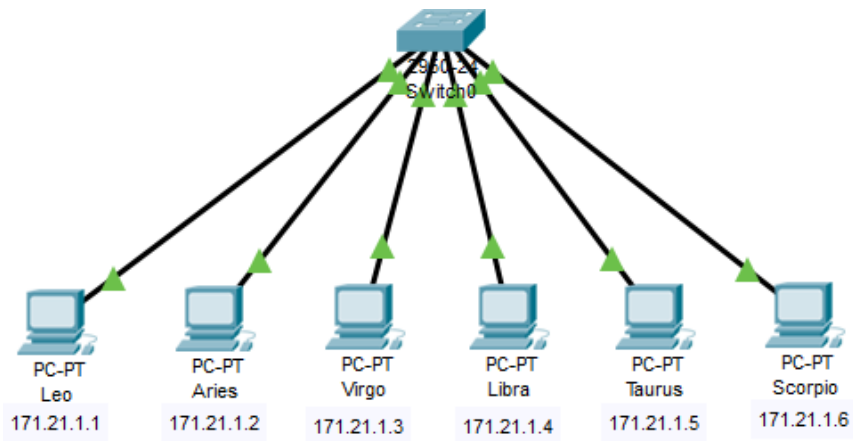


NAMA : CINDE PRAWITO P
NIM : L200170120
KELAS : C

MODUL 4

Kegiatan 1. Topologi 1

1. Desain topologi, penamaan, dan penyetingan IP address



2. Konfigurasi pada switch untuk membuat 3 Vlan dengan nama zodiak1, zodiak2, dan zodiak3

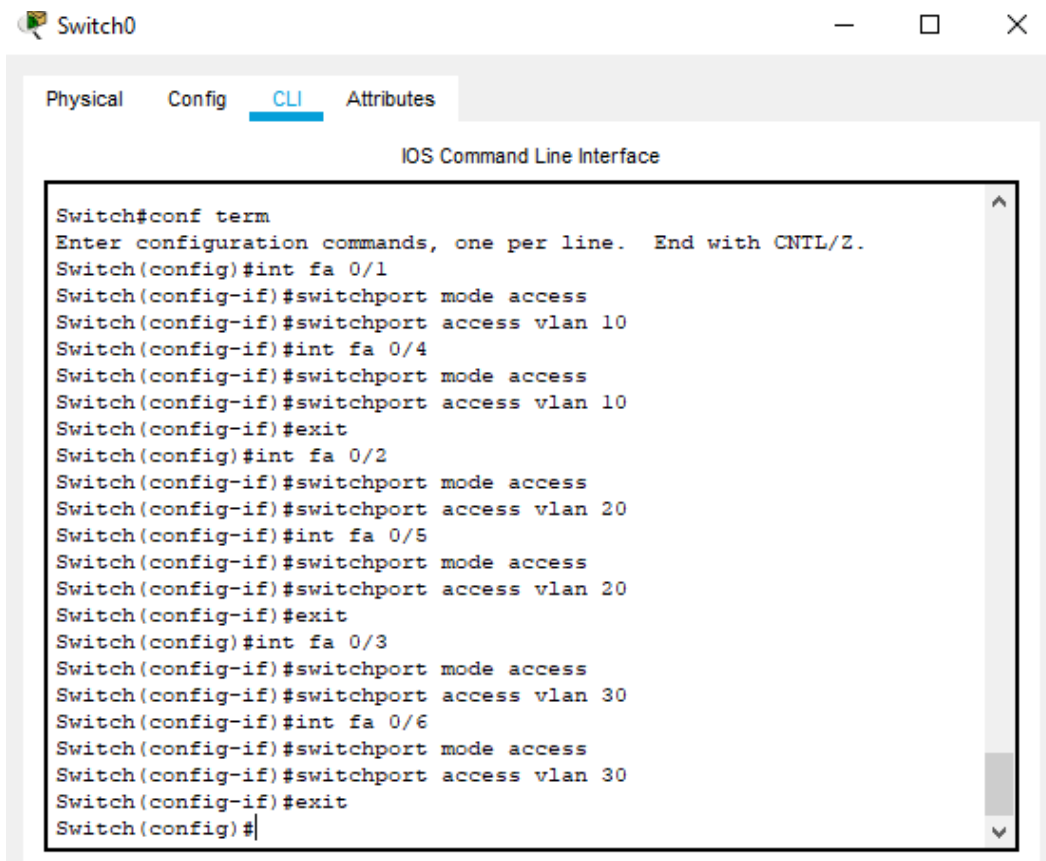
Physical Config CLI Attributes

IOS Command Line Interface

```
%LINK-5-CHANGED: Interface FastEthernet0/5, changed state to up
%LINEPROTO-5-UPDOWN: Line protocol on Interface FastEthernet0/5,
changed state to up
%LINK-5-CHANGED: Interface FastEthernet0/6, changed state to up
%LINEPROTO-5-UPDOWN: Line protocol on Interface FastEthernet0/6,
changed state to up

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)#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)#
```

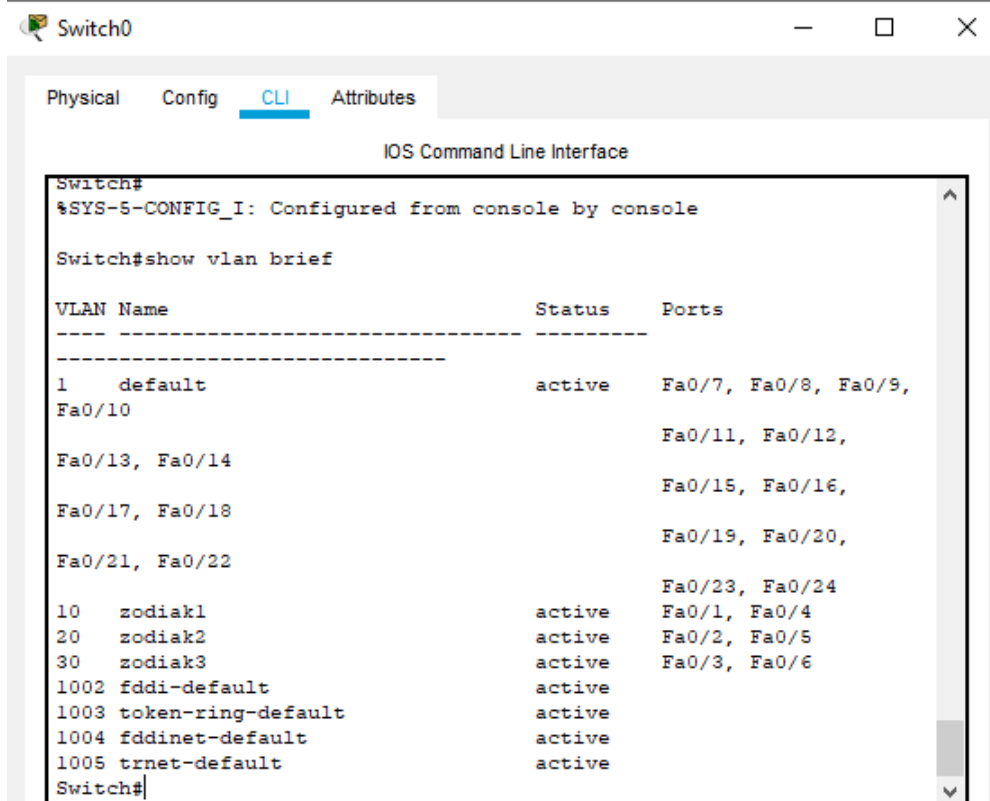
3. Konfigurasi port-port switch ke dalam vlan zodiak1, zodiak2, dan zodiak3 dengan anggota sebagai berikut
- Zodiak1 = leo dan libra
 - Zodiak2 = aries dan Taurus
 - Zodiak3 = virgo dan scorpio



```
Switch0
Physical Config CLI Attributes
IOS Command Line Interface

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

4. Melihan konfigurasi yang telah dibuat



```
Switch0
Physical Config CLI Attributes
IOS Command Line Interface

Switch#
%SYS-5-CONFIG_I: Configured from console by console

Switch#show vlan brief

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    Fa0/1, Fa0/4
20   zodiak2                 active    Fa0/2, Fa0/5
30   zodiak3                 active    Fa0/3, Fa0/6
1002 fddi-default         active
1003 token-ring-default   active
1004 fddinet-default       active
1005 trnet-default         active
Switch#
```

- Informasi vlan 10

```
Switch#show vlan id 10

VLAN Name                Status    Ports
-----
10   zodiak1                active    Fa0/1, Fa0/4

VLAN Type  SAID      MTU   Parent RingNo BridgeNo Stp  BrdgMode
Trans1 Trans2
-----
10   enet    100010   1500  -      -      -      -      -      0
0
```

- Informasi vlan 20

```
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
```

- Informasi vlan 30

```
Switch#show vlan id 30

VLAN Name                Status    Ports
-----
30   zodiak3                active    Fa0/3, Fa0/6

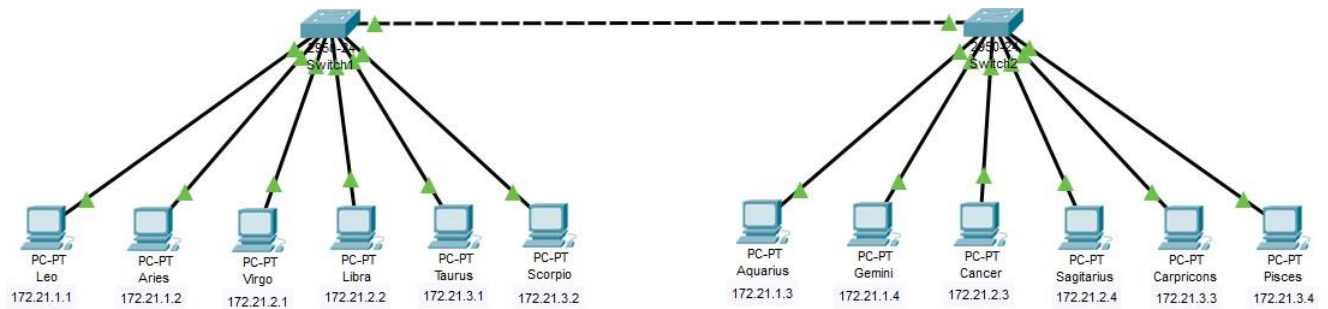
VLAN Type  SAID      MTU   Parent RingNo BridgeNo Stp  BrdgMode
Trans1 Trans2
-----
30   enet    100030   1500  -      -      -      -      -      0
0
```

5. Table informasi tentang vlan

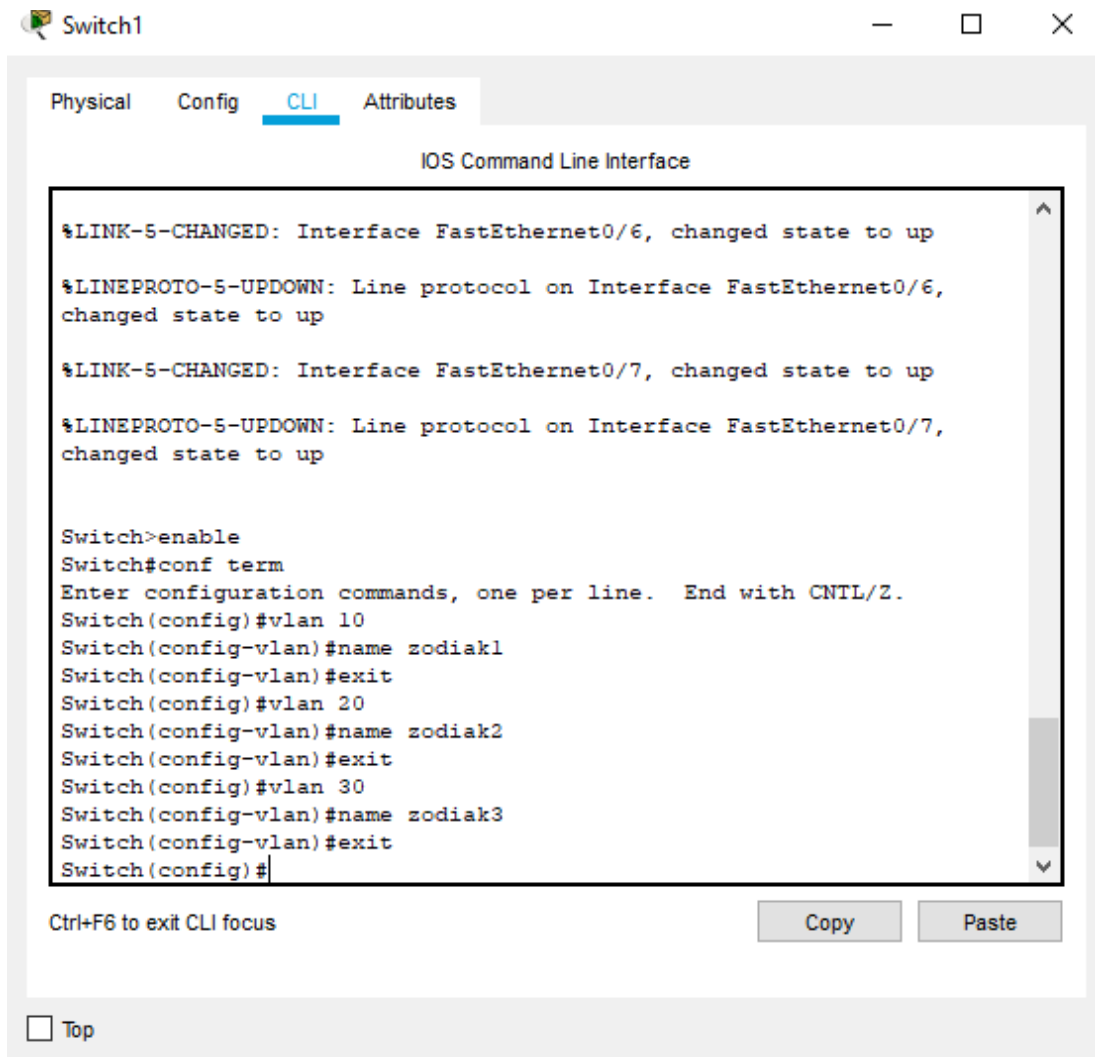
No	Variabel	Nilai		
1.	Nomer VLAN	10	20	30
2.	Nama VLAN	Zodiak1	Zodiak2	Zodiak3
3.	Port	Fa 0/1, Fa 0/4	Fa 0/2, Fa 0/5	Fa 0/3, Fa 0/6
4.	Status	Aktif	Aktif	Aktif

Kegiatan 2. Topologi 2

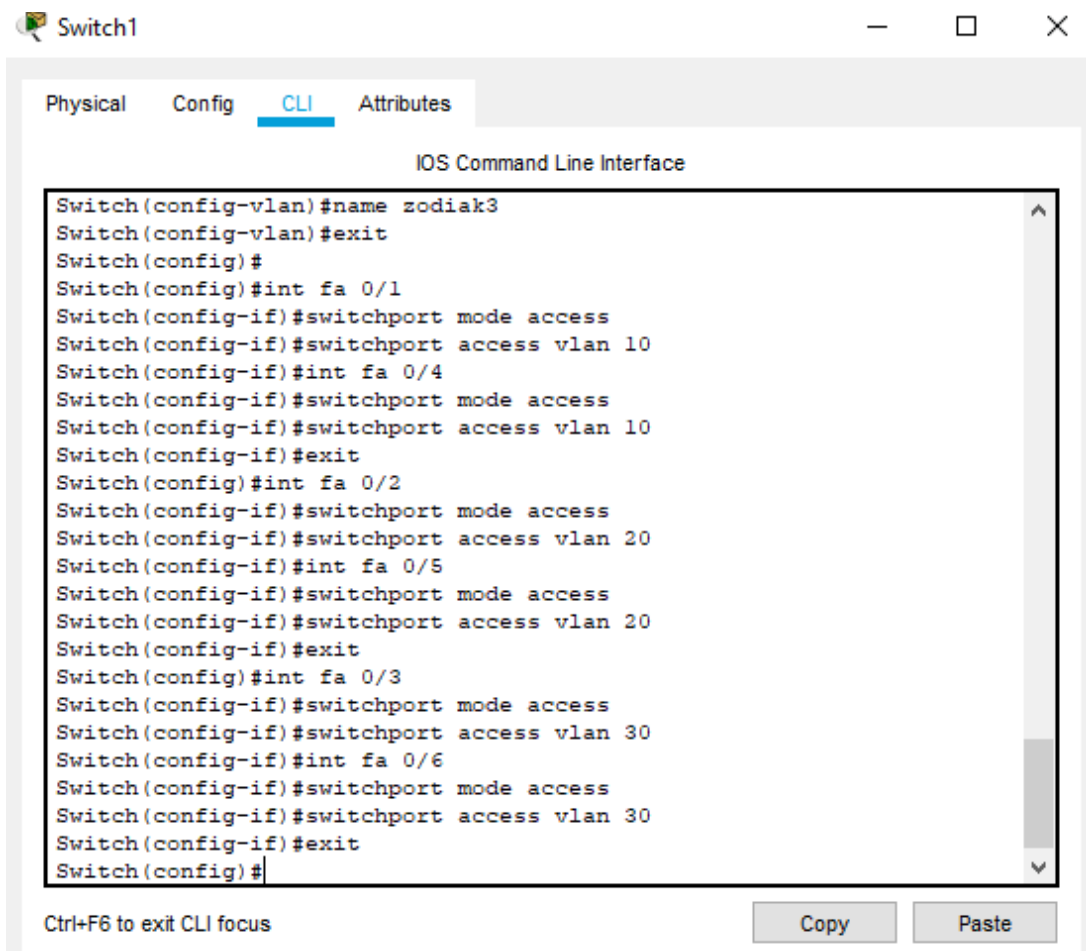
1. Membuat topologi, menamai, dan menyetting IP address



2. Konfigurasi pada switch untuk membuat 3 Vlan dengan nama zodiak1, zodiak2, dan zodiak3



3. Konfigurasi port-port switch ke dalam vlan zodiak1, zodiak2, dan zodiak3 dengan anggota sebagai berikut
- Zodiak1 = leo, libra, aquarius, gemini
 - Zodiak2 = aries, Taurus, cancer, sagitarius
 - Zodiak3 = virgo, scorpio, carpricons, pisces

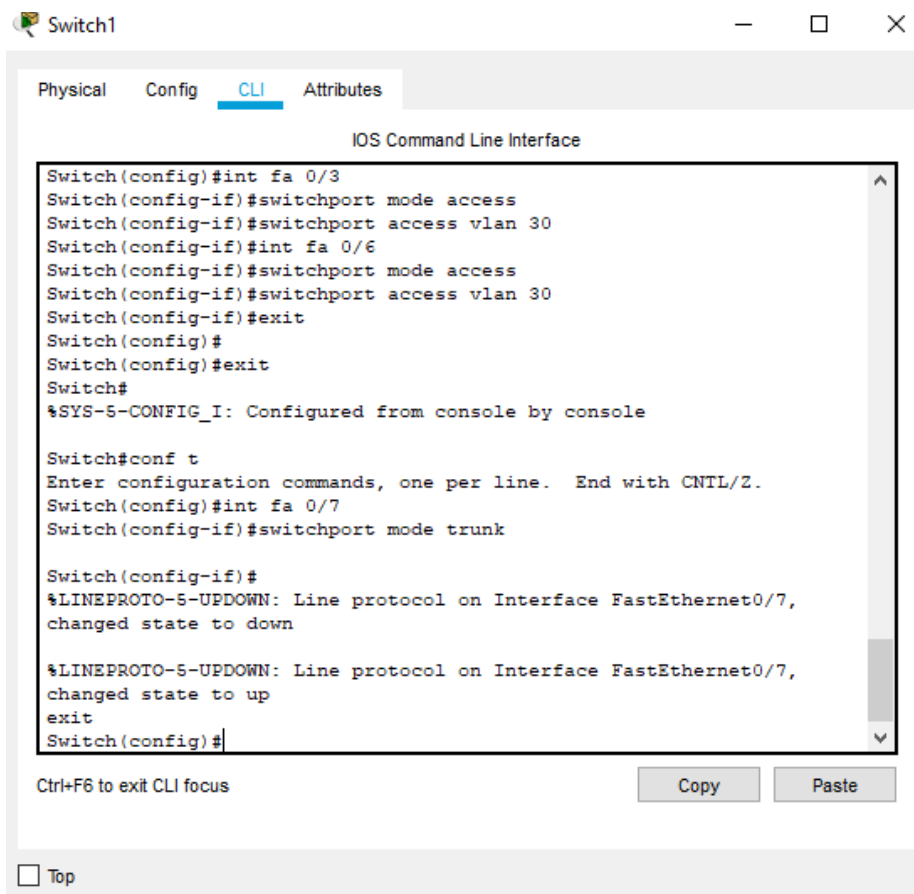


```
Switch1
Physical Config CLI Attributes
IOS Command Line Interface
Switch(config-vlan)#name zodiak3
Switch(config-vlan)#exit
Switch(config)#
Switch(config)#int fa 0/1
Switch(config-if)#switchport mode access
Switch(config-if)#switchport access vlan 10
Switch(config-if)#int fa 0/4
Switch(config-if)#switchport mode access
Switch(config-if)#switchport access vlan 10
Switch(config-if)#exit
Switch(config)#int fa 0/2
Switch(config-if)#switchport mode access
Switch(config-if)#switchport access vlan 20
Switch(config-if)#int fa 0/5
Switch(config-if)#switchport mode access
Switch(config-if)#switchport access vlan 20
Switch(config-if)#exit
Switch(config)#int fa 0/3
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)#
```

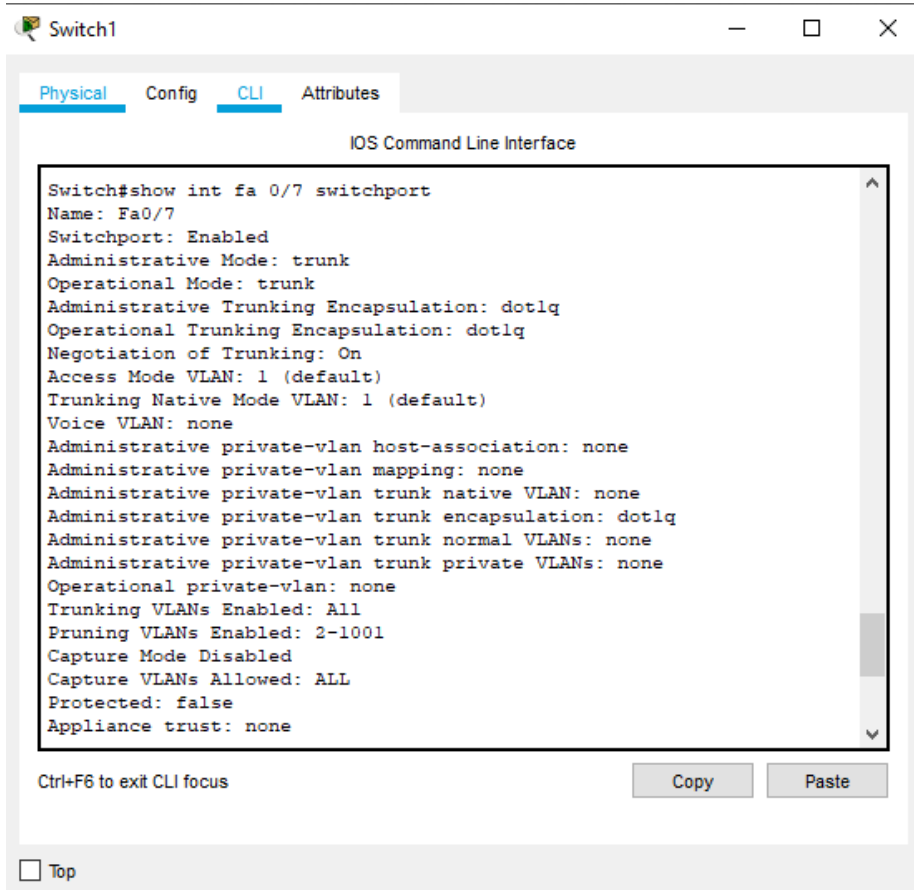
Ctrl+F6 to exit CLI focus

Copy Paste

4. Konfigurasi VLAN trunking pada switch 1



5. Melihat hasil konfigurasi trunking pada switch 1



Physical Config **CLI** Attributes

IOS Command Line Interface

```
Switch#show int fa 0/7 trunk
      ^
% Invalid input detected at '^' marker.

Switch#
Switch#
Switch#show int fa 0/7 trunk
      ^
% Invalid input detected at '^' marker.

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

Switch#
```

Ctrl+F6 to exit CLI focus

Copy

Paste

☐ Top

Switch1

Physical
Config
CLI
Attributes

IOS Command Line Interface

Switch#show vlan

VLAN Name	Status	Ports
1 default	active	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	Fa0/1, Fa0/4
20 zodiak2	active	Fa0/2, Fa0/5
30 zodiak3	active	Fa0/3, Fa0/6
1002 fddi-default	active	
1003 token-ring-default	active	
1004 fddinet-default	active	
1005 trnet-default	active	

VLAN	Type	SAID	Trans1	Trans2	MTU	Parent	RingNo	BridgeNo	Stp	BrdgMode
1	enet	100001			1500	-	-	-	-	0
10	enet	100010			1500	-	-	-	-	0
20	enet	100020			1500	-	-	-	-	0
30	enet	100030			1500	-	-	-	-	0
1002	fddi	101002			1500	-	-	-	-	0
1003	tr	101003			1500	-	-	-	-	0
1004	fdnet	101004			1500	-	-	-	ieee	0
1005	trnet	101005			1500	-	-	-	ibm	0

VLAN	Type	SAID	Trans1	Trans2	MTU	Parent	RingNo	BridgeNo	Stp	BrdgMode
1	enet	100001			1500	-	-	-	-	0
10	enet	100010			1500	-	-	-	-	0
20	enet	100020			1500	-	-	-	-	0
30	enet	100030			1500	-	-	-	-	0
1002	fddi	101002			1500	-	-	-	-	0
1003	tr	101003			1500	-	-	-	-	0
1004	fdnet	101004			1500	-	-	-	ieee	0
1005	trnet	101005			1500	-	-	-	ibm	0

Remote SPAN VLANs

Primary	Secondary	Type	Ports

Switch#

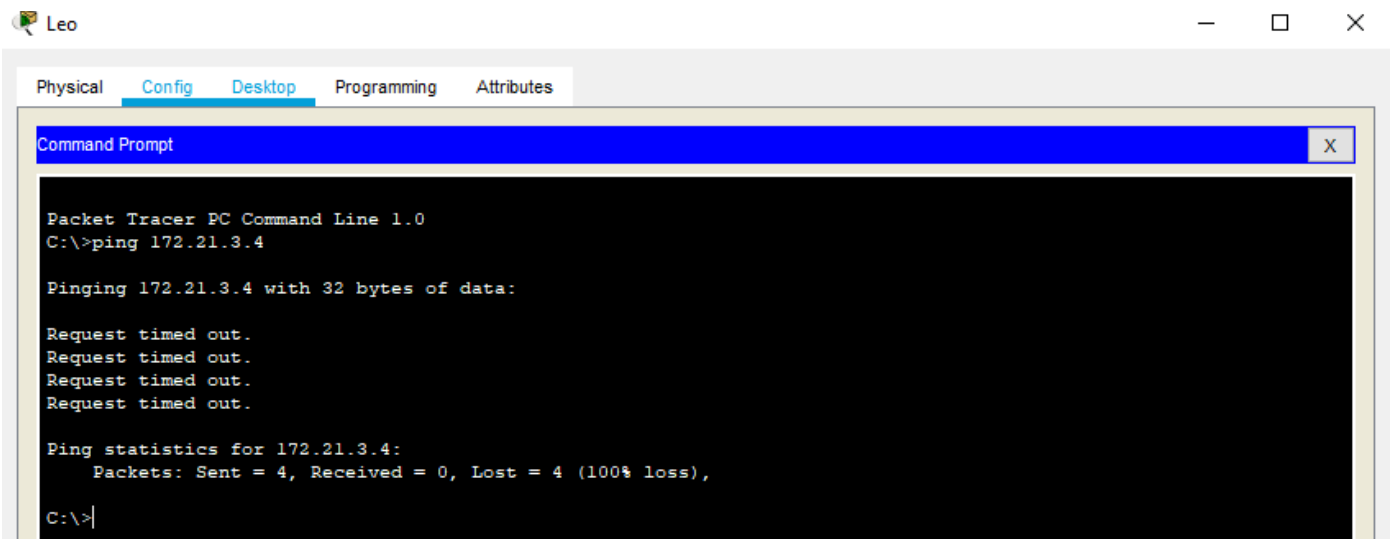
Ctrl+F6 to exit CLI focus

Copy

Paste

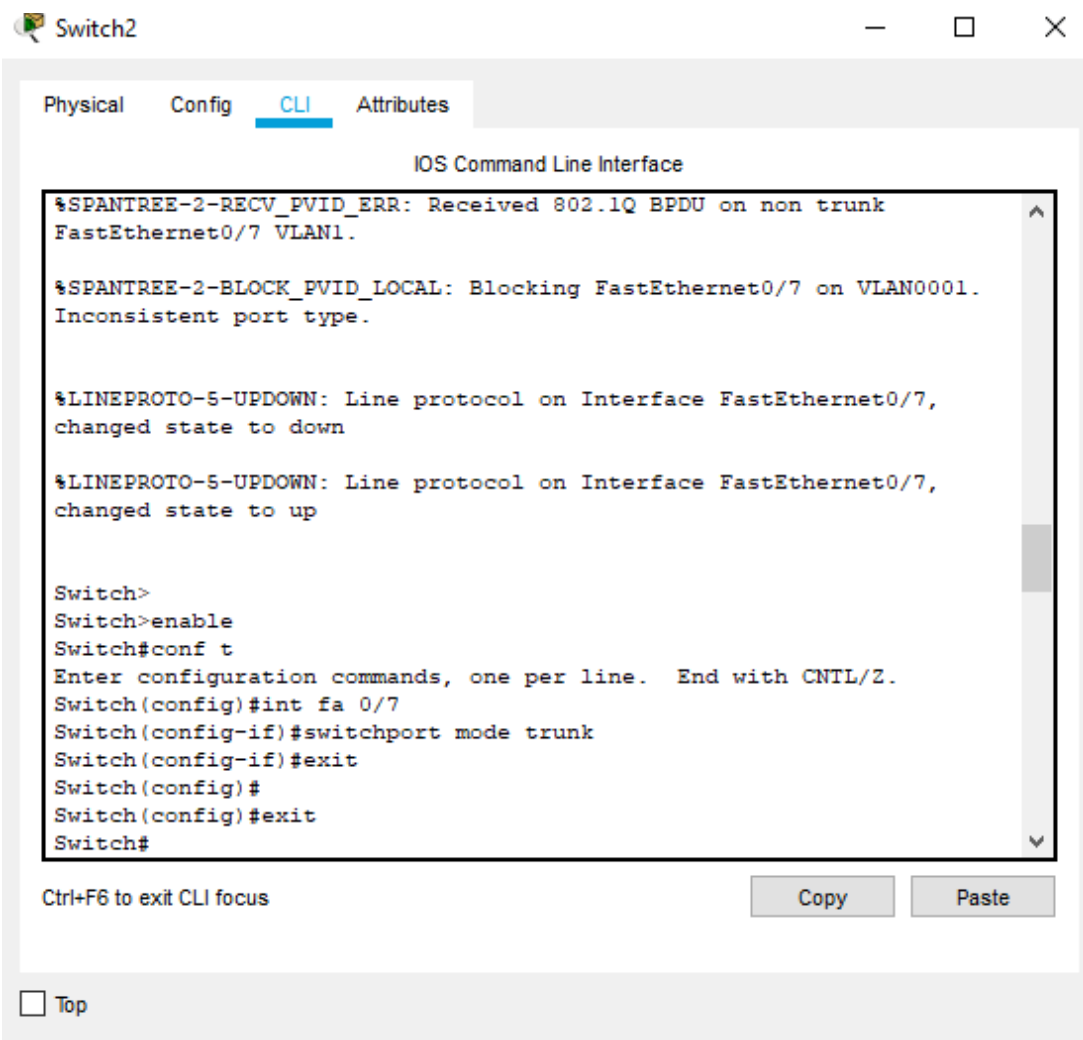
Pada langkah ini port yang sudah terkonfigurasi ke dalam vlan yaitu port 0/1 sampai port 0/6, sedangkan port 0/7 untuk trunking antar switch.

6. Uji coba ping antara PC leo dengan PC pisces

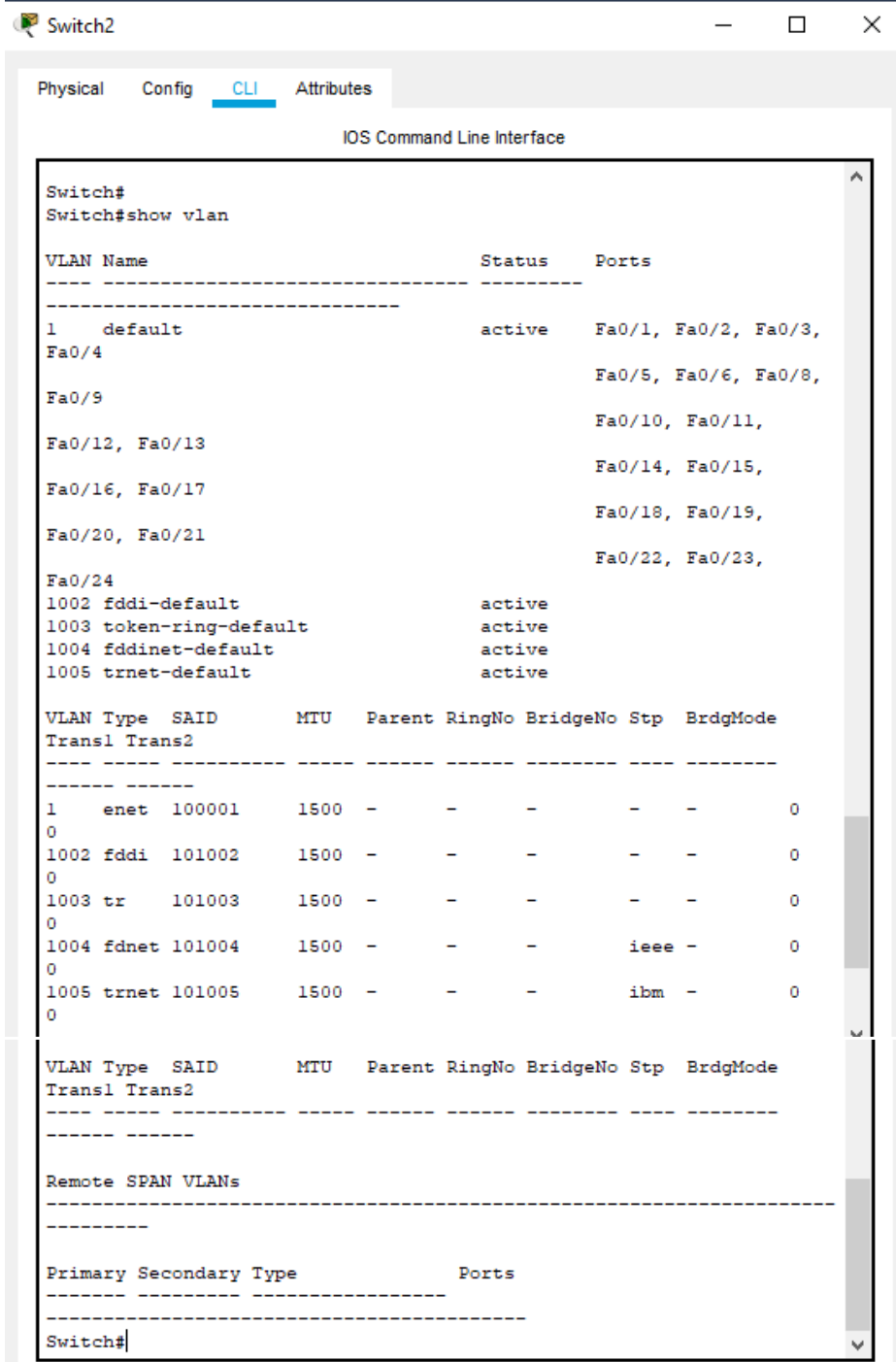


Hasil yang didapat masih RTO, karena PC pisces tidak berada pada VLAN yang sama dengan PC Leo

7. Konfigurasi VLAN trunking pada switch 2



8. Melihat hasil konfigurasi trunking pada switch 2



The screenshot shows a network switch window titled "Switch2" with tabs for Physical, Config, CLI, and Attributes. The CLI tab is active, displaying the "IOS Command Line Interface". The user has entered the command "Switch# show vlan". The output shows the status of VLANs and their associated ports.

```
Switch#
Switch#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         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
1002 fddi    101002    1500   -      -      -      -      -      0
0
1003 tr      101003    1500   -      -      -      -      -      0
0
1004 fdnet   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#
```

Pada langkah ini port port fastethernet belum terkonfigurasi ke dalam VLAN, bahkan VLAN nya belum dibuat

9. Konfigurasi port port kedalam VLAN zodiak1, zodiak2, dan zodiak3 dengan anggota sebagai berikut

- Zodiak1 = leo, libra, aquarius, gemini
- Zodiak2 = aries, Taurus, cancer, sagitarius
- Zodiak3 = virgo, scorpio, carpricons, pisces

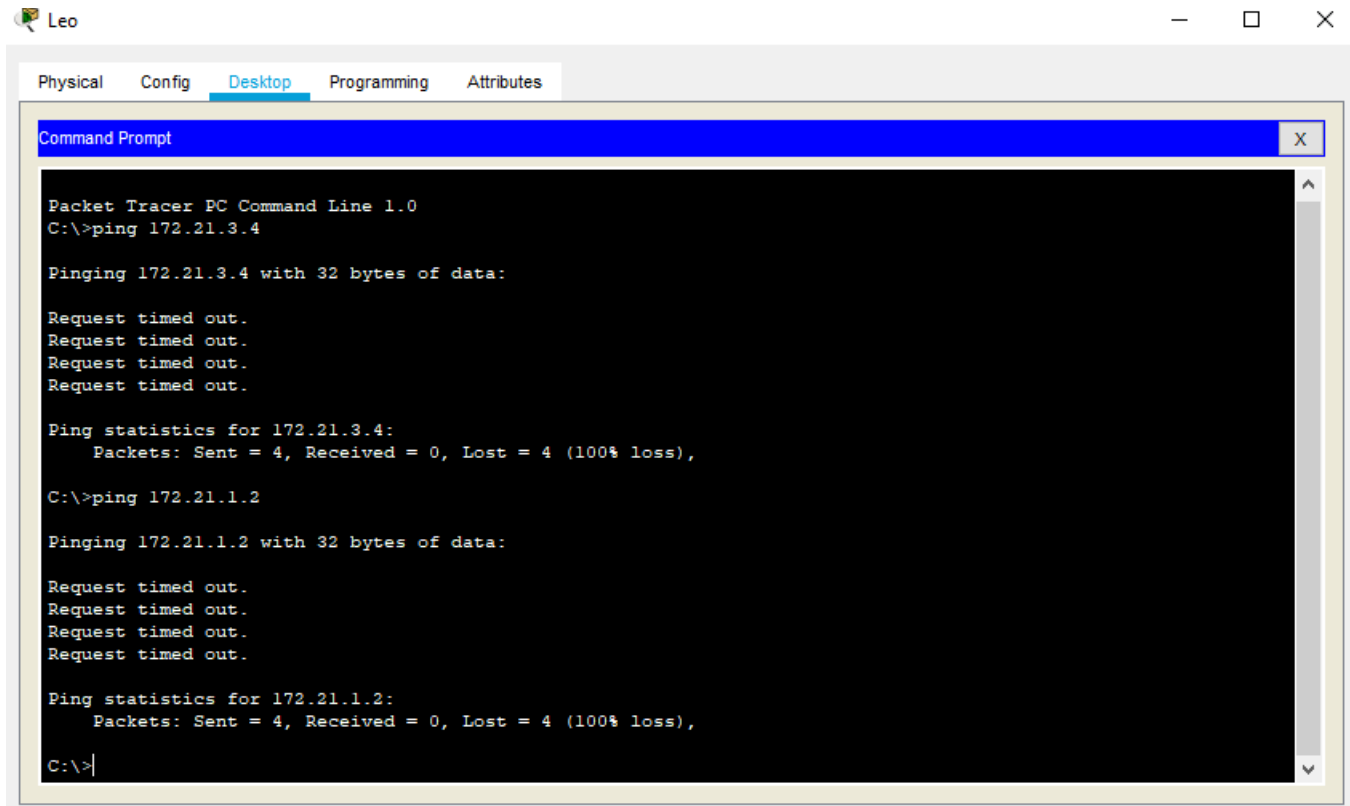
```
Switch2
Physical Config CLI Attributes
IOS Command Line Interface

Switch>enable
Switch#conf t
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)#
Switch(config)#
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)#

Ctrl+F6 to exit CLI focus
Copy Paste
Top
```

10. Uji coba ping

- PC leo ke PC aries



Leo

Physical Config **Desktop** Programming Attributes

Command Prompt

```
Packet Tracer PC Command Line 1.0
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:\>ping 172.21.1.2

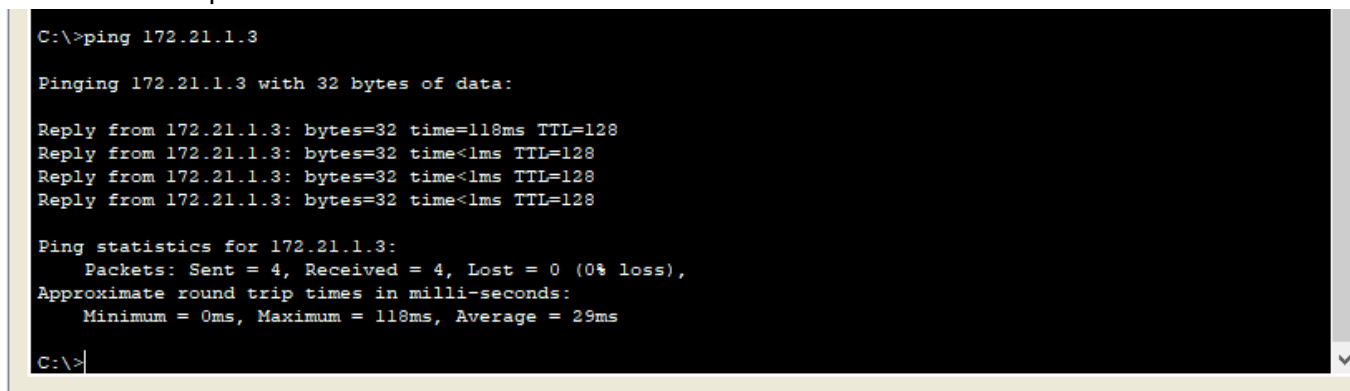
Pinging 172.21.1.2 with 32 bytes of data:

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),

C:\>|
```

- PC leo ke PC aquarius



```
C:\>ping 172.21.1.3

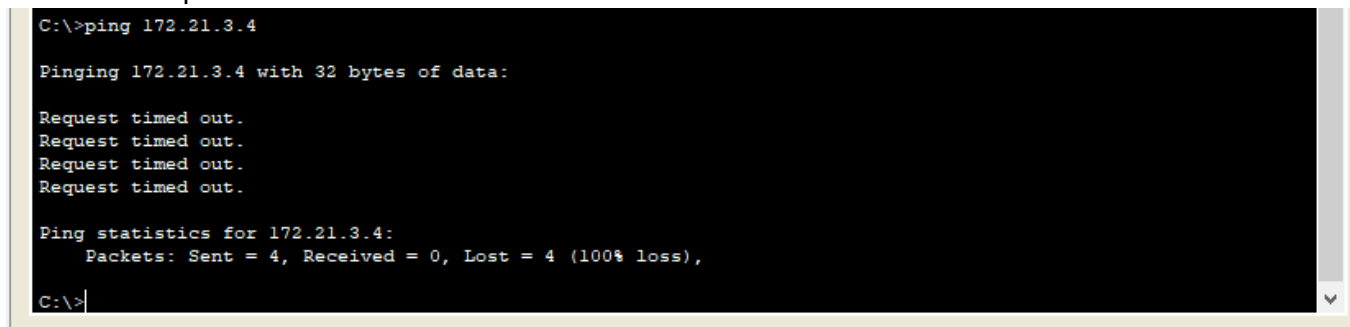
Pinging 172.21.1.3 with 32 bytes of data:

Reply from 172.21.1.3: bytes=32 time=118ms 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<1ms 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 = 118ms, Average = 29ms

C:\>|
```

- PC leo ke PC pisces



```
C:\>ping 172.21.3.4

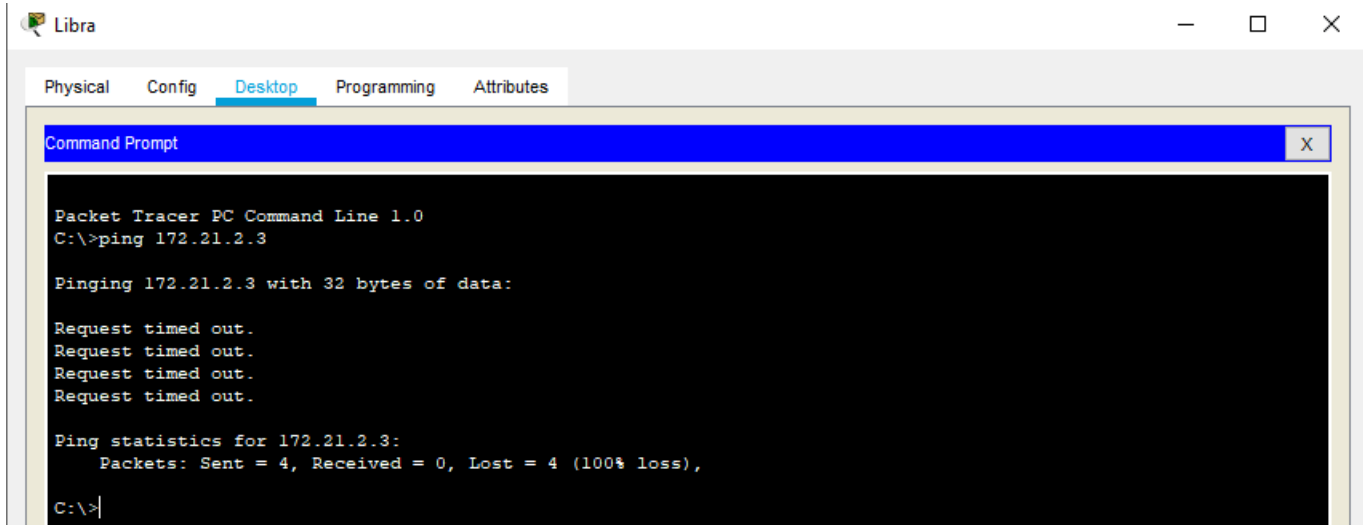
Pinging 172.21.3.4 with 32 bytes of data:

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:\>|
```

- PC libra ke PC cancer



The screenshot shows the Packet Tracer interface for PC Libra. The 'Desktop' tab is active, displaying a Command Prompt window. The command prompt shows the execution of the command 'ping 172.21.2.3'. The output indicates that all four requests timed out, resulting in a 100% loss of packets.

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

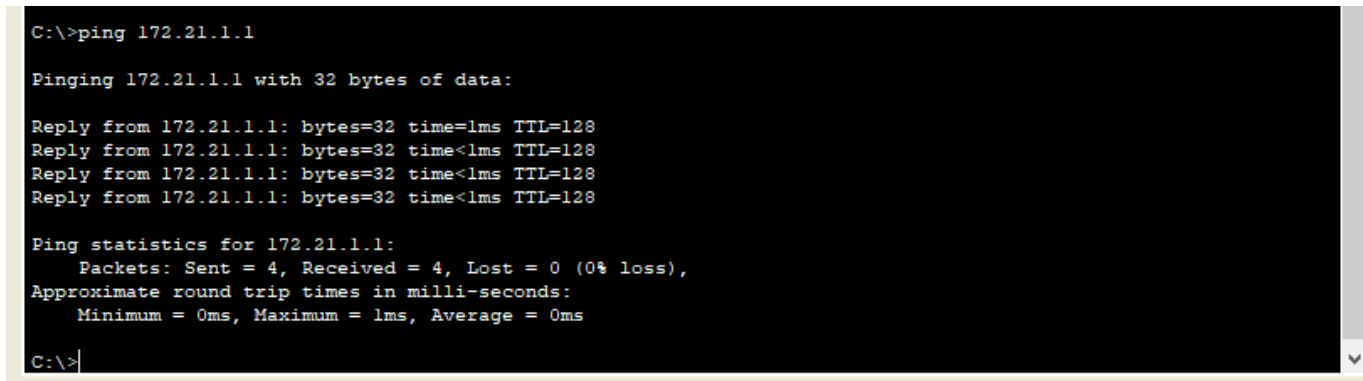
Pinging 172.21.2.3 with 32 bytes of data:

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



The screenshot shows the Packet Tracer interface for PC Libra. The 'Desktop' tab is active, displaying a Command Prompt window. The command prompt shows the execution of the command 'ping 172.21.1.1'. The output indicates that all four requests were successful, with a 0% loss of packets and a round trip time of 0ms.

```
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=0ms TTL=128
Reply from 172.21.1.1: bytes=32 time<0ms TTL=128
Reply from 172.21.1.1: bytes=32 time<0ms TTL=128
Reply from 172.21.1.1: bytes=32 time<0ms 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 = 0ms, Average = 0ms

C:\>
```

Dari hasil percobaan diatas, dapat disimpulkan apabila PC berada pada VLAN yang sama, maka akan menghasilkan status Reply pada saat pengujian ping, seperti contohnya PC leo ke PC aquarius dan PC libra ke PC leo.

Akan tetapi jika berada pada VLAN yang berbeda akan menghasilkan status RTO seperti contoh pada PC leo ke PC aries, PC leo ke PC pisces, dan PC libra ke PC cancer