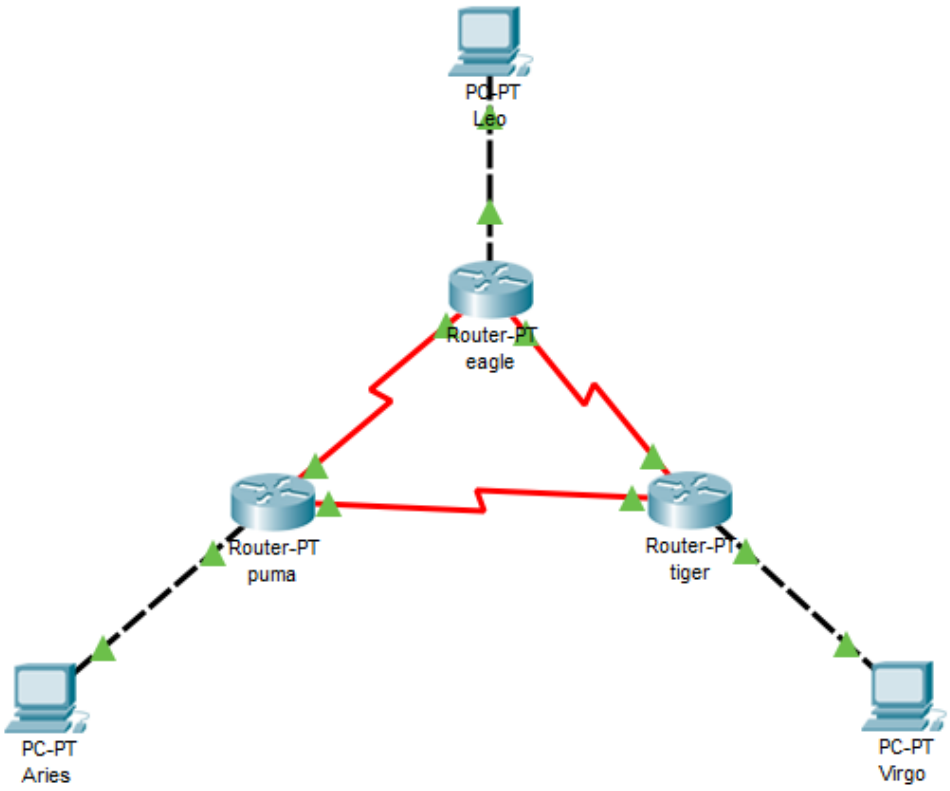
Nama : SRI HAJIATI

Nim : L200170103

Kelas : C

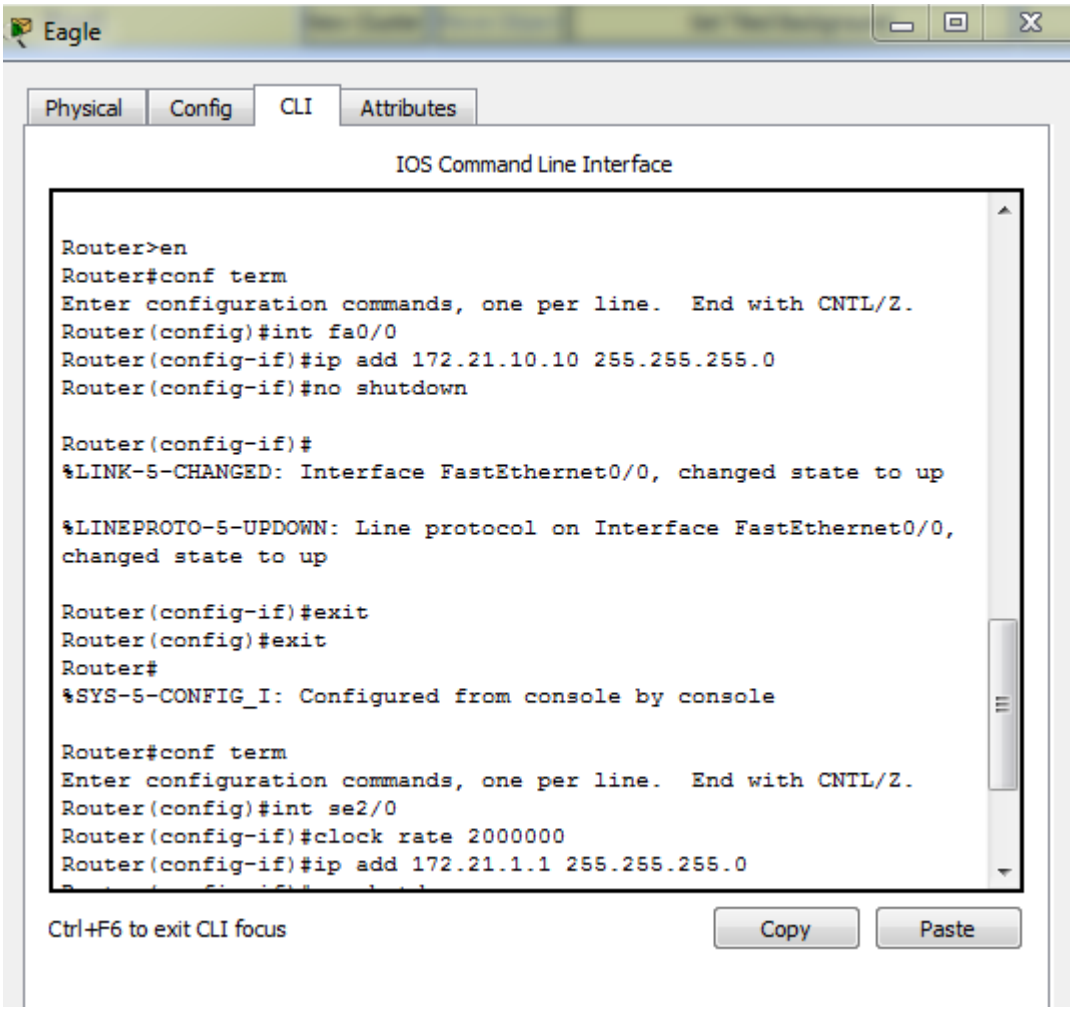
Modul : 7

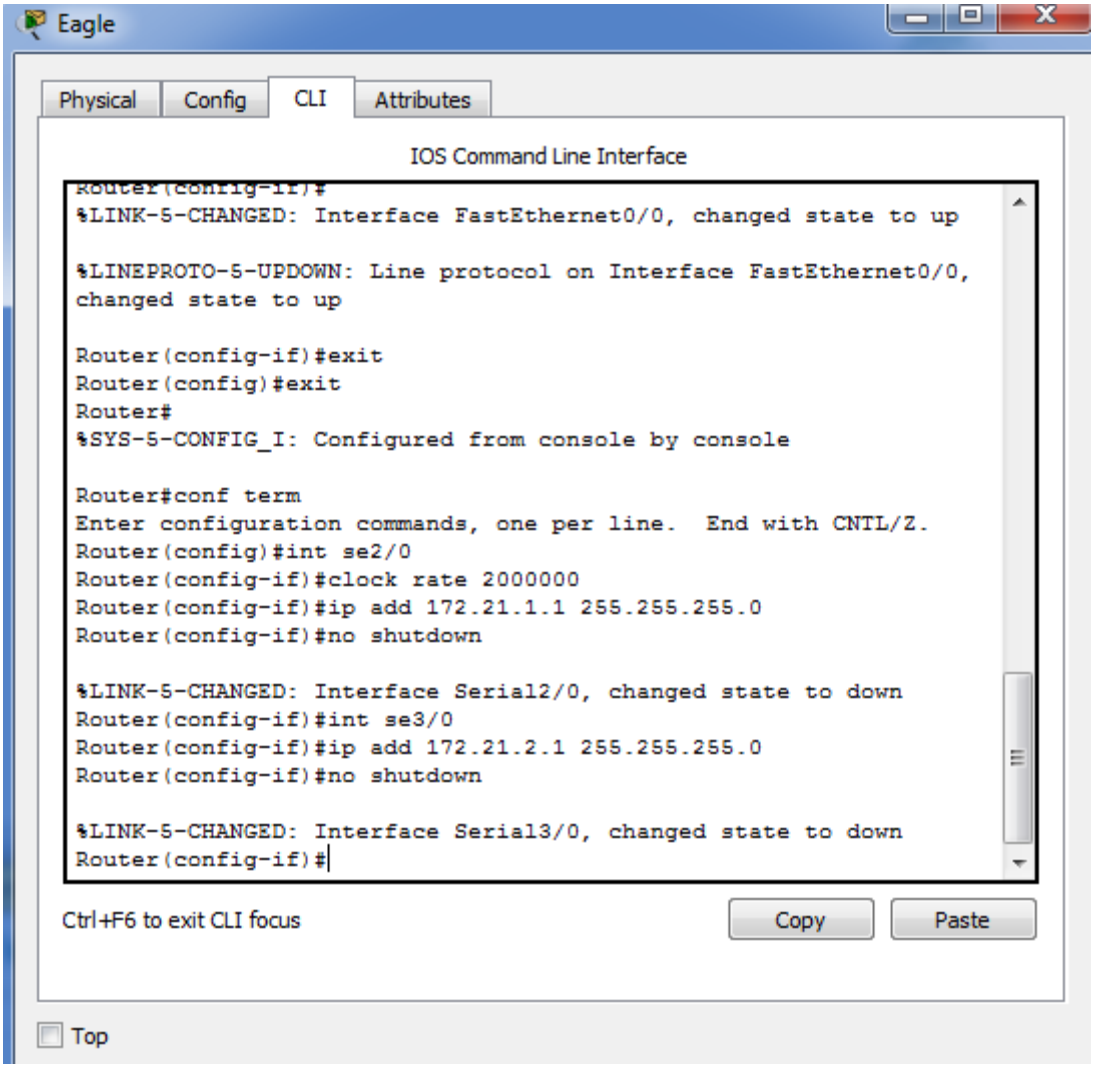
1. Topologi 1(Static routing)



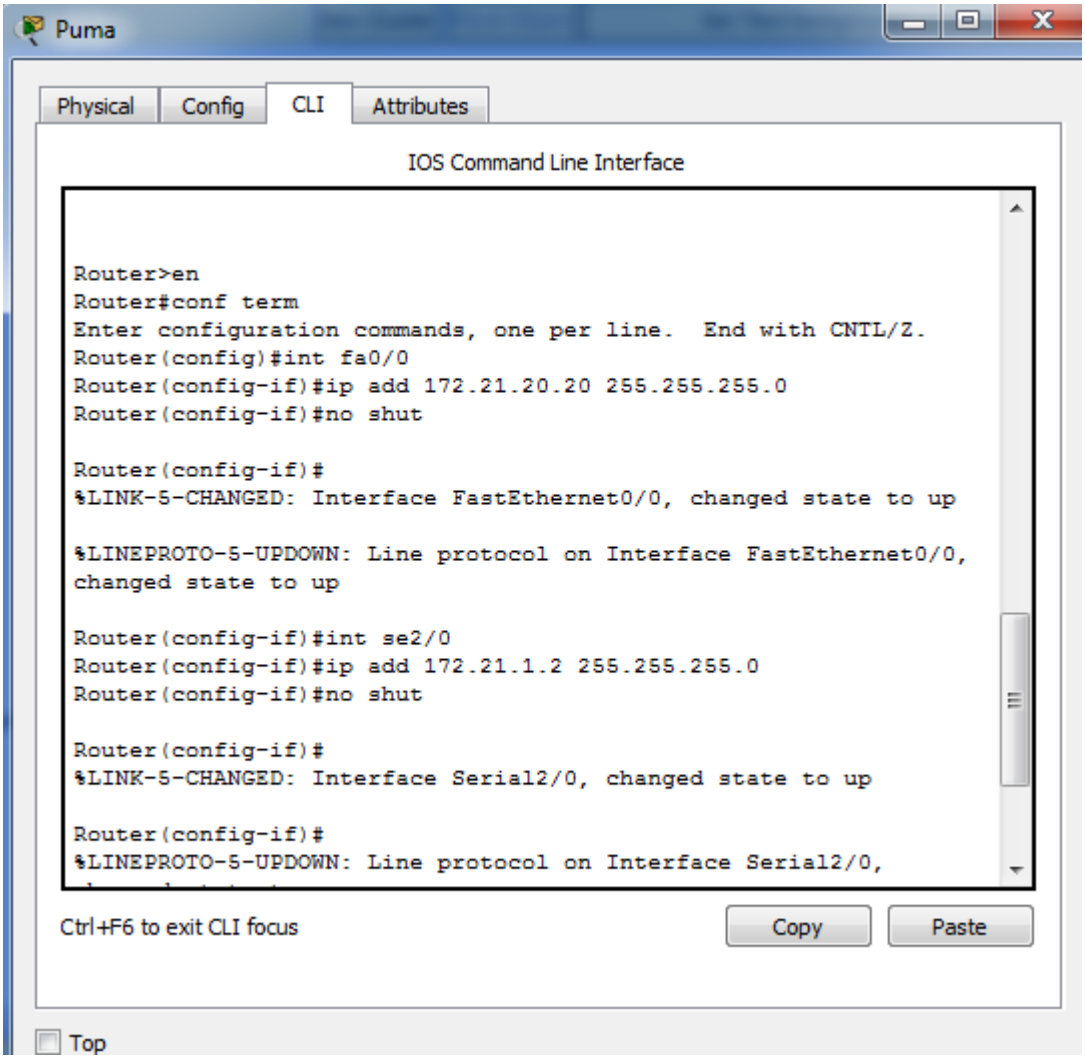
2. konfigurasi masing masing interface pada setiap router dengan alamat ip berikut

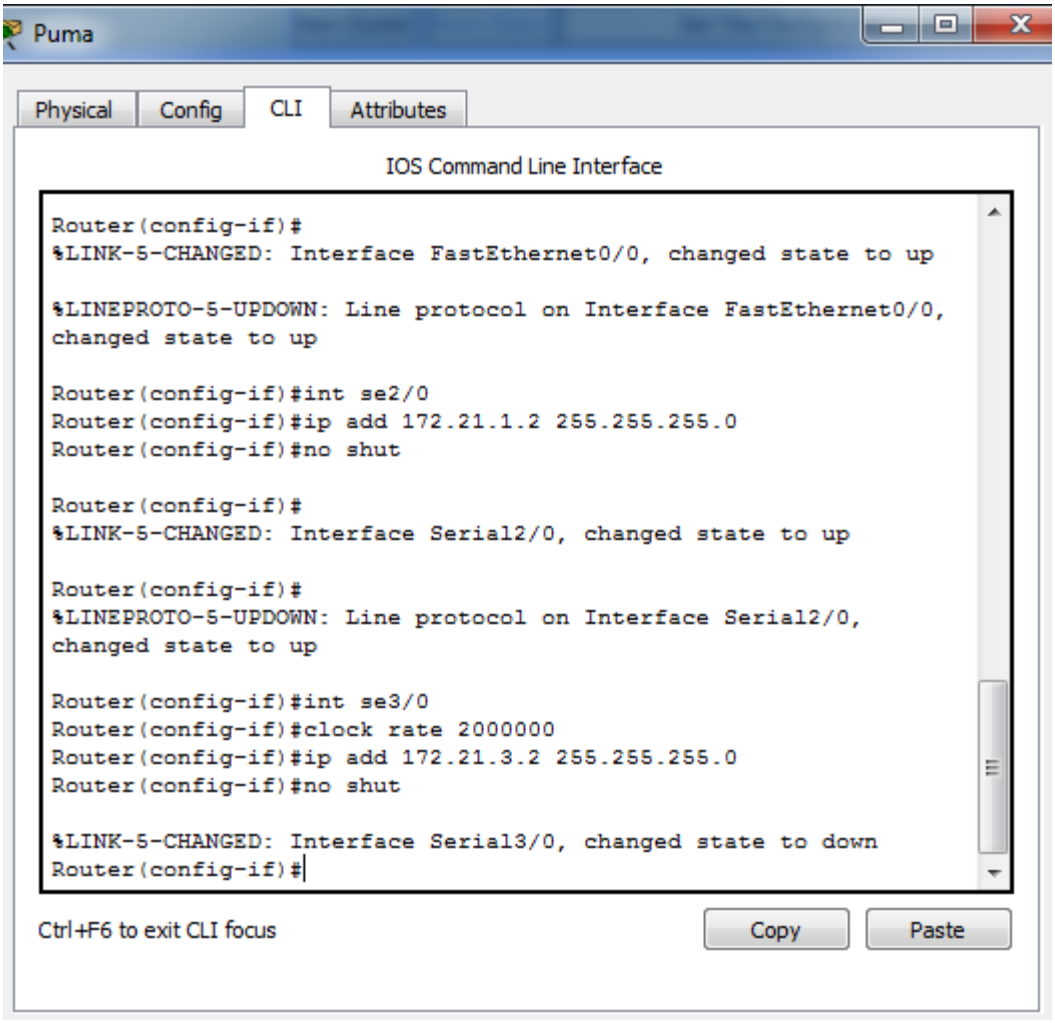
a. Eagle


Eagle
Physical
Config
CLI
Attributes
IOS Command Line Interface
Router>en
Router#conf term
Enter configuration commands, one per line. End with CNTL/Z.
Router(config)#int fa0/0
Router(config-if)#ip add 172.21.10.10 255.255.255.0
Router(config-if)#no shutdown
Router(config-if)#
%LINK-5-CHANGED: Interface FastEthernet0/0, changed state to up
%LINEPROTO-5-UPDOWN: Line protocol on Interface FastEthernet0/0,
changed state to up
Router(config-if)#exit
Router(config)#exit
Router#
%SYS-5-CONFIG_I: Configured from console by console
Router#conf term
Enter configuration commands, one per line. End with CNTL/Z.
Router(config)#int se2/0
Router(config-if)#clock rate 2000000
Router(config-if)#ip add 172.21.1.1 255.255.255.0
Ctrl+F6 to exit CLI focus
Copy
Paste

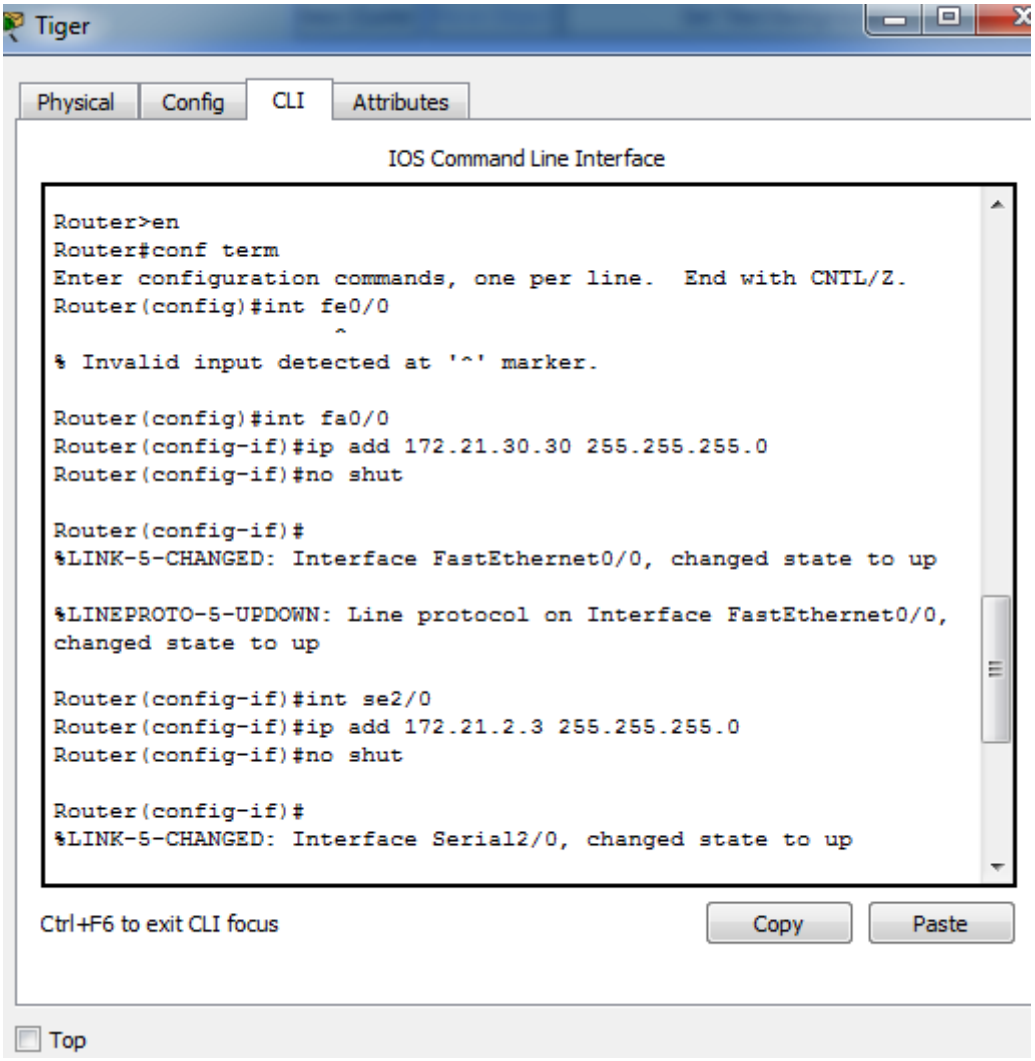

Eagle
Physical
Config
CLI
Attributes
IOS Command Line Interface
%LINK-5-CHANGED: Interface FastEthernet0/0, changed state to up
%LINEPROTO-5-UPDOWN: Line protocol on Interface FastEthernet0/0, changed state to up
Router(config-if)#exit
Router(config)#exit
Router#
%SYS-5-CONFIG_I: Configured from console by console
Router#conf term
Enter configuration commands, one per line. End with CNTL/Z.
Router(config)#int se2/0
Router(config-if)#clock rate 2000000
Router(config-if)#ip add 172.21.1.1 255.255.255.0
Router(config-if)#no shutdown
%LINK-5-CHANGED: Interface Serial2/0, changed state to down
Router(config-if)#int se3/0
Router(config-if)#ip add 172.21.2.1 255.255.255.0
Router(config-if)#no shutdown
%LINK-5-CHANGED: Interface Serial3/0, changed state to down
Router(config-if)#
Ctrl+F6 to exit CLI focus
Copy
Paste
Top

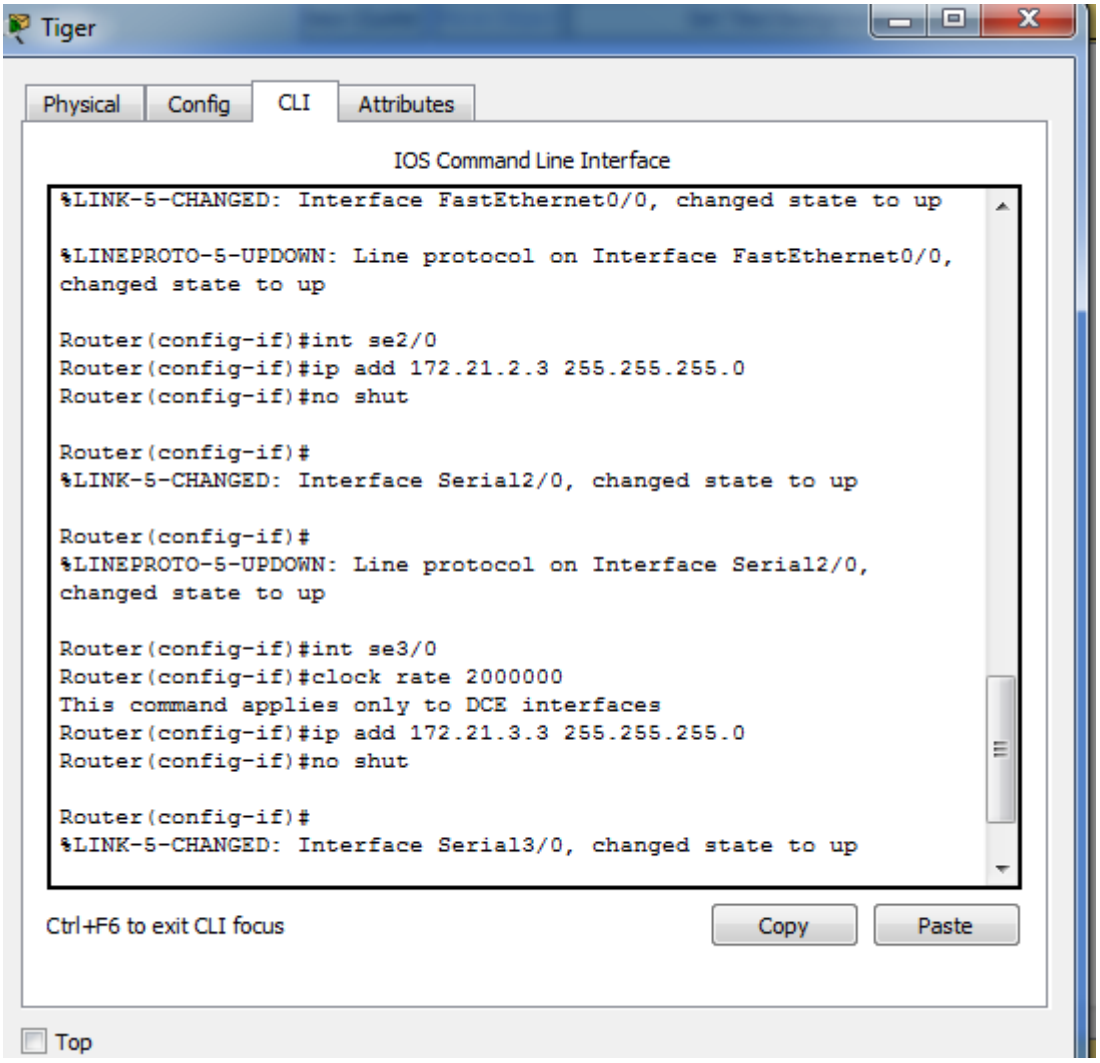
b. puma


Puma
Physical
Config
CLI
Attributes
IOS Command Line Interface
Router>en
Router#conf term
Enter configuration commands, one per line. End with CNTL/Z.
Router(config)#int fa0/0
Router(config-if)#ip add 172.21.20.20 255.255.255.0
Router(config-if)#no shut
Router(config-if)#
%LINK-5-CHANGED: Interface FastEthernet0/0, changed state to up
%LINEPROTO-5-UPDOWN: Line protocol on Interface FastEthernet0/0,
changed state to up
Router(config-if)#int se2/0
Router(config-if)#ip add 172.21.1.2 255.255.255.0
Router(config-if)#no shut
Router(config-if)#
%LINK-5-CHANGED: Interface Serial2/0, changed state to up
Router(config-if)#
%LINEPROTO-5-UPDOWN: Line protocol on Interface Serial2/0,
Ctrl+F6 to exit CLI focus
Copy
Paste
Top


Puma
Physical
Config
CLI
Attributes
IOS Command Line Interface
Router(config-if)#
%LINK-5-CHANGED: Interface FastEthernet0/0, changed state to up
%LINEPROTO-5-UPDOWN: Line protocol on Interface FastEthernet0/0,
changed state to up
Router(config-if)#int se2/0
Router(config-if)#ip add 172.21.1.2 255.255.255.0
Router(config-if)#no shut
Router(config-if)#
%LINK-5-CHANGED: Interface Serial2/0, changed state to up
Router(config-if)#
%LINEPROTO-5-UPDOWN: Line protocol on Interface Serial2/0,
changed state to up
Router(config-if)#int se3/0
Router(config-if)#clock rate 2000000
Router(config-if)#ip add 172.21.3.2 255.255.255.0
Router(config-if)#no shut
%LINK-5-CHANGED: Interface Serial3/0, changed state to down
Router(config-if)#
Ctrl+F6 to exit CLI focus
Copy
Paste

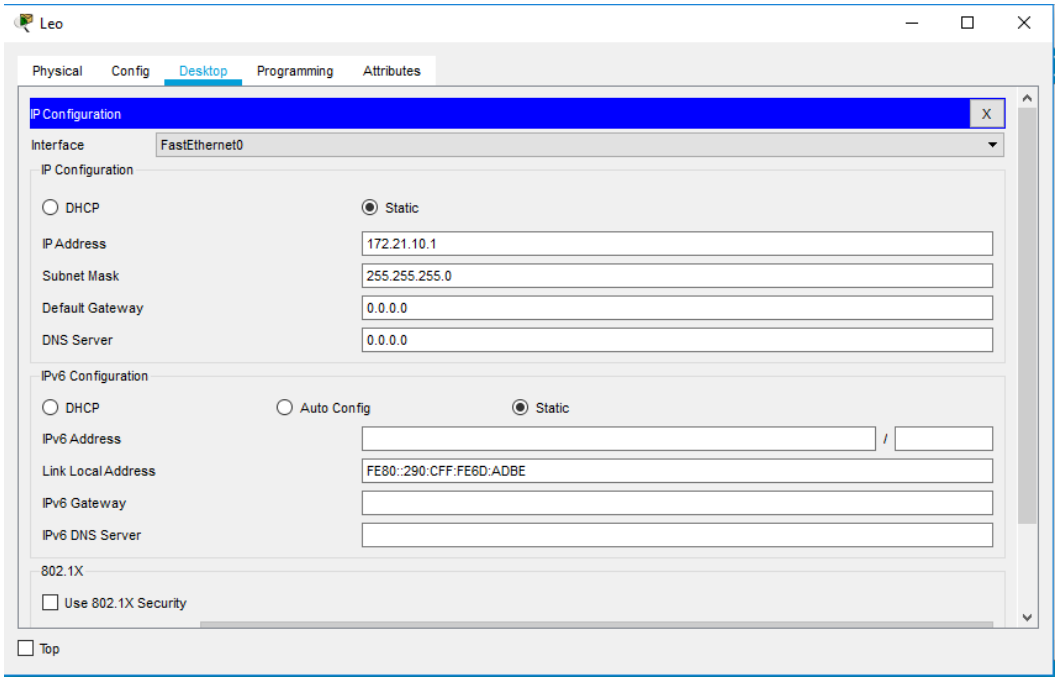
c. tiger


Tiger
Physical
Config
CLI
Attributes
IOS Command Line Interface
Router>en
Router#conf term
Enter configuration commands, one per line. End with CNTL/Z.
Router(config)#int fe0/0
                ^
% Invalid input detected at '^' marker.
Router(config)#int fa0/0
Router(config-if)#ip add 172.21.30.30 255.255.255.0
Router(config-if)#no shut
Router(config-if)#
%LINK-5-CHANGED: Interface FastEthernet0/0, changed state to up
%LINEPROTO-5-UPDOWN: Line protocol on Interface FastEthernet0/0,
changed state to up
Router(config-if)#int se2/0
Router(config-if)#ip add 172.21.2.3 255.255.255.0
Router(config-if)#no shut
Router(config-if)#
%LINK-5-CHANGED: Interface Serial2/0, changed state to up
Ctrl+F6 to exit CLI focus
Copy
Paste
Top

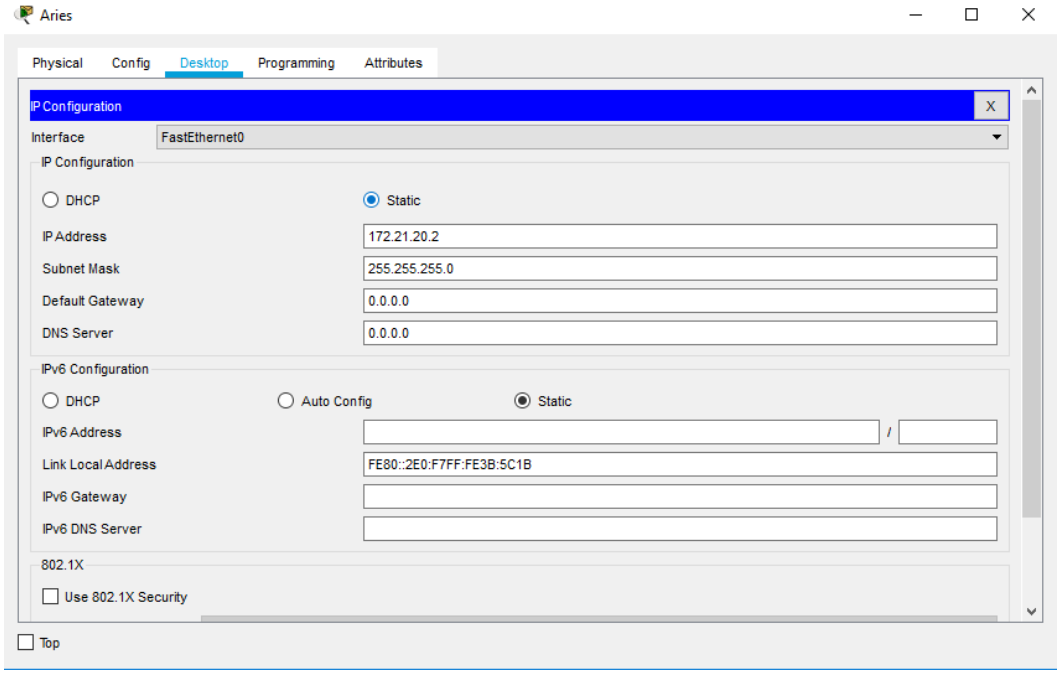


3. konfigurasi masing- masing PC dengan nama dan alamat Ip :

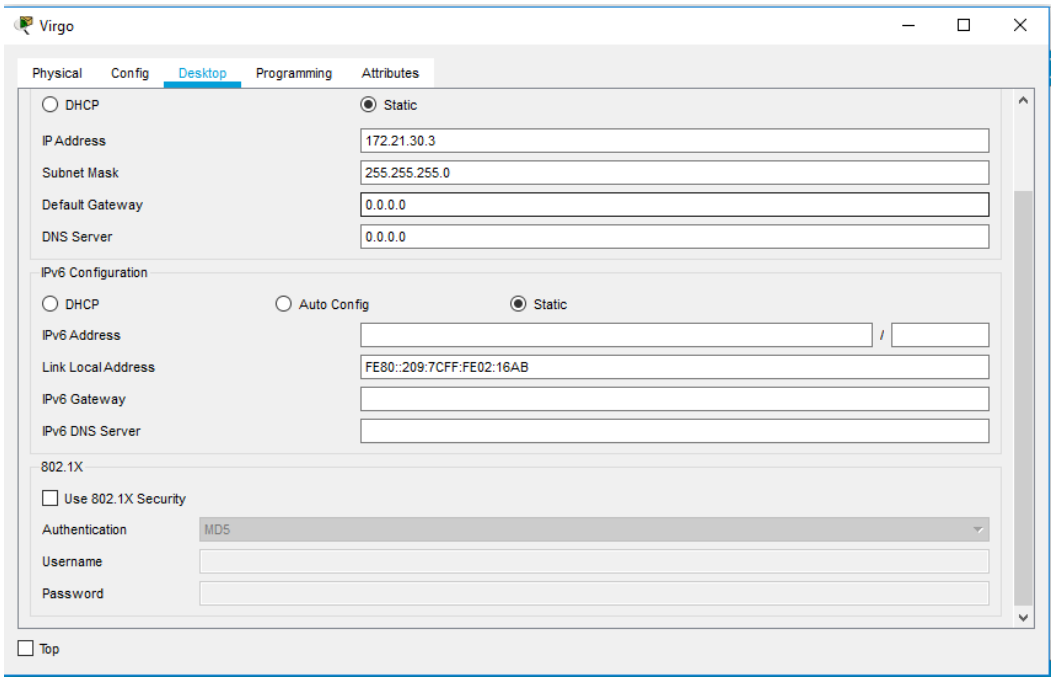
a. PC Leo



b. PC Aries

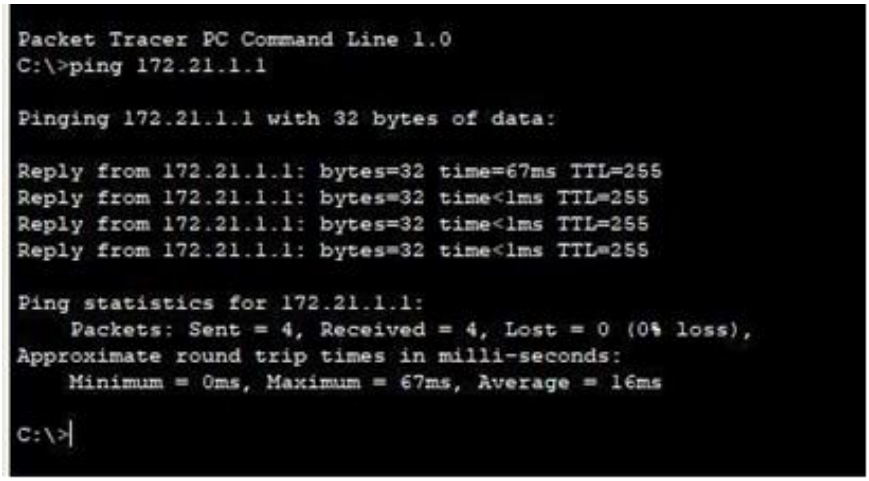


c. PC Virgo



5. Langkah pengujian untuk memastikan kesesuaian konfigurasi

a. ping PC leo ke router eagle



b. ping PC aries ke router puma

```
Packet Tracer PC Command Line 1.0
C:\>ping 172.21.1.2

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 = 0ms, Average = 0ms

C:\>
```

c. ping PC virgo ke router tiger

```
Packet Tracer PC Command Line 1.0
C:\>ping 172.21.3.3

Pinging 172.21.3.3 with 32 bytes of data:

Reply from 172.21.3.3: bytes=32 time<1ms TTL=255
Reply from 172.21.3.3: bytes=32 time<1ms TTL=255
Reply from 172.21.3.3: bytes=32 time<1ms TTL=255
Reply from 172.21.3.3: bytes=32 time<1ms TTL=255

Ping statistics for 172.21.3.3:
    Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),
Approximate round trip times in milli-seconds:
    Minimum = 0ms, Maximum = 0ms, Average = 0ms

C:\>
```

d. ping dari router eagle ke router puma

```
Router>enable
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 = 1/12/55 ms

Router#
```

e. ping dari roter eagle ke router Tiger

```
Router>enable
Router#ping 172.21.2.3

Type escape sequence to abort.
Sending 5, 100-byte ICMP Echos to 172.21.2.3, timeout is 2 seconds:
!!!!!
Success rate is 100 percent (5/5), round-trip min/avg/max = 1/2/5 ms

Router#
```

f. ping dari router puma ke router tiger

```
Router>enable
Router#ping 172.21.3.3

Type escape sequence to abort.
Sending 5, 100-byte ICMP Echos to 172.21.3.3, timeout is 2 seconds:
!!!!!
Success rate is 100 percent (5/5), round-trip min/avg/max = 1/1/4 ms

Router#
```

6. Show Route Table pada masing-masing Router

a. Eagle

```
Router>enable
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, 3 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

Router#
```

b. puma

```
Router>enable
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, 3 subnets
C       172.21.1.0 is directly connected, Serial2/0
C       172.21.3.0 is directly connected, Serial3/0
C       172.21.20.0 is directly connected, FastEthernet0/0

Router#
```

c. tiger

```
Router>enable
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, 3 subnets
C       172.21.2.0 is directly connected, Serial2/0
C       172.21.3.0 is directly connected, Serial3/0
C       172.21.30.0 is directly connected, FastEthernet0/0

Router#
```

7. Proses ping dari router eagle ke alamat interface e0 router puma

```
Router>enable
Router#ping 172.21.20.20

Type escape sequence to abort.
Sending 5, 100-byte ICMP Echos to 172.21.20.20, timeout is 2 seconds:
.....
Success rate is 0 percent (0/5)

Router#
```

8. Proses tracert dari PC Leo ke PC Aries

```
C:\>tracert 172.21.20.2

Tracing route to 172.21.20.2 over a maximum of 30 hops:

  1    1 ms      0 ms      0 ms      172.21.10.10
  2    0 ms      *         0 ms      172.21.10.10
  3    *         0 ms      *         Request timed out.
  4    0 ms      *         0 ms      172.21.10.10
  5    *         0 ms      *         Request timed out.
  6    0 ms      *         0 ms      172.21.10.10
  7    *         0 ms      *         Request timed out.
  8    0 ms
Control-C
^C
C:\>
C:\>
```

9. Proses tracert dari PC Leo ke interface Router Eagle.

```
C:\>tracert 172.21.1.1

Tracing route to 172.21.1.1 over a maximum of 30 hops:

  1    1 ms      0 ms      0 ms      172.21.1.1

Trace complete.
```

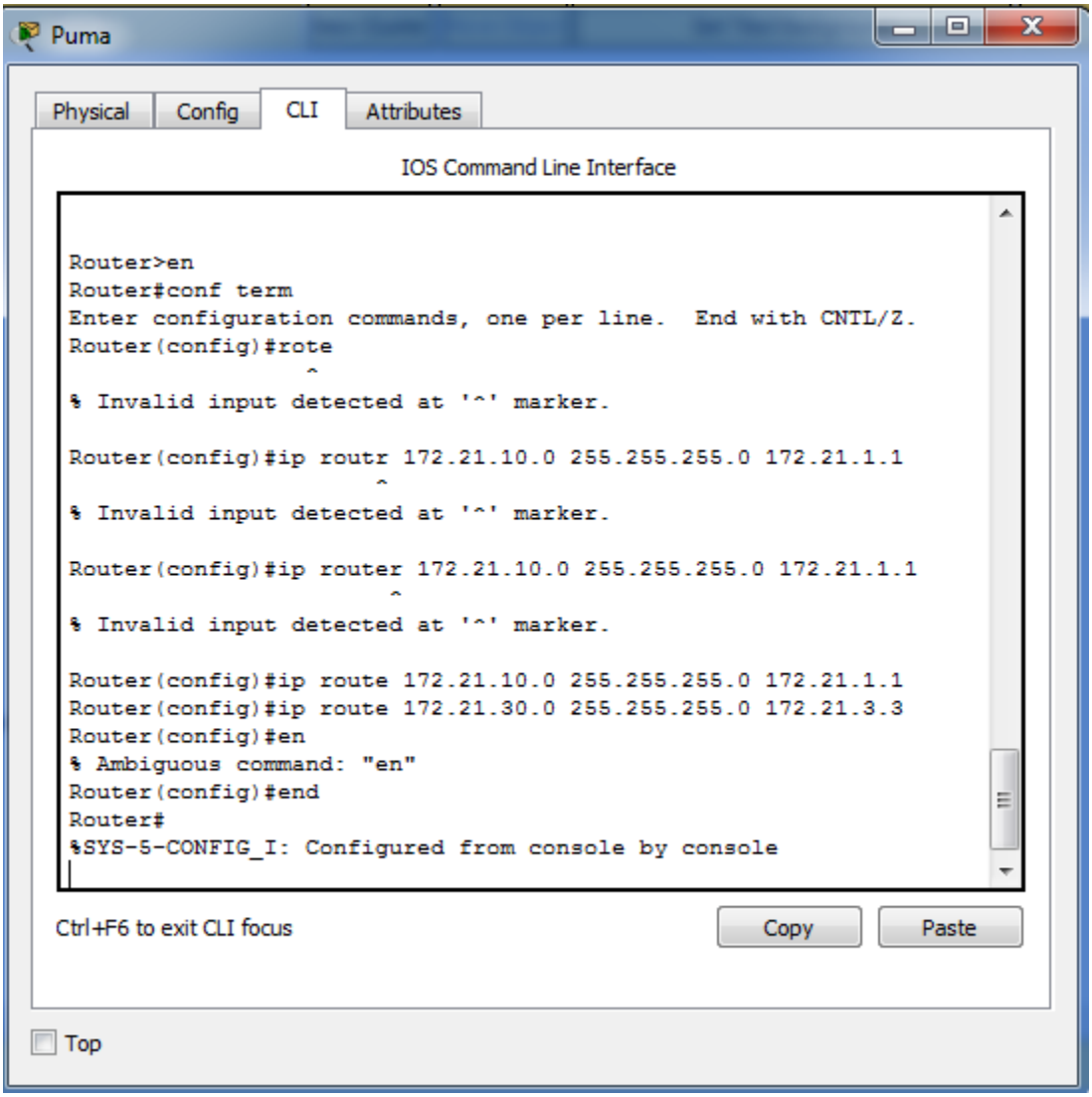
10. menambahkan route table pada setiap router

a. eagle

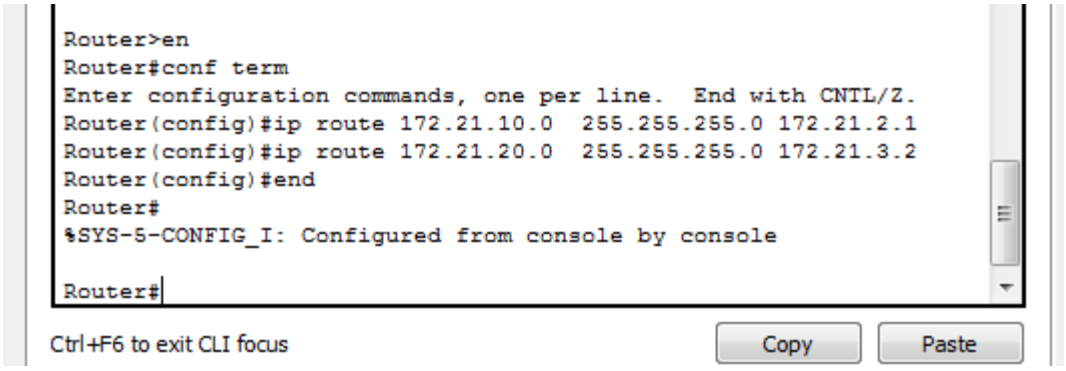
```
Router>en
Router#conf term
Enter configuration commands, one per line.  End with CNTL/Z.
Router(config)#ip route 172.21.20.0 255.255.255.0 172.21.1.2
Router(config)#ip route 172.21.30.0 255.255.255.0 172.21.2.3
Router(config)#end
Router#
%SYS-5-CONFIG_I: Configured from console by console
```

Ctrl+F6 to exit CLI focus Copy Paste

b. Puma



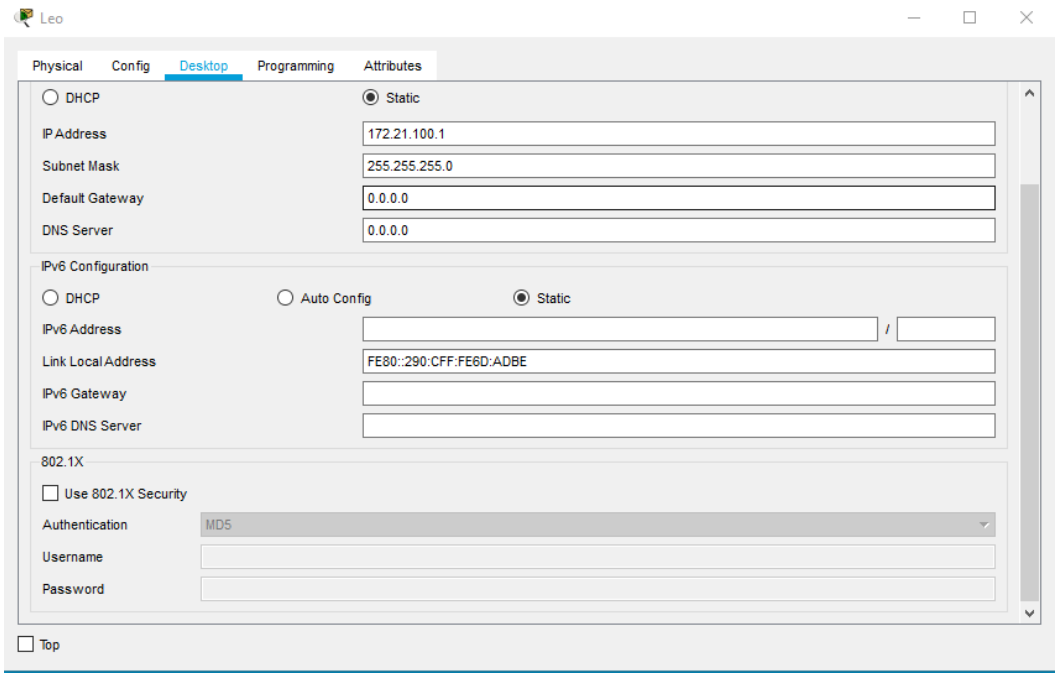
c. tiger



11. Melakukan Ping dan Tracer dari PC Leo ke PC Aries.

```
C:\>ping 172.21.20.2

Pinging 172.21.20.2 with 32 bytes of data:

Reply from 172.21.20.2: bytes=32 time=4ms TTL=126
Reply from 172.21.20.2: bytes=32 time=14ms TTL=126
Reply from 172.21.20.2: bytes=32 time=2ms TTL=126
Reply from 172.21.20.2: bytes=32 time=1ms TTL=126

Ping statistics for 172.21.20.2:
    Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),
Approximate round trip times in milli-seconds:
    Minimum = 1ms, Maximum = 14ms, Average = 5ms

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    4 ms      3 ms      0 ms      172.21.1.2
  3    0 ms      0 ms      1 ms      172.21.20.2

Trace complete.
```

12. mengubah IPPC leo diubah menjadi 172.21.100.0/24



- Mengubah Konfigurasi IP pada Router Eagle.

```
Router>enable
Router#config term
Enter configuration commands, one per line.  End with CNTL/Z.
Router(config)#int fa0/0
Router(config-if)#ip address 172.21.100.0 255.255.255.0
Bad mask /24 for address 172.21.100.0
Router(config-if)#no shutdown
Router(config-if)#
Router(config-if)#int fa0/0
Router(config-if)#ip address 172.21.100.10 255.255.255.0
Router(config-if)#no shutdown
Router(config-if)#
```

- Menambah Konfigurasi Router Puma.

```
Router>enable
Router#config term
Enter configuration commands, one per line.  End with CNTL/Z.
Router(config)#ip route 172.21.100.0 255.255.255.0 172.21.2.1
Router(config)#ip route 172.21.100.0 255.255.255.0 172.21.1.1
Router(config)#
```

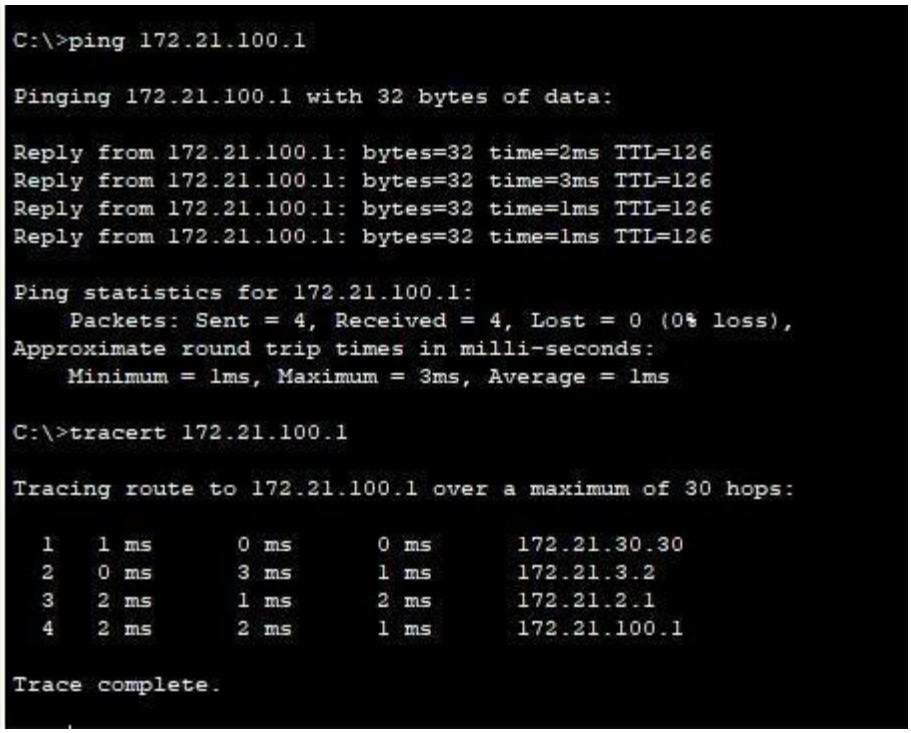
- Menambah Konfigurasi Router Tiger.

```
Router>enable
Router#config term
Enter configuration commands, one per line.  End with CNTL/Z.
Router(config)#ip route 172.21.100.0 255.255.255.0 172.21.2.1
```

- Melakukan Ping dan Trace dari PC Aries kePC Leo.

```
C:\>ping 172.21.100.1

Pinging 172.21.100.1 with 32 bytes of data:

Reply from 172.21.100.1: bytes=32 time=4ms TTL=126
Reply from 172.21.100.1: bytes=32 time=2ms TTL=126
Reply from 172.21.100.1: bytes=32 time=4ms TTL=126
Reply from 172.21.100.1: bytes=32 time=1ms TTL=126

Ping statistics for 172.21.100.1:
    Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),
Approximate round trip times in milli-seconds:
    Minimum = 1ms, Maximum = 4ms, Average = 2ms

C:\>tracert 172.21.100.1

Tracing route to 172.21.100.1 over a maximum of 30 hops:

  1    0 ms      0 ms      0 ms      172.21.20.20
  2    1 ms      0 ms      2 ms      172.21.1.1
  3    1 ms      1 ms      3 ms      172.21.100.1

Trace complete.
```

- Melakukan Ping dan Trace dari PC Virgo ke PC Leo.



```
C:\>ping 172.21.100.1

Pinging 172.21.100.1 with 32 bytes of data:

Reply from 172.21.100.1: bytes=32 time=2ms TTL=126
Reply from 172.21.100.1: bytes=32 time=3ms TTL=126
Reply from 172.21.100.1: bytes=32 time=1ms TTL=126
Reply from 172.21.100.1: bytes=32 time=1ms TTL=126

Ping statistics for 172.21.100.1:
    Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),
Approximate round trip times in milli-seconds:
    Minimum = 1ms, Maximum = 3ms, Average = 1ms

C:\>tracert 172.21.100.1

Tracing route to 172.21.100.1 over a maximum of 30 hops:

  1    1 ms      0 ms      0 ms      172.21.30.30
  2    0 ms      3 ms      1 ms      172.21.3.2
  3    2 ms      1 ms      2 ms      172.21.2.1
  4    2 ms      2 ms      1 ms      172.21.100.1

Trace complete.
```