

Nama : Nur Fadlilah Azzis

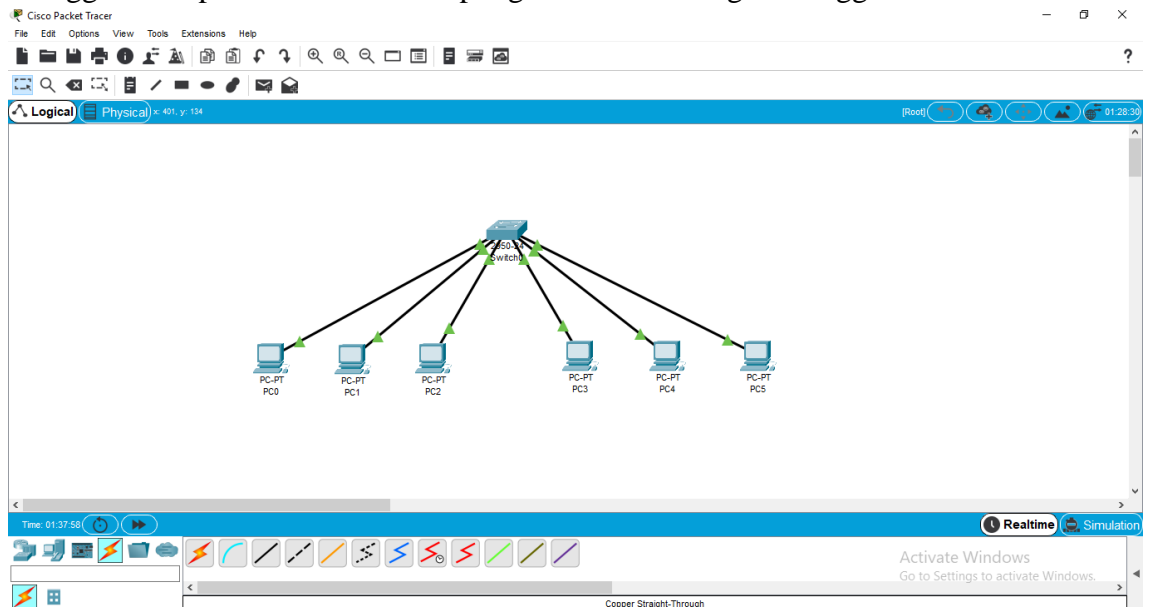
NIM : L200180113

Kelas : C

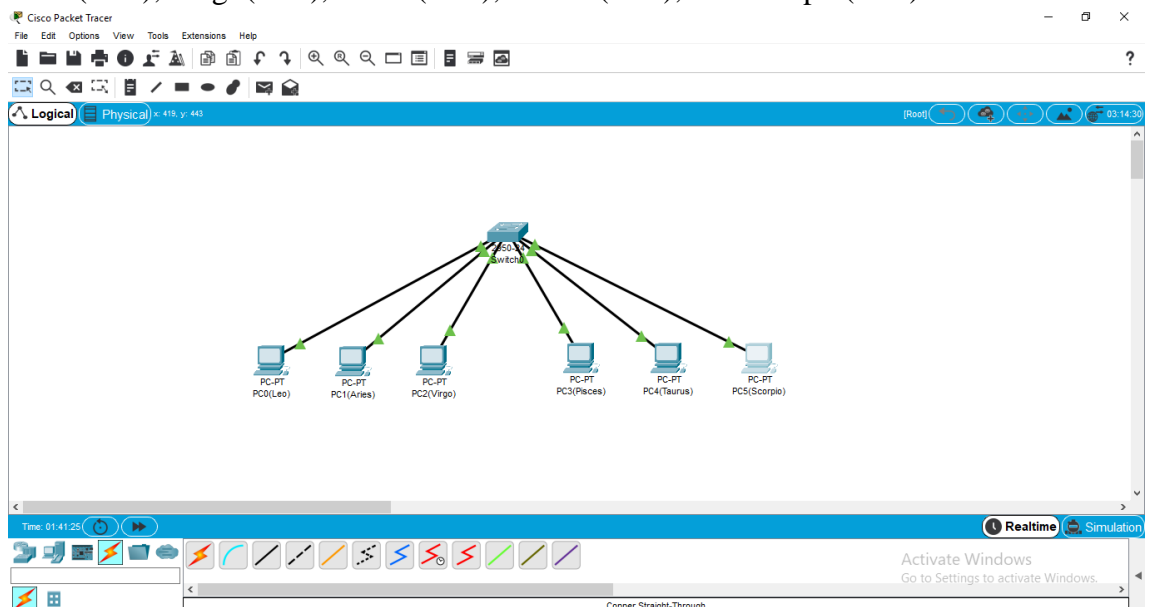
Modul 4

1. Kegiatan 1. Topologi 1

- a. Menggunakan packet tracer buat topologi berikut ini dengan menggunakan swith.

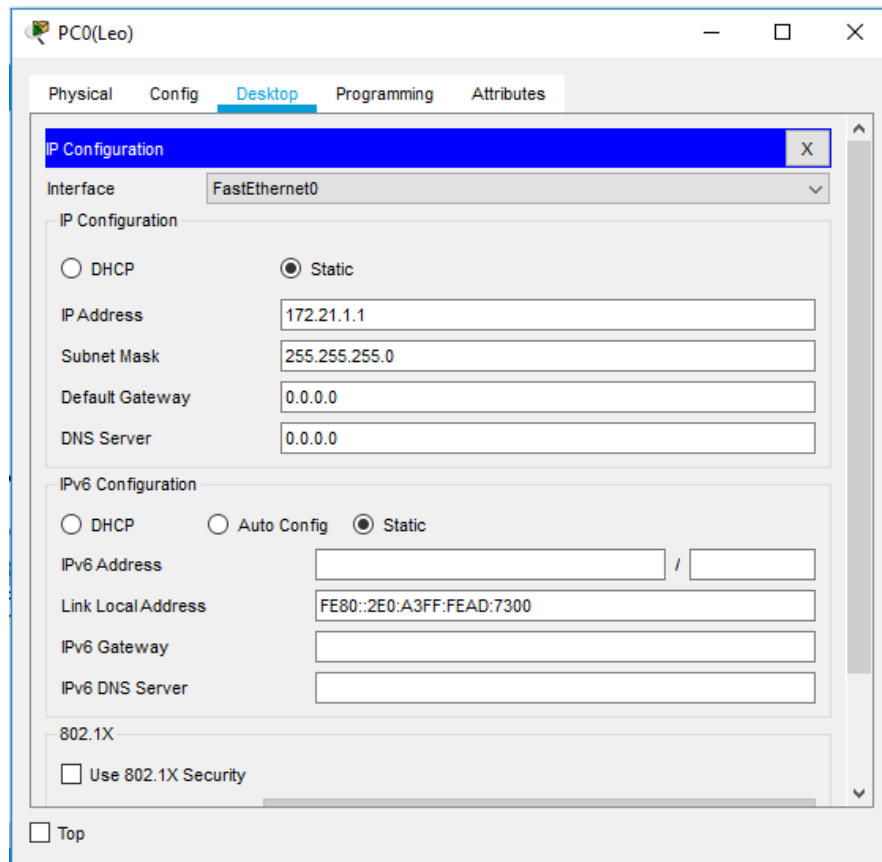


- b. Beri nama masing_masing perangkat dengan SW1(Switch), Leo (PC0), Aries(PC1), Virgo(PC2), Pisces(PC3), Taurus(PC4), dan Scorpio(PC5)



c. Konfigurasi masing-masing PC dengan nama dan alamat IP berikut ini:

- Leo



The screenshot shows the configuration window for PC0(Leo). The 'Desktop' tab is selected. The 'IP Configuration' section is expanded, showing the 'FastEthernet0' interface. The 'Static' radio button is selected under 'IP Configuration'. The fields are filled with the following values:

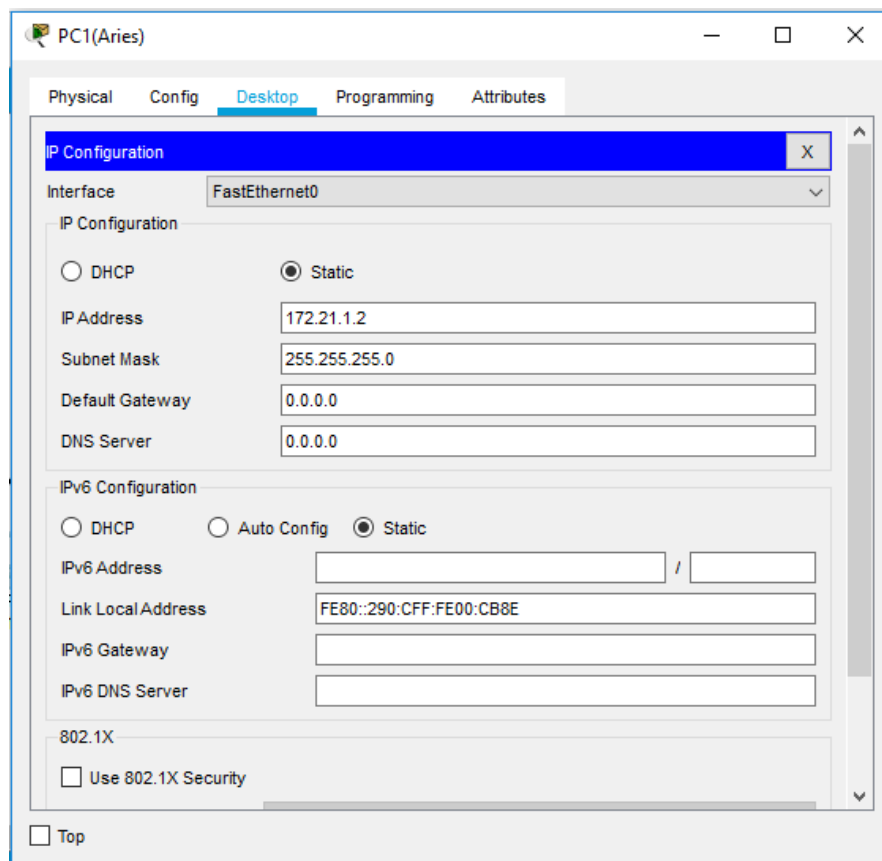
Field	Value
IP Address	172.21.1.1
Subnet Mask	255.255.255.0
Default Gateway	0.0.0.0
DNS Server	0.0.0.0

Under 'IPv6 Configuration', the 'Static' radio button is selected. The fields are empty:

Field	Value
IPv6 Address	
Link Local Address	FE80::2E0:A3FF:FEAD:7300
IPv6 Gateway	
IPv6 DNS Server	

Under '802.1X', the 'Use 802.1X Security' checkbox is unchecked.

- Aries



The screenshot shows the configuration window for PC1(Aries). The 'Desktop' tab is selected. The 'IP Configuration' section is expanded, showing the 'FastEthernet0' interface. The 'Static' radio button is selected under 'IP Configuration'. The fields are filled with the following values:

Field	Value
IP Address	172.21.1.2
Subnet Mask	255.255.255.0
Default Gateway	0.0.0.0
DNS Server	0.0.0.0

Under 'IPv6 Configuration', the 'Static' radio button is selected. The fields are filled with the following values:

Field	Value
IPv6 Address	
Link Local Address	FE80::290:CFF:FE00:CB8E
IPv6 Gateway	
IPv6 DNS Server	

Under '802.1X', the 'Use 802.1X Security' checkbox is unchecked.

- Virgo

PC2(Virgo)

Physical Config **Desktop** Programming Attributes

IP Configuration X

Interface: FastEthernet0

IP Configuration

☐ DHCP ☒ Static

IP Address: 172.21.1.3

Subnet Mask: 255.255.255.0

Default Gateway: 0.0.0.0

DNS Server: 0.0.0.0

IPv6 Configuration

☐ DHCP ☐ Auto Config ☒ Static

IPv6 Address: /

Link Local Address: FE80::201:63FF:FE6B:8BA0

IPv6 Gateway:

IPv6 DNS Server:

802.1X

☐ Use 802.1X Security

☐ Top

- Libra

PC3(Libra)

Physical Config **Desktop** Programming Attributes

IP Configuration X

Interface: FastEthernet0

IP Configuration

☐ DHCP ☒ Static

IP Address: 172.21.1.4

Subnet Mask: 255.255.255.0

Default Gateway: 0.0.0.0

DNS Server: 0.0.0.0

IPv6 Configuration

☐ DHCP ☐ Auto Config ☒ Static

IPv6 Address: /

Link Local Address: FE80::201:63FF:FE33:E939

IPv6 Gateway:

IPv6 DNS Server:

802.1X

☐ Use 802.1X Security

☐ Top

- Taurus

PC4(Taurus)

Physical Config **Desktop** Programming Attributes

IP Configuration [X]

Interface: FastEthernet0

IP Configuration

☐ DHCP ☒ Static

IP Address: 172.21.1.5

Subnet Mask: 255.255.255.0

Default Gateway: 0.0.0.0

DNS Server: 0.0.0.0

IPv6 Configuration

☐ DHCP ☐ Auto Config ☒ Static

IPv6 Address: /

Link LocalAddress: FE80::202:17FF:FE9D:4361

IPv6 Gateway:

IPv6 DNS Server:

802.1X

☐ Use 802.1X Security

☐ Top

- Scorpio

PC5(Scorpio)

Physical Config **Desktop** Programming Attributes

IP Configuration [X]

Interface: FastEthernet0

IP Configuration

☐ DHCP ☒ Static

IP Address: 172.21.1.6

Subnet Mask: 255.255.255.0

Default Gateway: 0.0.0.0

DNS Server: 0.0.0.0

IPv6 Configuration

☐ DHCP ☐ Auto Config ☒ Static

IPv6 Address: /

Link LocalAddress: FE80::2D0:BAFF:FECC:2079

IPv6 Gateway:

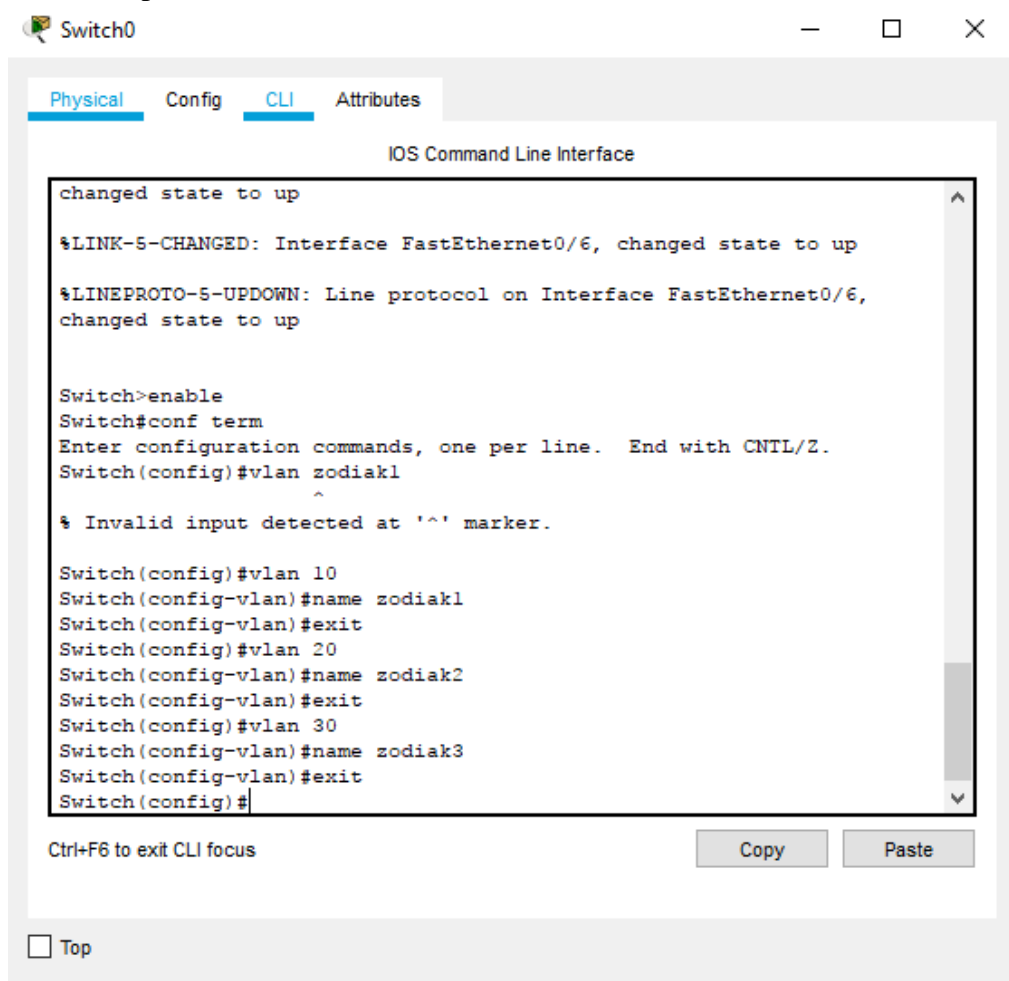
IPv6 DNS Server:

802.1X

☐ Use 802.1X Security

☐ Top

- d. Konfigurasi pada switch dengan mode user atau mode privilege, buat 3 VLAN dengan nama zodiak1, zodiak2, dan zodiak3. Dengan cara klik pada switch 2 kali, kemudian pilih cli.



- e. Pada mode configuration, konfigurasi port-port switch ke dalam vlan zodiak1, zodiak2, dan zodiak3 dengan anggota sebagai berikut.
- Zodiak1 = leo dan libra
 - Leo

Switch0

Physical **Config** CLI Attributes

GLOBAL

- Settings
- Algorithm Settings

SWITCHING

- VLAN Database

INTERFACE

- FastEthernet0/1**
- FastEthernet0/2
- FastEthernet0/3
- FastEthernet0/4
- FastEthernet0/5
- FastEthernet0/6
- FastEthernet0/7
- FastEthernet0/8
- FastEthernet0/9

FastEthernet0/1

Status ☒ On

Width ☒ 100 Mbps ☐ 10 Mbps ☒ Auto

☐ Half Duplex ☒ Full Duplex ☒ Auto

Access VLAN

Port Limit

☐ 1:default

☒ 10:zodiak1

☐ 20:zodiak2

Equivalent IOS Commands

```
Switch(config)#interface FastEthernet0/1
Switch(config-if)#
Switch(config-if)#
Switch(config-if)#switchport access vlan 10
Switch(config-if)#
```

☐ Top

➤ Libra

Switch0

Physical **Config** CLI Attributes

GLOBAL

- Settings
- Algorithm Settings

SWITCHING

- VLAN Database

INTERFACE

- FastEthernet0/1
- FastEthernet0/2
- FastEthernet0/3
- FastEthernet0/4**
- FastEthernet0/5
- FastEthernet0/6
- FastEthernet0/7
- FastEthernet0/8
- FastEthernet0/9

FastEthernet0/4

Status ☒ On

Width ☒ 100 Mbps ☐ 10 Mbps ☒ Auto

☐ Half Duplex ☒ Full Duplex ☒ Auto

Access VLAN

Port Limit

☐ 1:default

☒ 10:zodiak1

☐ 20:zodiak2

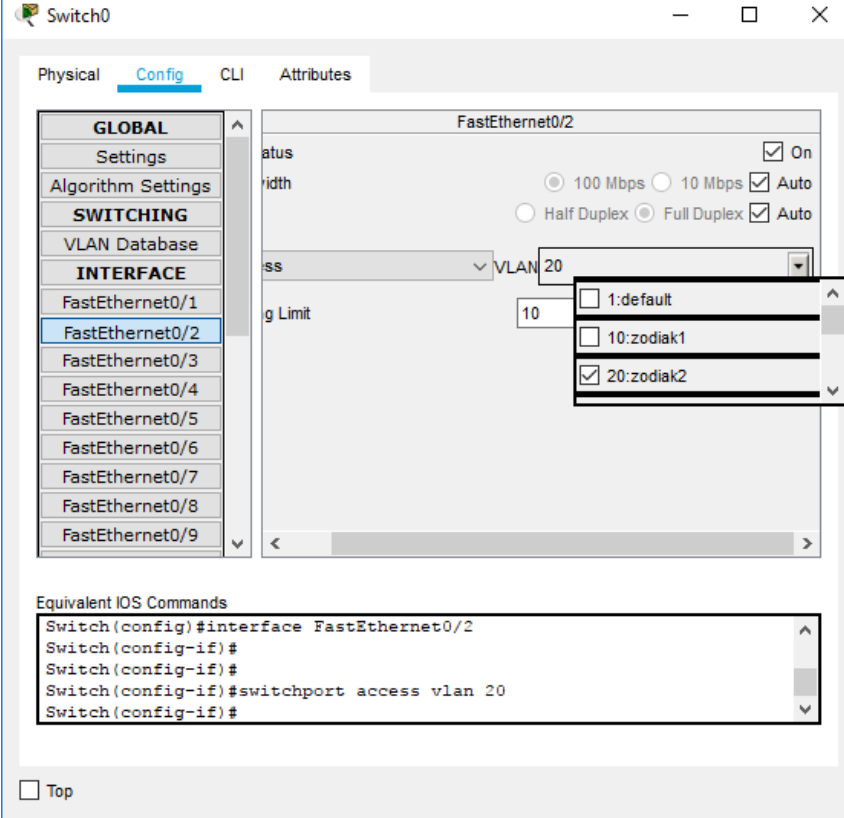
Equivalent IOS Commands

```
Switch(config)#interface FastEthernet0/4
Switch(config-if)#
Switch(config-if)#
Switch(config-if)#switchport access vlan 10
Switch(config-if)#
```

☐ Top

- Zodiak2 = aries dan Taurus

➤ Aries



Switch0

Physical **Config** CLI Attributes

GLOBAL

- Settings
- Algorithm Settings
- SWITCHING**
- VLAN Database
- INTERFACE**
- FastEthernet0/1
- FastEthernet0/2**
- FastEthernet0/3
- FastEthernet0/4
- FastEthernet0/5
- FastEthernet0/6
- FastEthernet0/7
- FastEthernet0/8
- FastEthernet0/9

FastEthernet0/2

Status ☒ On

Width ☒ 100 Mbps ☐ 10 Mbps ☒ Auto

☐ Half Duplex ☒ Full Duplex ☒ Auto

Access VLAN VLAN 20

Port Limit 10

VLAN Database:

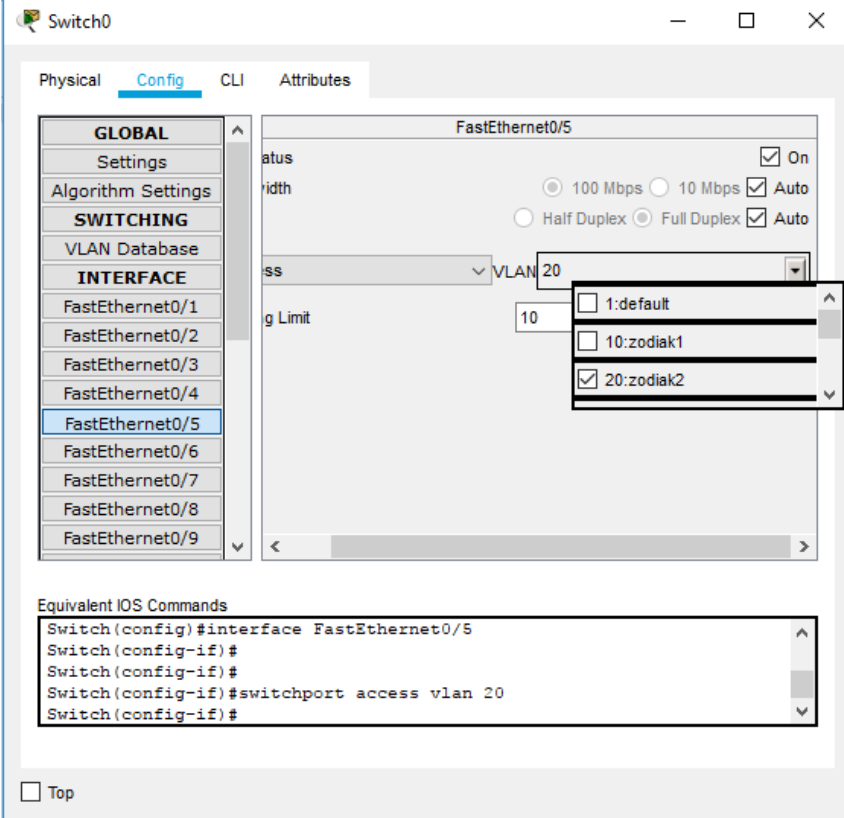
- ☐ 1:default
- ☐ 10:zodiak1
- ☒ 20:zodiak2

Equivalent IOS Commands

```
Switch(config)#interface FastEthernet0/2
Switch(config-if)#
Switch(config-if)#
Switch(config-if)#switchport access vlan 20
Switch(config-if)#
```

☐ Top

➤ Taurus



Switch0

Physical **Config** CLI Attributes

GLOBAL

- Settings
- Algorithm Settings
- SWITCHING**
- VLAN Database
- INTERFACE**
- FastEthernet0/1
- FastEthernet0/2
- FastEthernet0/3
- FastEthernet0/4
- FastEthernet0/5**
- FastEthernet0/6
- FastEthernet0/7
- FastEthernet0/8
- FastEthernet0/9

FastEthernet0/5

Status ☒ On

Width ☒ 100 Mbps ☐ 10 Mbps ☒ Auto

☐ Half Duplex ☒ Full Duplex ☒ Auto

Access VLAN VLAN 20

Port Limit 10

VLAN Database:

- ☐ 1:default
- ☐ 10:zodiak1
- ☒ 20:zodiak2

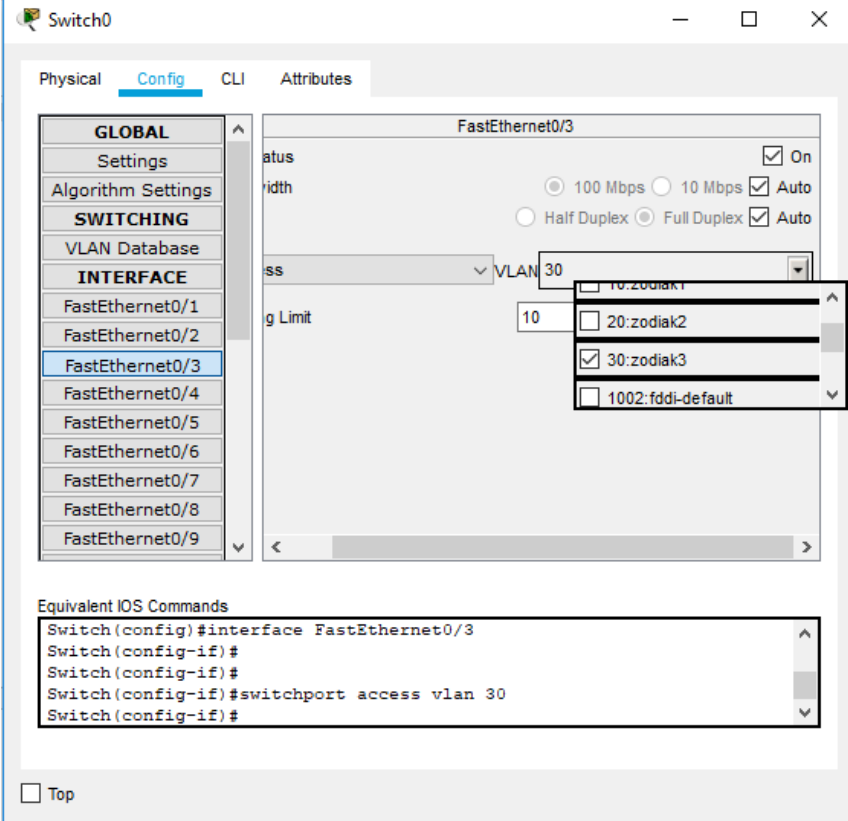
Equivalent IOS Commands

```
Switch(config)#interface FastEthernet0/5
Switch(config-if)#
Switch(config-if)#
Switch(config-if)#switchport access vlan 20
Switch(config-if)#
```

☐ Top

- Zodiak3 = virgo dan scorpio

➤ Virgo



Switch0

Physical **Config** CLI Attributes

GLOBAL

- Settings
- Algorithm Settings
- SWITCHING**
- VLAN Database
- INTERFACE**
- FastEthernet0/1
- FastEthernet0/2
- FastEthernet0/3**
- FastEthernet0/4
- FastEthernet0/5
- FastEthernet0/6
- FastEthernet0/7
- FastEthernet0/8
- FastEthernet0/9

FastEthernet0/3

Status ☒ On

Width ☒ 100 Mbps ☐ 10 Mbps ☒ Auto

☐ Half Duplex ☒ Full Duplex ☒ Auto

Access VLAN

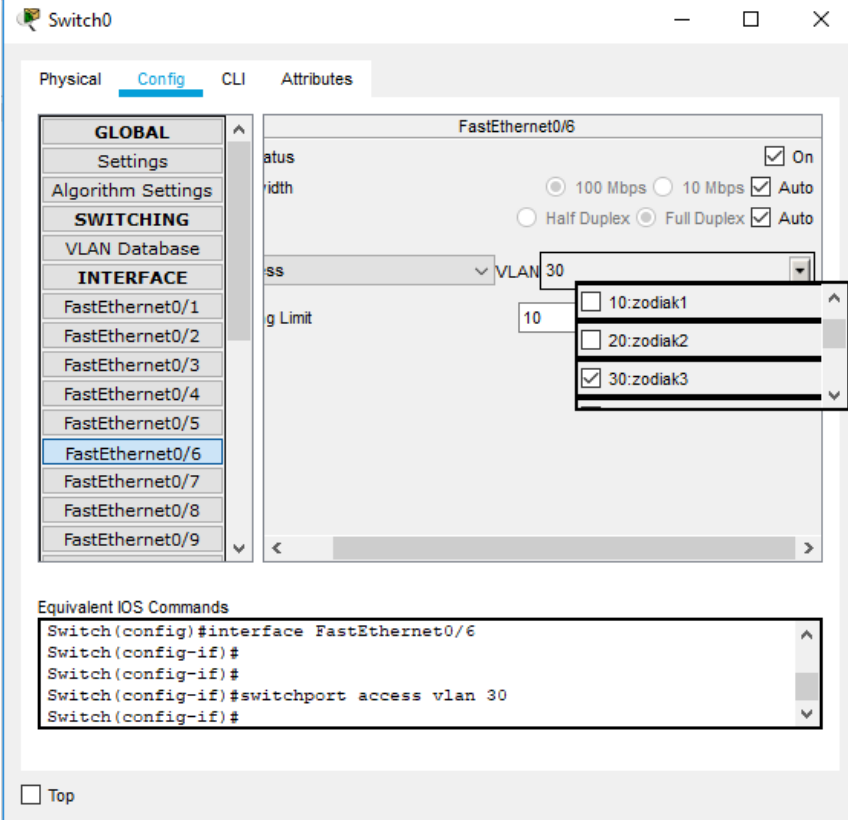
Speed Limit

Equivalent IOS Commands

```
Switch(config)#interface FastEthernet0/3
Switch(config-if)#
Switch(config-if)#
Switch(config-if)#switchport access vlan 30
Switch(config-if)#
```

☐ Top

➤ Scorpio



Switch0

Physical **Config** CLI Attributes

GLOBAL

- Settings
- Algorithm Settings
- SWITCHING**
- VLAN Database
- INTERFACE**
- FastEthernet0/1
- FastEthernet0/2
- FastEthernet0/3
- FastEthernet0/4
- FastEthernet0/5
- FastEthernet0/6**
- FastEthernet0/7
- FastEthernet0/8
- FastEthernet0/9

FastEthernet0/6

Status ☒ On

Width ☒ 100 Mbps ☐ 10 Mbps ☒ Auto

☐ Half Duplex ☒ Full Duplex ☒ Auto

Access VLAN

Speed Limit

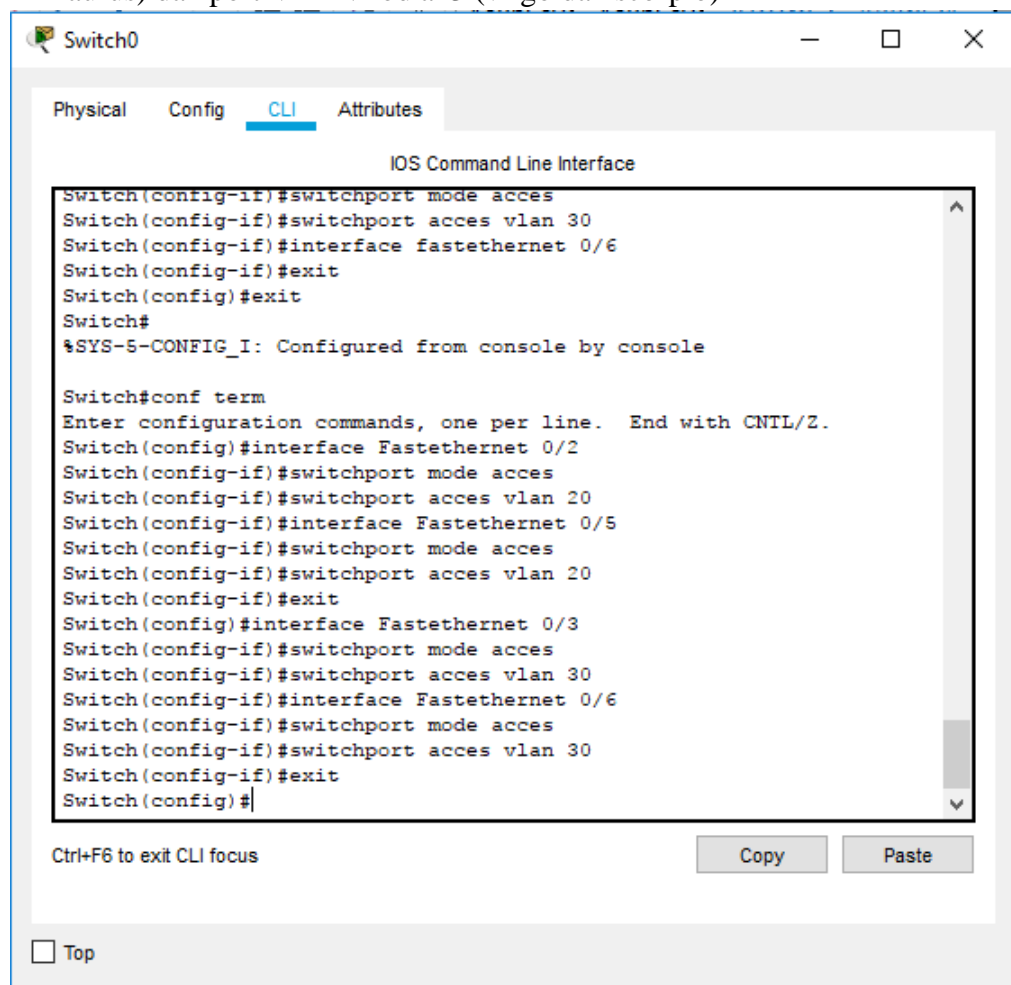
Equivalent IOS Commands

```
Switch(config)#interface FastEthernet0/6
Switch(config-if)#
Switch(config-if)#
Switch(config-if)#switchport access vlan 30
Switch(config-if)#
```

☐ Top

Langkah pengoperasian

- Masukan mode konfigurasi
- Ketik *interface Fastethernet 0/1*; (jika PC leo dihubungkan dengan switch port 1)
- Ketik *switchport mode acces*
- Ketik *switch port acces vlan 10*
- Ketik *interface Fastethernet 0/4*; (jika PC libra dihubungkan dengan switch port 1)
- Ketik *switchport mode acces*
- Ketik *switchport acces vlan 10*
- Ketik **exit**
- Lakukan langkah-langkah diatas untuk port VLAN zodiak2 (aries dan Taurus) dan port VLAN zodiak3 (virgo dan scorio)



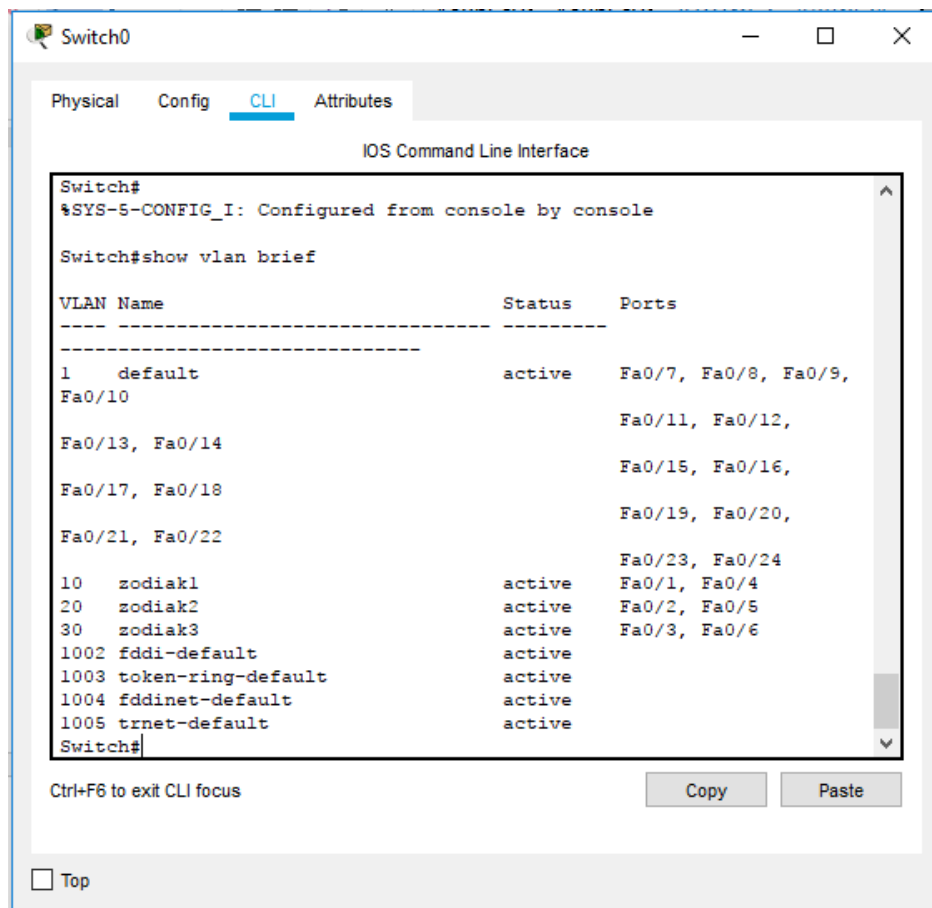
The screenshot shows a network switch CLI window titled "Switch0". The "CLI" tab is selected. The command history shows the following sequence of commands:

```
Switch(config-if)#switchport mode acces
Switch(config-if)#switchport acces vlan 30
Switch(config-if)#interface fastethernet 0/6
Switch(config-if)#exit
Switch(config)#exit
Switch#
%SYS-5-CONFIG_I: Configured from console by console

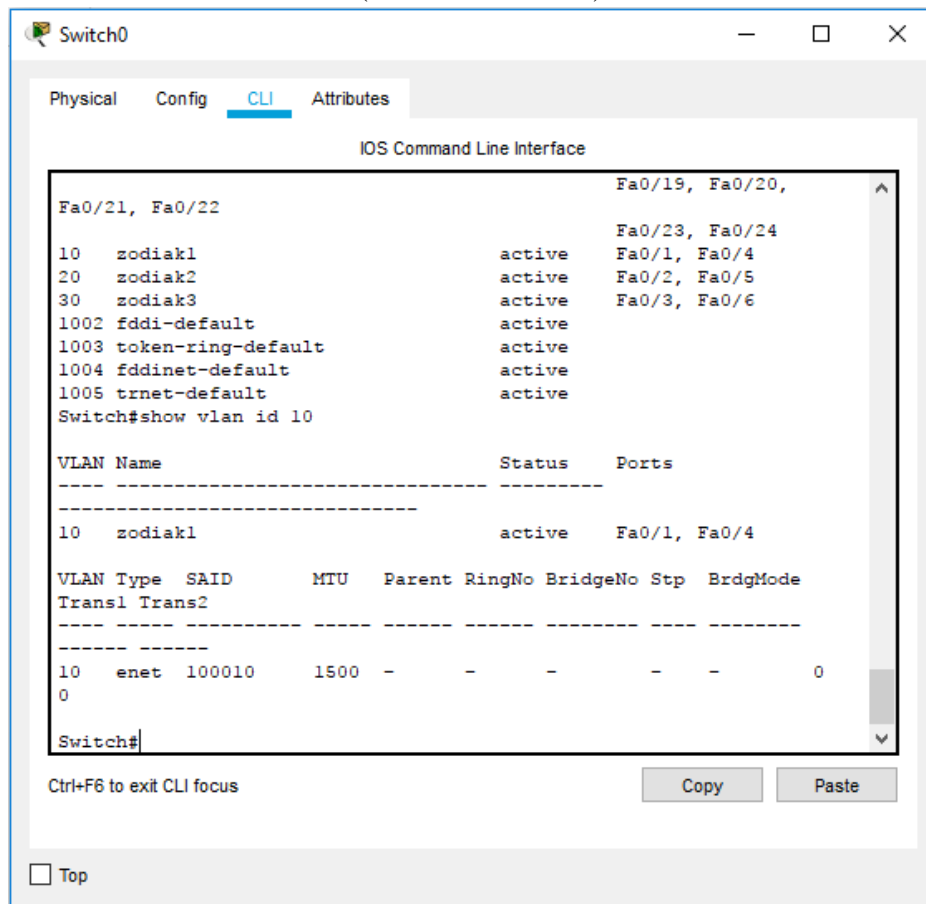
Switch#conf term
Enter configuration commands, one per line. End with CNTL/Z.
Switch(config)#interface Fastethernet 0/2
Switch(config-if)#switchport mode acces
Switch(config-if)#switchport acces vlan 20
Switch(config-if)#interface Fastethernet 0/5
Switch(config-if)#switchport mode acces
Switch(config-if)#switchport acces vlan 20
Switch(config-if)#exit
Switch(config)#interface Fastethernet 0/3
Switch(config-if)#switchport mode acces
Switch(config-if)#switchport acces vlan 30
Switch(config-if)#interface Fastethernet 0/6
Switch(config-if)#switchport mode acces
Switch(config-if)#switchport acces vlan 30
Switch(config-if)#exit
Switch(config)#
```

At the bottom of the CLI window, there is a "Top" button and a "Ctrl+F6 to exit CLI focus" message. To the right of the CLI window, there are "Copy" and "Paste" buttons.

- f. Pada mode user atau mode previliged, lihat konfigurasi VLAN yang telah dibuat.
- Langkah pengoperasian untuk melihat konfigurasi
- Tekan enter
 - Masuk mode privileged
 - Ketik **show vlan brief** (informasi vlan keseluruhan)



- Ketik **show vlan id 10** (informasi vlan 10)



- Ketik **show vlan id 20** (informasi vlan 20)

Switch0

Physical Config **CLI** Attributes

IOS Command Line Interface

```

10  zodiak1                active  Fa0/1, Fa0/4
VLAN Type  SAID           MTU    Parent RingNo BridgeNo Stp  BrdgMode
Trans1 Trans2
-----
10  enet  100010         1500    -      -      -      -      -      0
0

Switch#show vlan id 20

VLAN Name                Status    Ports
-----
20  zodiak2                active    Fa0/2, Fa0/5
VLAN Type  SAID           MTU    Parent RingNo BridgeNo Stp  BrdgMode
Trans1 Trans2
-----
20  enet  100020         1500    -      -      -      -      -      0
0

Switch#

```

Ctrl+F6 to exit CLI focus

Copy Paste

☐ Top

- Ketik **show vlan id 30** (informasi vlan 30)

Switch0

Physical Config **CLI** Attributes

IOS Command Line Interface

```

20  zodiak2                active    Fa0/2, Fa0/5
VLAN Type  SAID           MTU    Parent RingNo BridgeNo Stp  BrdgMode
Trans1 Trans2
-----
20  enet  100020         1500    -      -      -      -      -      0
0

Switch#show vlan id 30

VLAN Name                Status    Ports
-----
30  zodiak3                active    Fa0/3, Fa0/6
VLAN Type  SAID           MTU    Parent RingNo BridgeNo Stp  BrdgMode
Trans1 Trans2
-----
30  enet  100030         1500    -      -      -      -      -      0
0

Switch#

```

Ctrl+F6 to exit CLI focus

Copy Paste

☐ Top

Tugas 6A : Capture masing-masing tampilan informasi vlan dan isi tabel berikut.

No	Variable	Nilai		
1	Nomor VLAN	10	20	30
2	Nama VLAN	zodiak1	zodiak2	zodiak3
3	Port	fa 0/1, fa 0/4	fa 0/2, fa 0/5	fa 0/3, fa 0/6
4	Status	active	active	active

Tugas 6B: Jelaskan secara singkat hasil yang anda peroleh dari tugas 6A.

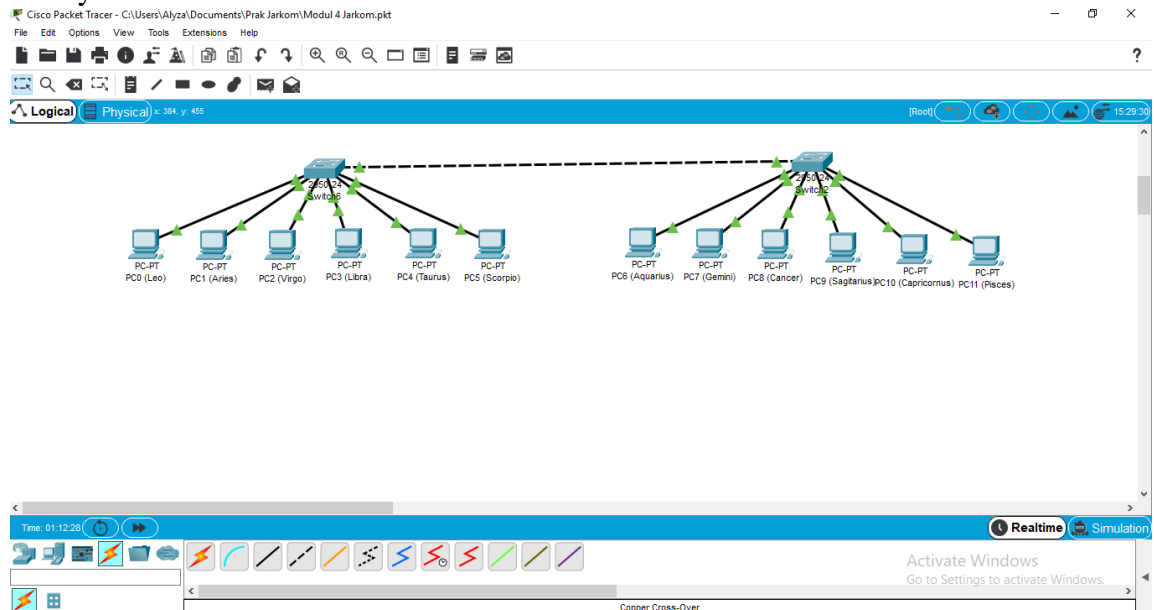
Jawab :

fa0/1 yg merupakan PC1(leo) dan fa0/4 yg merupakan PC4(libra) berada pada VLAN yang sama yaitu zodiak1 dengan nomer VLAN 10 berstatus active. fa0/2 yg merupakan PC2(aries) dan fa0/5 yang merupakan PC5(Taurus) berada pada VLAN yang sama yaitu zodiak2 dengan nomer VLAN 20 berstatus active. fa0/3 yg merupakan PC3(virgo) dan fa0/6 yang merupakan PC6(scorpio) berada pada VLAN yang sama yaitu zodiak2 dengan nomer VLAN 30

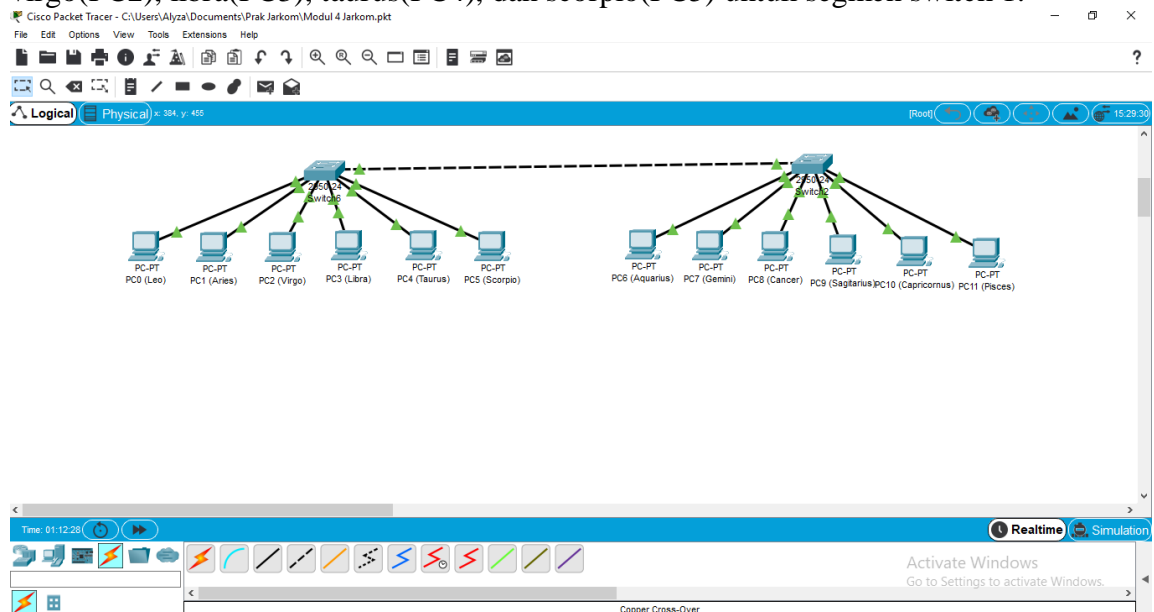
Jika melakukan ping antara port jaringan 1 VLAN yang sama maka statusnya akan sukses dan tidak terjadi kegagalan, lalu jika kita melakukan ping antara port pada VLAN yang berbeda maka statusnya akan terjadi kegagalan

2. Kegiatan 2. Topologi 2

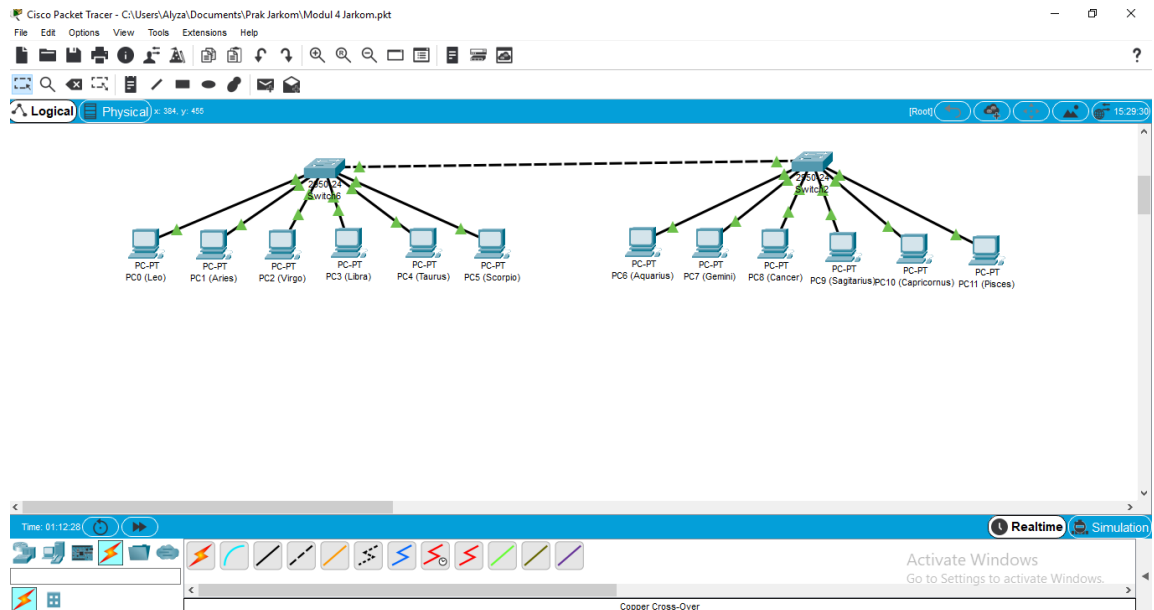
- Menggunakan cisco tracer buat topologi berikut ini dengan menggunakan switch Catalyst 2950.



- Beri nama masing-masing perangkat dengan SW1(switch 1), leo (PC0), aries(P1), virgo(PC2), libra(PC3), taurus(PC4), dan scorpio(PC5) untuk segmen switch 1.



- Beri nama masing-masing perangkat dengan SW2(switch 2), aquarius(PC6), gemini(PC7), cancer(PC8), sagittarius(PC9),capricornus(PC10), dan pisces(PC11) untuk segmen switch 2.



- Konfigurasi masing-masing PC dengan nama dan alamat IP berikut:

- Leo

PC0 (Leo)

Physical Config **Desktop** Programming Attributes

IP Configuration

Interface: FastEthernet0

IP Configuration

☐ DHCP ☒ Static

IP Address: 172.21.1.1

Subnet Mask: 255.255.255.0

Default Gateway: 0.0.0.0

DNS Server: 0.0.0.0

IPv6 Configuration

☐ DHCP ☐ Auto Config ☒ Static

IPv6 Address: /

Link Local Address: FE80::205:5EFF:FE11:BB2A

IPv6 Gateway:

IPv6 DNS Server:

802.1X

☐ Use 802.1X Security

☐ Top

- Aries

PC1 (Aries)

Physical Config **Desktop** Programming Attributes

IP Configuration X

Interface: FastEthernet0

IP Configuration

☐ DHCP ☒ Static

IP Address: 172.21.1.2

Subnet Mask: 255.255.255.0

Default Gateway: 0.0.0.0

DNS Server: 0.0.0.0

IPv6 Configuration

☐ DHCP ☐ Auto Config ☒ Static

IPv6 Address: /

Link Local Address: FE80::203:E4FF:FE33:CABC

IPv6 Gateway:

IPv6 DNS Server:

802.1X

☐ Use 802.1X Security

☐ Top

- Virgo

PC2 (Virgo)

Physical Config **Desktop** Programming Attributes

IP Configuration X

Interface: FastEthernet0

IP Configuration

☐ DHCP ☒ Static

IP Address: 172.21.2.1

Subnet Mask: 255.255.255.0

Default Gateway: 0.0.0.0

DNS Server: 0.0.0.0

IPv6 Configuration

☐ DHCP ☐ Auto Config ☒ Static

IPv6 Address: /

Link Local Address: FE80::206:2AFF:FE46:AB8C

IPv6 Gateway:

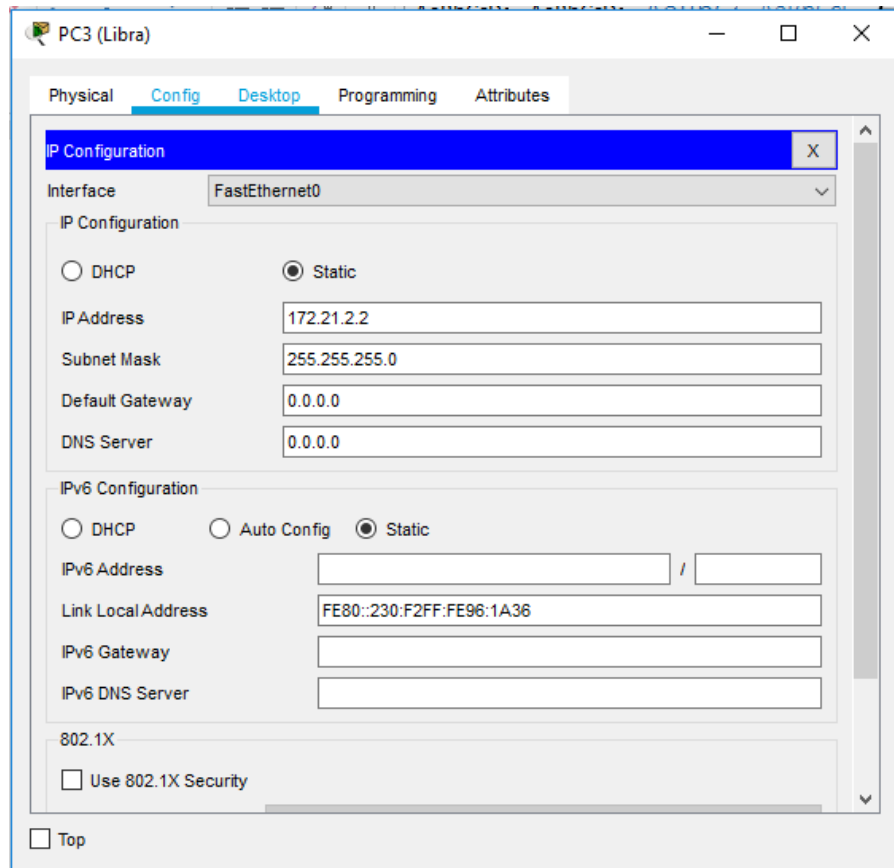
IPv6 DNS Server:

802.1X

☐ Use 802.1X Security

☐ Top

- **Libra**



PC3 (Libra)

Physical Config Desktop Programming Attributes

IP Configuration

Interface: FastEthernet0

IP Configuration

☐ DHCP ☒ Static

IP Address: 172.21.2.2

Subnet Mask: 255.255.255.0

Default Gateway: 0.0.0.0

DNS Server: 0.0.0.0

IPv6 Configuration

☐ DHCP ☐ Auto Config ☒ Static

IPv6 Address: /

Link Local Address: FE80::230:F2FF:FE96:1A36

IPv6 Gateway:

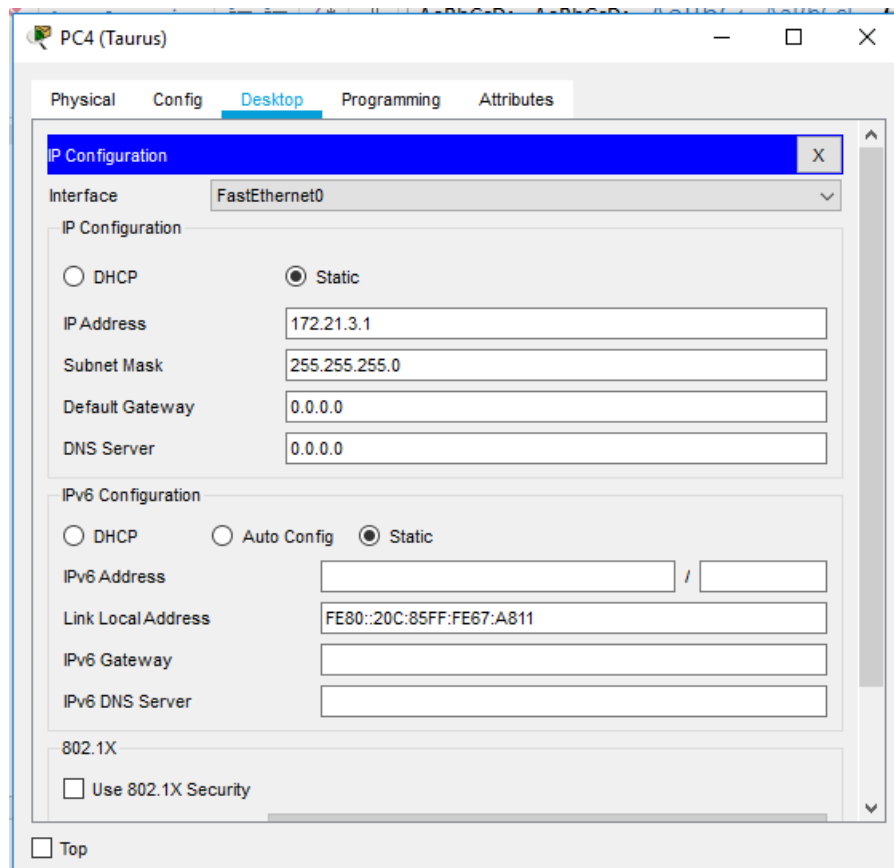
IPv6 DNS Server:

802.1X

☐ Use 802.1X Security

☐ Top

- **Taurus**



PC4 (Taurus)

Physical Config Desktop Programming Attributes

IP Configuration

Interface: FastEthernet0

IP Configuration

☐ DHCP ☒ Static

IP Address: 172.21.3.1

Subnet Mask: 255.255.255.0

Default Gateway: 0.0.0.0

DNS Server: 0.0.0.0

IPv6 Configuration

☐ DHCP ☐ Auto Config ☒ Static

IPv6 Address: /

Link Local Address: FE80::20C:85FF:FE67:A811

IPv6 Gateway:

IPv6 DNS Server:

802.1X

☐ Use 802.1X Security

☐ Top

- Scorpio

PC5 (Scorpio)

Physical Config **Desktop** Programming Attributes

IP Configuration [X]

Interface: FastEthernet0

IP Configuration

☐ DHCP ☒ Static

IP Address: 172.21.3.2

Subnet Mask: 255.255.255.0

Default Gateway: 0.0.0.0

DNS Server: 0.0.0.0

IPv6 Configuration

☐ DHCP ☐ Auto Config ☒ Static

IPv6 Address: /

Link Local Address: FE80::2D0:97FF:FE01:2A05

IPv6 Gateway:

IPv6 DNS Server:

802.1X

☐ Use 802.1X Security

☐ Top

- Aquarius

PC6 (Aquarius)

Physical Config **Desktop** Programming Attributes

IP Configuration [X]

Interface: FastEthernet0

IP Configuration

☐ DHCP ☒ Static

IP Address: 172.21.1.3

Subnet Mask: 255.255.255.0

Default Gateway: 0.0.0.0

DNS Server: 0.0.0.0

IPv6 Configuration

☐ DHCP ☐ Auto Config ☒ Static

IPv6 Address: /

Link Local Address: FE80::2D0:BCFF:FE3E:A369

IPv6 Gateway:

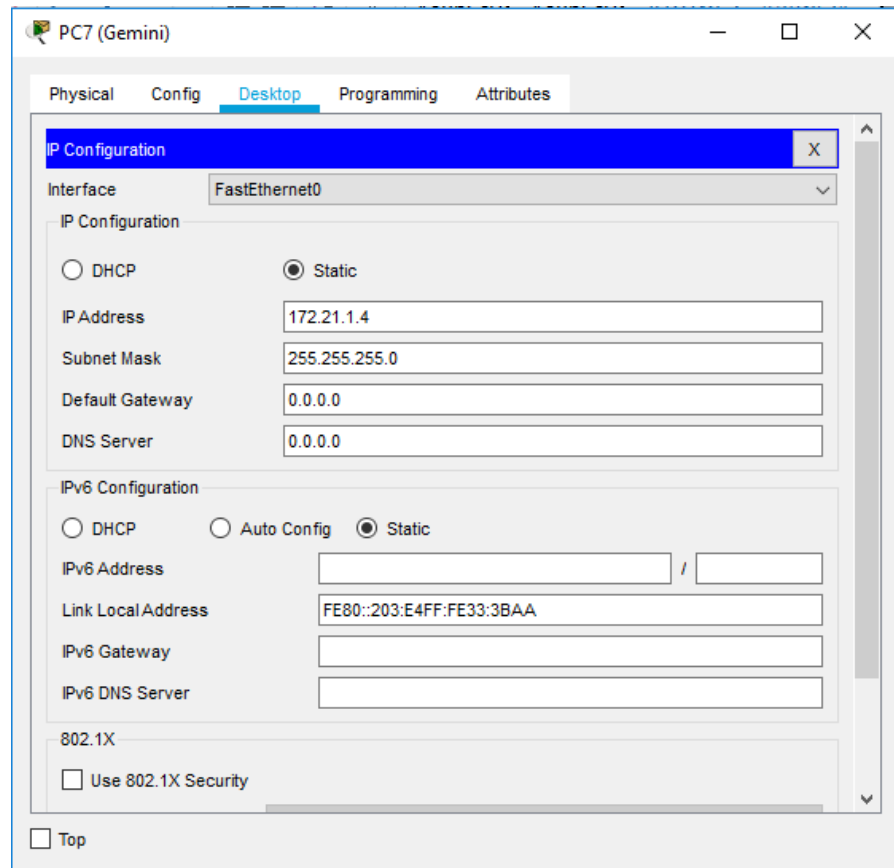
IPv6 DNS Server:

802.1X

☐ Use 802.1X Security

☐ Top

- Gemini



PC7 (Gemini)

Physical Config **Desktop** Programming Attributes

IP Configuration [X]

Interface: FastEthernet0

IP Configuration

☐ DHCP ☒ Static

IP Address: 172.21.1.4

Subnet Mask: 255.255.255.0

Default Gateway: 0.0.0.0

DNS Server: 0.0.0.0

IPv6 Configuration

☐ DHCP ☐ Auto Config ☒ Static

IPv6 Address: /

Link Local Address: FE80::203:E4FF:FE33:3BAA

IPv6 Gateway:

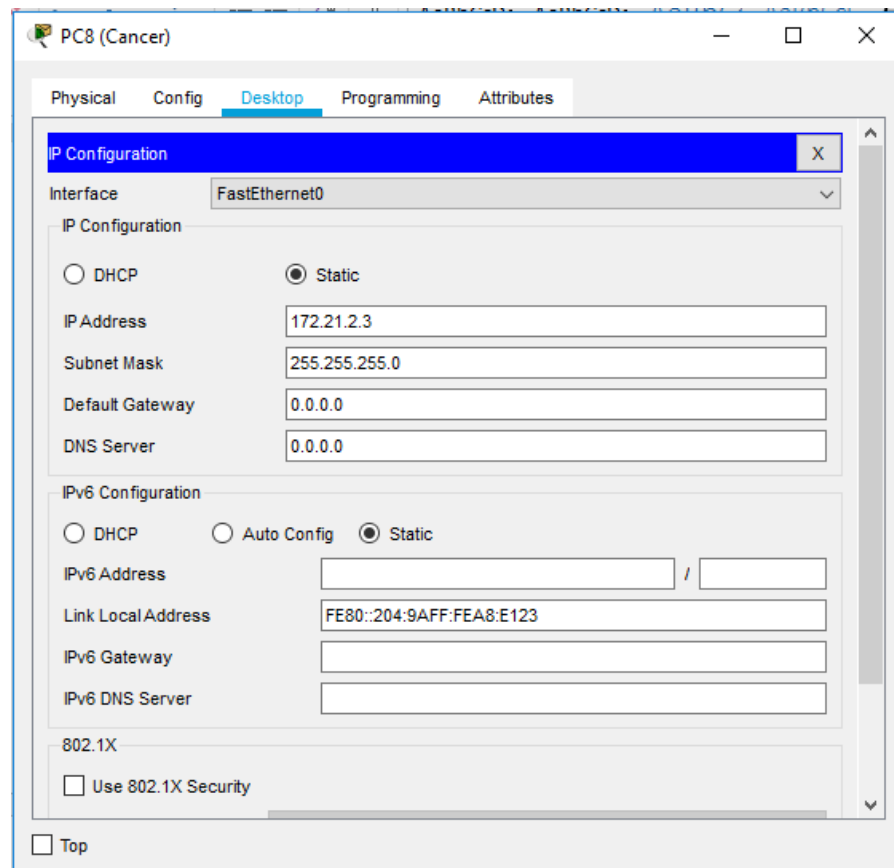
IPv6 DNS Server:

802.1X

☐ Use 802.1X Security

☐ Top

- Cancer



PC8 (Cancer)

Physical Config **Desktop** Programming Attributes

IP Configuration [X]

Interface: FastEthernet0

IP Configuration

☐ DHCP ☒ Static

IP Address: 172.21.2.3

Subnet Mask: 255.255.255.0

Default Gateway: 0.0.0.0

DNS Server: 0.0.0.0

IPv6 Configuration

☐ DHCP ☐ Auto Config ☒ Static

IPv6 Address: /

Link Local Address: FE80::204:9AFF:FEA8:E123

IPv6 Gateway:

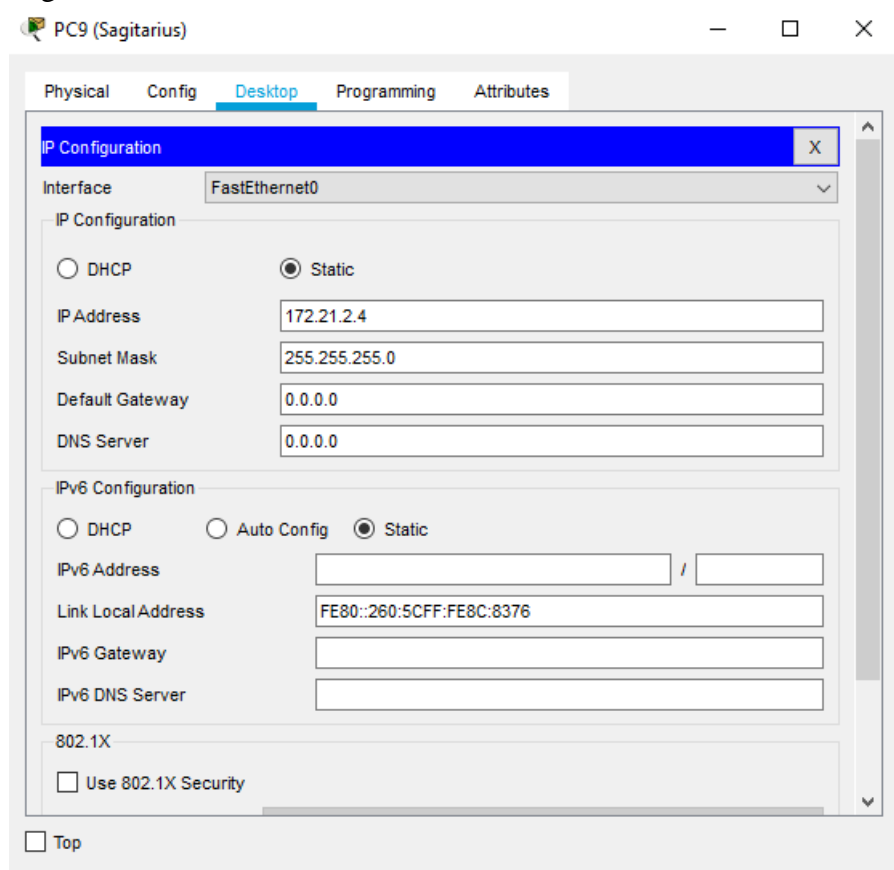
IPv6 DNS Server:

802.1X

☐ Use 802.1X Security

☐ Top

- Sagitarius



PC9 (Sagitarius)

Physical Config **Desktop** Programming Attributes

IP Configuration [X]

Interface: FastEthernet0

IP Configuration

☐ DHCP ☒ Static

IP Address: 172.21.2.4

Subnet Mask: 255.255.255.0

Default Gateway: 0.0.0.0

DNS Server: 0.0.0.0

IPv6 Configuration

☐ DHCP ☐ Auto Config ☒ Static

IPv6 Address: /

Link Local Address: FE80::260:5CFF:FE8C:8376

IPv6 Gateway:

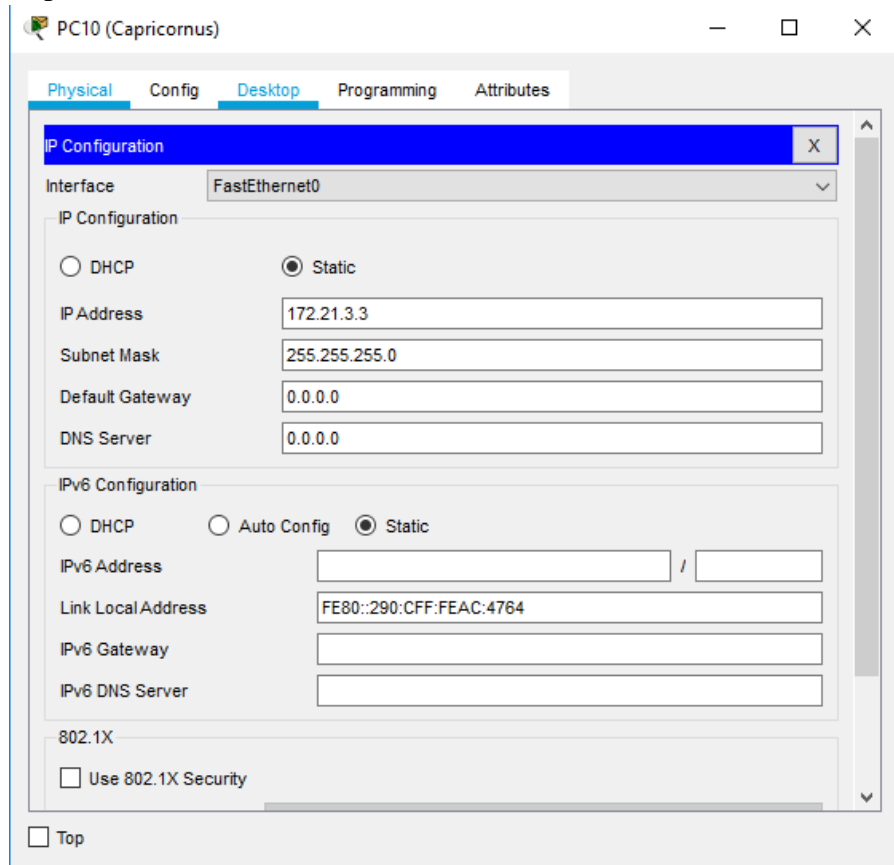
IPv6 DNS Server:

802.1X

☐ Use 802.1X Security

☐ Top

- Capricornus



PC10 (Capricornus)

Physical Config **Desktop** Programming Attributes

IP Configuration [X]

Interface: FastEthernet0

IP Configuration

☐ DHCP ☒ Static

IP Address: 172.21.3.3

Subnet Mask: 255.255.255.0

Default Gateway: 0.0.0.0

DNS Server: 0.0.0.0

IPv6 Configuration

☐ DHCP ☐ Auto Config ☒ Static

IPv6 Address: /

Link Local Address: FE80::290:CFF:FEAC:4764

IPv6 Gateway:

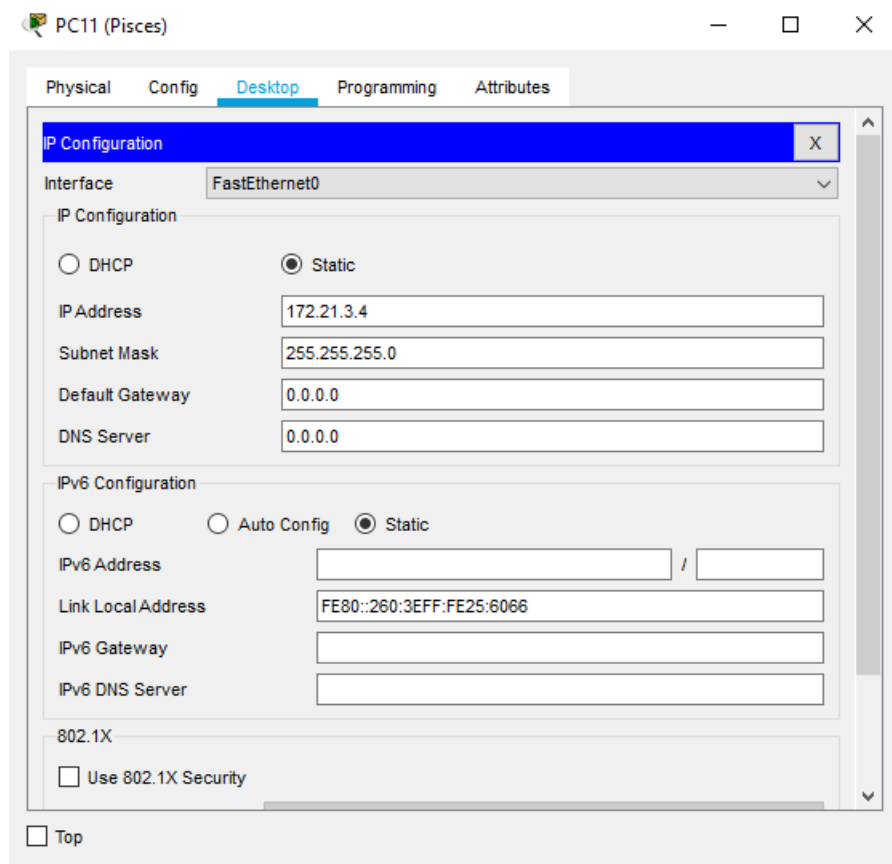
IPv6 DNS Server:

802.1X

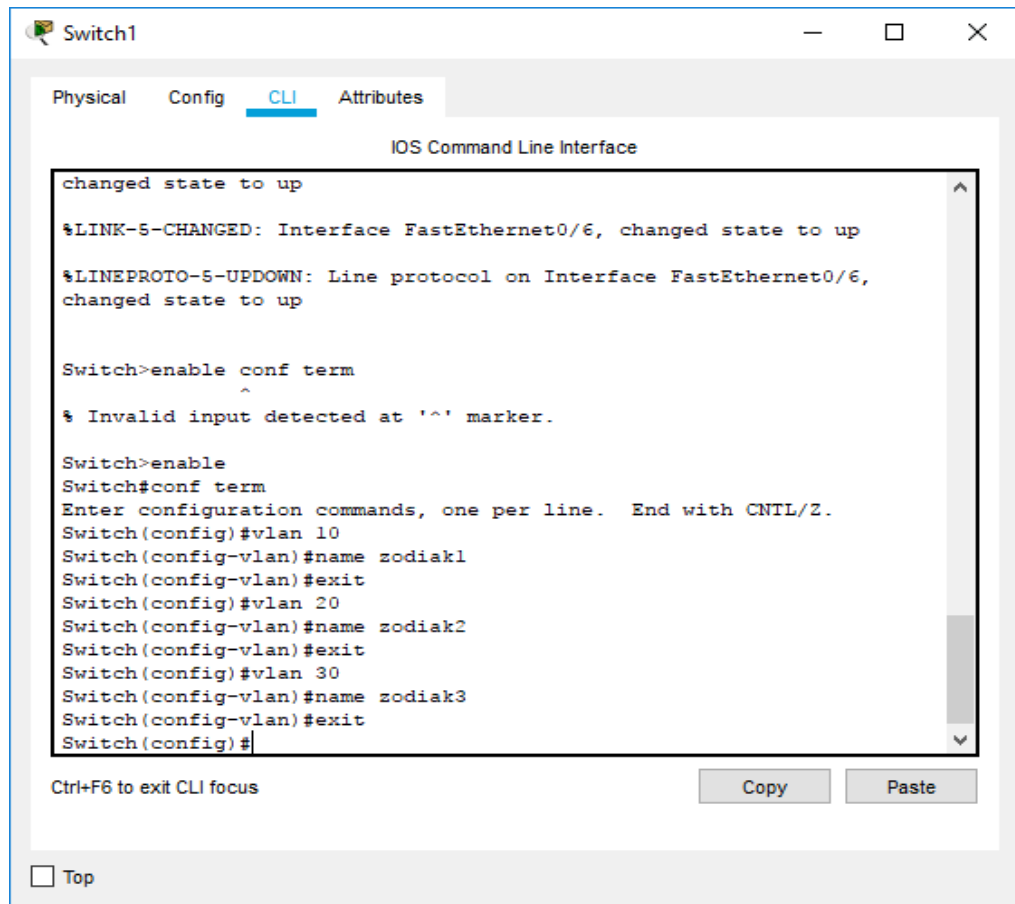
☐ Use 802.1X Security

☐ Top

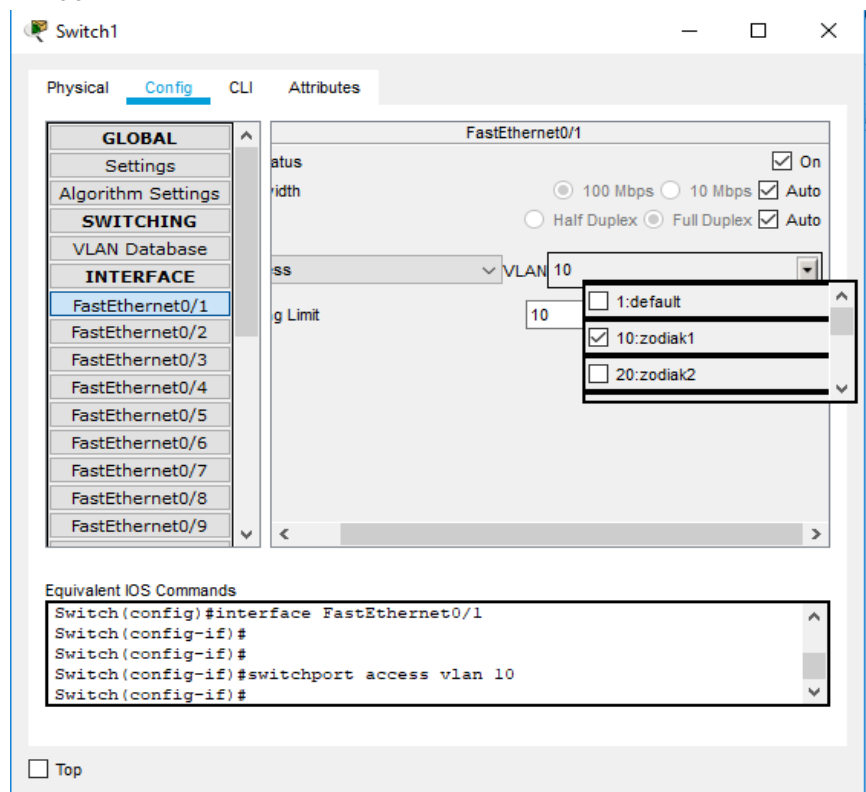
- Pisces



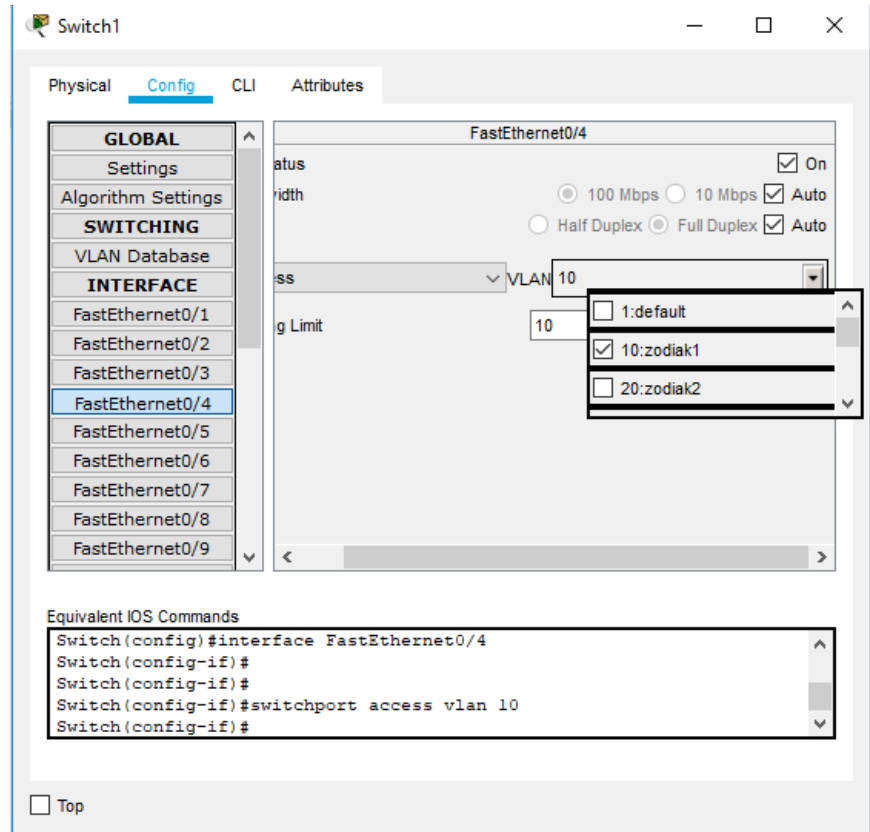
- Lakukan langkah 4 dan 5 kegiatan 1 untuk switch 1
 - Langkah 4 : Konfigurasi pada switch dengan mode user atau mode privilege, buat 3 VLAN dengan nama zodiak1, zodiak2, dan zodiak3. Dengan cara klik pada switch 2 kali, kemudian pilih cli.



- Langkah 5 : Pada mode configuration, konfigurasi port-port switch ke dalam vlan zodiak1, zodiak2, dan zodiak3 dengan anggota sebagai berikut.
 - Zodiak1 = leo dan libra
 - leo

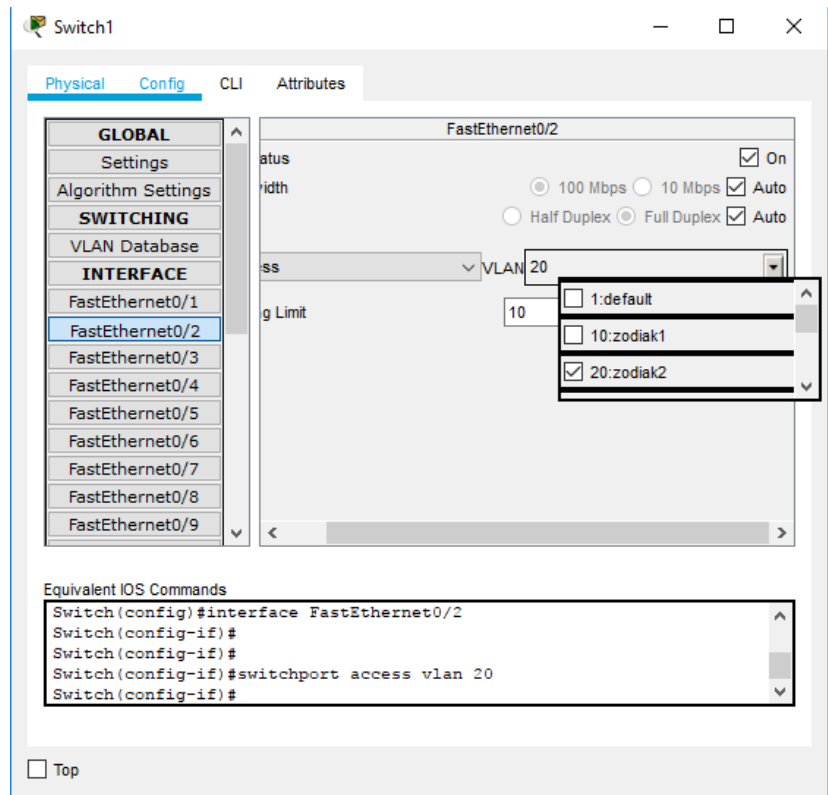


➤ libra



➤ Zodiak2 = aries dan taurus

➤ aries



➤ taurus

Switch1

Physical Config CLI Attributes

GLOBAL

- Settings
- Algorithm Settings
- SWITCHING**
- VLAN Database
- INTERFACE**
- FastEthernet0/1
- FastEthernet0/2
- FastEthernet0/3
- FastEthernet0/4
- FastEthernet0/5**
- FastEthernet0/6
- FastEthernet0/7
- FastEthernet0/8
- FastEthernet0/9

FastEthernet0/5

Status ☒ On

Speed ☒ 100 Mbps ☐ 10 Mbps ☒ Auto

Duplex ☐ Half Duplex ☒ Full Duplex ☒ Auto

Access VLAN

☐ 1:default
☐ 10:zodiak1
☒ 20:zodiak2

Port Security Limit

Equivalent IOS Commands

```
Switch(config)#interface FastEthernet0/5
Switch(config-if)#
Switch(config-if)#
Switch(config-if)#switchport access vlan 20
Switch(config-if)#
```

☐ Top

➤ Zodiak3 = virgo dan scorpio

➤ virgo

Switch1

Physical Config CLI Attributes

GLOBAL

- Settings
- Algorithm Settings
- SWITCHING**
- VLAN Database
- INTERFACE**
- FastEthernet0/1
- FastEthernet0/2
- FastEthernet0/3**
- FastEthernet0/4
- FastEthernet0/5
- FastEthernet0/6
- FastEthernet0/7
- FastEthernet0/8
- FastEthernet0/9

FastEthernet0/3

Status ☒ On

Speed ☒ 100 Mbps ☐ 10 Mbps ☒ Auto

Duplex ☐ Half Duplex ☒ Full Duplex ☒ Auto

Access VLAN

☐ 10:zodiak1
☐ 20:zodiak2
☒ 30:zodiak3

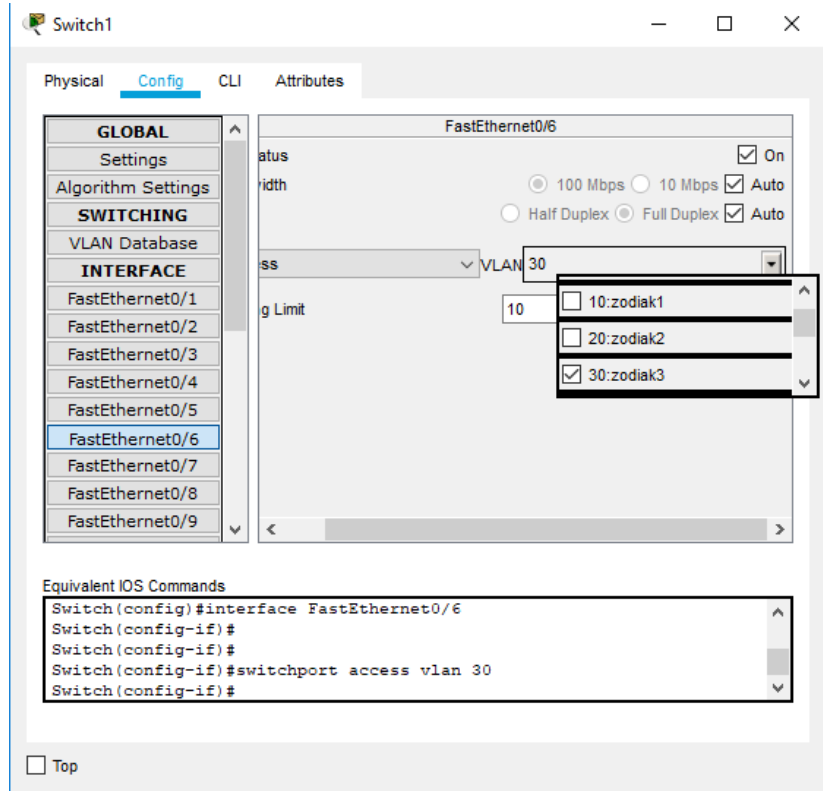
Port Security Limit

Equivalent IOS Commands

```
Switch(config)#interface FastEthernet0/3
Switch(config-if)#
Switch(config-if)#
Switch(config-if)#switchport access vlan 30
Switch(config-if)#
```

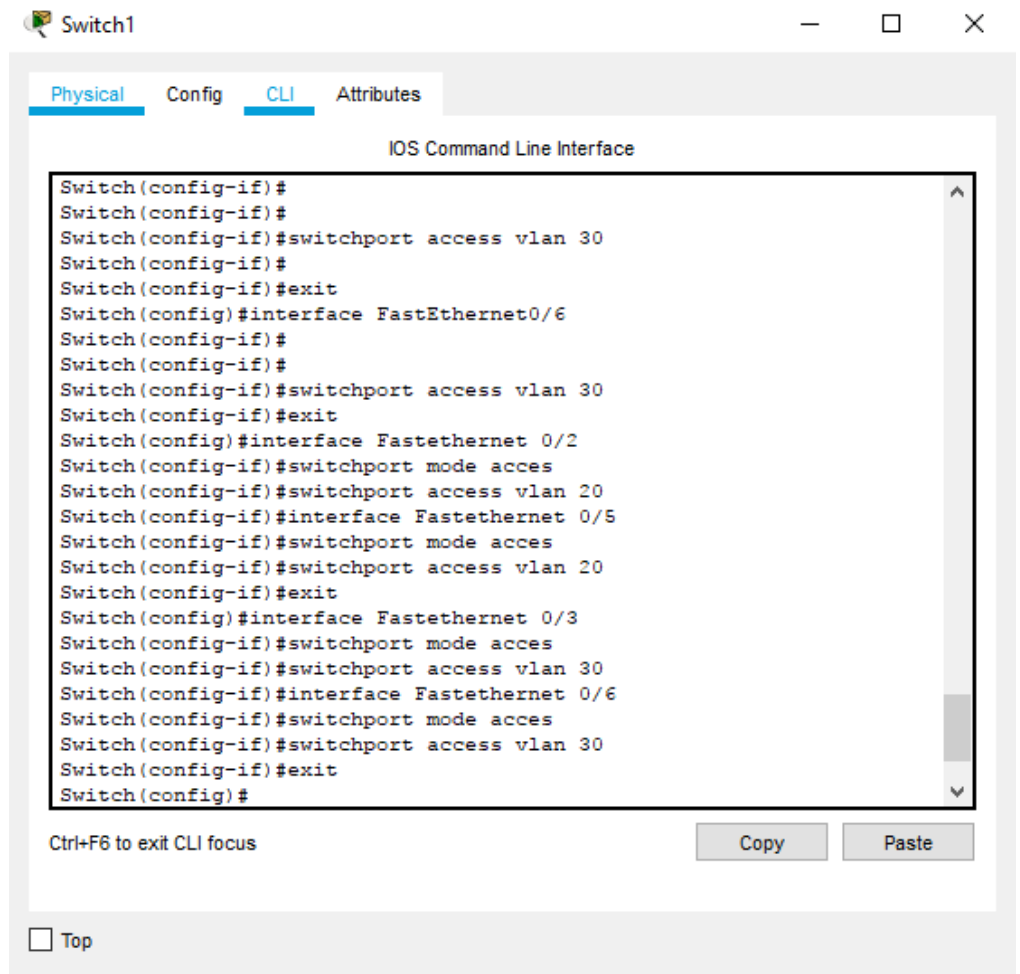
☐ Top

➤ scorpio

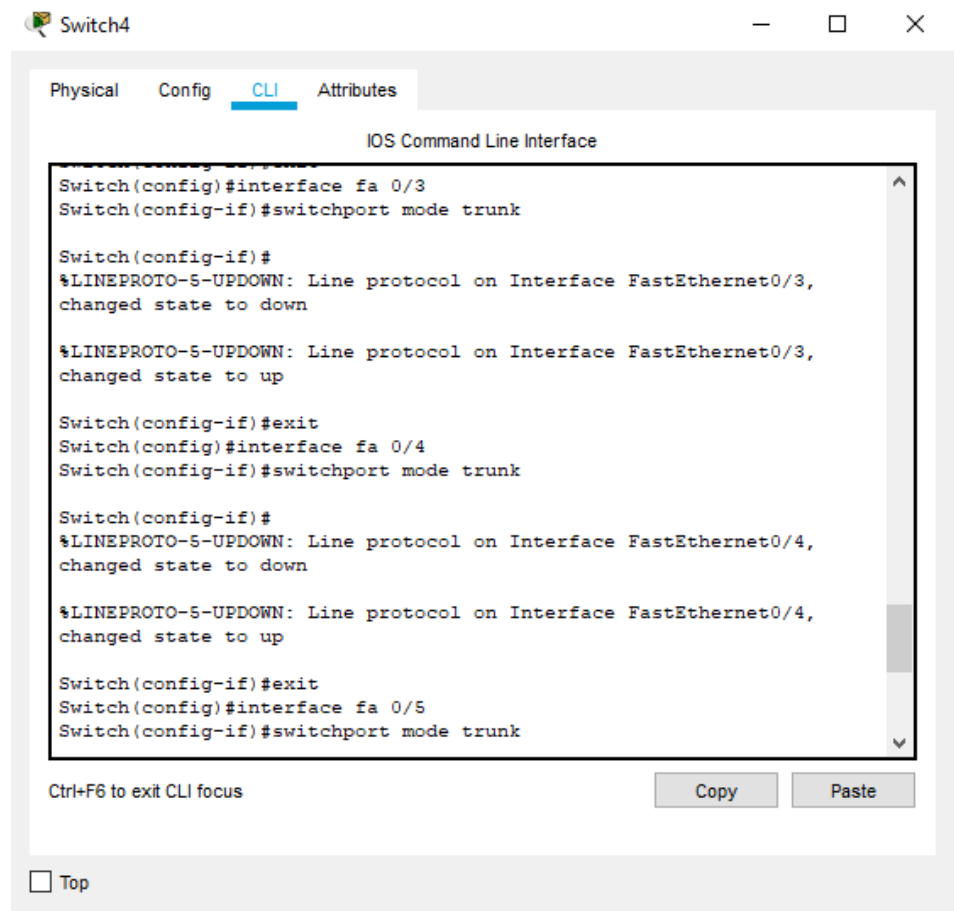
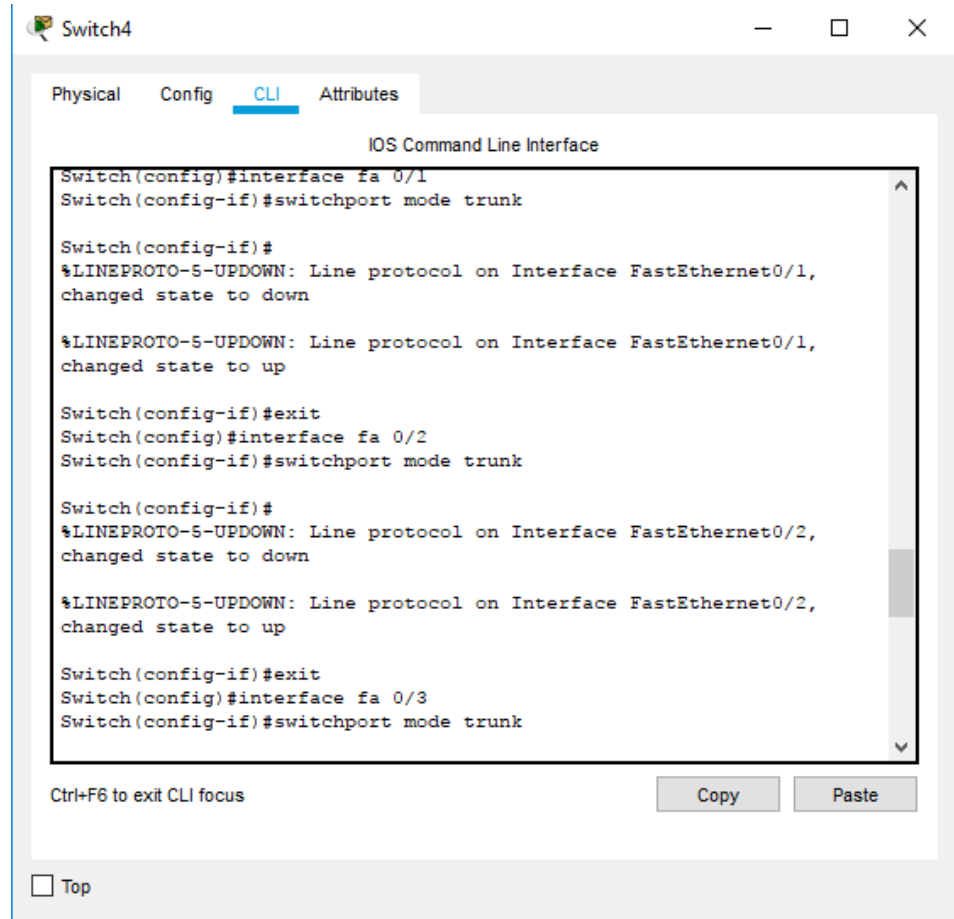


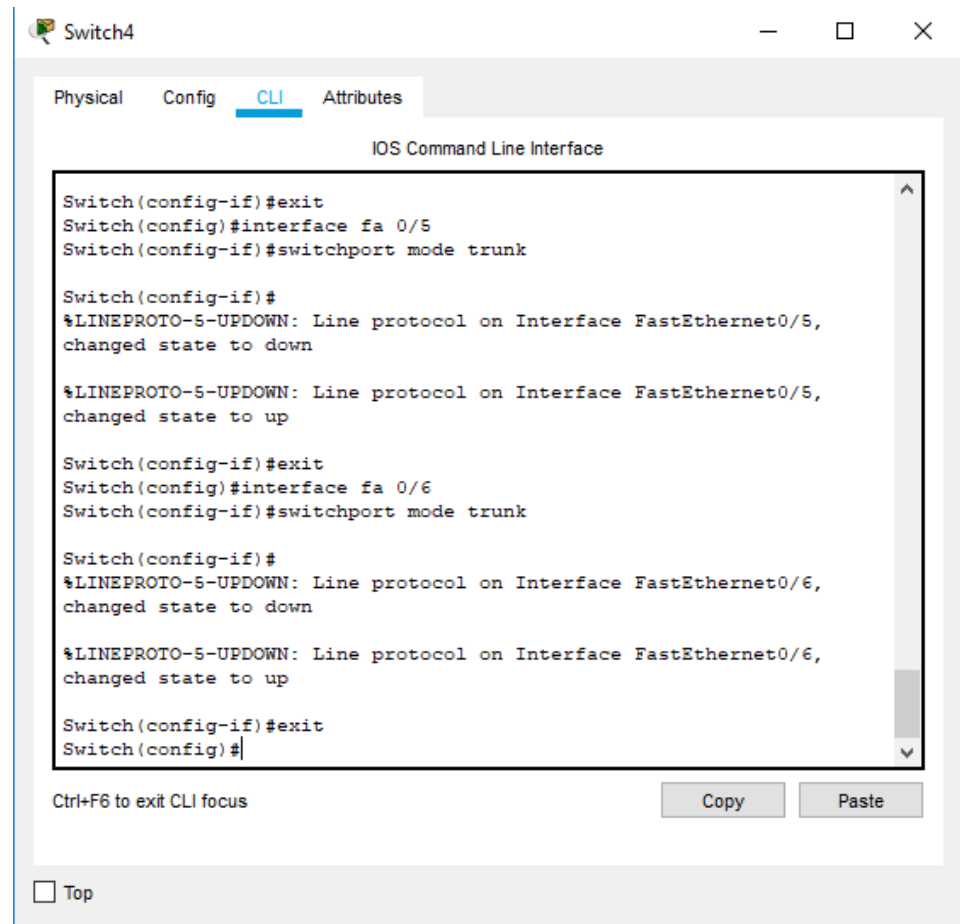
Langkah pengoperasian

- Masukan mode konfigurasi
- Ketik ***interface Fastethernet 0/1***; (jika PC leo dihubungkan dengan switch port 1)
- Ketik ***switchport mode acces***
- Ketik ***switch port acces vlan 10***
- Ketik ***interface Fastethernet 0/4***; (jika PC libra dihubungnkan dengan switch port 1)
- Ketik ***switchport mode acces***
- Ketik ***switchport acces vlan 10***
- Ketik ***exit***
- Lakukan langkah-langkah diatas untuk port VLAN zodiak2 (aries dan Taurus) dan port VLAN zodiak3 (virgo dan scorpio)



- Lakukan konfigurasi VLAN trunking pada switch 1. Langkah pengoperasian
 - Tekan ente
 - Masukan mode konfigurasi
 - Masukan mode interface yang dipakai untuk trunking
 - Ketik **switchport mode** seperti contoh dibawah ini
 - **Switchport(config)#interface fa0/1**
 - **Switch(config-if)#switch mode trunk**
 - **Switch(config-if)#exit**
 - **Switch(config)#**
 - Switch
 - Melakukan konfigurasi VLAN trunking pada switch 1.(fa 0/1, fa 0/2, fa 0/3, fa 0/4, fa 0/5, dan fa 0/6)





- Pada mode user atau mode privileged, lihat konfigurasi trunking yang telah dibuat. Langkah pengoperasian untuk melihat konfigurasi
 - Tekan enter
 - Masukkan mode privileged
 - Ketik *show interface fastethernet0/??switchport* (?? Nomer port untuk trunking)
 - Keetik *show interface trunk*
 - Ketik *show vlan*
 - Melihat konfigurasi trunking pada fa 0/1, fa 0/2, fa 0/3, fa 0/4, fa 0/5, dan fa 0/6

IOS Command Line Interface

```
Switch#show interface fastethernet 0/2 switchport
Name: Fa0/2
Switchport: Enabled
Administrative Mode: trunk
Operational Mode: trunk
Administrative Trunking Encapsulation: dot1q
Operational Trunking Encapsulation: dot1q
Negotiation of Trunking: Off
Access Mode VLAN: 20 (zodiak2)
Trunking Native Mode VLAN: 1 (default)
Voice VLAN: none
Administrative private-vlan host-association: none
Administrative private-vlan mapping: none
Administrative private-vlan trunk native VLAN: none
Administrative private-vlan trunk encapsulation: dot1q
Administrative private-vlan trunk normal VLANs: none
Administrative private-vlan trunk private VLANs: none
Operational private-vlan: none
Trunking VLANs Enabled: All
Pruning VLANs Enabled: 2-1001
Capture Mode Disabled
Capture VLANs Allowed: ALL
Protected: false
```

Ctrl+F6 to exit CLI focus

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☐ Top

IOS Command Line Interface

```
Switch#show interface trunk
Port      Mode      Encapsulation  Status      Native vlan
Fa0/1     on        802.1q         trunking    1
Fa0/2     on        802.1q         trunking    1
Fa0/3     on        802.1q         trunking    1
Fa0/4     on        802.1q         trunking    1
Fa0/5     on        802.1q         trunking    1
Fa0/6     on        802.1q         trunking    1

Port      Vlans allowed on trunk
Fa0/1     1-1005
Fa0/2     1-1005
Fa0/3     1-1005
Fa0/4     1-1005
Fa0/5     1-1005
Fa0/6     1-1005

Port      Vlans allowed and active in management domain
Fa0/1     1,10,20,30
Fa0/2     1,10,20,30
Fa0/3     1,10,20,30
Fa0/4     1,10,20,30
Fa0/5     1,10,20,30

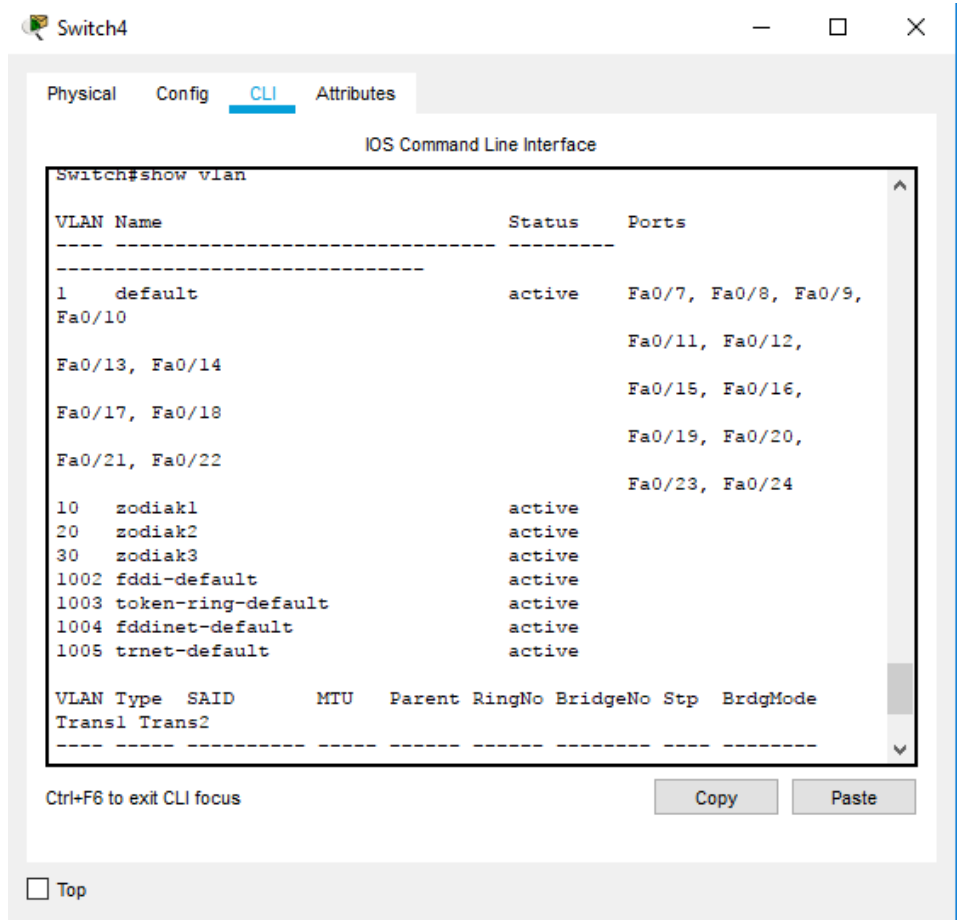
Switch#show vlan
```

Ctrl+F6 to exit CLI focus

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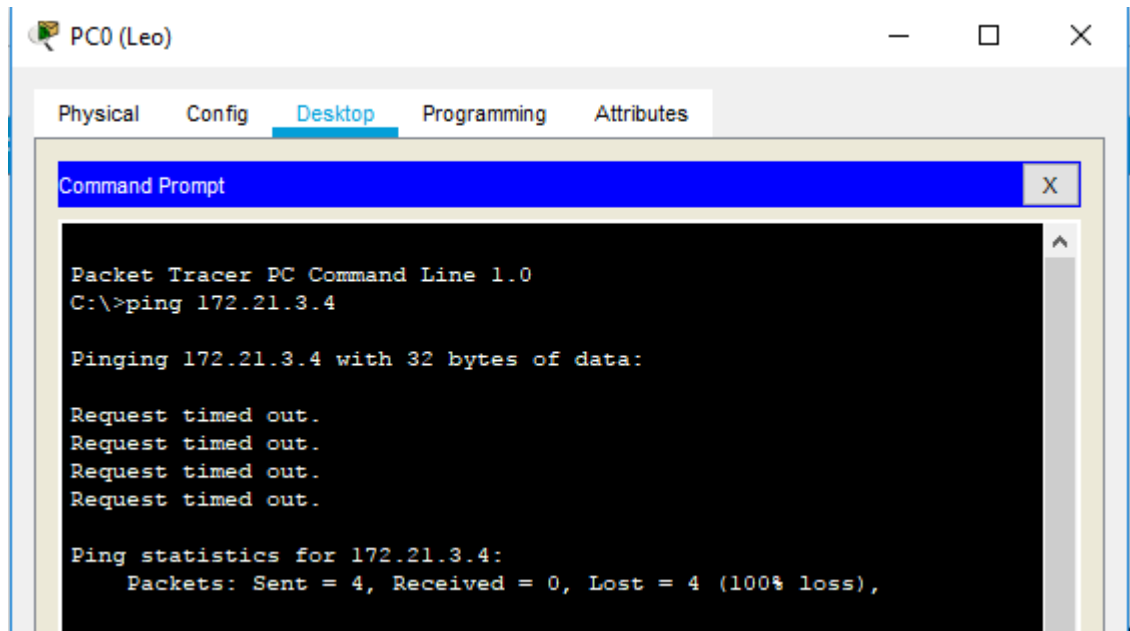
☐ Top



Tugas 7A : Jelaskan secara singkat hasil yang anda peroleh dari langkah 7.

Jawab :

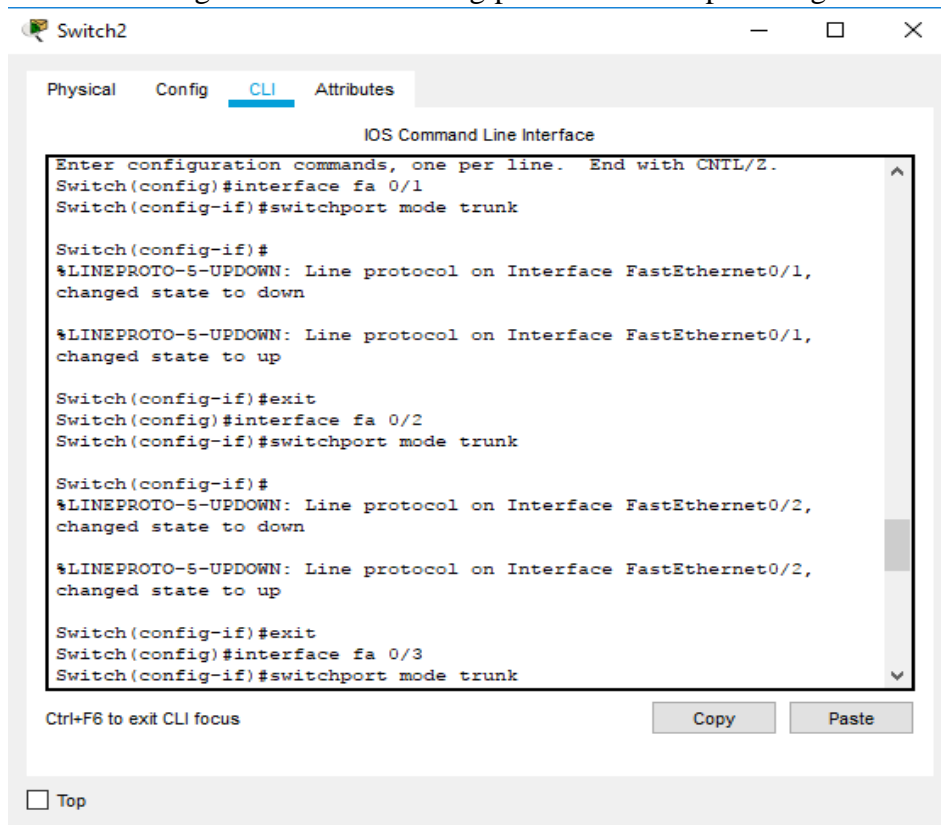
- Saat kita mengetikkan ***show interface fastheternet 0/??***(?? nomer port trunking) akan muncul status switchport trunk pada interface:
 - Administrative Mode. Merupakan switchport default yaitu trunk
 - Administrative Trunking Encapsulation. Merupakan enkapsulasi default yaitu dot1q.
 - Trunking Native Mode VLAN. Native VLAN default menggunakan VLAN1.
 - Capture VLANs Allowed. Secara default, semua VLAN dibolehkan masuk ke trunk port.
- Saat kita mengetikkan ***show interface trunk*** akan menampilkan status trunking dan semua VLAN dibolehkan masuk trunk.
- Saat kita mengetikkan ***show vlan*** berfungsi untuk mengecek status pada VLAN
- Lakukan ping dari PC leo ke PC pisces

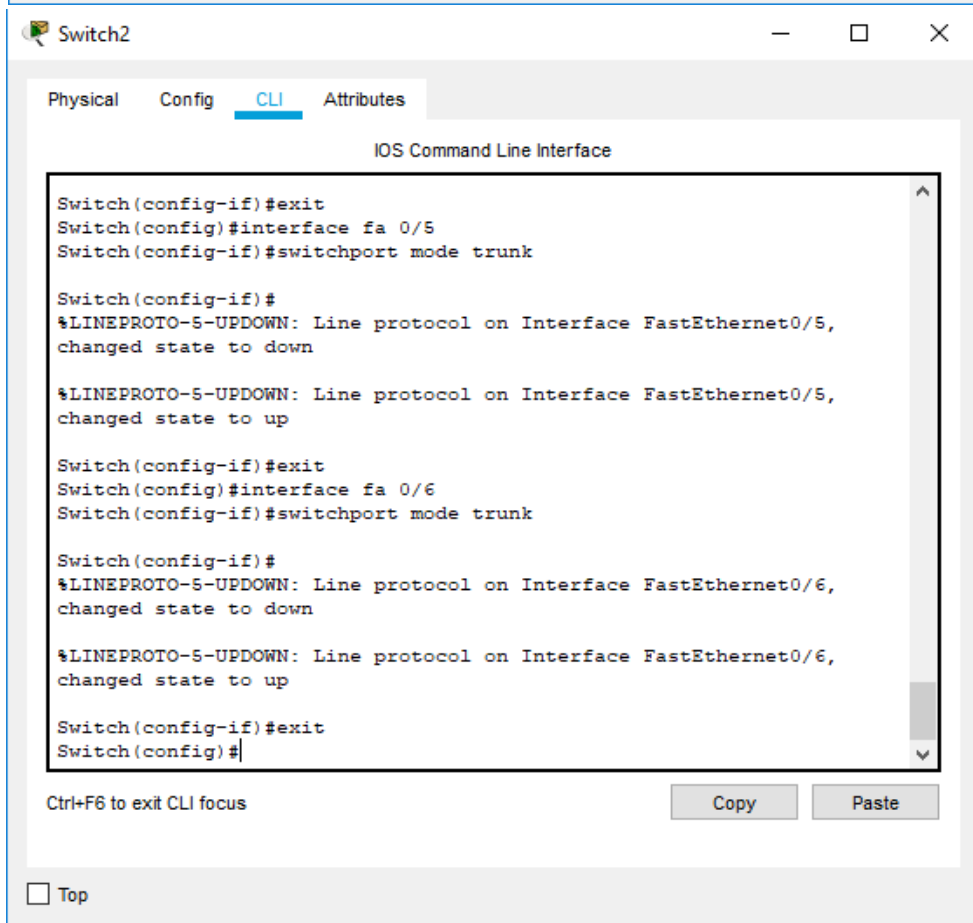
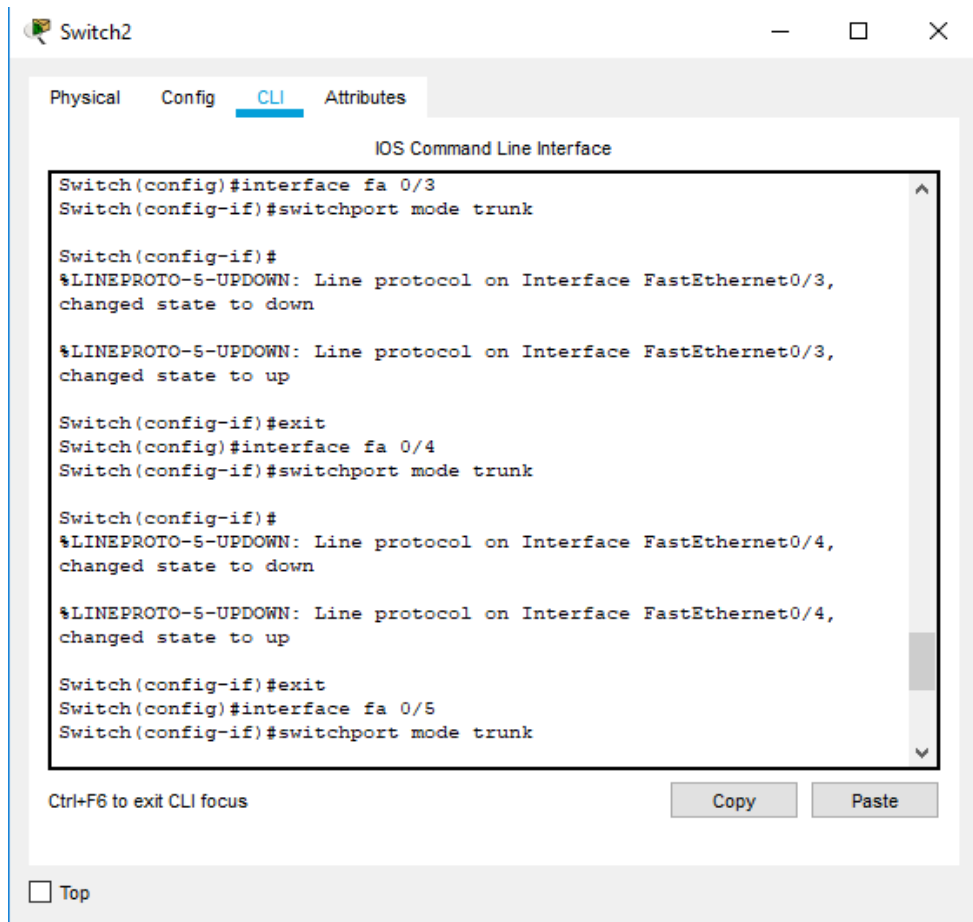


Tugas 8A : Jelaskan secara singkat mengapa hasil yang anda peroleh dari langkah 8 mendapatkan status “rto”?

Jawab : Karena PC(leo) dan PC(pisces) berada pada VLAN dan jaringan yang berbeda.

- Lakukan konfigurasi VLAN trunking pada switch 2 seperti langkah 6.





- Pada mode user atau mode previligid, lihat konfigurasi vlan pada switch 2
Langkah pengoperasian untuk melihat konfigurasi
 - Tekan enter
 - Masuk mode previligid
 - Ketik *show vlan*

```
Switch2
Physical Config CLI Attributes
IOS Command Line Interface
Switch#show vlan
VLAN Name                Status    Ports
-----
1    default                active    Fa0/7, Fa0/8, Fa0/9,
Fa0/10                    Fa0/11, Fa0/12,
Fa0/13, Fa0/14            Fa0/15, Fa0/16,
Fa0/17, Fa0/18            Fa0/19, Fa0/20,
Fa0/21, Fa0/22            Fa0/23, Fa0/24
10   zodiak1                  active
20   zodiak2                  active
30   zodiak3                  active
1002 fddi-default            active
1003 token-ring-default     active
1004 fddinet-default        active
1005 trnet-default          active
VLAN Type  SAID      MTU   Parent RingNo BridgeNo Stp   BrdgMode
Trans1 Trans2
-----
1    enet     100001   1500  -     -     -     -     -     0
0
10   enet     100010   1500  -     -     -     -     -     0
0
20   enet     100020   1500  -     -     -     -     -     0
0
30   enet     100030   1500  -     -     -     -     -     0
0
--More--
```

Ctrl+F6 to exit CLI focus

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☐ Top

```
Switch2
Physical Config CLI Attributes
IOS Command Line Interface
Fa0/17, Fa0/18
Fa0/19, Fa0/20,
Fa0/21, Fa0/22
Fa0/23, Fa0/24
10   zodiak1                  active
20   zodiak2                  active
30   zodiak3                  active
1002 fddi-default            active
1003 token-ring-default     active
1004 fddinet-default        active
1005 trnet-default          active
VLAN Type  SAID      MTU   Parent RingNo BridgeNo Stp   BrdgMode
Trans1 Trans2
-----
1    enet     100001   1500  -     -     -     -     -     0
0
10   enet     100010   1500  -     -     -     -     -     0
0
20   enet     100020   1500  -     -     -     -     -     0
0
30   enet     100030   1500  -     -     -     -     -     0
0
--More--
```

Ctrl+F6 to exit CLI focus

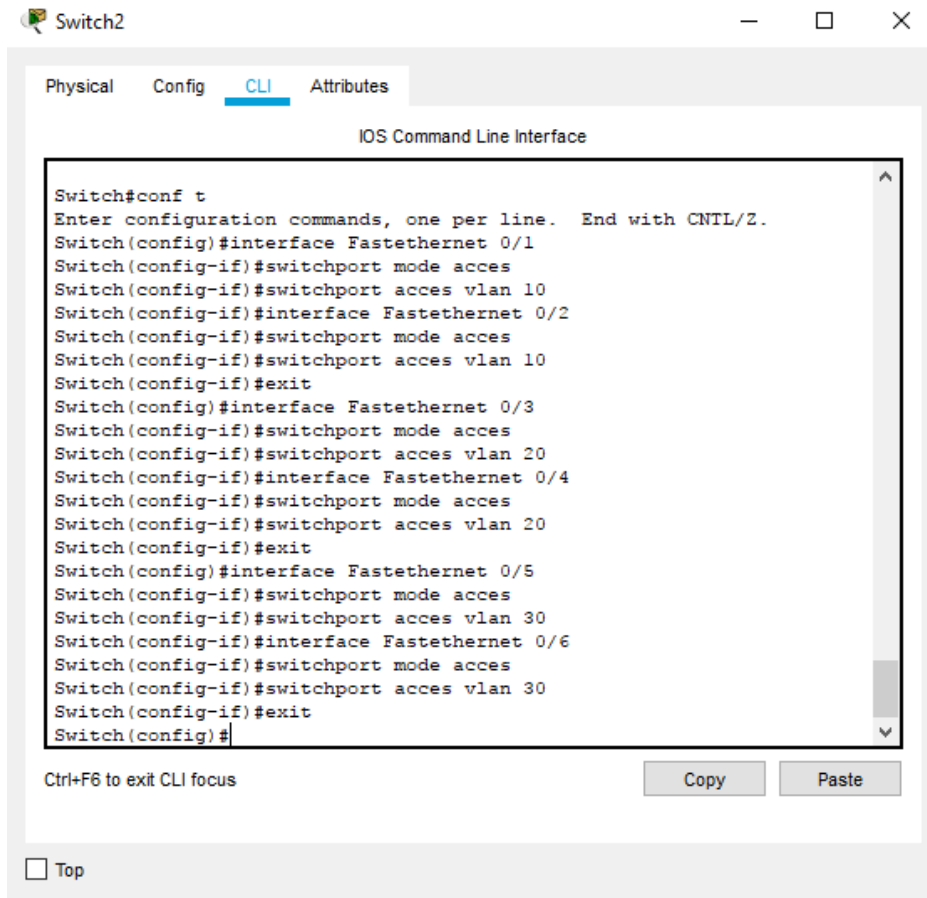
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Tugas 10 A: Jelaskan secara singkat hasil yang anda peroleh dari langkah 10.

Jawab : Berfungsi untuk mengecek status pada VLAN

- k. Pada mode configuration, konfigurasi port-port switch ke dalam VLAN zodiak1, zodiak2, dan zodiak3 dengan anggota sebagai berikut:
- zodiak1 = aquarius dan Gemini
 - zodiak2 = cancer dan sagitarius
 - zodiak3 = capriconus dan pisces



```
Switch#conf t
Enter configuration commands, one per line.  End with CNTL/Z.
Switch(config)#interface FastEthernet 0/1
Switch(config-if)#switchport mode acces
Switch(config-if)#switchport acces vlan 10
Switch(config-if)#interface FastEthernet 0/2
Switch(config-if)#switchport mode acces
Switch(config-if)#switchport acces vlan 10
Switch(config-if)#exit
Switch(config)#interface FastEthernet 0/3
Switch(config-if)#switchport mode acces
Switch(config-if)#switchport acces vlan 20
Switch(config-if)#interface FastEthernet 0/4
Switch(config-if)#switchport mode acces
Switch(config-if)#switchport acces vlan 20
Switch(config-if)#exit
Switch(config)#interface FastEthernet 0/5
Switch(config-if)#switchport mode acces
Switch(config-if)#switchport acces vlan 30
Switch(config-if)#interface FastEthernet 0/6
Switch(config-if)#switchport mode acces
Switch(config-if)#switchport acces vlan 30
Switch(config-if)#exit
Switch(config)#
```

- i. Lakukan ping dari PC leo ke PC aries, PC leo ke PC aquarius, PC leo ke PC pisces, PC libra ke PC cancer, dan PC libra ke PC leo.
- PC leo ke PC aries

PC0 (Leo)

Physical Config Desktop Programming Attributes

Command Prompt

```
Packets: Sent = 4, Received = 0, Lost = 4 (100% loss),

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=12ms TTL=128
Reply from 172.21.1.2: bytes=32 time<1ms TTL=128
Reply from 172.21.1.2: bytes=32 time<1ms TTL=128
Reply from 172.21.1.2: bytes=32 time<1ms TTL=128

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 = 12ms, Average = 3ms
```

- PC leo ke PC aquarius

PC0 (Leo)

Physical Config Desktop Programming Attributes

Command Prompt

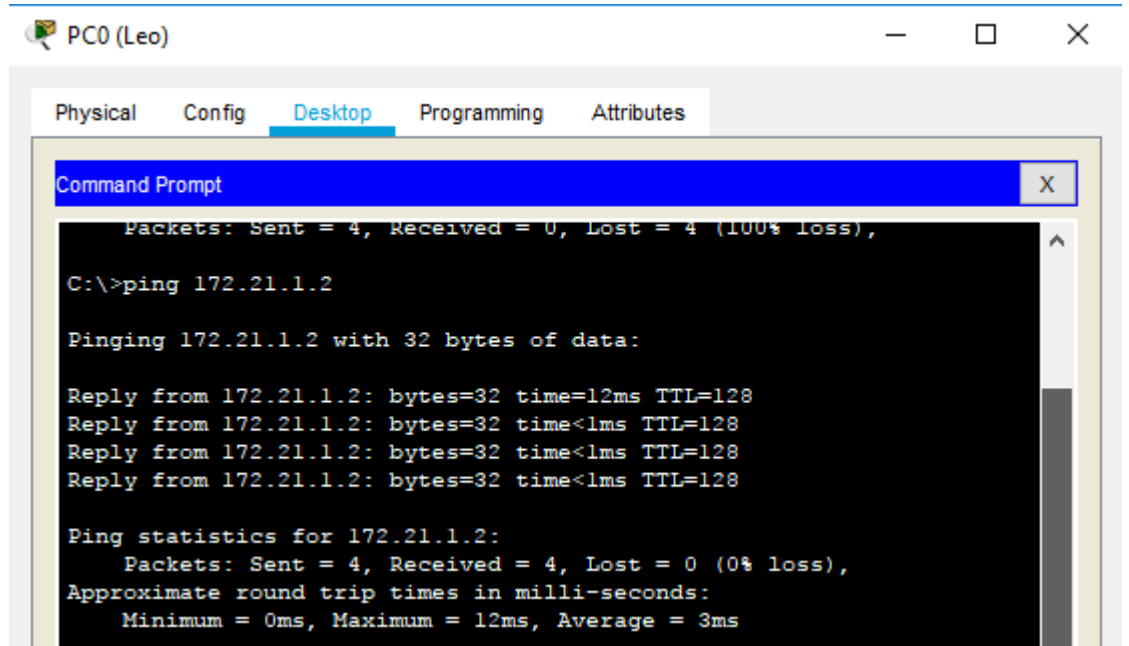
```
C:\>ping 172.21.1.3

Pinging 172.21.1.3 with 32 bytes of data:

Request timed out.
Request timed out.
Request timed out.
Request timed out.

Ping statistics for 172.21.1.3:
    Packets: Sent = 4, Received = 0, Lost = 4 (100% loss),
```

- PC lo eke PC pisces



PC0 (Leo)

Physical Config Desktop Programming Attributes

Command Prompt

```
Packets: Sent = 4, Received = 0, Lost = 4 (100% loss),

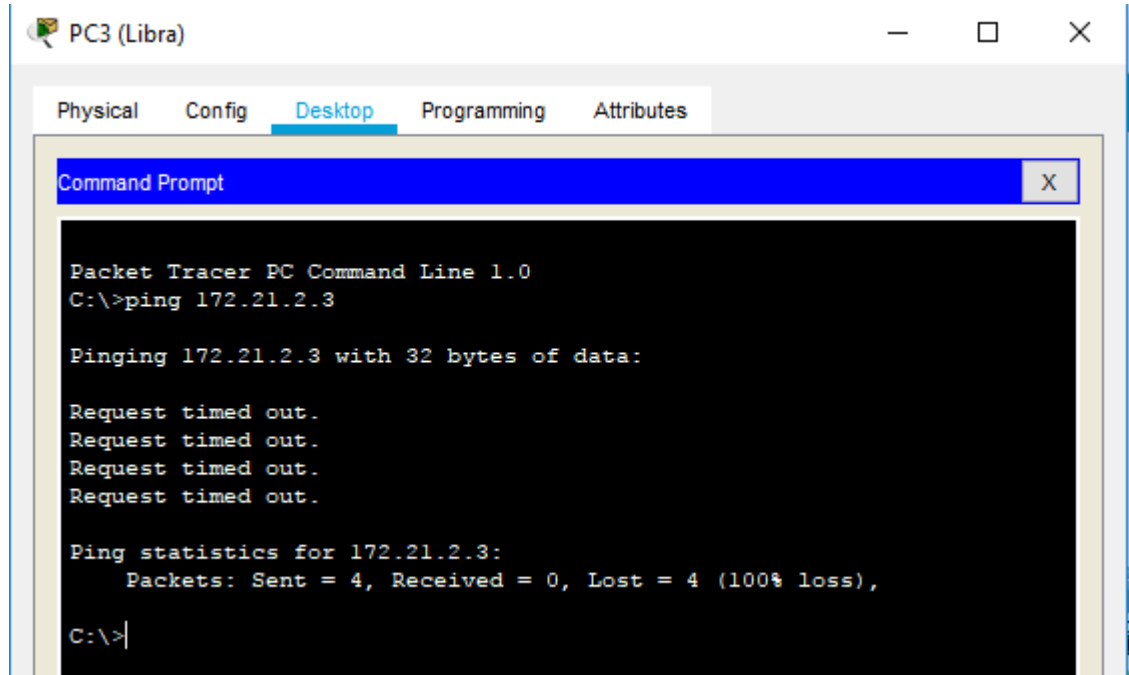
C:\>ping 172.21.1.2

Pinging 172.21.1.2 with 32 bytes of data:

Reply from 172.21.1.2: bytes=32 time=12ms TTL=128
Reply from 172.21.1.2: bytes=32 time<1ms TTL=128
Reply from 172.21.1.2: bytes=32 time<1ms TTL=128
Reply from 172.21.1.2: bytes=32 time<1ms TTL=128

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 = 12ms, Average = 3ms
```

- PC libra ke PC cnacer



PC3 (Libra)

Physical Config Desktop Programming Attributes

Command Prompt

```
Packet Tracer PC Command Line 1.0
C:\>ping 172.21.2.3

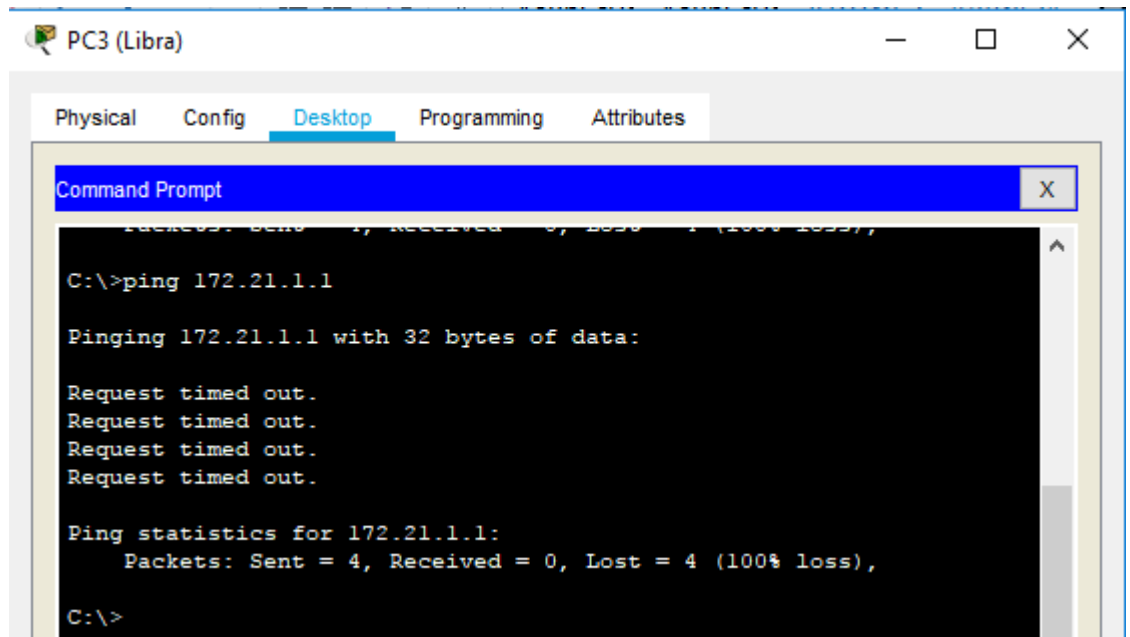
Pinging 172.21.2.3 with 32 bytes of data:

Request timed out.
Request timed out.
Request timed out.
Request timed out.

Ping statistics for 172.21.2.3:
    Packets: Sent = 4, Received = 0, Lost = 4 (100% loss),

C:\>|
```

- PC libra ke PC leo



Tugas 12A : Jelaskan secara singkat hasil yang anda peroleh dari langkah 8.

Jawab : Bahwa akan mendapat hasil reply apabila pc berada pada jaringan dan VLAN yang sama. Apabila hanya sama dari salah satu VLAN atau jaringan maka hasilnya juga akan rto.