

**COMPUTER NETWORKS  
PRACTICUM 7**



**By:**

**GANNO TRIBUANA KURNIAJI**

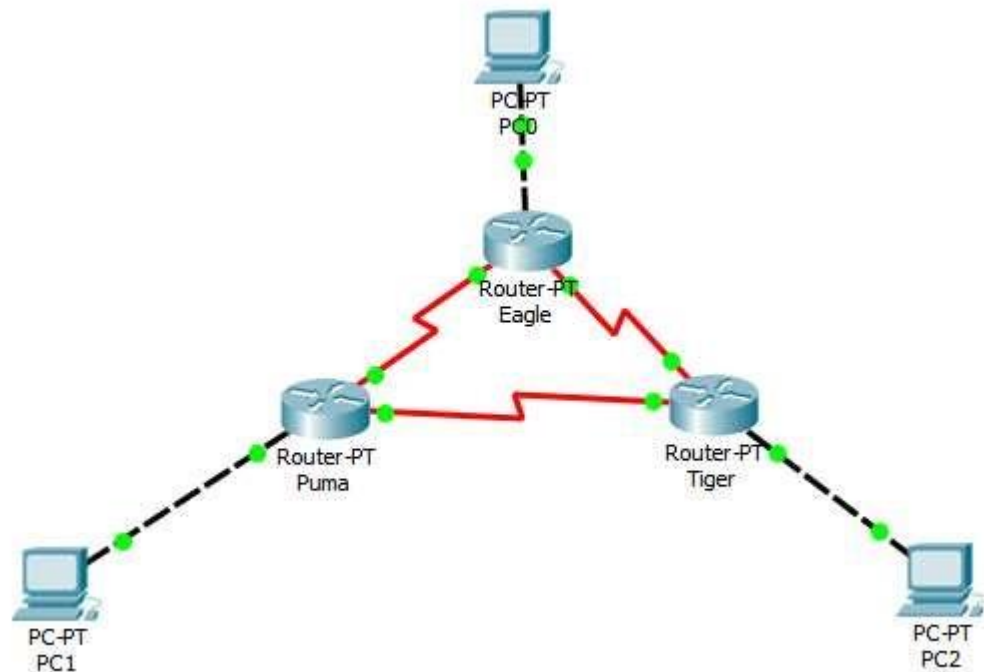
**NIM: L200184092**

**INFORMATION TECHNOLOGY  
FACULTY OF COMMUNICATION AND INFORMATICS  
UNIVERSITY OF MUHAMMADIYAH SURAKARTA  
2020**

## # ACTIVITY 1

A. Membuat topologi

B. Memberi nama router



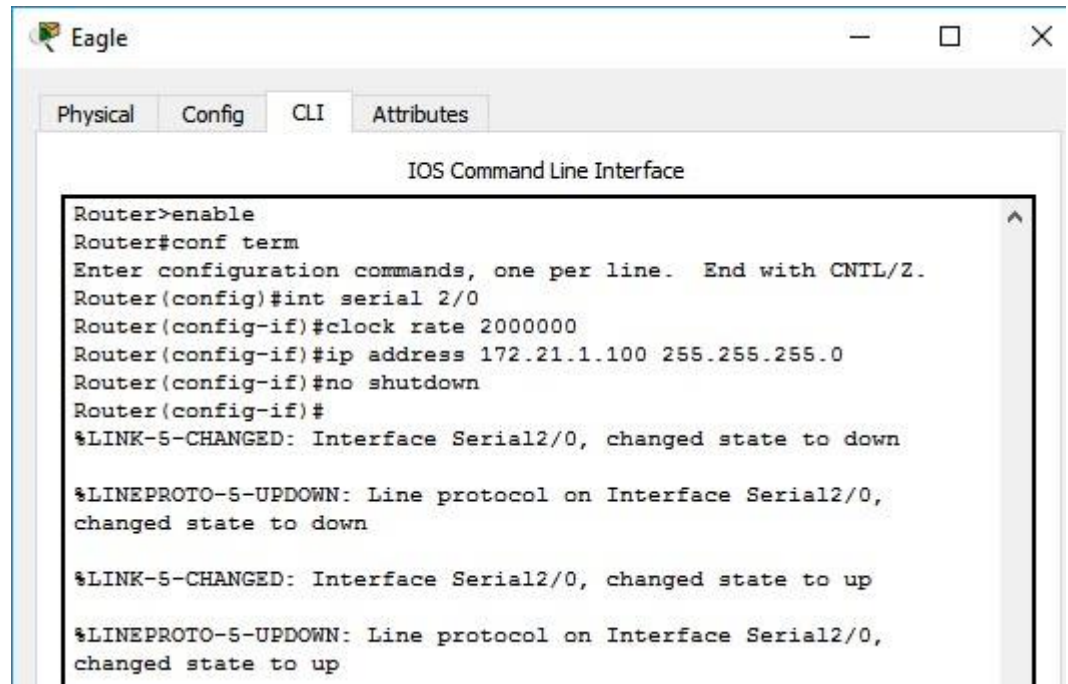
C. Konfigurasi IP Router

➤ Eagle (Ethernet 0)

```
Eagle
Physical Config CLI Attributes
IOS Command Line Interface
Router>enable
Router#conf term
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
```

### Eagle (Serial 0)



The screenshot shows the Eagle network simulator window with the 'CLI' tab selected. The terminal displays the following commands and output:

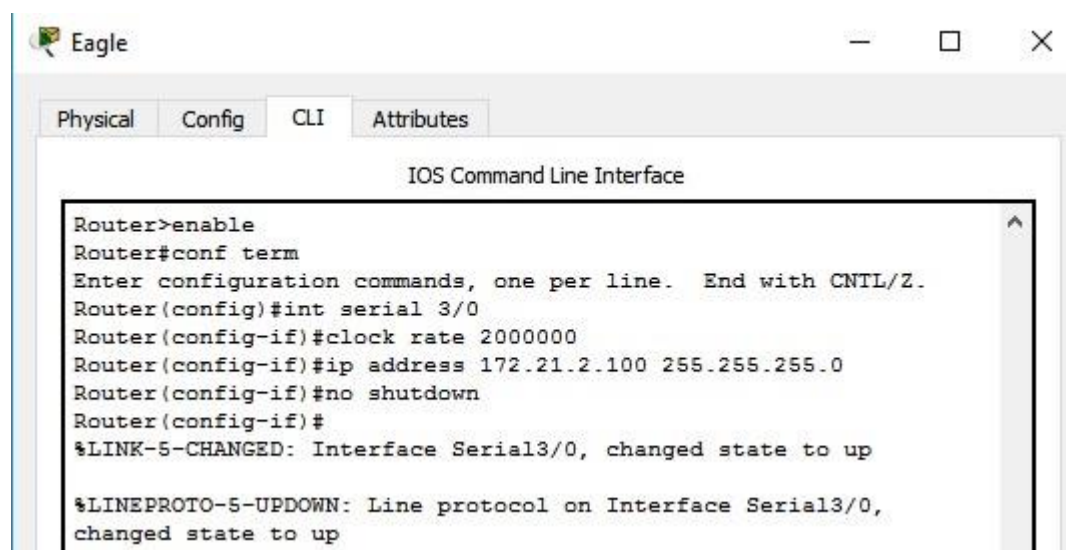
```
Router>enable
Router#conf term
Enter configuration commands, one per line. End with CNTL/Z.
Router(config)#int serial 2/0
Router(config-if)#clock rate 2000000
Router(config-if)#ip address 172.21.1.100 255.255.255.0
Router(config-if)#no shutdown
Router(config-if)#
%LINK-5-CHANGED: Interface Serial2/0, changed state to down

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

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

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

### ➤ Eagle (Serial 1)

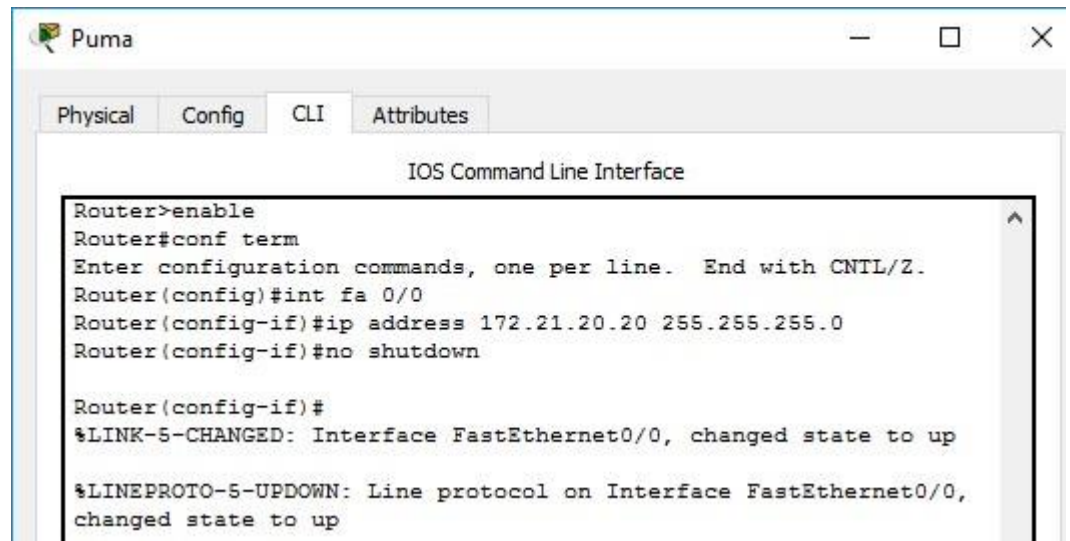


The screenshot shows the Eagle network simulator window with the 'CLI' tab selected. The terminal displays the following commands and output:

```
Router>enable
Router#conf term
Enter configuration commands, one per line. End with CNTL/Z.
Router(config)#int serial 3/0
Router(config-if)#clock rate 2000000
Router(config-if)#ip address 172.21.2.100 255.255.255.0
Router(config-if)#no shutdown
Router(config-if)#
%LINK-5-CHANGED: Interface Serial3/0, changed state to up

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

## ➤ Puma (Ethernet 0)



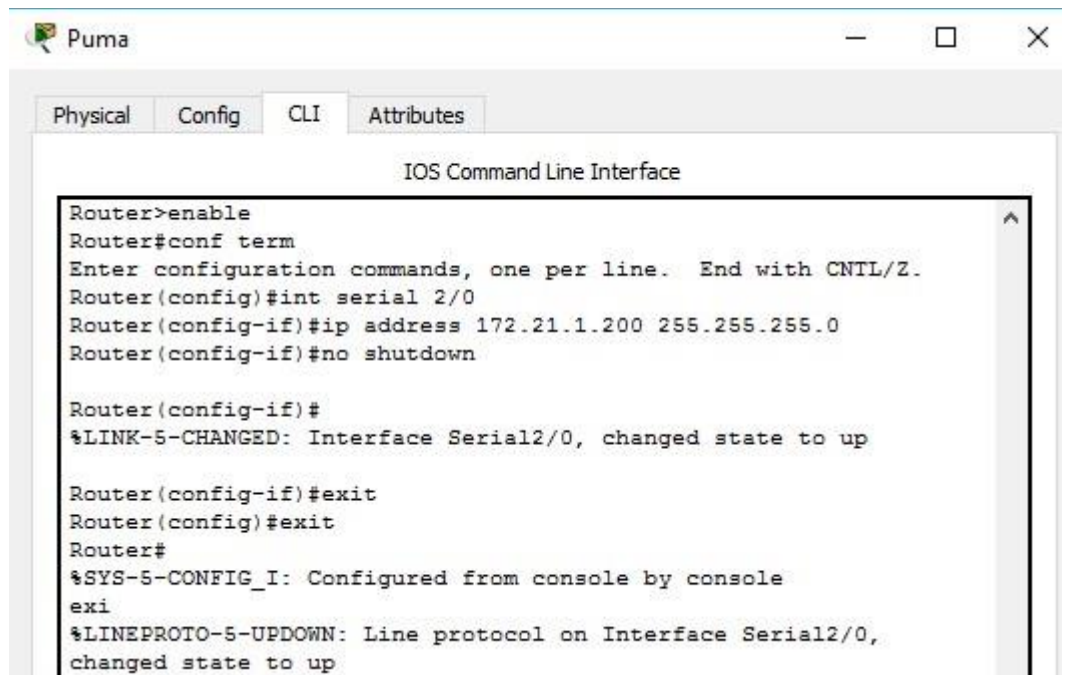
The screenshot shows a window titled "Puma" with tabs for Physical, Config, CLI, and Attributes. The CLI tab is active, displaying the "IOS Command Line Interface". The commands entered are: Router>enable, Router#conf term, Router(config)#int fa 0/0, Router(config-if)#ip address 172.21.20.20 255.255.255.0, and Router(config-if)#no shutdown. The output shows the interface state changing to up.

```
Router>enable
Router#conf term
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
```

## ➤ Puma (Serial 0)



The screenshot shows a window titled "Puma" with tabs for Physical, Config, CLI, and Attributes. The CLI tab is active, displaying the "IOS Command Line Interface". The commands entered are: Router>enable, Router#conf term, Router(config)#int serial 2/0, Router(config-if)#ip address 172.21.1.200 255.255.255.0, Router(config-if)#no shutdown, Router(config-if)#exit, Router(config)#exit, and Router#. The output shows the interface state changing to up and the configuration being saved.

```
Router>enable
Router#conf term
Enter configuration commands, one per line. End with CNTL/Z.
Router(config)#int serial 2/0
Router(config-if)#ip address 172.21.1.200 255.255.255.0
Router(config-if)#no shutdown

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

Router(config-if)#exit
Router(config)#exit
Router#
%SYS-5-CONFIG_I: Configured from console by console
exi
%LINEPROTO-5-UPDOWN: Line protocol on Interface Serial2/0,
changed state to up
```



### Puma (Serial 1)

```
Router>enable
Router#conf term
Enter configuration commands, one per line. End with CNTL/Z.
Router(config)#int serial 3/0
Router(config-if)#clock rate 2000000
Router(config-if)#ip address 172.21.3.200 255.255.255.0
Router(config-if)#no shutdown
Router(config-if)#
%LINK-5-CHANGED: Interface Serial3/0, changed state to up

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

### ➤ Tiger (Ethernet 0)

```
Router>enable
Router#conf term
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
```

### Tiger (Serial 0)

Tiger

Physical Config CLI Attributes

IOS Command Line Interface

```
Router>enable
Router#conf term
Enter configuration commands, one per line. End with CNTL/Z.
Router(config)#int serial 2/0
Router(config-if)#ip address 172.21.2.300 255.255.255.0
^
% Invalid input detected at '^' marker.

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

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

➤ Tiger (Serial 1)

Tiger

Physical Config CLI Attributes

IOS Command Line Interface

```
Router>enable
Router#conf term
Enter configuration commands, one per line. End with CNTL/Z.
Router(config)#int serial 3/0
Router(config-if)#ip address 172.21.3.300 255.255.255.0
^
% Invalid input detected at '^' marker.

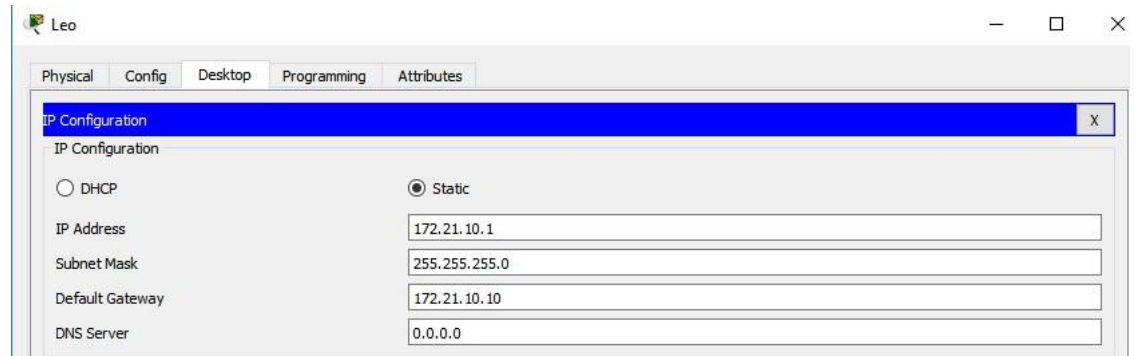
Router(config-if)#ip address 172.21.3.3 255.255.255.0
Router(config-if)#no shutdown

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

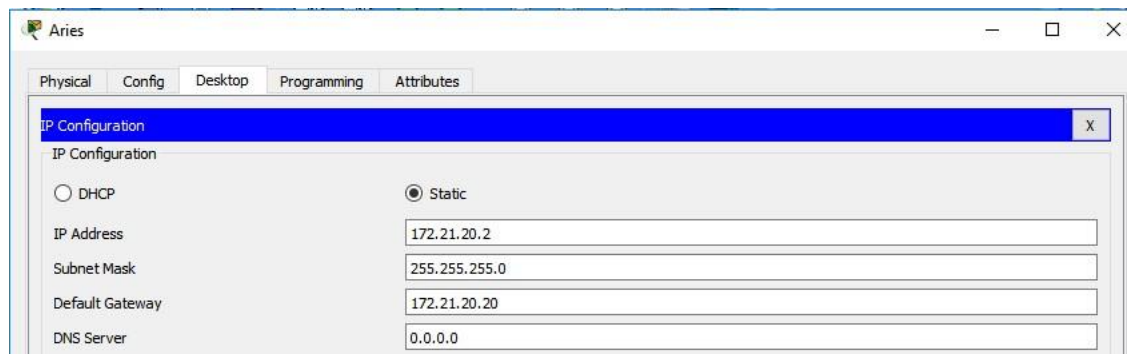
%LINEPROTO-5-UPDOWN: Line protocol on Interface Serial3/0,
changed state to up
```

## D. Konfigurasi PC

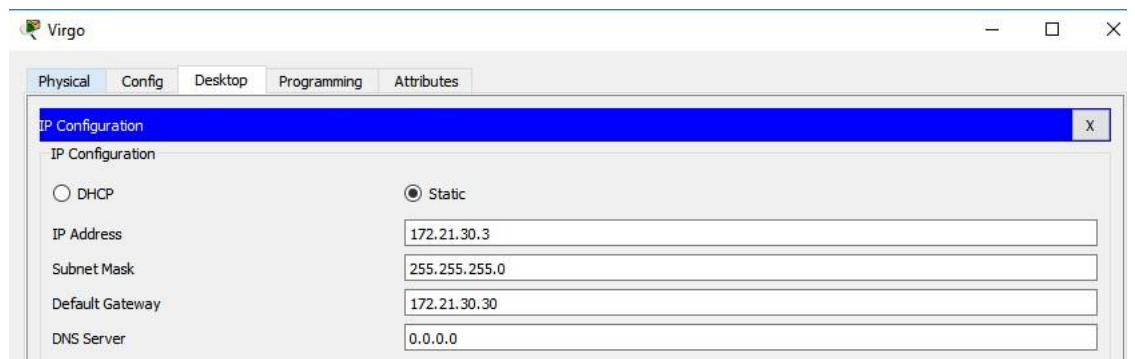
### ➤ Leo (PC1)



### ➤ Aries (PC2)



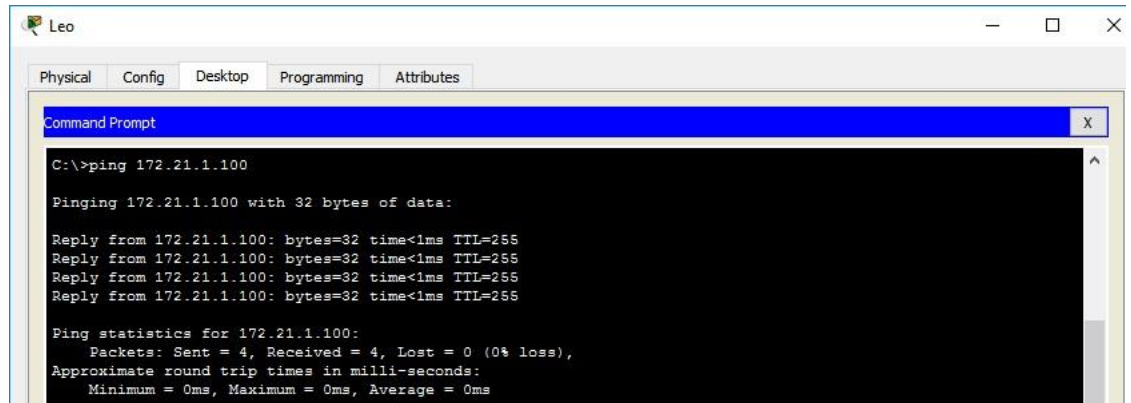
### ➤ Virgo (PC3)



## E. Memastikan kesesuaian konfigurasi

### ➤ Ping dari PC Leo ke router Eagle





Leo

Physical Config Desktop Programming Attributes

Command Prompt

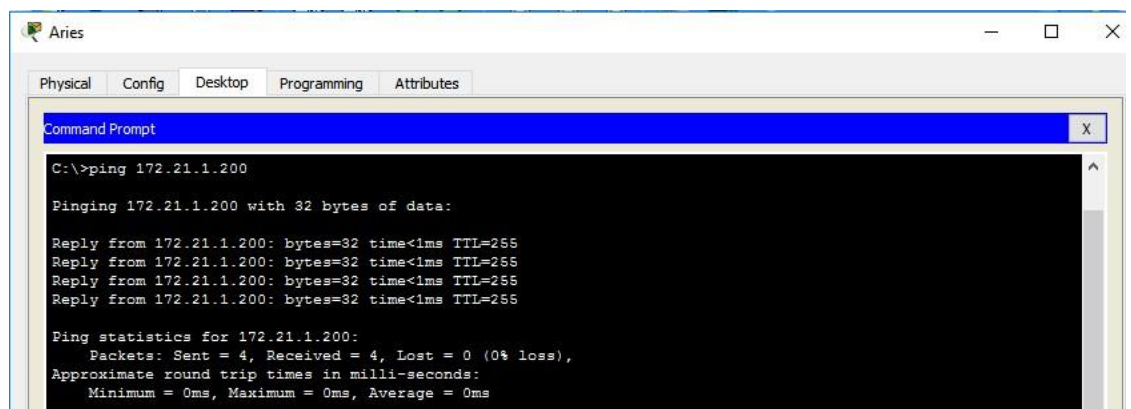
```
C:\>ping 172.21.1.100

Pinging 172.21.1.100 with 32 bytes of data:

Reply from 172.21.1.100: bytes=32 time<1ms TTL=255
Reply from 172.21.1.100: bytes=32 time<1ms TTL=255
Reply from 172.21.1.100: bytes=32 time<1ms TTL=255
Reply from 172.21.1.100: bytes=32 time<1ms TTL=255

Ping statistics for 172.21.1.100:
    Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),
    Approximate round trip times in milli-seconds:
        Minimum = 0ms, Maximum = 0ms, Average = 0ms
```

➤ Ping dari PC Aries ke router Puma



Aries

Physical Config Desktop Programming Attributes

Command Prompt

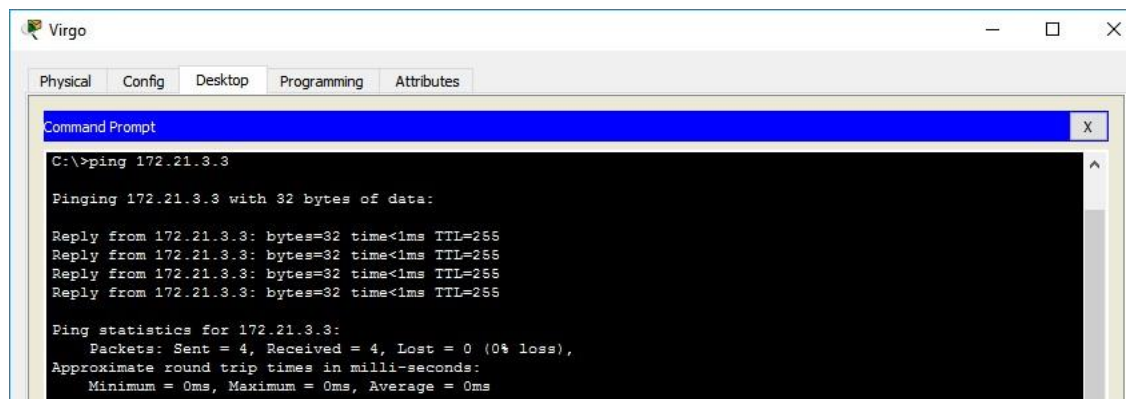
```
C:\>ping 172.21.1.200

Pinging 172.21.1.200 with 32 bytes of data:

Reply from 172.21.1.200: bytes=32 time<1ms TTL=255
Reply from 172.21.1.200: bytes=32 time<1ms TTL=255
Reply from 172.21.1.200: bytes=32 time<1ms TTL=255
Reply from 172.21.1.200: bytes=32 time<1ms TTL=255

Ping statistics for 172.21.1.200:
    Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),
    Approximate round trip times in milli-seconds:
        Minimum = 0ms, Maximum = 0ms, Average = 0ms
```

➤ Ping dari PC Virgo ke router Tiger



Virgo

Physical Config Desktop Programming Attributes

Command Prompt

```
C:\>ping 172.21.3.3

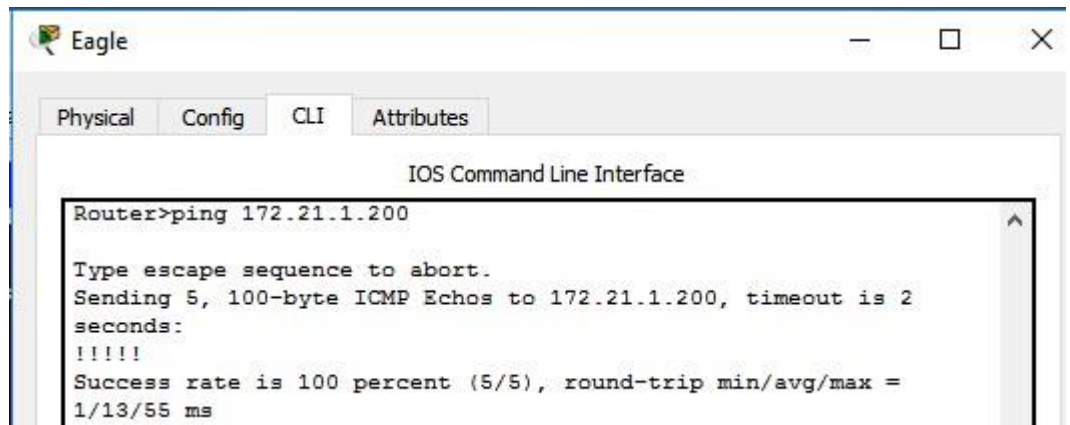
Pinging 172.21.3.3 with 32 bytes of data:

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
```

➤ Ping dari router Eagle ke router Puma



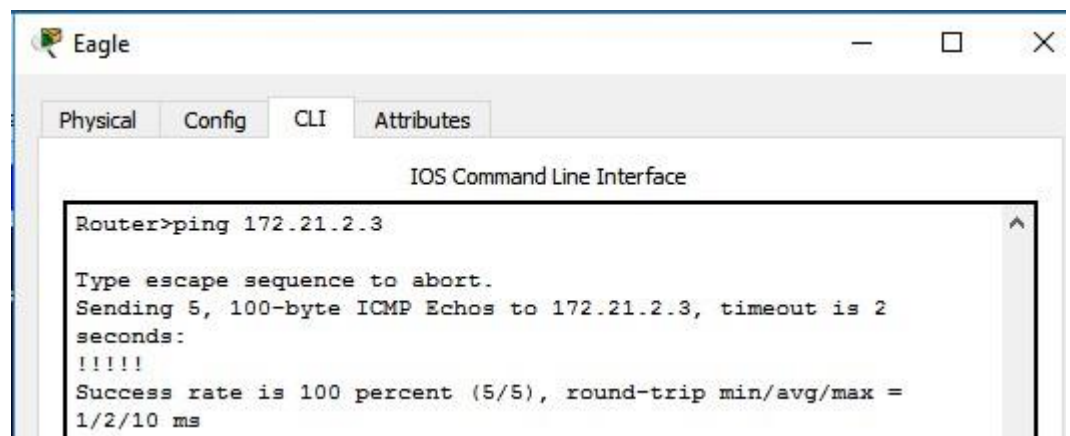


The screenshot shows the 'Eagle' router's CLI window. The 'CLI' tab is selected. The command 'Router>ping 172.21.1.200' has been entered. The output shows a successful ping with a success rate of 100 percent (5/5) and a round-trip time of 1/13/55 ms.

```
Router>ping 172.21.1.200

Type escape sequence to abort.
Sending 5, 100-byte ICMP Echos to 172.21.1.200, timeout is 2
seconds:
!!!!!!
Success rate is 100 percent (5/5), round-trip min/avg/max =
1/13/55 ms
```

➤ Ping dari router Eagle ke router Tiger

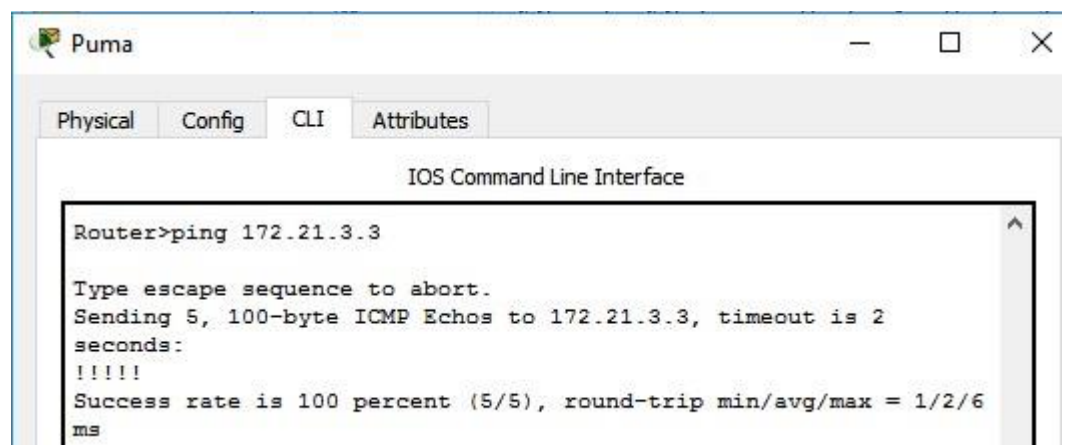


The screenshot shows the 'Eagle' router's CLI window. The 'CLI' tab is selected. The command 'Router>ping 172.21.2.3' has been entered. The output shows a successful ping with a success rate of 100 percent (5/5) and a round-trip time of 1/2/10 ms.

```
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 =
1/2/10 ms
```

➤ Ping dari router Puma ke router Tiger

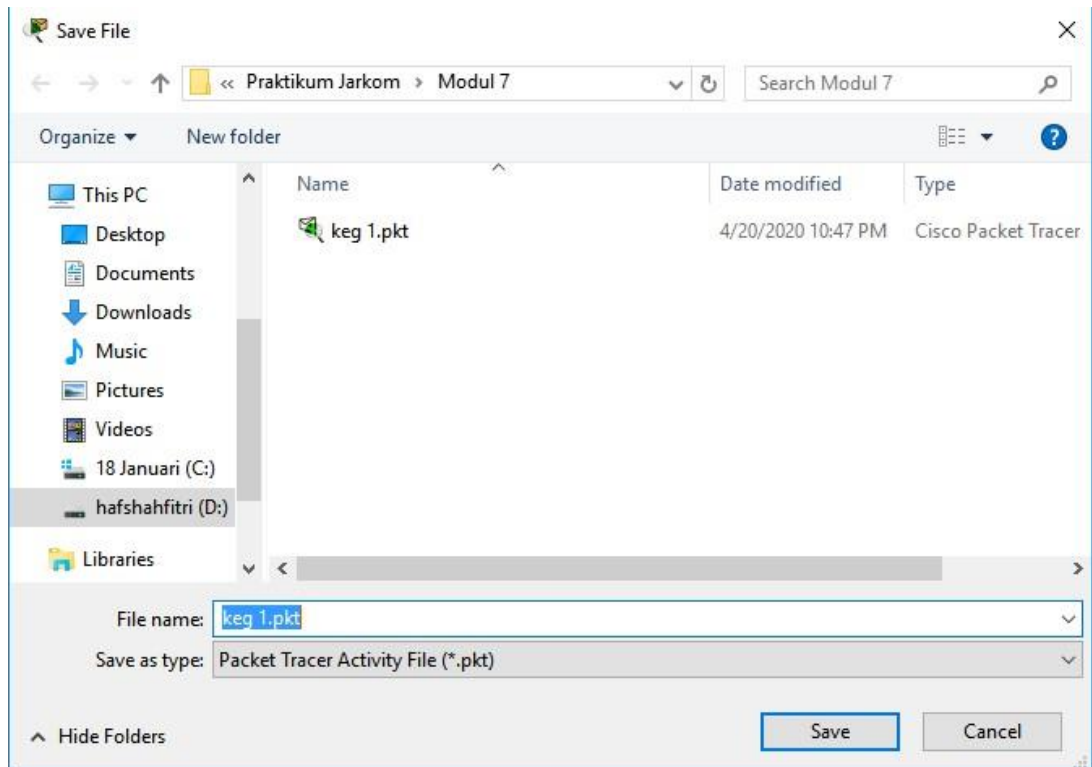


The screenshot shows the 'Puma' router's CLI window. The 'CLI' tab is selected. The command 'Router>ping 172.21.3.3' has been entered. The output shows a successful ping with a success rate of 100 percent (5/5) and a round-trip time of 1/2/6 ms.

```
Router>ping 172.21.3.3

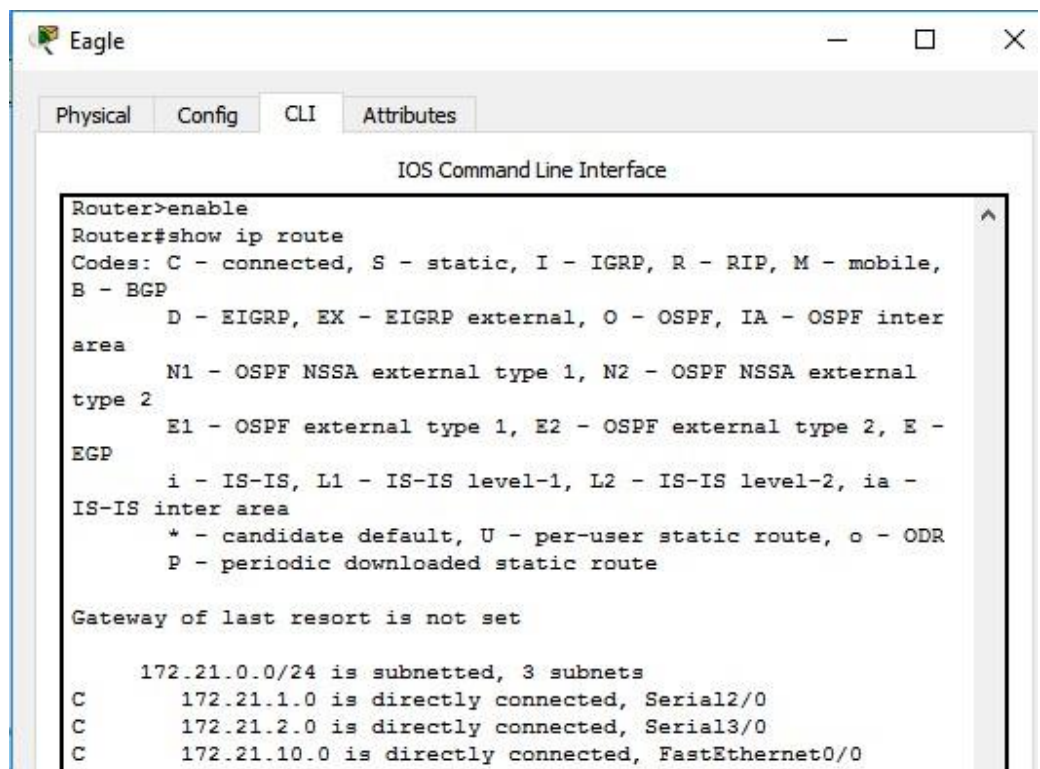
Type escape sequence to abort.
Sending 5, 100-byte ICMP Echos to 172.21.3.3, timeout is 2
seconds:
!!!!!!
Success rate is 100 percent (5/5), round-trip min/avg/max = 1/2/6
ms
```

## F. Simpan konfigurasi



## G. Tugas 7A . Melihat route table masing-masing router

### ➤ Eagle



### ➤ Puma

Puma

Physical Config CLI Attributes

IOS Command Line Interface

```
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
```

➤ Tiger

Tiger

Physical Config CLI Attributes

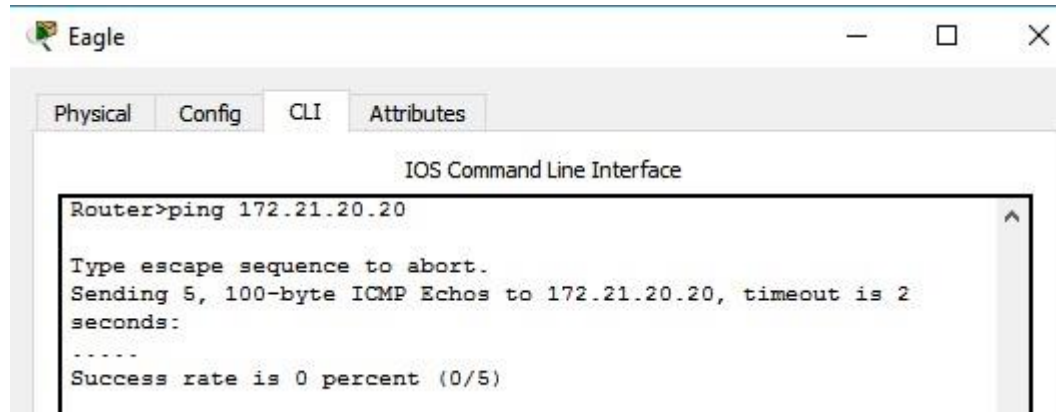
IOS Command Line Interface

```
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

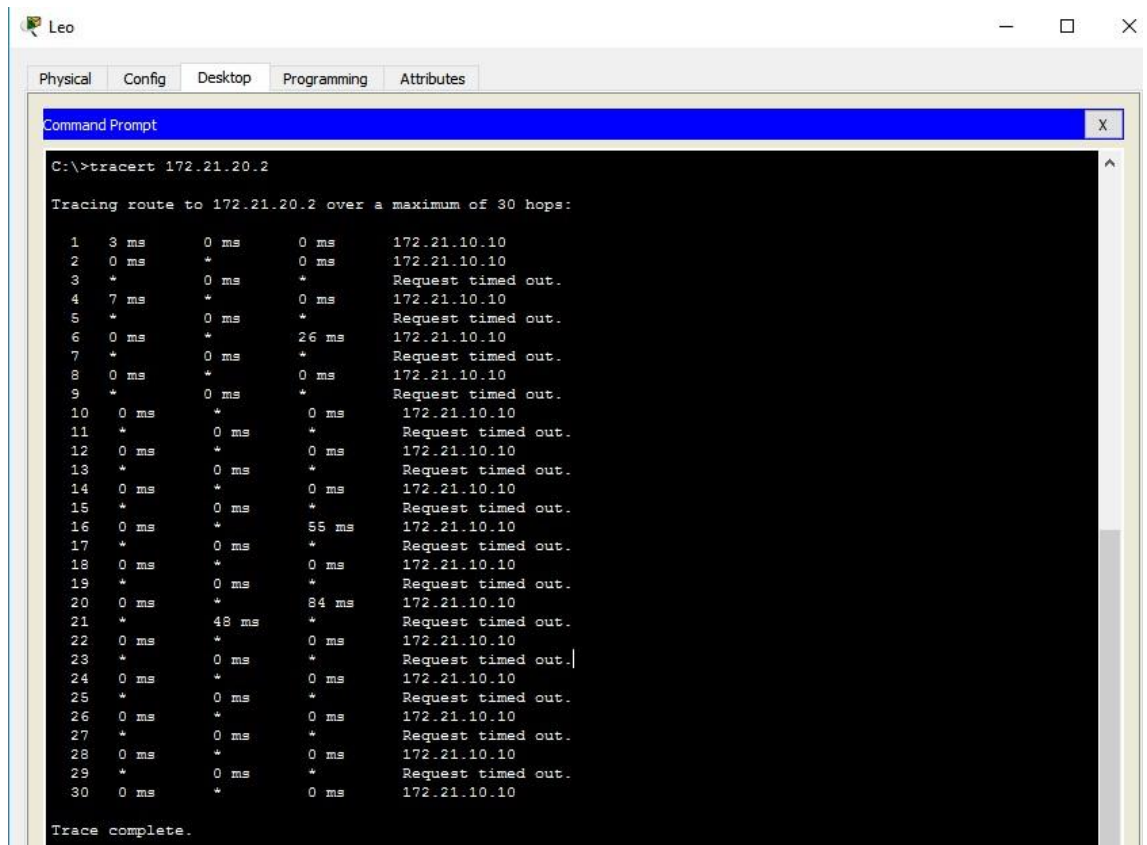
Gateway of last resort is not set

    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
```

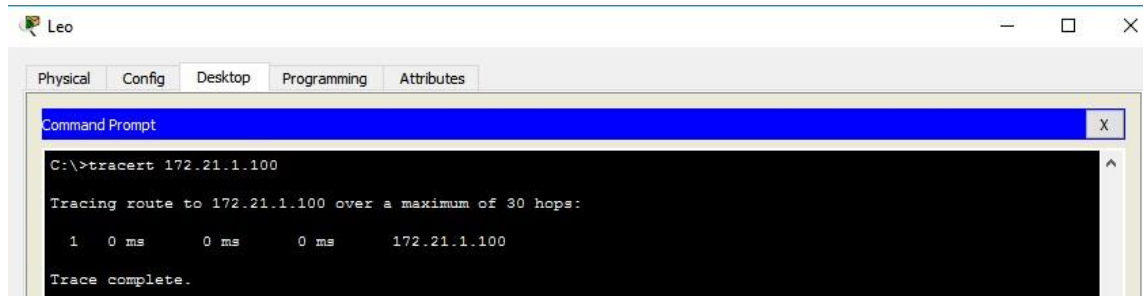
H. Tugas 8A . Ping dari Eagle ke interface e0 router Puma **JELASIN**



# I. Tugas 9A . Trace PC Leo ke PC Aries **JELASIN**



# J. Tugas 10A . Trace PC Leo ke interface s0 router Eagle **JELASIN**

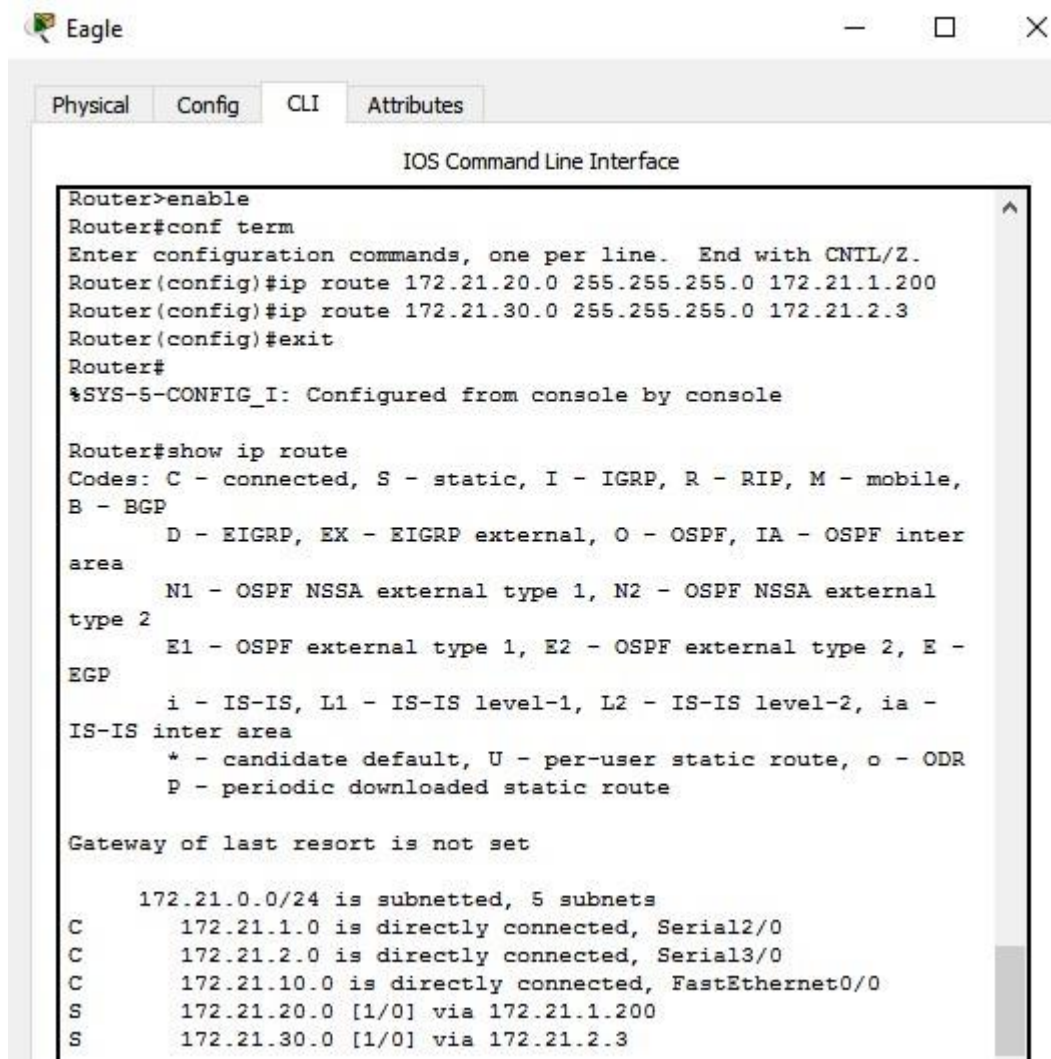


```
C:\>tracert 172.21.1.100

Tracing route to 172.21.1.100 over a maximum of 30 hops:

  0  0 ms    0 ms    0 ms    172.21.1.100
Trace complete.
```

## K. Route table untuk masing-masing router



```
Router>enable
Router#conf term
Enter configuration commands, one per line. End with CNTL/Z.
Router(config)#ip route 172.21.20.0 255.255.255.0 172.21.1.200
Router(config)#ip route 172.21.30.0 255.255.255.0 172.21.2.3
Router(config)#exit
Router#
%SYS-5-CONFIG_I: Configured from console by console

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

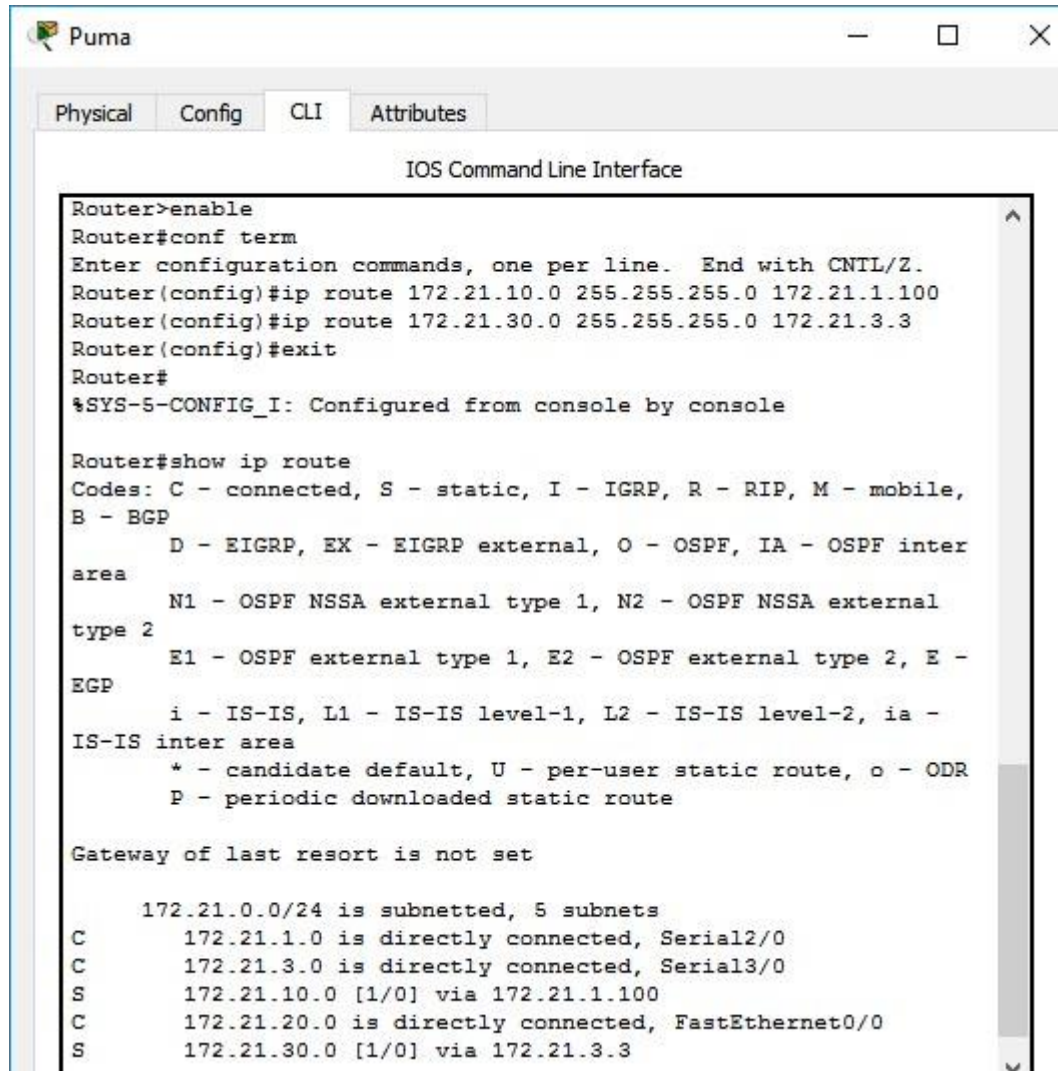
Gateway of last resort is not set

172.21.0.0/24 is subnetted, 5 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
S       172.21.20.0 [1/0] via 172.21.1.200
S       172.21.30.0 [1/0] via 172.21.2.3
```

## ❖ Tugas 11A

- Langkah penambahan route table pada router Puma





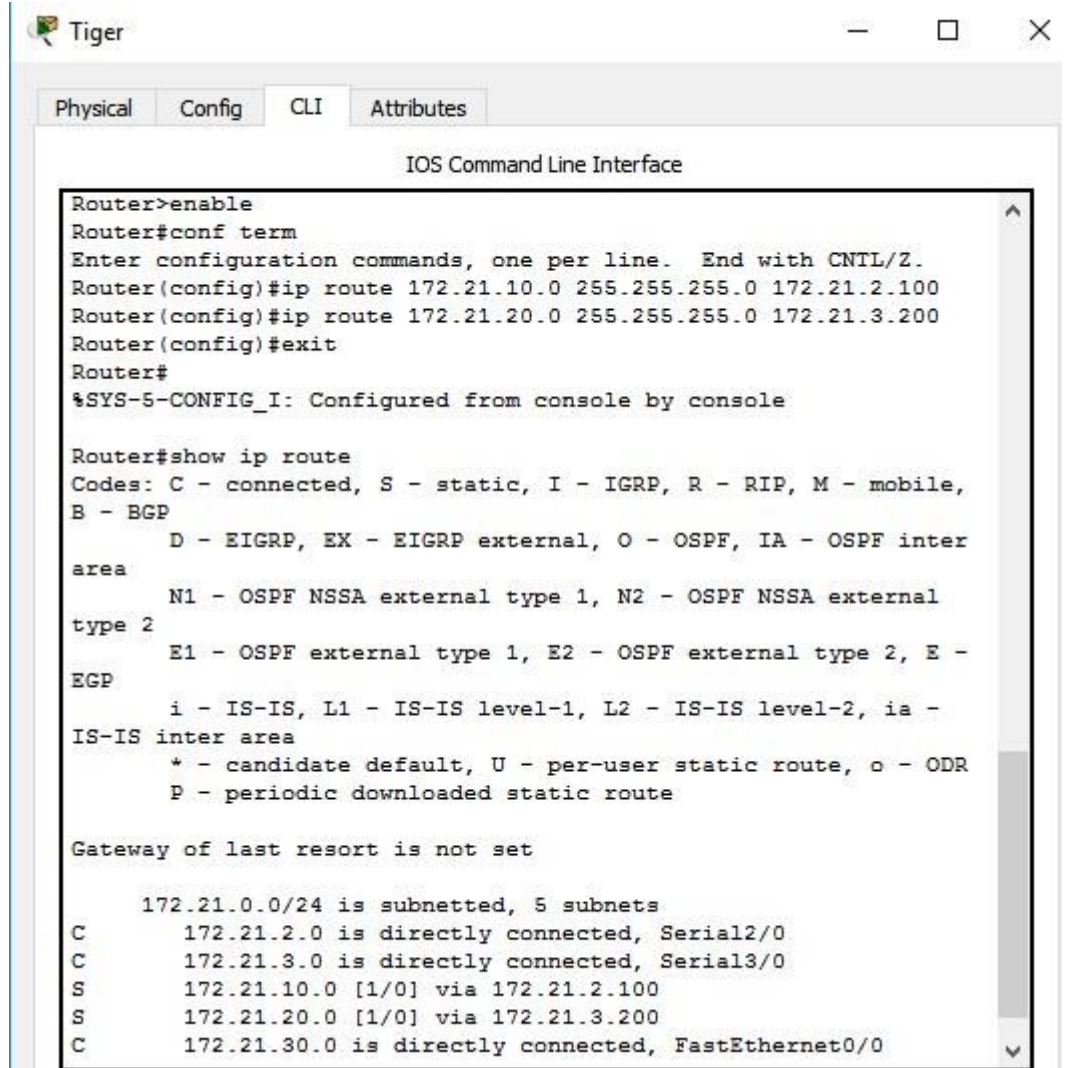
```
Router>enable
Router#conf term
Enter configuration commands, one per line. End with CNTL/Z.
Router(config)#ip route 172.21.10.0 255.255.255.0 172.21.1.100
Router(config)#ip route 172.21.30.0 255.255.255.0 172.21.3.3
Router(config)#exit
Router#
%SYS-5-CONFIG_I: Configured from console by console

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, 5 subnets
C       172.21.1.0 is directly connected, Serial2/0
C       172.21.3.0 is directly connected, Serial3/0
S       172.21.10.0 [1/0] via 172.21.1.100
C       172.21.20.0 is directly connected, FastEthernet0/0
S       172.21.30.0 [1/0] via 172.21.3.3
```

- Langkah penambahan route table pada router Tiger



```
Router>enable
Router#conf term
Enter configuration commands, one per line. End with CNTL/Z.
Router(config)#ip route 172.21.10.0 255.255.255.0 172.21.2.100
Router(config)#ip route 172.21.20.0 255.255.255.0 172.21.3.200
Router(config)#exit
Router#
%SYS-5-CONFIG_I: Configured from console by console

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

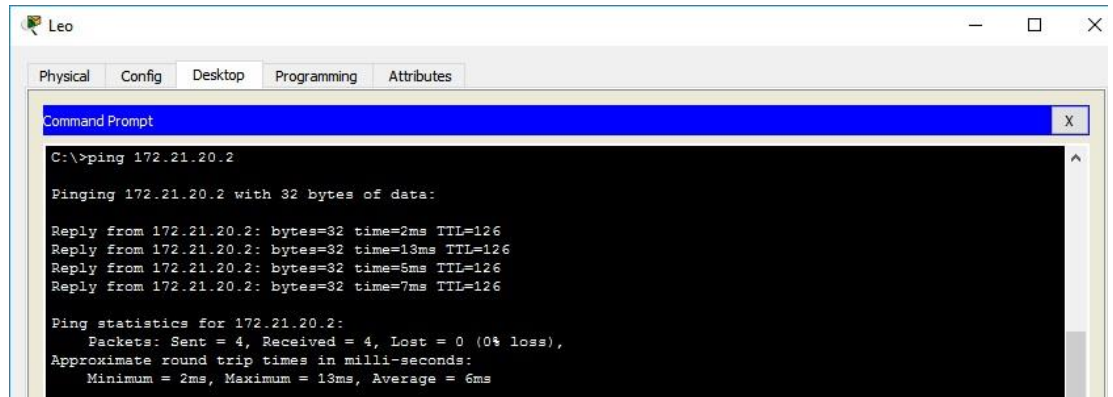
Gateway of last resort is not set

      172.21.0.0/24 is subnetted, 5 subnets
C       172.21.2.0 is directly connected, Serial2/0
C       172.21.3.0 is directly connected, Serial3/0
S       172.21.10.0 [1/0] via 172.21.2.100
S       172.21.20.0 [1/0] via 172.21.3.200
C       172.21.30.0 is directly connected, FastEthernet0/0
```

**L. Tugas 12A .**

➤ **Ping PC Leo ke PC Aries**





Leo

Physical Config Desktop Programming Attributes

Command Prompt

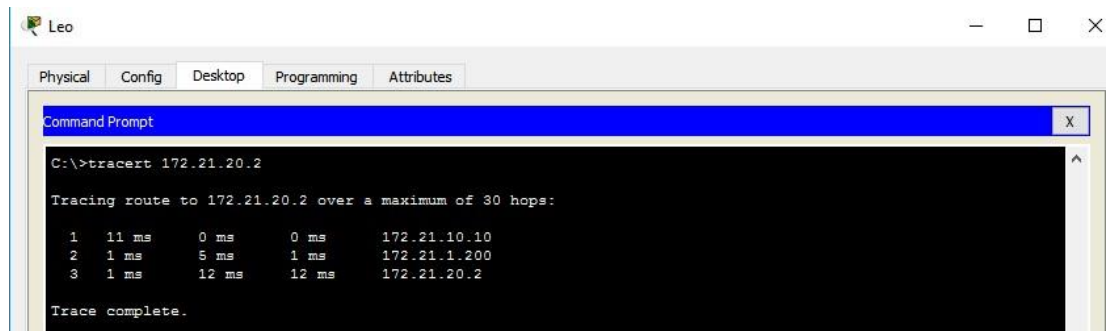
```
C:\>ping 172.21.20.2

Pinging 172.21.20.2 with 32 bytes of data:

Reply from 172.21.20.2: bytes=32 time=2ms TTL=126
Reply from 172.21.20.2: bytes=32 time=13ms TTL=126
Reply from 172.21.20.2: bytes=32 time=5ms TTL=126
Reply from 172.21.20.2: bytes=32 time=7ms 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 = 2ms, Maximum = 13ms, Average = 6ms
```

➤ Trace PC Leo ke PC Aries **JELASKAN**



Leo

Physical Config Desktop Programming Attributes

Command Prompt

```
C:\>tracert 172.21.20.2

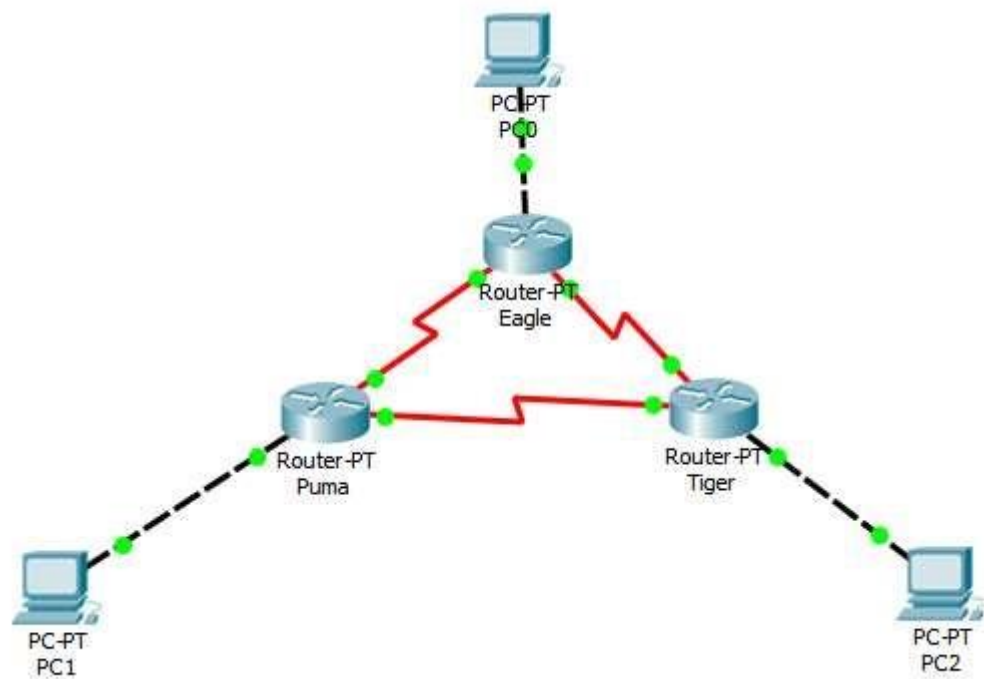
Tracing route to 172.21.20.2 over a maximum of 30 hops:

  0  11 ms    0 ms    0 ms    172.21.10.10
  1  1 ms     5 ms    1 ms    172.21.1.200
  2  1 ms    12 ms   12 ms   172.21.20.2

Trace complete.
```

## # ACTIVITY 2

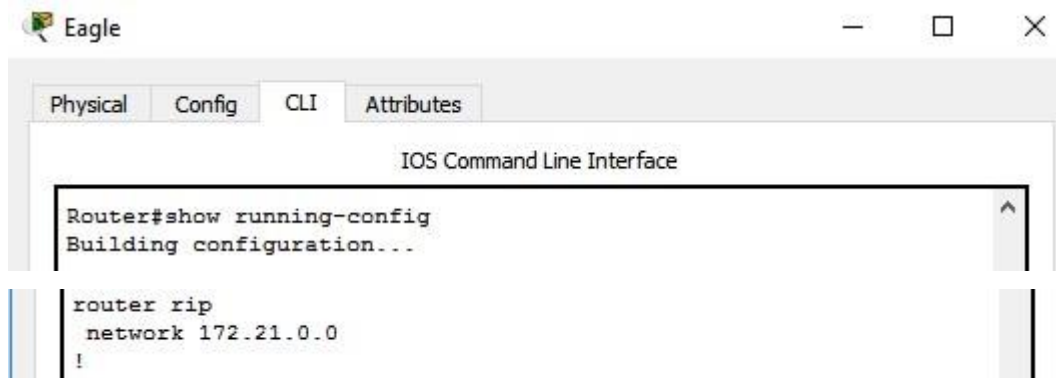
- A. Membuka topologi kegiatan 1
- B. Load konfigurasi seluruh device yang disimpan pada langkah 6 kegiatan 1



### C. Konfigurasi routing RIP pada router Eagle

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

### D. Melihat konfigurasi routing RIP



```
Router#show running-config
Building configuration...

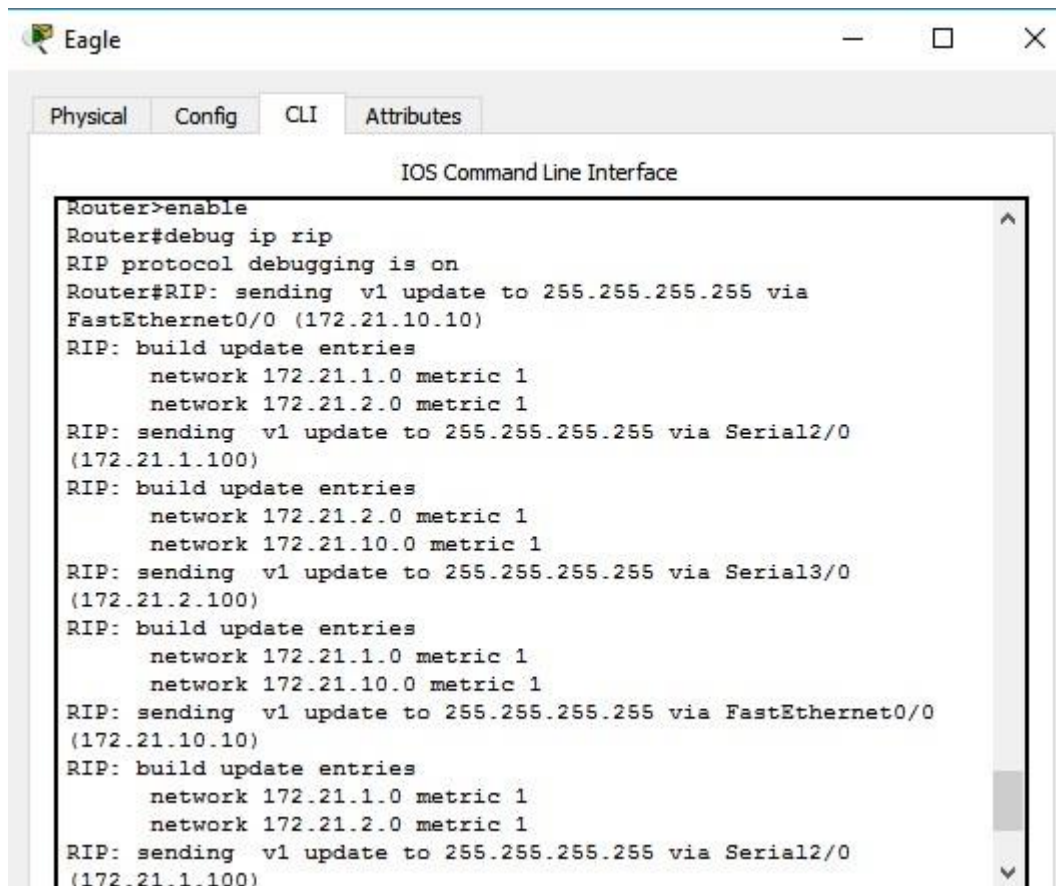
router rip
 network 172.21.0.0
!
```

❖ **Tugas 4A** . Nomer alamat jaringan yang terdaftar pada konfigurasi routing RIP

**172.21.0.0**

❖ **Tugas 4B** . Mengapa alamat jaringan yang terhubung dengan interface e0, s0, dan s1 tidak didaftarkan ke konfigurasi routing RIP **GATAU**

## E. Proses update routing RIP



```
Router>enable
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
(172.21.1.100)
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
(172.21.2.100)
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
(172.21.1.100)
```

```

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
(172.21.2.100)
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
(172.21.1.100)
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
(172.21.2.100)
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

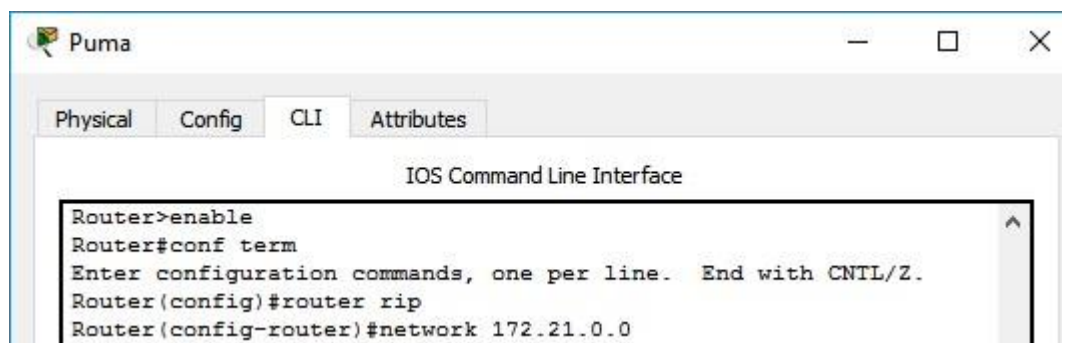
```

❖ *Tugas 5A* . Penjelasan singkat proses update routing RIP

## F. Konfigurasi routing RIP pada puma dan tiger

### ➤ PUMA

- Konfigurasi routing RIP



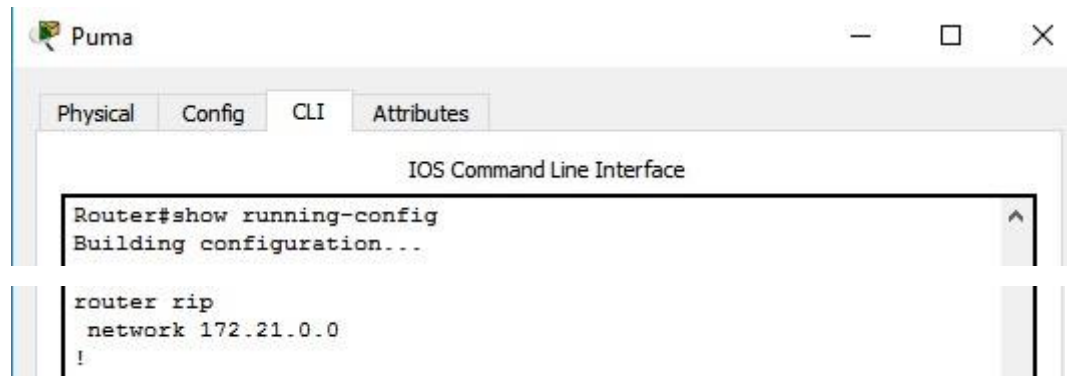
The screenshot shows a window titled 'Puma' with tabs for 'Physical', 'Config', 'CLI', and 'Attributes'. The 'CLI' tab is active, displaying the 'IOS Command Line Interface'. The commands entered are as follows:

```

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

```

- Melihat konfigurasi routing RIP

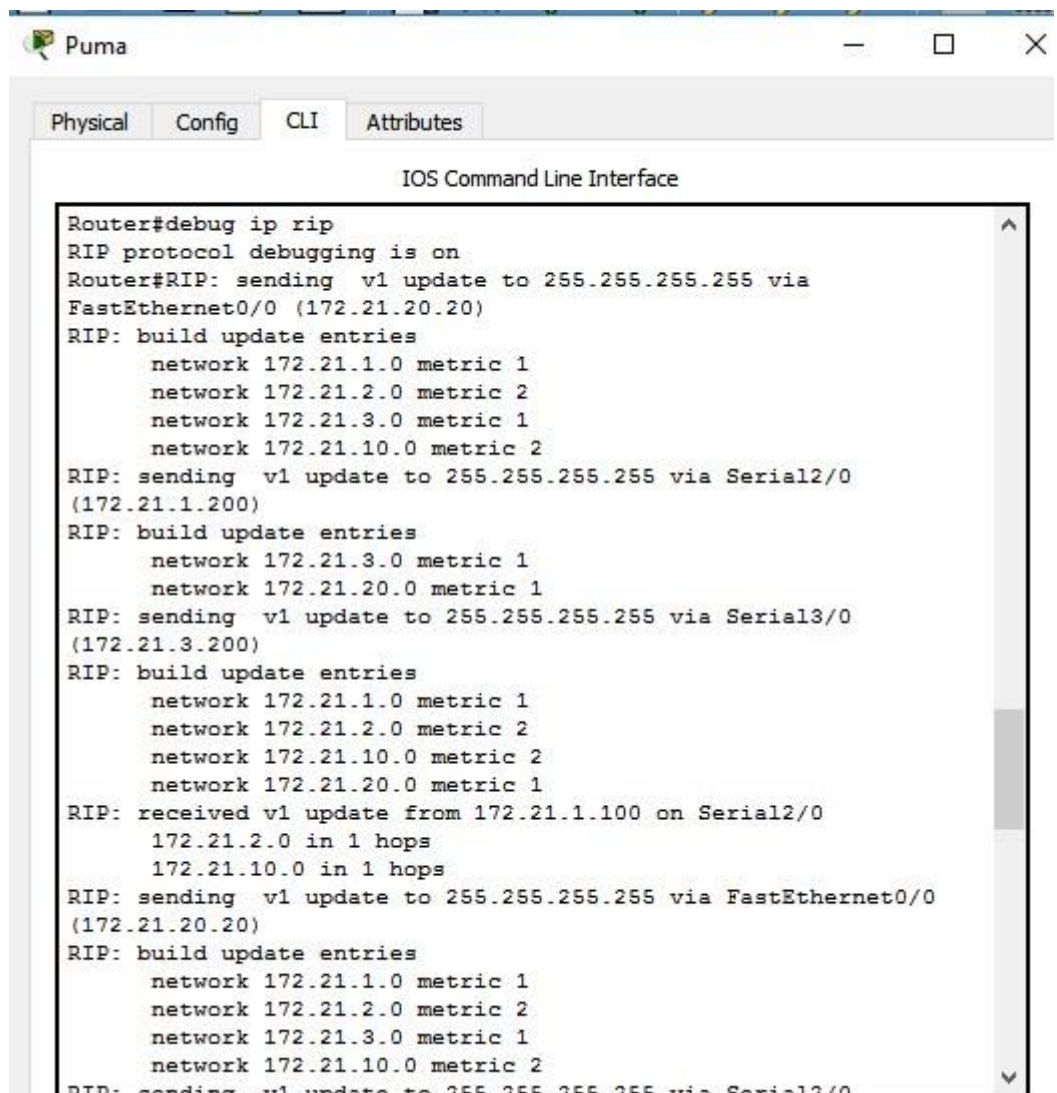


The image shows a Puma window with a tabbed interface. The 'CLI' tab is selected, displaying the 'IOS Command Line Interface'. The text in the terminal shows the command 'Router#show running-config' and its output, which includes 'router rip' and 'network 172.21.0.0'.

```
Router#show running-config
Building configuration...

router rip
 network 172.21.0.0
!
```

- Update routing RIP



The image shows a Puma window with a tabbed interface. The 'CLI' tab is selected, displaying the 'IOS Command Line Interface'. The text in the terminal shows the command 'Router#debug ip rip' and its output, which includes 'RIP protocol debugging is on' and several lines of debug output showing RIP updates and build update entries.

```
Router#debug ip rip
RIP protocol debugging is on
Router#RIP: sending v1 update to 255.255.255.255 via
FastEthernet0/0 (172.21.20.20)
RIP: build update entries
    network 172.21.1.0 metric 1
    network 172.21.2.0 metric 2
    network 172.21.3.0 metric 1
    network 172.21.10.0 metric 2
RIP: sending v1 update to 255.255.255.255 via Serial2/0
(172.21.1.200)
RIP: build update entries
    network 172.21.3.0 metric 1
    network 172.21.20.0 metric 1
RIP: sending v1 update to 255.255.255.255 via Serial3/0
(172.21.3.200)
RIP: build update entries
    network 172.21.1.0 metric 1
    network 172.21.2.0 metric 2
    network 172.21.10.0 metric 2
    network 172.21.20.0 metric 1
RIP: received v1 update from 172.21.1.100 on Serial2/0
    172.21.2.0 in 1 hops
    172.21.10.0 in 1 hops
RIP: sending v1 update to 255.255.255.255 via FastEthernet0/0
(172.21.20.20)
RIP: build update entries
    network 172.21.1.0 metric 1
    network 172.21.2.0 metric 2
    network 172.21.3.0 metric 1
    network 172.21.10.0 metric 2
RIP: sending v1 update to 255.255.255.255 via Serial2/0
```

```

RIP: sending v1 update to 255.255.255.255 via Serial3/0
(172.21.3.200)
RIP: build update entries
    network 172.21.1.0 metric 1
    network 172.21.2.0 metric 2
    network 172.21.10.0 metric 2
    network 172.21.20.0 metric 1
RIP: received v1 update from 172.21.1.100 on Serial2/0
    172.21.2.0 in 1 hops
    172.21.10.0 in 1 hops
RIP: sending v1 update to 255.255.255.255 via FastEthernet0/0
(172.21.20.20)
RIP: build update entries
    network 172.21.1.0 metric 1
    network 172.21.2.0 metric 2
    network 172.21.3.0 metric 1
    network 172.21.10.0 metric 2
RIP: sending v1 update to 255.255.255.255 via Serial2/0
(172.21.1.200)
RIP: build update entries
    network 172.21.3.0 metric 1
    network 172.21.20.0 metric 1
RIP: sending v1 update to 255.255.255.255 via Serial3/0
(172.21.3.200)
RIP: build update entries
    network 172.21.1.0 metric 1
    network 172.21.2.0 metric 2
    network 172.21.10.0 metric 2
    network 172.21.20.0 metric 1
RIP: received v1 update from 172.21.1.100 on Serial2/0
    172.21.2.0 in 1 hops
    172.21.10.0 in 1 hops

```

## ➤ TIGER

- Konfigurasi routing RIP



The screenshot shows a window titled "Tiger" with a tabbed interface. The "CLI" tab is selected, displaying the "IOS Command Line Interface". The command sequence entered is as follows:

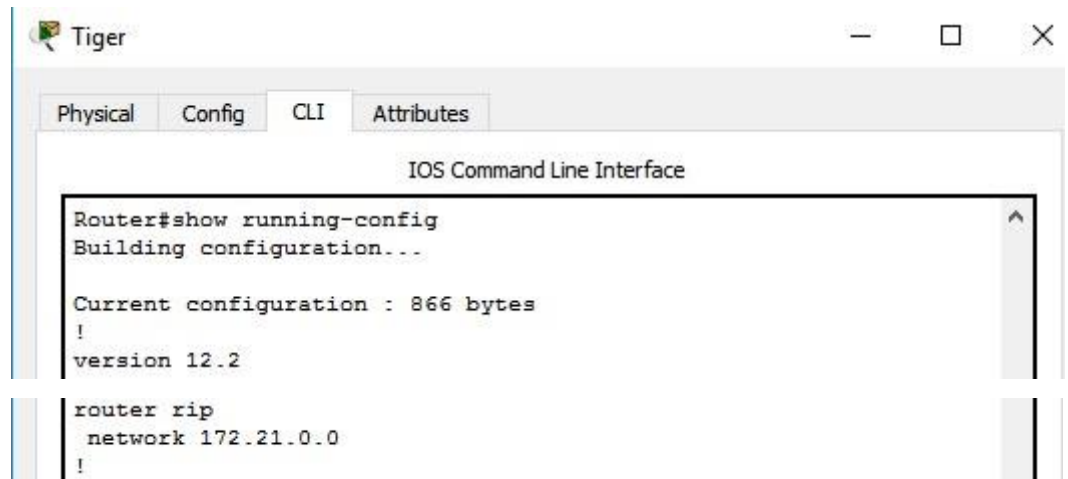
```

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

```

- Melihat konfigurasi routing RIP





Tiger

Physical Config CLI Attributes

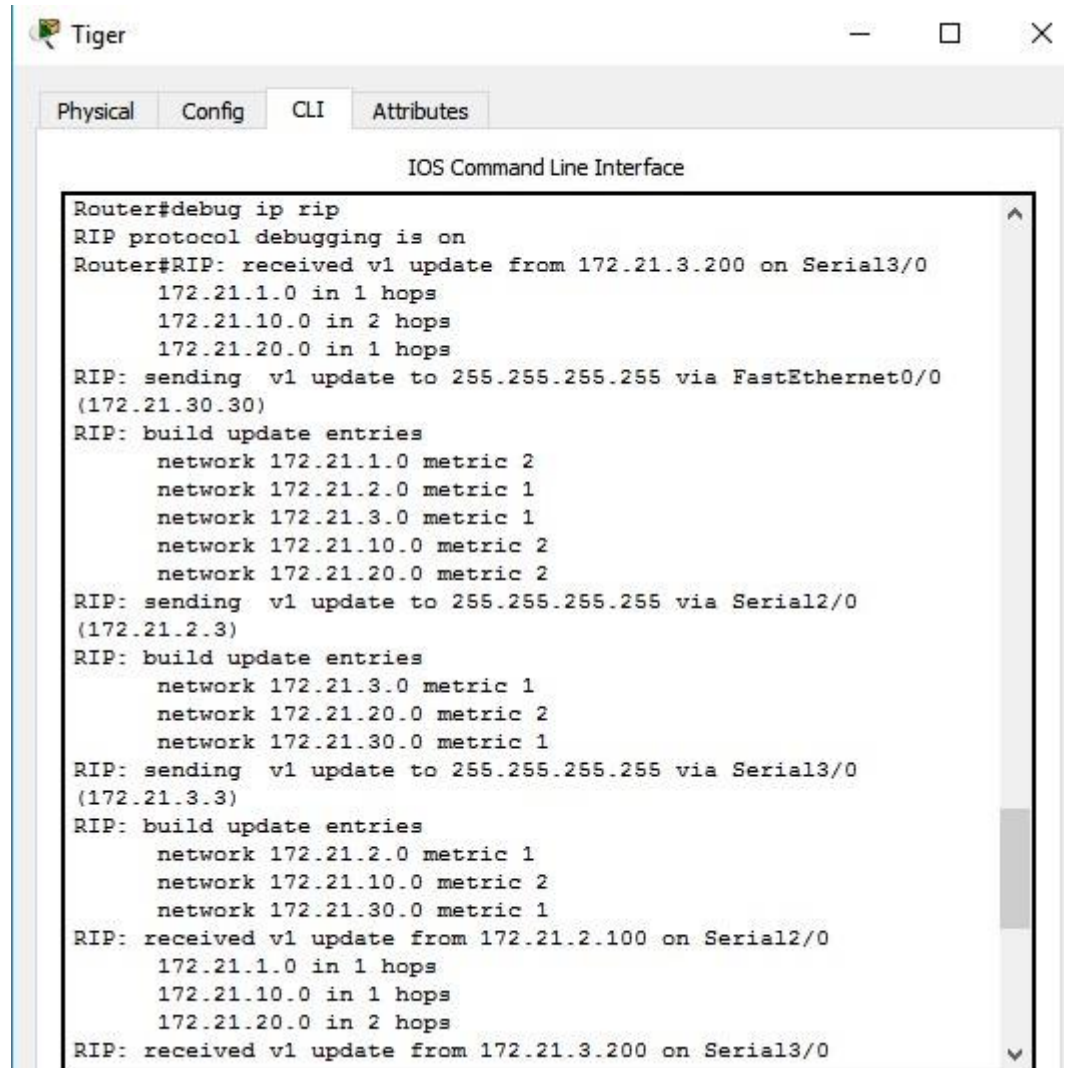
IOS Command Line Interface

```
Router#show running-config
Building configuration...

Current configuration : 866 bytes
!
version 12.2

router rip
 network 172.21.0.0
!
```

- Update routing RIP



Tiger

Physical Config CLI Attributes

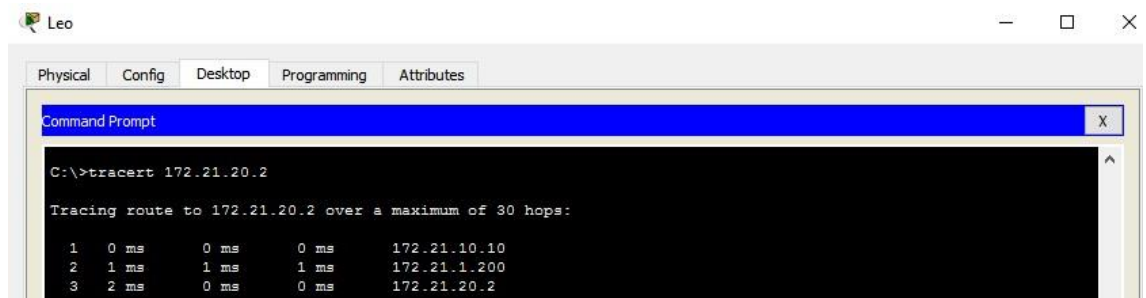
IOS Command Line Interface

```
Router#debug ip rip
RIP protocol debugging is on
Router#RIP: received v1 update from 172.21.3.200 on Serial3/0
 172.21.1.0 in 1 hops
 172.21.10.0 in 2 hops
 172.21.20.0 in 1 hops
RIP: sending v1 update to 255.255.255.255 via FastEthernet0/0
(172.21.30.30)
RIP: build update entries
  network 172.21.1.0 metric 2
  network 172.21.2.0 metric 1
  network 172.21.3.0 metric 1
  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
(172.21.2.3)
RIP: build update entries
  network 172.21.3.0 metric 1
  network 172.21.20.0 metric 2
  network 172.21.30.0 metric 1
RIP: sending v1 update to 255.255.255.255 via Serial3/0
(172.21.3.3)
RIP: build update entries
  network 172.21.2.0 metric 1
  network 172.21.10.0 metric 2
  network 172.21.30.0 metric 1
RIP: received v1 update from 172.21.2.100 on Serial2/0
 172.21.1.0 in 1 hops
 172.21.10.0 in 1 hops
 172.21.20.0 in 2 hops
RIP: received v1 update from 172.21.3.200 on Serial3/0
```



```
RIP: sending v1 update to 255.255.255.255 via Serial3/0
(172.21.3.3)
RIP: build update entries
    network 172.21.2.0 metric 1
    network 172.21.10.0 metric 2
    network 172.21.30.0 metric 1
RIP: received v1 update from 172.21.2.100 on Serial2/0
    172.21.1.0 in 1 hops
    172.21.10.0 in 1 hops
    172.21.20.0 in 2 hops
RIP: received v1 update from 172.21.3.200 on Serial3/0
    172.21.1.0 in 1 hops
    172.21.10.0 in 2 hops
    172.21.20.0 in 1 hops
RIP: sending v1 update to 255.255.255.255 via FastEthernet0/0
(172.21.30.30)
RIP: build update entries
    network 172.21.1.0 metric 2
    network 172.21.2.0 metric 1
    network 172.21.3.0 metric 1
    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
(172.21.2.3)
RIP: build update entries
    network 172.21.3.0 metric 1
    network 172.21.20.0 metric 2
    network 172.21.30.0 metric 1
RIP: sending v1 update to 255.255.255.255 via Serial3/0
(172.21.3.3)
RIP: build update entries
```

## G. Tracert PC Leo ke PC Aries



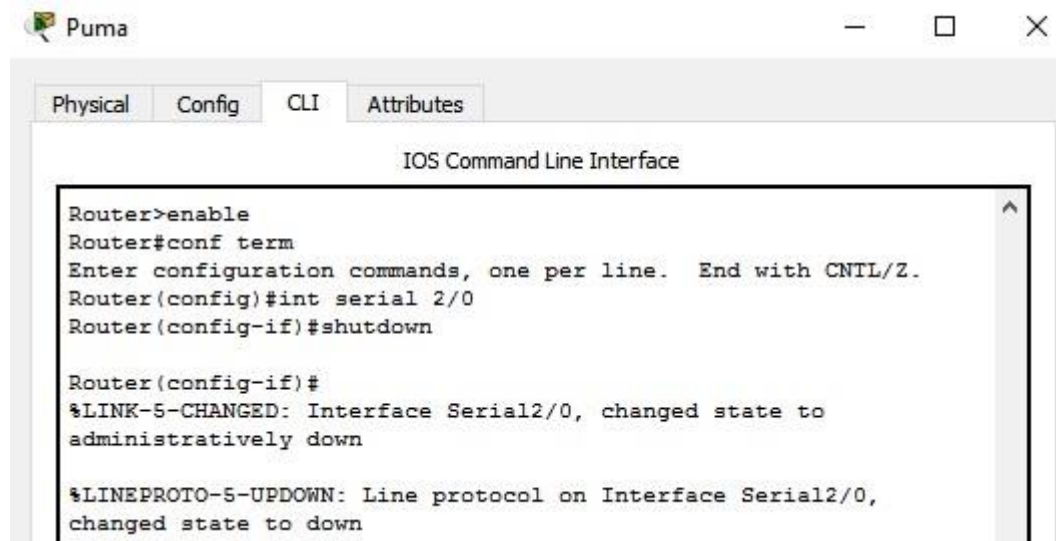
The screenshot shows a Windows desktop environment with a window titled "Leo". Inside the window is a "Command Prompt" application. The command prompt displays the command `C:\>tracert 172.21.20.2` and its output. The output shows a successful traceroute to 172.21.20.2 over a maximum of 30 hops. The route consists of three hops: Hop 1 from 172.21.10.10, Hop 2 from 172.21.1.200, and Hop 3 to 172.21.20.2. Round-trip times are shown in milliseconds for each hop.

```
C:\>tracert 172.21.20.2

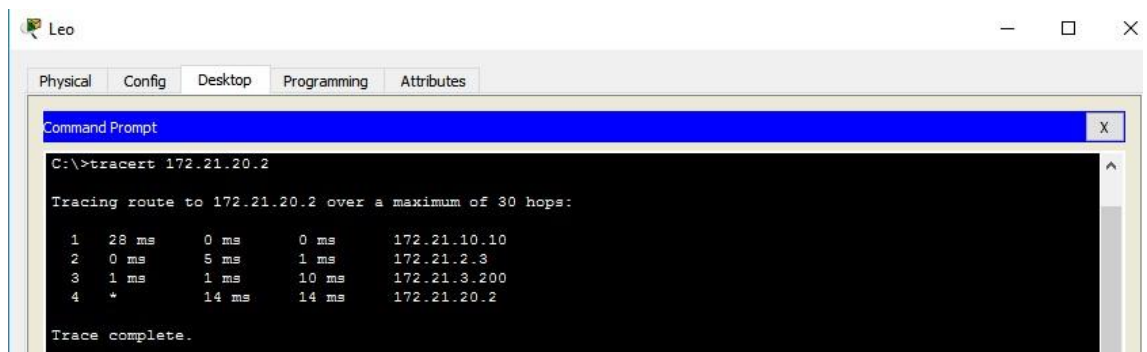
Tracing route to 172.21.20.2 over a maximum of 30 hops:

  0  0 ms    0 ms    0 ms    172.21.10.10
  1  1 ms    1 ms    1 ms    172.21.1.200
  2  2 ms    0 ms    0 ms    172.21.20.2
```

## H. Memutus hubungan antara router Eagle dan Puma



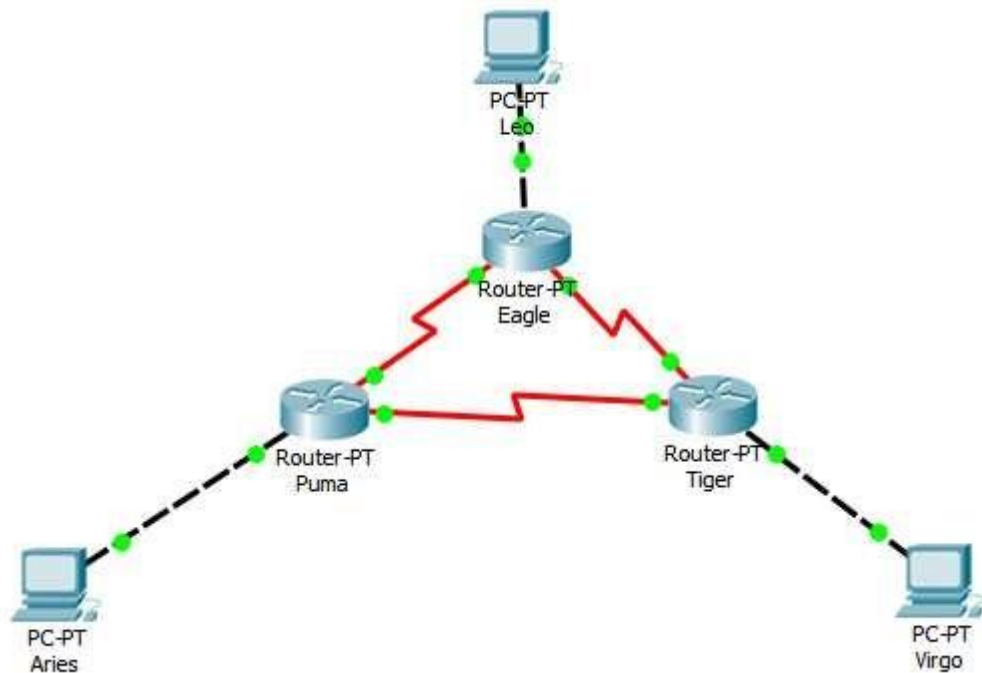
## I. Tracert PC Leo ke PC Aries



## # ACTIVITY 3

A. Membuka topologi kegiatan 1

B. Load konfigurasi seluruh device yang disimpan pada langkah 6 kegiatan 1



### C. Konfigurasi routing RIP pada router eagle

```

Eagle
Physical Config CLI Attributes
IOS Command Line Interface
Router>enable
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
  
```

### D. Melihat konfigurasi routing RIP

```

Eagle
Physical Config CLI Attributes
IOS Command Line Interface
router eigrp 100
network 172.21.0.0
auto-summary
!
router rip
network 172.21.0.0
!
  
```

### E. Melihat transaksi routing IGRP

### F. Gatau

### G. Routing IGRP pada router Puma dan Tiger

#### ➤ PUMA

- **Konfigurasi routing RIP**
- **Melihat konfigurasi routing RIP**
- **Melihat transaksi routing IGRP**

➤ **TIGER**

- **Konfigurasi routing RIP**
- **Melihat konfigurasi routing RIP**
- **Melihat transaksi routing IGRP**

**H. Trace PC Leo ke PC Aries**

**I. Memutus hubungan antara router Eagle dan Puma**

**J. Trace PC Leo ke PC Aries**