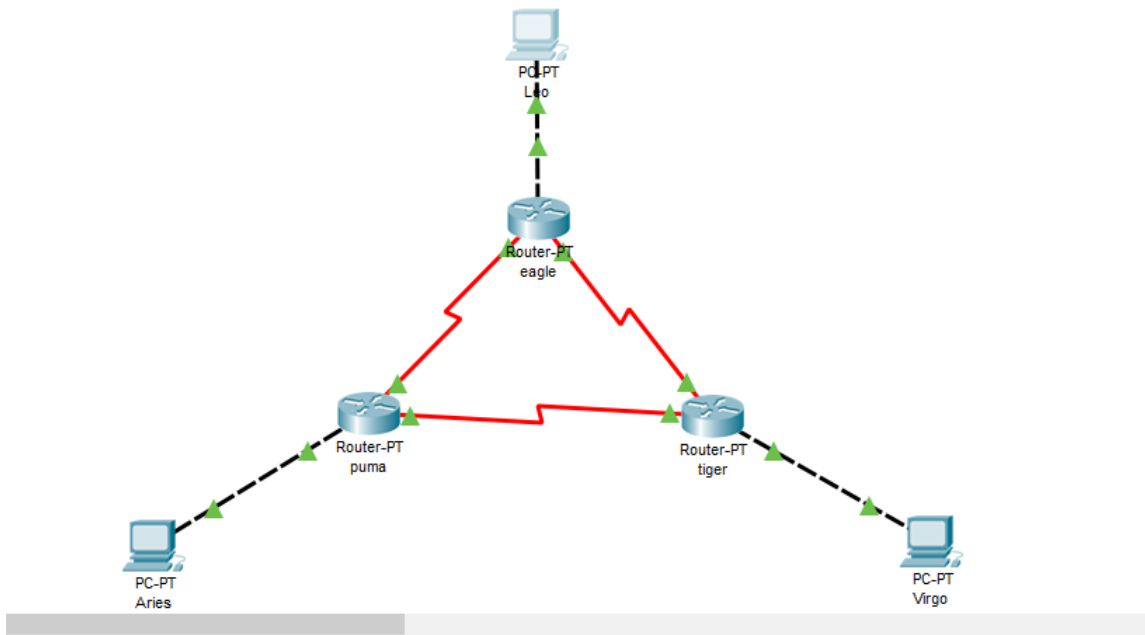


NAMA : DITA DENITA PRAMESTI

NIM : L200170139

KELAS : C

MODUL: 7



1. Konfigurasi masing-masing Interface pada tiap Router dengan IP Address.

a. Router Eagle

eagle

```
Physical Config CLI Attributes
IOS Command Line Interface

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

Press RETURN to get started!

Router>en
Router#conf term
Enter configuration commands, one per line. End with CNTL/Z.
Router(config)#int fa0/0
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

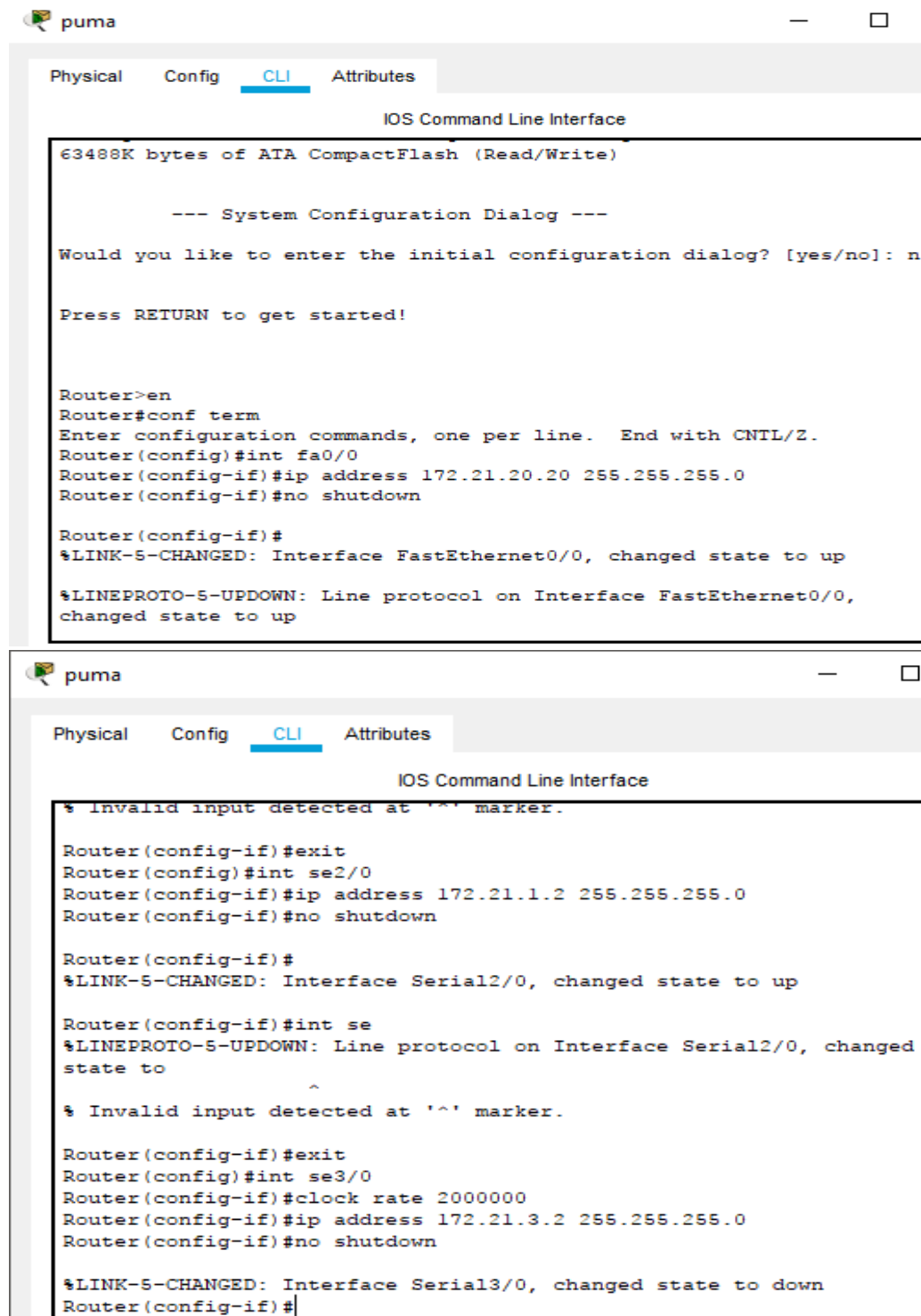
Router(config-if)#exit
Router(config)#int se2/0
Router(config-if)#clock rate 2000000
This command applies only to DCE interfaces
Router(config-if)#172.21.1.1 255.255.255.0
Router(config-if)#
% Invalid input detected at '^' marker.

Router(config-if)#ip address 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)#exit
Router(config)#int se3/0
Router(config-if)#ip address 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)#
```

b. Router Puma



The image shows two screenshots of the Router Puma CLI interface. The first screenshot shows the initial configuration steps, including enabling the terminal, configuring interface fa0/0 with IP address 172.21.20.20, and enabling it. The second screenshot shows further configuration steps, including exiting the previous interface, configuring interface se2/0 with IP address 172.21.1.2, enabling it, and then configuring interface se3/0 with clock rate 2000000 and IP address 172.21.3.2, and finally disabling it.

```
puma

Physical Config CLI Attributes

IOS Command Line Interface

63488K bytes of ATA CompactFlash (Read/Write)

--- System Configuration Dialog ---

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

Press RETURN to get started!

Router>en
Router#conf term
Enter configuration commands, one per line. End with CNTL/Z.
Router(config)#int fa0/0
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

puma

Physical Config CLI Attributes

IOS Command Line Interface

% Invalid input detected at '^' marker.

Router(config-if)#exit
Router(config)#int se2/0
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
%LINEPROTO-5-UPDOWN: Line protocol on Interface Serial2/0, changed
state to
^
% Invalid input detected at '^' marker.

Router(config-if)#exit
Router(config)#int se3/0
Router(config-if)#clock rate 2000000
Router(config-if)#ip address 172.21.3.2 255.255.255.0
Router(config-if)#no shutdown

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

c. Router Tiger

 tiger

Physical

Config

CLI

Attributes

IOS Comma

Press RETURN to get started!

Router>en
Router#conf term
Enter configuration commands, one per line. End with CNTL/Z.
Router(config)#int fa0/0
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)#exit
Router(config)#int se2/0
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)#exit
Router(config)#
%LINEPROTO-5-UPDOWN: Line protocol on Interface Serial2/0, changed state to up

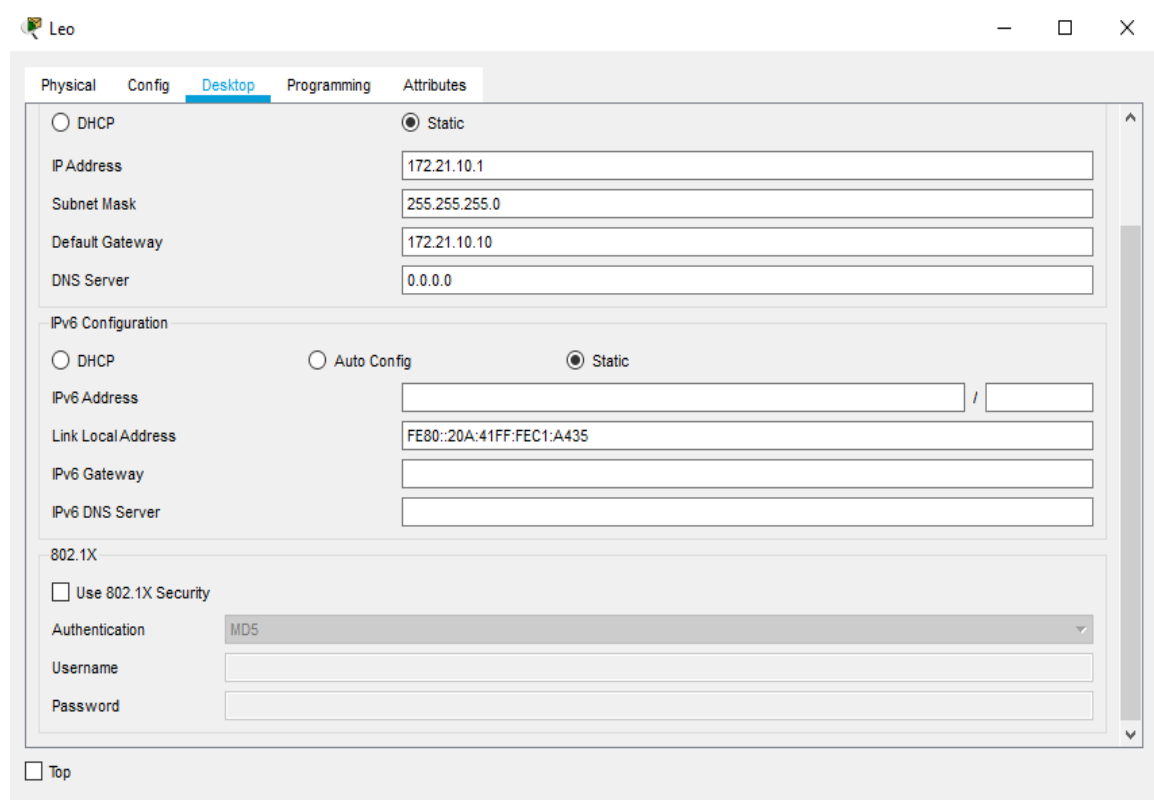
Router(config)#int se3/0
Router(config-if)#clock rate 2000000
This command applies only to DCE interfaces
Router(config-if)#ip address 172.21.3.3 255.255.255.0
Router(config-if)#no shutdown

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

|

2. Konfigurasi IP Address pada setiap PC.

a. PC Leo



The screenshot shows the configuration window for PC Leo. The 'Desktop' tab is selected. Under the 'Static' radio button, the IP Address is 172.21.10.1, Subnet Mask is 255.255.255.0, Default Gateway is 172.21.10.10, and DNS Server is 0.0.0.0. The IPv6 Configuration section shows 'Static' selected with an empty IPv6 Address field, Link Local Address FE80::20A:41FF:FE43:5, and empty fields for IPv6 Gateway and IPv6 DNS Server. The 802.1X section has 'Use 802.1X Security' unchecked, Authentication set to MD5, and empty fields for Username and Password. A 'Top' button is at the bottom left.

Leo

Physical Config **Desktop** Programming Attributes

☐ 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::20A:41FF:FE43:5

IPv6 Gateway

IPv6 DNS Server

802.1X

☐ Use 802.1X Security

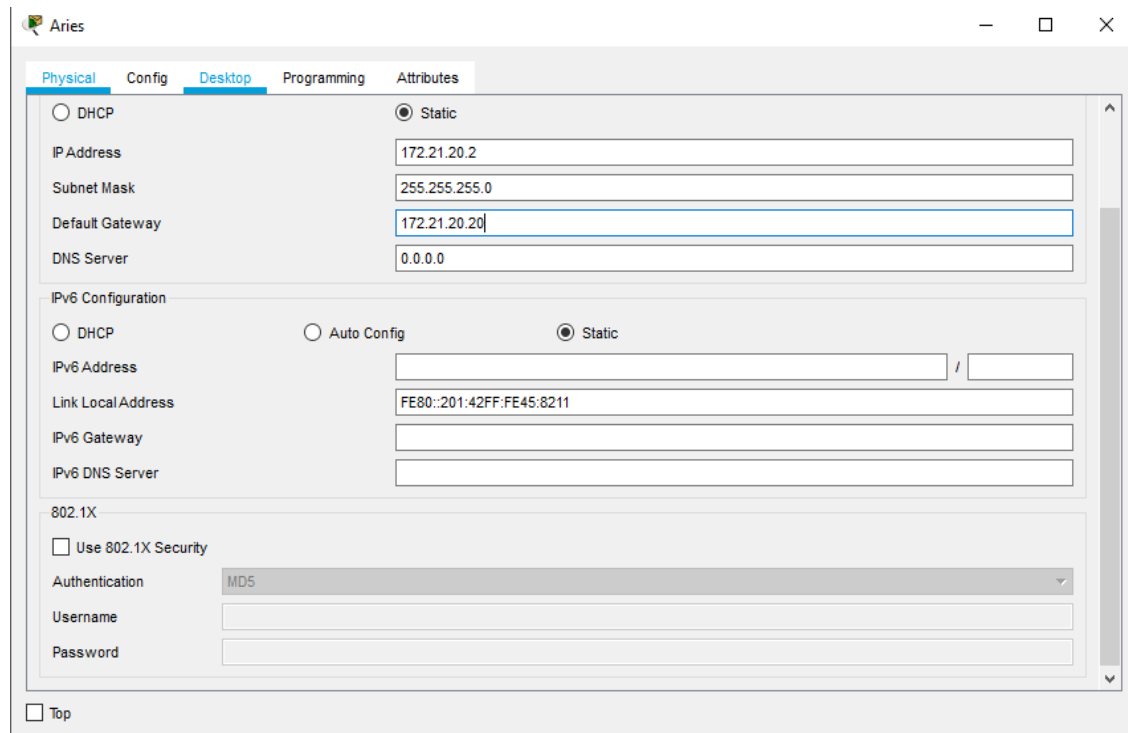
Authentication MD5

Username

Password

☐ Top

b. PC Aries



The screenshot shows the configuration window for PC Aries. The 'Desktop' tab is selected. Under the 'Static' radio button, the IP Address is 172.21.20.2, Subnet Mask is 255.255.255.0, Default Gateway is 172.21.20.20, and DNS Server is 0.0.0.0. The IPv6 Configuration section shows 'Static' selected with an empty IPv6 Address field, Link Local Address FE80::201:42FF:FE45:8211, and empty fields for IPv6 Gateway and IPv6 DNS Server. The 802.1X section has 'Use 802.1X Security' unchecked, Authentication set to MD5, and empty fields for Username and Password. A 'Top' button is at the bottom left.

Aries

Physical Config **Desktop** Programming Attributes

☐ DHCP ☒ Static

IP Address 172.21.20.2

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::201:42FF:FE45:8211

IPv6 Gateway

IPv6 DNS Server

802.1X

☐ Use 802.1X Security

Authentication MD5

Username

Password

☐ Top

c. PC Virgo

Virgo

Physical Config **Desktop** Programming Attributes

☐ DHCP ☒ Static

IP Address 172.21.30.3

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::230:F2FF:FEBD:E459

IPv6 Gateway

IPv6 DNS Server

802.1X

☐ Use 802.1X Security

Authentication MD5

Username

Password

☐ Top

3. Uji konfigurasi telah sesuai (proses ping)

a. PC Leo ke router eagle

Leo

Physical Config **Desktop** Programming Attributes

Command Prompt

```
Packet Tracer PC Command Line 1.0
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=29ms 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 = 29ms, Average = 7ms
```

b. PC Aries ke router puma

Aries

Physical Config Desktop Programming Attributes

Command Prompt

```
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=2ms 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 = 2ms, Average = 0ms
C:\>|
```

c. PC Virgo ke router tiger

Virgo

Physical Config Desktop Programming Attributes

Command Prompt

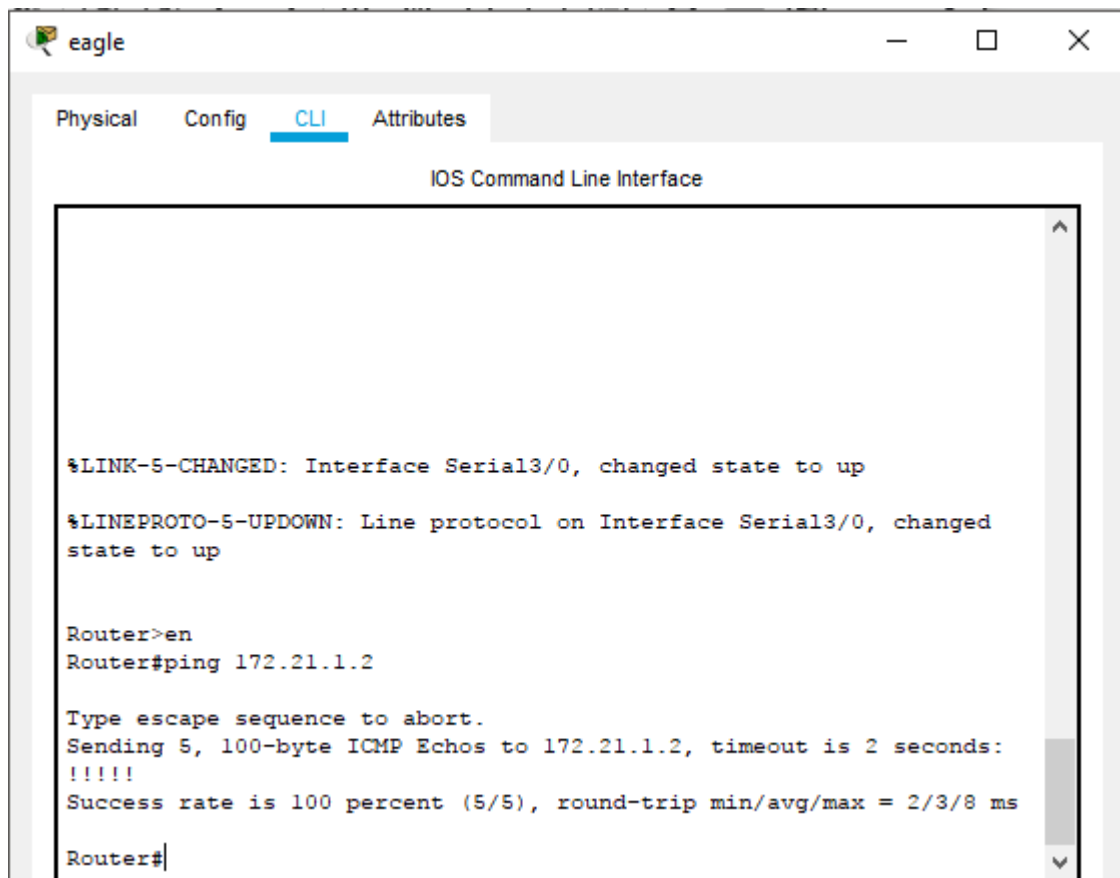
```
Packet Tracer PC Command Line 1.0
C:\>ping 172.21.3.3

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. Router eagle ke puma



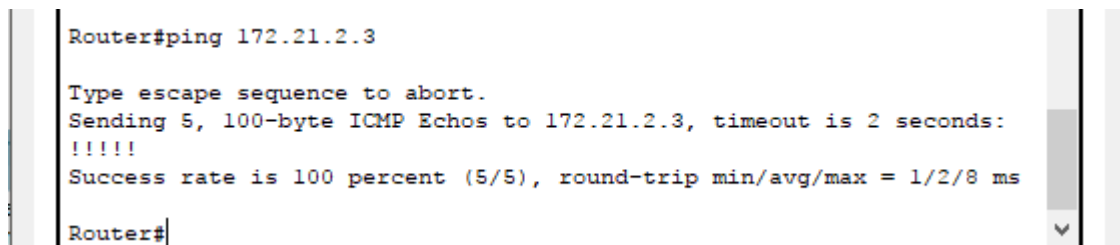
The screenshot shows the 'eagle' network simulator window. The 'CLI' tab is selected, displaying the 'IOS Command Line Interface'. The interface shows the following text:

```
%LINK-5-CHANGED: Interface Serial3/0, changed state to up
%LINEPROTO-5-UPDOWN: Line protocol on Interface Serial3/0, changed
state to up

Router>en
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 = 2/3/8 ms
Router#
```

e. Router eagle ke tiger

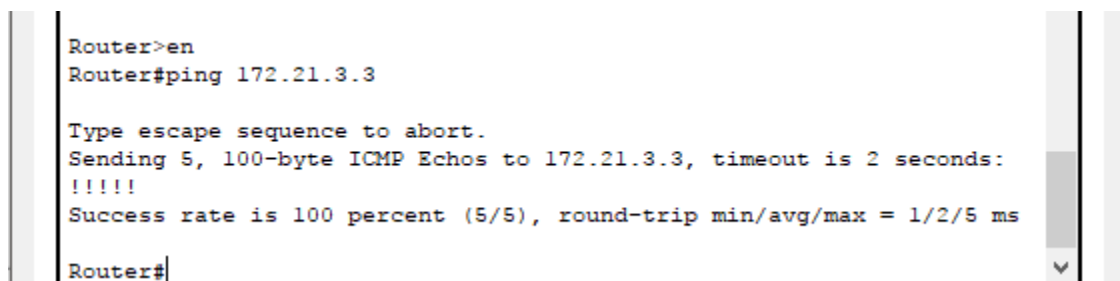


The screenshot shows the CLI of a router in the eagle simulator. The following text is displayed:

```
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 = 1/2/8 ms
Router#
```

f. Router puma ke tiger

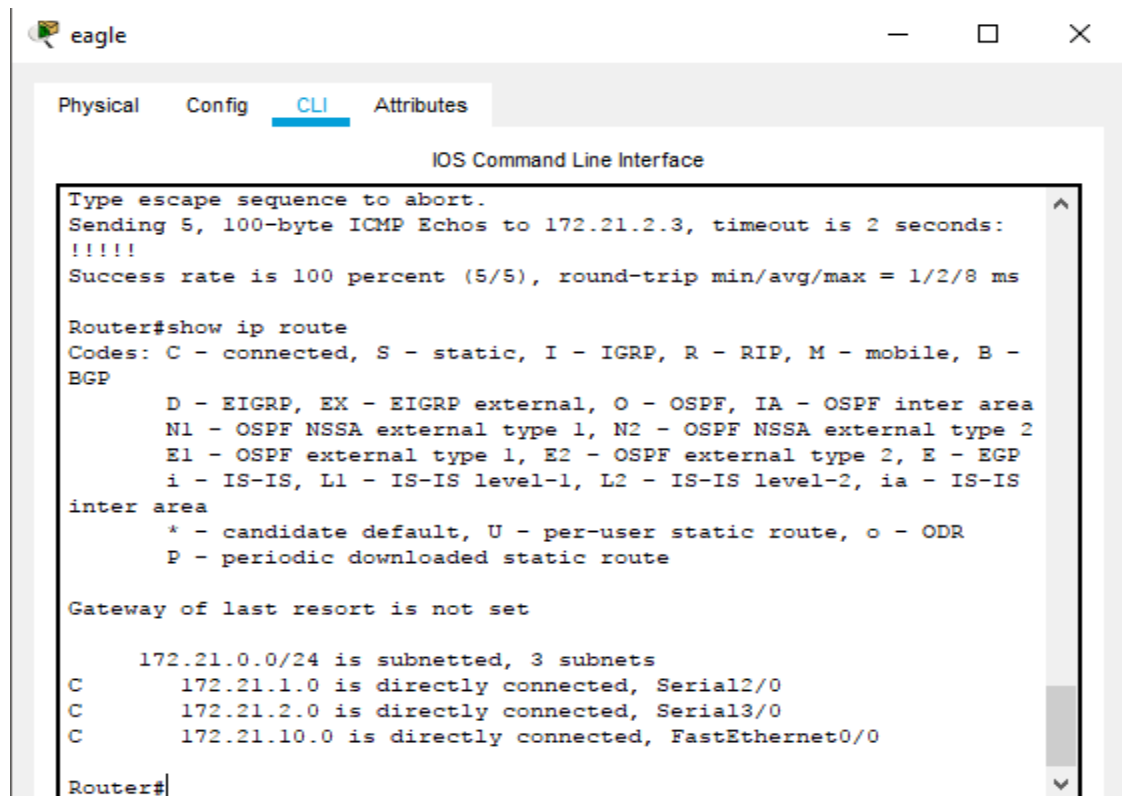


The screenshot shows the CLI of a router in the eagle simulator. The following text is displayed:

```
Router>en
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 = 1/2/5 ms
Router#
```

7. melihat router table pada masing router



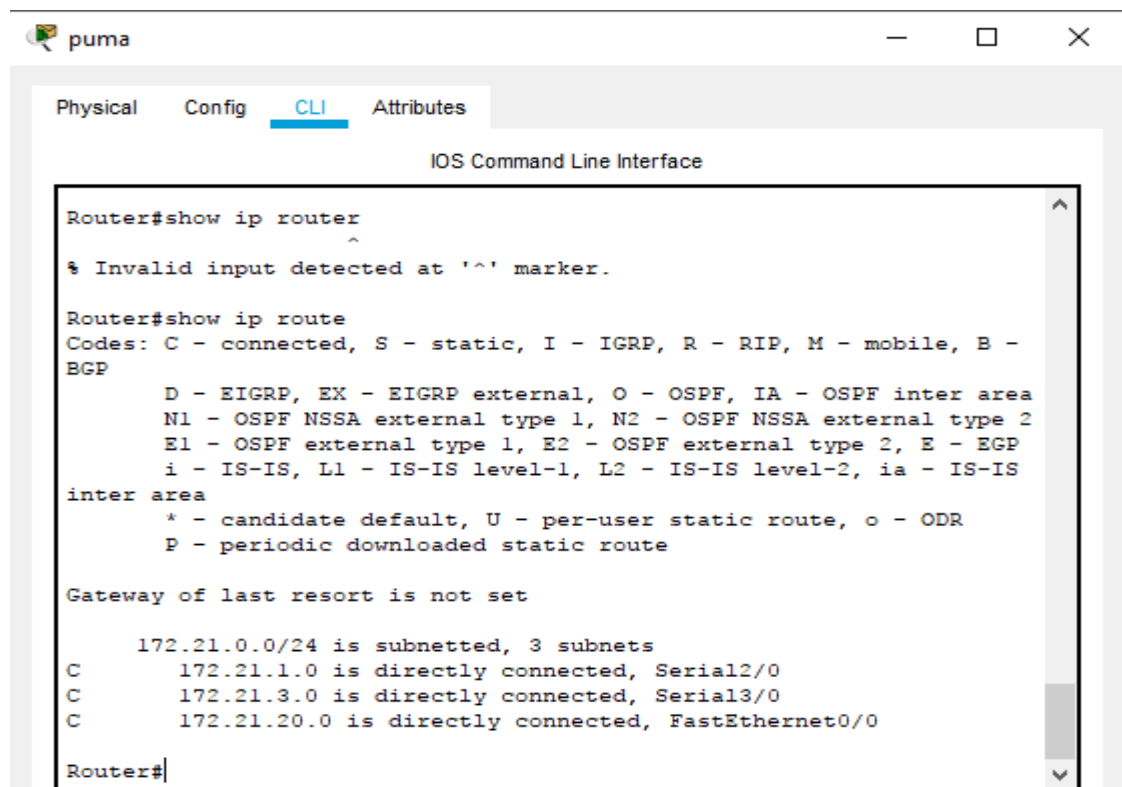
```
eagle
Physical Config CLI Attributes
IOS Command Line Interface
Type escape sequence to abort.
Sending 5, 100-byte ICMP Echos to 172.21.2.3, timeout is 2 seconds:
!!!!!!
Success rate is 100 percent (5/5), round-trip min/avg/max = 1/2/8 ms

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      172.21.2.0 is directly connected, Serial3/0
C      172.21.10.0 is directly connected, FastEthernet0/0

Router#
```



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

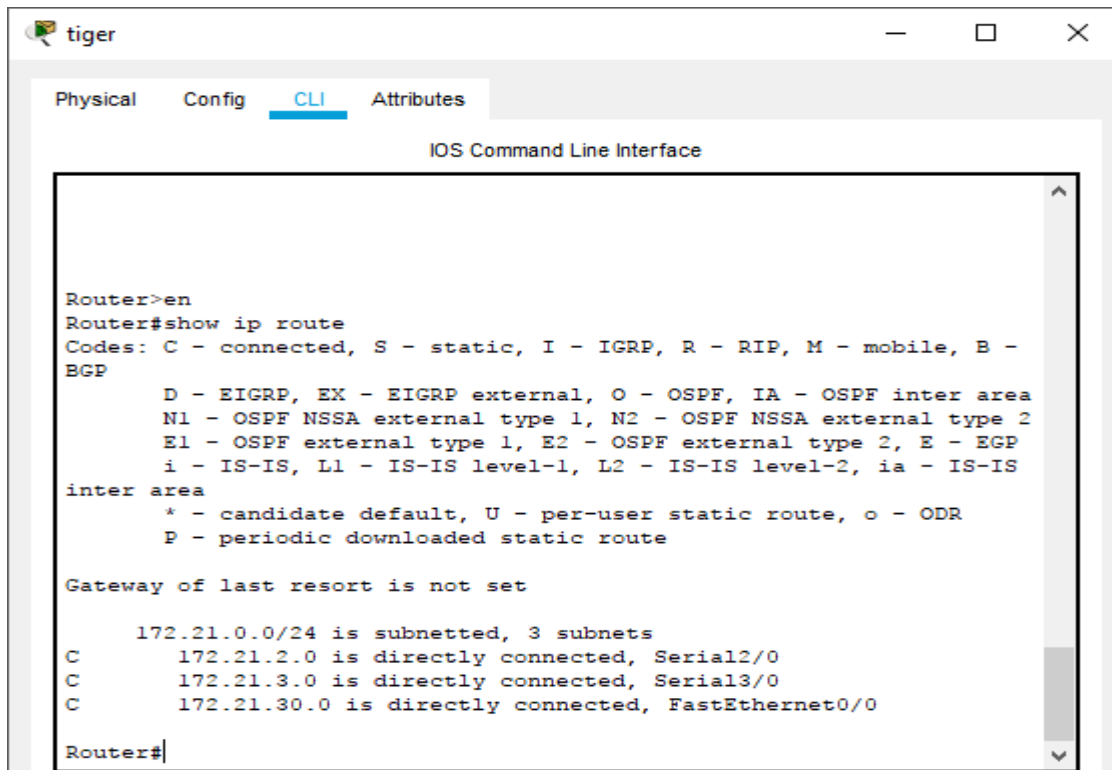
Router#show ip router
^
% Invalid input detected at '^' marker.

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#
```

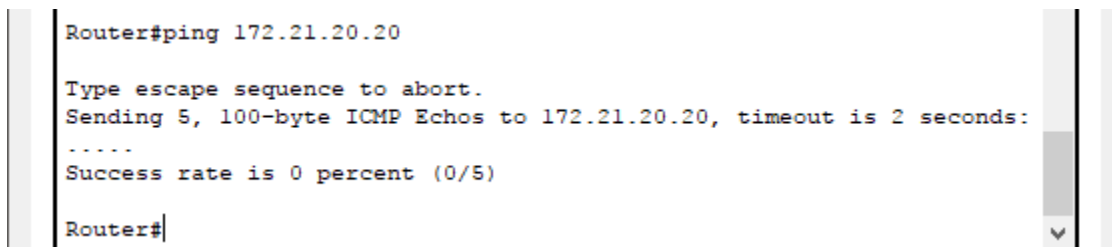



```
Router>en
Router#show ip route
Codes: C - connected, S - static, I - IGRP, R - RIP, M - mobile, B -
BGP
       D - EIGRP, EX - EIGRP external, O - OSPF, IA - OSPF inter area
       N1 - OSPF NSSA external type 1, N2 - OSPF NSSA external type 2
       E1 - OSPF external type 1, E2 - OSPF external 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#
```

8. Melakukan ping dari router eagle ke alamat fa router puma (172.21.20.20)



```
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#
```

Tugas 8A: pada gambar di atas dijelaskan bahwa router eagle dengan alamat fa router puma saling terhubung.

9. Melakukan trace dari PC Leo ke PC Aries

Leo

Physical Config Desktop Programming Attributes

Command Prompt

```
Approximate round trip times in milli-seconds:
  Minimum = 0ms, Maximum = 29ms, Average = 7ms

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  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    *        0 ms    172.21.10.10
  9  *        0 ms    *        Request timed out.
 10  0 ms    *        0 ms    172.21.10.10
 11  *        0 ms    *        Request timed out.
 12  0 ms    *        0 ms    172.21.10.10
 13  *        0 ms    *        Request timed out.
 14  0 ms    *        0 ms    172.21.10.10
 15  *        0 ms    *        Request timed out.
 16  0 ms    *        0 ms    172.21.10.10
 17  *        0 ms    *        Request timed out.
 18  0 ms    *        0 ms    172.21.10.10
 19  *        0 ms    *        Request timed out.
 20  0 ms    *        0 ms    172.21.10.10
 21  *        0 ms    *        Request timed out.
 22  0 ms    *        0 ms    172.21.10.10
 23  *        0 ms    *        Request timed out.
 24  0 ms    *        2 ms    172.21.10.10
 25  *        0 ms    *        Request timed out.
 26  0 ms    *        0 ms    172.21.10.10
 27  *        0 ms    *        Request timed out.
 28  0 ms    *        0 ms    172.21.10.10
 29  *        0 ms    *        Request timed out.
 30  0 ms    *        0 ms    172.21.10.10

Trace complete.

C:\>
```

10. melakukan trace dari PC Leo ke alamat s0 router eagle(172.21.1.1)

```
C:\>tracert 172.21.1.1

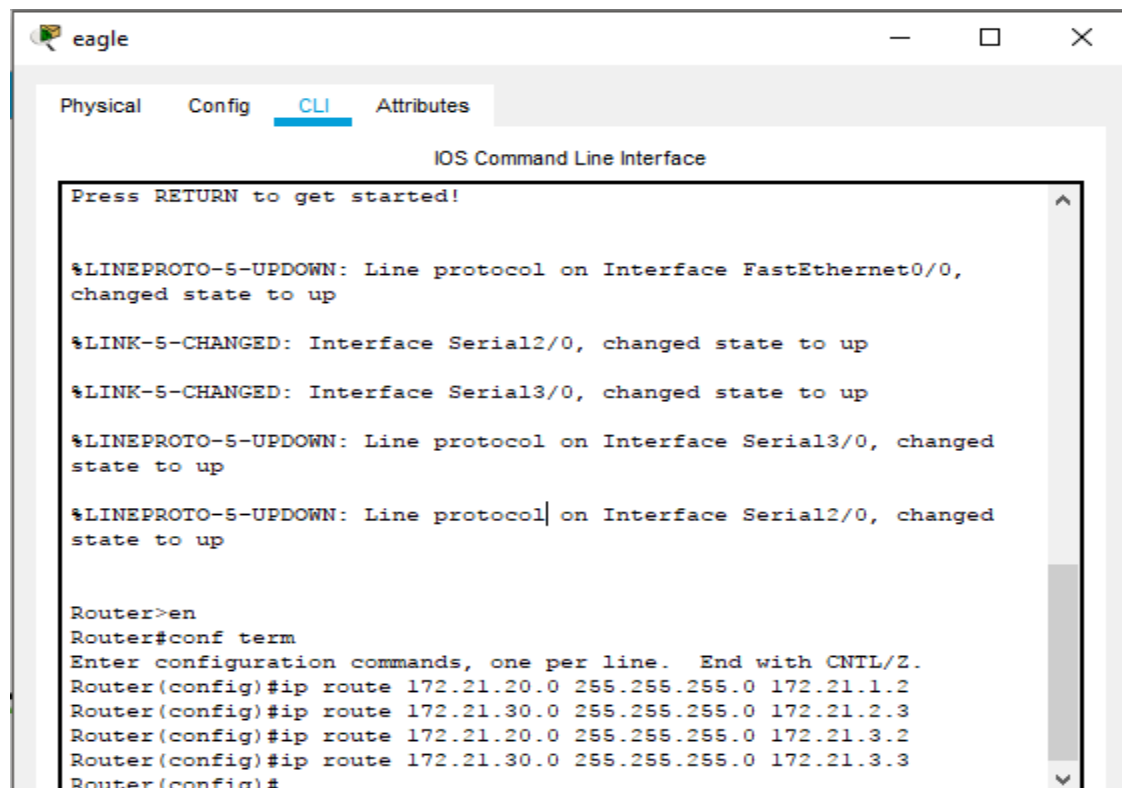
Tracing route to 172.21.1.1 over a maximum of 30 hops:

  1  0 ms    0 ms    1 ms    172.21.1.1

Trace complete.

C:\>
```

11A. Menambahkan route table (static route)



The screenshot shows the 'eagle' network simulator window. The 'CLI' tab is selected, displaying the 'IOS Command Line Interface'. The interface shows the following sequence of commands and system messages:

```
Press RETURN to get started!

%LINEPROTO-5-UPDOWN: Line protocol on Interface FastEthernet0/0,
changed state to up

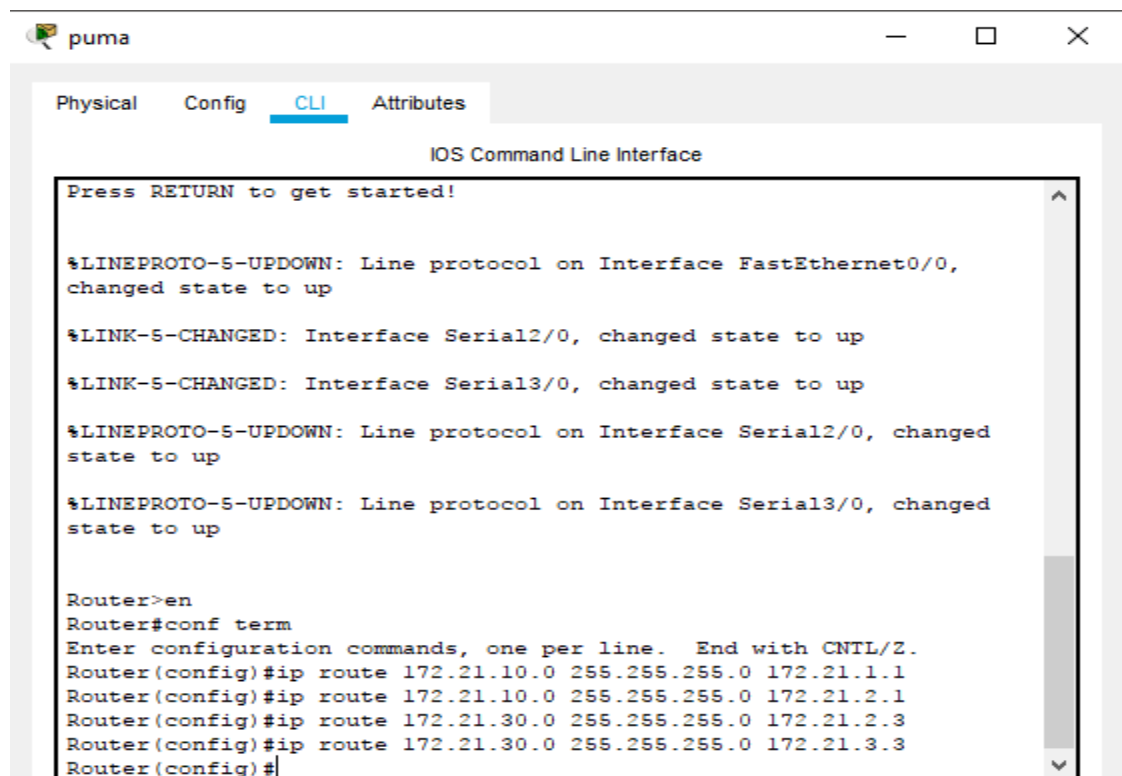
%LINK-5-CHANGED: Interface Serial2/0, changed state to up

%LINK-5-CHANGED: Interface Serial3/0, changed state to up

%LINEPROTO-5-UPDOWN: Line protocol on Interface Serial3/0, changed
state to up

%LINEPROTO-5-UPDOWN: Line protocol on Interface Serial2/0, changed
state to up

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)#ip route 172.21.20.0 255.255.255.0 172.21.3.2
Router(config)#ip route 172.21.30.0 255.255.255.0 172.21.3.3
Router(config)#
```



The screenshot shows the 'puma' network simulator window. The 'CLI' tab is selected, displaying the 'IOS Command Line Interface'. The interface shows the following sequence of commands and system messages:

```
Press RETURN to get started!

%LINEPROTO-5-UPDOWN: Line protocol on Interface FastEthernet0/0,
changed state to up

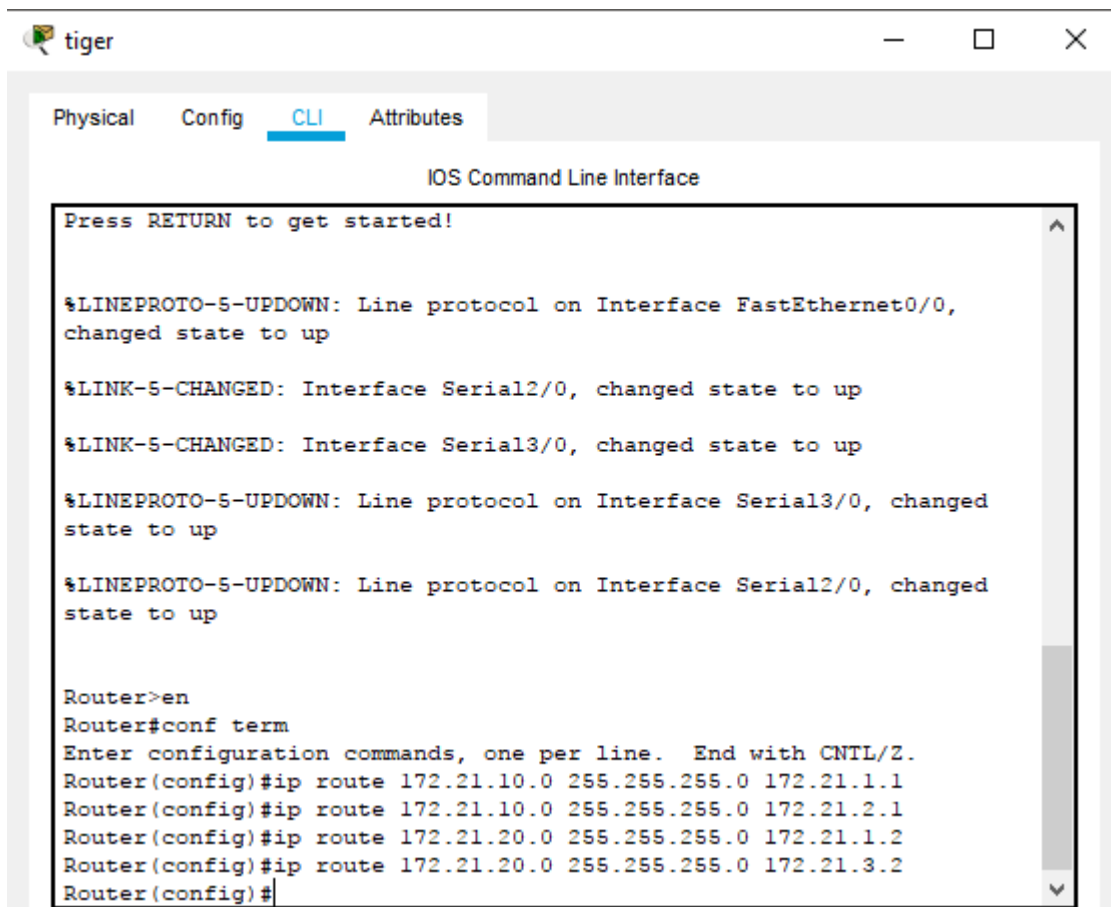
%LINK-5-CHANGED: Interface Serial2/0, changed state to up

%LINK-5-CHANGED: Interface Serial3/0, changed state to up

%LINEPROTO-5-UPDOWN: Line protocol on Interface Serial2/0, changed
state to up

%LINEPROTO-5-UPDOWN: Line protocol on Interface Serial3/0, changed
state to up

Router>en
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 172.21.10.0 255.255.255.0 172.21.2.1
Router(config)#ip route 172.21.30.0 255.255.255.0 172.21.2.3
Router(config)#ip route 172.21.30.0 255.255.255.0 172.21.3.3
Router(config)#
```



12A. Melakukan ping dan trace dari PC Leo ke PC Aries

