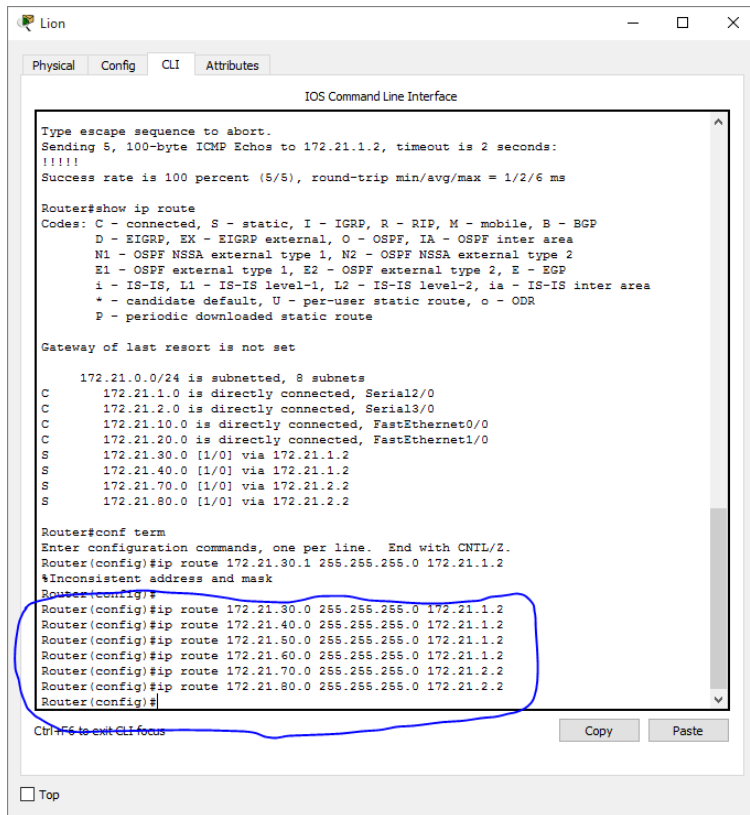
Dari pc 1 ke router lion



Dari router lion ke router puma



5. Melakukan routing



```
IOS Command Line Interface

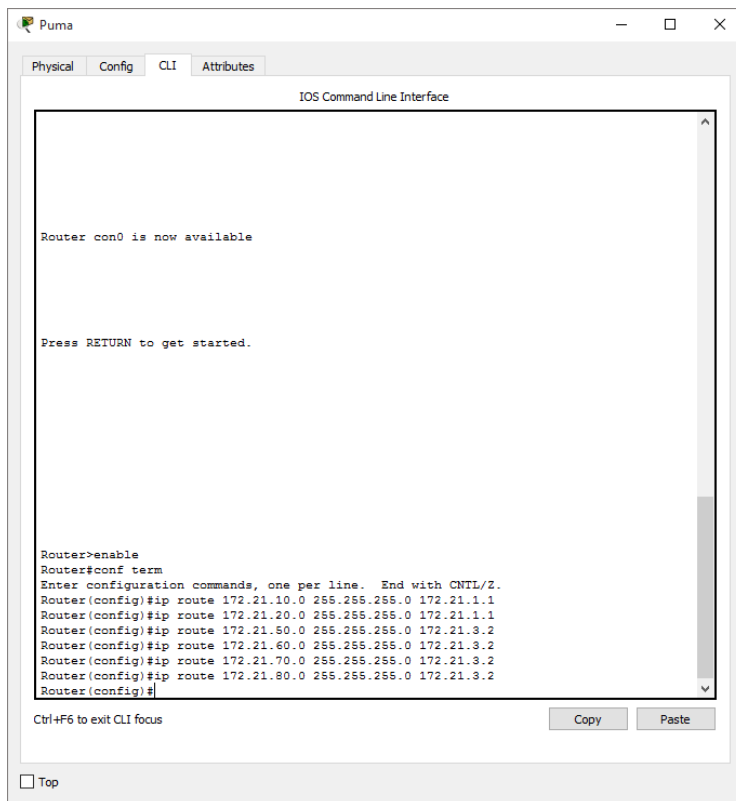
Type escape sequence to abort.
Sending 5, 100-byte ICMP Echos to 172.21.1.2, timeout is 2 seconds:
!!!!!!
Success rate is 100 percent (5/5), round-trip min/avg/max = 1/2/6 ms

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

    172.21.0.0/24 is subnetted, 8 subnets
C       172.21.1.0 is directly connected, Serial2/0
C       172.21.2.0 is directly connected, Serial3/0
C       172.21.10.0 is directly connected, FastEthernet0/0
C       172.21.20.0 is directly connected, FastEthernet1/0
S       172.21.30.0 [1/0] via 172.21.1.2
S       172.21.40.0 [1/0] via 172.21.1.2
S       172.21.70.0 [1/0] via 172.21.2.2
S       172.21.80.0 [1/0] via 172.21.2.2

Router#conf term
Enter configuration commands, one per line. End with CNTL/Z.
Router(config)#ip route 172.21.30.1 255.255.255.0 172.21.1.2
%Inconsistent address and mask
Router(config)#
Router(config)#ip route 172.21.30.0 255.255.255.0 172.21.1.2
Router(config)#ip route 172.21.40.0 255.255.255.0 172.21.1.2
Router(config)#ip route 172.21.50.0 255.255.255.0 172.21.1.2
Router(config)#ip route 172.21.60.0 255.255.255.0 172.21.1.2
Router(config)#ip route 172.21.70.0 255.255.255.0 172.21.2.2
Router(config)#ip route 172.21.80.0 255.255.255.0 172.21.2.2
Router(config)#
Ctrl+F6 to exit CLI focus
```

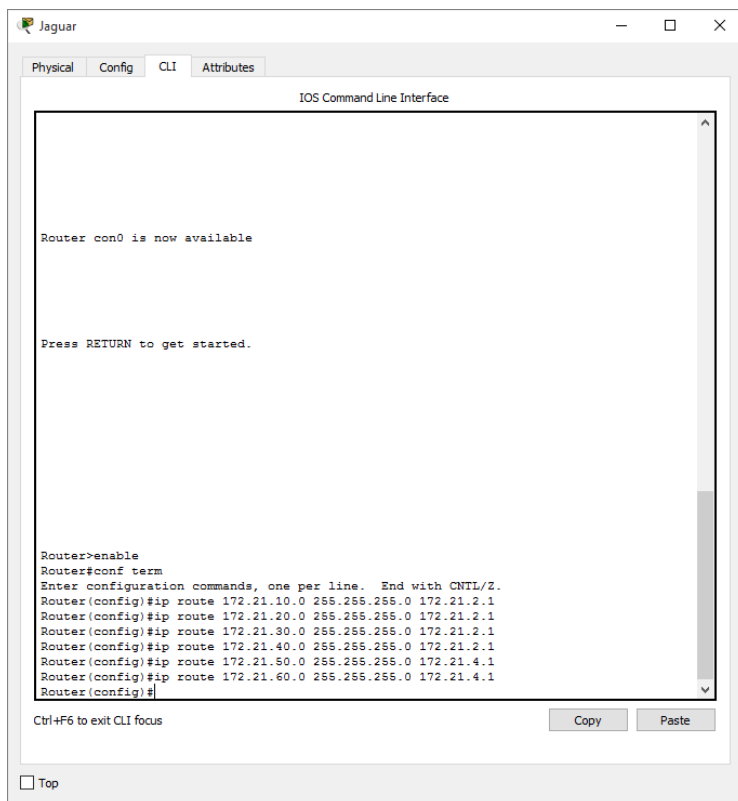
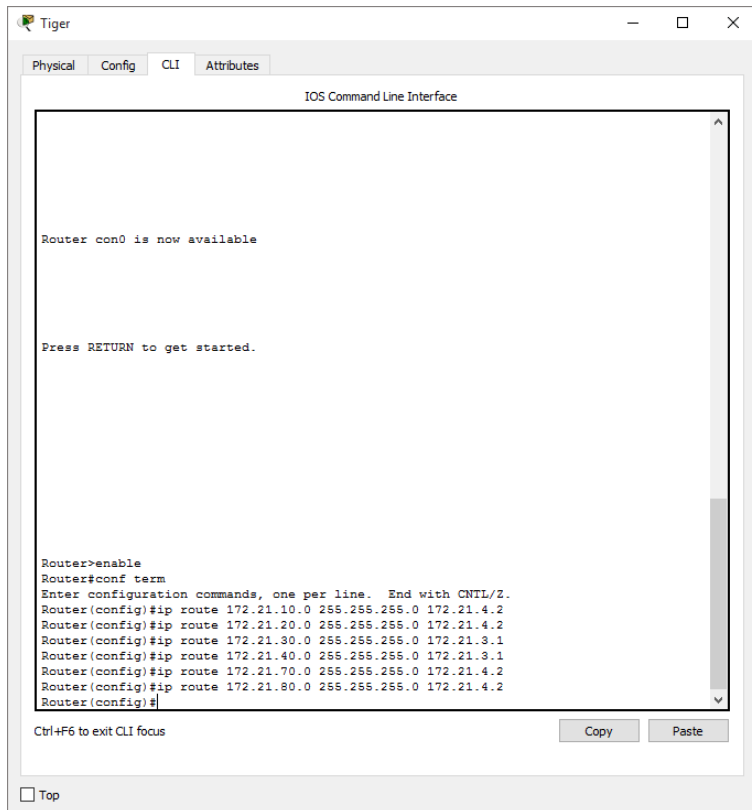


```
IOS Command Line Interface

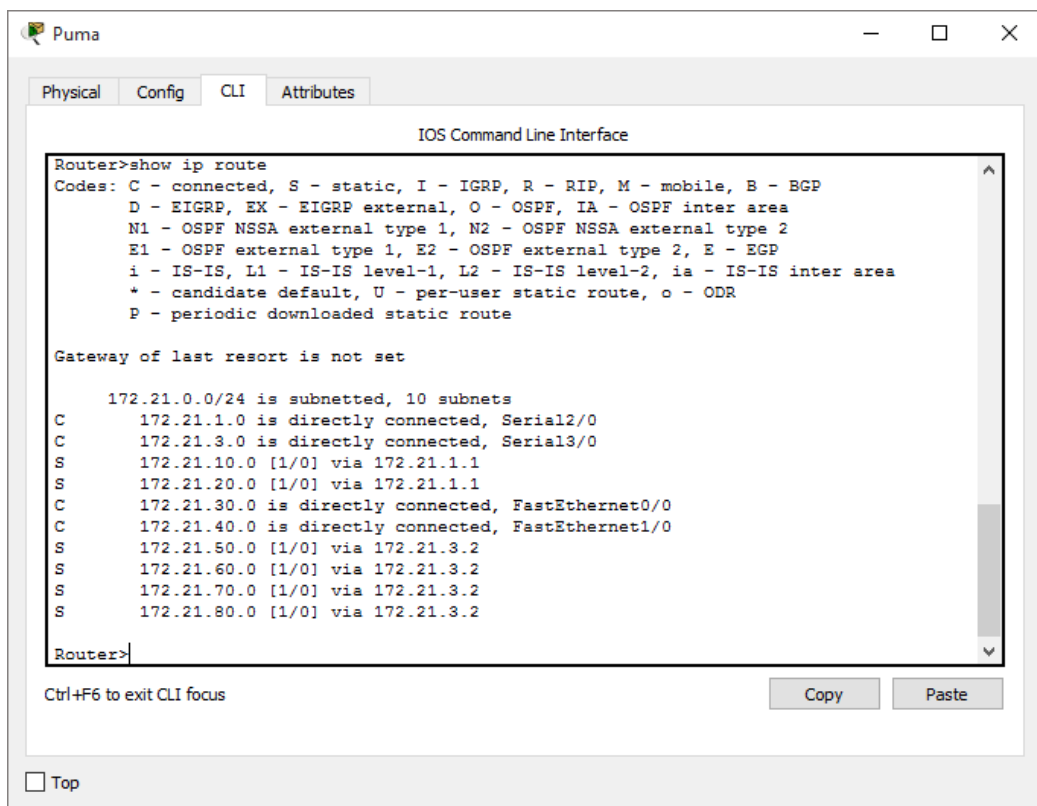
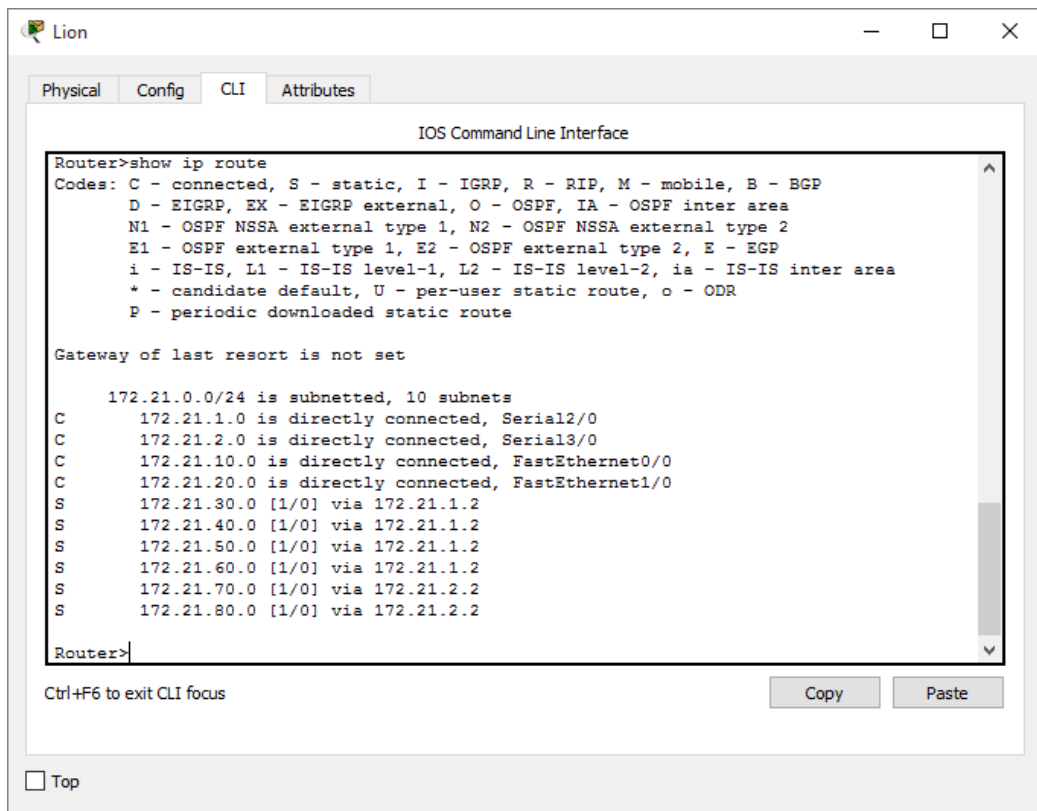
Router con0 is now available

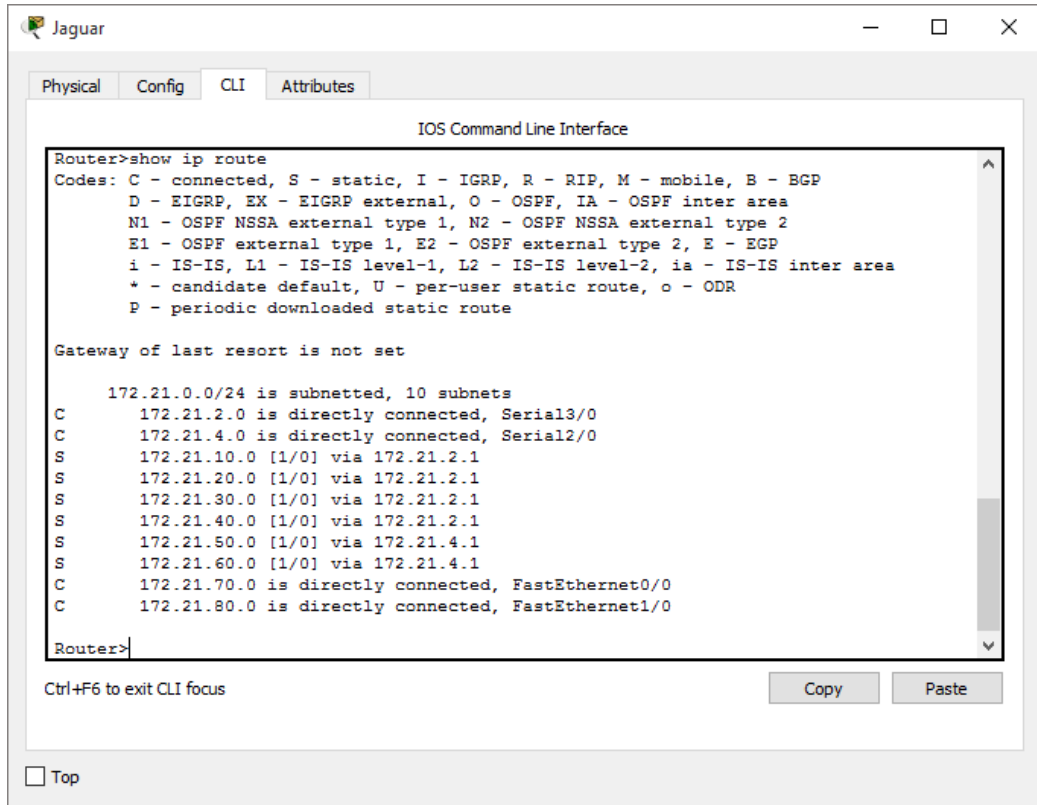
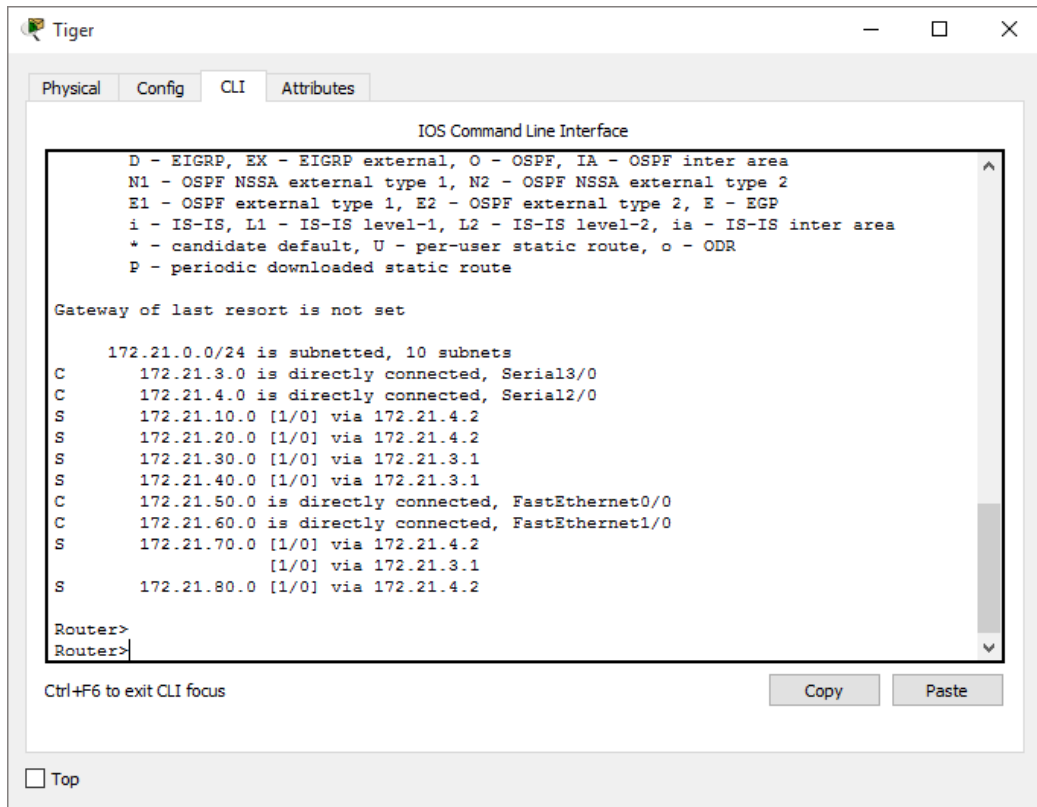
Press RETURN to get started.

Router>enable
Router#conf term
Enter configuration commands, one per line. End with CNTL/Z.
Router(config)#ip route 172.21.10.0 255.255.255.0 172.21.1.1
Router(config)#ip route 172.21.20.0 255.255.255.0 172.21.1.1
Router(config)#ip route 172.21.50.0 255.255.255.0 172.21.3.2
Router(config)#ip route 172.21.60.0 255.255.255.0 172.21.3.2
Router(config)#ip route 172.21.70.0 255.255.255.0 172.21.3.2
Router(config)#ip route 172.21.80.0 255.255.255.0 172.21.3.2
Router(config)#
Ctrl+F6 to exit CLI focus
```

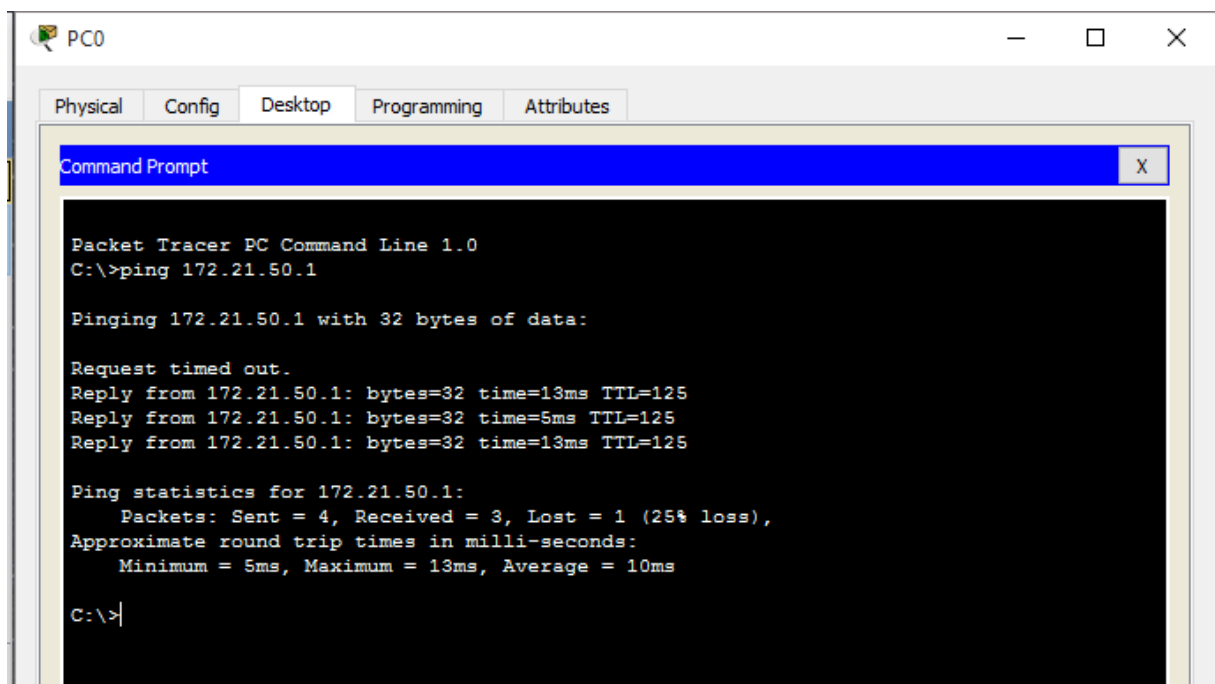



6. Melakukan show ip route



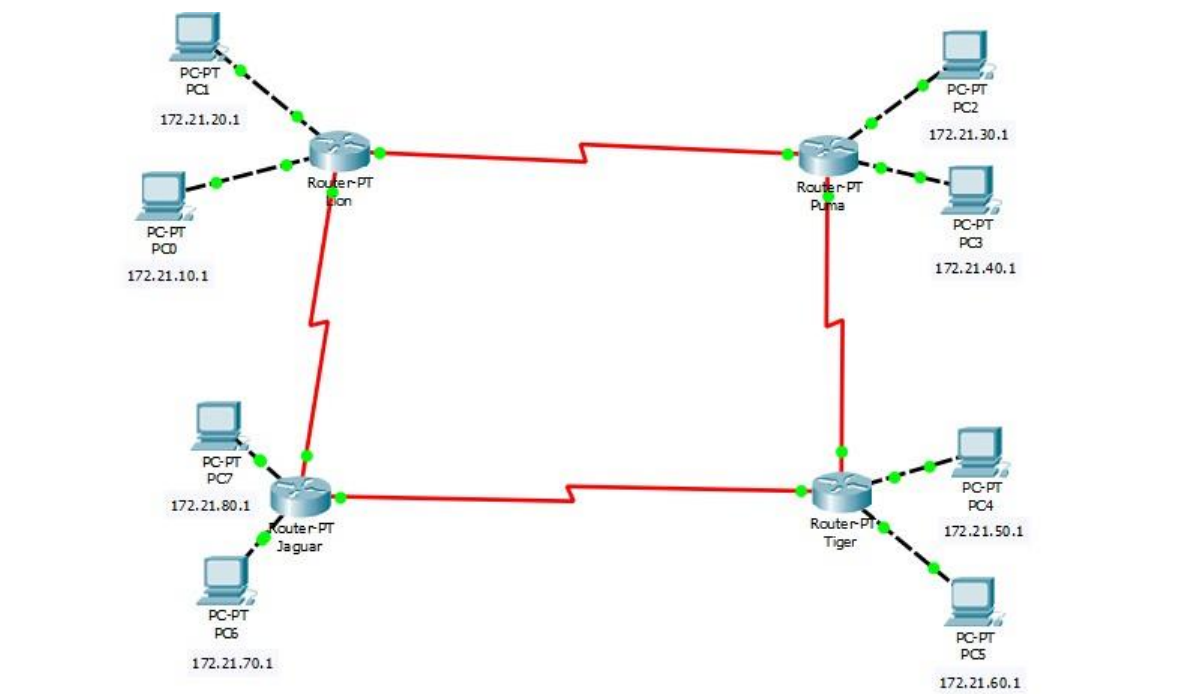


7. Melakukan ping dari pc 0 ke pc 4

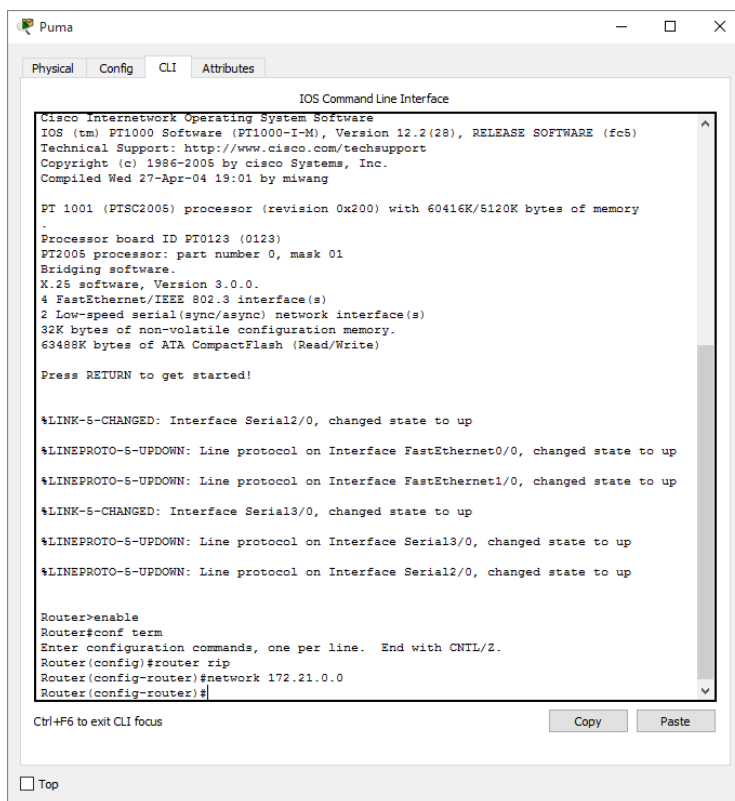
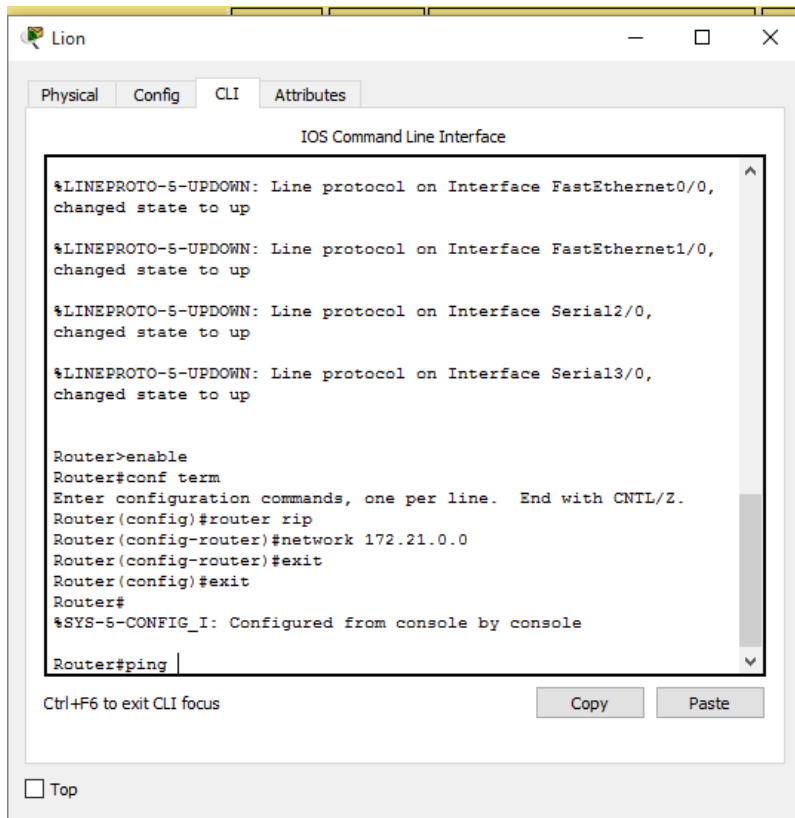


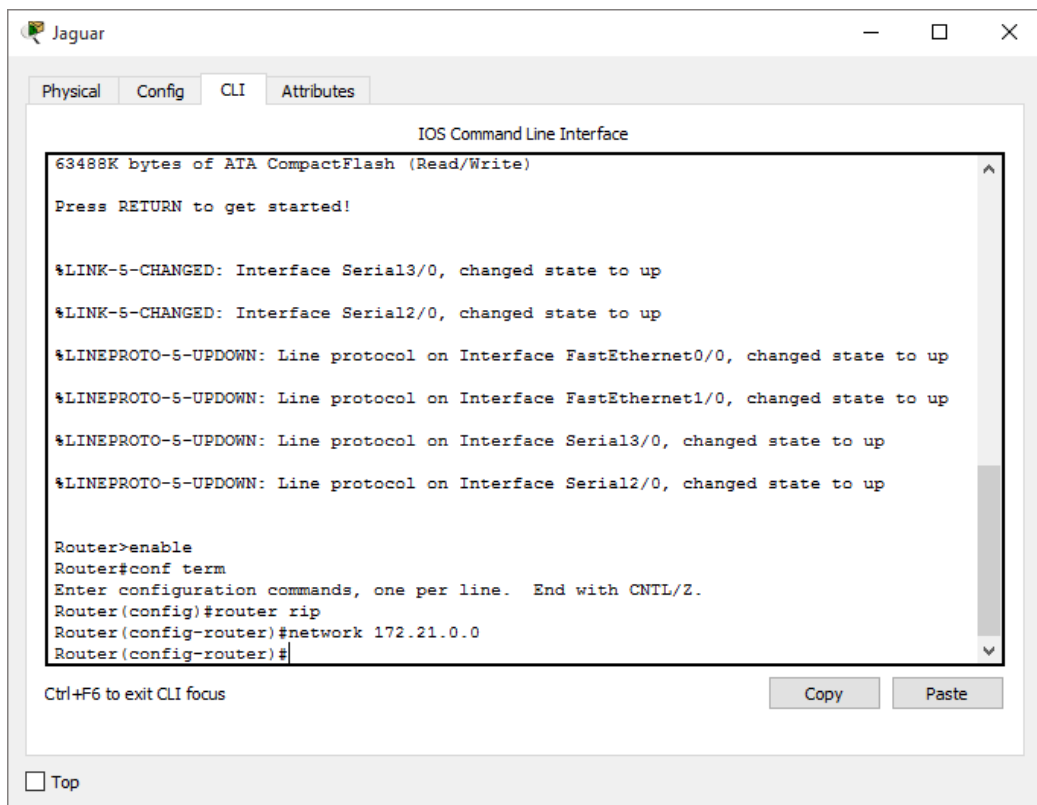
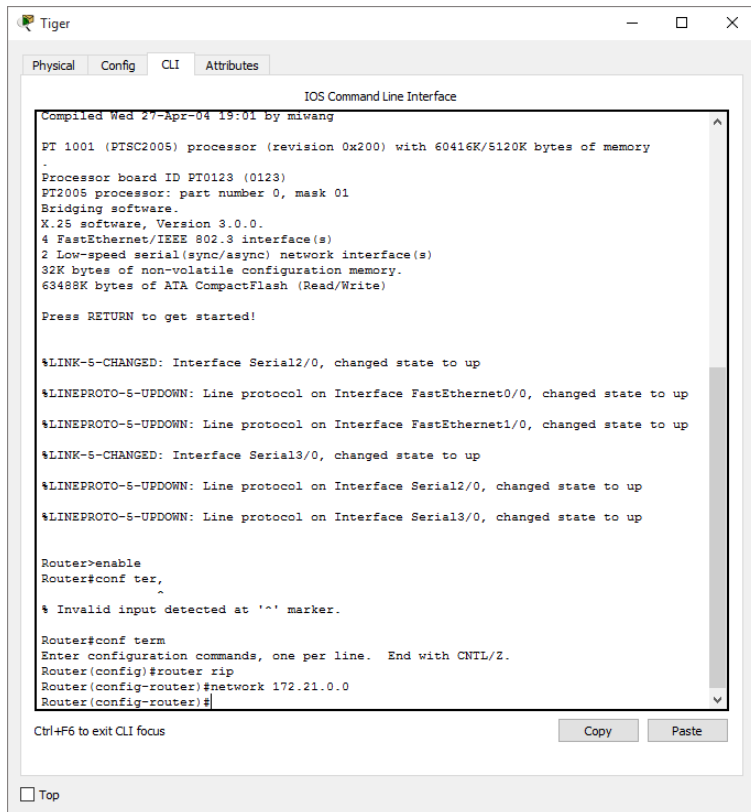
RIP

1. Desain jaringan

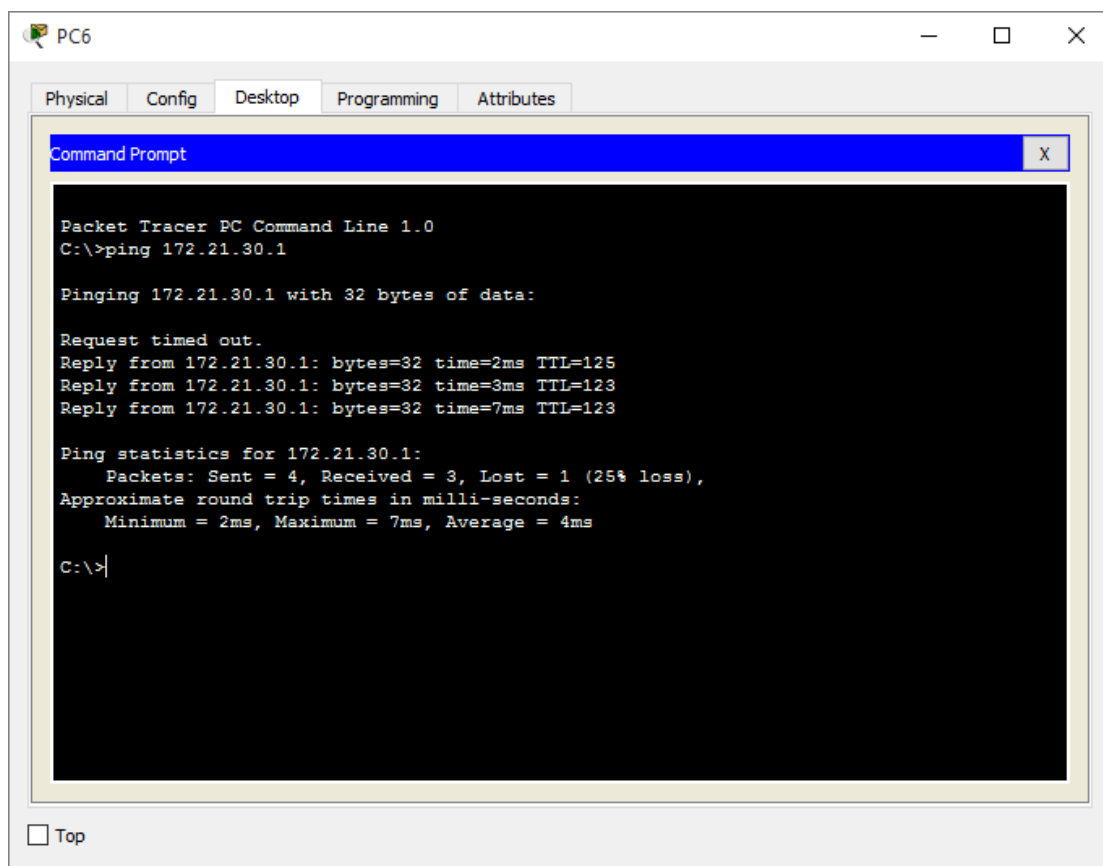


2. Melakukan konfigurasi ip dan routing



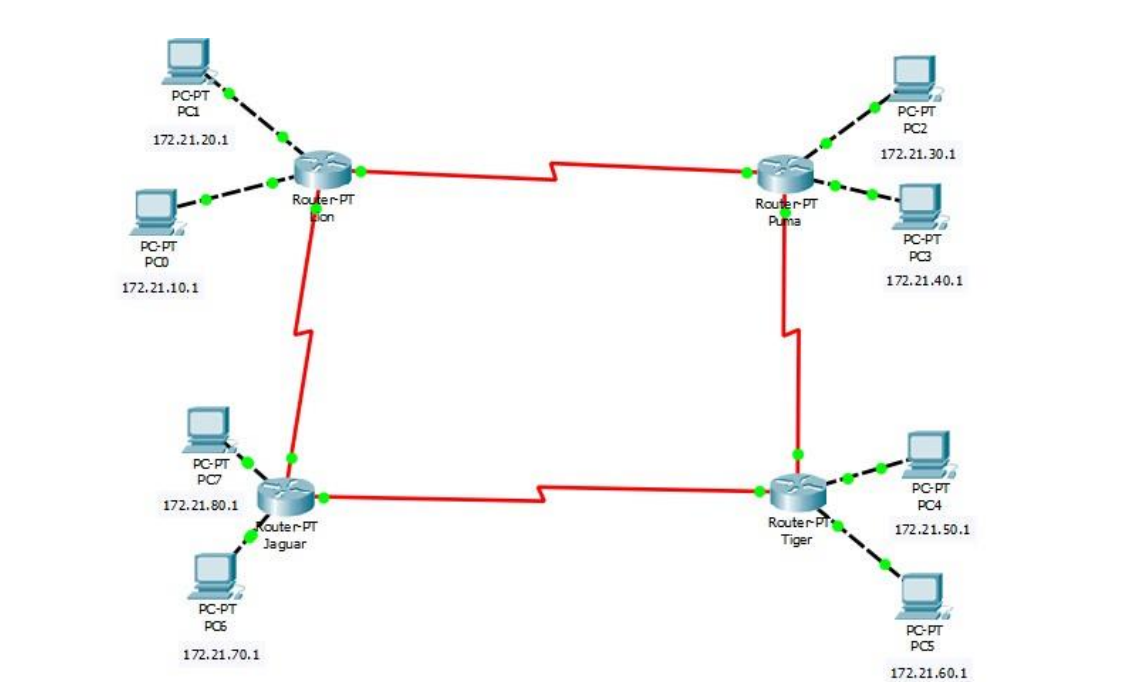


3. Melakukan ping dari pc 6 ke pc 2

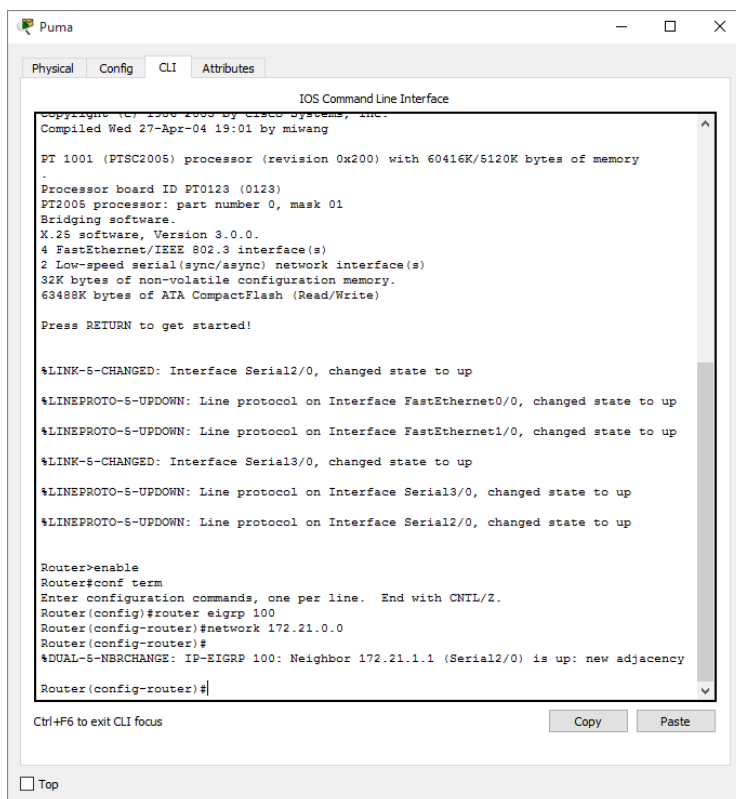
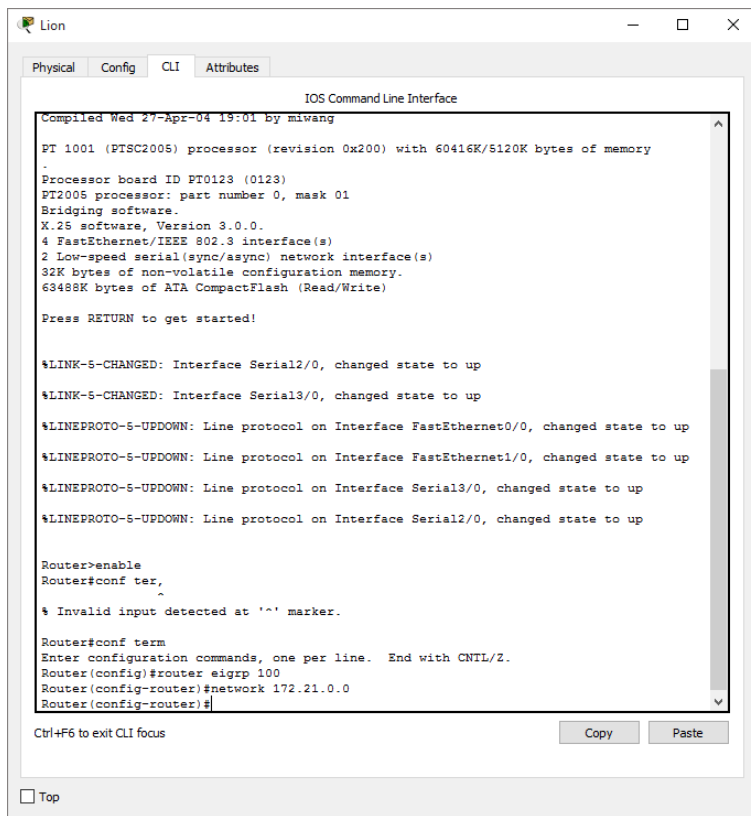


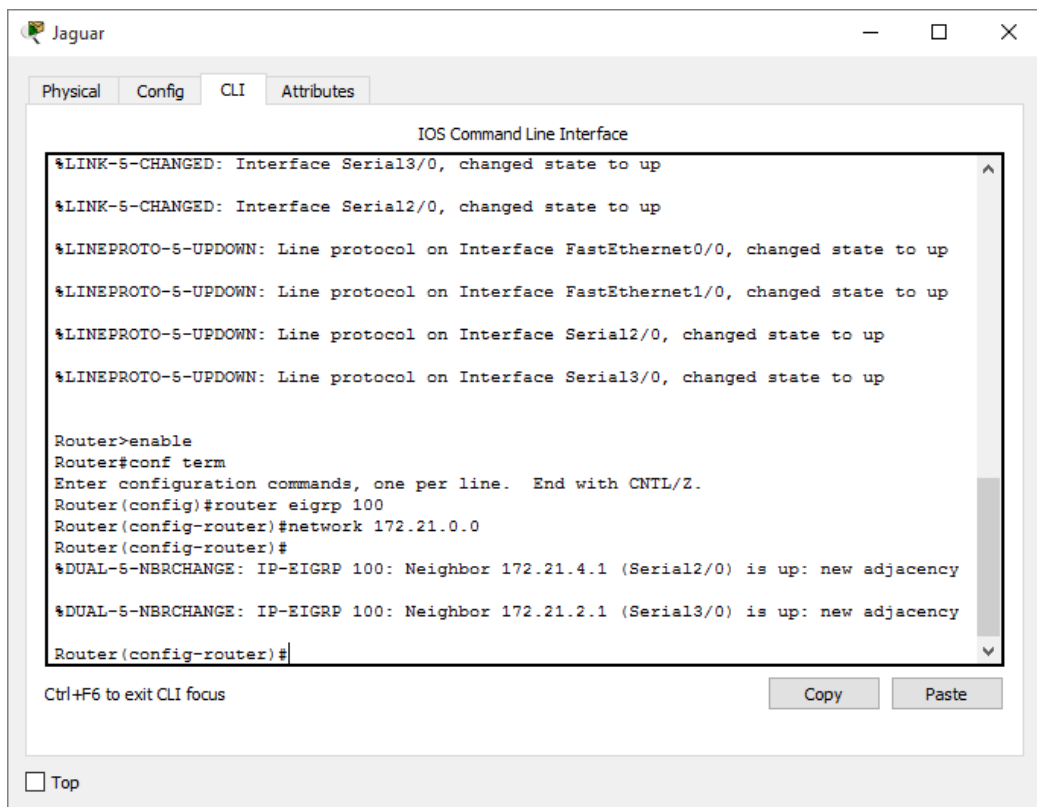
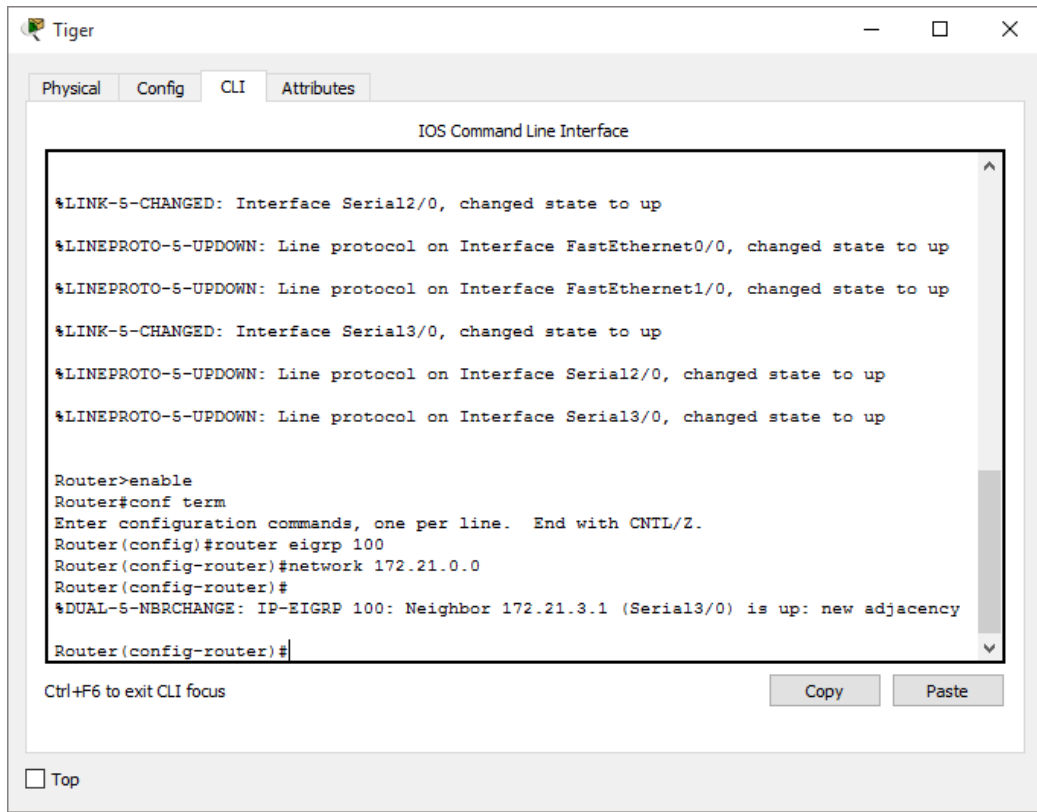
IGRP

1. Desain jaringan



2. Melakukan konfigurasi ip dan routing secara otomatis





3. Melakukan ping dari pc 4 ke pc 0

