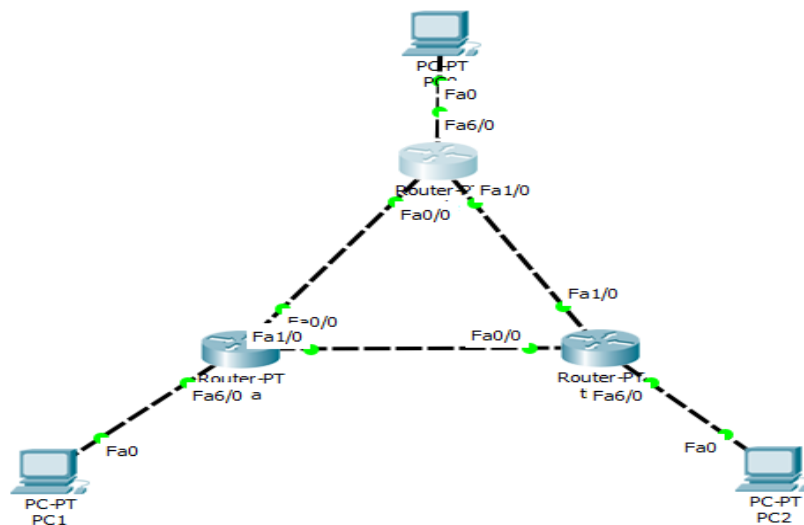


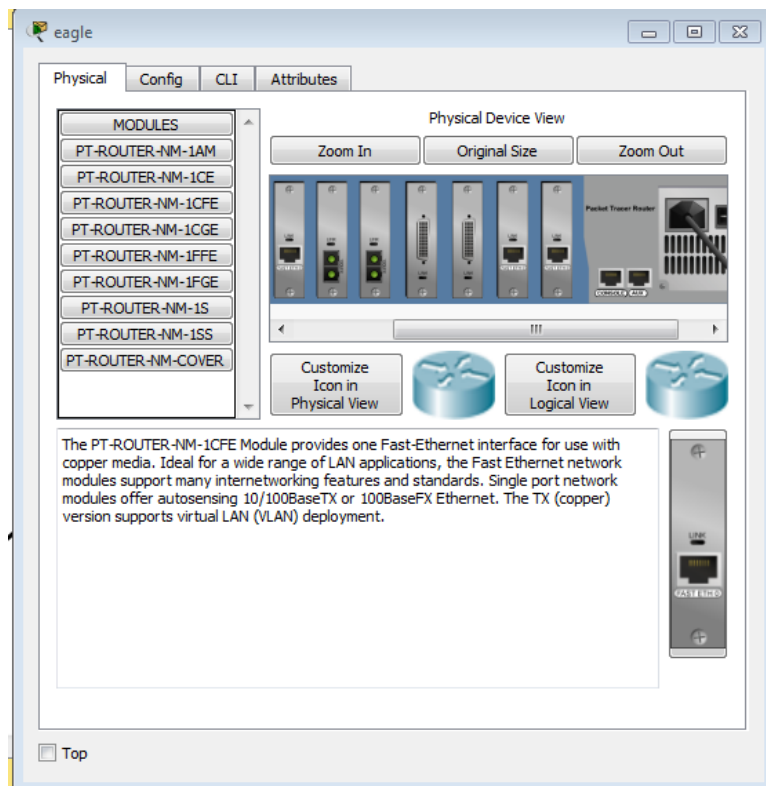
Nama : Riris Agriela Savitri  
NIM : L200170029  
Kelas : A

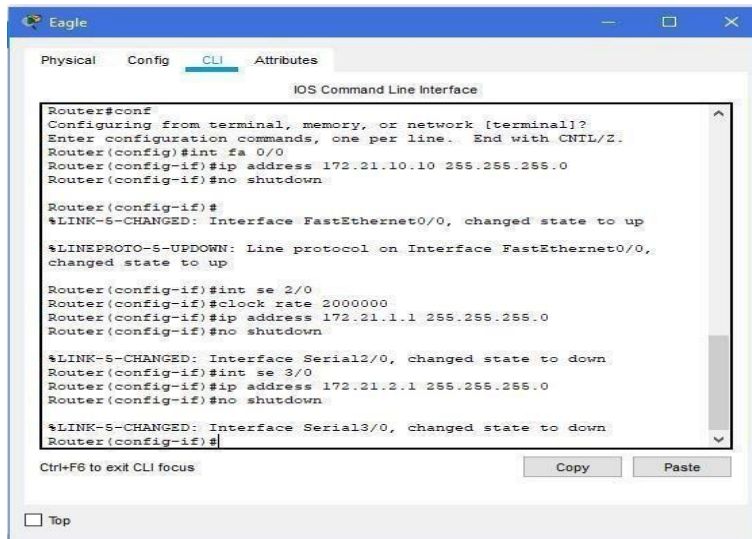
## MODUL7

# STATIC ROUTE, RIP DAN IGRP



1. Konfigurasi masing masing interface pada tiap Router





The screenshot shows the Eagle IDE window with the 'CLI' tab selected. The 'IOS Command Line Interface' window displays the following configuration commands and status messages:

```
Router#conf
Configuring from terminal, memory, or network [terminal]?
Enter configuration commands, one per line. End with CNTL/Z.
Router(config)#int fa 0/0
Router(config-if)#ip address 172.21.10.10 255.255.255.0
Router(config-if)#no shutdown

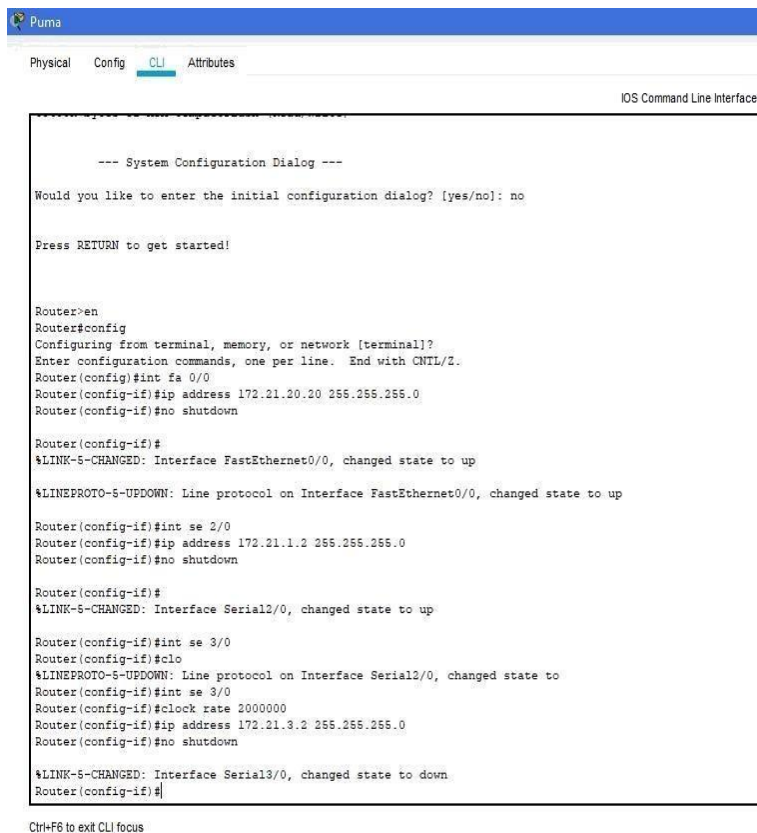
Router(config-if)#
%LINK-5-CHANGED: Interface FastEthernet0/0, changed state to up
%LINEPROTO-5-UPDOWN: Line protocol on Interface FastEthernet0/0,
changed state to up

Router(config-if)#int se 2/0
Router(config-if)#clock rate 2000000
Router(config-if)#ip address 172.21.1.1 255.255.255.0
Router(config-if)#no shutdown

Router(config-if)#
%LINK-5-CHANGED: Interface Serial2/0, changed state to down
Router(config-if)#int se 3/0
Router(config-if)#ip address 172.21.2.1 255.255.255.0
Router(config-if)#no shutdown

Router(config-if)#
%LINK-5-CHANGED: Interface Serial3/0, changed state to down
Router(config-if)#
```

At the bottom of the CLI window, there is a 'Copy' button, a 'Paste' button, and a 'Top' button.



The screenshot shows the Puma IDE window with the 'CLI' tab selected. The 'IOS Command Line Interface' window displays the following configuration commands and status messages:

```
--- System Configuration Dialog ---

Would you like to enter the initial configuration dialog? [yes/no]: no

Press RETURN to get started!

Router>en
Router#config
Configuring from terminal, memory, or network [terminal]?
Enter configuration commands, one per line. End with CNTL/Z.
Router(config)#int fa 0/0
Router(config-if)#ip address 172.21.20.20 255.255.255.0
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

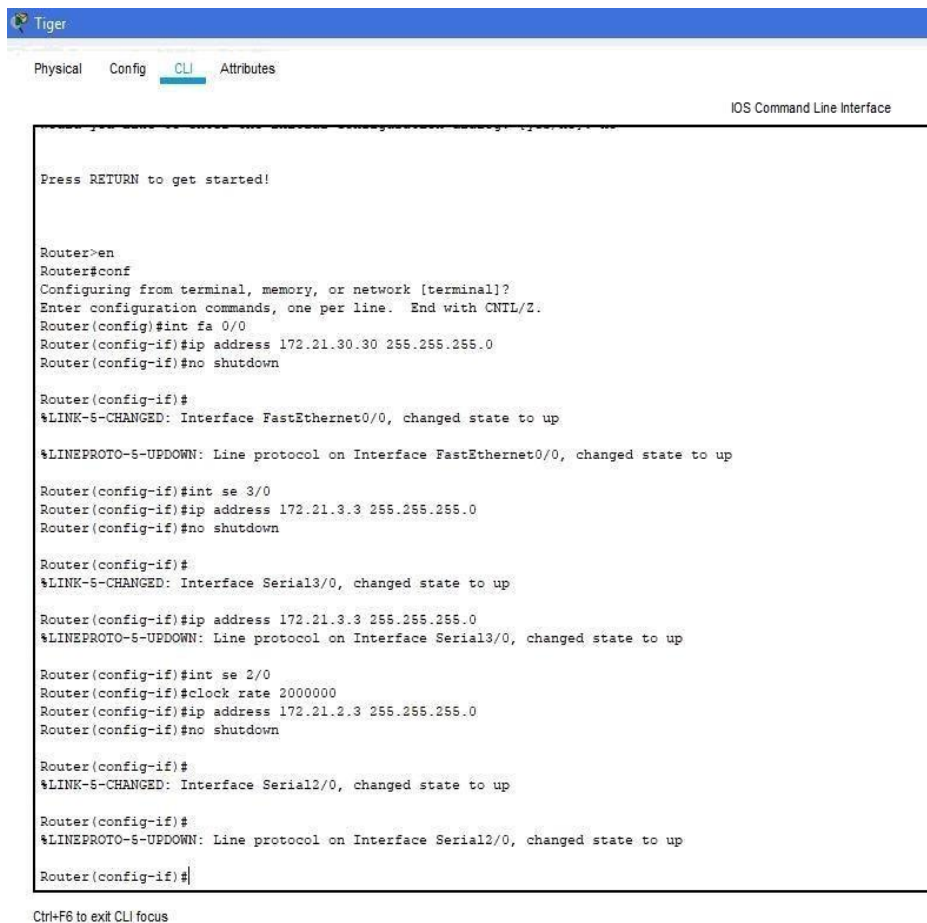
Router(config-if)#int se 2/0
Router(config-if)#ip address 172.21.1.2 255.255.255.0
Router(config-if)#no shutdown

Router(config-if)#
%LINK-5-CHANGED: Interface Serial2/0, changed state to up

Router(config-if)#int se 3/0
Router(config-if)#cld
%LINEPROTO-5-UPDOWN: Line protocol on Interface Serial2/0, changed state to
Router(config-if)#int se 3/0
Router(config-if)#clock rate 2000000
Router(config-if)#ip address 172.21.3.2 255.255.255.0
Router(config-if)#no shutdown

Router(config-if)#
%LINK-5-CHANGED: Interface Serial3/0, changed state to down
Router(config-if)#
```

At the bottom of the CLI window, there is a 'Ctrl+F8 to exit CLI focus' message.



```
Tiger
Physical Config CLI Attributes
IOS Command Line Interface

Press RETURN to get started!

Router>en
Router#conf
Configuring from terminal, memory, or network [terminal]?
Enter configuration commands, one per line. End with CNTL/Z.
Router(config)#int fa 0/0
Router(config-if)#ip address 172.21.30.30 255.255.255.0
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)#int se 3/0
Router(config-if)#ip address 172.21.3.3 255.255.255.0
Router(config-if)#no shutdown

Router(config-if)#
%LINK-5-CHANGED: Interface Serial3/0, changed state to up

Router(config-if)#ip address 172.21.3.3 255.255.255.0
%LINEPROTO-5-UPDOWN: Line protocol on Interface Serial3/0, changed state to up

Router(config-if)#int se 2/0
Router(config-if)#clock rate 2000000
Router(config-if)#ip address 172.21.2.3 255.255.255.0
Router(config-if)#no shutdown

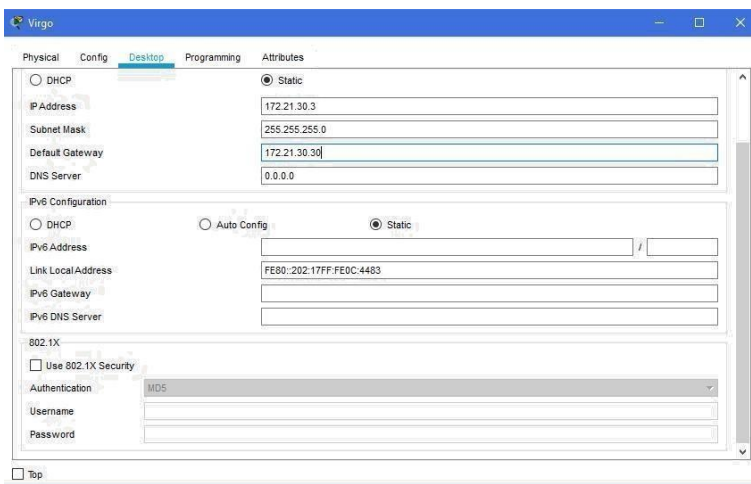
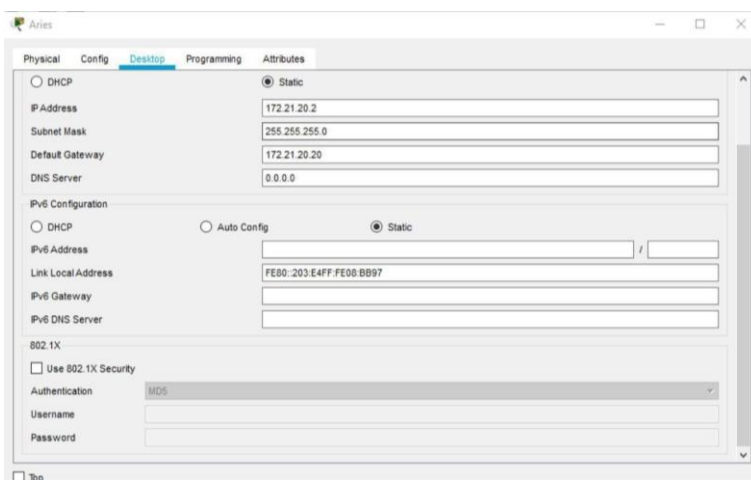
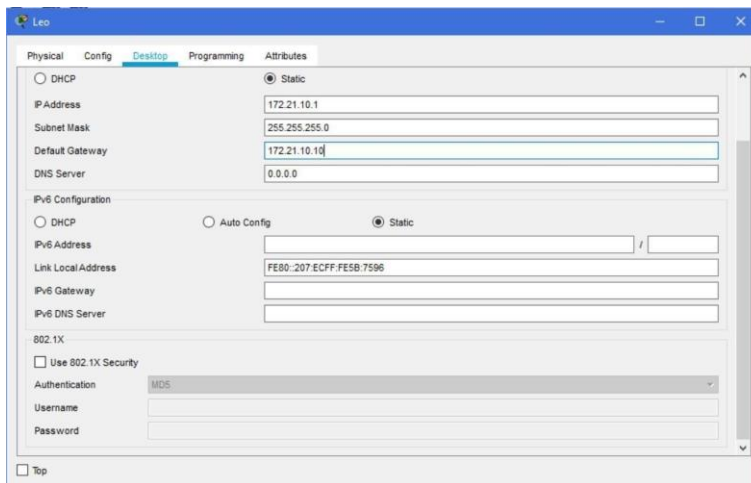
Router(config-if)#
%LINK-5-CHANGED: Interface Serial2/0, changed state to up

Router(config-if)#
%LINEPROTO-5-UPDOWN: Line protocol on Interface Serial2/0, changed state to up

Router(config-if)#
```

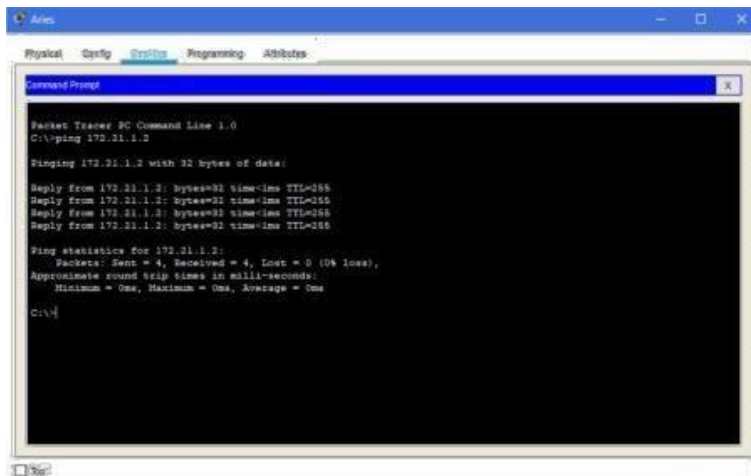
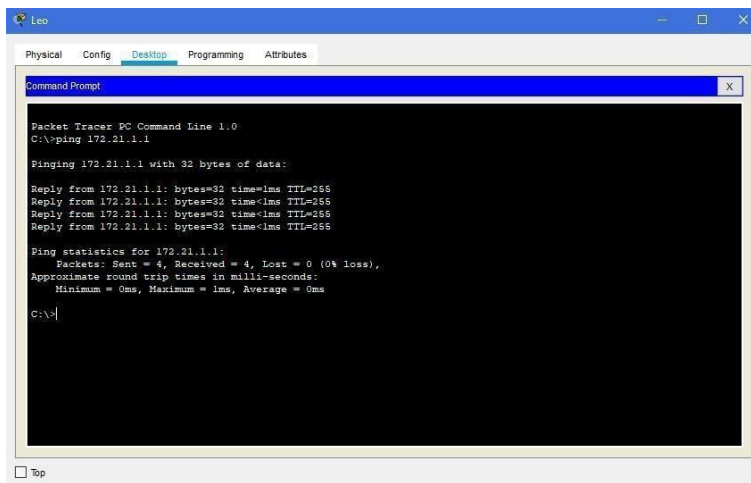
Ctrl+F6 to exit CLI focus

2. Memberi nama masing2 router dengan nama eagle(router 1), puma(router 2), dan tiger (router 3).
3. Mengkonfigurasi masing-masing interface pada tiap router dengan alamat IP berikut ini:
  - eagle (ethernet 0) = 172.21.10.10/24
  - eagle (serial 0) = 172.21.1.1/24
  - eagle (serial 1) = 172.21.2.1/24
  - puma (ethernet 0) = 172.21.20.20/24
  - puma (serial 0) = 172.21.1.2/24
  - puma (serial 1) = 172.21.3.2/24
  - tiger (ethernet 0) = 172.21.30.30/24
  - tiger (serial 0) = 172.21.2.3/24
  - tiger (serial 1) = 172.21.3.3/24



4. Konfigurasi masing-masing PC dengan nama dan alamat IP berikut:

- Leo (PC 1) = 172.21.10.1/24 dan default gateway (ipconfig/dg) 172.21.10.10
- Aries (PC 2) = 172.21.20.2/24 dan default gateway (ipconfig/dg) 172.21.20.20
- Virgo (PC 1) = 172.21.30.3/24 dan default gateway (ipconfig/dg) 172.21.30.30



Eagle

Physical Config CLI Attributes

IOS Command Line Interface

```
Router>en
Router#conf
Configuring from terminal, memory, or network [terminal]?
Enter configuration commands, one per line. End with CNTL/Z.
Router(config)#ping 172.21.1.2
^
% Invalid input detected at '^' marker.

Router(config)#end
Router#
%SYS-5-CONFIG_I: Configured from console by console

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 = 1/2/6 ms

Router#
```

Ctrl+F6 to exit CLI focus

Copy Paste

☐ Top

```
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 = 0/1/6 ms

Router#
```

Ctrl+F6 to exit CLI focus

Copy Paste

☐ Top



## 5. Menampilkan IP Router



Puma

Physical Config CLI Attributes

IOS Command Line Interface

```
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 = 1/3/8 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, 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#
```

Ctrl+F6 to exit CLI focus

Copy Paste

☐ Top

Tiger

Physical Config CLI Attributes

IOS Command Line Interface

```
Router>en  
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#
```

Ctrl+F6 to exit CLI focus

Copy Paste

☐ Top



6. Melakukan ping dari router eagle ke interface puma (172.21.20.20)

```
C:\>ping 172.21.20.20

Pinging 172.21.20.20 with 32 bytes of data:

Reply from 172.21.20.20: bytes=32 time=1ms TTL=255
Reply from 172.21.20.20: bytes=32 time<1ms TTL=255
Reply from 172.21.20.20: bytes=32 time<1ms TTL=255
Reply from 172.21.20.20: bytes=32 time<1ms TTL=255

Ping statistics for 172.21.20.20:
    Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),
    Approximate round trip times in milli-seconds:
        Minimum = 0ms, Maximum = 1ms, Average = 0ms

C:\>
```

7. Trace 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  131 ms    0 ms    0 ms    172.21.10.10
  2   0 ms     *       52 ms   172.21.10.10
  3   *       0 ms    *       Request timed out.
  4   0 ms     *      13 ms   172.21.10.10
  5   *       0 ms    *       Request timed out.
  6   0 ms     *      0 ms    172.21.10.10
  7

Control-C
^C
C:\>
```

8. Trace dari PC leo ke router eagle (172.21.1.1)

```
C:\>tracert 172.21.1.1

Tracing route to 172.21.1.1 over a maximum of 30 hops:

  1   0 ms     0 ms     0 ms    172.21.1.1

Trace complete.

C:\>
```

9. Melakukan ip route pada masing masing router

```
Router>en
Router#conf
Configuring from terminal, memory, or network [terminal]?
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)#
```

Ctrl+F6 to exit CLI focus

Copy Paste

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```
Router>en
Router#conf
Configuring from terminal, memory, or network [terminal]?
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 172.21.30.0 255.255.255.0 172.21.3.3
Router(config)#
```

Ctrl+F6 to exit CLI focus

Copy Paste

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```
Router>en
Router#conf
Configuring from terminal, memory, or network [terminal]?
Enter configuration commands, one per line. End with CNTL/Z.
Router(config)#ip route 172.21.10.0 255.255.255.0 172.21.2.1
Router(config)#ip route 172.21.20.0 255.255.255.0 172.21.3.2
Router(config)#
```

Ctrl+F6 to exit CLI focus

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☐ Top

## 10. Ping PC leo ke PC aries dan tracer PC leo ke PC aries

```
C:\>ping 172.21.20.2

Pinging 172.21.20.2 with 32 bytes of data:

Request timed out.
Reply from 172.21.20.2: bytes=32 time=130ms TTL=126
Reply from 172.21.20.2: bytes=32 time=16ms 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 = 3, Lost = 1 (25% loss),
    Approximate round trip times in milli-seconds:
        Minimum = 1ms, Maximum = 130ms, Average = 48ms

C:\>
```

```
C:\>tracert 172.21.20.2

Tracing route to 172.21.20.2 over a maximum of 30 hops:

  0  0 ms    0 ms    0 ms    172.21.10.10
  1  1 ms    1 ms    4 ms    172.21.1.2
  2  0 ms    13 ms   0 ms    172.21.20.2

Trace complete.

C:\>
```

## 11. Mengubah alamat jaringan pada Leo menjadi 172.21.100.0/24

The screenshot shows the 'Leo' configuration window with the 'Desktop' tab selected. Under the 'Static' radio button, the IP Address is set to 172.21.100.1, Subnet Mask to 255.255.255.0, and Default Gateway to 172.21.100.10. The DNS Server is set to 0.0.0.0. Under the 'IPv6 Configuration' section, the 'Static' radio button is selected, and the Link Local Address is set to FE80::207:ECFF:FE5B:7596. The '802.1X' section has 'Use 802.1X Security' unchecked, and the 'Authentication' dropdown is set to 'MD5'. There are fields for 'Username' and 'Password'.

## 12. Konfigurasi ip baru pada router eagle

```
Router#en
Router#conf
Configuring from terminal, memory, or network [terminal]?
Enter configuration commands, one per line. End with CNTL/Z.
Router(config)#int fa 0/0
Router(config-if)#ip address 172.21.100.10 255.255.255.0
Router(config-if)#no shutdown
Router(config-if)#
```

Ctrl+F6 to exit CLI focus

Copy

☐ Top

## 13. Menambahkan konfigurasi ip route baru pada router puma dan tiger

```
Router>en
Router#conf
Configuring from terminal, memory, or network [terminal]?
Enter configuration commands, one per line. End with CNTL/Z.
Router(config)#ip route 172.21.100.0 255.255.255.0 172.21.1.1
Router(config)#
```

Ctrl+F6 to exit CLI focus

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☐ Top

```
Router>en
Router#conf
Configuring from terminal, memory, or network [terminal]?
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)#
```

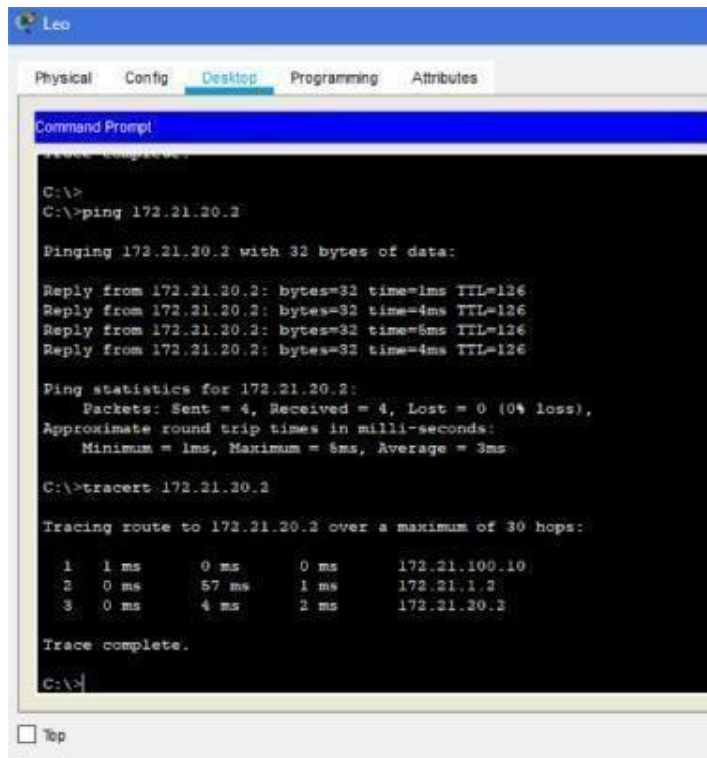
Ctrl+F6 to exit CLI focus

Copy

Paste

☐ Top

. 14. Melakukan ping dan tracer dari Leo ke Aries dan Virgo



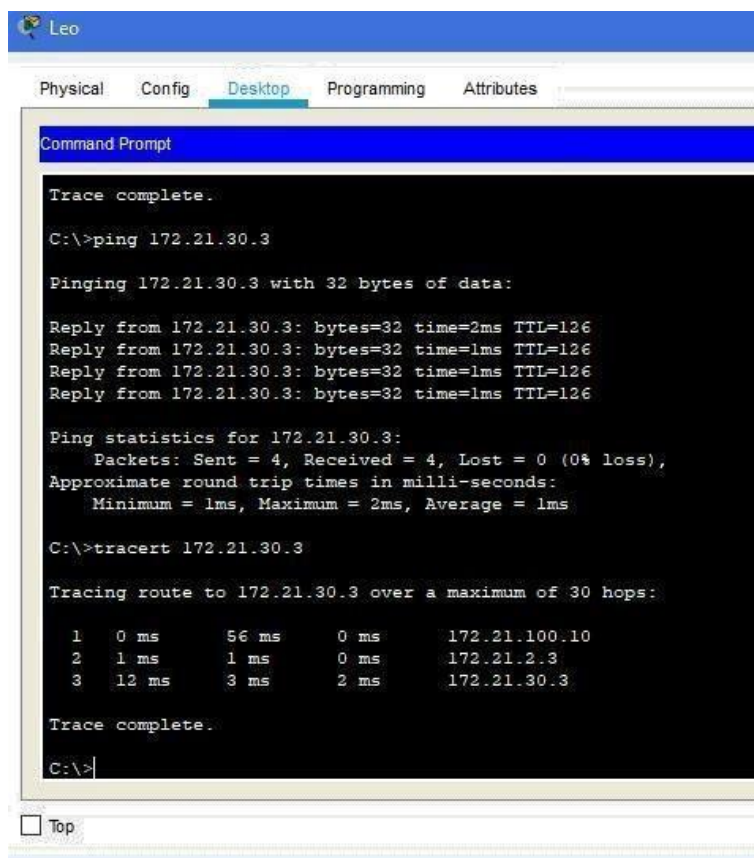
Leo

Physical Config Desktop Programming Attributes

Command Prompt

```
Trace complete.  
C:\>  
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=1ms TTL=126  
Reply from 172.21.20.2: bytes=32 time=4ms TTL=126  
Reply from 172.21.20.2: bytes=32 time=6ms TTL=126  
Reply from 172.21.20.2: bytes=32 time=4ms 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 = 6ms, Average = 3ms  
  
C:\>tracert 172.21.20.2  
  
Tracing route to 172.21.20.2 over a maximum of 30 hops:  
  
  0  1 ms    0 ms    0 ms    172.21.100.10  
  1  0 ms    57 ms   1 ms    172.21.1.2  
  2  0 ms    4 ms    2 ms    172.21.20.2  
  
Trace complete.  
C:\>
```

☐ Top



Leo

Physical Config Desktop Programming Attributes

Command Prompt

```
Trace complete.  
C:\>  
C:\>ping 172.21.30.3  
  
Pinging 172.21.30.3 with 32 bytes of data:  
  
Reply from 172.21.30.3: bytes=32 time=2ms TTL=126  
Reply from 172.21.30.3: bytes=32 time=1ms TTL=126  
Reply from 172.21.30.3: bytes=32 time=1ms TTL=126  
Reply from 172.21.30.3: bytes=32 time=1ms TTL=126  
  
Ping statistics for 172.21.30.3:  
    Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),  
    Approximate round trip times in milli-seconds:  
        Minimum = 1ms, Maximum = 2ms, Average = 1ms  
  
C:\>tracert 172.21.30.3  
  
Tracing route to 172.21.30.3 over a maximum of 30 hops:  
  
  0  0 ms    56 ms   0 ms    172.21.100.10  
  1  1 ms    1 ms    0 ms    172.21.2.3  
  2 12 ms    3 ms    2 ms    172.21.30.3  
  
Trace complete.  
C:\>
```

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