NAMA = CORRY LUQMA ZUNIRA

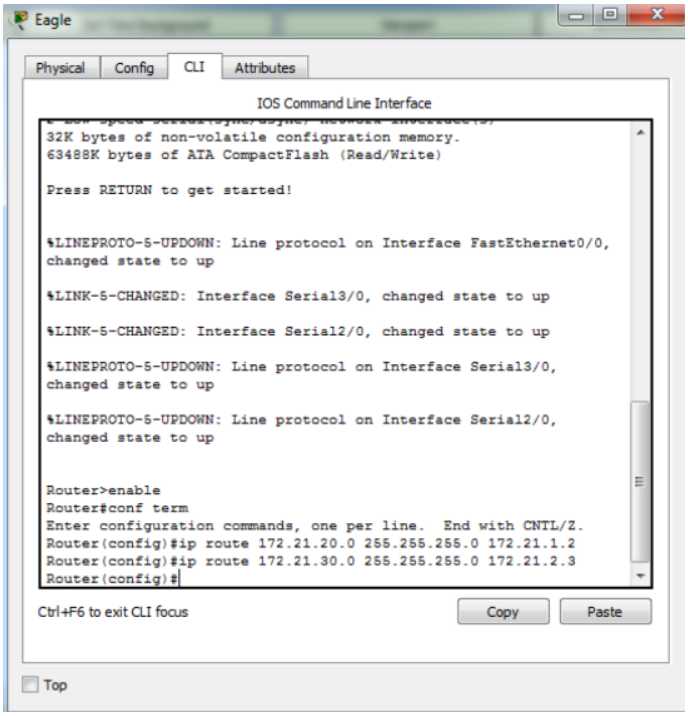
KELAS = D

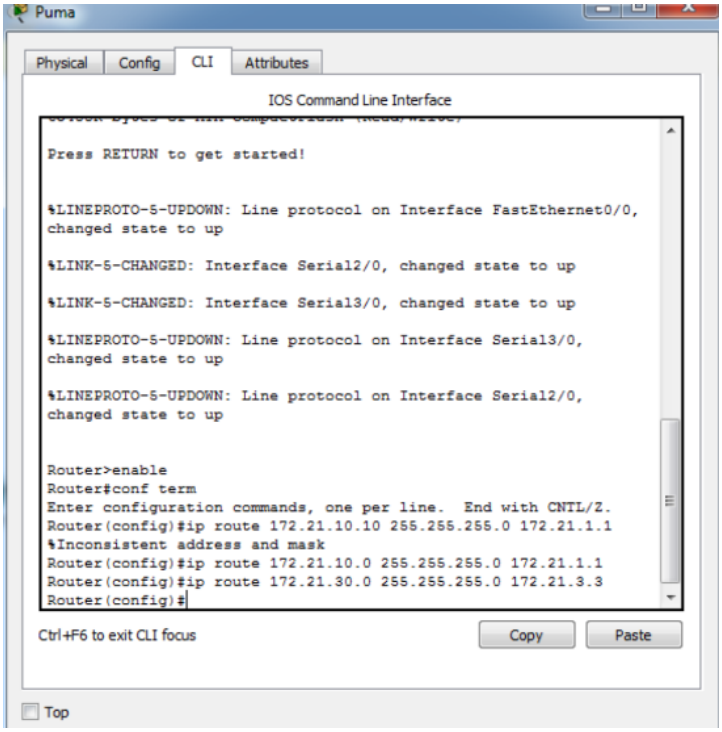
NIM = L200170152

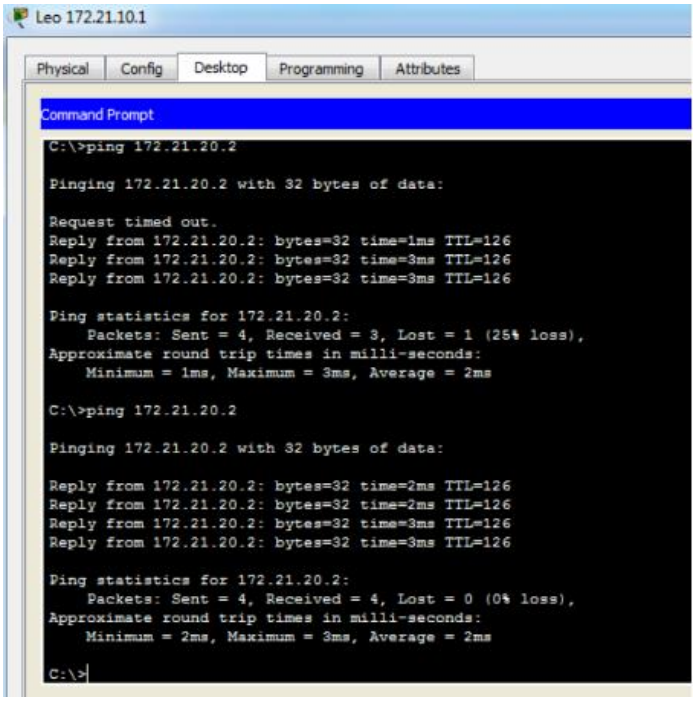
Kegiatan 1.

Static Routing.

Tugas 11A: Tuliskan langkah penambahan route table (static route) pada router puma dan eagle.







Tugas 12A: Apakah mendapat tanggapan dari leo? Jelaskan secara singkat mengapa demikian.

Ya mendapatkan. Karena sudah dibuat routing untuk lewat jalur tersebut.

Tugas 13A: Jika alamat jaringan pada segmen leo diubah dari 172.21.10.0/24 menjadi 172.21.100./24. Tuliskan langkah perubahan konfigurasi yang dilakukan pada setiap router agar

PC leo dapat dihubungi (ping) dari PC aries dan virgo. Mengapa langkah-langkah tersebut harus dilakukan?

1. Lakukan konfigurasi pada router eagle.

2. Lakukan konfigurasi pada PC Leo dan ubah default gateway.

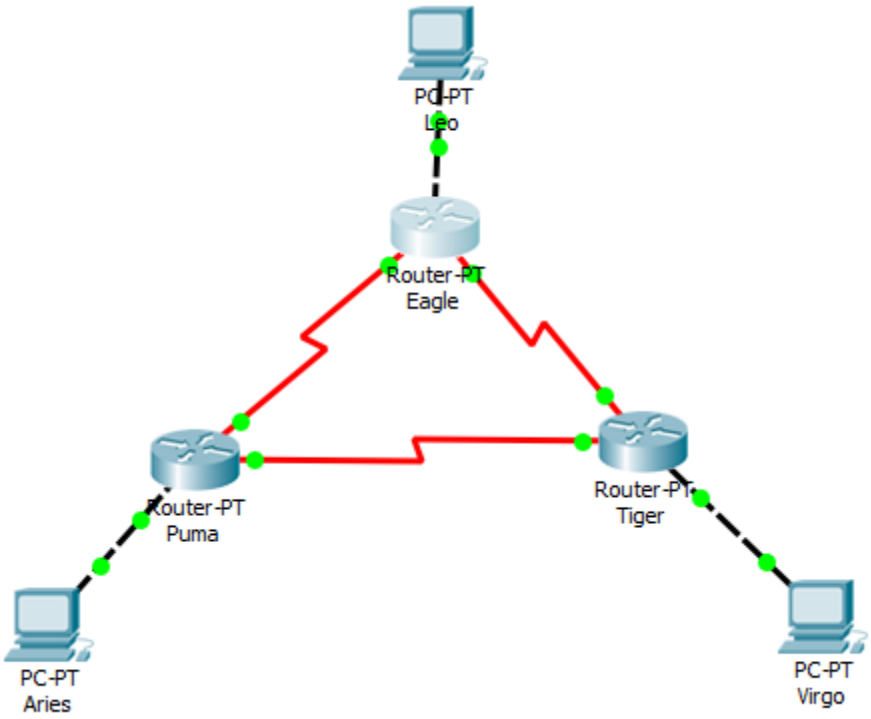
3. Lakukan routing pada masing masing router sesuai dengan blok ip pc

4. Lakukan pengecekan dengan cara (ping)

Kegiatan 2.

Rip (Routing Information Protocol)

1. Dari Packet Tracer, buka(load) topolohi NetMap yang dipakai **Kegiatan 1.**



Tugas 4A : Berapa nomor alamat jaringan yang terdaftar pada konfigurasi routing RIP?

```
!
interface FastEthernet5/0
 no ip address
 shutdown
!
router rip
 network 172.21.0.0
!
ip classless
!
ip flow-export version 9
!
!
!
!
!
!
!
line con 0
!
line aux 0
!
line vty 0 4
 login
```

Tugas 4B : Mengapa alamat jaringan yang langsung terhubung dengan interface e0(172.21.10.0), s0(172.21.1.0), dan s1(172.21.2.0) tidak di daftarkan ke konfigurasi routing RIP?

Karena pada 172.21.0.0 mencakup semua alamat jaringan.

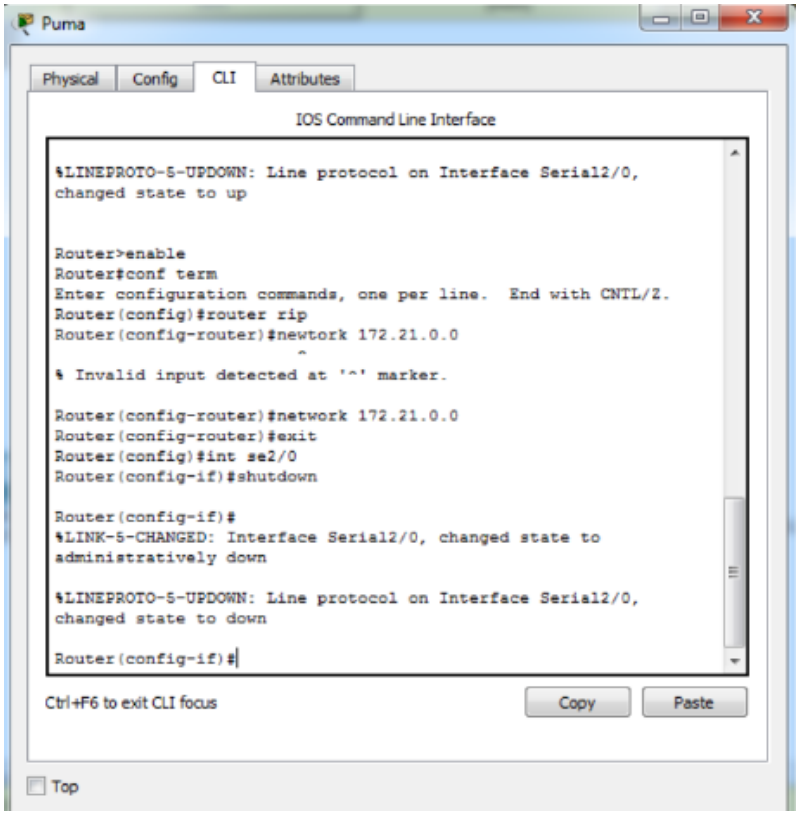
Tugas 5A : Jelaskan secara singkat proses tersebut.

```
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

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
```

Tugas 6A :Tuliskan langkah konfigurasi routing RIP yang dilakukan pada salah satu router(puma atau tiger)

```
Router>en
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)#ex
Router(config)#ex
Router#
%SYS-5-CONFIG_I: Configured from console by console
```

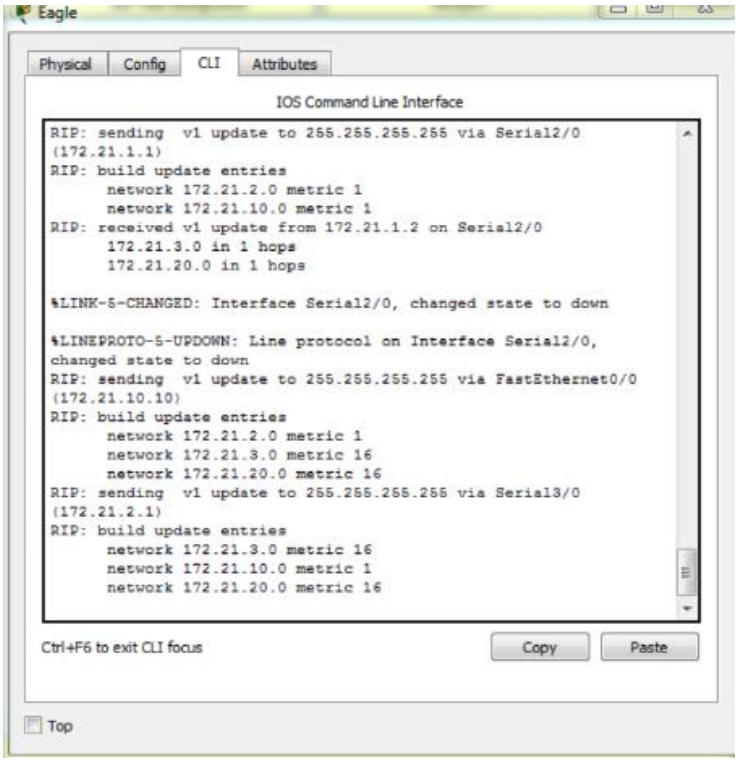
Tugas 6B : Jelaskan secara singkat proses update yang terjadi pada router eagle ketika konfigurasi salah satu router(puma atau tiger) dilakukan. (Perhatikan bagian "RIP: Received updated from 172.21.X.X on SerialX" dan tambahan subnet yang terjadi)



Tugas 6C : Jika alamat jaringan pada segmen leo diubah dari 172.21.100.0/24. Apakah perlu dilakukan perubahan konfigurasi pada setiap router agar PC leo dapat dihubungi (ping) dari PC aries dan virgo? Mengapa demikian?

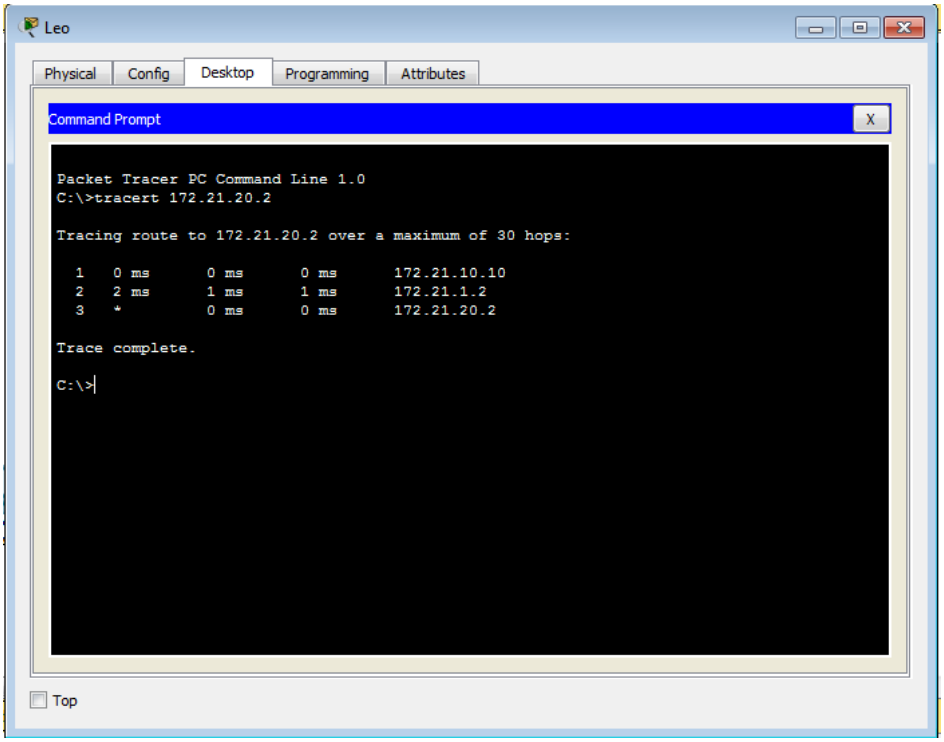
Tidak perlu, karena masih dalam satu jaringan.

Tugas 8A : Jelaskan secara singkat proses update yang terjadi pada router eagle. (Perhatikan bagian "RIP : Received Updated from 172.21.2.3 on Serial1" dan perubahan hops dari subnet 172.21.20.0 yang terjadi)



Tugas 9A : Apakah hasil yang diperoleh berbeda dengan langkah 8 diatas(ketika langkah 8 belum dilakukan)? Jelaskan secara singkat mengapa demikian.

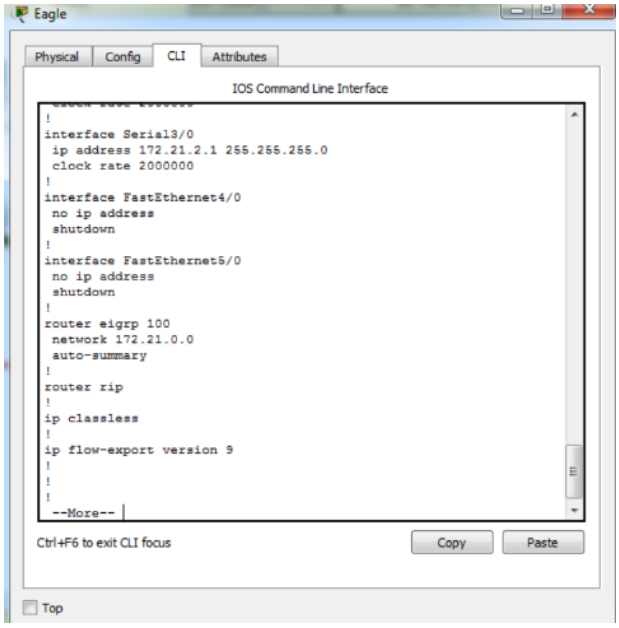
```
C:\>tracert 172.21.20.2

Tracing route to 172.21.20.2 over a maximum of 30 hops:

  1    0 ms      0 ms      0 ms      172.21.10.10
  2    1 ms      2 ms      1 ms      172.21.2.3
  3    0 ms      2 ms      1 ms      172.21.3.2
  4    0 ms      0 ms      0 ms      172.21.20.2

Trace complete.

C:\>
```



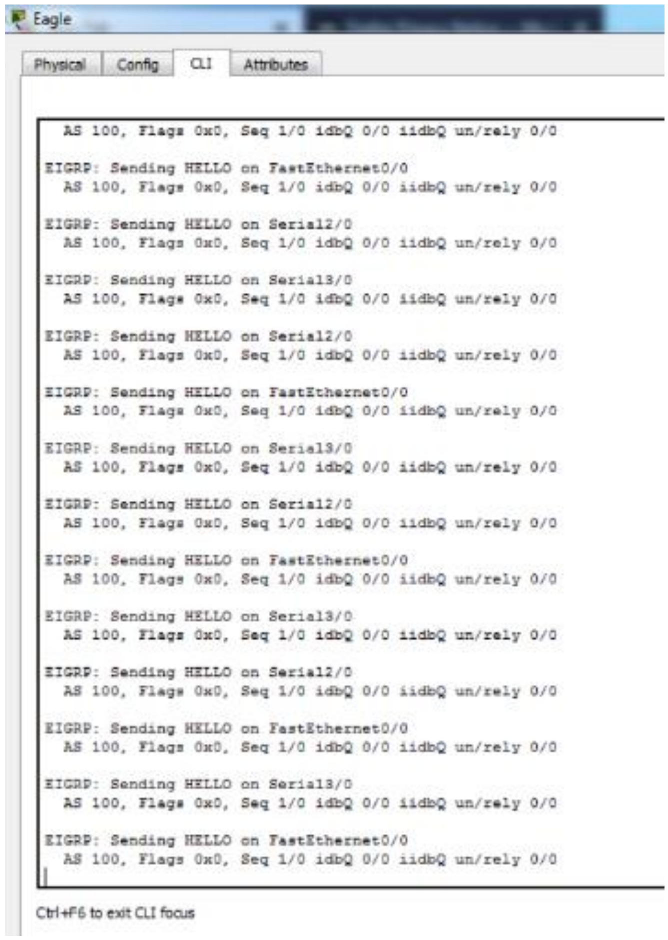
Karena hubungkan sudah di downkan, maka routing RTO karena sudah tidak terhubung.

Kegiatan 3.
EIGRP(Interior Gateaway Routing Protovcol)

- Tugas 4A : Berapa nomor alamat jaringan yang terdaftar pada konfigurasi routing EIGRP?



- Tugas 5A : Jelaskan secara singkat proses tersebut?



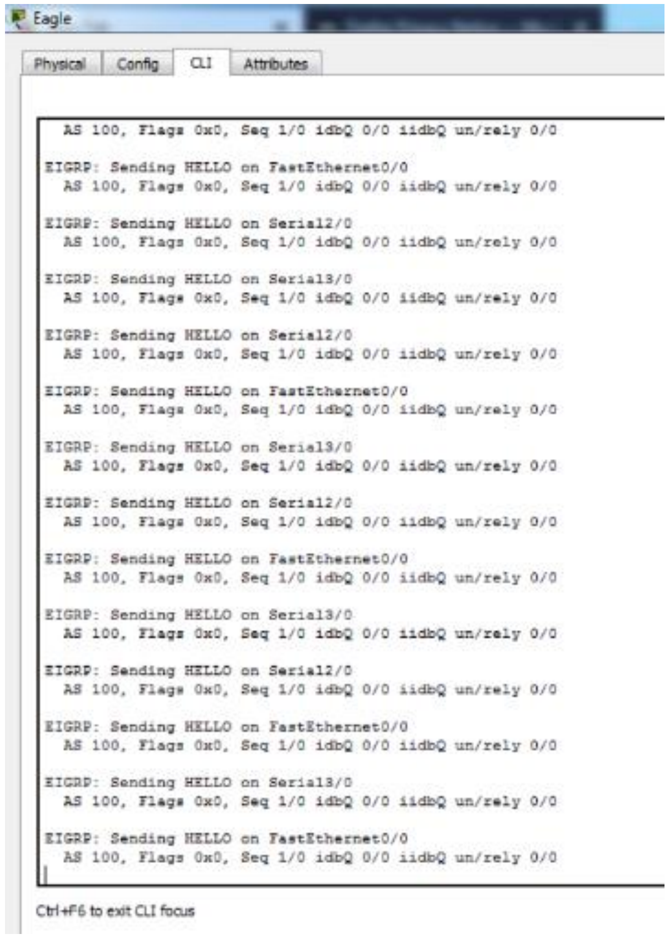

```
  AS 100, Flags 0x0, Seq 1/0 idbQ 0/0 iidbQ un/rely 0/0

EIGRP: Sending HELLO on FastEthernet0/0
  AS 100, Flags 0x0, Seq 1/0 idbQ 0/0 iidbQ un/rely 0/0

EIGRP: Sending HELLO on Serial2/0
  AS 100, Flags 0x0, Seq 1/0 idbQ 0/0 iidbQ un/rely 0/0

EIGRP: Sending HELLO on Serial3/0
  AS 100, Flags 0x0, Seq 1/0 idbQ 0/0 iidbQ un/rely 0/0

EIGRP: Sending HELLO on Serial2/0
  AS 100, Flags 0x0, Seq 1/0 idbQ 0/0 iidbQ un/rely 0/0

EIGRP: Sending HELLO on FastEthernet0/0
  AS 100, Flags 0x0, Seq 1/0 idbQ 0/0 iidbQ un/rely 0/0

EIGRP: Sending HELLO on Serial3/0
  AS 100, Flags 0x0, Seq 1/0 idbQ 0/0 iidbQ un/rely 0/0

EIGRP: Sending HELLO on Serial2/0
  AS 100, Flags 0x0, Seq 1/0 idbQ 0/0 iidbQ un/rely 0/0

EIGRP: Sending HELLO on FastEthernet0/0
  AS 100, Flags 0x0, Seq 1/0 idbQ 0/0 iidbQ un/rely 0/0

EIGRP: Sending HELLO on Serial3/0
  AS 100, Flags 0x0, Seq 1/0 idbQ 0/0 iidbQ un/rely 0/0

EIGRP: Sending HELLO on Serial2/0
  AS 100, Flags 0x0, Seq 1/0 idbQ 0/0 iidbQ un/rely 0/0

EIGRP: Sending HELLO on FastEthernet0/0
  AS 100, Flags 0x0, Seq 1/0 idbQ 0/0 iidbQ un/rely 0/0

EIGRP: Sending HELLO on Serial3/0
  AS 100, Flags 0x0, Seq 1/0 idbQ 0/0 iidbQ un/rely 0/0

EIGRP: Sending HELLO on FastEthernet0/0
  AS 100, Flags 0x0, Seq 1/0 idbQ 0/0 iidbQ un/rely 0/0
```

Ctrl+F6 to exit CLI focus

- Tugas 6A : Jelaskan secara singkat proses tersebut

```
Router>en
Router#conf term
Enter configuration commands, one per line.  End with CNTL/Z.
Router(config)#router eigrp 100
Router(config-router)#network 172.21.0.0
Router(config-router)#
%DUAL-5-NBRCHANGE: IP-EIGRP 100: Neighbor 172.21.3.2 (Serial3/0)
is up: new adjacency

%DUAL-5-NBRCHANGE: IP-EIGRP 100: Neighbor 172.21.2.1 (Serial2/0)
is up: new adjacency
```

- Tugas 7A : Tuliskan langkah konfigurasi routing EIGRP yang dilakukan pada salah satu router(puma atau tiger).



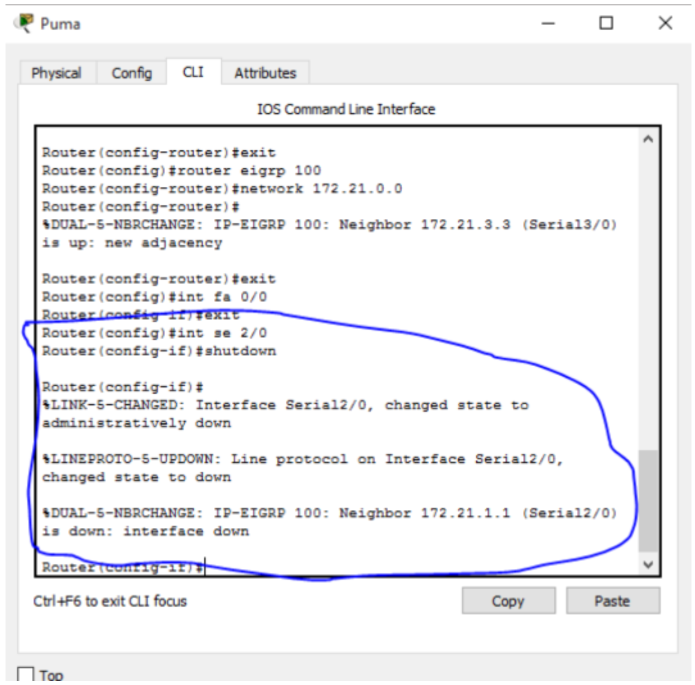
- Tugas 7B : Jelaskan secara singkat proses update yang terjadi pada router eagle ketika konfigurasi salah satu router(puma atau tiger) dilakukan. (perhatikan bagian "EIGRP : Received updated from 172.21.X.X on SerialX" dan tambahan subnet yang terjadi)

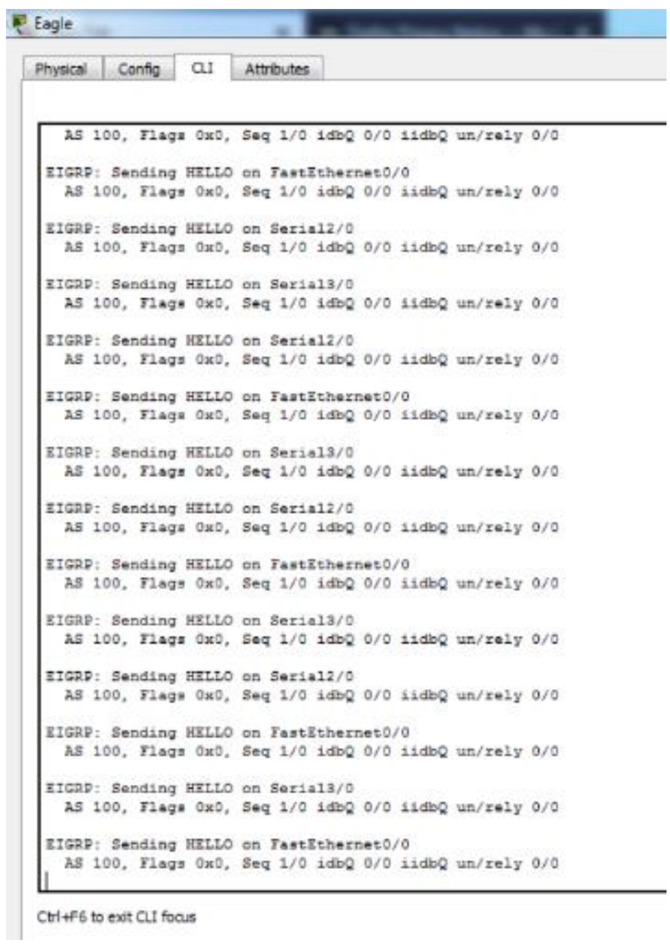
Setelah router puma di konfigurasi maka di router eagle otomatis meng-update kemudian mengirim ACK hingga proses selesai.

- Tugas 7C : Jika alamat jaringan pada segmen leo diubah dari 172.21.10.0/24 menjadi 172.21.100.0/24. Apakah perlu dilakukan perubahan konfigurasi pada setiap router agar PC leo dapat dihubungi(ping) dari PC aries dan virgo? Mengapa demikian?

Tidak perlu karna dalam jaringan yang sama.

- Tugas 9A : Jelaskan secara singkat proses update yang terjadi pada router eagle.(perhatikan bagian"EIGRP : Received updated from 172.21.2.3 on Serial1")

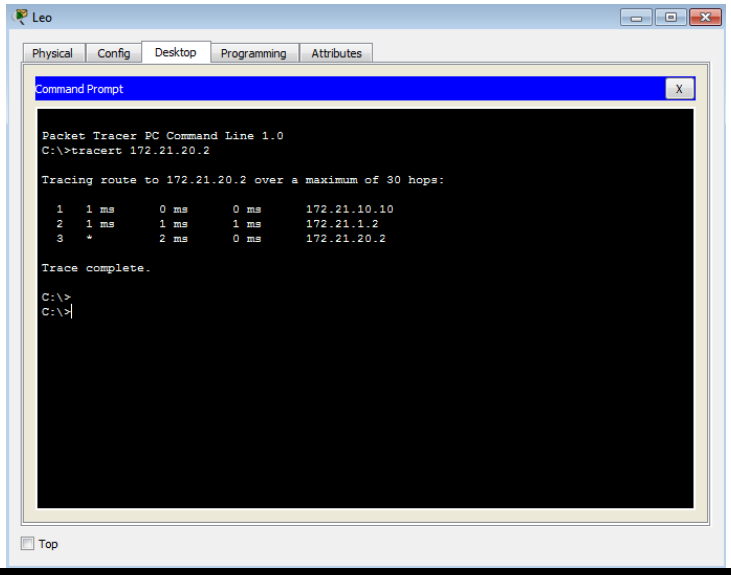




Setelah pemutusan pada router puma dan eagle pada router puma, maka akan ada

notifikasi dan update pada router eagle.

- Tugas 10A : Apakah hasil yang diperoleh berbeda dengan langkah 8 diatas(ketika langkah 9 belum dilakukan)? Jelaskan secara singkat mengapa demikian.



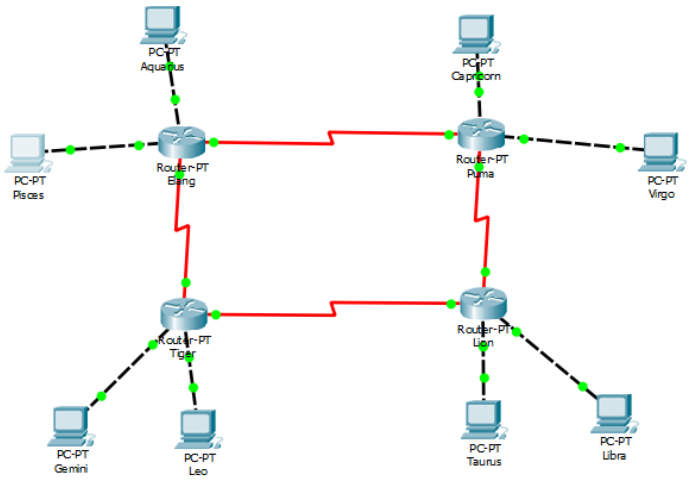

```
C:\>tracert 172.21.20.2

Tracing route to 172.21.20.2 over a maximum of 30 hops:

  1    0 ms      0 ms      0 ms      172.21.10.10
  2    1 ms      1 ms      0 ms      172.21.2.3
  3    1 ms      2 ms      0 ms      172.21.3.2
  4    1 ms      0 ms      0 ms      172.21.20.2

Trace complete.

C:\>
```

D. TUGAS MODUL 5

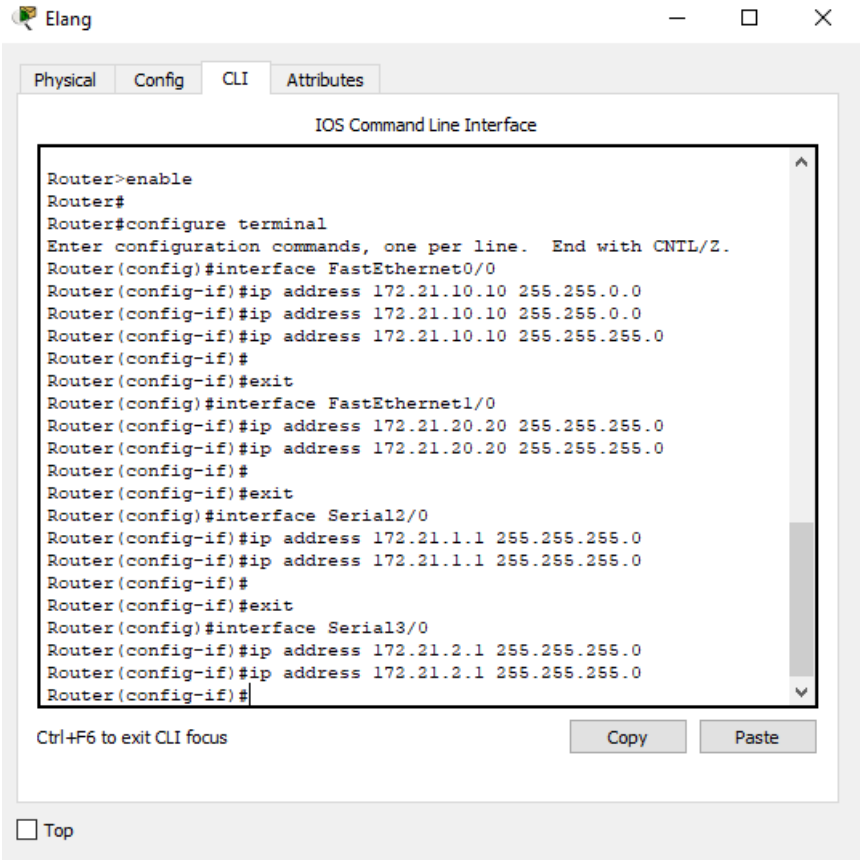
1. Buatlah konfigurasi static routing dan dinamic routing tang terdiri dari 4 router dan setiap router terdiri dari 2 pc. Dengan ip address sesuai kebutuhan!.

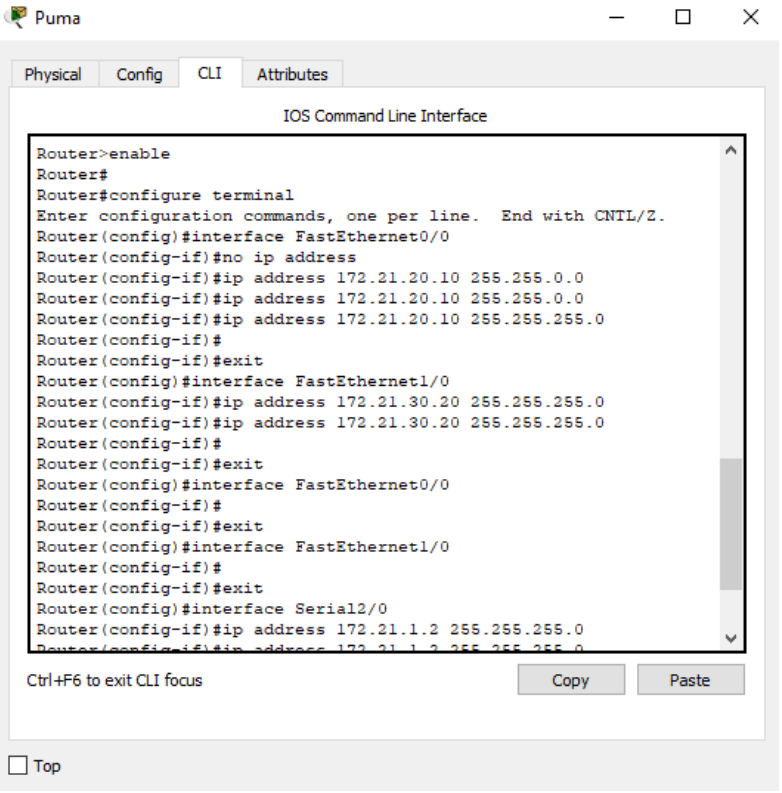
Static Routing.

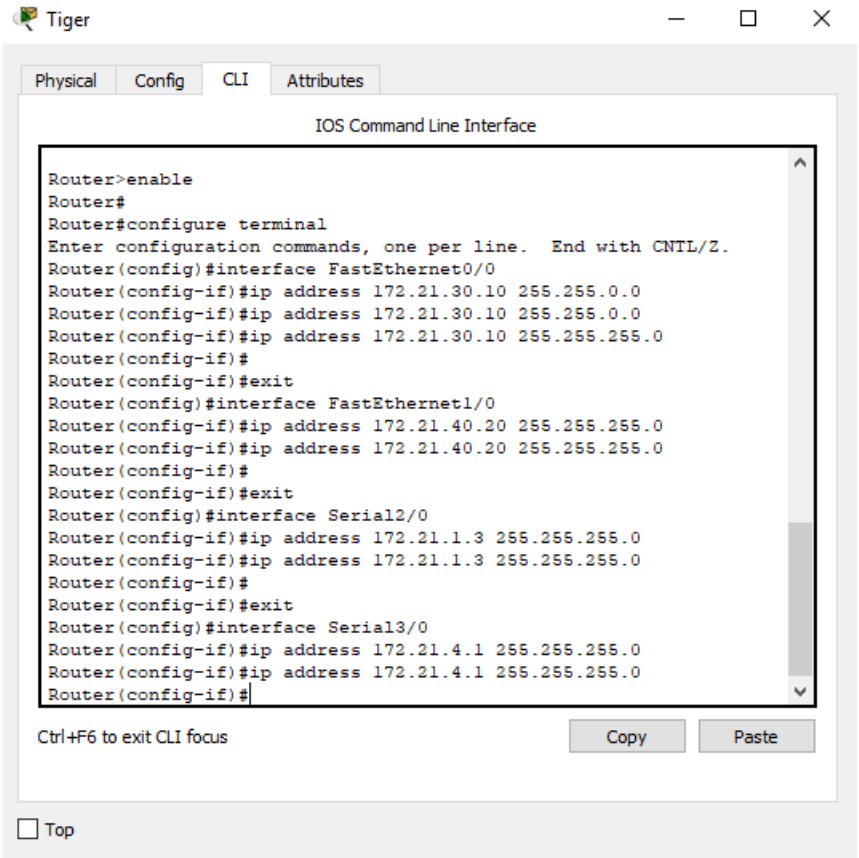
1. Gambar Topologi

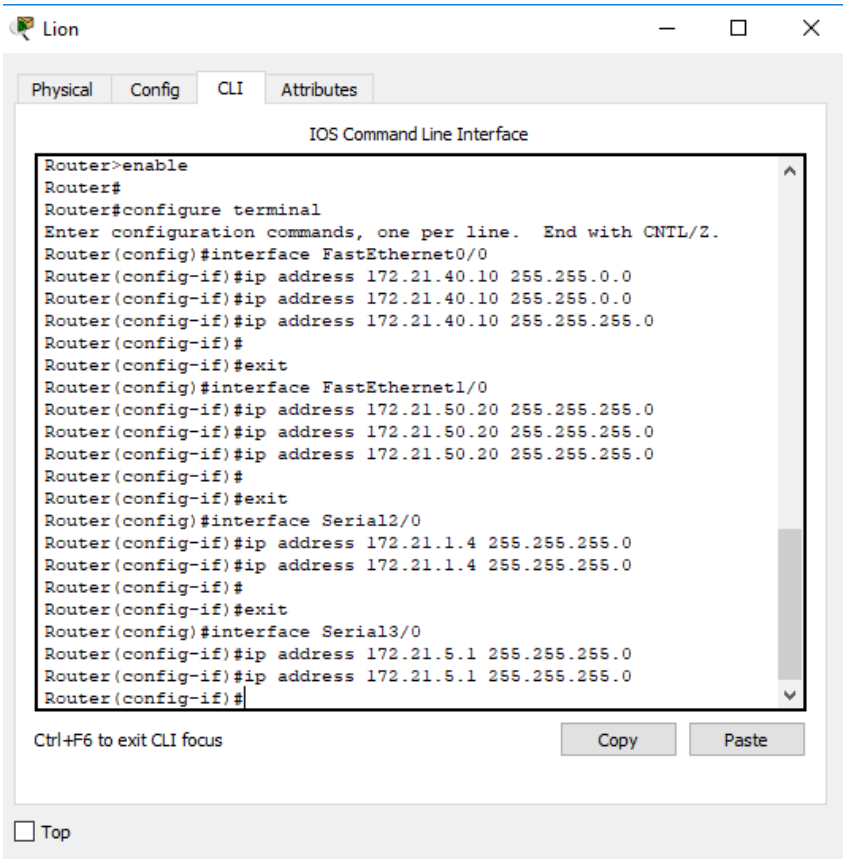


2. Konfigurasi masing masing router.

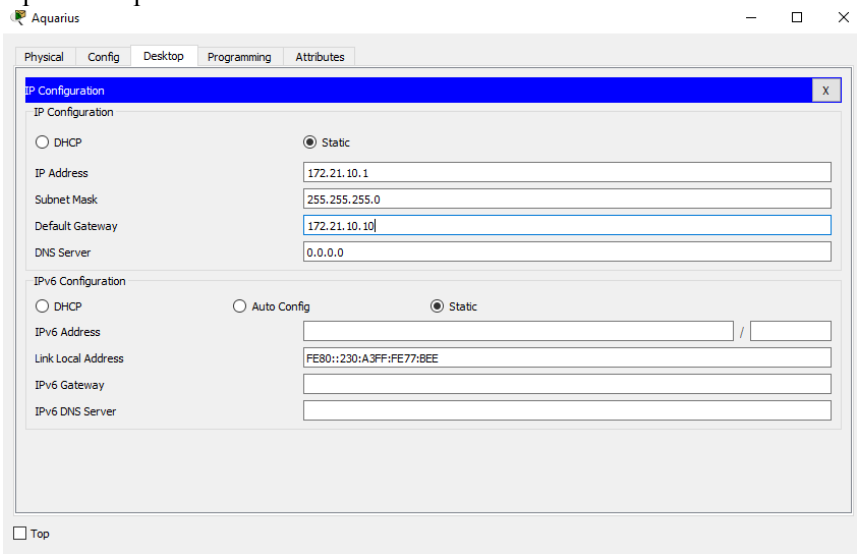



Puma
Physical
Config
CLI
Attributes
IOS Command Line Interface
Router>enable
Router#
Router#configure terminal
Enter configuration commands, one per line. End with CNTL/Z.
Router(config)#interface FastEthernet0/0
Router(config-if)#no ip address
Router(config-if)#ip address 172.21.20.10 255.255.0.0
Router(config-if)#ip address 172.21.20.10 255.255.0.0
Router(config-if)#ip address 172.21.20.10 255.255.255.0
Router(config-if)#
Router(config-if)#exit
Router(config)#interface FastEthernet1/0
Router(config-if)#ip address 172.21.30.20 255.255.255.0
Router(config-if)#ip address 172.21.30.20 255.255.255.0
Router(config-if)#
Router(config-if)#exit
Router(config)#interface FastEthernet0/0
Router(config-if)#
Router(config-if)#exit
Router(config)#interface FastEthernet1/0
Router(config-if)#
Router(config-if)#exit
Router(config)#interface Serial2/0
Router(config-if)#ip address 172.21.1.2 255.255.255.0
Ctrl+F6 to exit CLI focus
Copy
Paste
Top


Tiger
Physical
Config
CLI
Attributes
IOS Command Line Interface
Router>enable
Router#
Router#configure terminal
Enter configuration commands, one per line. End with CNTL/Z.
Router(config)#interface FastEthernet0/0
Router(config-if)#ip address 172.21.30.10 255.255.0.0
Router(config-if)#ip address 172.21.30.10 255.255.0.0
Router(config-if)#ip address 172.21.30.10 255.255.255.0
Router(config-if)#
Router(config-if)#exit
Router(config)#interface FastEthernet1/0
Router(config-if)#ip address 172.21.40.20 255.255.255.0
Router(config-if)#ip address 172.21.40.20 255.255.255.0
Router(config-if)#
Router(config-if)#exit
Router(config)#interface Serial2/0
Router(config-if)#ip address 172.21.1.3 255.255.255.0
Router(config-if)#ip address 172.21.1.3 255.255.255.0
Router(config-if)#
Router(config-if)#exit
Router(config)#interface Serial3/0
Router(config-if)#ip address 172.21.4.1 255.255.255.0
Router(config-if)#ip address 172.21.4.1 255.255.255.0
Router(config-if)#
Ctrl+F6 to exit CLI focus
Copy
Paste
Top



3. Konfigurasi pada setiap PC.



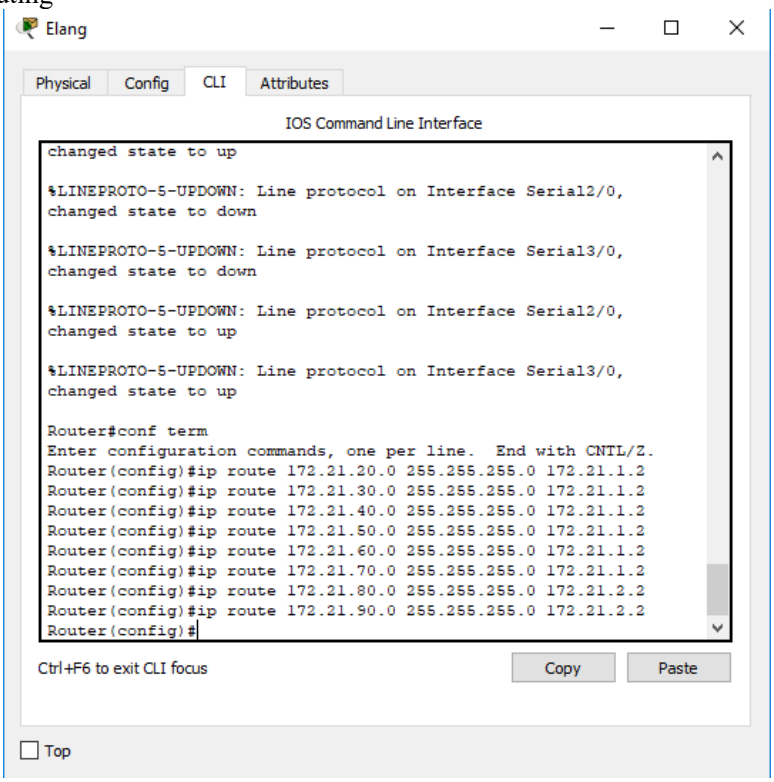
4. Cek koneksi
dari PC Aquarius ke Router Elang.

```
C:\>ping 172.21.10.10

Pinging 172.21.10.10 with 32 bytes of data:

Reply from 172.21.10.10: bytes=32 time=108ms TTL=255
Reply from 172.21.10.10: bytes=32 time<1ms TTL=255
Reply from 172.21.10.10: bytes=32 time<1ms TTL=255
Reply from 172.21.10.10: bytes=32 time<1ms TTL=255

Ping statistics for 172.21.10.10:
    Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),
Approximate round trip times in milli-seconds:
    Minimum = 0ms, Maximum = 108ms, Average = 27ms
```

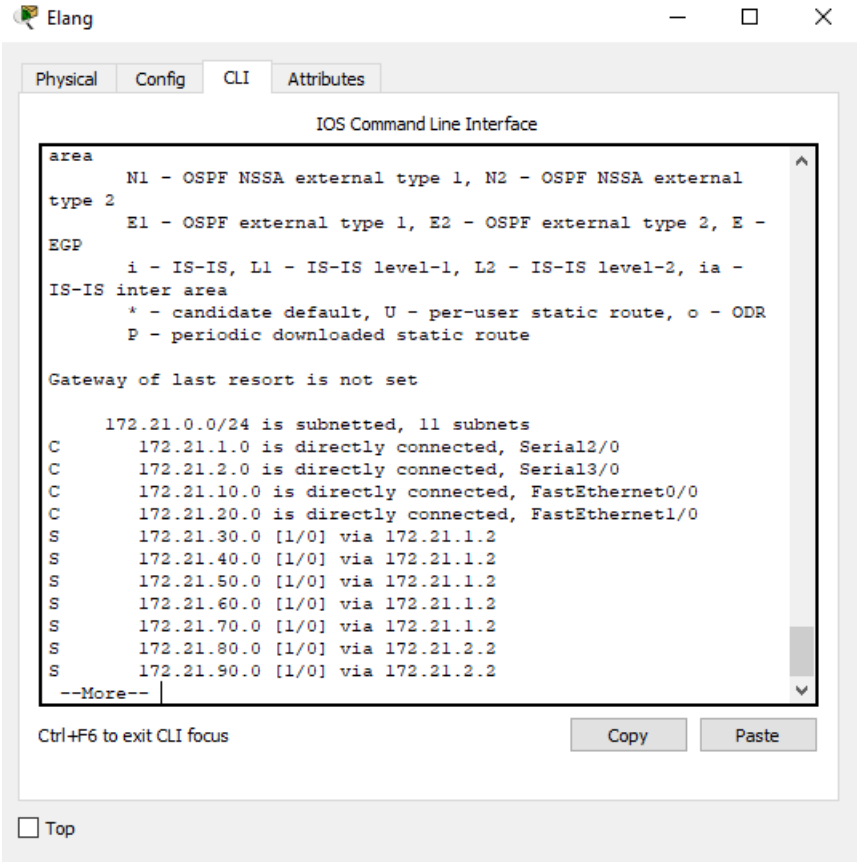
dari Router Elang ke Router Puma.

```
Router#ping 172.21.1.2

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 =
1/3/11 ms
```

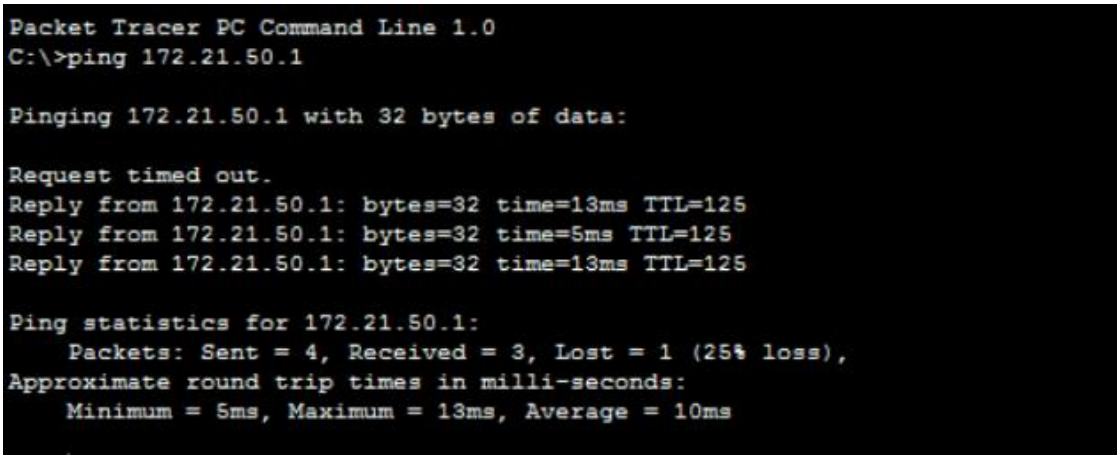
5. Melakukan routing



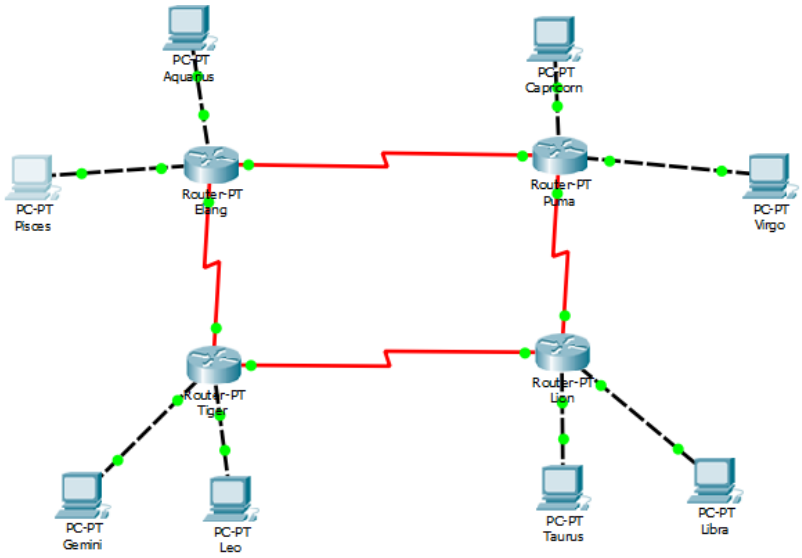
6. Show ip route



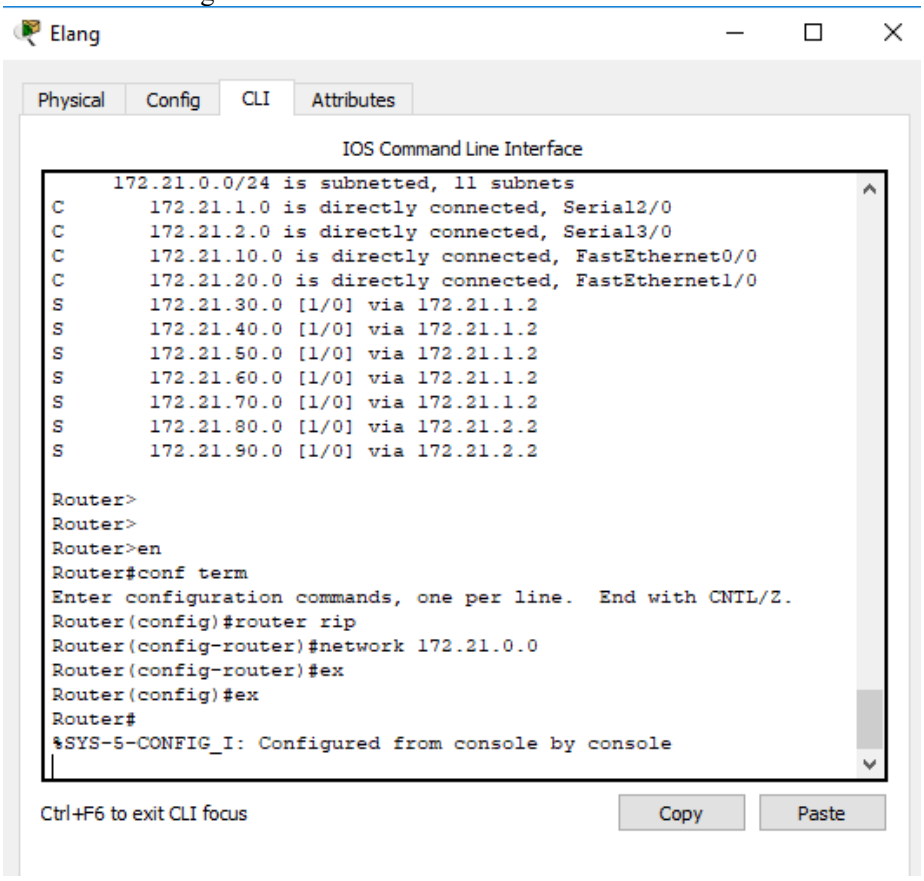
7. PING PC Pisces ke Libra



DinamicRouting Tang.



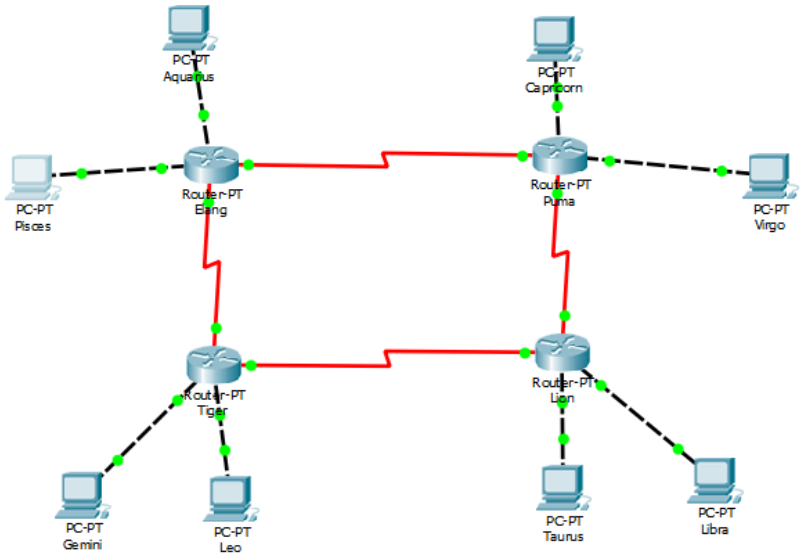
1. Konfigurasi IP dan routing.



2. Melakukan PING PC Gemini ke Capcricorn.

```
C:\>ping 172.21.30.1

Pinging 172.21.30.1 with 32 bytes of data:

Request timed out.
Reply from 172.21.30.1: bytes=32 time=2ms TTL=125
Reply from 172.21.30.1: bytes=32 time=3ms TTL=123
Reply from 172.21.30.1: bytes=32 time=7ms TTL=123

Ping statistics for 172.21.30.1:
    Packets: Sent = 4, Received = 3, Lost = 1 (25% loss),
Approximate round trip times in milli-seconds:
    Minimum = 2ms, Maximum = 7ms, Average = 4ms
```

EIGRP



1. Konfigurasi IP dan routing

```
Router#conf term
Enter configuration commands, one per line.  End with CNTL/Z.
Router(config)#router eigrp 100
Router(config-router)#network 172.21.0.0
Router(config-router)#
```

2. Melakukan PING PC Libra ke PC Pisces