

NAMA : NURUL ARIFIA SAFITRI

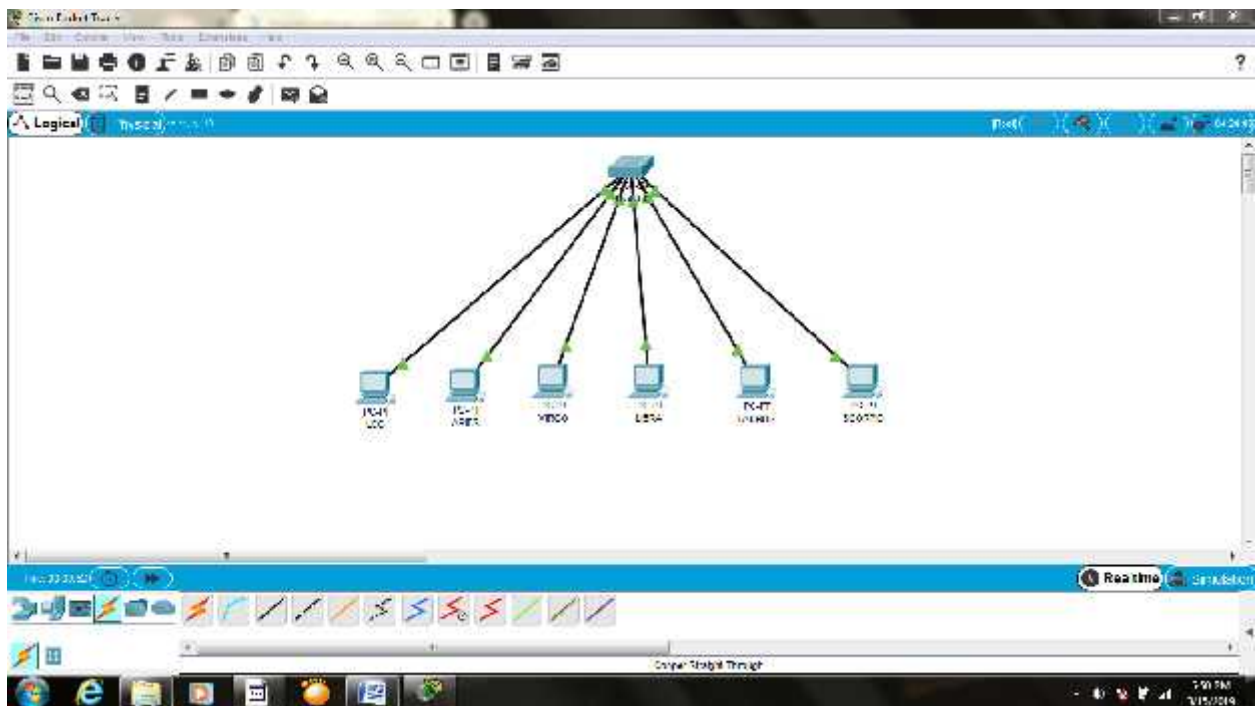
NIM : L200170088

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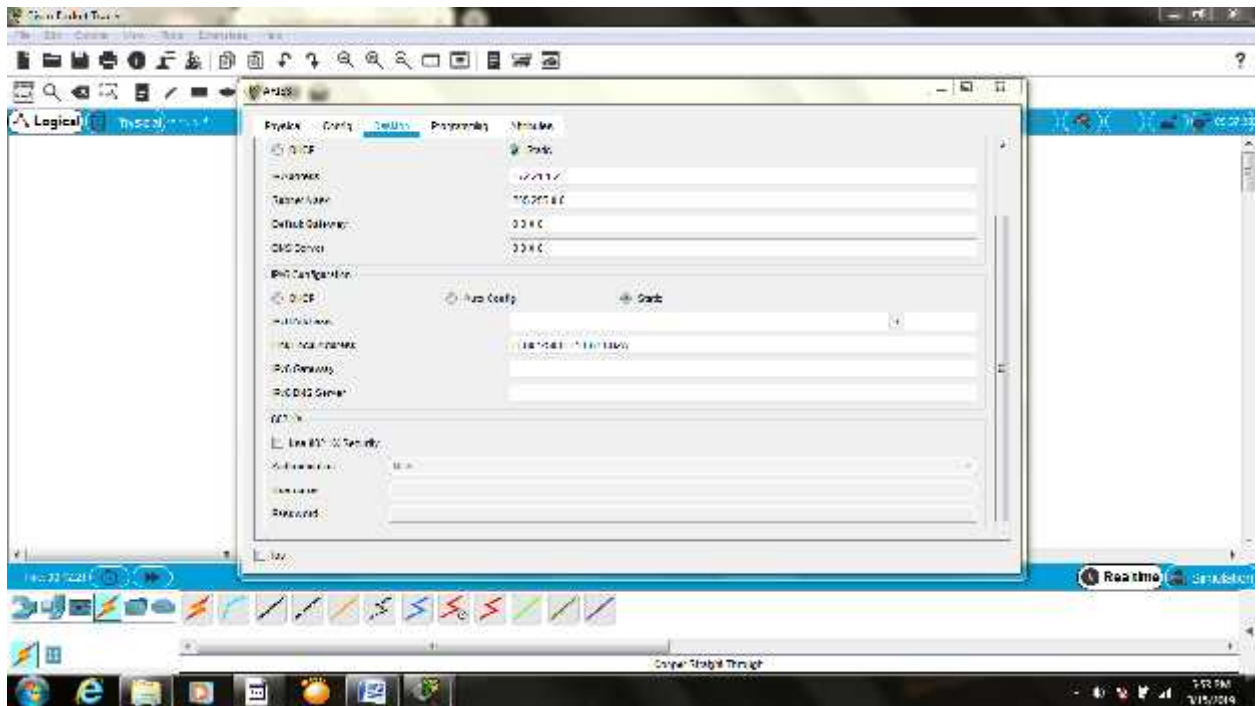
MODUL : 4

## **KEGIATAN PRAKTIKUM**

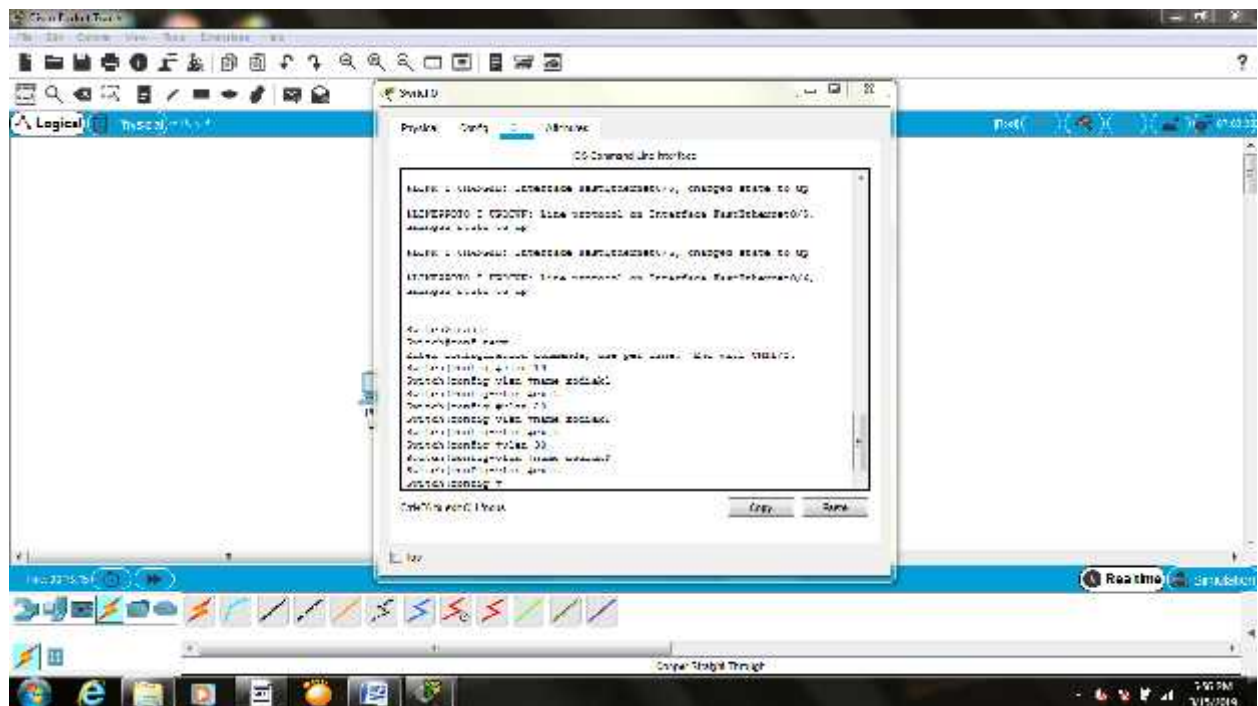
### Kegiatan 1.



- Pemberian nama dan IP pada masing-masing PC.



- Membuat tiga VLAN dan dengan pemberian nama zodiak1, zodiak2, dan zodiak3.



- Mengkonfigurasi port-port pada switch ke dalam VLAN.



- Konfigurasi VLAN.

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#

Ctrl+F6 to exit CLI focus

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```
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

```
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#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

```

- Mengisi table sesuai modul

- Zodiak1

No	Variable	Nilai
1	Nomor VLAN	10
2	Nama VLAN	Zodiak1
3	Port	Fa 0/1, Fa 0/4
4	Status	Active

- Zodiak2

No	Variable	Nilai
1	Nomor VLAN	20
2	Nama VLAN	Zodiak2
3	Port	Fa 0/2, Fa 0/5
4	Status	Active

- Zodiak3

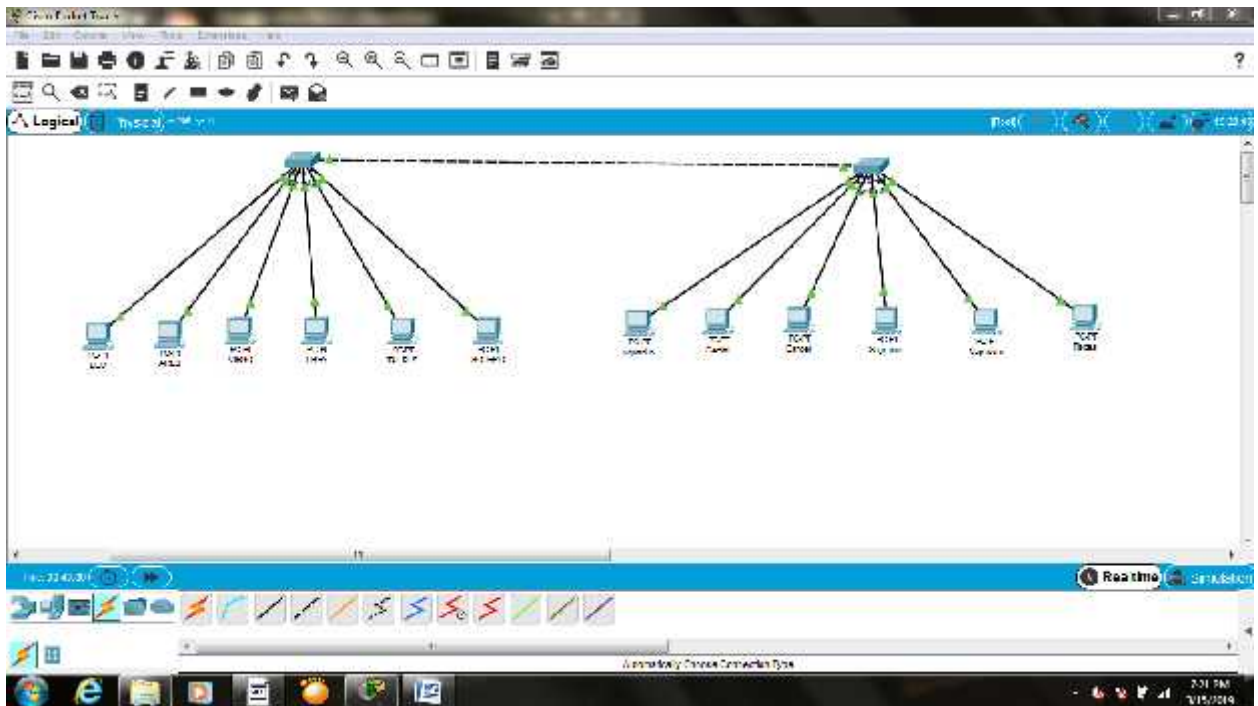
No	Variable	Nilai
1	Nomor VLAN	30
2	Nama VLAN	Zodiak3
3	Port	Fa 0/3, Fa 0/6

4	Status	Active
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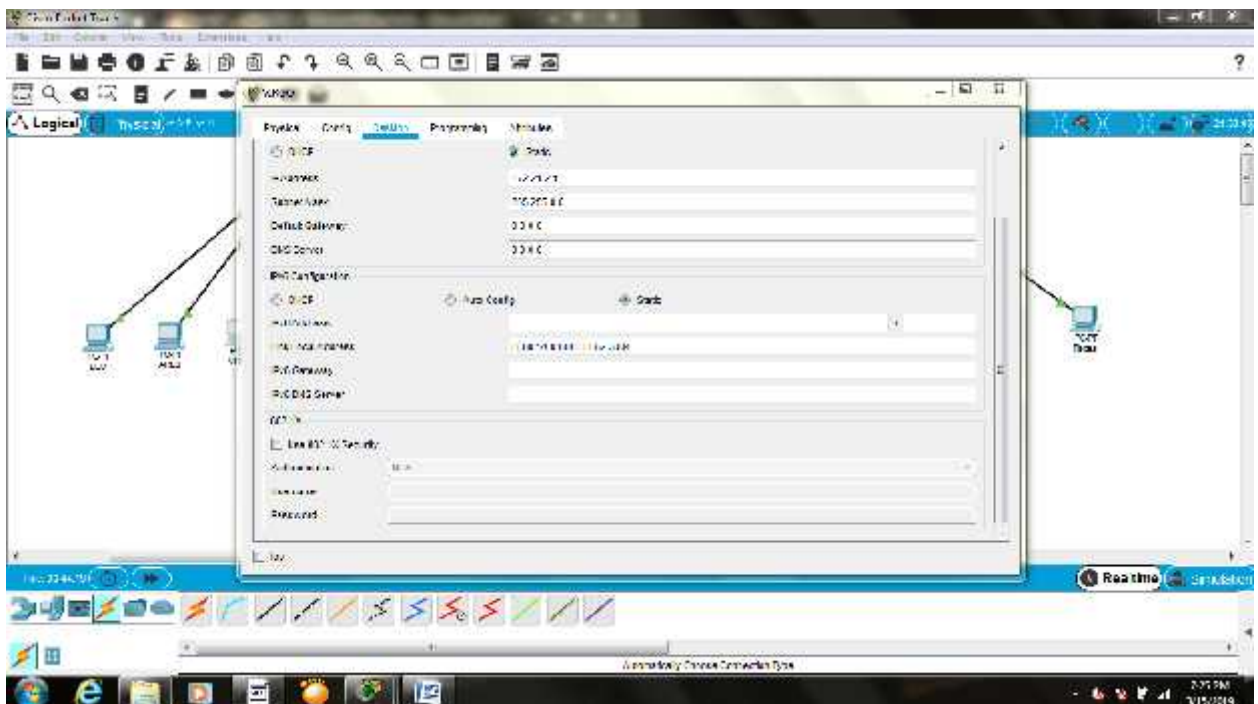
Kesimpulan Nomer 6 :

Bahwa setiap 6 komputer terbagi menjadi 3 VLAN dengan nama berbeda, zodiak1, zodiak2, dan zodiak3. Dimana nomor dari Vlan 10, 20, dan 30, dan Vlan 10 terdapat port Fa 0/1 (Leo) dan Fa 0/4 (Libra), Vlan 20 terdapat port Fa 0/2 (Aries) dan Fa 0/5 (Taurus), dan Vlan 30 terdapat port Fa 0/3 (Virgo) dan Fa 0/6 (Scorpio), dan semua VLAN tersebut dalam kondisi aktif.

## Kegiatan 2.

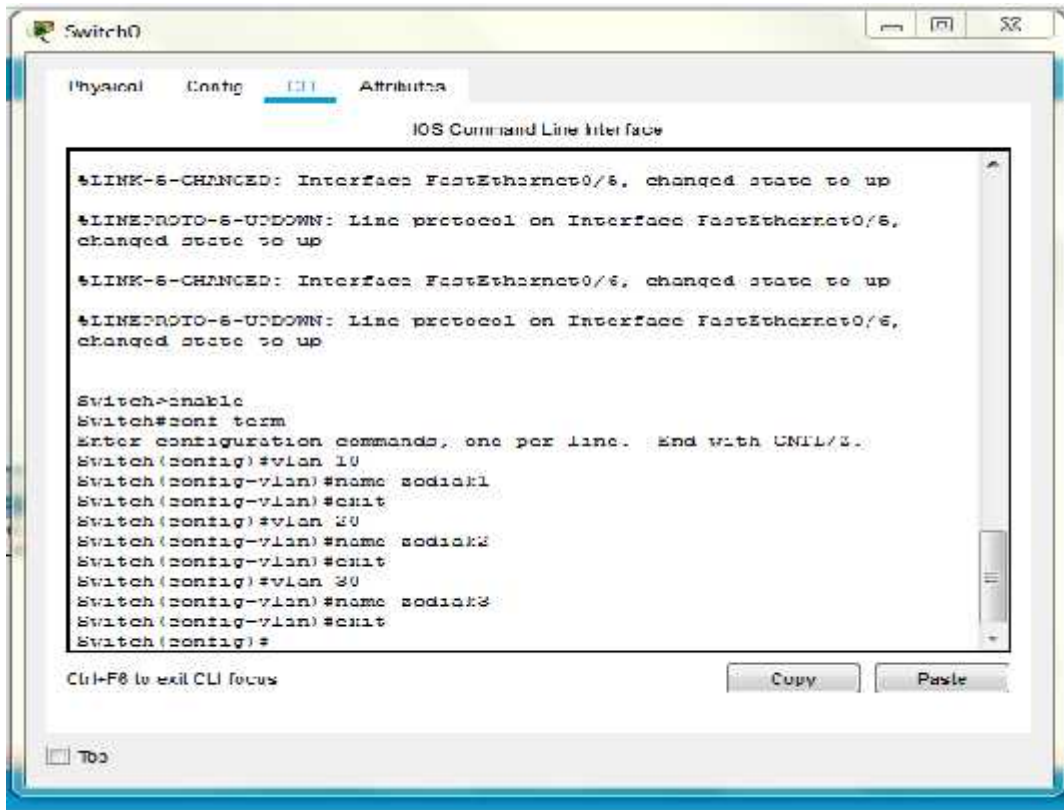


- Pemberian nama dan IP pada masing-masing PC





- Membikin VLAN dan mengkonfigurasi port-port pada switch ke VLAN



```
Switch(config)#interface FastEthernet0/1
Switch(config-if)#switchport mode access
Switch(config-if)#switch access vlan 10
Switch(config-if)#interface FastEthernet0/4
Switch(config-if)#switchport mode access
Switch(config-if)#switch 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 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
```



- Konfigurasi VLAN Trunking pada switch pertama (switch 0)

```
Switch#conf t
Enter configuration commands, one per line. End with CNTL/Z.
Switch(config)#interface fa0/24
Switch(config-if)#switchport mode trunk
Switch(config-if)#switchport trunk allowed vlan all
Switch(config-if)#exit
Switch(config)#swshow interface fastethernet0/24 switchport
```

- Konfigurasi Trunking VLAN

```
Switch#show interface fastethernet0/24 switchport
Name: Fa0/24
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#show interface fastethernet0/24
fastethernet0/24 is up, line protocol is up (connected)
Hardware is Lance, address is 00d0.bc7b.ea10 (bia 00d0.bc7b.ea10)
BW 10000 Kbit, DTX 1000 Kbps
    reliability 256/256, txload 1/256, rxload 1/256
Encapsulation ARPA, Loopback not set
Keepalive set (10 sec)
Full-duplex, 100Mb/s
input flow control is off, output flow control is off
ARP type: ARPA, ARP Timeout 04:00:00
Last input 00:00:08, output 00:00:08, output hang never
Test-clearing of "show interface" counters never
Input queue: 0/75/0/0 (size/max/drops/flushes): Total output drops: 0
Queueing strategy: fifo
Output queue 0/40 (size/max)
5 minute input rate 0 bits/sec, 0 packets/sec
6 minute output rate 0 bits/sec, 0 packets/sec
  856 packets input, 198851 bytes, 0 no buffer
    Received 966 broadcasts, 0 runts, 0 giants, 0 throttles
  0 input errors, 0 CRC, 0 frame, 0 overrun, 0 ignored, 0 abort
  0 discarded, 0 multi-casts, 0 pause input
  4 input packets with dribble condition detected
 2357 packets output, 203670 bytes, 0 underruns
  0 output errors, 0 collisions, 10 interface resets
  0 babbles, 0 late collision, 0 deferred
  0 lost carrier, 0 no carrier
  0 output buffer failures, 0 output buffers swapped out
```

Switch#show vlan

VLAN name	Members	Ports
default	active	Gig0/9, Gig0/10, Gig0/11, Gig0/12 Fa0/11, Fa0/13, Fa0/18, Fa0/21 Fa0/19, Fa0/16, Fa0/17, Fa0/18 Fa0/19, Fa0/20, Fa0/21, Fa0/22 Fa0/23
10 sddisk1	active	Gig0/1, Gig0/4
20 sddisk2	active	Fa0/3, Fa0/6
30 sddisk3	active	Gig0/2, Gig0/5
1003 fddi-default	active	
1009 tokenring-default	active	
1004 fddinet-default	active	
1005 isdnat-default	active	

VLAN	Type	SNID	MTU	Parent	RingNo	BridgeNo	Stp	BridgeMode	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
1003	fddi	100003	1500	-	-	-	-	-	0	0
1009	tr	101009	1500	-	-	-	-	-	0	0
1004	fddnet	101004	1500	-	-	-	ieee	-	0	0
1005	trnet	101005	1500	-	-	-	ibm	-	0	0

VLAN	Type	SNID	MTU	Parent	RingNo	BridgeNo	Stp	BridgeMode	Trans1	Trans2
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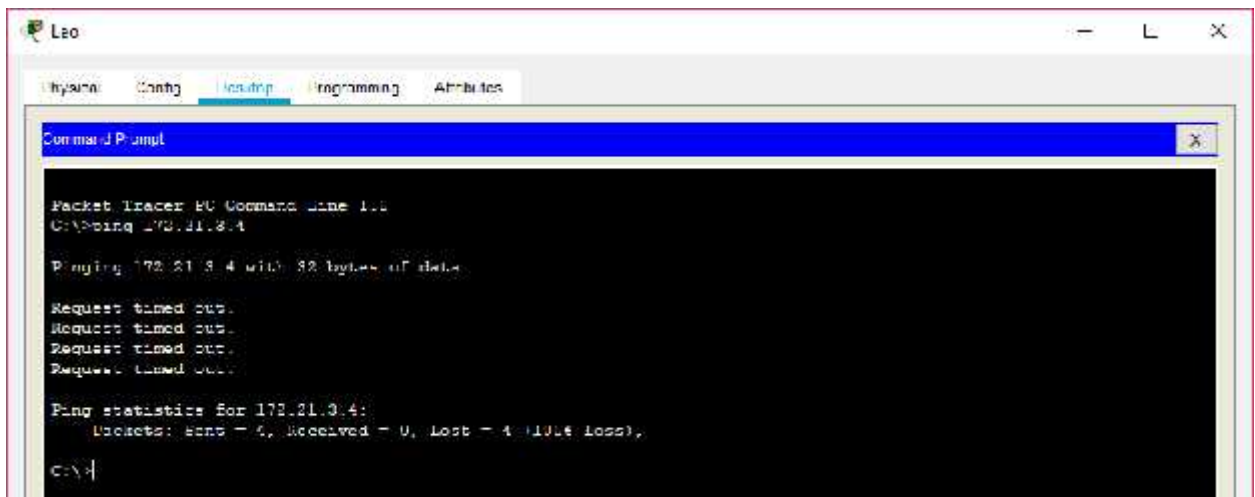
Remote SDN VLANs

Primary	Secondary	Type	Port
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### Kesimpulan No.7 :

Pada hasil yang tertera di atas menunjukkan bahwa, Vlan pada port 0/1 sampai 0/6 sudah terkonfigurasi dan terhubung dan juga telah di Trunking pada port 0/24

- Melakukan Ping pada PC Leo ke PC Pisces



- Membuat VLAN Trunking pada switch kedua (switch 1)

```

Switch>enable
Switch#conf t
Enter configuration commands, one per line. End with CNTL/Z.
Switch(config)#interface fa0/24
Switch(config-if)#switchport mode trunk
Switch(config-if)#switchport trunk allowed vlan all
Switch(config-if)#exit
Switch(config)#

```

- Melihat konfigurasi Trunking VLAN (switch 1)

```
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
10	zodiak1	active	Fa0/1, Fa0/2
20	zodiak2	active	Fa0/3, Fa0/4
30	zodiak3	active	Fa0/5, Fa0/6
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
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
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Kesimpulan No.10 :

Pada hasil yang tertera di atas menunjukkan bahwa, Vlan pada port 0/1 sampai 0/6 sudah terkonfigurasi dan terhubung dan juga telah di Trunking pada port 0/24

- Membuat VLAN dan mengkonfigurasi port-port pada switch ke VLAN (switch 1)

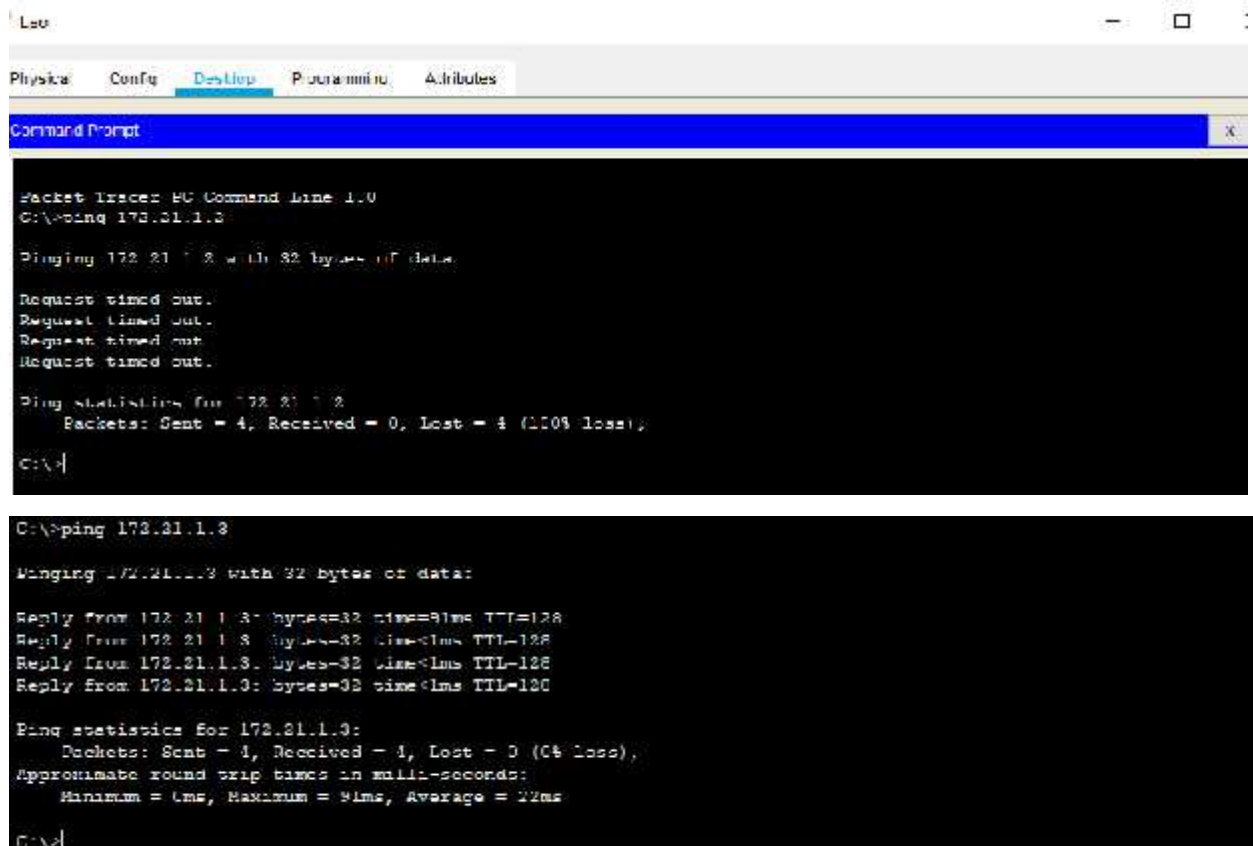
```
Switch#conf term
Enter configuration commands, one per line. End with CNTL/Z.
Switch(config)#vlan 10
Switch(config-vlan)#name zodiak1
Switch(config-vlan)#exit
Switch(config)#vlan 20
Switch(config-vlan)#name zodiak2
Switch(config-vlan)#exit
Switch(config)#vlan 30
Switch(config-vlan)#name zodiak3
Switch(config-vlan)#exit
Switch(config)#
```

```
Switch(config)#interface FastEthernet0/2
Switch(config-if)#switch mode access
Switch(config-if)#switch access vlan 10
Switch(config-if)#interface FastEthernet0/1
Switch(config-if)#switch mode access
Switch(config-if)#switch access vlan 10
Switch(config-if)#exit
Switch(config)#
```

```
Switch(config)#interface FastEthernet0/3
Switch(config-if)#switch mode access
Switch(config-if)#switch access vlan 20
Switch(config-if)#interface FastEthernet0/4
Switch(config-if)#switch mode access
Switch(config-if)#switch access vlan 20
Switch(config-if)#exit
Switch(config)#
```

```
Switch(config)#interface FastEthernet0/5
Switch(config-if)#switch mode access
Switch(config-if)#switch access vlan 30
Switch(config-if)#interface FastEthernet0/6
Switch(config-if)#switch mode access
Switch(config-if)#switch access vlan 30
Switch(config-if)#exit
Switch(config)#
```

- Melakukan ping pada PC Leo ke PC Aries, PC Leo ke PC Aquarius, PC Leo ke PC Pisces, PC Libra ke PC Cancer, PC Libra ke PC Leo



```
Leo
Physica Config Desktop Programm Attributes
Command Prompt

Packet Tracer PC Command Line 1.0
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),

C:\>

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=91ms 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 milliseconds:
        Minimum = 0ms, Maximum = 91ms, Average = 22ms

C:\>
```



```
Leo
Physical Config Desktop Programming Attributes
Command Prompt

Packet Tracer PC Command Line 1.0
C:\>ping 172.21.3.1

Pinging 172.21.3.1 with 32 bytes of data:

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

Ping statistics for 172.21.3.1:
    Packets: Sent = 4, Received = 0, Lost = 4 (100% loss),
C:\>
```

```
Libra
Physical Config Desktop Programming Attributes
Command Prompt

Packet Tracer PC Command Line 1.0
C:\>ping 172.21.3.3

Pinging 172.21.3.3 with 32 bytes of data:

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

Ping statistics for 172.21.3.3:
    Packets: Sent = 4, Received = 0, Lost = 4 (100% loss),
C:\>
```

```
C:\>ping 172.21.1.1

Pinging 172.21.1.1 with 32 bytes of data:

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

Ping statistics for 172.21.1.1:
    Packets: Sent = 4, Received = 0, Lost = 4 (100% loss),
C:\>
```

Kesimpulan No.12 :

Bahwa Ping dengan Vlan yang berbeda dan switch yang berbeda tidak memungkinkan, walaupun telah terbantu dengan Trunking, walaupun begitu memungkinkan untuk melakukan ping pada Vlan yang sama.