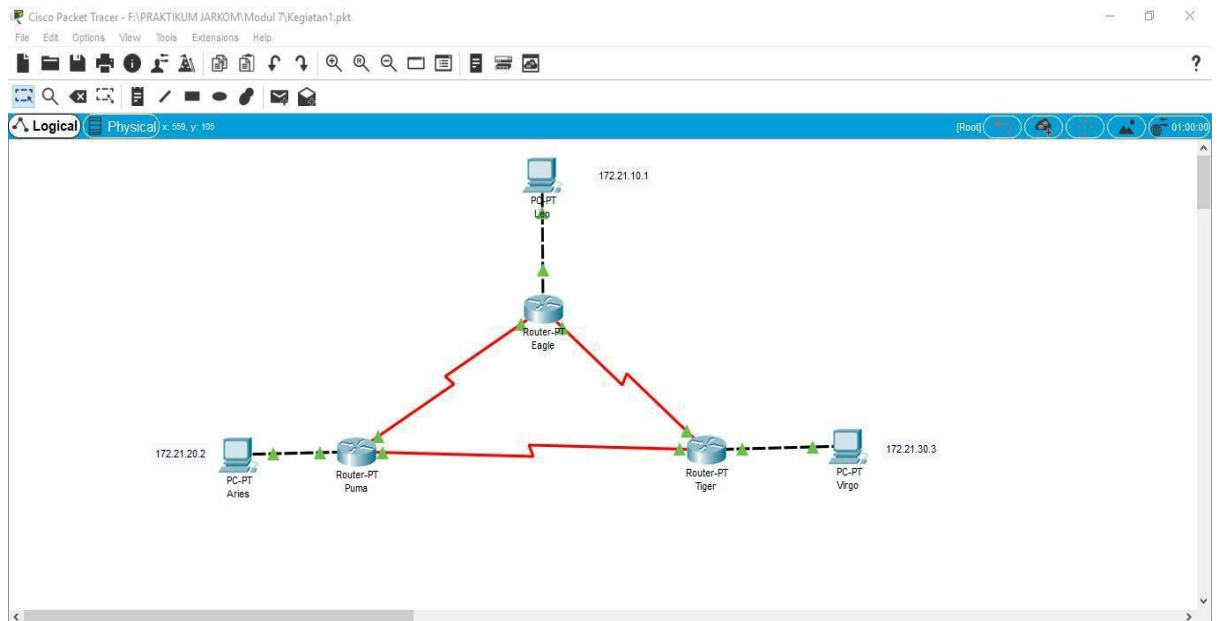


MODUL 7

Nama : Fachrul Rinaldi
NIM : L200170042
Kelas : A



1. Konfigurasi masing masing interface pada tiap Router

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

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

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

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

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

Ctrl+F6 to exit CLI focus

Copy Paste

☐ Top

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

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

Press RETURN to get started!

Router>en
Router#config
Configuring from terminal, memory, or network [terminal]?
Enter configuration commands, one per line. End with CNTL/Z.
Router(config)#int fa 0/0
Router(config-if)#ip address 172.21.20.20 255.255.255.0
Router(config-if)#no shutdown

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

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

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

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

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

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

Ctrl+F6 to exit CLI focus

Press RETURN to get started!

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

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

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

Router(config-if)#int se 3/0
Router(config-if)#ip address 172.21.3.3 255.255.255.0
Router(config-if)#no shutdown

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

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

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

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

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

Router(config-if)#
```

Ctrl+F6 to exit CLI focus

2. Konfigurasi ip PC

Leo

Physical Config **Desktop** Programming Attributes

☐ DHCP ☒ Static

IP Address

Subnet Mask

Default Gateway

DNS Server

IPv6 Configuration

☐ DHCP ☐ Auto Config ☒ Static

IPv6 Address /

Link Local Address

IPv6 Gateway

IPv6 DNS Server

802.1X

☐ Use 802.1X Security

Authentication

Username

Password

☐ Top

Aries

Physical Config **Desktop** Programming Attributes

☐ DHCP ☒ Static

IP Address

Subnet Mask

Default Gateway

DNS Server

IPv6 Configuration

☐ DHCP ☐ Auto Config ☒ Static

IPv6 Address /

Link Local Address

IPv6 Gateway

IPv6 DNS Server

802.1X

☐ Use 802.1X Security

Authentication

Username

Password

☐ Top

Virgo

Physical Config **Desktop** Programming Attributes

☐ DHCP ☒ Static

IP Address: 172.21.30.3

Subnet Mask: 255.255.255.0

Default Gateway: 172.21.30.30

DNS Server: 0.0.0.0

IPv6 Configuration

☐ DHCP ☐ Auto Config ☒ Static

IPv6 Address: /

Link Local Address: FE80::202:17FF:FE0C:4483

IPv6 Gateway:

IPv6 DNS Server:

802.1X

☐ Use 802.1X Security

Authentication: MD5

Username:

Password:

☐ Top

3. Pengujian kesesuaian konfigurasi

Leo

Physical Config **Desktop** Programming Attributes

Command Prompt

```

Packet Tracer PC Command Line 1.0
C:\>ping 172.21.1.1

Pinging 172.21.1.1 with 32 bytes of data:

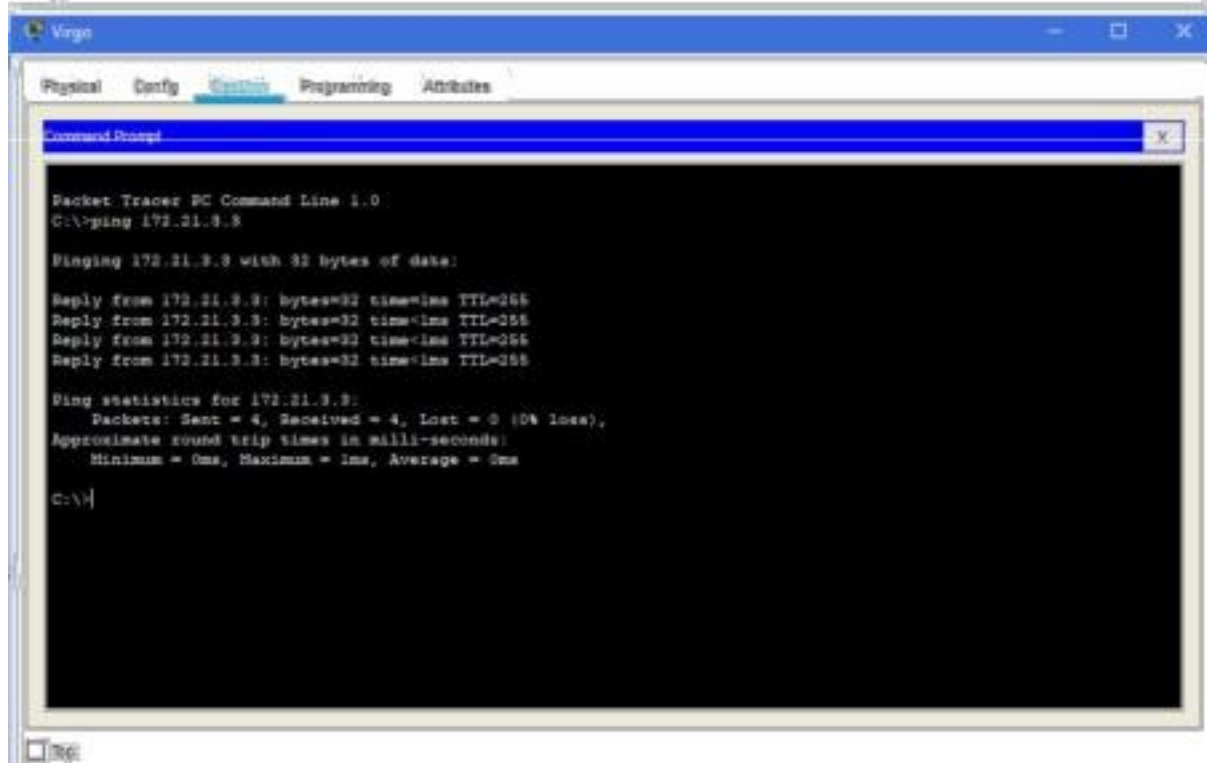
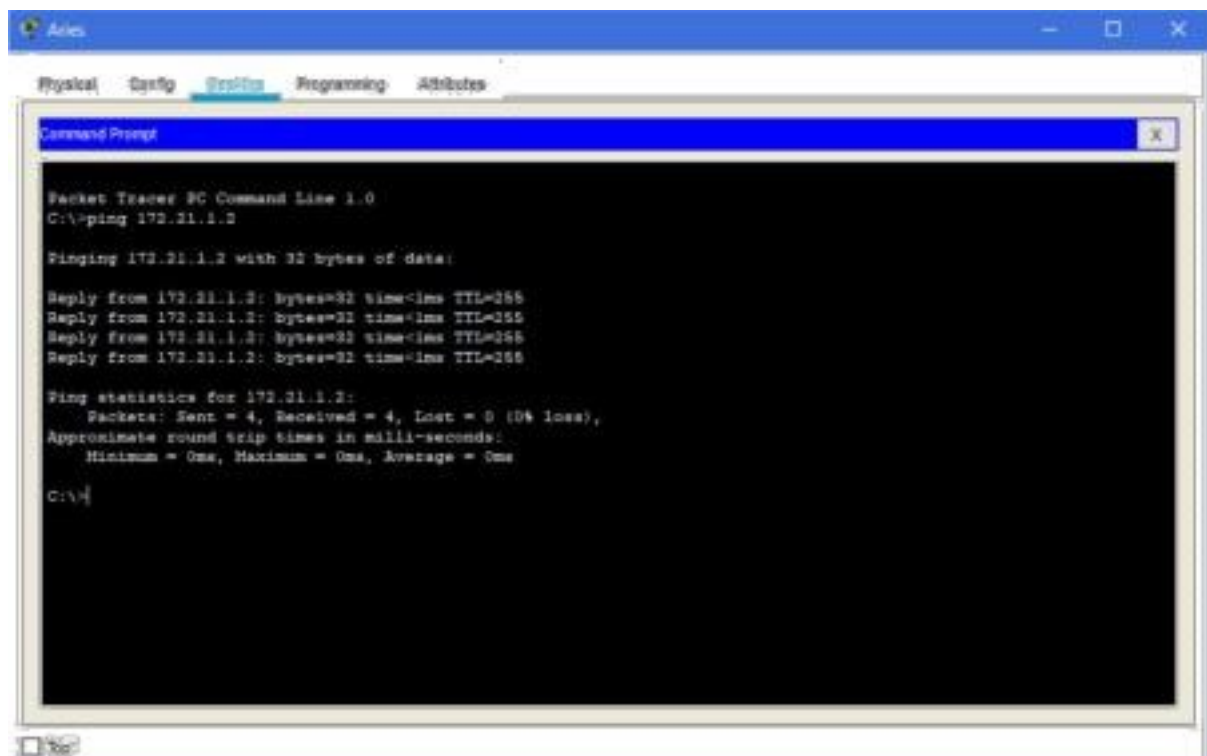
Reply from 172.21.1.1: bytes=32 time=1ms TTL=255
Reply from 172.21.1.1: bytes=32 time<1ms TTL=255
Reply from 172.21.1.1: bytes=32 time<1ms TTL=255
Reply from 172.21.1.1: bytes=32 time<1ms TTL=255

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:\>

```

☐ Top



IOS Command Line Interface

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

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

Router#ping 172.21.1.2

Type escape sequence to abort.
Sending 5, 100-byte ICMP Echos to 172.21.1.2, timeout is 2 seconds:
!!!!
Success rate is 100 percent (5/5), round-trip min/avg/max = 1/2/6 ms

Router#
```

Ctrl+F6 to exit CLI focus

Copy

Paste

☐ Top

```
Router#ping 172.21.2.3

Type escape sequence to abort.
Sending 5, 100-byte ICMP Echos to 172.21.2.3, timeout is 2 seconds:
!!!!
Success rate is 100 percent (5/5), round-trip min/avg/max = 0/1/6 ms

Router#
```

Ctrl+F6 to exit CLI focus

Copy

Paste

☐ Top

IOS Command Line Interface

Press RETURN to get started.

```
Router>en
Router#ping 172.21.3.3

Type escape sequence to abort.
Sending 5, 100-byte ICMP Echos to 172.21.3.3, timeout is 2 seconds:
!!!!
Success rate is 100 percent (5/5), round-trip min/avg/max = 1/3/8 ms
Router#
```

Ctrl+F6 to exit CLI focus


Copy

Paste

☐ Top

4. Menampilkan ip route



 Puma

Physical

Config

CLI

Attributes

IOS Command Line Interface

Type escape sequence to abort.
Sending 5, 100-byte ICMP Echos to 172.21.3.3, timeout is 2 seconds:
!!!!
Success rate is 100 percent (5/5), round-trip min/avg/max = 1/3/8 ms

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

Gateway of last resort is not set

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

Router#

Ctrl+F6 to exit CLI focus

Copy

Paste

☐ Top

Tiger

Physical Config CLI Attributes

IOS Command Line Interface

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

Gateway of last resort is not set

    172.21.0.0/24 is subnetted, 3 subnets
C      172.21.2.0 is directly connected, Serial2/0
C      172.21.3.0 is directly connected, Serial3/0
C      172.21.30.0 is directly connected, FastEthernet0/0
Router#
```

Ctrl+F6 to exit CLI focus

Copy Paste

☐ Top

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

```
Router#ping 172.21.20.20
Type escape sequence to abort.
Sending 5, 100-byte ICMP Echos to 172.21.20.20, timeout is 2 seconds:
.....
Success rate is 0 percent (0/5)
Router#
```

Ctrl+F6 to exit CLI focus

Copy Paste

☐ Top

6. Trace PC leo ke PC aries

```
C:\>tracert 172.21.20.2

Tracing route to 172.21.20.2 over a maximum of 30 hops:

  1  131 ms    0 ms    0 ms    172.21.10.10
  2   0 ms     *      52 ms   172.21.10.10
  3   *        0 ms    *      Request timed out.
  4   0 ms     *      13 ms   172.21.10.10
  5   *        0 ms    *      Request timed out.
  6   0 ms     *      0 ms    172.21.10.10
  7
Control-C
^C
C:\>
```

☐ Top

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

```
C:\>tracert 172.21.1.1

Tracing route to 172.21.1.1 over a maximum of 30 hops:

  1   0 ms     0 ms     0 ms    172.21.1.1

Trace complete.

C:\>
```

8. Melakukan ip route pada masing masing router

```
Router>en
Router#conf
Configuring from terminal, memory, or network [terminal]?
Enter configuration commands, one per line.  End with CNTL/Z.
Router(config)#ip route 172.21.20.0 255.255.255.0 172.21.1.2
Router(config)#ip route 172.21.30.0 255.255.255.0 172.21.2.3
Router(config)#
```

Ctrl+F6 to exit CLI focus Copy Paste

☐ Top

```
Router>en
Router#conf
Configuring from terminal, memory, or network [terminal]?
Enter configuration commands, one per line.  End with CNTL/Z.
Router(config)#ip route 172.21.10.0 255.255.255.0 172.21.1.1
Router(config)#ip route 172.21.30.0 255.255.255.0 172.21.3.3
Router(config)#
```

Ctrl+F6 to exit CLI focus Copy Paste

☐ Top

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

Ctrl+F6 to exit CLI focus

Copy

Paste

☐ Top

9. Ping PC leo ke PC aries dan tracer PC leo ke PC aries

```
C:\>ping 172.21.20.2

Pinging 172.21.20.2 with 32 bytes of data:

Request timed out.
Reply from 172.21.20.2: bytes=32 time=130ms TTL=126
Reply from 172.21.20.2: bytes=32 time=15ms TTL=126
Reply from 172.21.20.2: bytes=32 time=1ms TTL=126

Ping statistics for 172.21.20.2:
    Packets: Sent = 4, Received = 3, Lost = 1 (25% loss),
    Approximate round trip times in milli-seconds:
        Minimum = 1ms, Maximum = 130ms, Average = 48ms

C:\>
```

☐ Top

```
C:\>tracert 172.21.20.2

Tracing route to 172.21.20.2 over a maximum of 30 hops:

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

Trace complete.

C:\>
```

☐ Top

10. Mengubah alamat jaringan pada Leo menjadi 172.21.100.0/24

The screenshot shows the 'Leo' configuration window with the 'Desktop' tab selected. The 'Config' section is active, showing the following settings:

- Static IP Configuration:**
 - ☒ Static
 - IP Address: 172.21.100.1
 - Subnet Mask: 255.255.255.0
 - Default Gateway: 172.21.100.10
 - DNS Server: 0.0.0.0
- IPv6 Configuration:**
 - ☐ DHCP, ☐ Auto Config, ☒ Static
 - IPv6 Address: [empty]
 - Link Local Address: FE80::207:ECFF:FE5B:7596
 - IPv6 Gateway: [empty]
 - IPv6 DNS Server: [empty]
- 802.1X:**
 - ☐ Use 802.1X Security
 - Authentication: MD5
 - Username: [empty]
 - Password: [empty]

At the bottom left, there is a 'Top' button.

11. Konfigurasi ip baru pada router eagle

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

Ctrl+F6 to exit CLI focus

Copy

☐ Top

12. Menambahkan konfigurasi ip route baru pada router puma dan tiger

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

Ctrl+F6 to exit CLI focus

Copy Paste

☐ Top

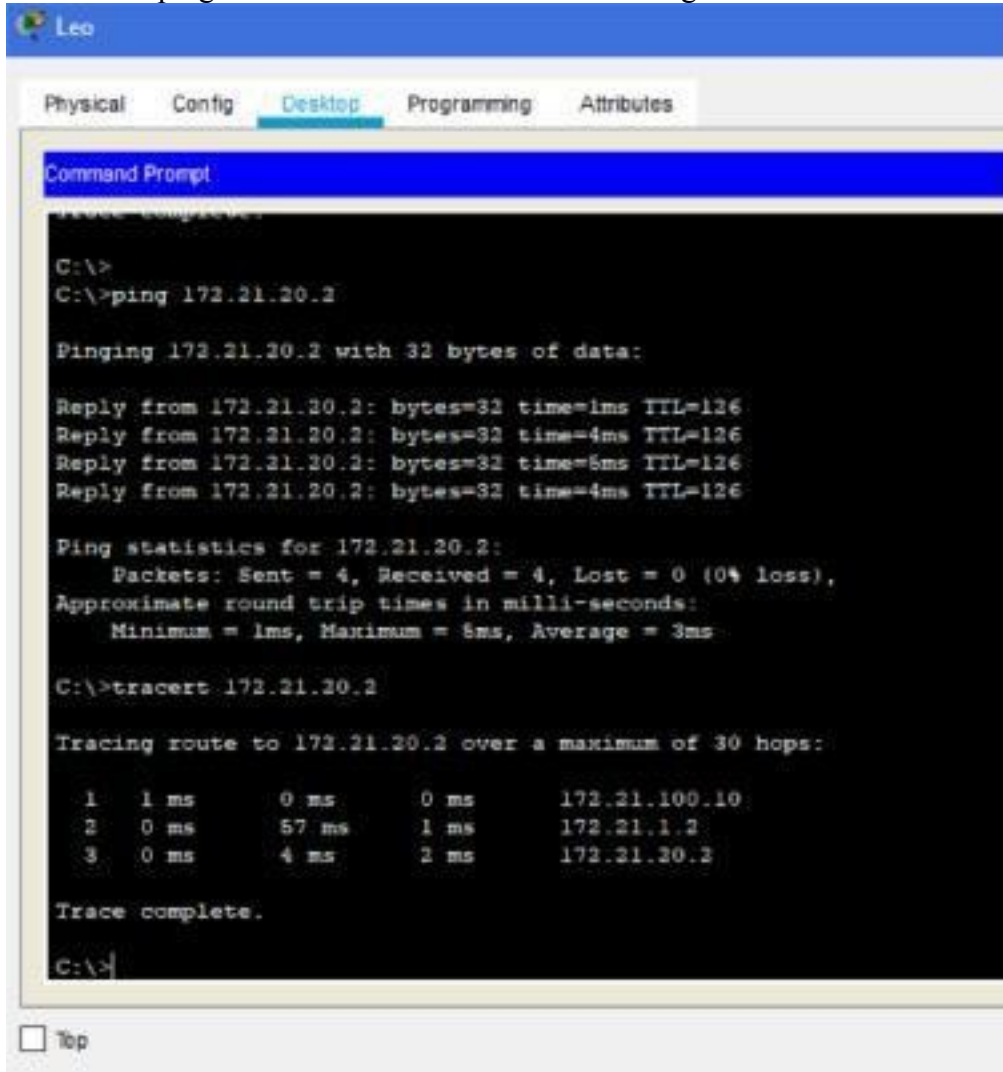
```
Router>en
Router#conf
Configuring from terminal, memory, or network [terminal]?
Enter configuration commands, one per line.  End with CNTL/Z.
Router(config)#ip route 172.21.100.0 255.255.255.0 172.21.2.1
Router(config)#
```

Ctrl+F6 to exit CLI focus

Copy Paste

☐ Top

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



The screenshot shows a network simulator window titled "Leo" with tabs for Physical, Config, Desktop, Programming, and Attributes. The "Desktop" tab is active, displaying a "Command Prompt" window. The Command Prompt shows the execution of a ping command to 172.21.20.2 and a subsequent traceroute command. The ping results show four successful replies with varying times (1ms, 4ms, 5ms, 4ms) and a TTL of 126. The traceroute shows a path from 172.21.100.10 to 172.21.1.2 to 172.21.20.2, with hop times of 1ms, 57ms, and 4ms respectively.

```
Leo
Physical Config Desktop Programming Attributes
Command Prompt
Trace complete.
C:\>
C:\>ping 172.21.20.2

Pinging 172.21.20.2 with 32 bytes of data:

Reply from 172.21.20.2: bytes=32 time=1ms TTL=126
Reply from 172.21.20.2: bytes=32 time=4ms TTL=126
Reply from 172.21.20.2: bytes=32 time=5ms TTL=126
Reply from 172.21.20.2: bytes=32 time=4ms TTL=126

Ping statistics for 172.21.20.2:
    Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),
    Approximate round trip times in milli-seconds:
        Minimum = 1ms, Maximum = 5ms, Average = 3ms

C:\>tracert 172.21.20.2

Tracing route to 172.21.20.2 over a maximum of 30 hops:

  0  1 ms    0 ms    0 ms    172.21.100.10
  1  0 ms    57 ms   1 ms    172.21.1.2
  2  0 ms    4 ms    2 ms    172.21.20.2

Trace complete.
C:\>
```

☐ Top

Leo

Physical Config **Desktop** Programming Attributes

Command Prompt

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

☐ Top