

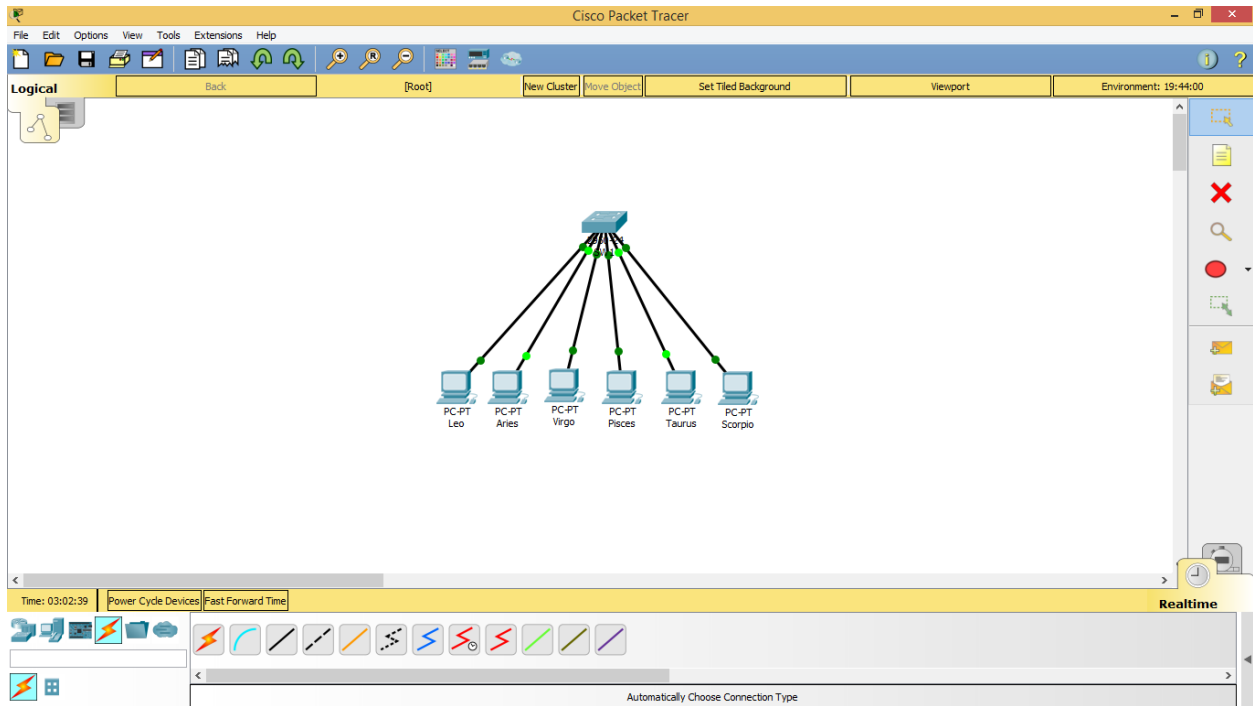
Nama : Anggit Astriani

NIM : L200180111

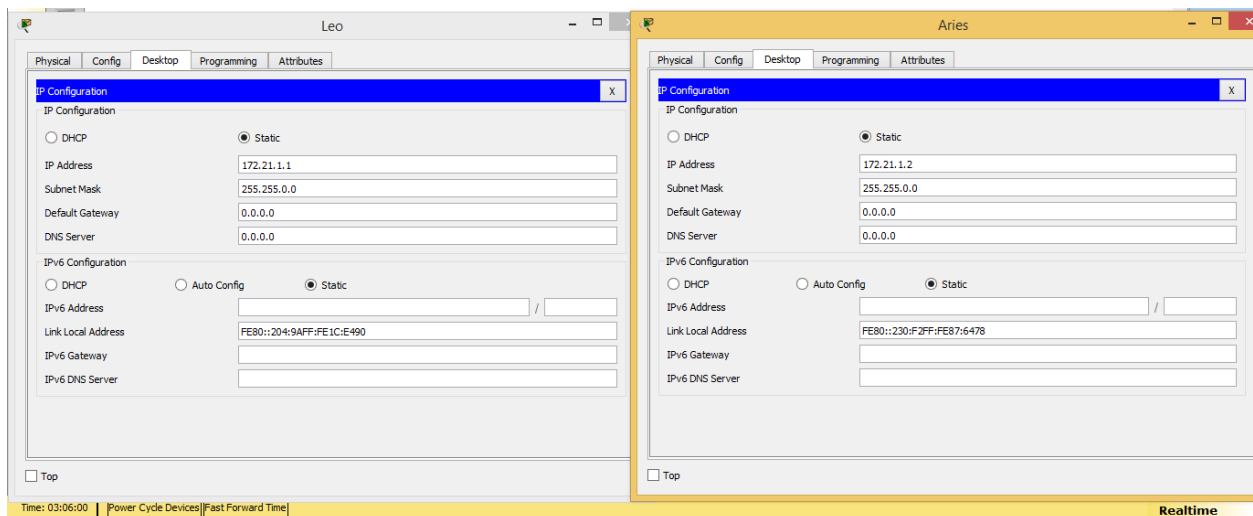
## MODUL 4

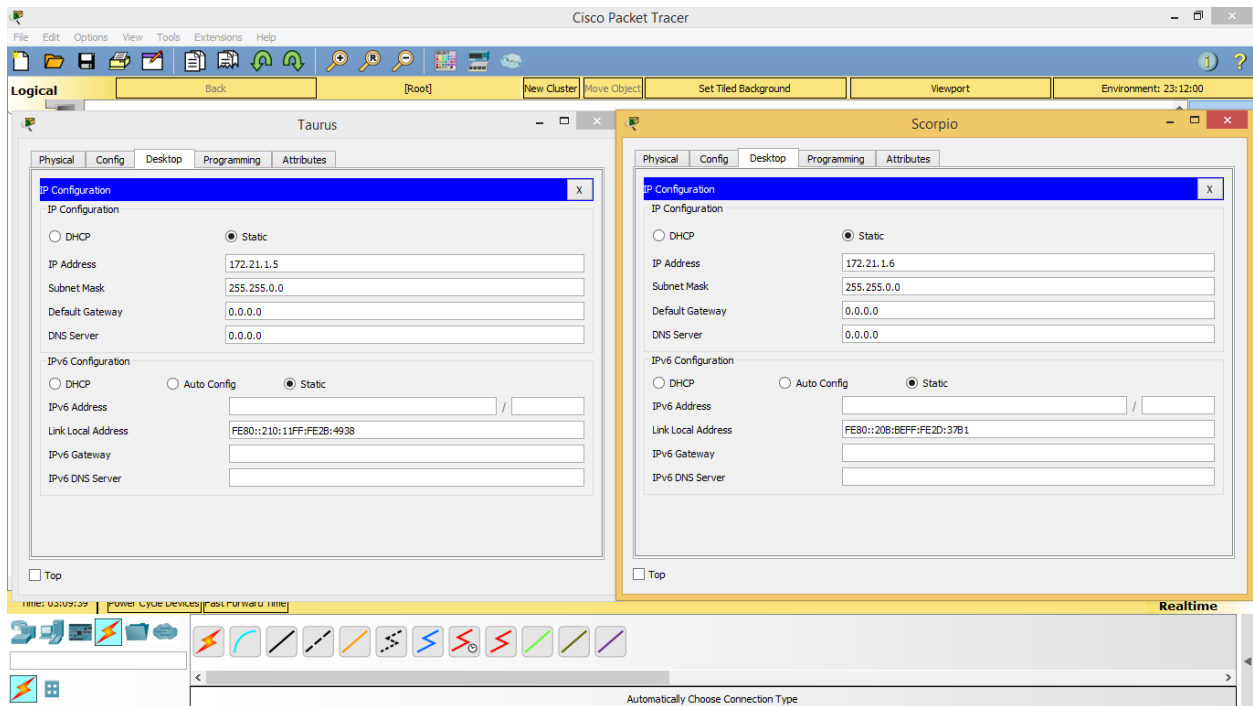
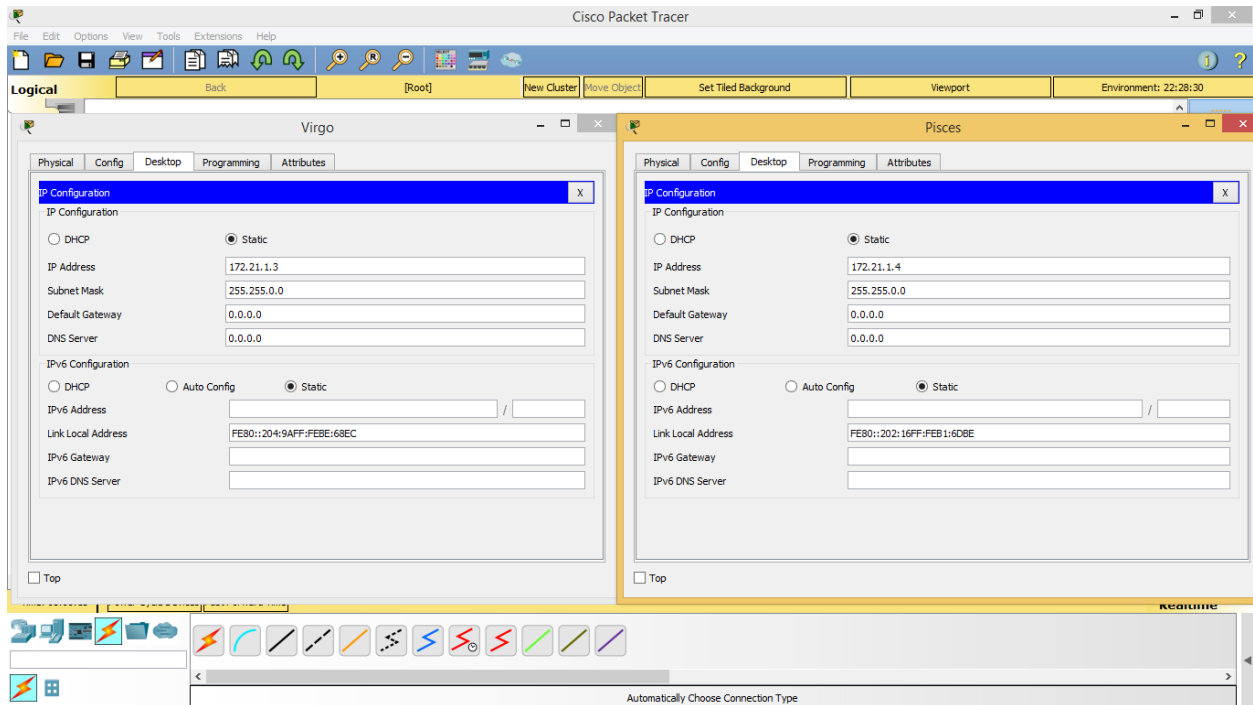
### Kegiatan 1. Topologi 1

Membuat topologi

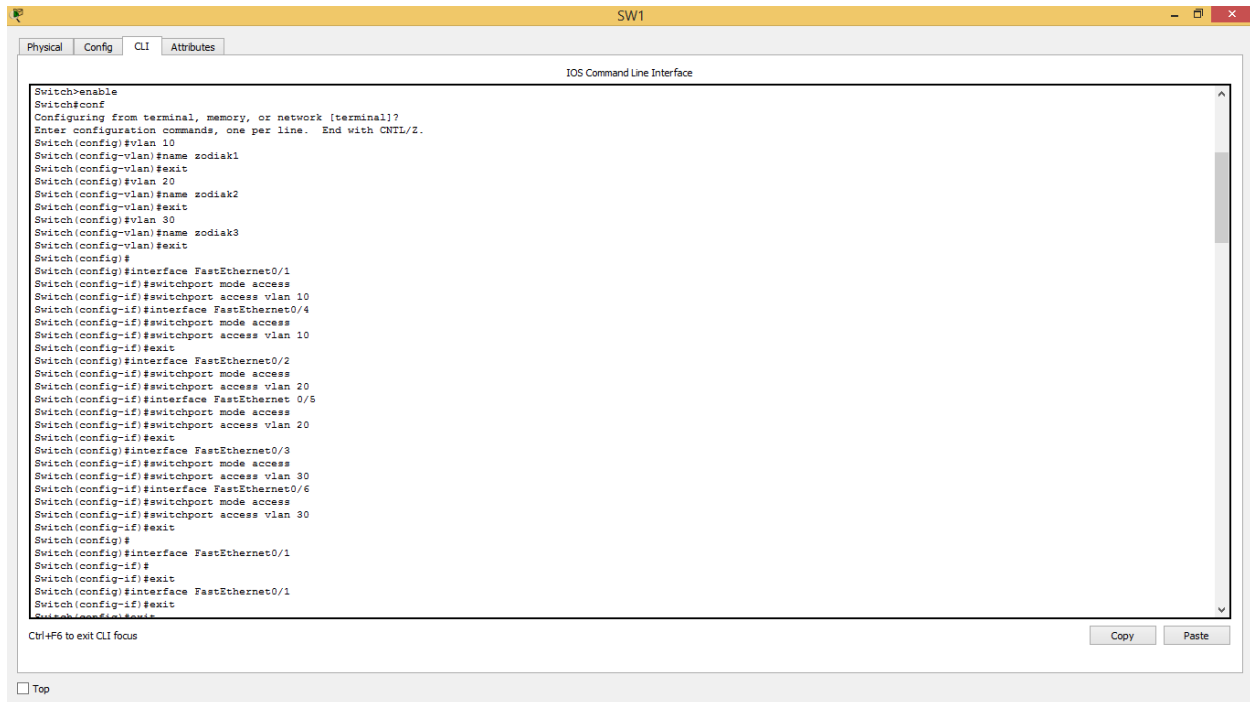


Konfigurasi masing-masing pc

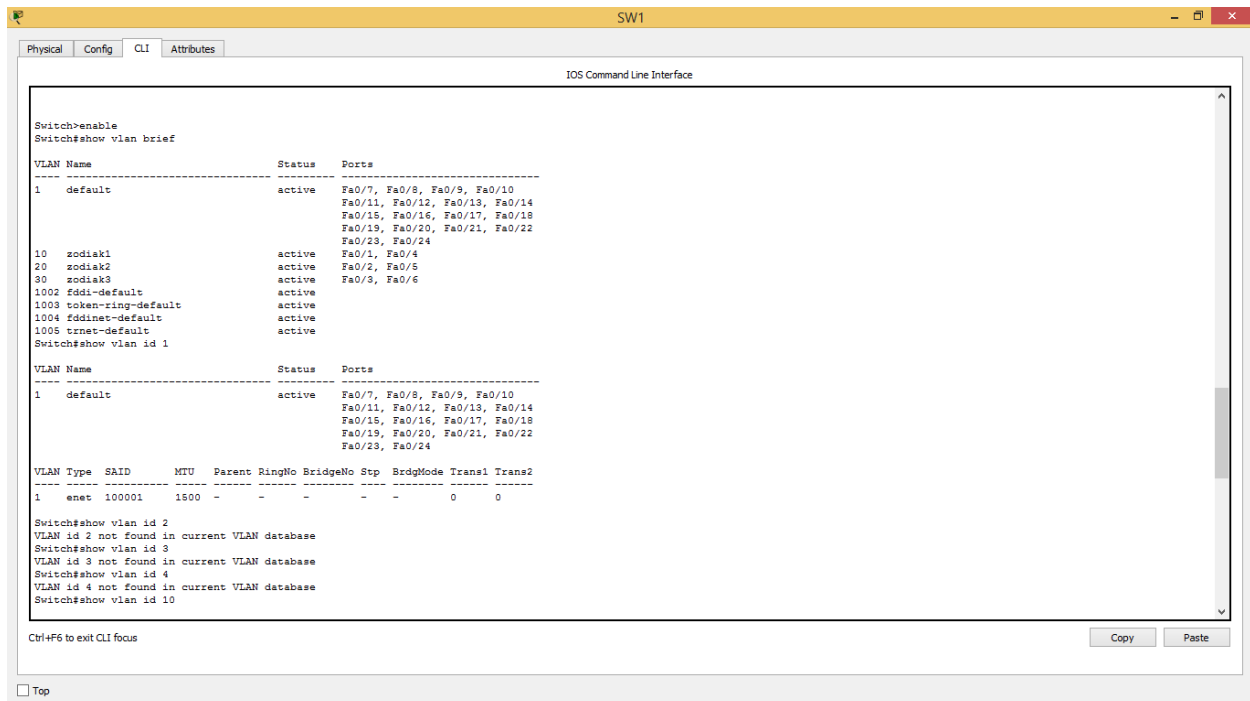


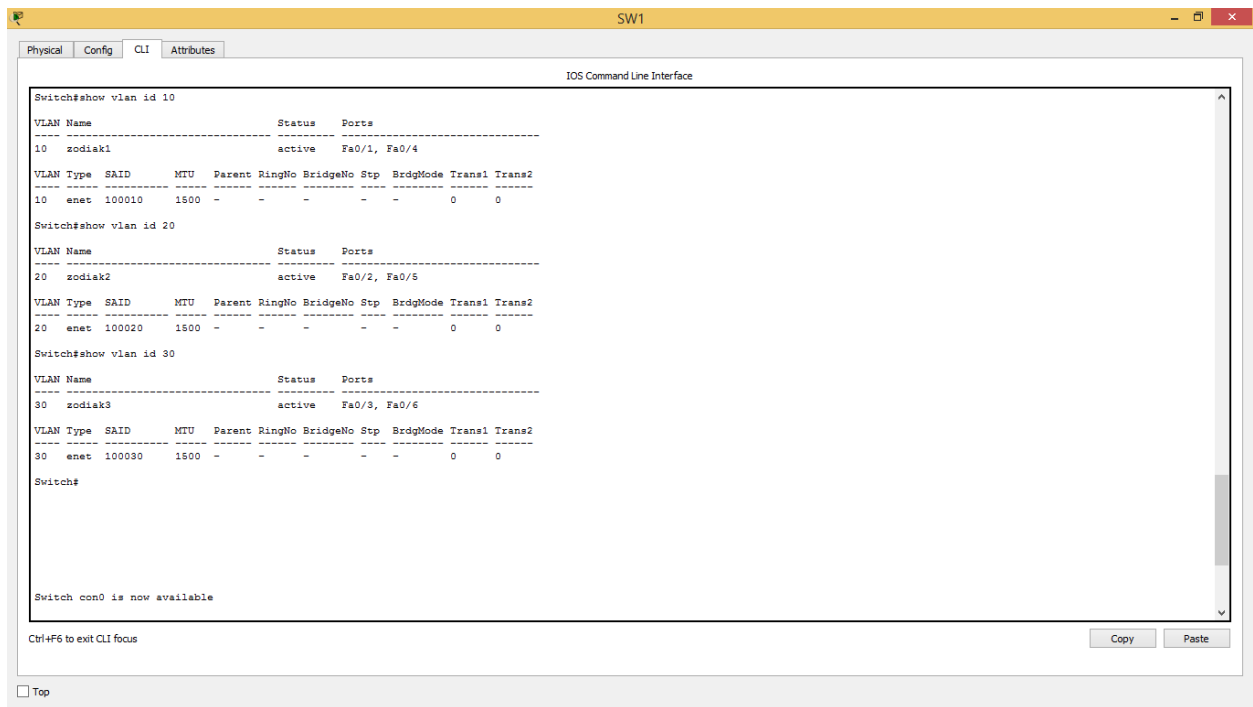


## Konfigurasi pada switch dan konfigurasi port-port switch



## Melihat Konfigurasi VLAN yang telah dibuat





## Tugas 6A :

No	Variabel	Nilai
1.	Nomor VLAN	10
2.	Nama VLAN	zodiak1
3.	Port	Fa0/1, Fa0/4
4.	Status	active

No	Variabel	Nilai
1.	Nomor VLAN	20
2.	Nama VLAN	zodiak2
3.	Port	Fa0/2, Fa0/5
4.	Status	active

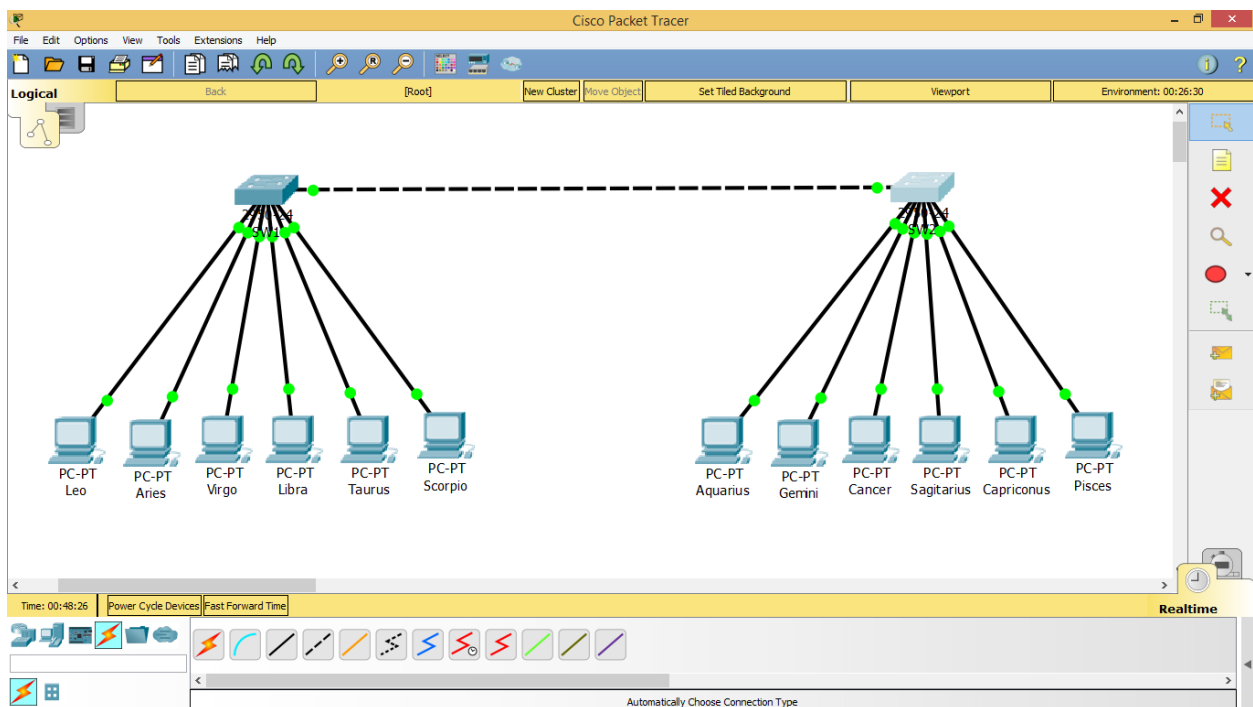
No	Variabel	Nilai
1.	Nomor VLAN	30
2.	Nama VLAN	zodiak3
3.	Port	Fa0/3, Fa0/6
4.	Status	active

### Tugas 6B :

Hasil dari 6A yaitu configuration yang kita lakukan telah menjadikan 3 id vlan yang terdiri dari zodiak1(10), zodiak2(20), zodiak3(30) dan masing-masing id vlan diisi dengan 2 port (PC) dan semua vlan statusnya telah aktif.

## Kegiatan 2. Topologi 2

### Membuat topologi dan memberi penamaan



## Konfigurasi masing-masing pc (Memasukkan IP)

Leo

Physical Config Desktop Programming Attributes

IP Configuration

IP Configuration

☐ DHCP ☒ Static

IP Address 172.21.1.1

Subnet Mask 255.255.0.0

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:FE14:B0D8

IPv6 Gateway

IPv6 DNS Server

☐ Top

Aries

Physical Config Desktop Programming Attributes

IP Configuration

IP Configuration

☐ DHCP ☒ Static

IP Address 172.21.1.2

Subnet Mask 255.255.0.0

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:C9FF:FE22:94AE

IPv6 Gateway

IPv6 DNS Server

☐ Top

Virgo

Physical Config Desktop Programming Attributes

IP Configuration

IP Configuration

☐ DHCP ☒ Static

IP Address 172.21.2.1

Subnet Mask 255.255.0.0

Default Gateway 0.0.0.0

DNS Server 0.0.0.0

IPv6 Configuration

☐ DHCP ☐ Auto Config ☒ Static

IPv6 Address /

Link Local Address FE80::20A:41FF:FE1B:1751

IPv6 Gateway

IPv6 DNS Server

☐ Top

Libra

Physical Config Desktop Programming Attributes

IP Configuration

IP Configuration

☐ DHCP ☒ Static

IP Address 172.21.2.2

Subnet Mask 255.255.0.0

Default Gateway 0.0.0.0

DNS Server 0.0.0.0

IPv6 Configuration

☐ DHCP ☐ Auto Config ☒ Static

IPv6 Address /

Link Local Address FE80::260:47FF:FEC7:48B

IPv6 Gateway

IPv6 DNS Server

☐ Top

Taurus

Physical

Config

Desktop

Programming

Attributes

IP Configuration

X

IP Configuration

☐ DHCP

☒ Static

IP Address

172.21.3.1

Subnet Mask

255.255.0.0

Default Gateway

0.0.0.0

DNS Server

0.0.0.0

IPv6 Configuration

☐ DHCP

☐ Auto Config

☒ Static

IPv6 Address

/

Link Local Address

FE80::240:BFF:FE52:46E2

IPv6 Gateway

IPv6 DNS Server

☐ Top

Scorpio

Physical

Config

Desktop

Programming

Attributes

IP Configuration

X

IP Configuration

☐ DHCP

☒ Static

IP Address

172.21.3.2

Subnet Mask

255.255.0.0

Default Gateway

0.0.0.0

DNS Server

0.0.0.0

IPv6 Configuration

☐ DHCP

☐ Auto Config

☒ Static

IPv6 Address

/

Link Local Address

FE80::2E0:A3FF:FE38:77A2

IPv6 Gateway

IPv6 DNS Server

☐ Top



Aquarius

Physical Config Desktop Programming Attributes

IP Configuration X

IP Configuration

☐ DHCP ☒ Static

IP Address 172.21.1.3

Subnet Mask 255.255.0.0

Default Gateway 0.0.0.0

DNS Server 0.0.0.0

IPv6 Configuration

☐ DHCP ☐ Auto Config ☒ Static

IPv6 Address /

Link Local Address FE80::290:2BFF:FEC1:1671

IPv6 Gateway

IPv6 DNS Server

☐ Top

Gemini

Physical Config Desktop Programming Attributes

IP Configuration X

IP Configuration

☐ DHCP ☒ Static

IP Address 172.21.1.4

Subnet Mask 255.255.0.0

Default Gateway 0.0.0.0

DNS Server 0.0.0.0

IPv6 Configuration

☐ DHCP ☐ Auto Config ☒ Static

IPv6 Address /

Link Local Address FE80::250:FFF:FE0B:90EA

IPv6 Gateway

IPv6 DNS Server

☐ Top

Cancer

Physical

Config

Desktop

Programming

Attributes

IP Configuration

X

IP Configuration

☐ DHCP

☒ Static

IP Address

172.21.2.3

Subnet Mask

255.255.0.0

Default Gateway

0.0.0.0

DNS Server

0.0.0.0

IPv6 Configuration

☐ DHCP

☐ Auto Config

☒ Static

IPv6 Address

/

Link Local Address

FE80::2E0:8FFF:FE67:B04D

IPv6 Gateway

IPv6 DNS Server

☐ Top

Sagittarius

Physical

Config

Desktop

Programming

Attributes

IP Configuration

X

IP Configuration

☐ DHCP

☒ Static

IP Address

172.21.2.4

Subnet Mask

255.255.0.0

Default Gateway

0.0.0.0

DNS Server

0.0.0.0

IPv6 Configuration

☐ DHCP

☐ Auto Config

☒ Static

IPv6 Address

/

Link Local Address

FE80::20A:F3FF:FE8E:A6C9

IPv6 Gateway

IPv6 DNS Server

☐ Top

Pisces

Physical Config Desktop Programming Attributes

IP Configuration X

IP Configuration

☐ DHCP ☒ Static

IP Address 172.21.3.4

Subnet Mask 255.255.0.0

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:C7FF:FE7C:6801

IPv6 Gateway

IPv6 DNS Server

☐ Top

Capricornus

Physical Config Desktop Programming Attributes

IP Configuration X

IP Configuration

☐ DHCP ☒ Static

IP Address 172.21.3.3

Subnet Mask 255.255.0.0

Default Gateway 0.0.0.0

DNS Server 0.0.0.0

IPv6 Configuration

☐ DHCP ☐ Auto Config ☒ Static

IPv6 Address /

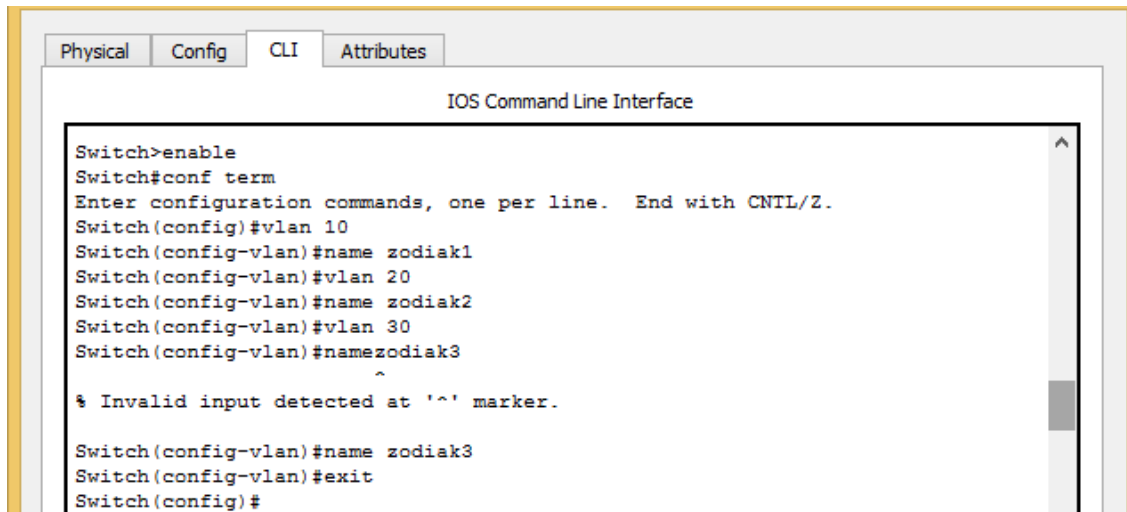
Link Local Address FE80::206:2AFF:FE90:361A

IPv6 Gateway

IPv6 DNS Server

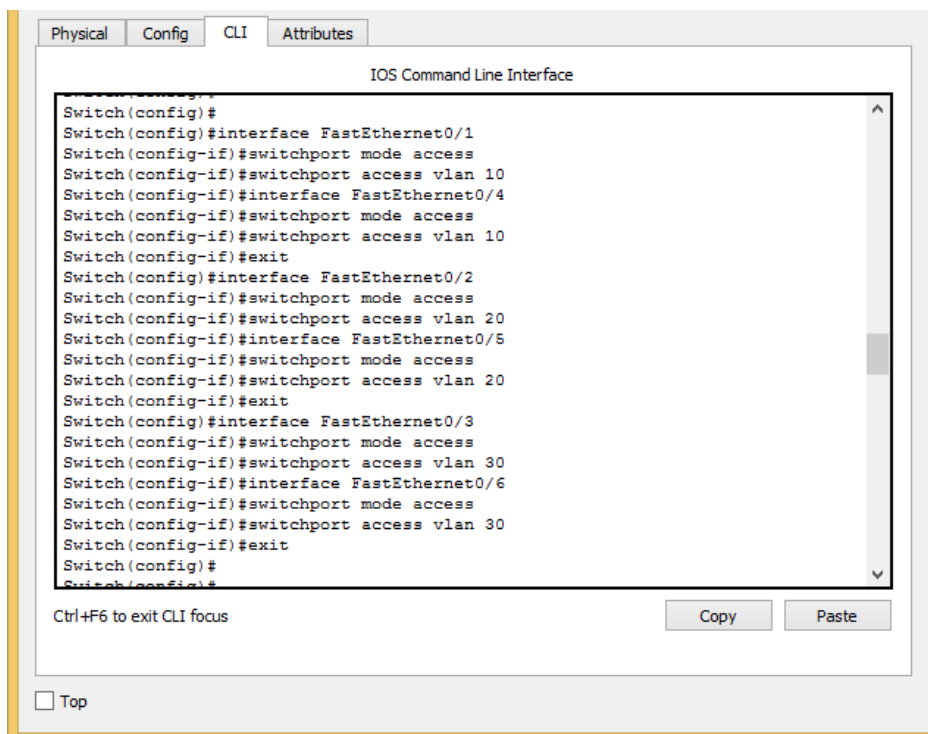
☐ Top

## Configurasi pada switch untuk membuat 3 Vlan dengan nama zodiak1, zodiak2, zodiak3



```
Switch>enable
Switch#conf term
Enter configuration commands, one per line. End with CNTL/Z.
Switch(config)#vlan 10
Switch(config-vlan)#name zodiak1
Switch(config-vlan)#vlan 20
Switch(config-vlan)#name zodiak2
Switch(config-vlan)#vlan 30
Switch(config-vlan)#name zodiak3
Switch(config-vlan)#^
% Invalid input detected at '^' marker.
Switch(config-vlan)#name zodiak3
Switch(config-vlan)#exit
Switch(config)#
```

## Melakukan konfigurasi port-port switch ke dalam Vlan zodiak1, zodiak2, dan zodiak3 pada switch 1



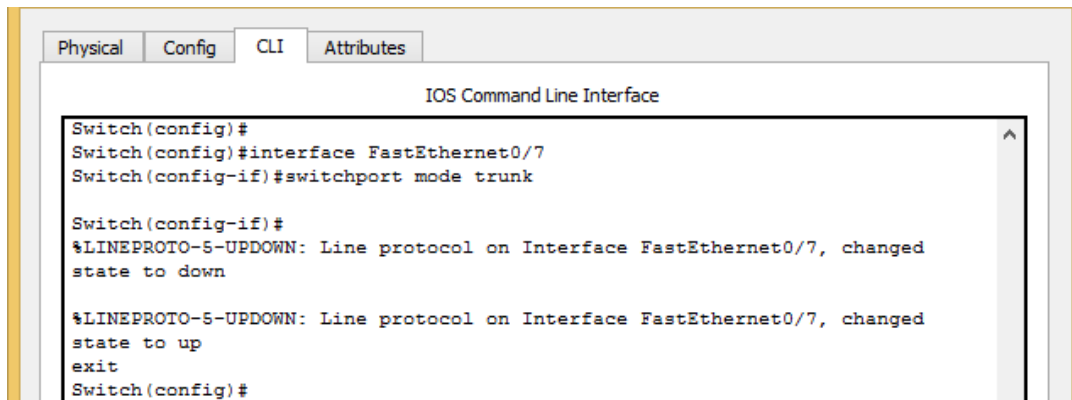
```
Switch(config)#
Switch(config)#interface FastEthernet0/1
Switch(config-if)#switchport mode access
Switch(config-if)#switchport access vlan 10
Switch(config-if)#interface FastEthernet0/4
Switch(config-if)#switchport mode access
Switch(config-if)#switchport access vlan 10
Switch(config-if)#exit
Switch(config)#interface FastEthernet0/2
Switch(config-if)#switchport mode access
Switch(config-if)#switchport access vlan 20
Switch(config-if)#interface FastEthernet0/5
Switch(config-if)#switchport mode access
Switch(config-if)#switchport access vlan 20
Switch(config-if)#exit
Switch(config)#interface FastEthernet0/3
Switch(config-if)#switchport mode access
Switch(config-if)#switchport access vlan 30
Switch(config-if)#interface FastEthernet0/6
Switch(config-if)#switchport mode access
Switch(config-if)#switchport access vlan 30
Switch(config-if)#exit
Switch(config)#
Switch(config)#
```

Ctrl+F6 to exit CLI focus

Copy Paste

☐ Top

## Konfigurasi Vlan trunking pada switch 1



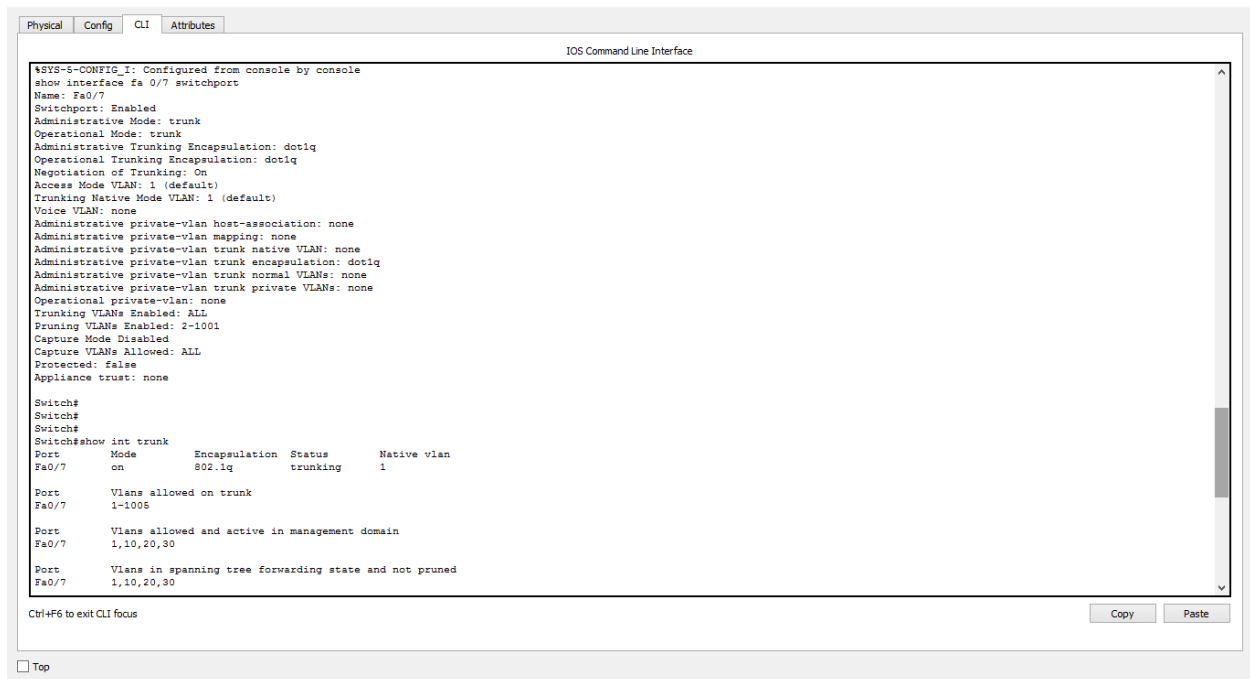
The screenshot shows the CLI of a switch with tabs for Physical, Config, CLI, and Attributes. The CLI window displays the following commands and output:

```
Switch(config)#
Switch(config)#interface FastEthernet0/7
Switch(config-if)#switchport mode trunk

Switch(config-if)#
%LINEPROTO-5-UPDOWN: Line protocol on Interface FastEthernet0/7, changed
state to down

%LINEPROTO-5-UPDOWN: Line protocol on Interface FastEthernet0/7, changed
state to up
exit
Switch(config)#
```

## Melihat konfigurasi trunking pada switch 1



The screenshot shows the CLI of a switch with tabs for Physical, Config, CLI, and Attributes. The CLI window displays the following commands and output:

```
!SYS-5-CONFIG-I: Configured from console by console
show interface fa 0/7 switchport
Name: Fa0/7
Switchport: Enabled
Administrative Mode: trunk
Operational Mode: trunk
Administrative Trunking Encapsulation: dot1q
Operational Trunking Encapsulation: dot1q
Negotiation of Trunking: On
Access Mode VLAN: 1 (default)
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
Appliance trust: none

Switch#
Switch#
Switch#
Switch#show int trunk
Port      Mode      Encapsulation  Status      Native vlan
Fa0/7     on        802.1q         trunking    1

Port      Vlans allowed on trunk
Fa0/7     1-1005

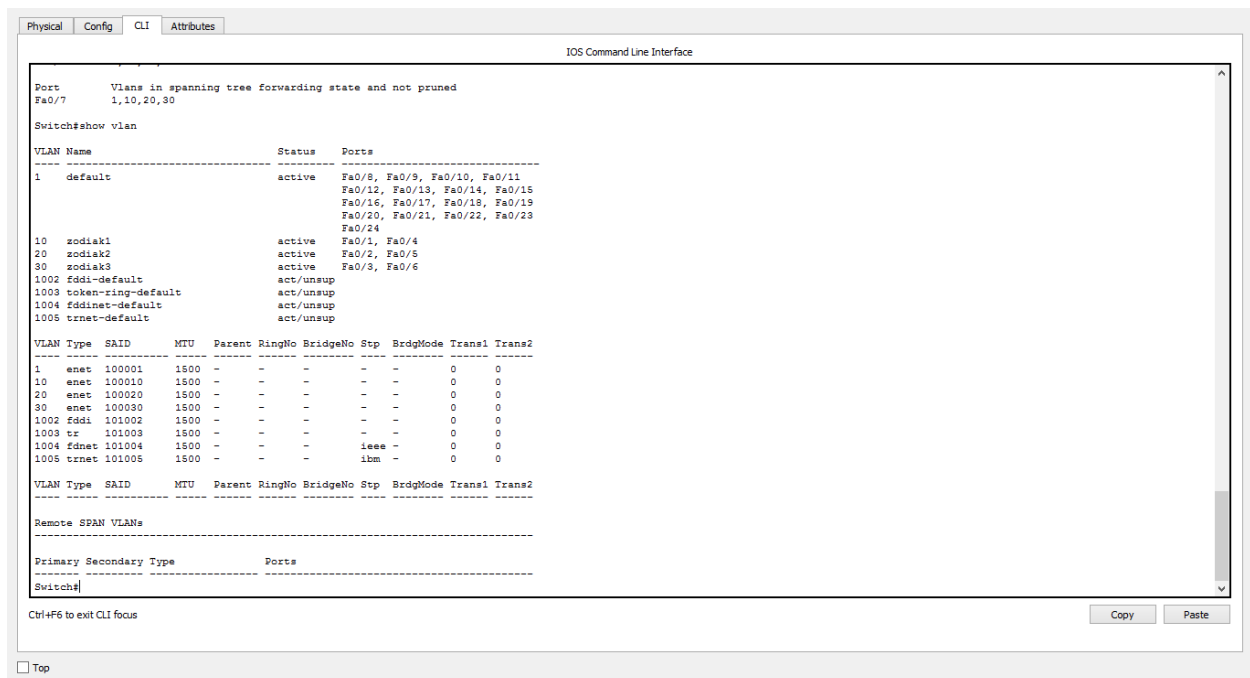
Port      Vlans allowed and active in management domain
Fa0/7     1,10,20,30

Port      Vlans in spanning tree forwarding state and not pruned
Fa0/7     1,10,20,30
```

Ctrl+F6 to exit CLI focus

Copy Paste

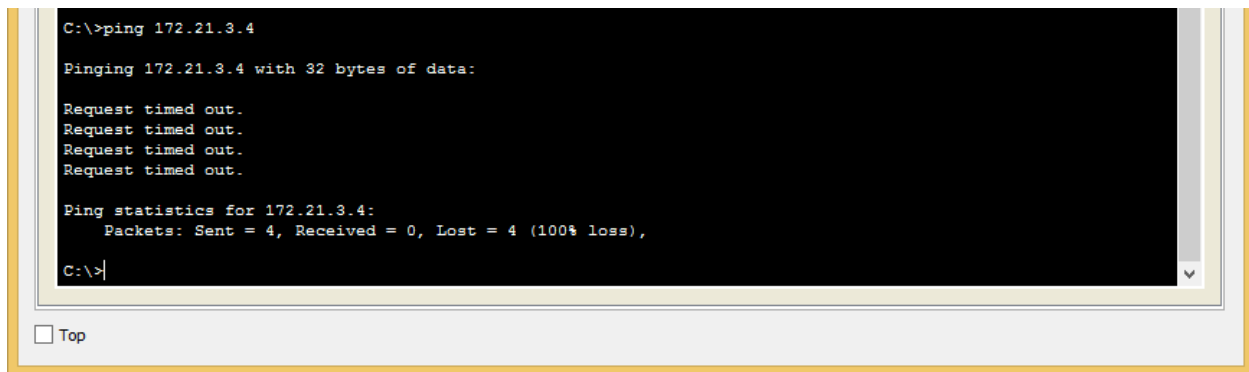
☐ Top



## Tugas 7A : Hasil yang diperoleh dari langkah 7

Mengaktifkan switch port Fa0/1(port yang digunakan untuk trunk), Administrative mode menjadi trunk dan juga Operational Mode trunk.

## Melakukan ping dari PC leo ke PC Pisces



```
C:\>ping 172.21.3.4

Pinging 172.21.3.4 with 32 bytes of data:

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

Ping statistics for 172.21.3.4:
    Packets: Sent = 4, Received = 0, Lost = 4 (100% loss),

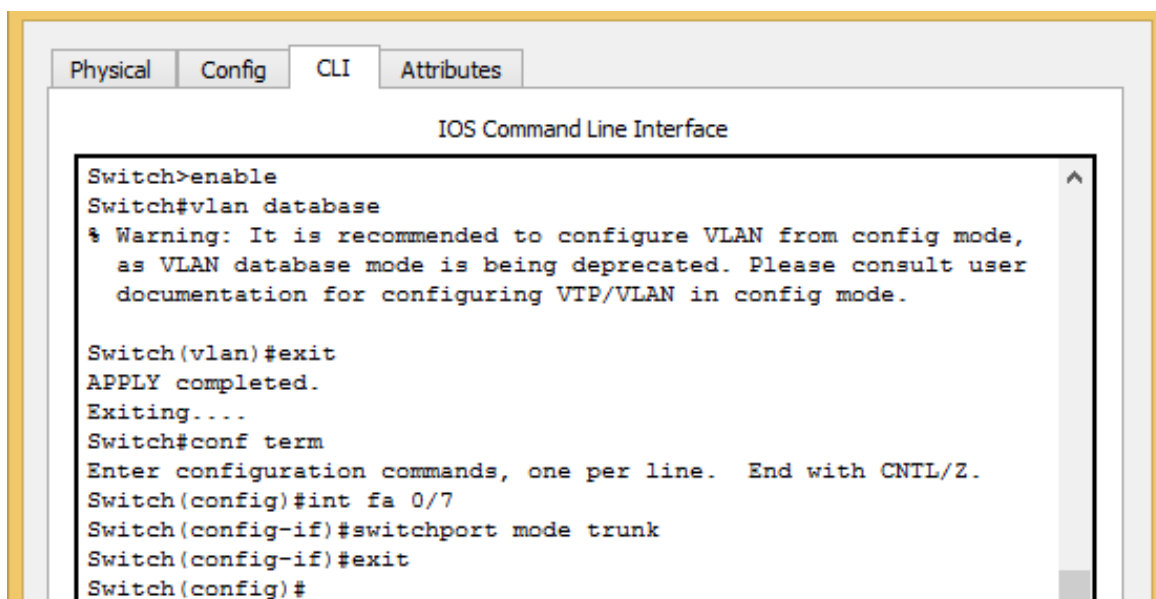
C:\>
```

☐ Top

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

Ping dari PC leo ke PC Pisces mendapatkan status RTO atau Request Time Out karena keduanya berada pada jaringan yang berbeda dan dalam kondisi VLAN keduanya berada dalam VLAN yang berbeda(VLAN zodiak1 dan VLAN zodiak2)

## Konfigurasi trunking Vlan pada switch 2



```
Physical  Config  CLI  Attributes

IOS Command Line Interface

Switch>enable
Switch#vlan database
% Warning: It is recommended to configure VLAN from config mode,
as VLAN database mode is being deprecated. Please consult user
documentation for configuring VTP/VLAN in config mode.

Switch(vlan)#exit
APPLY completed.
Exiting....
Switch#conf term
Enter configuration commands, one per line.  End with CNTL/Z.
Switch(config)#int fa 0/7
Switch(config-if)#switchport mode trunk
Switch(config-if)#exit
Switch(config)#
```

## Melihat konfigurasi trunking pada switch 2

```
SW2
Physical Config CLI Attributes
IOS Command Line Interface
Switch#
$SYS-6-CONFIG_I: Configured from console by console
show vlan

VLAN Name                Status    Ports
-----
1    default                active    Fa0/1, Fa0/2, Fa0/3, Fa0/4
                                           Fa0/5, Fa0/6, 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
1002 fddi-default          act/unsup
1003 token-ring-default    act/unsup
1004 fddinet-default        act/unsup
1005 trnet-default          act/unsup

VLAN Type  SAID      MTU    Parent RingNo BridgeNo Stp    BrdgMode Trans1 Trans2
-----
1    enet  100001    1500    -      -      -      -      0      0
1002 fddi  101002    1500    -      -      -      -      0      0
1003 tr   101003    1500    -      -      -      -      0      0
1004 fdnat 101004    1500    -      -      -      ieee   0      0
1005 trnet 101005    1500    -      -      -      ibm     0      0

VLAN Type  SAID      MTU    Parent RingNo BridgeNo Stp    BrdgMode Trans1 Trans2
-----
Remote SPAN VLANs

Primary Secondary Type      Ports
-----
Switch#
```

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

Dapat disimpulkan bahwa pada konfigurasi trunking sudah dilakukan dan dalam switch menunjukkan konfigurasi trunking sudah berjalan. Port yang telah didaftarkan dalam trunking memiliki kapasitas untuk managed beberapa hal yang berkaitan dengan domain(1, 10, 20, 30).

### Konfigurasi port-port switch ke dalam Vlan zodiak1, zodiak2, zodiak3

The screenshot displays the IOS Command Line Interface (CLI) with the following configuration commands entered:

```
Switch#conf term
Enter configuration commands, one per line. End with CNTL/Z.
Switch(config)#vlan 10
Switch(config-vlan)#name zodiak1
Switch(config-vlan)#exit
Switch(config)#vlan 20
Switch(config-vlan)#name zodiak2
Switch(config-vlan)#exit
Switch(config)#vlan 30
Switch(config-vlan)#name zodiak3
Switch(config-vlan)#exit
Switch(config)#int fa 0/1
Switch(config-if)#switchport mode access
Switch(config-if)#switchport access vlan 10
Switch(config-if)#int fa 0/2
Switch(config-if)#switchport mode access
Switch(config-if)#switchport access vlan 10
Switch(config-if)#exit
Switch(config)#int fa 0/3
Switch(config-if)#switchport mode access
Switch(config-if)#switchport access vlan 20
Switch(config-if)#int fa 0/4
Switch(config-if)#switchport mode access
Switch(config-if)#switchport access vlan 20
Switch(config-if)#exit
Switch(config)#int fa 0/5
Switch(config-if)#switchport mode access
Switch(config-if)#switchport access vlan 30
Switch(config-if)#int fa 0/6
Switch(config-if)#switchport mode access
Switch(config-if)#switchport access vlan 30
Switch(config-if)#exit
Switch(config)#
Switch(config)#
Switch(config)#
Switch(config)#
Switch(config)#
Switch(config)#
Switch(config)#
```

The interface also shows the command history and the prompt 'Ctrl+F6 to exit CLI focus'.



## Uji Coba Ping

### Leo ke Aries

```
C:\>ping 172.21.1.2

Pinging 172.21.1.2 with 32 bytes of data:

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

Ping statistics for 172.21.1.2:
    Packets: Sent = 4, Received = 0, Lost = 4 (100% loss),
```

### Leo ke Aquarius

```
C:\>ping 172.21.1.3

Pinging 172.21.1.3 with 32 bytes of data:

Reply from 172.21.1.3: bytes=32 time=231ms TTL=128
Reply from 172.21.1.3: bytes=32 time<1ms TTL=128
Reply from 172.21.1.3: bytes=32 time<1ms TTL=128
Reply from 172.21.1.3: bytes=32 time=12ms TTL=128

Ping statistics for 172.21.1.3:
    Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),
    Approximate round trip times in milli-seconds:
        Minimum = 0ms, Maximum = 231ms, Average = 60ms

C:\>
```

### Leo ke Pisces

```
C:\>ping 172.21.3.4

Pinging 172.21.3.4 with 32 bytes of data:

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

Ping statistics for 172.21.3.4:
    Packets: Sent = 4, Received = 0, Lost = 4 (100% loss),

C:\>
```

## Libra ke Cancer

```
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:\>
```

## Libra ke Leo

```
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=13ms TTL=128
Reply from 172.21.1.1: bytes=32 time=1ms TTL=128
Reply from 172.21.1.1: bytes=32 time<1ms TTL=128
Reply from 172.21.1.1: bytes=32 time<1ms TTL=128

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 = 13ms, Average = 3ms

C:\>
```

## Tugas 12 A :

Dari beberapa hasil percobaan diatas, dapat disimpulkan apabila pc berada pada vlan yang sama, maka akan menghasilkan balasan atau reply dari IP tujuan pada saat melakukan pengujian Ping, seperti contohnya pc Leo ke pc Aquarius dan pc Libra ke PC Leo.

Akan tetapi apabila berada pada Vlan yang berbeda akan menghasilkan status RTO, seperti pada contoh pc Leo ke pc Aries, pc Leo ke pc Pisces, dan pc Libra ke pc Cancer.