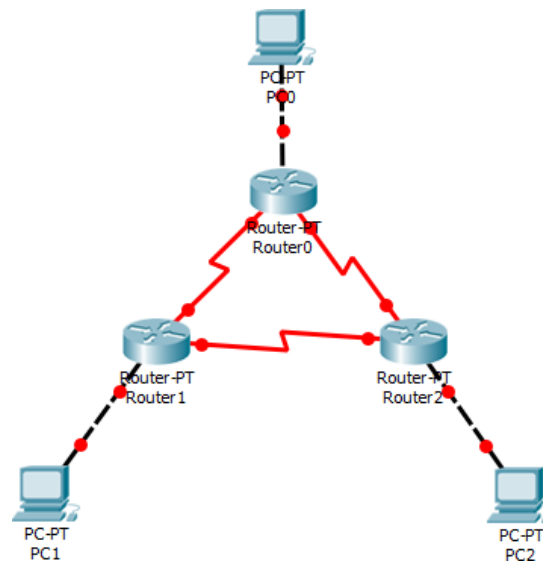


Nama : Sukma Nindi Listyarini
Kelas : D
Nim : L200170147

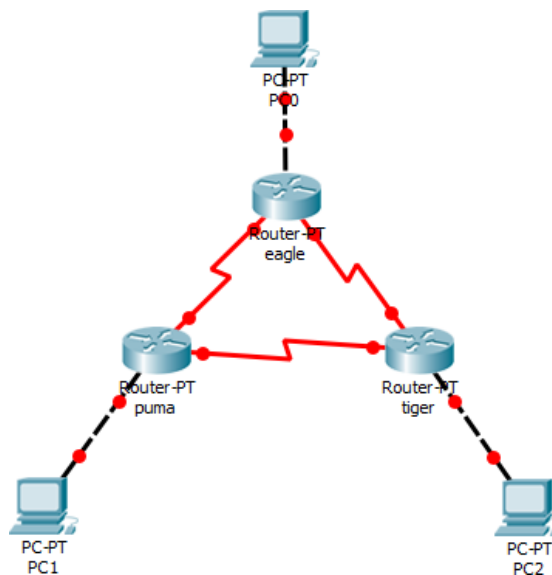
Laporan Praktikum - Jaringan Komputer MODUL 7

Kegiatan 1.

1. Membuat topologi seperti dibawah ini dengan menggunakan cisco packet tracer.



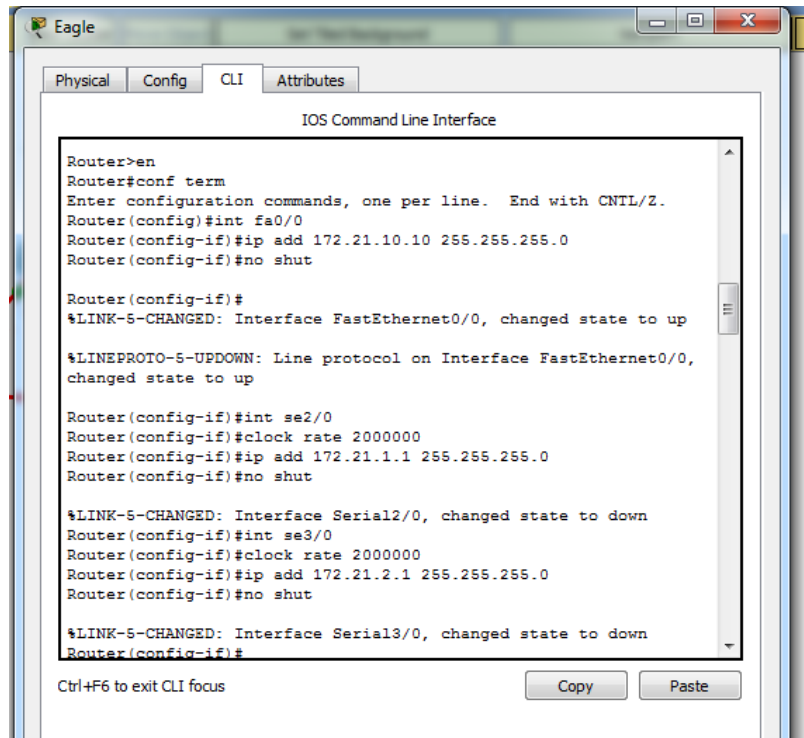
2. Memberi nama masing-masing router.



3. Melakukan konfigurasi masing-masing interface pada tiap router.

a) Konfigurasi pada router Eagle

Eagle	Ethernet 0	172.21.10.10/24
	Serial 0	172.21.1.1/24
	Serial 1	172.21.2.1/24



```

Router>en
Router#conf term
Enter configuration commands, one per line. End with CNTL/Z.
Router(config)#int fa0/0
Router(config-if)#ip add 172.21.10.10 255.255.255.0
Router(config-if)#no shut

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

Router(config-if)#int se2/0
Router(config-if)#clock rate 2000000
Router(config-if)#ip add 172.21.1.1 255.255.255.0
Router(config-if)#no shut

%LINK-5-CHANGED: Interface Serial2/0, changed state to down
Router(config-if)#int se3/0
Router(config-if)#clock rate 2000000
Router(config-if)#ip add 172.21.2.1 255.255.255.0
Router(config-if)#no shut

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

b) Konfigurasi pada router Puma

Puma	Ethernet 0	172.21.20.20/24
	Serial 0	172.21.1.2/24
	Serial 1	172.21.3.2/24

c) Konfigurasi pada router Tiger

Tiger	Ethernet 0	172.21.30.30/24
	Serial 0	172.21.2.3/24
	Serial 1	172.21.3.3/24

Konfigurasi Tiger

```
Router(config-if)#int se2/0
Router(config-if)#ip add 172.21.2.3 255.255.255.0
Router(config-if)#no shut
```

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

```
Router(config-if)#int se
%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)#int fa0/0
Router(config-if)#ip add 172.21.30.30 255.255.255.0
Router(config-if)#no shut
```

```
Router(config-if)#
%LINK-5-CHANGED: Interface FastEthernet0/0, changed state to up
```

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

```
Router(config-if)#int se3/0
Router(config-if)#ip add 172.21.3.3 255.255.255.0
Router(config-if)#no shut
```

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

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

4. Melakukan konfigurasi masing-masing PC dengan nama dan alamat IP.

a. PC 1 (Leo) = 172.21.10.1/24 dan default gateway (ipconfig/dg) 172.21.10.10

The screenshot shows the 'IP Configuration' window for a PC named 'Leo'. The window has tabs for 'Physical', 'Config', 'Desktop', 'Programming', and 'Attributes'. The 'Config' tab is active, and the 'IP Configuration' section is expanded. Under 'IP Configuration', the 'Static' radio button is selected. The fields are filled with: IP Address: 172.21.10.1, Subnet Mask: 255.255.255.0, Default Gateway: 172.21.10.10, and DNS Server: 0.0.0.0. Under 'IPv6 Configuration', the 'Static' radio button is also selected. The fields are filled with: IPv6 Address: (empty), Link Local Address: FE80::20C:CFFF:FE95:97A7, IPv6 Gateway: (empty), and IPv6 DNS Server: (empty). A 'Top' button is at the bottom left.

b. PC 2 (Aries) = 172.21.20.2/24 dan default gateway (ipconfig/dg) 172.21.20.20

The screenshot shows the 'IP Configuration' window for a PC named 'Aries'. The window has tabs for 'Physical', 'Config', 'Desktop', 'Programming', and 'Attributes'. The 'Config' tab is active, and the 'IP Configuration' section is expanded. Under 'IP Configuration', the 'Static' radio button is selected. The fields are filled with: IP Address: 172.21.20.2, Subnet Mask: 255.255.255.0, Default Gateway: 172.21.20.20, and DNS Server: 0.0.0.0. Under 'IPv6 Configuration', the 'Static' radio button is also selected. The fields are filled with: IPv6 Address: (empty), Link Local Address: FE80::201:97FF:FE96:E1A4, IPv6 Gateway: (empty), and IPv6 DNS Server: (empty). A 'Top' button is at the bottom left.

c. PC 3 (Virgo)=172.21.30.3/24 dan default gateway (ipconfig/dg) 172.21.30.30

The screenshot shows the 'Virgo' network configuration window. It has a tabbed interface with 'Physical', 'Config', 'Desktop', 'Programming', and 'Attributes'. The 'Config' tab is active, and a sub-window titled 'IP Configuration' is open. This sub-window has a blue header bar with a close button 'X'. Inside, there are two main sections: 'IP Configuration' and 'IPv6 Configuration'. The 'IP Configuration' section has radio buttons for 'DHCP' and 'Static' (which is selected). Below these are text fields for 'IP Address' (172.21.30.3), 'Subnet Mask' (255.255.255.0), 'Default Gateway' (172.21.30.30), and 'DNS Server' (0.0.0.0). The 'IPv6 Configuration' section has radio buttons for 'DHCP', 'Auto Config', and 'Static' (which is selected). Below these are text fields for 'IPv6 Address' (empty), 'Link Local Address' (FE80::2D0:97FF:FE82:5B29), 'IPv6 Gateway' (empty), and 'IPv6 DNS Server' (empty). At the bottom left of the main window is a 'Top' button.

IP Configuration	
<input type="radio"/> DHCP	<input checked="" type="radio"/> 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		
<input type="radio"/> DHCP	<input type="radio"/> Auto Config	<input checked="" type="radio"/> Static
IPv6 Address		
Link Local Address	FE80::2D0:97FF:FE82:5B29	
IPv6 Gateway		
IPv6 DNS Server		

☐ Top

5. Memastikan kesesuaian konfigurasi.

d. Ping dari PC Leo ke Router Eagle.

```
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
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 = 1ms, Average = 0ms

C:\>|
```

e. Ping dari PC Aries ke Router Puma.

```
C:\>ping 172.21.1.2

Pinging 172.21.1.2 with 32 bytes of data:

Reply from 172.21.1.2: bytes=32 time=1ms TTL=255
Reply from 172.21.1.2: bytes=32 time<1ms TTL=255
Reply from 172.21.1.2: bytes=32 time<1ms TTL=255
Reply from 172.21.1.2: bytes=32 time<1ms TTL=255

Ping statistics for 172.21.1.2:
    Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),
Approximate round trip times in milli-seconds:
    Minimum = 0ms, Maximum = 1ms, Average = 0ms

C:\>
```

f. Ping dari PC Virgo ke Router Tiger.

```
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 = 1ms, Average = 0ms

C:\>|
```

g. Ping dari Router Eagle ke Router Puma.

```
Router>ping 172.21.1.2

Type escape sequence to abort.
Sending 5, 100-byte ICMP Echos to 172.21.1.2, timeout is 2
seconds:
!!!!
Success rate is 100 percent (5/5), round-trip min/avg/max =
1/2/10 ms
```

h. Ping dari Router Eagle ke Router Tiger.

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

i. Ping dari Router Puma ke Router Tiger.

```
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 = 1/2/8
ms
```

6. Menyimpan konfigurasi seluruh device.

7. Melihat route table pada masing-masing router.

j. Router Eagle.

```
Router>ping 172.21.1.2

Type escape sequence to abort.
Sending 5, 100-byte ICMP Echos to 172.21.1.2, timeout is 2 seconds:
!!!!
Success rate is 100 percent (5/5), round-trip min/avg/max = 1/2/10 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 = 1/1/2 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
```

k. Router Puma.

```
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 = 1/2/8 ms

Router>show ip route
Codes: C - connected, S - static, I - IGRP, R - RIP, M - mobile, B - BGP
       D - EIGRP, EX - EIGRP external, O - OSPF, IA - OSPF inter area
       N1 - OSPF NSSA external type 1, N2 - OSPF NSSA external type 2
       E1 - OSPF external type 1, E2 - OSPF external type 2, E - EGP
       i - IS-IS, L1 - IS-IS level-1, L2 - IS-IS level-2, ia - IS-IS inter area
       * - candidate default, U - per-user static route, o - ODR
       P - periodic downloaded static route

Gateway of last resort is not set

    172.21.0.0/24 is subnetted, 3 subnets
C       172.21.1.0 is directly connected, Serial2/0
C       172.21.3.0 is directly connected, Serial3/0
C       172.21.20.0 is directly connected, FastEthernet0/0
```


b. Router Tiger.

```
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
```

8. Ping dari Router Eagle ke alamat interface s0 Router Puma.

```
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)
```

9. Trace PC Leo ke PC Aries.

```
C:\>tracert 172.21.20.2

Tracing route to 172.21.20.2 over a maximum of 30 hops:

  1  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 *          1 ms      *          Request timed out.
 22 0 ms      *          0 ms      172.21.10.10
 23 *          0 ms      *          Request timed out.
 24 0 ms      *          0 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.
```

10. Trace PC Leo ke alamat interface s0 Router Eagle.

```
C:\>tracert 172.21.1.1

Tracing route to 172.21.1.1 over a maximum of 30 hops:

  1  1 ms      0 ms      0 ms      172.21.1.1

Trace complete.
```

11. Menambahkan route table pada masing-masing router untuk setiap alamat jaringan yang tidak terhubung secara langsung dengan interface router.

a. Router Eagle

```
Router>en
Router#conf term
Enter configuration commands, one per line. End with CNTL/Z.
Router(config)#ip route 172.21.20.0 255.255.255.0 172.21.1.2
Router(config)#ip route 172.21.30.0 255.255.255.0 172.21.2.3
Router(config)#ex
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 172.21.1.2
S       172.21.30.0 [1/0] via 172.21.2.3
```

b. Router Puma

```
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 172.21.30.0 255.255.255.0 172.21.3.3
Router(config)#ex
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 172.21.1.1
C       172.21.20.0 is directly connected, FastEthernet0/0
S       172.21.30.0 [1/0] via 172.21.3.3
```

c. Router Tiger

```
Router>en
Router#conf term
Enter configuration commands, one per line. End with CNTL/Z.
Router(config)#ip route 172.21.10.0 255.255.255.0 172.21.2.1
Router(config)#ip route 172.21.20.0 255.255.255.0 172.21.3.2
Router(config)#ex
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 172.21.2.1
S       172.21.20.0 [1/0] via 172.21.3.2
C       172.21.30.0 is directly connected, FastEthernet0/0
```

12. Ping PC Leo ke PC Aries dan trace PC Leo ke PC Aries.

a. Ping PC Leo ke PC Aries.

```
C:\>ping 172.21.20.2

Pinging 172.21.20.2 with 32 bytes of data:

Reply from 172.21.20.2: bytes=32 time=2ms TTL=126
Reply from 172.21.20.2: bytes=32 time=3ms TTL=126
Reply from 172.21.20.2: bytes=32 time=1ms TTL=126
Reply from 172.21.20.2: bytes=32 time=3ms TTL=126

Ping statistics for 172.21.20.2:
    Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),
    Approximate round trip times in milli-seconds:
        Minimum = 1ms, Maximum = 3ms, Average = 2ms
```

b. Trace dari PC Leo ke PC Aries

```
C:\>tracert 172.21.20.2

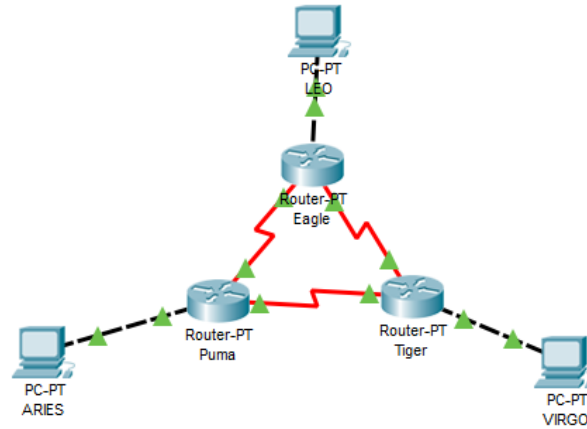
Tracing route to 172.21.20.2 over a maximum of 30 hops:

  0  6 ms    0 ms    0 ms    172.21.10.10
  1  3 ms    1 ms    3 ms    172.21.1.2
  2  1 ms    0 ms    0 ms    172.21.20.2

Trace complete.
```

Kegiatan 2.

1. Membuat topologi seperti dibawah ini dengan menggunakan cisco packet tracer.



2. Melakukan load konfigurasi seluruh device yang disimpan dalam Kegiatan1
3. Melakukan konfigurasi routing RIP pada Router Eagle.

```
Router>en
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)#
```

4. Melihat konfigurasi routing RIP yang telah dibuat.

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

Current configuration : 889 bytes
!
version 12.2
no service timestamps log datetime msec
no service timestamps debug datetime msec
no service password-encryption
!
hostname Router
!
!
!
!
!
!
!
!
ip cef
no ipv6 cef
!
!
--More-- |
```

5. Melihat proses update routing RIP pada Router Eagle.

```
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 (172.21.1.1)
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 (172.21.2.1)
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 (172.21.1.1)
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 (172.21.2.1)
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 (172.21.1.1)
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 (172.21.2.1)
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 (172.21.1.1)
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 (172.21.2.1)
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 (172.21.1.1)
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 (172.21.2.1)
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 (172.21.1.1)
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 (172.21.2.1)
RIP: build update entries
    network 172.21.1.0 metric 1
    network 172.21.10.0 metric 1
```



```

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 (172.21.1.1)
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 (172.21.2.1)
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 (172.21.1.1)
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 (172.21.2.1)
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 (172.21.1.1)
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 (172.21.2.1)
RIP: build update entries
    network 172.21.1.0 metric 1
    network 172.21.10.0 metric 1

```

6. Melakukan konfigurasi routing RIP pada Router Puma dan Tiger.

a. Router Puma.

```

Router>en
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)#exit
Router#
%SYS-5-CONFIG_I: Configured from console by console

```

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

```
Current configuration : 869 bytes
!
version 12.2
no service timestamps log datetime msec
no service timestamps debug datetime msec
no service password-encryption
!
hostname Router
!
!
!
!
!
!
!
!
ip cef
no ipv6 cef
!
!
```

```
RIP: received v1 update from 172.21.1.1 on Serial2/0
    172.21.2.0 in 1 hops
    172.21.10.0 in 1 hops
    172.21.30.0 in 2 hops
RIP: received v1 update from 172.21.3.3 on Serial3/0
    172.21.2.0 in 1 hops
    172.21.10.0 in 2 hops
    172.21.30.0 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
    network 172.21.30.0 metric 2
RIP: sending v1 update to 255.255.255.255 via Serial2/0 (172.21.1.2)
RIP: build update entries
    network 172.21.3.0 metric 1
    network 172.21.20.0 metric 1
    network 172.21.30.0 metric 2
RIP: sending v1 update to 255.255.255.255 via Serial3/0 (172.21.3.2)
RIP: build update entries
    network 172.21.1.0 metric 1
    network 172.21.10.0 metric 2
    network 172.21.20.0 metric 1
RIP: received v1 update from 172.21.1.1 on Serial2/0
    172.21.2.0 in 1 hops
    172.21.10.0 in 1 hops
    172.21.30.0 in 2 hops
RIP: received v1 update from 172.21.3.3 on Serial3/0
    172.21.2.0 in 1 hops
    172.21.10.0 in 2 hops
    172.21.30.0 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
```

b. Router Tiger.

```
Router>en
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)#
Router(config-router)#exit
Router(config)#exit
Router#
%SYS-5-CONFIG_I: Configured from console by console

Router#show running-config
Building configuration...

Current configuration : 851 bytes
!
version 12.2
no service timestamps log datetime msec
no service timestamps debug datetime msec
no service password-encryption
!
hostname Router
!
!
!
!
!
!
!
!
ip cef
no ipv6 cef
!
!
```

```

Router#debug ip rip
RIP protocol debugging is on
Router#RIP: received v1 update from 172.21.2.1 on Serial2/0
    172.21.10.0 in 1 hops
RIP: received v1 update from 172.21.3.2 on Serial3/0
    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 172.21.2.0 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 172.21.2.1 on Serial2/0
    172.21.10.0 in 1 hops
RIP: sending v1 update to 255.255.255.255 via FastEthernet0/0 (172.21.30.30)
RIP: build update entries
    network 172.21.2.0 metric 1
    network 172.21.3.0 metric 1
    network 172.21.10.0 metric 2
    network 172.21.20.0 metric 2

```

7. Trace dari PC Leo ke PC Aries

```

C:\>tracert 172.21.20.2

Tracing route to 172.21.20.2 over a maximum of 30 hops:

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

Trace complete.

```

8. Membuat hubungan antara Router Eagle dan Puma terputus.

```

Router(config)#int se2/0
Router(config-if)#shutdown

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

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

```

9. Trace dari PC Leo ke PC Aries

```
C:\>tracert 172.21.20.2

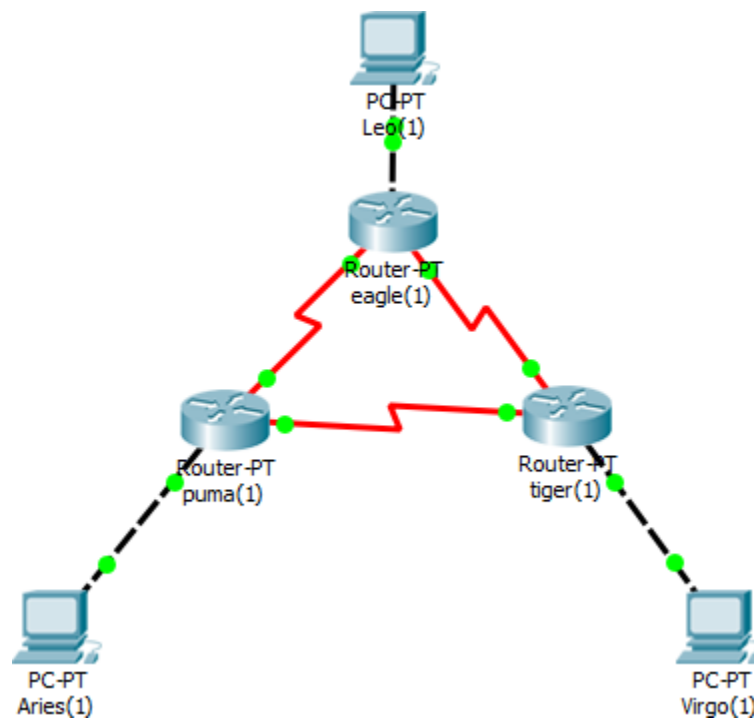
Tracing route to 172.21.20.2 over a maximum of 30 hops:

  1  0 ms    0 ms    0 ms    172.21.10.10
  2  3 ms    0 ms    0 ms    172.21.2.3
  3  2 ms    4 ms    1 ms    172.21.3.2
  4  0 ms    1 ms    2 ms    172.21.20.2

Trace complete.
```

Kegiatan 3.

1. Topologi



2. Melakukan load konfigurasi seluruh device yang disimpan dalam Kegiatan1.

3. Melakukan konfigurasi routing RIP pada Router Eagle.

```
Router>en
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)#exit
Router(config)#exit
Router#
```

4. Melihat konfigurasi routing EIGRP yang telah dibuat.

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

Current configuration : 909 bytes
!
version 12.2
no service timestamps log datetime msec
no service timestamps debug datetime msec
no service password-encryption
!
hostname Router
!
!
!
!
!
!
!
!
ip cef
no ipv6 cef
!
!
```

5. Melihat proses transaksi routing EIGRP pada Router Eagle.

```
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 Serial3/0
  AS 10, 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 Serial2/0
  AS 10, Flags 0x0, Seq 1/0 idbQ 0/0 iidbQ un/rely 0/0

EIGRP: Sending HELLO on FastEthernet0/0
  AS 10, 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 Serial3/0
  AS 10, 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 10, Flags 0x0, Seq 1/0 idbQ 0/0 iidbQ un/rely 0/0

EIGRP: Sending HELLO on Serial2/0
  AS 10, 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
```

6. Menonaktifkan debug.

```
EIGRP Packets debugging is off
Router#
```

7. Melakukan konfigurasi routing EIGRP pada Router Puma dan Router Tiger.

a. Router Puma.

```
Router>en
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)#exit
Router(config)#exit
Router#
%SYS-5-CONFIG_I: Configured from console by console

Router#show running-config
Building configuration...

Current configuration : 889 bytes
!
version 12.2
no service timestamps log datetime msec
no service timestamps debug datetime msec
no service password-encryption
!
hostname Router
!
!
!
!
!
!
!
!
ip cef
no ipv6 cef
!
!
```



```
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: 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 Serial2/0
  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 FastEthernet0/0
  AS 100, Flags 0x0, Seq 1/0 idbQ 0/0 iidbQ un/rely 0/0
```

b. Router Tiger.

```
Router>en
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 172.21.3.2 (Serial3/0) is up: new adjacency

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

Router#show running-config
Building configuration...

Current configuration : 871 bytes
!
version 12.2
no service timestamps log datetime msec
no service timestamps debug datetime msec
no service password-encryption
!
hostname Router
!
!
!
!
!
!
!
!
ip cef
no ipv6 cef
!
!
```

```

Router#debug eigrp packets
EIGRP Packets debugging is on
  (UPDATE, REQUEST, QUERY, REPLY, HELLO, ACK )
Router#
EIGRP: Sending HELLO on Serial2/0
  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: Received HELLO on Serial3/0 nbr 172.21.3.2
  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 Serial2/0
  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: Received HELLO on Serial3/0 nbr 172.21.3.2
  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 Serial2/0
  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

```

8. Trace dari PC Leo ke PC Aries.

```

C:\>tracert 172.21.20.2

Tracing route to 172.21.20.2 over a maximum of 30 hops:

  1  57 ms    0 ms     0 ms    172.21.10.10
  2   1 ms    1 ms     2 ms    172.21.1.2
  3   *       0 ms     2 ms    172.21.20.2

Trace complete.

```

9. Memutus hubungan antara Router Eagle dan Router Puma.

```

Router#conf term
Enter configuration commands, one per line.  End with CNTL/Z.
Router(config)#int se2/0
Router(config-if)#shutdown

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

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

```

10. Trace dari PC Leo ke PC Aries.