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NIM : L200180035

Kelas : B

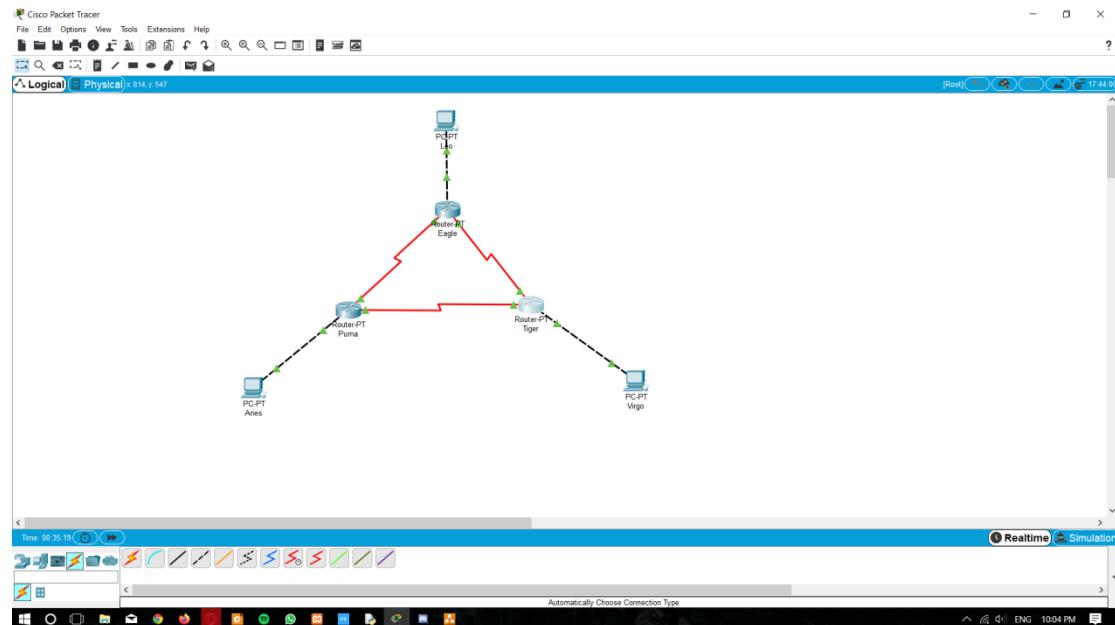
Praktikum Jaringan Komputer

Modul 7

Latihan dan Tugas

Kegiatan Praktikum

Kegiatan 1. Topologi 1 (Static Routing)



1. Konfigurasi masing masing Router dengan IP

a. Router Eagle

```

Eagle
Physical Config CLI Attributes
Technical Support: http://www.cisco.com/techsupport
Copyright (C) 1997-2005 by cisco Systems, Inc.
Compiled Wed 27-Apr-04 19:01 by mtsang

PC 1001 (FTSC2005) processor (revision 0x200) with 60416K/5120K bytes of memory
Processor board ID FTU123 (0123)
PC2005 processor; part number 0, mask 01
Bridge software, Version 3.0.0.
X.25 software, Version 3.0.0.
4 FastEthernet/IEEE 802.3 interface(s)
2 Low-speed serial(ymo/async) network interface(s)
32K bytes of non-volatile configuration memory.
63488K bytes of ATA CompactFlash (Read/Write)

--- System Configuration Dialog ---

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

Press RETURN to get started!

Router>enable
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)#
*LINE=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 sec/0
Router>(config-if)#!ip address 172.21.1.1 255.255.255.0
Router>(config-if)#!no shutdown

*LINE=5-CHANGED: Interface Serial1/0, changed state to down
Router>(config-if)#!int serial1/0
Router>(config-if)#!clock rate 2000000
This command applies only to DCE interfaces
Router>(config-if)#!no shutdown
This command applies only to DCE interfaces
Router>(config-if)#!ip address 172.21.2.1 255.255.255.0
Router>(config-if)#!no shutdown

*LINE=5-CHANGED: Interface Serial1/0, changed state to down
Router>(config-if)#
Ctrl+F6 to exit CLI focus

```

b. Router Puma

```

Puma
Physical Config CLI Attributes
Technical Support: http://www.cisco.com/techsupport
Copyright (C) 1997-2005 by cisco Systems, Inc.
Compiled Wed 27-Apr-04 19:01 by mtsang

PC 1001 (FTSC2005) processor (revision 0x200) with 60416K/5120K bytes of memory
Processor board ID FTU123 (0123)
PC2005 processor; part number 0, mask 01
Bridge software, Version 3.0.0.
X.25 software, Version 3.0.0.
4 FastEthernet/IEEE 802.3 interface(s)
2 Low-speed serial(ymo/async) network interface(s)
32K bytes of non-volatile configuration memory.
63488K bytes of ATA CompactFlash (Read/Write)

--- System Configuration Dialog ---

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

Press RETURN to get started!

Router>enable
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)#
*LINE=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 sec/0
Router>(config-if)#!ip address 172.21.1.2 255.255.255.0
Router>(config-if)#!no shutdown

*LINE=5-CHANGED: Interface Serial1/0, changed state to up
Router>(config-if)#!int serial1/0
Router>(config-if)#!clock rate 2000000
Router>(config-if)#!ip address 172.21.3.2 255.255.255.0
Router>(config-if)#!no shutdown

*LINE=5-CHANGED: Interface Serial1/0, changed state to down
Router>(config-if)#
Ctrl+F6 to exit CLI focus

```

c. Router Tiger

Tiger

Physical Config **CLI** Attributes

iOS Command Line Interface

```
Processor Board ID PDU0123 (0123)
PT2008 processor part number 0, mask 01
Bridging software.
Kernel version 3.0.0.
RAM size 128 MB
4 FastEthernet/IEEE 802.3 interface(s)
2 Low-speed serial (rsync/async) network interface(s)
32K bytes of nonvolatile configuration memory.
63488K bytes of ATA CompaqFlash (Read/Write)

--- System Configuration Dialog ---

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

Press RETURN to get started!

Router>enable
Router>config term
Enter configuration commands, one per line. End with CNTL/Z.
Router(config)##tad/0
Router(config)#ip address 172.21.30.30 255.255.255.0
Router(config-if)#no shutdown

Router(config-if)#%LINE-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 s0/0
Router(config-if)#ip address 172.21.2.3 255.255.255.0
Router(config-if)#no shutdown

Router(config-if)#%LINE-5-CHANGED: Interface Serial0/0, changed state to up
Router(config-if)#int s0/0
Router(config-if)#%LINEPROTO-5-UPDOWN: Line protocol on Interface Serial0/0, changed state to up

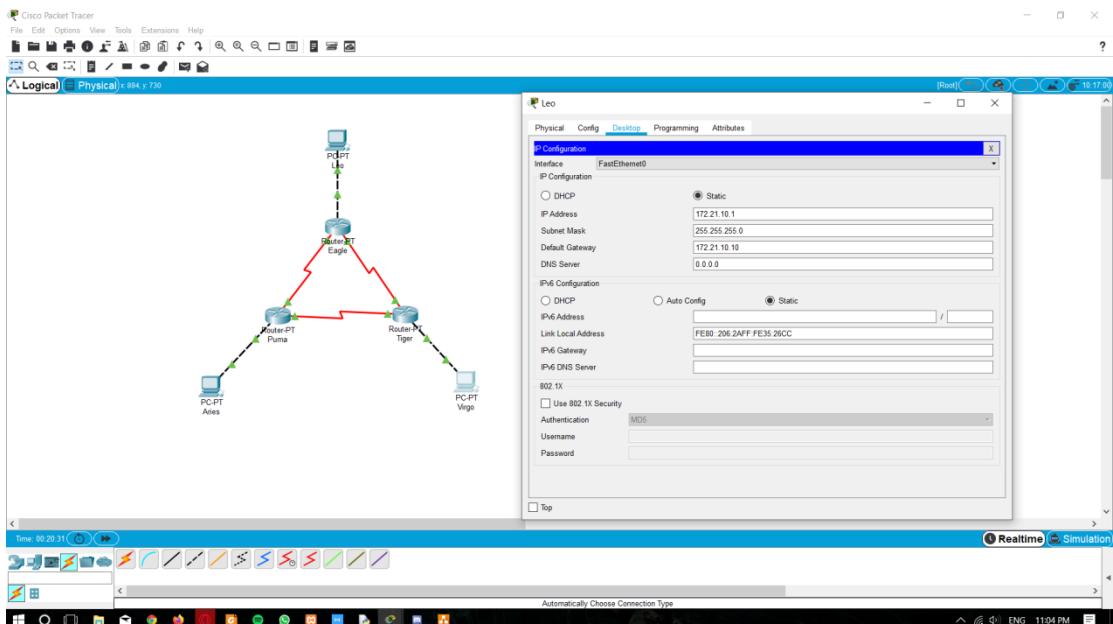
Router(config-if)#clock rate 2000000
This command applies only to DCE interfaces
Router(config-if)#clock rate 2000000
This command applies only to DCE interfaces
Router(config-if)#ip address 172.21.1.3 255.255.255.0
Router(config-if)#no shutdown

Router(config-if)#%LINE-5-CHANGED: Interface Serial1/0, changed state to up
%LINEPROTO-5-UPDOWN: Line protocol on Interface Serial1/0, changed state to up

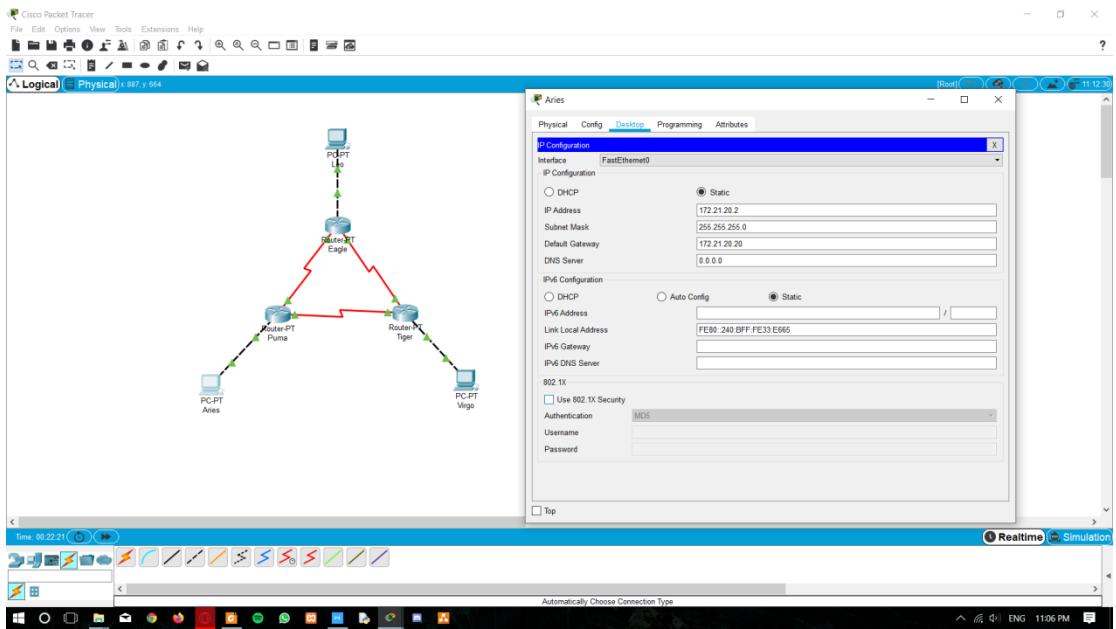
Ctrl+F6 to exit CLI focus
```

2. Konfigurasi IP pada Setiap PC

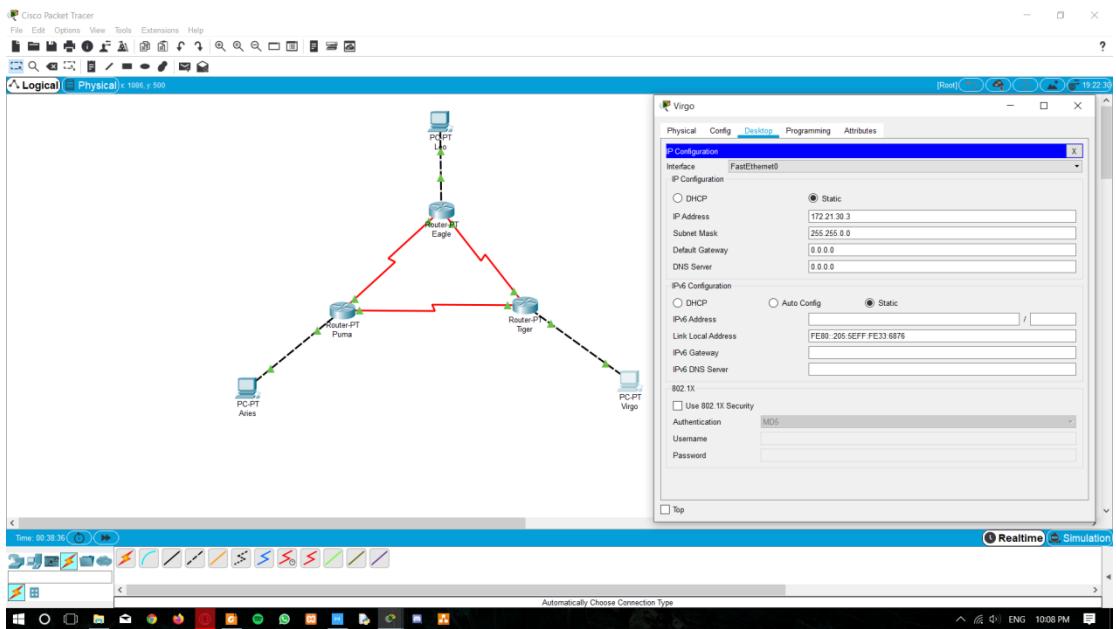
a. PC Leo



b. PC Aries



c. PC Virgo



3. Melakukan Ping

a. Ping dari PC Leo ke Router Eagle (172.21.1.1)

```
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<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 = 0ms, Average = 0ms

C:\>
```

b. Ping dari PC Aries ke Router Puma (172.21.1.2)

```
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

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 dari PC Virgo ke Router Tiger (172.21.3.3)

```

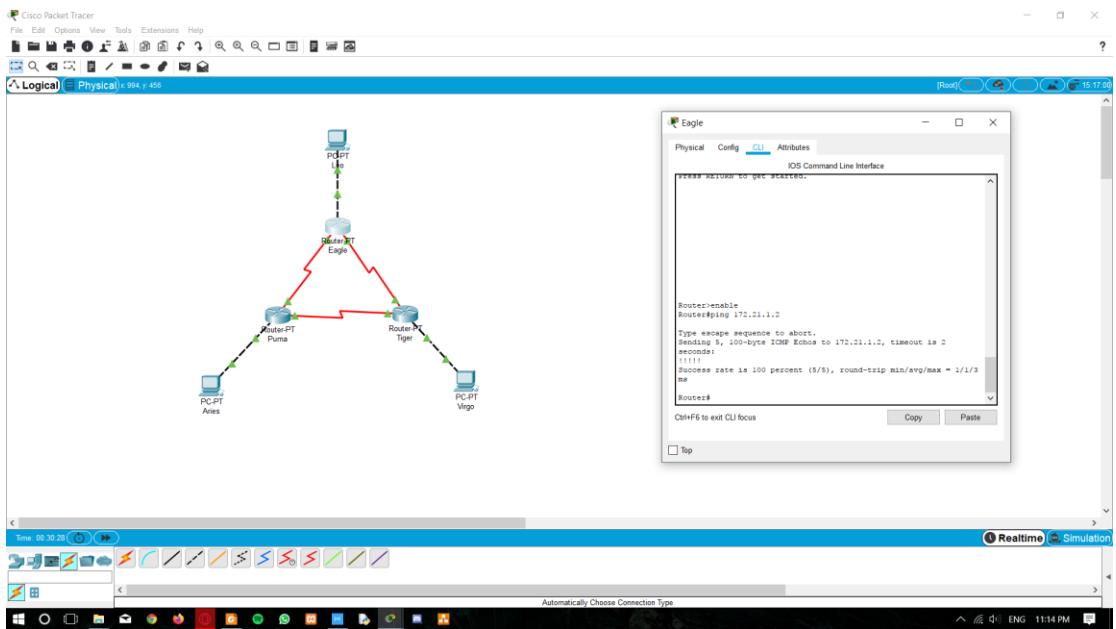
Virgo
Physical Config Desktop Programming Attributes
Command Prompt
Packet Tracer PC Command Line 1.0
C:\>ping 172.21.3.3

Pinging 172.21.3.3 with 32 bytes of data:
Reply from 172.21.3.3: bytes=32 time<1ms TTL=255

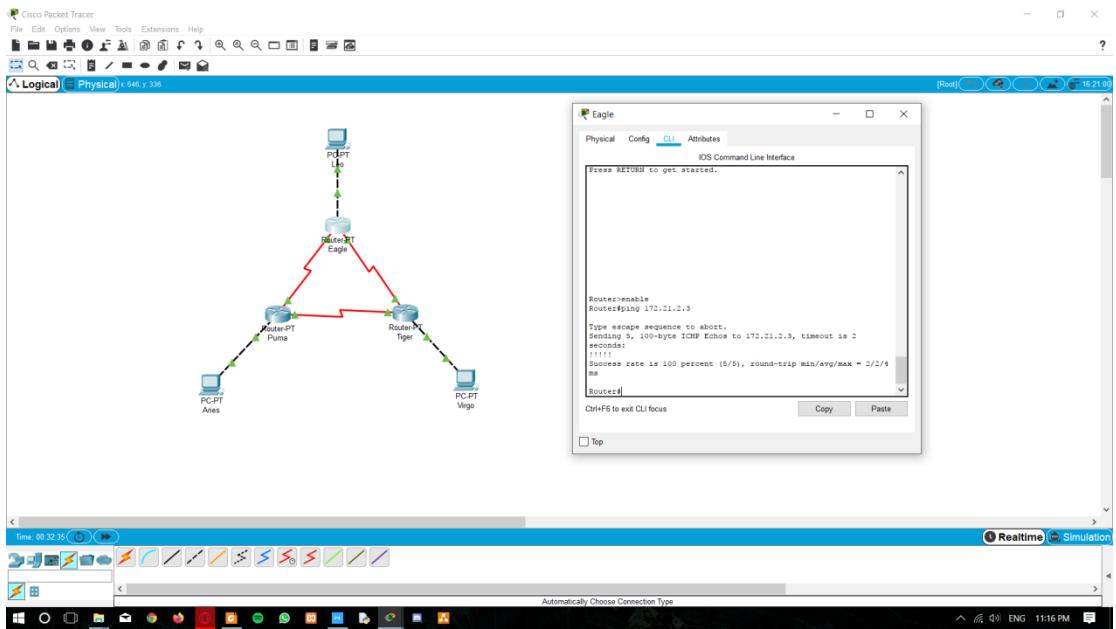
Ping statistics for 172.21.3.3:
    Packets: Sent = 4, Received = 4 (0% loss),
    Approximate round trip times in milli-seconds:
        Minimum = 0ms, Maximum = 0ms, Average = 0ms
C:\>

```

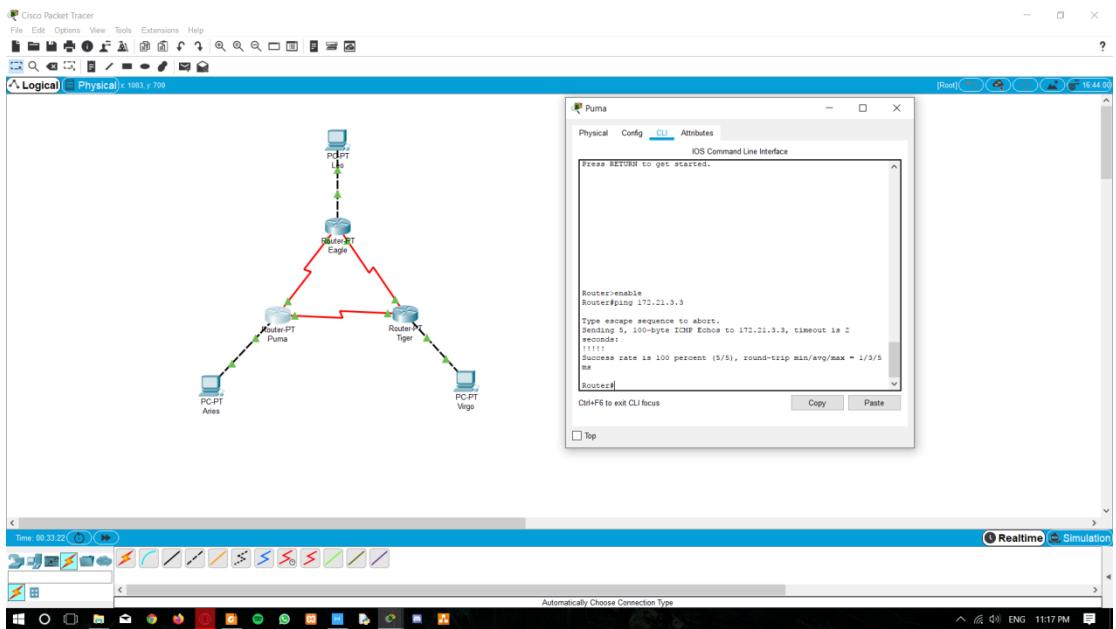
d. Ping dari Router Eagle Ke Router Puma (172.21.1.2)



e. Ping dari Router Eagle Ke Router Tiger (172.21.2.3)

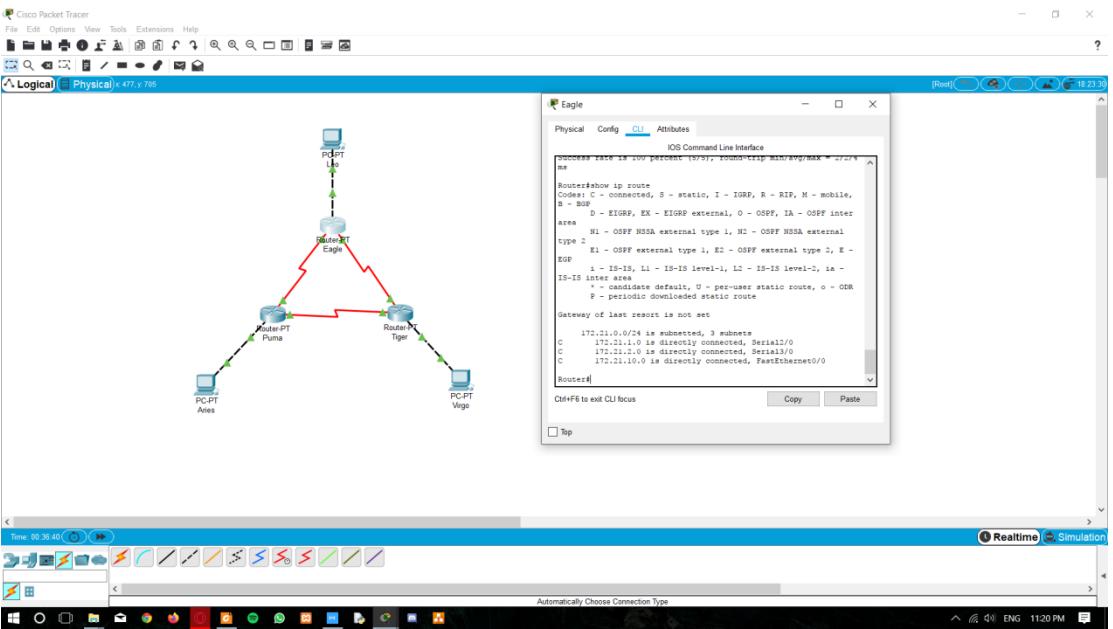


f. Ping dari Router Puma Ke Router Tiger (172.21.3.3)

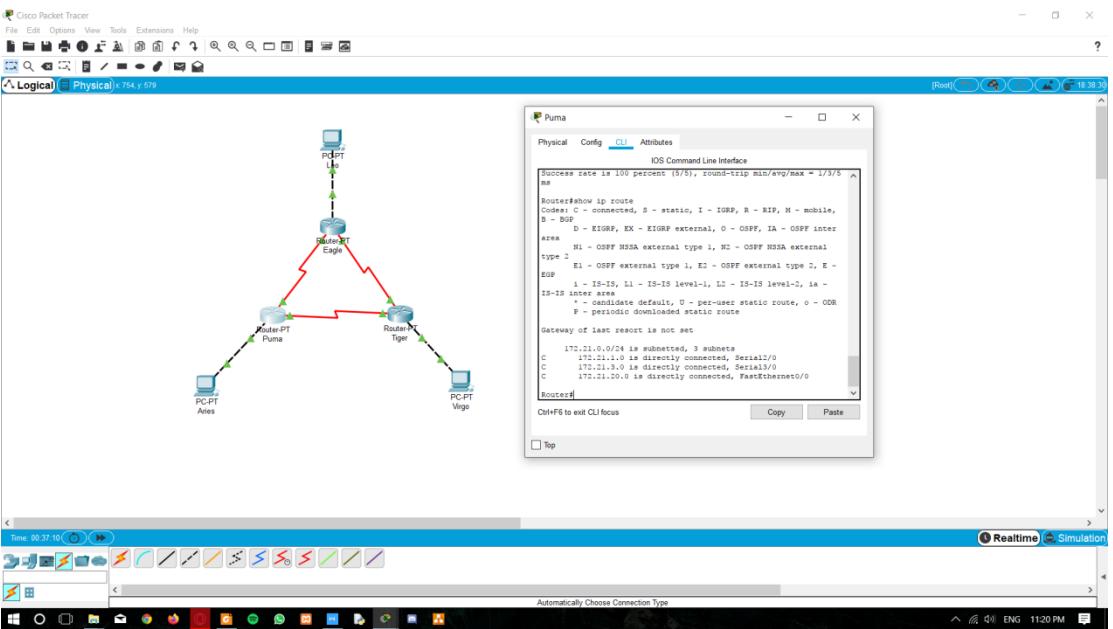


4. Melihat Route Table

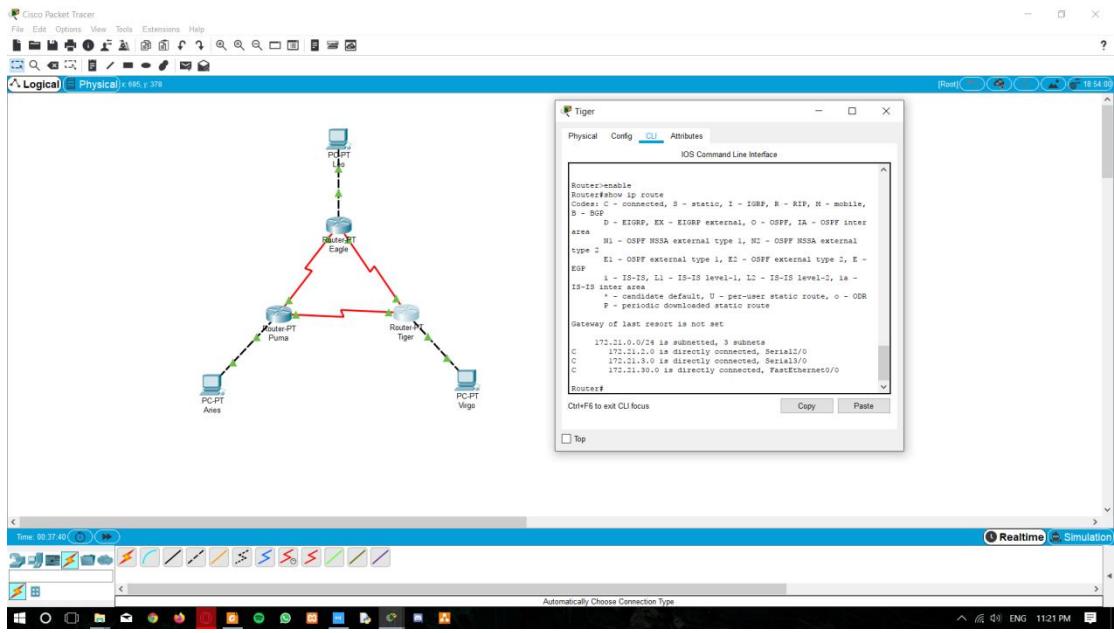
a. Router Eagle



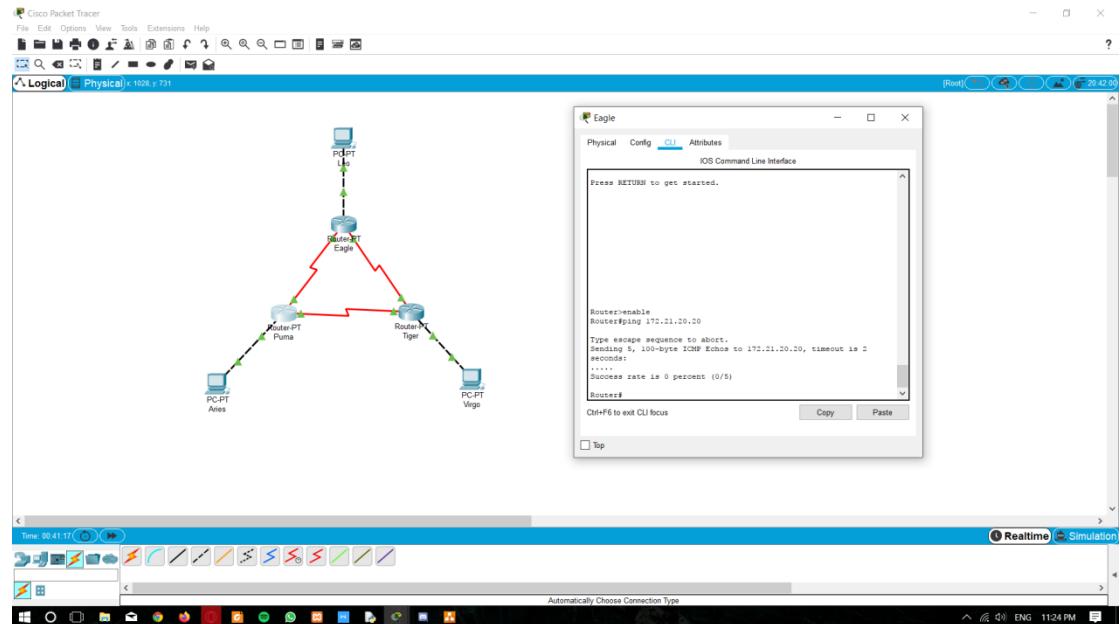
b. Router Puma



c. Router Tiger

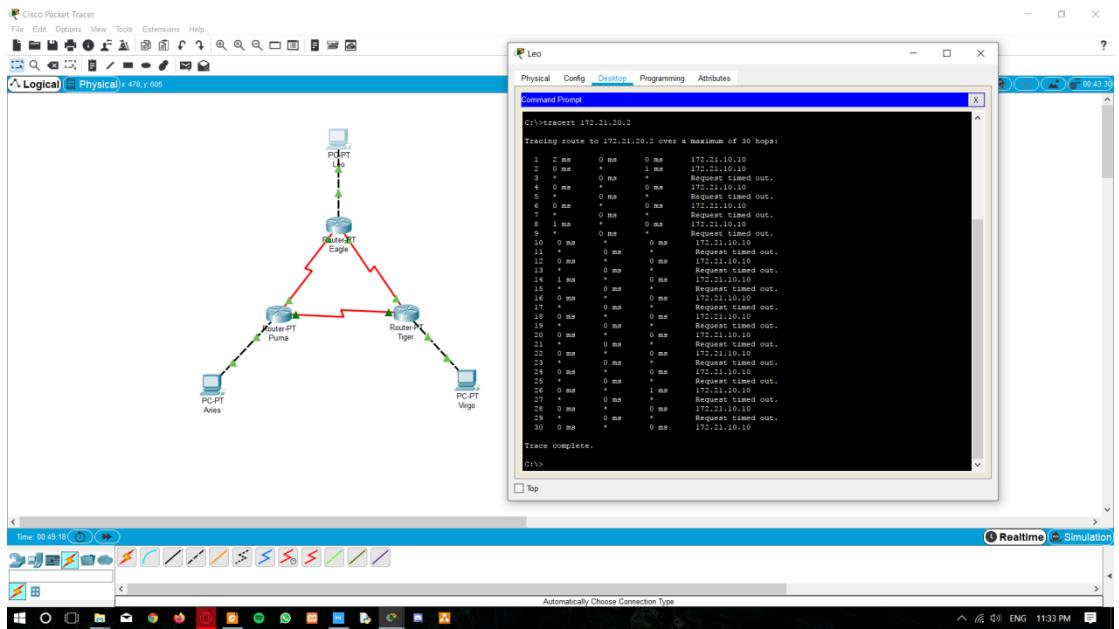


5. Melakukan ping dari Router Eagle ke alamat Interface Router Puma (172.21.20.20)



Tugas 8A : Dari hasil Ping diatas berhasil mendapat tanggapan dari Fa0/0 Router Puma. Karena Router Eagle dengan Router Puma terhubung langsung.

6. Melakukan Trace dari PC Leo ke PC Aries.



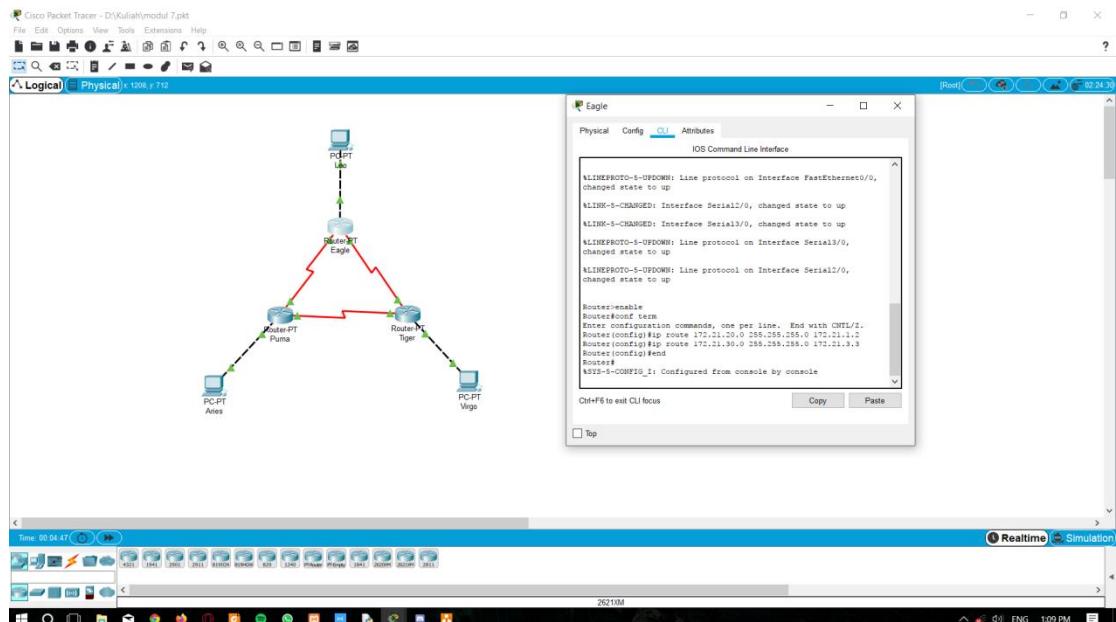
Tugas 9A : Dari Trace diatas dapat disimpulkan jika PC Leo dengan PC Aries belum terhubung, perlu dilakukan Routing pada Router Eagle

7. Melakukan Trace PC Leo ke IP Address Interface FastEthernet0/0 pada Router Eagle (172.21.1.1)

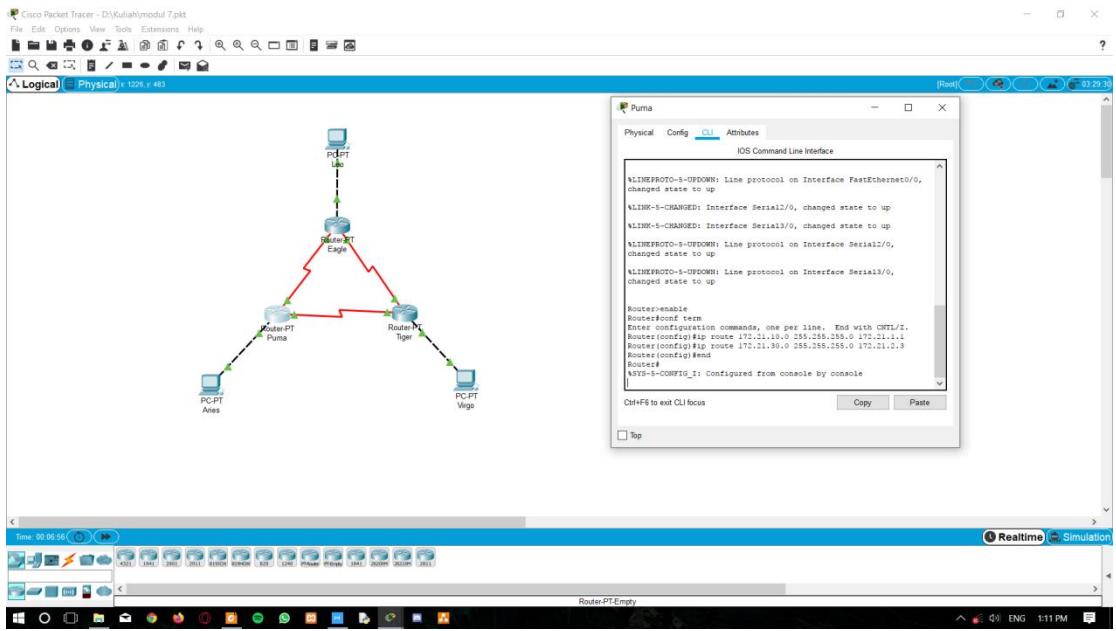
```
C:\>tracert 172.21.1.1
Tracing route to 172.21.1.1 over a maximum of 30 hops:
 1  0 ms      0 ms      0 ms      172.21.1.1
Trace complete.
C:\>
```

8. Menambahkan Route Table pada setiap Router.

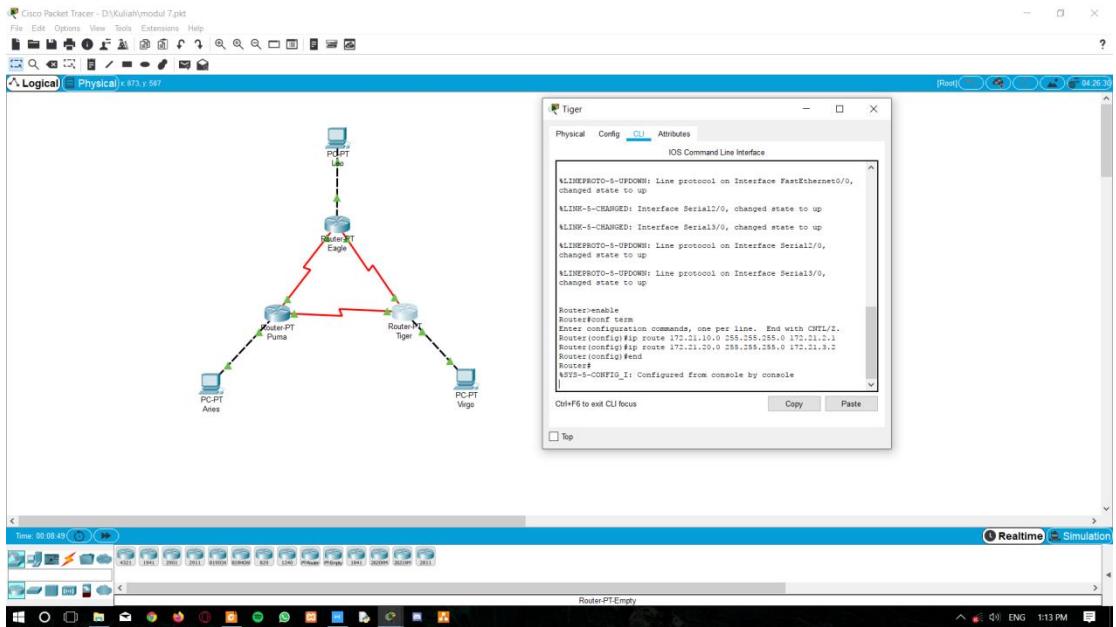
a. Route Eagle



b. Route Puma



c. Route Tiger



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

```

Physical Config Desktop Programming Attributes
Command Prompt
Packet Tracer PC Command Line 1.0
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=1ms TTL=126
Reply from 172.21.20.2: bytes=32 time=1ms 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 = 1ms, Average = 1ms

C:\>tracert 172.21.20.2

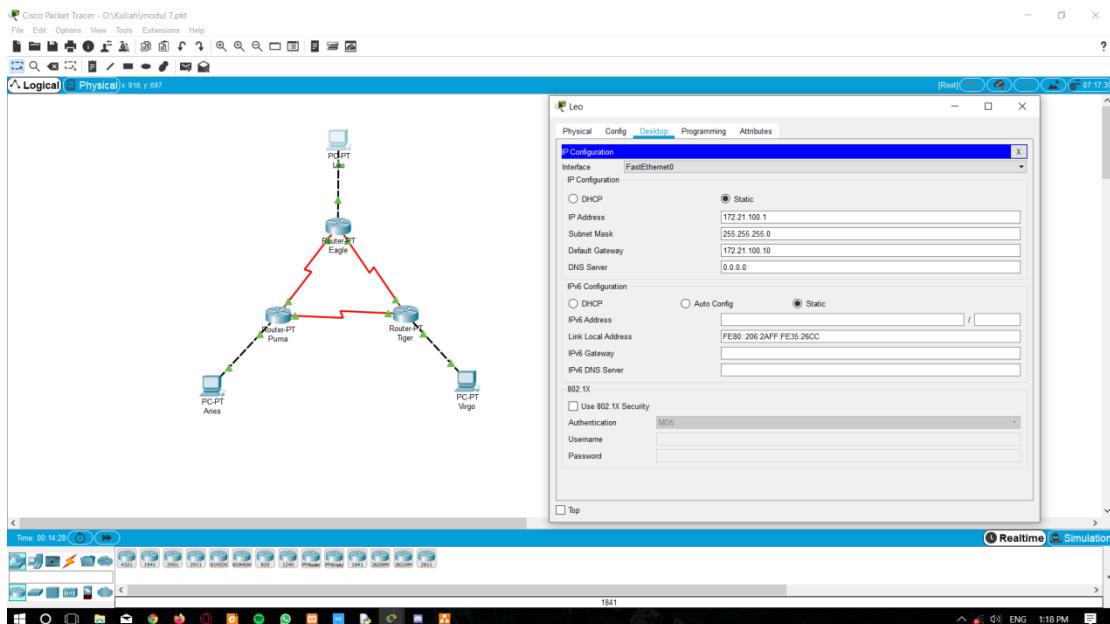
Tracing route to 172.21.20.2 over a maximum of 30 hops:
  1  0 ms    0 ms    0 ms  172.21.10.10
  2  1 ms    1 ms    0 ms  172.21.1.2
  3  0 ms    0 ms    3 ms  172.21.20.2

Trace complete.

C:\>

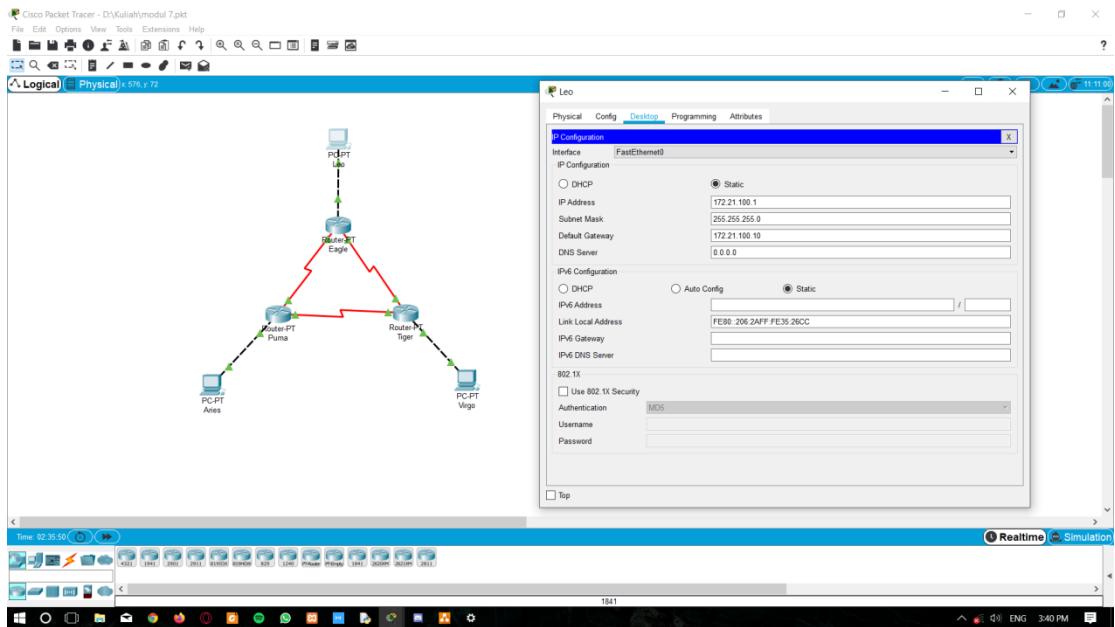
```

10. Mengubah IP PC leo diubah menjadi 172.21.100.0/24

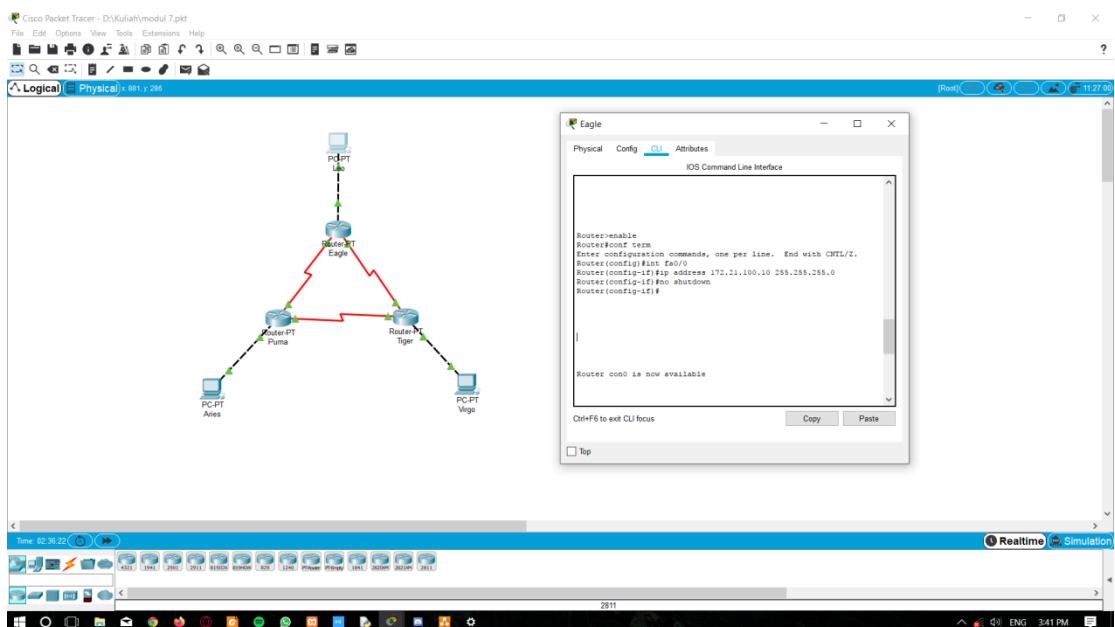


Ubah Konfigurasi IP Address serta Default Gateway Pada PC Leo dan FastEthernet0/0 pada Router Eagle.

- IP Address PC Leo

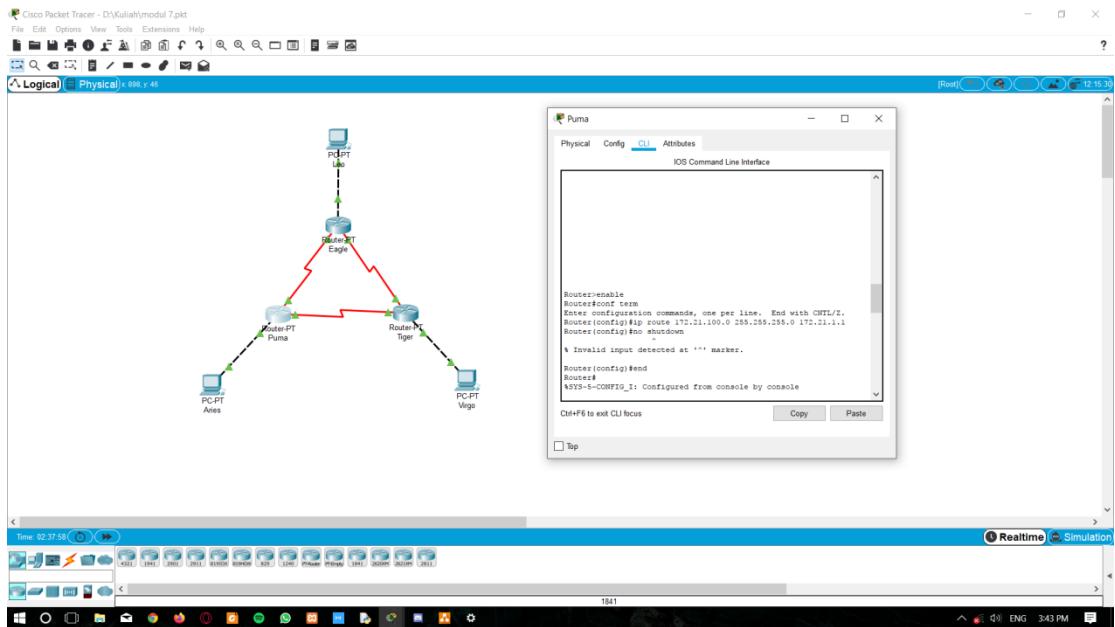


➤ Router Eagle

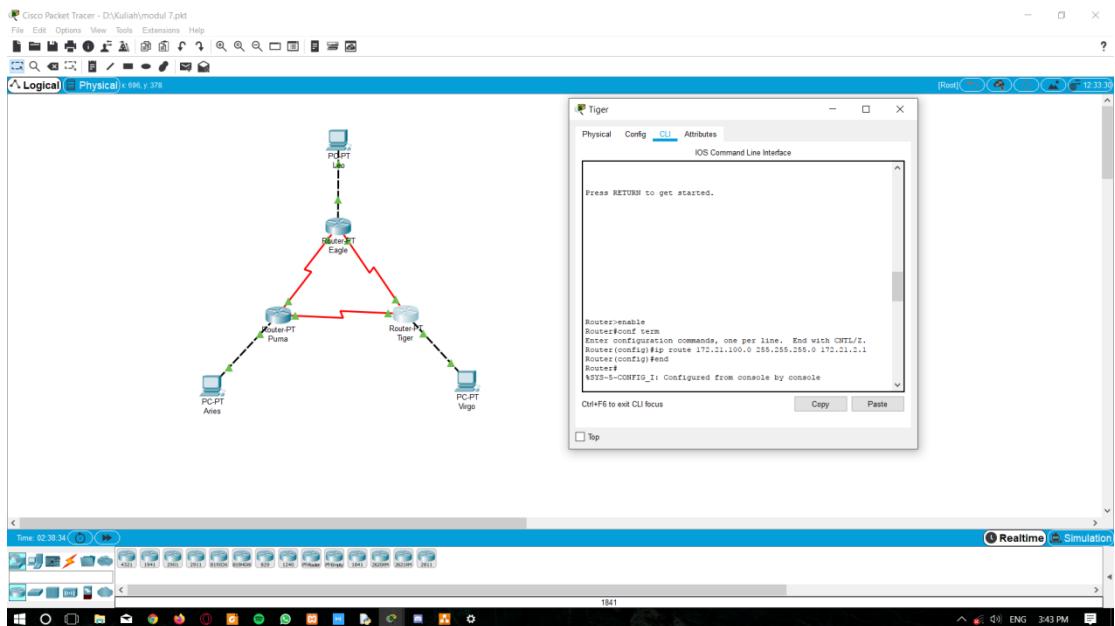


Routing ulang pada Router Puma dan Router Tiger.

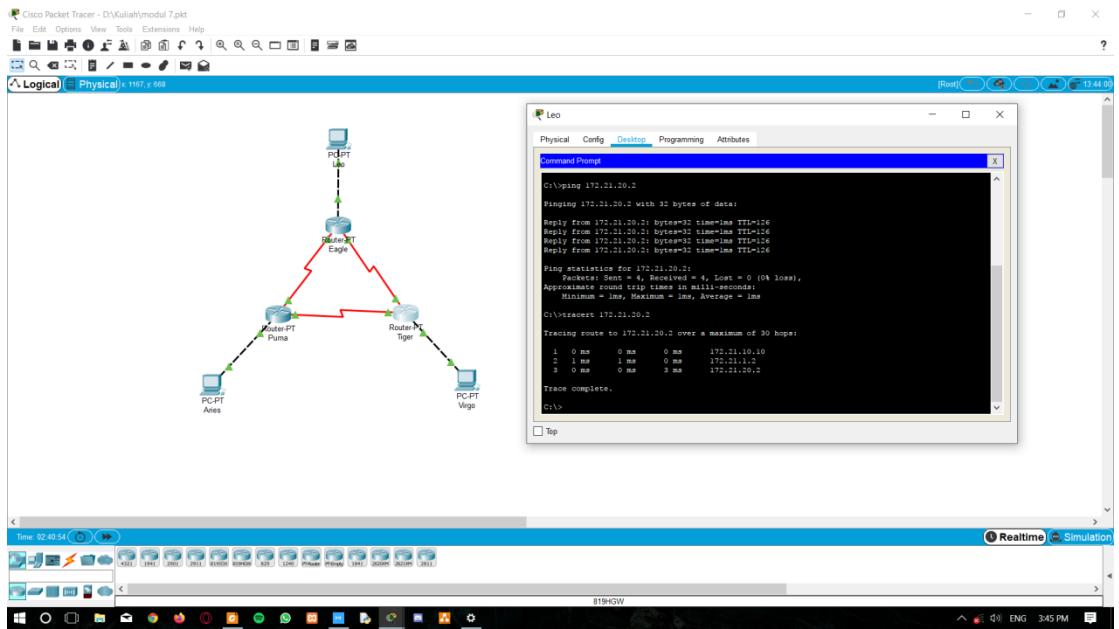
➤ Router Puma



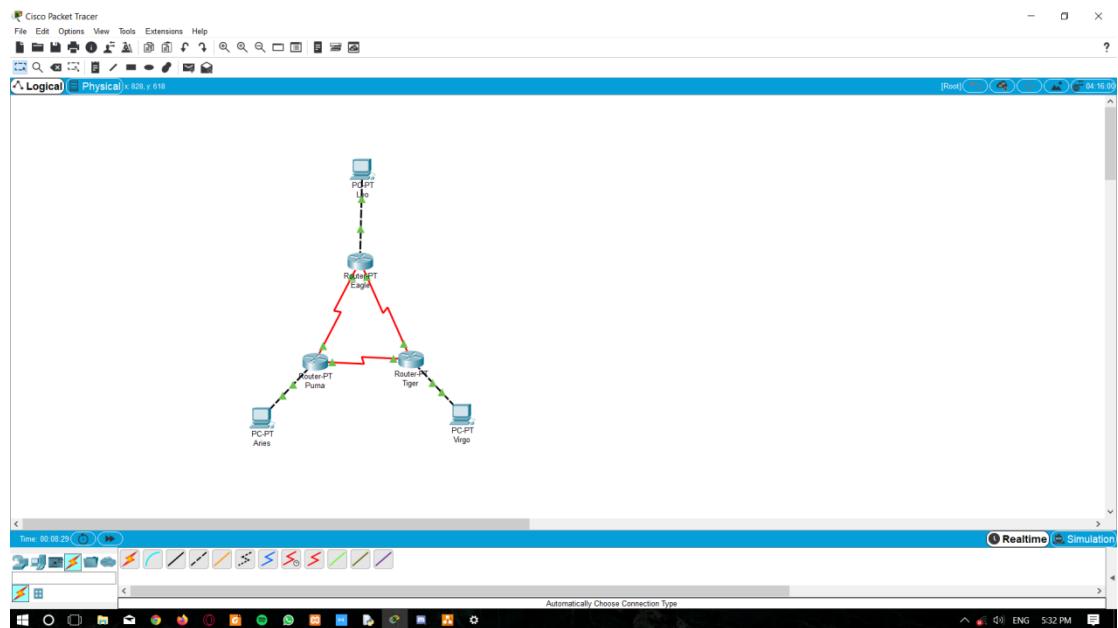
➤ Router Tiger



Melakukan ping dan traceroute dari PC Leo ke PC Aries



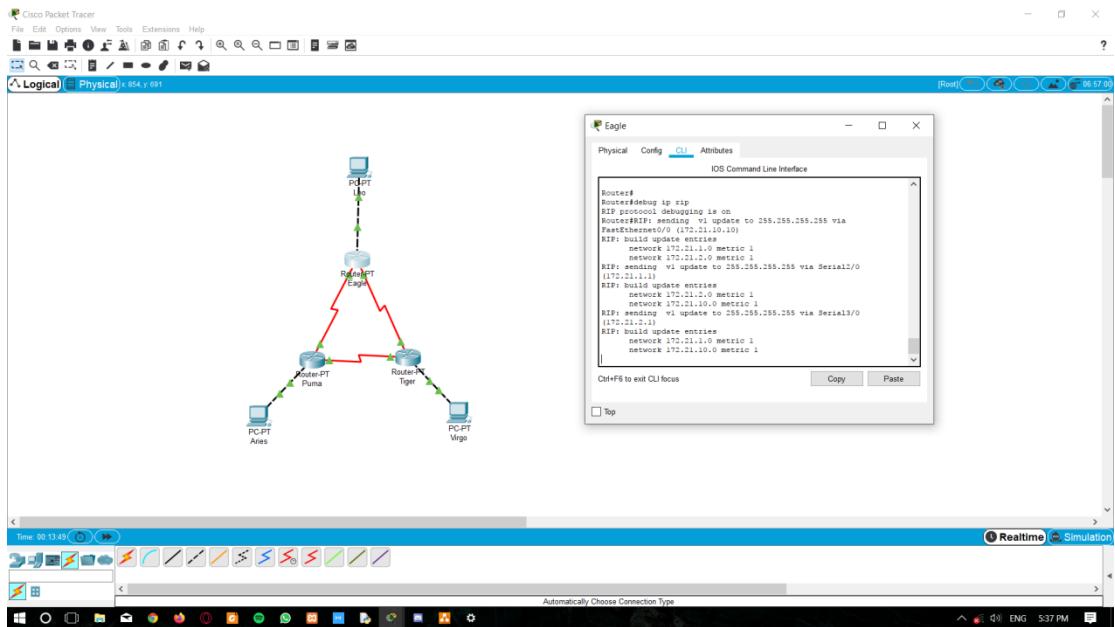
Kegiatan 2. RIP (Routing Information Protocol)



1. Nomor alamat jaringan pada konfigurasi routing RIP

Nomor alamat jaringan route rip adalah 172.21.0.0

2. Melakukan perintah “debug ip rip” pada router Eagle



3. Trace dari PC leo ke PC aries sebelum memutus router eagle ke router puma

A terminal window titled 'Leo' is open, showing the 'Desktop' tab selected. It displays the Command Prompt window with the following traceroute output:

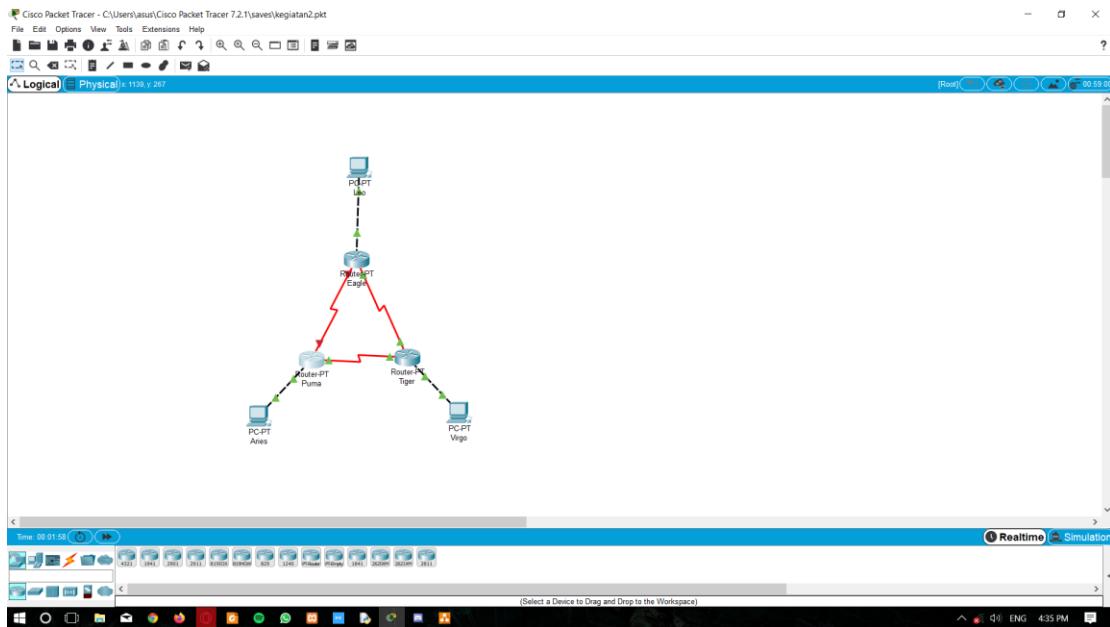
```

Tracing route to 172.21.20.2 over a maximum of 30 hops:
1  1 ms   1 ms   0 ms  172.21.10.10
2  0 ms   * ms   0 ms  Request timed out.
3  0 ms   * ms   0 ms  172.21.10.10
4  0 ms   * ms   0 ms  Request timed out.
5  * ms   0 ms   * ms  172.21.10.10
6  * ms   0 ms   * ms  Request timed out.
7  * ms   0 ms   * ms  172.21.10.10
8  0 ms   * ms   0 ms  Request timed out.
9  0 ms   * ms   0 ms  172.21.10.10
10 0 ms   * ms   0 ms  Request timed out.
11 0 ms   * ms   0 ms  172.21.10.10
12 0 ms   * ms   0 ms  Request timed out.
13 0 ms   * ms   0 ms  172.21.10.10
14 0 ms   * ms   0 ms  Request timed out.
15 0 ms   * ms   0 ms  172.21.10.10
16 0 ms   * ms   0 ms  Request timed out.
17 0 ms   * ms   0 ms  172.21.10.10
18 0 ms   * ms   0 ms  Request timed out.
19 0 ms   * ms   0 ms  172.21.10.10
20 0 ms   * ms   0 ms  Request timed out.
21 0 ms   * ms   0 ms  172.21.10.10
22 0 ms   * ms   0 ms  Request timed out.
23 0 ms   * ms   0 ms  172.21.10.10
24 0 ms   * ms   0 ms  Request timed out.
25 *      1 ms   * ms   Request timed out.
26 0 ms   * ms   0 ms  172.21.10.10
27 0 ms   * ms   0 ms  Request timed out.
28 0 ms   * ms   0 ms  172.21.10.10
29 0 ms   * ms   0 ms  Request timed out.
30 0 ms   * ms   0 ms  172.21.10.10

Trace complete.
C:\>

```

4. Trace dari PC leo ke PC aries setelah diputus antara router eagle ke router puma



Leo

Physical Config Desktop Programming Attributes

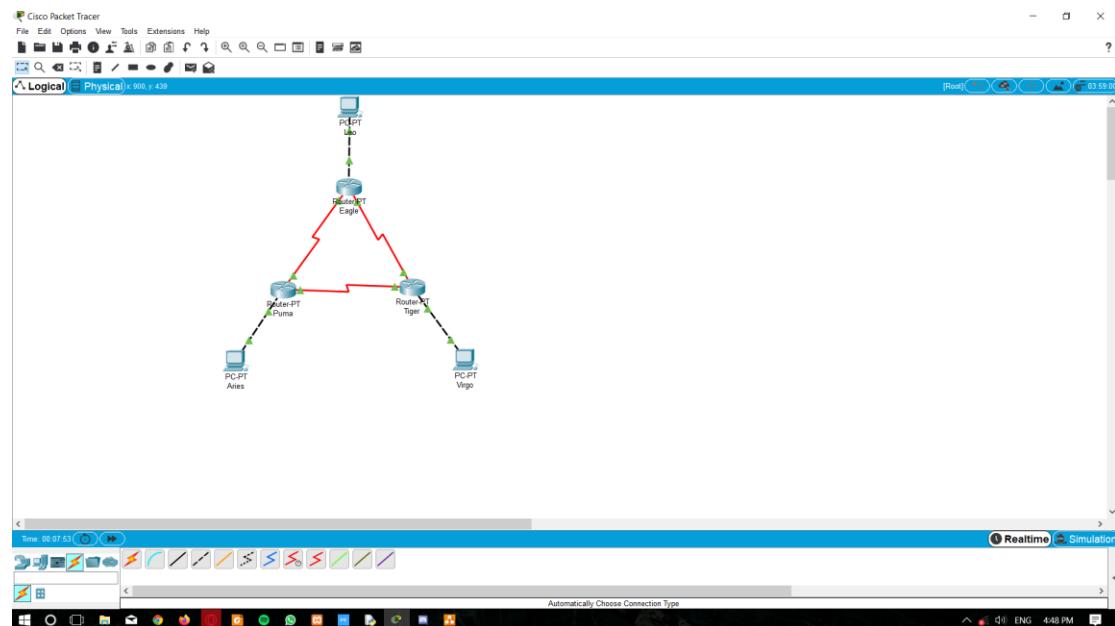
Command Prompt

```
Packet Tracer PC Command Line 1.0
C:\tracert 172.21.10.10
Tracing route to 172.21.10.10 over a maximum of 30 hops:
  1  0 ms    0 ms    0 ms  172.21.10.10
  2  0 ms    * ms    0 ms  Request timed out.
  3  0 ms    0 ms    0 ms  Request timed out.
  4  0 ms    0 ms    0 ms  Request timed out.
  5  * ms    0 ms    * ms  Request timed out.
  6  0 ms    0 ms    0 ms  Request timed out.
  7  0 ms    0 ms    0 ms  Request timed out.
  8  0 ms    * ms    0 ms  Request timed out.
  9  0 ms    0 ms    0 ms  Request timed out.
  10 0 ms    * ms    0 ms  Request timed out.
  11  * ms    0 ms    * ms  Request timed out.
  12 0 ms    0 ms    0 ms  Request timed out.
  13  * ms    0 ms    * ms  Request timed out.
  14 3 ms    * ms    0 ms  Request timed out.
  15 0 ms    * ms    0 ms  Request timed out.
  16 0 ms    * ms    0 ms  Request timed out.
  17  * ms    0 ms    * ms  Request timed out.
  18 0 ms    0 ms    0 ms  Request timed out.
  19  * ms    0 ms    * ms  Request timed out.
  20 0 ms    0 ms    0 ms  Request timed out.
  21 0 ms    * ms    0 ms  Request timed out.
  22 0 ms    0 ms    0 ms  Request timed out.
  23  * ms    0 ms    * ms  Request timed out.
  24 0 ms    0 ms    0 ms  Request timed out.
  25  * ms    0 ms    * ms  Request timed out.
  26 0 ms    0 ms    0 ms  Request timed out.
  27 0 ms    * ms    0 ms  Request timed out.
  28 0 ms    0 ms    0 ms  Request timed out.
  29 0 ms    * ms    0 ms  Request timed out.
  30 0 ms    2 ms    0 ms  Request timed out.

Trace complete.
C:\>
```

Top

Kegiatan 3. IGRP (Interior Gateway Routing Protocol)



1. Konfigurasi routing RIP pada Router Eagle

```
%LINEPROTO-5-UPDOWN: Line protocol on 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

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

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
Router(config-router)#ex
Router(config)#

Ctrl+F6 to exit CLI focus
```

The screenshot shows the Cisco IOS Command Line Interface (CLI) for Router Eagle. The 'CLI' tab is active. The terminal window displays the configuration of EIGRP on the router. The configuration includes enabling the router, entering configuration mode, defining a router ID, and specifying the network range for EIGRP. The interface also shows system messages like link changes and line protocol status updates.

2. Lakukan perintah "show running-config" pada mode user.

```
shutdown
!
interface Serial2/0
  ip address 172.21.1.1 255.255.255.0
!
interface Serial3/0
  ip address 172.21.2.1 255.255.255.0
!
interface FastEthernet4/0
  no ip address
  shutdown
!
interface FastEthernet5/0
  no ip address
  shutdown
!
router eigrp 100
  network 172.21.0.0
  auto-summary
!
```

Ctrl+F6 to exit CLI focus

Top

3. Lakukan perintah "debug ip igrp transactions" pada mode user dan di router eagle.

Tunggu beberapa saat untuk melihat informasi transaksi routing EIGRP yang terjadi.

```
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 Serial12/0
```

4. Melakukan konfigurasi routing EIGRP pada router puma dan tiger

➤ Router Puma

Puma

Physical Config **CLI** Attributes

IOS Command Line Interface

```
*LINEPROTO-5-UPDOWN: Line protocol on Interface FastEthernet0/0,
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>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
Router(config-router)#
%DUAL-5-NBRCHANGE: IP-EIGRP 100: Neighbor 172.21.1.1 (Serial2/0)
is up: new adjacency

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

Router#show running-config
```

Ctrl+F6 to exit CLI focus

Top

Copy **Paste**

Melihat proses transaksi routing EIGRP pada router puma.

Puma

Physical Config **CLI** Attributes

IOS Command Line Interface

```
Router#
Router#debug eigrp packets
EIGRP Packets debugging is on
    (UPDATE, REQUEST, QUERY, REPLY, HELLO, ACK )
Router#
EIGRP: Sending HELLO on FastEthernet0/0
    AS 100, Flags 0x0, Seq 6/0 idbQ 0/0 iidbQ un/rely 0/0

EIGRP: Sending HELLO on Serial3/0
    AS 100, Flags 0x0, Seq 6/0 idbQ 0/0 iidbQ un/rely 0/0

EIGRP: Sending HELLO on Serial2/0
    AS 100, Flags 0x0, Seq 6/0 idbQ 0/0 iidbQ un/rely 0/0

EIGRP: Received HELLO on Serial2/0 nbr 172.21.1.1
    AS 100, Flags 0x0, Seq 6/0 idbQ 0/0

EIGRP: Sending HELLO on FastEthernet0/0
    AS 100, Flags 0x0, Seq 6/0 idbQ 0/0 iidbQ un/rely 0/0

EIGRP: Sending HELLO on Serial3/0
    AS 100, Flags 0x0, Seq 6/0 idbQ 0/0 iidbQ un/rely 0/0
```

Ctrl+F6 to exit CLI focus **Copy** **Paste**

Top

➤ Router Tiger

Tiger

Physical Config **CLI** Attributes

IOS Command Line Interface

```
Press RETURN to get started!

%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 FastEthernet0/0,
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>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
Router(config-router)#
Router(config-router)#

Ctrl+F6 to exit CLI focus      Copy      Paste
```

Top

Melihat konfigurasi routing EIGRP yang telah dibuat.

The screenshot shows the Cisco IOS CLI interface for a router named 'Tiger'. The 'CLI' tab is selected. The command-line area displays the following configuration:

```
no ip address
duplex auto
speed auto
shutdown
!
interface Serial2/0
 ip address 172.21.2.3 255.255.255.0
!
interface Serial3/0
 ip address 172.21.3.3 255.255.255.0
 clock rate 2000000
!
interface FastEthernet4/0
 no ip address
 shutdown
!
interface FastEthernet5/0
 no ip address
 shutdown
!
router eigrp 100
 network 172.21.0.0
 auto-summary
!
--More-- |
```

Below the command line, there are buttons for 'Copy' and 'Paste'. At the bottom left is a 'Top' button.

Melihat proses transaksi routing EIGRP pada Router Tiger.

The screenshot shows the Cisco IOS CLI interface for Router Tiger. The 'CLI' tab is selected. The command-line area displays the following EIGRP debug output:

```
Router#debug eigrp packets
EIGRP Packets debugging is on
(UPDATE, REQUEST, QUERY, REPLY, HELLO, ACK )
Router#
EIGRP: Sending HELLO on FastEthernet0/0
 AS 100, Flags 0x0, Seq 1/0 idbQ 0/0 iidbQ un/rely 0/0

EIGRP: Received HELLO on Serial3/0 nbr 172.21.2.1
 AS 100, Flags 0x0, Seq 6/0 idbQ 0/0

EIGRP: recv packet with wrong subnet on Serial3/0

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

EIGRP: Received HELLO on Serial2/0 nbr 172.21.3.2
 AS 100, Flags 0x0, Seq 6/0 idbQ 0/0

EIGRP: recv packet with wrong subnet on Serial2/0

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

Below the command line, there are buttons for 'Copy' and 'Paste'. At the bottom left is a 'Top' button.

5. Melakukan traceroute dari PC Leo ke PC aries

Leo

Physical Config Desktop Programming Attributes

Command Prompt X

```
Packet Tracer PC Command Line 1.0
C:\>tracert 172.21.20.2

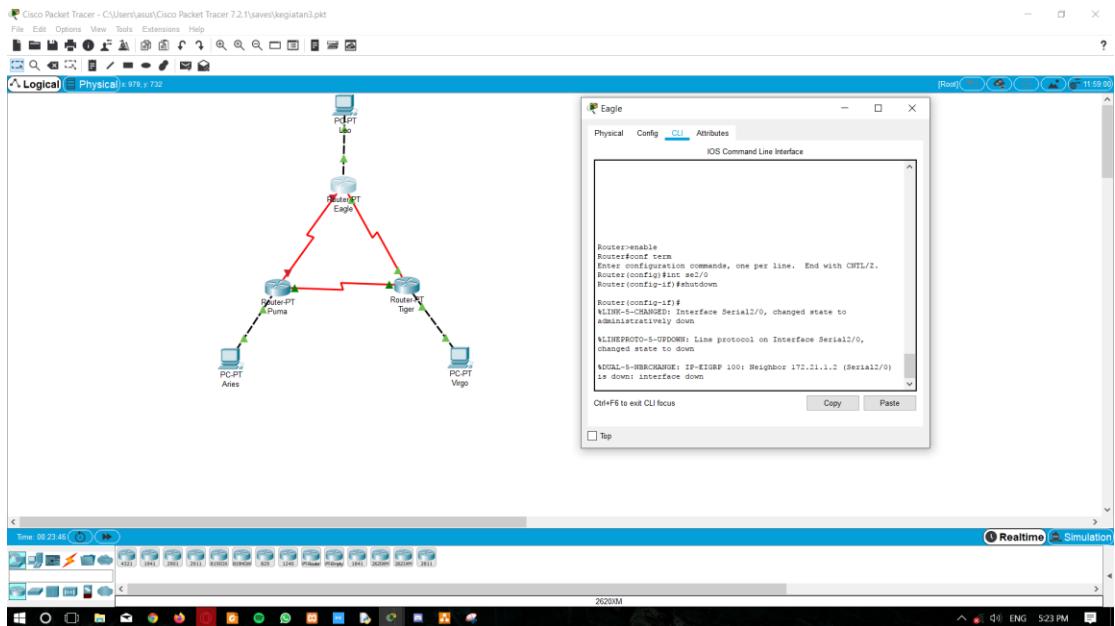
Tracing route to 172.21.20.2 over a maximum of 30 hops:

 1  1 ms      1 ms      0 ms      172.21.10.10
 2  0 ms      1 ms      0 ms      172.21.1.2
 3  *         0 ms      3 ms      172.21.20.2

Trace complete.

C:\>
```

6. Membuat hubungan antara router eagle dan puma terputus



7. Melakukan tracert dari PC leo ke PC Aries.

Leo

Physical Config Desktop Programming Attributes

Command Prompt X

```
Packet Tracer PC Command Line 1.0
C:\>tracert 172.21.20.2

Tracing route to 172.21.20.2 over a maximum of 30 hops:
 1  1 ms      1 ms      0 ms      172.21.10.10
 2  0 ms      1 ms      0 ms      172.21.1.2
 3  *          0 ms      3 ms      172.21.20.2

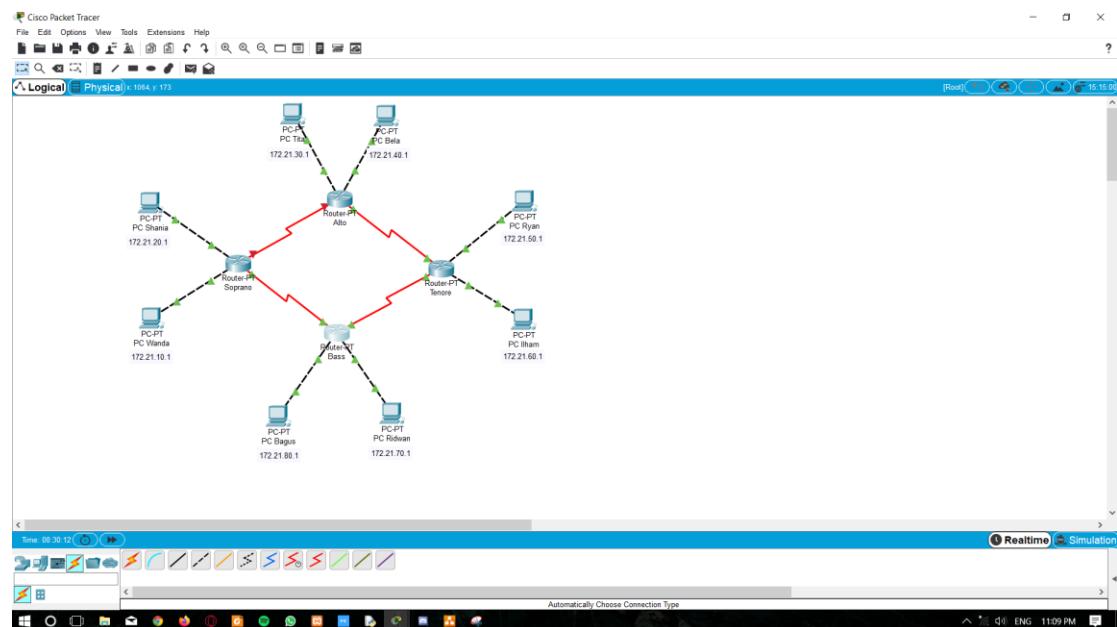
Trace complete.

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      |
```

Top

TUGAS



1. Melakukan konfigurasi pada semua router

➤ Router Soprano

```
Router>enable
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)#
%LINK-5-CHANGED: Interface FastEthernet1/0, changed state to up
%LINEPROTO-5-UPDOWN: Line protocol on Interface FastEthernet1/0, changed state to up

Router(config-if)#
%LINK-5-CHANGED: Interface Serial2/0, changed state to down
Router(config-if)#
%LINK-5-CHANGED: Interface Serial3/0, changed state to down

Router(config-if)#
Router>
```

➤ Router Alto

Alto

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 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)#int fal/0
Router(config-if)#ip address 172.21.40.40 255.255.255.0
Router(config-if)#no shutdown

Router(config-if)#
%LINK-5-CHANGED: Interface FastEthernet1/0, changed state to up
%LINEPROTO-5-UPDOWN: Line protocol on Interface FastEthernet1/0,
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)#int se 3/0
Router(config-if)#ip address 172.21.3.1 255.255.255.0
Router(config-if)#clock rate 2000000
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

➤ Router Tenore

Tenore

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 fa0/0
Router(config-if)#ip address 172.21.50.50 255.255.255.0
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 fal/0
Router(config-if)#ip address 172.21.60.60 255.255.255.0
Router(config-if)#no shutdown

Router(config-if)#
%LINK-5-CHANGED: Interface FastEthernet1/0, changed state to up
%LINEPROTO-5-UPDOWN: Line protocol on Interface FastEthernet1/0,
changed state to up

Router(config-if)#int se 2/0
Router(config-if)#clock rate 2000000
This command applies only to DCE interfaces
Router(config-if)#ip address 172.21.4.1 255.255.255.0
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)#int se 3/0
%LINEPROTO-5-UPDOWN: Line protocol on Interface Serial2/0,
changed state to up
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)#

```

Ctrl+F6 to exit CLI focus **Copy** **Paste**

Top

➤ Router Bass

Bass

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 172.21.70.70 255.255.255.0
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 fa 1/0
Router(config-if)#ip address 172.21.80.80 255.255.255.0
Router(config-if)#no shutdown

Router(config-if)#
%LINK-5-CHANGED: Interface FastEthernet1/0, changed state to up

%LINEPROTO-5-UPDOWN: Line protocol on Interface FastEthernet1/0,
changed state to up

Router(config-if)#int se 2/0
Router(config-if)#ip address 172.21.4.2 255.255.255.0
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)#
%LINEPROTO-5-UPDOWN: Line protocol on Interface Serial2/0,
changed state to up

Router(config-if)#ip address 172.21.2.2 255.255.255.0
Router(config-if)#no shutdown

Router(config-if)#

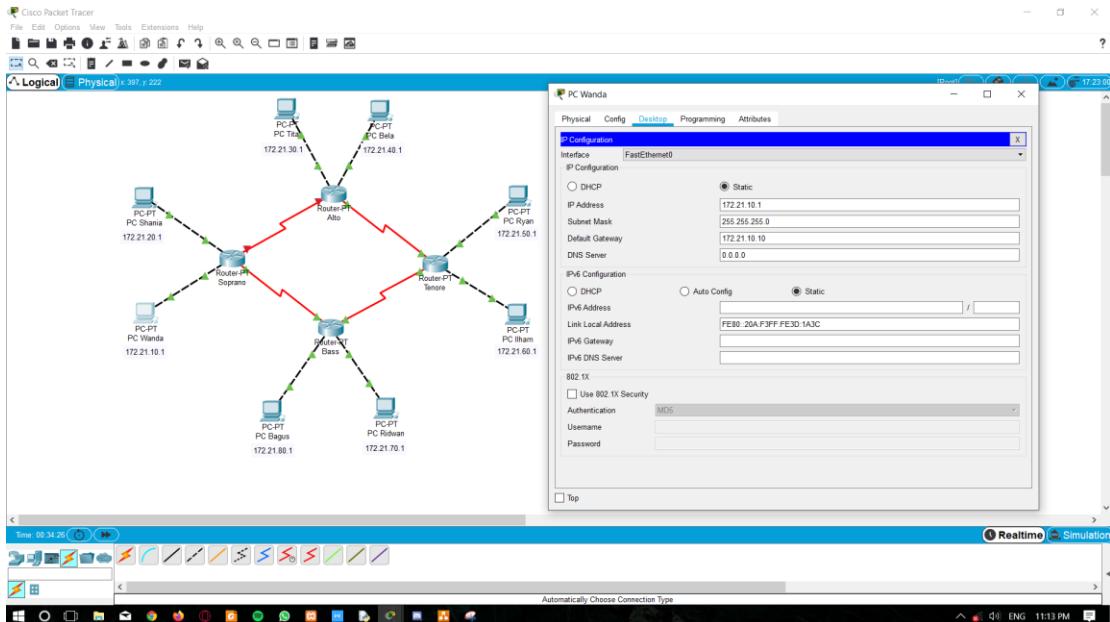
```

Ctrl+F6 to exit CLI focus **Copy** **Paste**

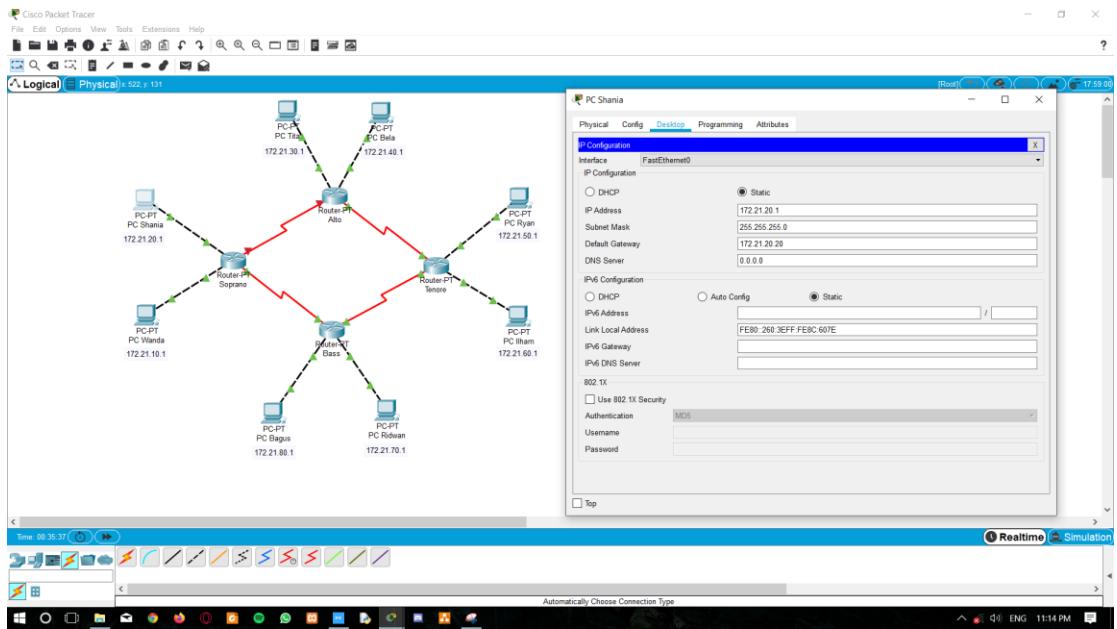
Top

2. Melakukan konfigurasi IP Address pada semua PC

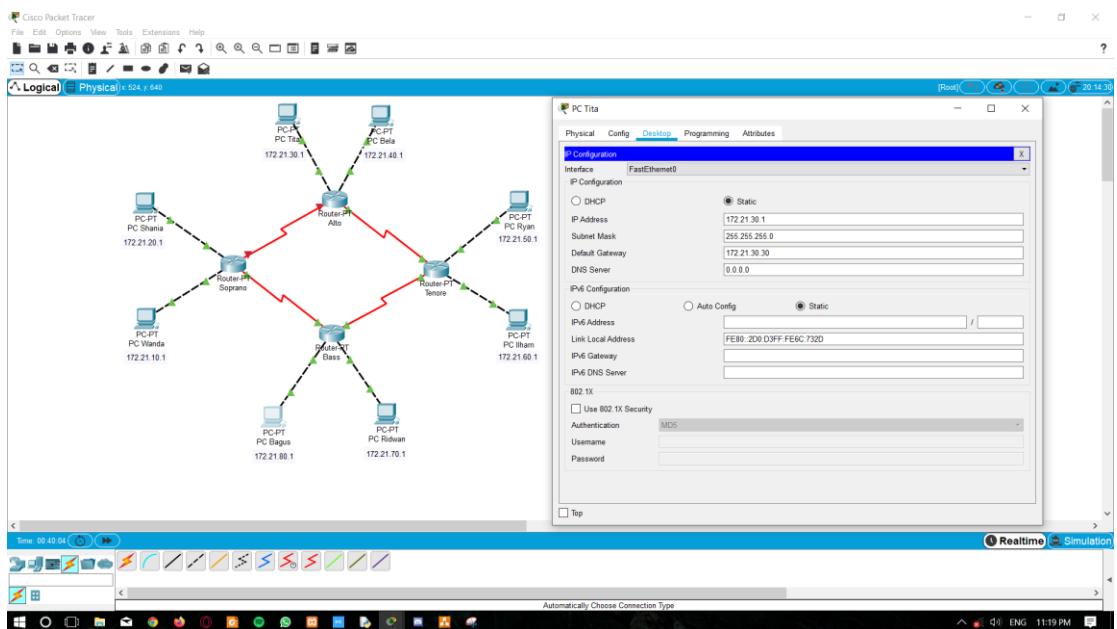
➤ PC Wanda



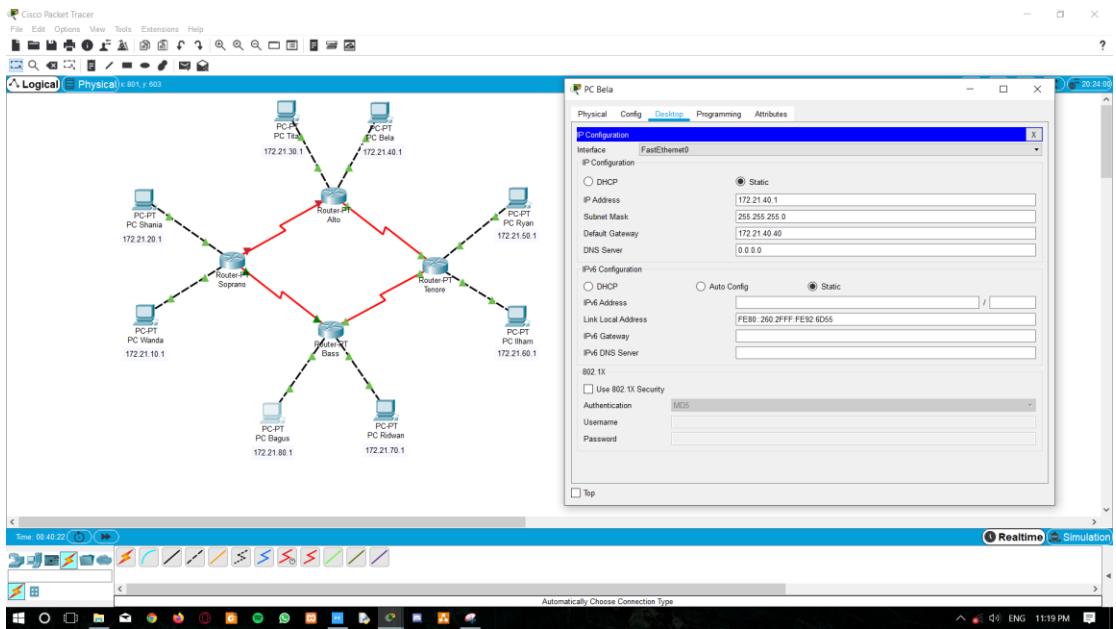
➤ PC Shania



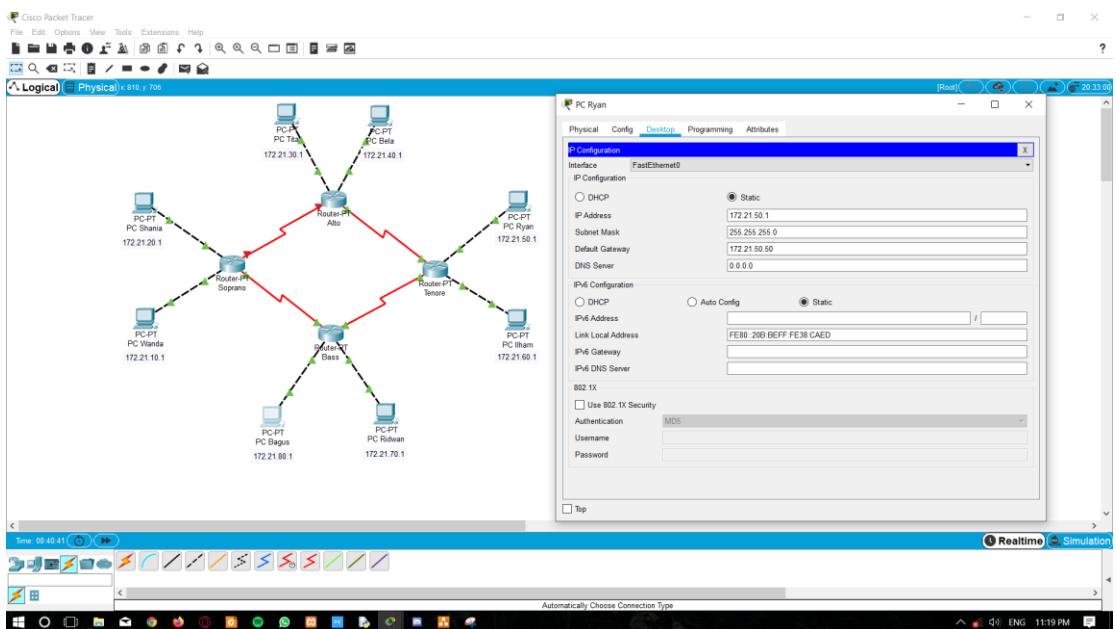
➤ PC Tita



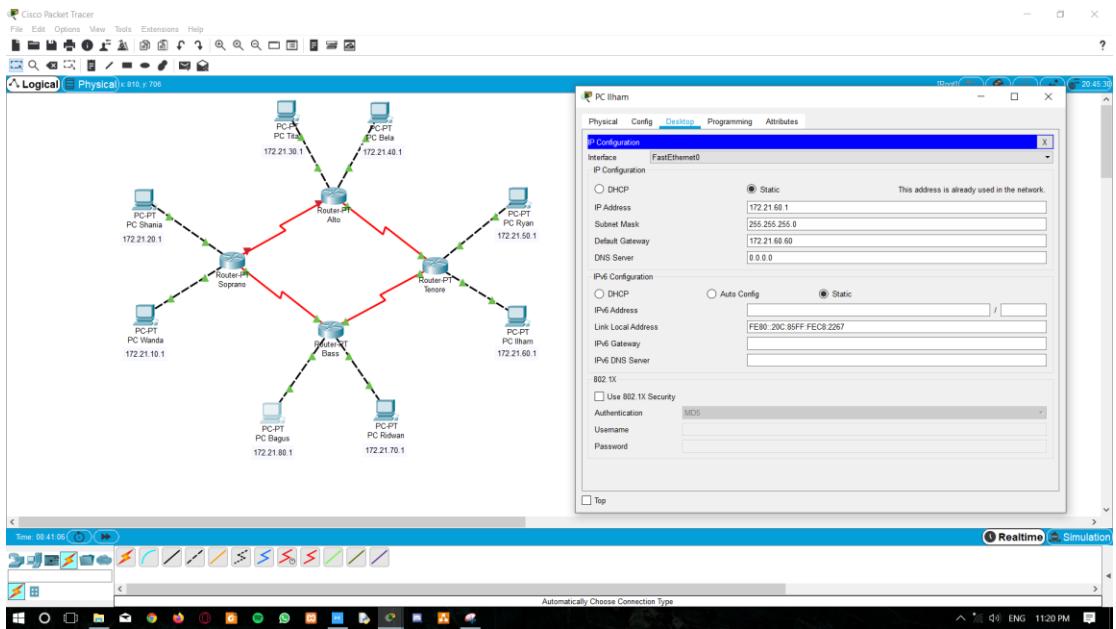
➤ PC Bela



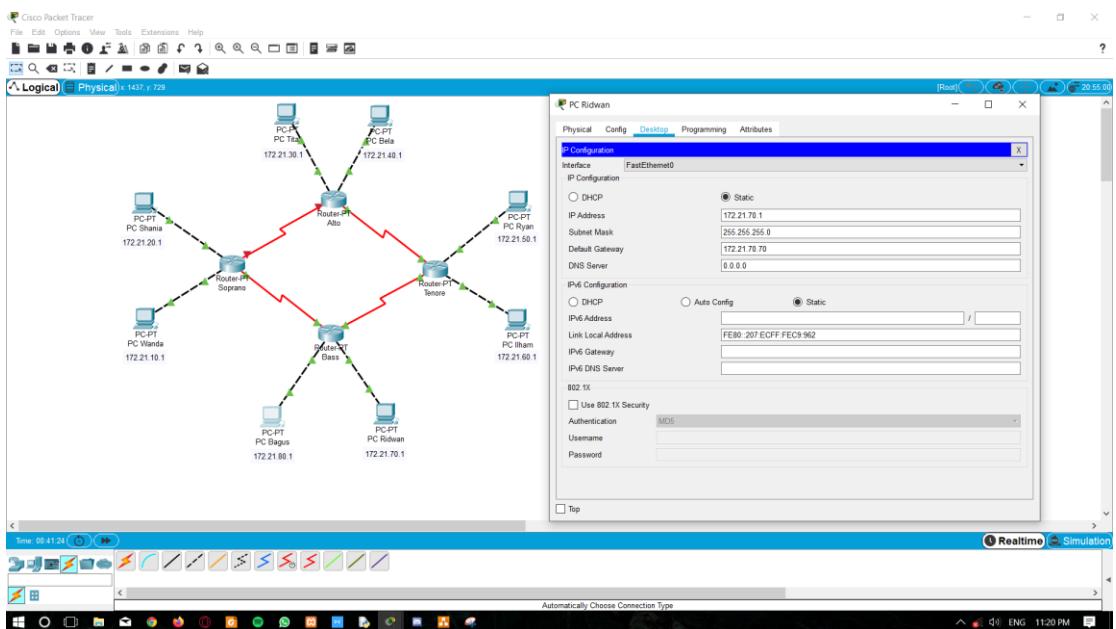
➤ PC Ryan



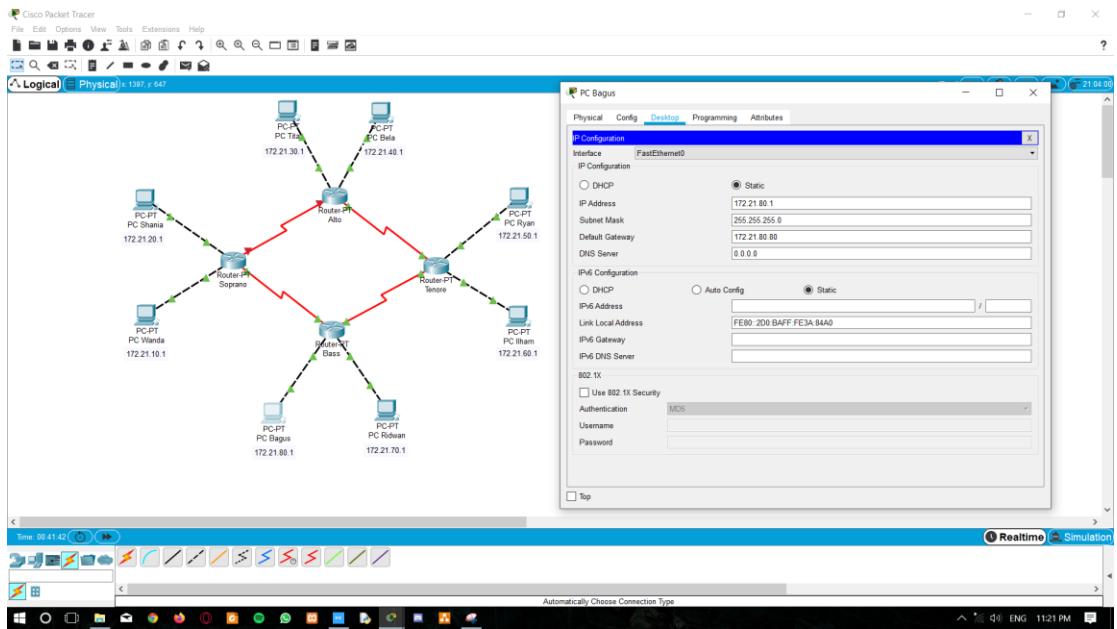
➤ PC Ilham



➤ PC Ridwan

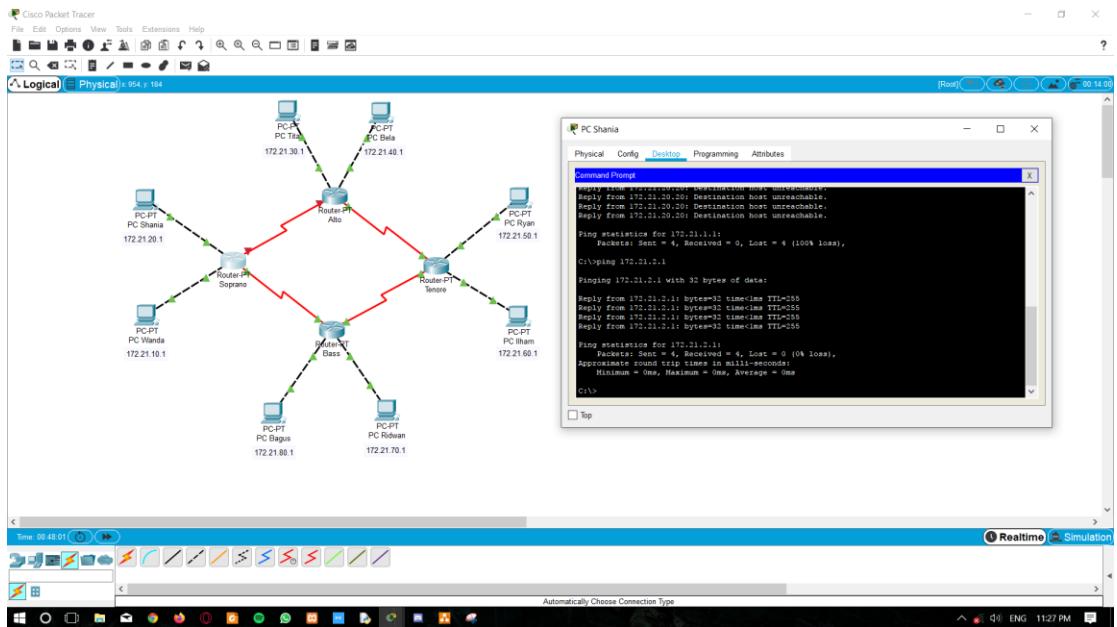


➤ PC Bagus



3. Melakukan Ping

- Dari PC Shania ke Router Soprano



4. Melakukan Routing

- Router Soprano

Soprano

Physical Config **CLI** Attributes

IOS Command Line Interface

```
Router(config)#interface FastEthernet1/0
Router(config-if)#ip address
* Incomplete command.
Router(config-if)#
Router(config-if)#exit
Router(config)#interface FastEthernet0/0
Router(config-if)#ip address 172.21.20.20 255.255.255.0
Router(config-if)#end
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)#ip route 172.21.30.0 255.255.255.0 172.21.1.2
Router(config)#ip route 172.21.40.0 255.255.255.0 172.21.1.2
Router(config)#ip route 172.21.50.0 255.255.255.0 172.21.1.2
Router(config)#ip route 172.21.60.0 255.255.255.0 172.21.1.2
Router(config)#ip route 172.21.70.0 255.255.255.0 172.21.1.2
Router(config)#ip route 172.21.80.0 255.255.255.0 172.21.1.2
Router(config)#[
```

➤ Router Alto

Alto

Physical Config **CLI** Attributes

IOS Command Line Interface

```
PRESS RETURN to get started.

Router>enable
Router#conf term
Enter configuration commands, one per line. End with CNTL/Z.
Router(config)#ip route 172.21.10.0 255.255.255.0 172.21.1.1
Router(config)#ip route 172.21.20.0 255.255.255.0 172.21.1.1
Router(config)#ip route 172.21.30.0 255.255.255.0 172.21.3.2
Router(config)#ip route 172.21.50.0 255.255.255.0 172.21.3.2
Router(config)#ip route 172.21.60.0 255.255.255.0 172.21.3.2
Router(config)#ip route 172.21.70.0 255.255.255.0 172.21.3.2
Router(config)#ip route 172.21.80.0 255.255.255.0 172.21.3.2
Router(config)#[
```

➤ Router Tenore

Tenore

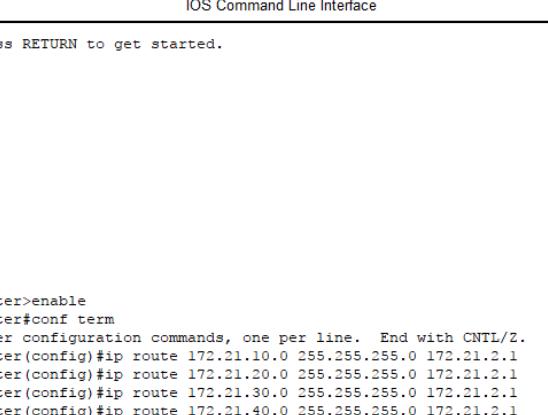
Physical Config **CLI** Attributes

IOS Command Line Interface

```
*IP-4-DUPADDR: Duplicate address 172.21.60.60 on FastEthernet1/0,
sourced by 000C.85C8.2267
*IP-4-DUPADDR: Duplicate address 172.21.60.60 on FastEthernet1/0,
sourced by 000C.85C8.2267

Router>enable
Router#conf term
Enter configuration commands, one per line. End with CNTL/Z.
Router(config)#ip route 172.21.10.0 255.255.255.0 172.21.4.2
Router(config)#ip route 172.21.20.0 255.255.255.0 172.21.4.2
Router(config)#ip route 172.21.30.0 255.255.255.0 172.21.3.1
Router(config)#ip route 172.21.40.0 255.255.255.0 172.21.3.1
Router(config)#ip route 172.21.70.0 255.255.255.0 172.21.4.2
Router(config)#ip route 172.21.80.0 255.255.255.0 172.21.4.2
Router(config)#[
```

➤ Router Bass



Bass

Physical Config **CLI** Attributes

IOS Command Line Interface

Press RETURN to get started.

```
Router>enable
Router#conf term
Enter configuration commands, one per line. End with CNTL/Z.
Router(config)#ip route 172.21.10.0 255.255.255.0 172.21.2.1
Router(config)#ip route 172.21.20.0 255.255.255.0 172.21.2.1
Router(config)#ip route 172.21.30.0 255.255.255.0 172.21.2.1
Router(config)#ip route 172.21.40.0 255.255.255.0 172.21.2.1
Router(config)#ip route 172.21.50.0 255.255.255.0 172.21.4.1
Router(config)#ip route 172.21.60.0 255.255.255.0 172.21.4.1
Router(config)#

```

RIP

Melakukan konfigurasi ip dan routing pada semua router

➤ Router Soprano

➤ Router Alto

Alt

Physical Config **CLI** Attributes

IOS Command Line Interface

```
Router(config)#interface FastEthernet5/0
Router(config-if)#
Router(config-if)#exit
Router(config)#interface Serial13/0
Router(config-if)#
Router(config-if)#exit
Router(config)#interface Serial12/0
Router(config-if)#
Router(config-if)#exit
Router(config)#interface FastEthernet1/0
Router(config-if)#end
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)#router rip
Router(config-router)#network 172.21.0.0
Router(config-router)#exit
Router(config)#|
```

Ctrl+F6 to exit CLI focus

Top

➤ Router Tenor

Tenore

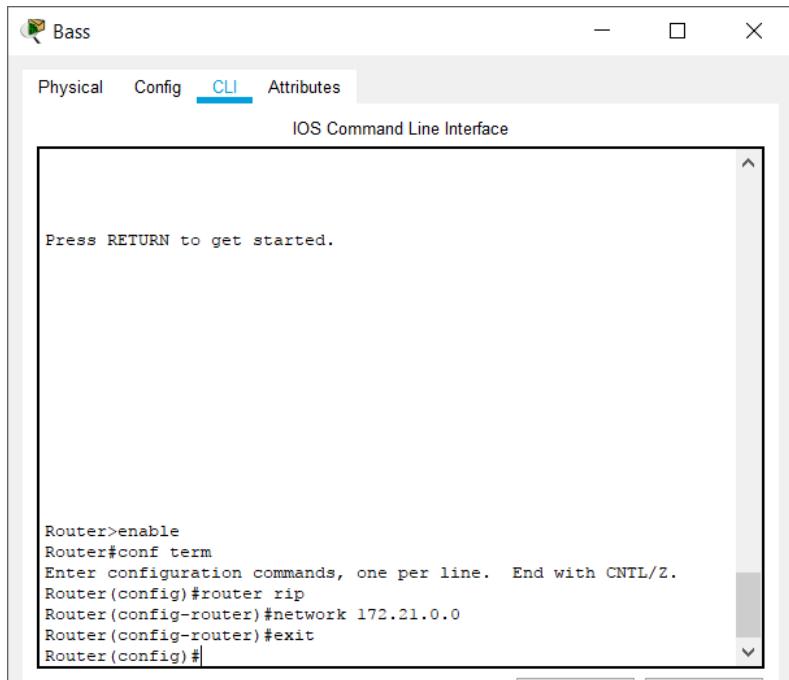
Physical Config **CLI** Attributes

IOS Command Line Interface

```
Press RETURN to get started.

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
Router(config-router)#exit
Router(config)#|
```

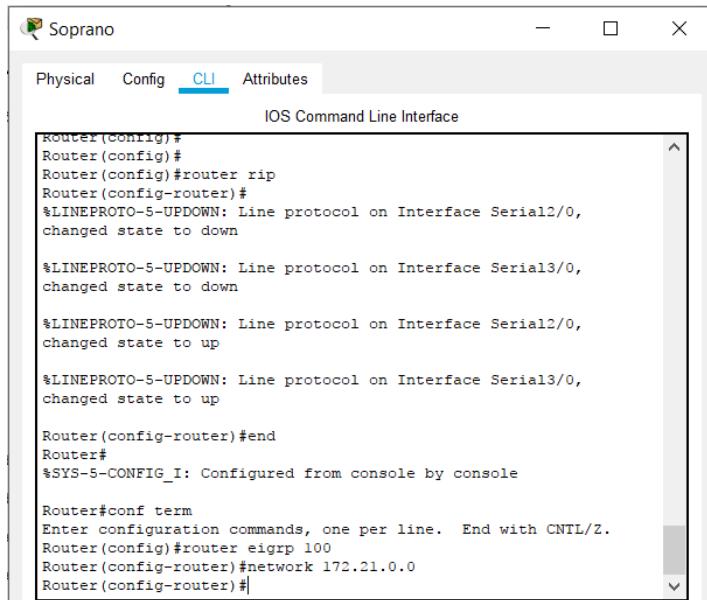
➤ Router Bass



IGRP

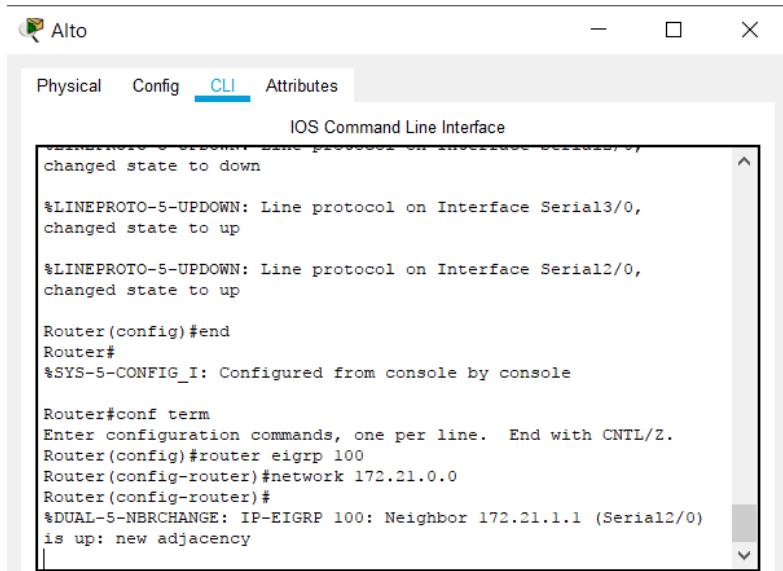
Melakukan konfigurasi ip dan routing secara otomatis

➤ Router Soprano



```
router(config)#  
Router(config)#  
Router(config)#router rip  
Router(config-router)#  
%LINEPROTO-5-UPDOWN: Line protocol on Interface Serial2/0,  
changed state to down  
  
%LINEPROTO-5-UPDOWN: Line protocol on Interface Serial3/0,  
changed state to down  
  
%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(config-router)#end  
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)#router eigrp 100  
Router(config-router)#network 172.21.0.0  
Router(config-router)#
```

➤ Router Alto



```
changed state to down  
  
%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(config)#end  
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)#router eigrp 100  
Router(config-router)#network 172.21.0.0  
Router(config-router)#  
%DUAL-5-NBRCHANGE: IP-EIGRP 100: Neighbor 172.21.1.1 (Serial2/0)  
is up: new adjacency
```

➤ Router Tenore

Tenore

Physical Config **CLI** Attributes

IOS Command Line Interface

```
Router(config)#router rip
Router(config-router)#network 172.21.0.0
Router(config-router)#exit
Router(config)#
%LINEPROTO-5-UPDOWN: Line protocol on Interface Serial3/0,
changed state to down

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

%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(config)#end
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)#router eigrp 100
Router(config-router)#network 172.21.0.0
Router(config-router)#

```

➤ Router Bass

Bass

Physical Config **CLI** Attributes

IOS Command Line Interface

```
Router(config)#
%LINEPROTO-5-UPDOWN: Line protocol on Interface Serial3/0,
changed state to down

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

%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(config)#end
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)#router eigrp 100
Router(config-router)#network 172.21.0.0
Router(config-router)#
%DUAL-5-NBRCHANGE: IP-EIGRP 100: Neighbor 172.21.2.1 (Serial3/0)
is up: new adjacency

```