

LAPORAN UAS

JARINGAN KOMPUTER



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LABORATORIUM EMBEDDED SYSTEM
INSTITUT TEKNOLOGI PLN
2024/2025

NIM GANJIL:

- ⇒ LAN A = 170 HOST
- ⇒ LAN B = 10 HOST
- ⇒ LAN C = 80 HOST
- ⇒ LAN D = 2 digit terakhir NIM masing-masing (Misal NIM = 2021131123, maka LAN D = 23 HOST), jika 2 digit terakhir NIM < 10, maka jumlah Host pada LAN D = 40
- ⇒ LAN E = 120 HOST
- ⇒ LAN F = 12 HOST
- ⇒ LAN G = Ketentuan untuk jumlah host pada LAN G adalah sebagai berikut:
 - o Jika 2 digit terakhir NIM ≥ 60 maka $- 20$ (Misal NIM = 202131063, maka jumlah Host LAN G = $63 - 20 = 43$. Jadi LAN G = 40 HOST)
 - o Jika 2 digit terakhir NIM < 60 maka $+ 20$ (Misal NIM = 202131063, maka jumlah Host LAN G = $63 + 20 = 83$. Jadi LAN G = 80 HOST)
- ⇒ Masing-Masing WAN = 2 Host

Tentukan **Network Address, Broadcast Address, Host Range dan Subnetmask** pada setiap network tsb.

IP = 192.168.129.60

Berdasarkan soal ini berikut jawabanya :

LAN A 170 host

$$2^{n-2} = 120$$

$$N = 8$$

Network Address (NA): 192.168.129.0

Broadcast Address (BA): 192.168.129.255

First Host (FH): 192.168.129.1

Last Host (LH): 192.168.129.254. SM = 255.255.255.0

Subnet mask : 255.255.255.0

LAN E = 120 N = 7

Network Address (NA): 192.168.130.0

Broadcast Address (BA): 192.168.130.127

First Host (FH): 192.168.130.1.

Last Host (LH): 192.168.130.126.

Subnet Mask (SM) = 255.255.255.128

LAN C = 80 HOST N = 7

Network Address (NA): 192.168.130.128

Broadcast Address (BA): 192.168.130.255

First Host (FH): 192.168.130.129

Last Host (LH): 192.168.130.254

Subnet Mask (SM) = 255.255.255.128

LAN G = 49 HOST N = 6

Network Address (NA): 192.168.131.0

Broadcast Address (BA): 192.168.131.63

First Host (FH): 192.168.131.1

Last Host (LH): 192.168.131.62

Subnet Mask (SM) = 255.255.255.192

LAN D = 29 HOST N = 5

Network Address (NA): 192.168.131.64

Broadcast Address (BA): 192.168.131.95

First Host (FH): 192.168.131.65

Last Host (LH): 192.168.131.94

Subnet Mask (SM) = 255.255.255.224

LAN F = 12 HOST N = 4

Network Address (NA): 192.168.131.96.

Broadcast Address (BA): 192.168.131.111

First Host (FH): 192.168.131.97

Last Host (LH): 192.168.131.110

Subnet Mask (SM) = 255.255.255.240

LAN B = 10 HOST N = 4

Network Address (NA): 192.168.131.112.

Broadcast Address (BA): 192.168.131.127.

First Host (FH): 192.168.131.113.

Last Host (LH): 192.168.131.126.

Subnet Mask (SM) = 255.255.255.240

WAN A = 2 HOST N = 2

Network Address (NA): 192.168.131.128.

Broadcast Address (BA): 192.168.131.131.

First Host (FH): 192.168.131.129.

Last Host (LH): 192.168.131.130.

Subnet Mask (SM) = 255.255.255.252

WAN B = 2 HOST N = 2

Network Address (NA): 192.168.131.132.

Broadcast Address (BA): 192.168.131.135.

First Host (FH): 192.168.131.133.

Last Host (LH): 192.168.131.134.

Subnet mask (SM) = 255.255.255.252

WAN C = 2 HOST N = 2

Network Address (NA): 192.168.131.136.

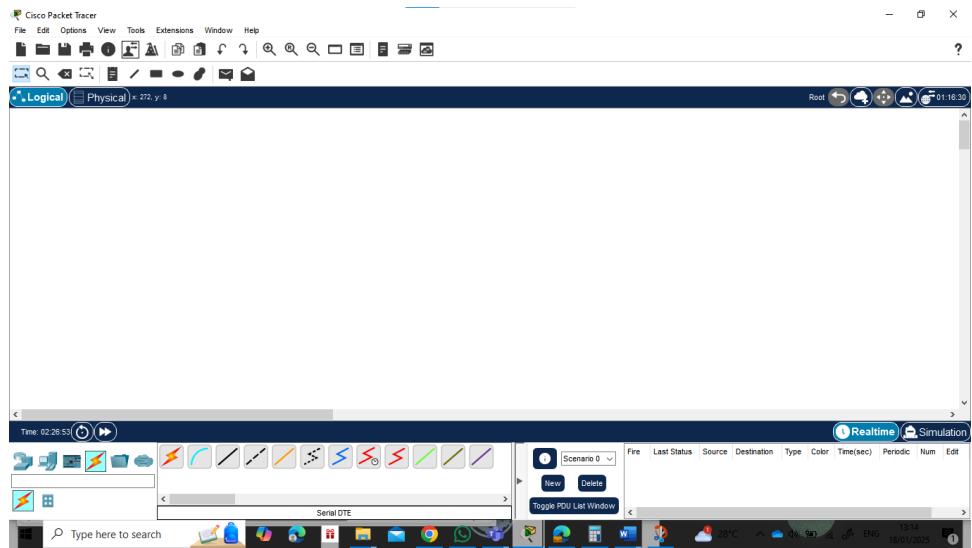
Broadcast Address (BA): 192.168.131.139.

First Host (FH): 192.168.131.137.

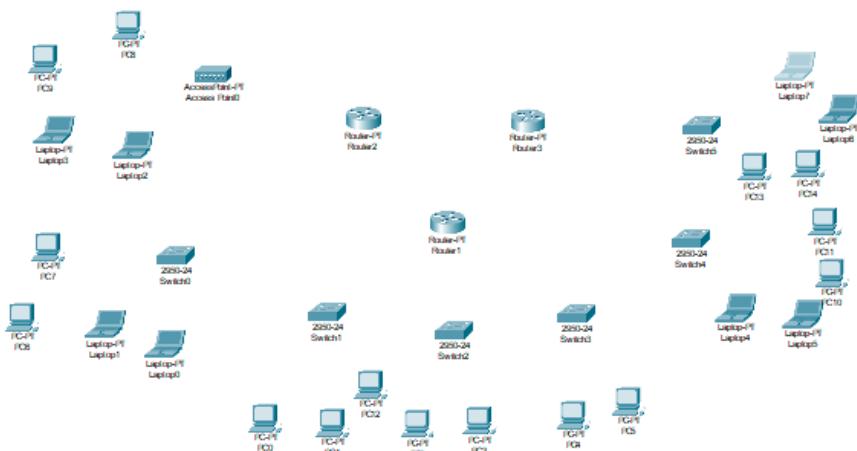
Last Host (LH): 192.168.131.138.

Subnet Mask (SM) = 255.255.255.252

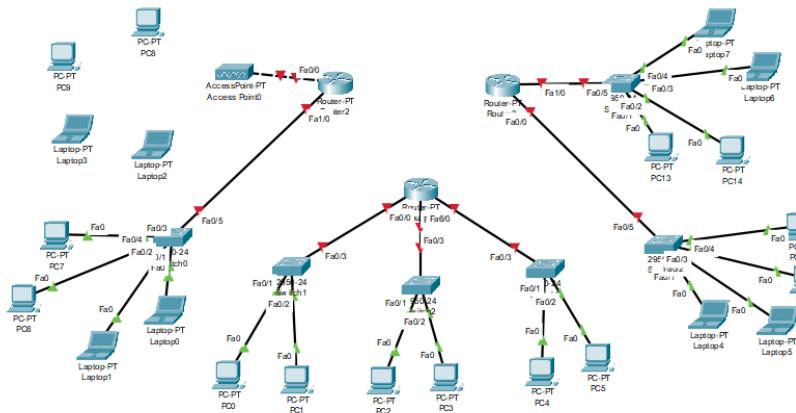
Penjelasan pembuatan jaringan :



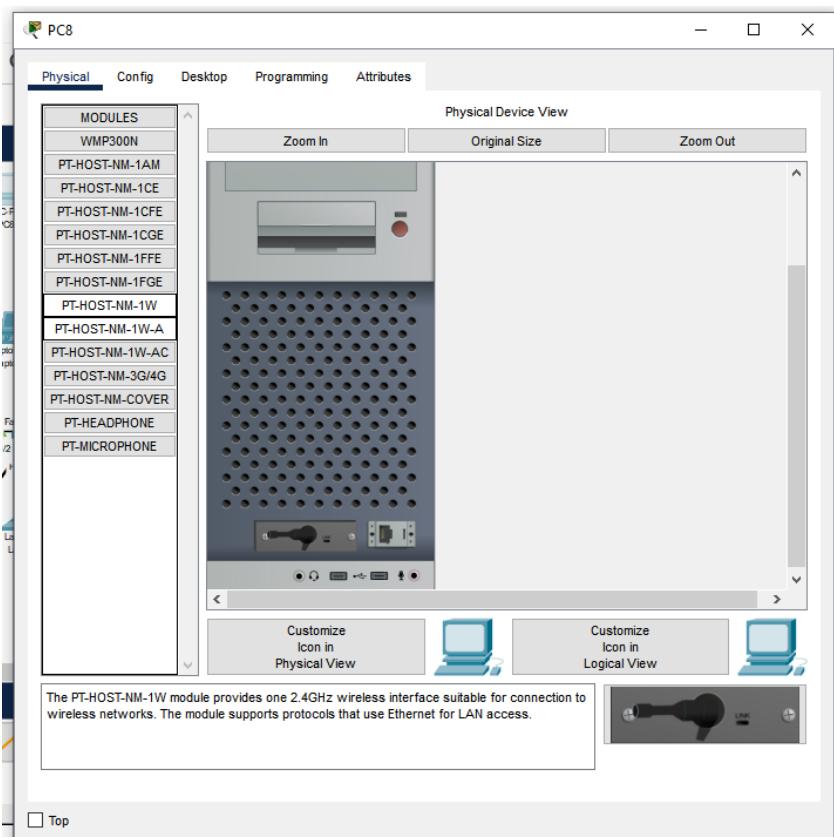
1. Pertama tampilan cisco saat pertama kali di buka



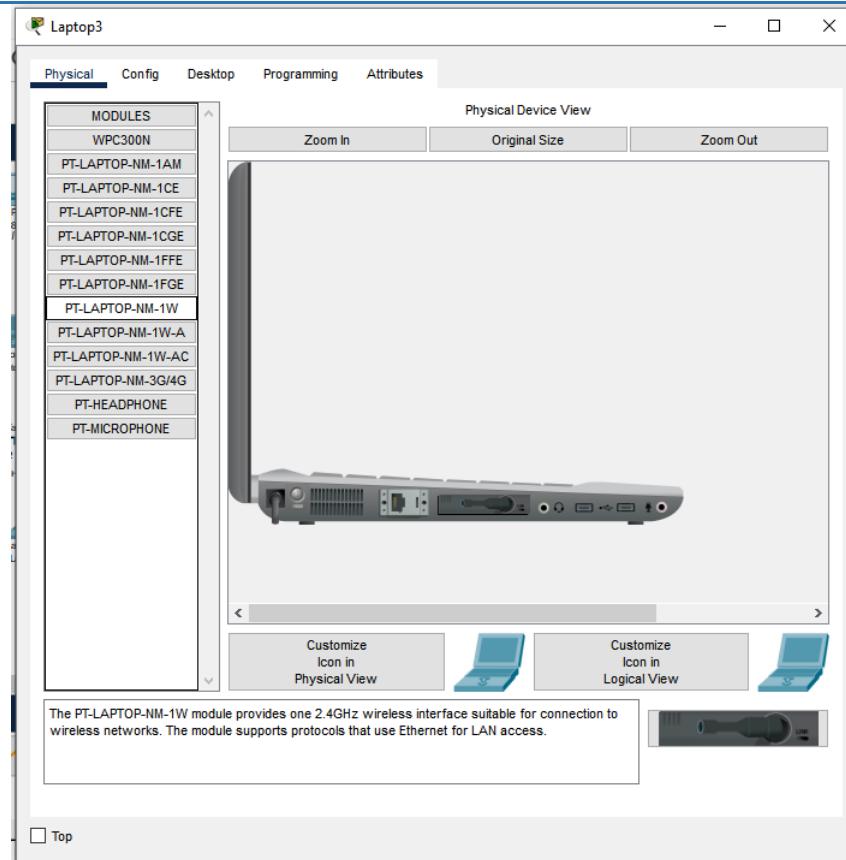
2. Masukan perangkat seberti berikut yang terdiri dari 1 access point, 6 switch, 3 router, 15 PC dan 7 laptop



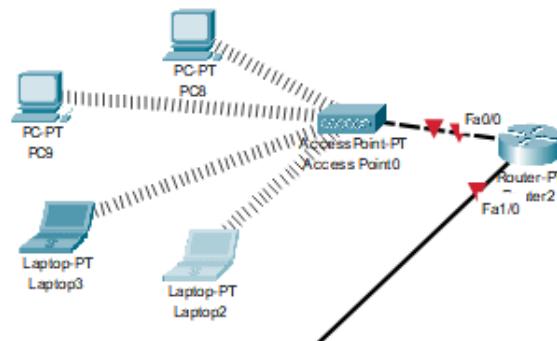
3. Sambungkan perangkat antara end device dengan network device dengan kabel straight dan antara network device dengan kabel cross seperti berikut



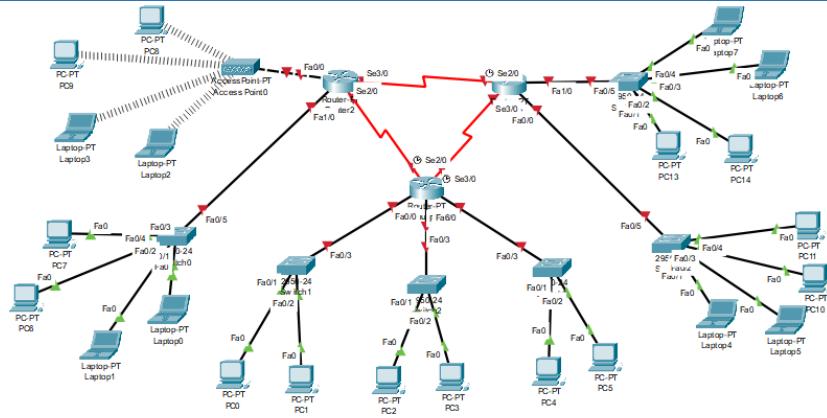
4. Pada PC di LAN A ganti modules pada PC dari meggunakan kabel menjadi non kabel dengan memasangkan PT-HOST-NM-1W.



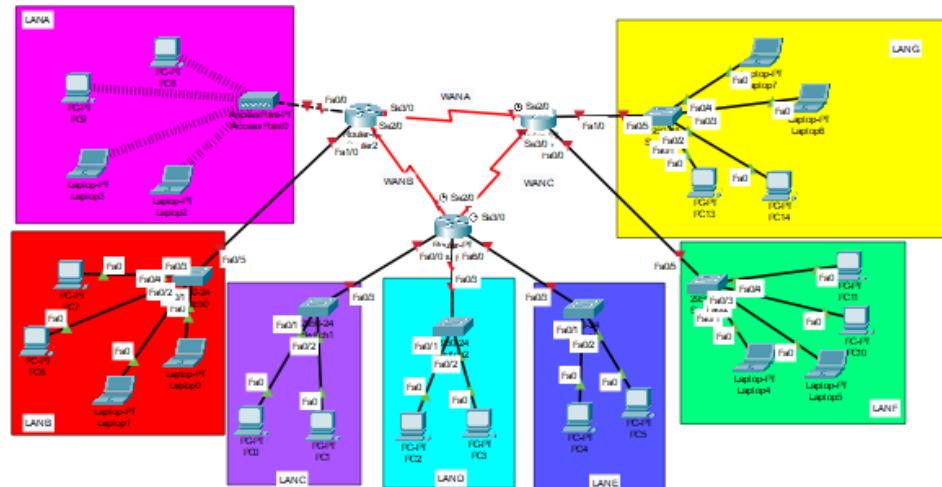
5. Begitu pula pada perangkat laptop



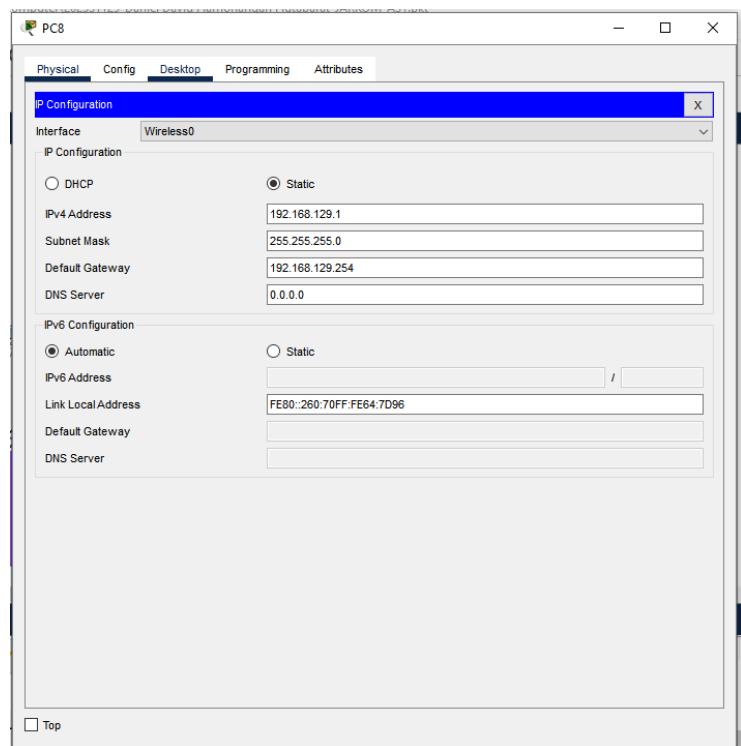
6. Jika berhasil maka tampilan dari sambungan akan seperti ini dan akan tersambung otomatis ke access point.



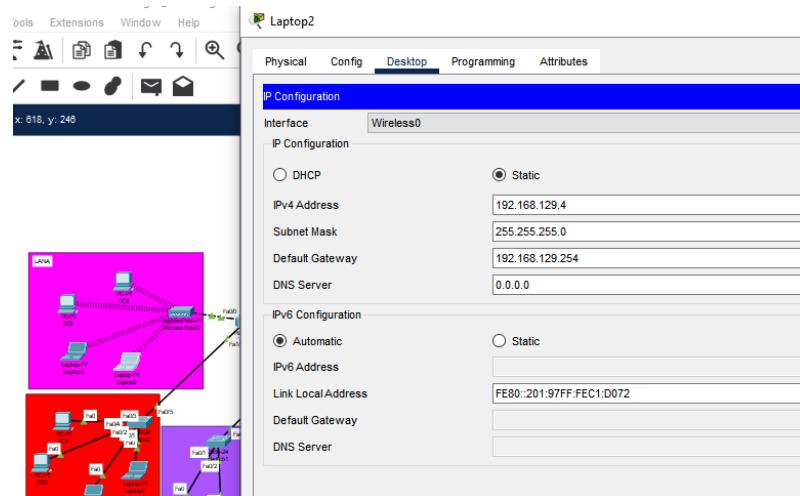
7. Selanjutnya sambungkan antar router dengan kabel serial yang berwarna merah dan berikut tampilan jaringan yang telah dihubungkan dengan kabel



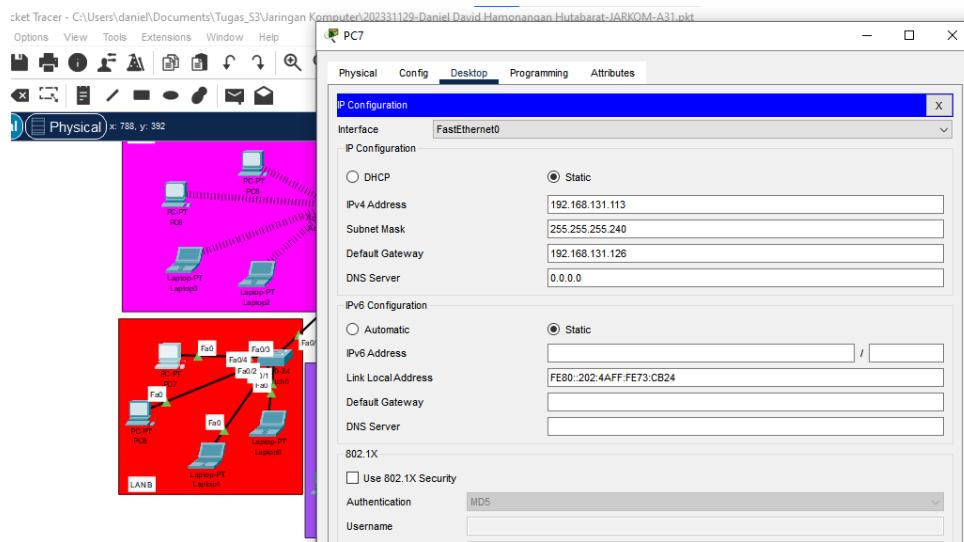
8. Berikut tampilan yang sudah dipisah berdasarkan LAN nya masing masing dimana terdiri dari LAN A – LAN G dan WAN A -WAN B



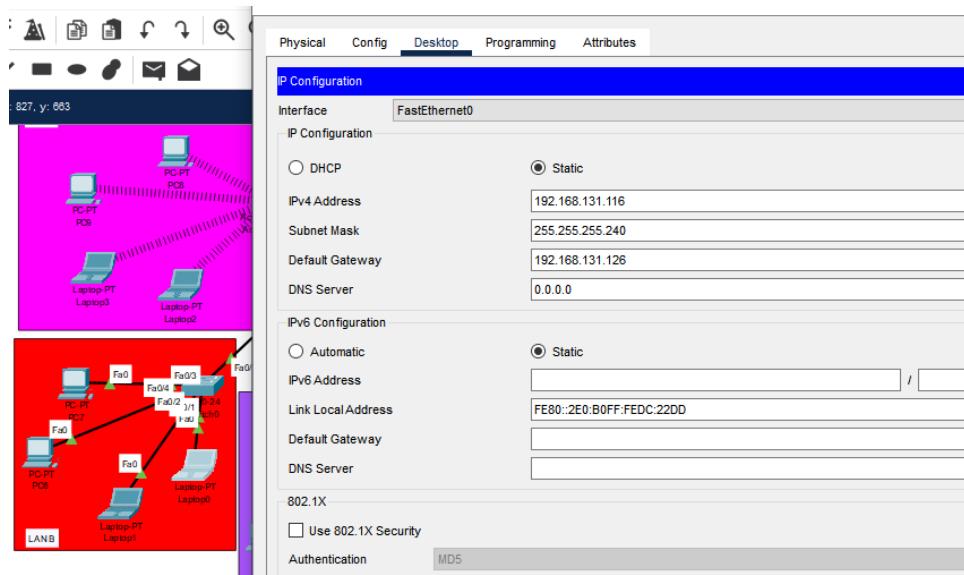
9. Berikut adalah pengisian IP address dari LAN A dimana menggunakan first host dari LAN A yaitu 192.168.129.1 dengan subnet masknya 255.255.255.0 dan default gateway nya adalah last host dari LAN A



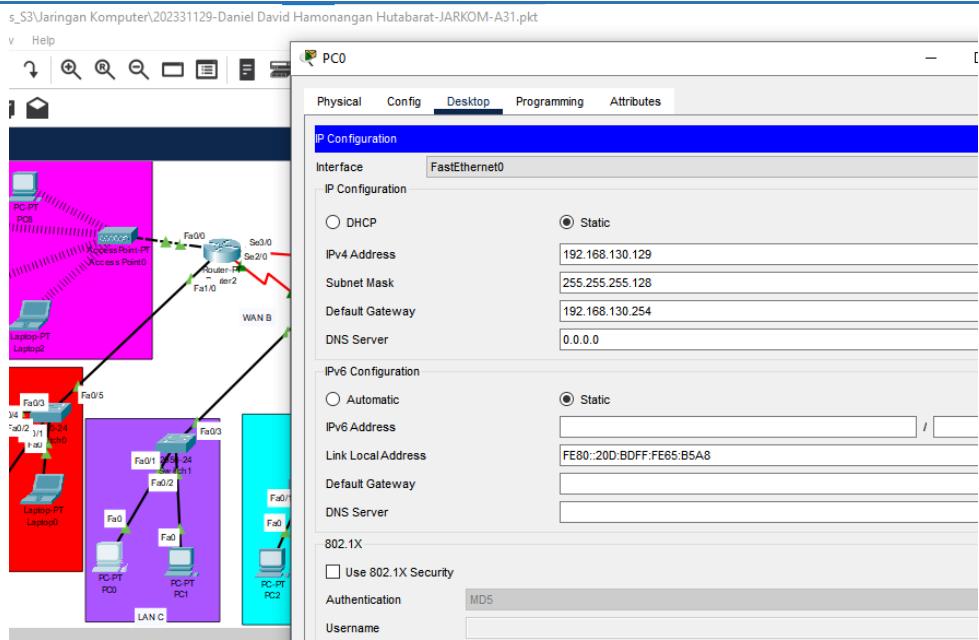
10. Berikut adalah end device terakhir dari LAN A perbedanya dari PC yang pertama adalah hanya pada ipv4 address nya dimana melanjutkan dari first host address yang sebelumnya menjadi 192.168.129.4



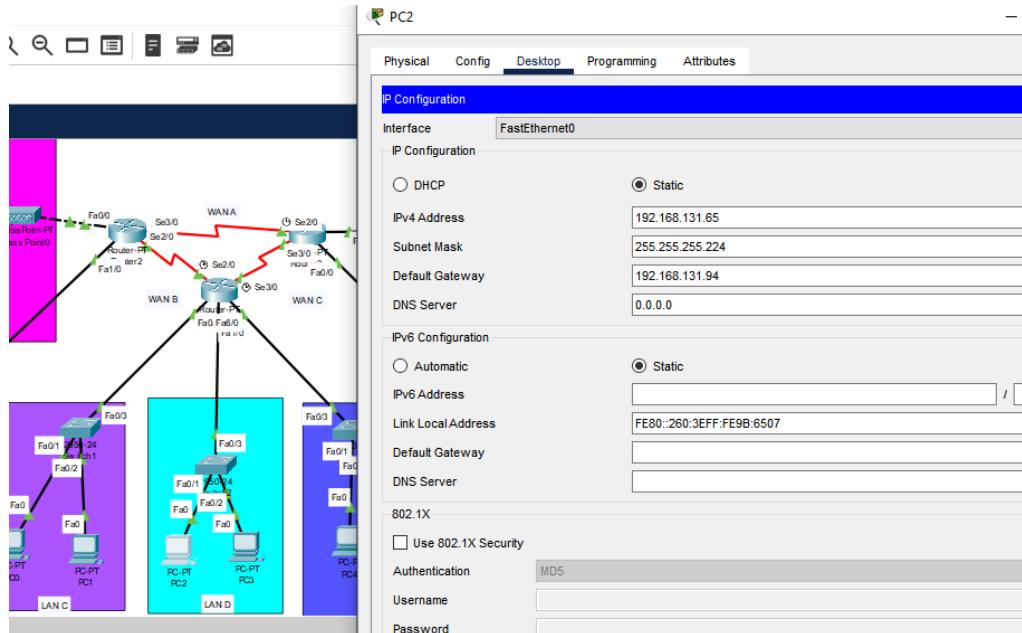
11. Berikutnya adalah end device dari LAN B dimana Ip address nya adalah 192.168.131.113 dan subnet masknya 255.255.255.240 serta 192.168.131.126



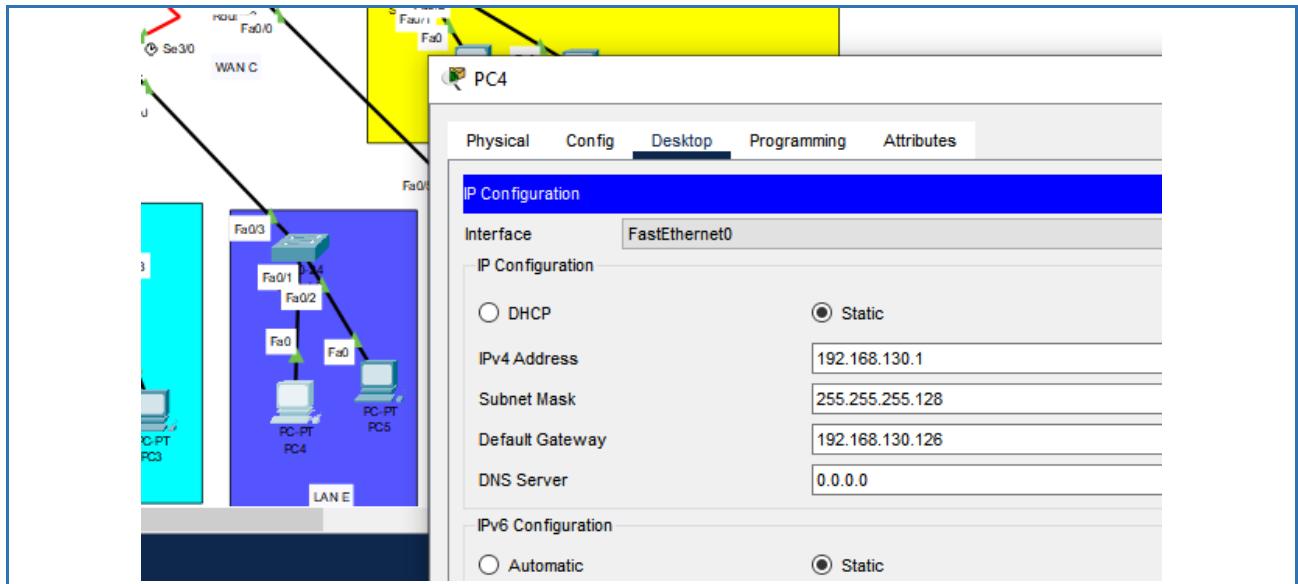
12. Berikutnya adalah end device terakhir dari LAN B dimana yang berbeda adalah ip addressnya yang melanjutkan dari ip address end device sebelumnya



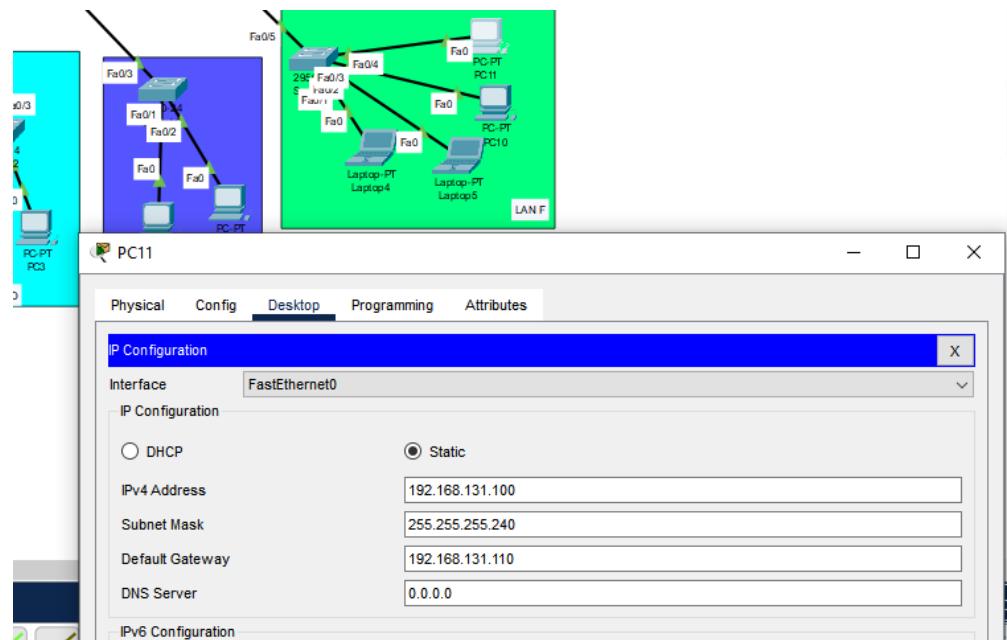
13. Selanjutnya adalah ip pada LAN C dimana ipnya adalah 192.168.130.129 dan subnet nya adalah 255.255.255.128 dan defaul gatewaynya adalah 192.168.130.254



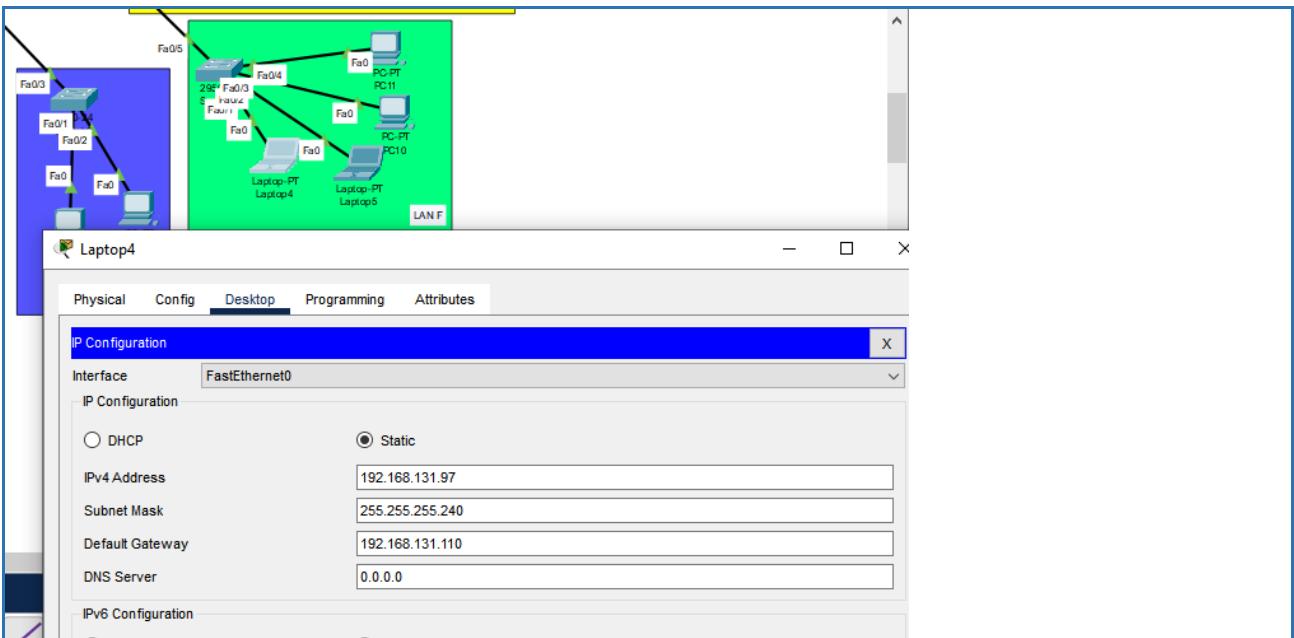
14. Berikutnya ip dari end device LAN D yang menggunakan ip 192.164.131.65 dan subnet mask 255.255.255.224 dan defaul gateway 192.168.131.94



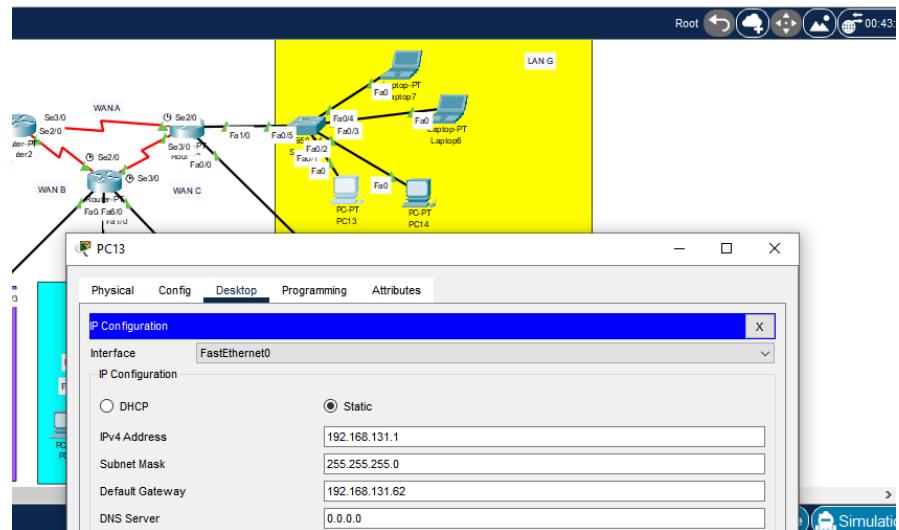
15. Berikutnya adalah ip pada end device LAN E yang menggunakan 192.168.130.1, subnet mask 255.255.255.128 dan default gateway 192.168.130.126



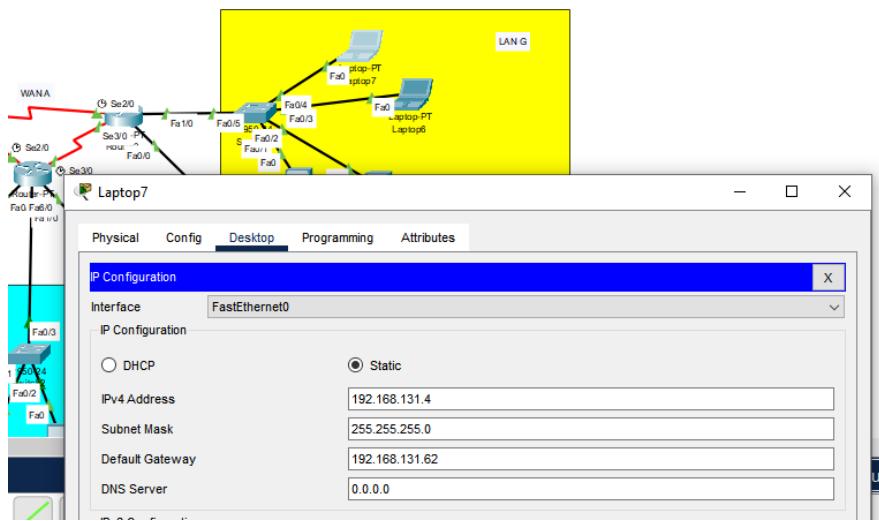
16. Selanjutnya adalah end device pada LAN F yang menggunakan ip 192.168.131.100 dengan subnetmask 255.255.255.240 dan default gateway 192.168.131.110



17. Perbedaan ip pada perangkat ini adalah pada ip address nya saja yang melanjutkan ip dari perangkat sebelumnya



18. Selanjutnya adalah end device pada LAN G yang menggunakan ip 192.168.131.1 dengan subnet dengan akhiran 0 dan default gateway dengan akhiran 62.



19. Berikut perangkat end device lainnya dari LAN G

```

Router2
Physical Config CLI Attributes
IOS Command Line Interface
technical support: http://www.cisco.com/techsupport
Copyright (c) 1986-2005 by cisco Systems, Inc.
Compiled Wed 27-Apr-04 19:01 by miwang

PT 1001 (PTSC2005) processor (revision 0x200) with 60416K/5120K bytes of memory
.
Processor board ID PT0123 (0123)
PT2005 processor: part number 0, mask 01
Bridging software.
X.25 software, Version 3.0.0.
4 FastEthernet/IEEE 802.3 interface(s)
2 Low-speed serial(sync/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]:
Press RETURN to get started!

Router>enable
Router#config
Configuring from terminal, memory, or network [terminal]?
Enter configuration commands, one per line. End with CNTL/Z.
Router(config)#int fa0/0
Router(config-if)#ip address 192.168.129.254 255.255.255.0
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

```

20. Berikut nya adalah menghubungkan LAN A dengan router yaitu dengan memasukan default gateway LAN A dan subnet mask LAN A

Router2

Physical Config **CLI** Attributes

IOS Command Line Interface

```
Router#enable
Router#config
Configuring from terminal, memory, or network [terminal]?
Enter configuration commands, one per line. End with CNTL/Z.
Router(config)#int fa0/0
Router(config-if)#ip address 192.168.129.254 255.255.255.0
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)#ex
Router(config)#int fal/0
Router(config-if)#ip address 192.168.131.134 255.255.255.252
Router(config-if)#no shutdown

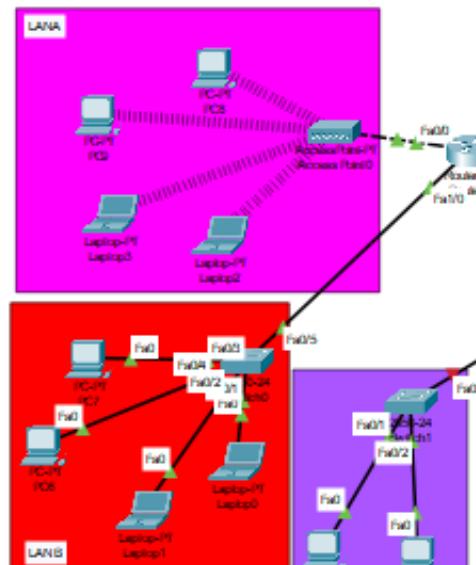
Router(config-if)#
$LINK-5-CHANGED: Interface FastEthernet1/0, changed state to up

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

Router(config-if)#ip address 192.168.131.126 255.255.255.240
Router(config-if)#no shutdown
Router(config-if)#

 Top
```

21. Berikutnya adalah menghubungkan LAN B dengan router kiri yaitu dengan menginput last host atau default gateway dan subnet mask LAN B ke dalam CLI router kiri.



22. Berikut hasilnya

Router1

Physical Config **CLI** Attributes

IOS Command Line Interface

```

2 Low-speed serial(sync/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#config
Configuring from terminal, memory, or network [terminal]?
Enter configuration commands, one per line. End with CNTL/Z.
Router(config)#int se0/0
%Invalid interface type and number
Router(config)#int fa0/0
Router(config-if)#ip address 192.168.130.254 255.255.255.128
Router(config-if)#ex
Router(config)#int fa3/0
%Invalid interface type and number
Router(config)#int fa1/0
Router(config-if)#ip address 192.168.131.94 255.255.255.224
Router(config-if)#ex
Router(config)#int fa6/0
Router(config-if)#ip address 192.168.130.126 255.255.255.128
Router(config-if)#no shutdown

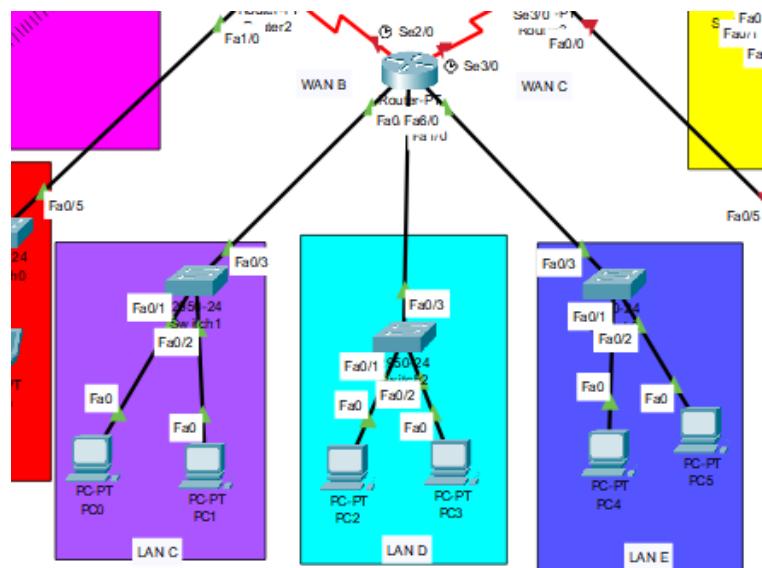
Router(config-if)#
%LINK-5-CHANGED: Interface FastEthernet6/0, changed state to up

%LINEPROTO-5-UPDOWN: Line protocol on Interface FastEthernet6/0, changed state to up

```

Top

23. Berikut ini adalah proses menghubungkan LAN C, D, E dengan router tengah



24. Berikut ini adalah hasilnya

```

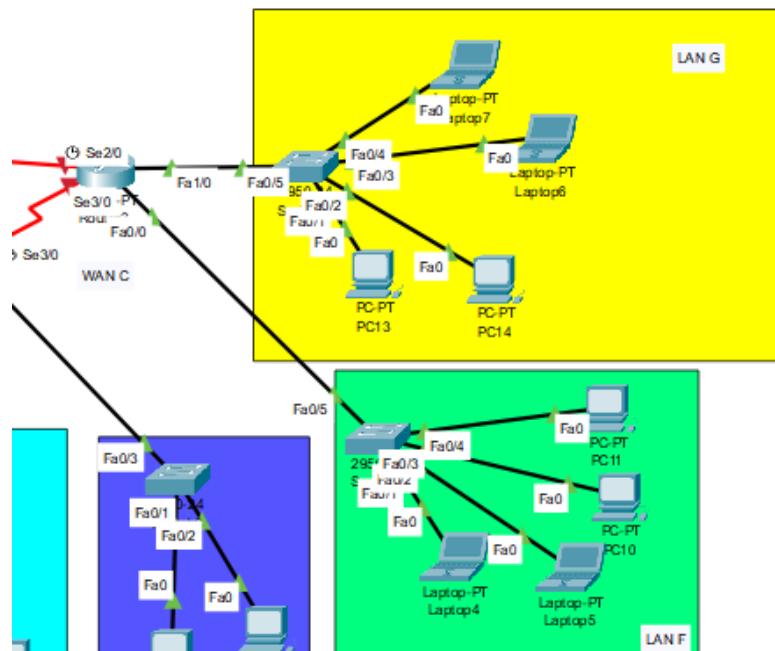
Router>enable
Router>config
Configuring from terminal, memory, or network [terminal]?
Enter configuration commands, one per line. End with CNTL/Z.
Router(config)#int fa1/0
Router(config-if)#ip address 192.168.131.110 255.255.255.240
Router(config-if)#no shutdown

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)#
$LINK-5-CHANGED: Interface FastEthernet0/0, changed state to up
$LINEPROTO-5-UPDOWN: Line protocol on Interface FastEthernet0/0, changed state to up

```

25. Berikut ini adalah command yang digunakan untuk menghubungkan antara LAN F dan G dengan router kanan menggunakan last host dan subnet mask masing-masing LAN.



26. Berikut tampilan hasilnya

The screenshot shows the Cisco IOS Command Line Interface (CLI) for Router2. The window title is "Router2". The tabs at the top are "Physical", "Config", "CLI" (which is selected), and "Attributes". The main area displays the following configuration commands:

```
Router>enable
Router#config
Configuring from terminal, memory, or network [terminal]?
Enter configuration commands, one per line. End with CNTL/Z.
Router(config)#int se3/0
Router(config-if)#ip address 192.168.131.129 255.255.255.252
Router(config-if)#no shutdown

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

27. Berikut adalah langkah untuk menghubungkan antara router kiri dengan kanan menggunakan WAN A dimana router kiri dimasukan FH dari WAN A

The screenshot shows the Cisco IOS Command Line Interface (CLI) for Router3. The window title is "Router3". The tabs at the top are "Physical", "Config", "CLI" (which is selected), and "Attributes". The main area displays the following configuration commands:

```
PRESS RETURN TO get started

Router>enable
Router#config
Configuring from terminal, memory, or network [terminal]?
Enter configuration commands, one per line. End with CNTL/Z.
Router(config)#int fa1/0
Router(config-if)#ip address 192.168.131.62 255.255.255.192
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

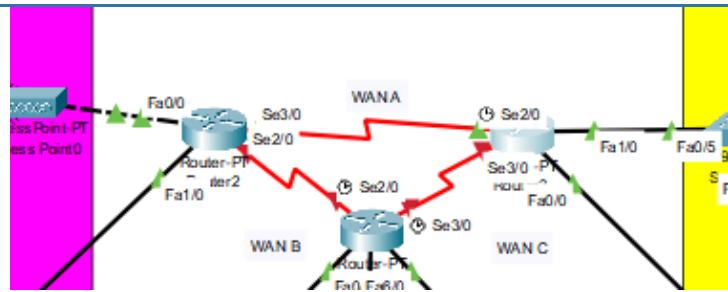
Router(config-if)#ex
Router(config)#int fa0/0
Router(config-if)#ip address 192.168.131.110 255.255.255.240
Router(config-if)#no shutdown

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)#ex
Router(config)#int se2/0
Router(config-if)#ip address 192.168.131.130 255.255.255.252
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
```

28. Selanjutnya untuk router kanan masukan IP last host dari WAN A dengan subnest mask



29. Berikut tampilan yang sudah terhubung

```

Router# Enter configuration commands, one per line. End with CNTL/Z.
Router(config)#int fa1/0
Router(config-if)#ip address 192.168.131.62 255.255.255.192
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)#ex
Router(config)#int fa0/0
Router(config-if)#ip address 192.168.131.110 255.255.255.240
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)#ex
Router(config)#int se2/0
Router(config-if)#ip address 192.168.131.130 255.255.255.252
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

Router(config-if)#ex
Router(config)#int se3/0
Router(config-if)#ip address 192.168.131.137 255.255.255.252
Router(config-if)#no shutdown

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

```

30. Berikutnya adalah menghubungkan WAN C yang menghubungkan Router kanan dan tenggan yaitu denggan pada router kanan masukan FH dari WAN C beserta subnet masknya

Router1

Physical Config **CLI** Attributes

IOS Command Line Interface

```
Router con0 is now available

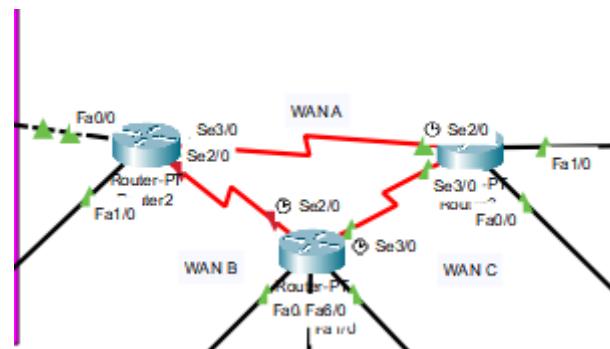
Press RETURN to get started.

Router>enable
Router#config
Configuring from terminal, memory, or network [terminal]?
Enter configuration commands, one per line. End with CNTL/Z.
Router(config)#int se3/0
Router(config-if)#ip address 192.168.131.138 255.255.255.252
Router(config-if)#no shutdown

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

Copy Paste

31. Berikutnya pada router tengah masukan LH dari WAN C dan subnet hostnya



32. Berikut tampilan dari hasilnya

```

Router>enable
Router#config
Configuring from terminal, memory, or network [terminal]?
Enter configuration commands, one per line. End with CNTL/Z.
Router(config)#int se3/0
Router(config-if)#ip address 192.168.131.138 255.255.255.252
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

Router(config-if)#exit
Router(config)#int se2/0
Router(config-if)#ip address 192.168.131.133 255.255.255.252
Router(config-if)#

```

33. Terakhir adalah menghubungkan router tengah dengan router kiri dengan WAN B pertama masukan ip FH WAN B pada router tengah beserta subnet masknya

```

Router>enable
Router#config
Configuring from terminal, memory, or network [terminal]?
Enter configuration commands, one per line. End with CNTL/Z.
Router(config)#int se3/0
Router(config-if)#ip address 192.168.131.129 255.255.255.252
Router(config-if)#no shutdown

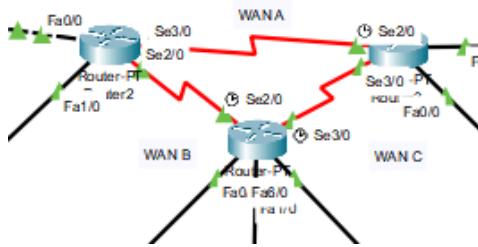
%LINK-5-CHANGED: Interface Serial3/0, changed state to down
Router(config-if)#
%LINK-5-CHANGED: Interface Serial3/0, changed state to up

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

Router(config-if)#
Router(config-if)#
Router(config-if)#
Router(config-if)#

```

34. Masukan IP LH host WAN B pada router kiri dan subnet masknya



35. Berikut hasilnya

David Hamonangan_Hutabarat-JARKOM-A31.pkt

Router2

Physical Config CLI Attributes

IOS Command Line Interface

```

Router>enable
Router#config
Configuring from terminal, memory, or network [terminal]?
Enter configuration commands, one per line. End with CNTL/Z.
Router(config)#int se3/0
Router(config-if)#ip address 192.168.131.129 255.255.255.252
Router(config-if)#no shutdown

*LINK-5-CHANGED: Interface Serial3/0, changed state to down
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

Router(config-if)#ex
Router(config)#int se2/0
Router(config-if)#ip address 192.168.131.134 255.255.255.252
Router(config-if)#no shutdown

*LINK-5-CHANGED: Interface Serial2/0, changed state to down
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

Router(config-if)#ex
Router(config)#int se3/0
Router(config-if)#ip route 192.168.131.0 255.255.255.192 192.168.131.130
Router(config)#int se3/0
Router(config-if)#ip route 192.168.131.96 255.255.255.240 192.168.131.130
Router(config)#

```

Copy Paste

Top

36. Selanjutnya adalah melakukan ip route yaitu pada router kiri akan menghubungkan ke router kanan yang terhubung dengan LAN G dan LAN F yaitu dengan memasukan perintah IP router kemudian memasukan NA dari LAN dan subnet dari LAN dan terakhir memasukan IP dari router tujuan diaman pada router kanan WAN A menggunakan LH WAN A.



Router3

Physical Config CLI Attributes

IOS Command Line Interface

```
Router(config-if)#ex
Router(config)#int fa0/0
Router(config-if)#ip address 192.168.131.110 255.255.255.240
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)#ex
Router(config)#int se2/0
Router(config-if)#ip address 192.168.131.130 255.255.255.252
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

Router(config-if)#ex
Router(config)#int se3/0
Router(config-if)#ip address 192.168.131.137 255.255.255.252
Router(config-if)#no shutdown

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

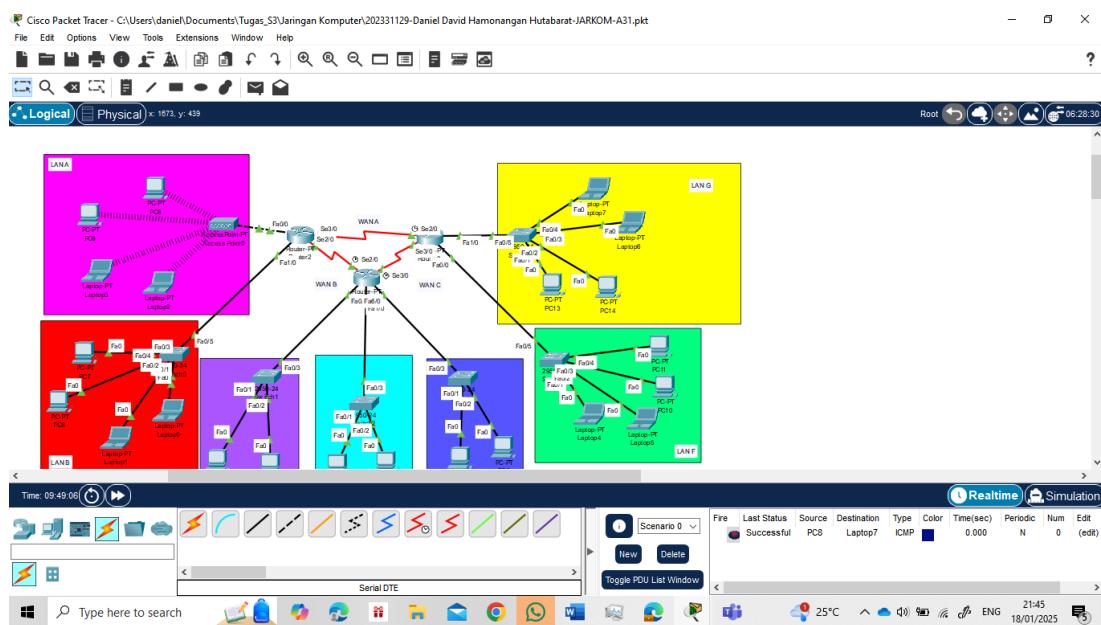
%LINEPROTO-5-UPDOWN: Line protocol on Interface Serial3/0, changed state to up

Router(config-if)#ex
Router(config)#int se2/0
Router(config-if)#ip route 192.168.129.0 255.255.255.0 192.168.131.129
Router(config)#int se2/0
Router(config-if)#ip route 192.168.131.112 255.255.255.240 192.168.131.129
Router(config)#

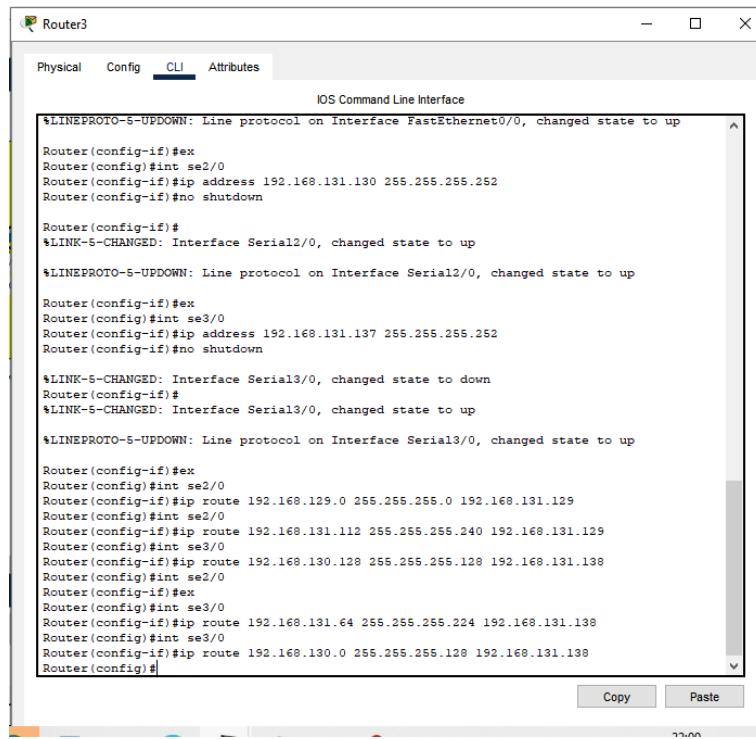
```

Copy Paste

37. Begitu pun sebaliknya untuk router kanan dengan memasukan NA LAN tujuan dan subnet mask serta ip router tujuan pada WAN A



38. Berikut hasilnya



```
%LINEPROTO-5-UPDOWN: Line protocol on Interface FastEthernet0/0, changed state to up
Router(config-if)#ex
Router(config)#int se2/0
Router(config-if)#ip address 192.168.131.130 255.255.255.252
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

Router(config-if)#ex
Router(config)#int se3/0
Router(config-if)#ip address 192.168.131.137 255.255.255.252
Router(config-if)#no shutdown

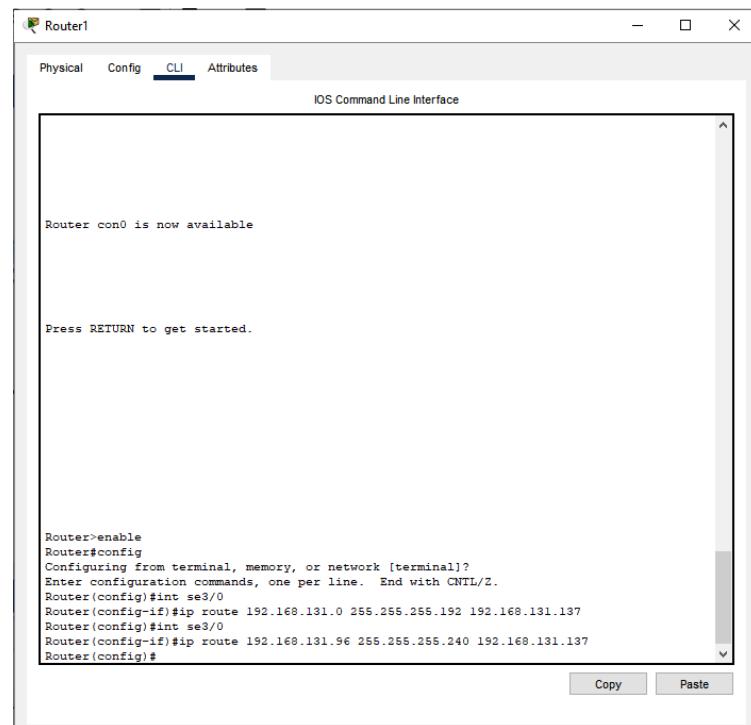
%LINK-5-CHANGED: Interface Serial3/0, changed state to down
Router(config-if)#
%LINK-5-CHANGED: Interface Serial3/0, changed state to up

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

Router(config-if)#ex
Router(config)#int se2/0
Router(config-if)#ip route 192.168.129.0 255.255.255.0 192.168.131.129
Router(config)#int se2/0
Router(config-if)#ip route 192.168.131.112 255.255.255.240 192.168.131.129
Router(config)#int se3/0
Router(config-if)#ip route 192.168.130.128 255.255.255.128 192.168.131.138
Router(config)#int se2/0
Router(config-if)#ex
Router(config)#int se3/0
Router(config-if)#ip route 192.168.131.64 255.255.255.224 192.168.131.138
Router(config)#int se3/0
Router(config-if)#ip route 192.168.130.0 255.255.255.128 192.168.131.138
Router(config)#

```

39. Masukan NA,SM dan ip router tengah untuk melakukan ip route pada WAN C



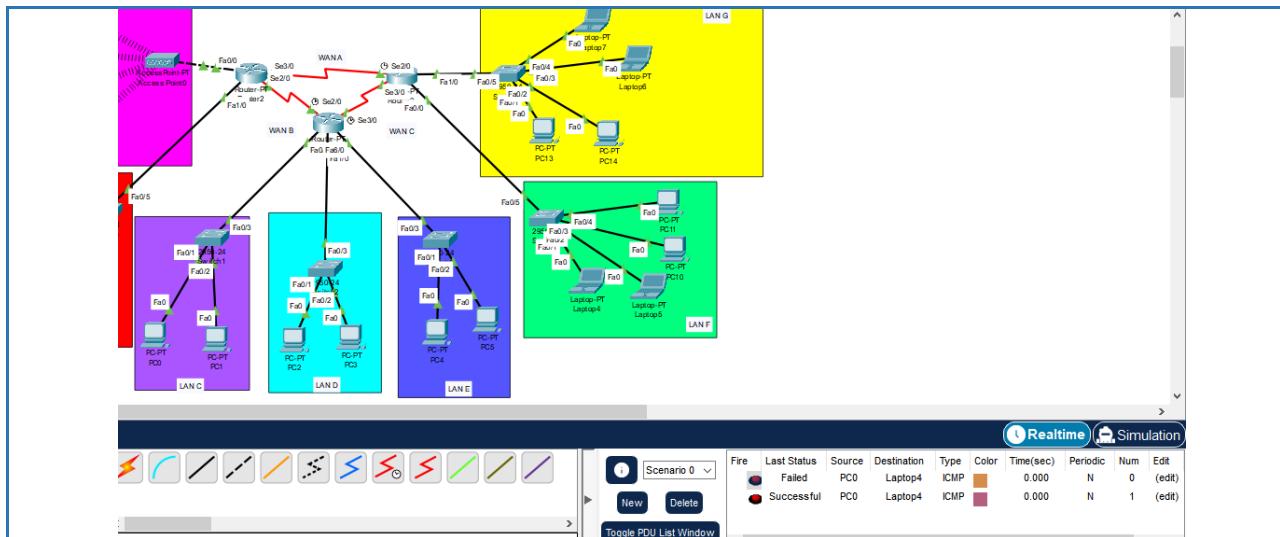
```
Router con0 is now available

Press RETURN to get started.

Router>enable
Router#config
Configuring from terminal, memory, or network [terminal]?
Enter configuration commands, one per line. End with CNTL/Z.
Router(config)#int se3/0
Router(config-if)#ip route 192.168.131.0 255.255.255.192 192.168.131.137
Router(config)#int se3/0
Router(config-if)#ip route 192.168.131.96 255.255.255.240 192.168.131.137
Router(config)#

```

40. Masukan NA,SM dan ip router kanan untuk melakukan ip route pada WAN C



41. Berikut hasilnya

The screenshot shows the Cisco IOS Command Line Interface (CLI) window titled 'Router1'. The 'CLI' tab is selected. The terminal window displays the following configuration session:

```

Router con0 is now available

Press RETURN to get started.

Router>enable
Router#config
Configuring from terminal, memory, or network [terminal]?
Enter configuration commands, one per line. End with CNTL/Z.
Router(config)#int se3/0
Router(config-if)#ip route 192.168.131.0 255.255.255.192 192.168.131.137
Router(config)#int se3/0
Router(config-if)#ip route 192.168.131.96 255.255.255.240 192.168.131.137
Router(config)#int se2/0
Router(config-if)#ip route 192.168.129.0 255.255.255.0 192.168.131.134
Router(config)#int se2/0
Router(config-if)#ip route 192.168.131.112 255.255.255.240 192.168.131.134
Router(config)#

```

At the bottom right of the terminal window are 'Copy' and 'Paste' buttons. Below the terminal window is a checkbox labeled 'Top'.

42. Lakukan hal yang sama seperti ip route sebelumnya yaitu melakukan input NA LAN tujuan, subnet mask LAN tujuan dan ip router yang dituju.

The screenshot shows a Windows application window titled "Router2". The tab bar at the top has "Physical", "Config", "CLI" (which is selected), and "Attributes". Below the tabs is a header "IOS Command Line Interface". The main area contains the following text:

```
Router con0 is now available

Press RETURN to get started.

Router>enable
Router#config
Configuring from terminal, memory, or network [terminal]?
Enter configuration commands, one per line. End with CNTL/Z.
Router(config)#int se2/0
Router(config-if)#ip route 192.168.130.128 255.255.255.128
^
% Invalid input detected at '^' marker.

Router(config-if)#ip route 192.168.130.128 255.255.255.128 192.168.131.133
Router(config)#int se2/0
Router(config-if)#ip route 192.168.131.64 255.255.255.224 192.168.131.133
Router(config)#int se2/0
Router(config-if)#ip route 192.168.130.0 255.255.255.128 192.168.131.133
Router(config)#
```

At the bottom right of the CLI window are "Copy" and "Paste" buttons. At the bottom left is a checkbox labeled "Top".

43. Input NA LAN tujuan, dan subnet mask LAN tujuan dan ip router yang dituju. Untuk menghubungkan

44. Output PC LAN A ke PC LAN B

```
Cisco Packet Tracer PC Command Line 1.0
C:>
ping
Cisco Packet Tracer PC Ping
Usage: ping [-n count | -v IOS | -t ] target
C:>ip 192.168.131.113
Invalid Command.
C:>ping 192.168.131.113
Pinging 192.168.131.113 with 32 bytes of data:
Reply from 192.168.131.113: bytes=32 time=5ms TTL=127
Reply from 192.168.131.113: bytes=32 time=29ms TTL=127
Reply from 192.168.131.113: bytes=32 time=11ms TTL=127
Reply from 192.168.131.113: bytes=32 time=39ms TTL=127

Ping statistics for 192.168.131.113:
    Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),
    Approximate round trip times in milli-seconds:
        Minimum = 5ms, Maximum = 39ms, Average = 21ms
C:>
```

45. Output PC LAN C ke laptop LAN F

```
Cisco Packet Tracer PC Command Line 1.0
C:>ping 192.168.131.97
Pinging 192.168.131.97 with 32 bytes of data:
Reply from 192.168.131.97: bytes=32 time=1ms TTL=126
Reply from 192.168.131.97: bytes=32 time=11ms TTL=126
Reply from 192.168.131.97: bytes=32 time=10ms TTL=126
Reply from 192.168.131.97: bytes=32 time=30ms TTL=126

Ping statistics for 192.168.131.97:
    Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),
    Approximate round trip times in milli-seconds:
        Minimum = 1ms, Maximum = 30ms, Average = 13ms
C:>
```

46. Output PC LAN D ke PC LAN G

```
Cisco Packet Tracer PC Command Line 1.0
C:\>ping 192.168.131.1

Pinging 192.168.131.1 with 32 bytes of data:

Request timed out.
Reply from 192.168.131.1: bytes=32 time=12ms TTL=126
Reply from 192.168.131.1: bytes=32 time=10ms TTL=126
Reply from 192.168.131.1: bytes=32 time=13ms TTL=126

Ping statistics for 192.168.131.1:
    Packets: Sent = 4, Received = 3, Lost = 1 (25% loss),
Approximate round trip times in milli-seconds:
    Minimum = 10ms, Maximum = 13ms, Average = 11ms

C:\>ping 192.168.131.1

Pinging 192.168.131.1 with 32 bytes of data:

Reply from 192.168.131.1: bytes=32 time=36ms TTL=126
Reply from 192.168.131.1: bytes=32 time=34ms TTL=126
Reply from 192.168.131.1: bytes=32 time=11ms TTL=126
Reply from 192.168.131.1: bytes=32 time=1ms TTL=126

Ping statistics for 192.168.131.1:
    Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),
Approximate round trip times in milli-seconds:
    Minimum = 1ms, Maximum = 36ms, Average = 20ms

C:\>
```

47. Output PC LAN A ke PC LAN D

```
Cisco Packet Tracer PC Command Line 1.0
C:\>

ping 192.168.131.66

Pinging 192.168.131.66 with 32 bytes of data:

Reply from 192.168.131.66: bytes=32 time=111ms TTL=126
Reply from 192.168.131.66: bytes=32 time=32ms TTL=126
Reply from 192.168.131.66: bytes=32 time=45ms TTL=126
Reply from 192.168.131.66: bytes=32 time=30ms TTL=126

Ping statistics for 192.168.131.66:
    Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),
Approximate round trip times in milli-seconds:
    Minimum = 30ms, Maximum = 111ms, Average = 54ms

C:\>
```

Fire	Last Status	Source	Destination	Type	Color	Time(sec)	Periodic	Num	Edit
	Successful	PC9	Laptop6	ICMP		0.000	N	0	(edit)
	Successful	PC7	PC11	ICMP		0.000	N	1	(edit)
	Successful	PC8	Laptop5	ICMP		0.000	N	2	(edit)