NAMA : Tio Septiadi Murbiantoro

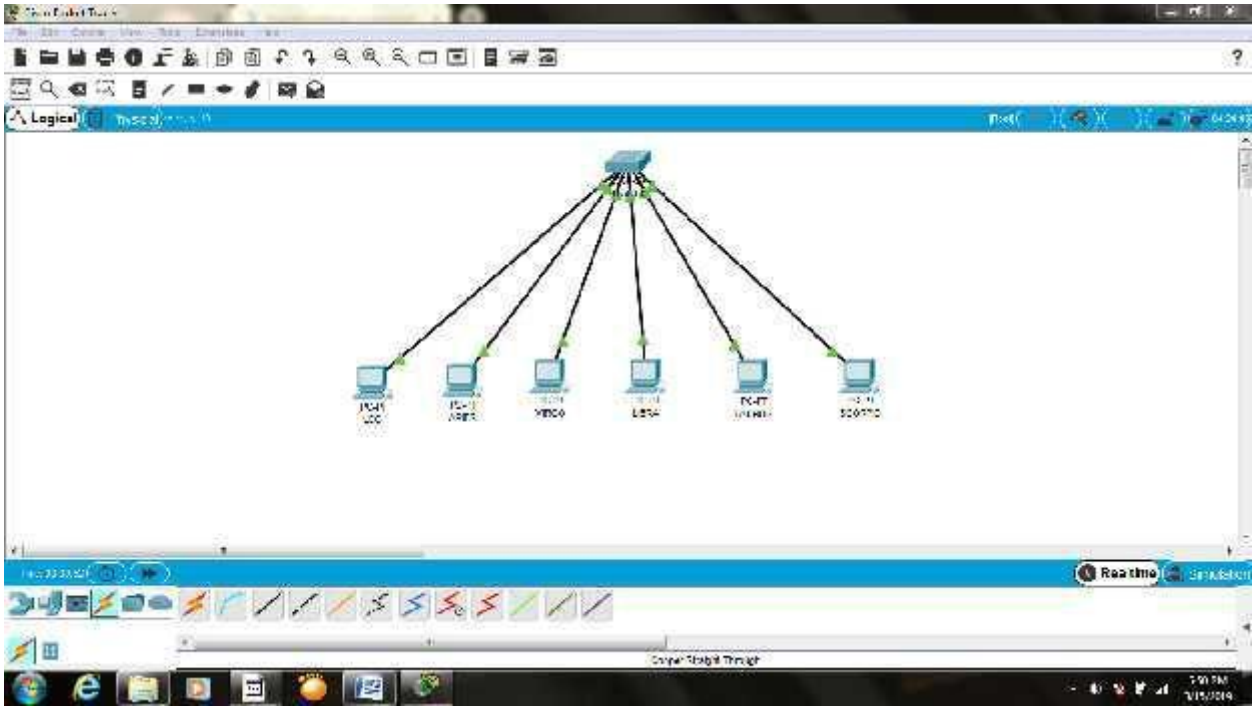
NIM : L200170099

KELAS : C

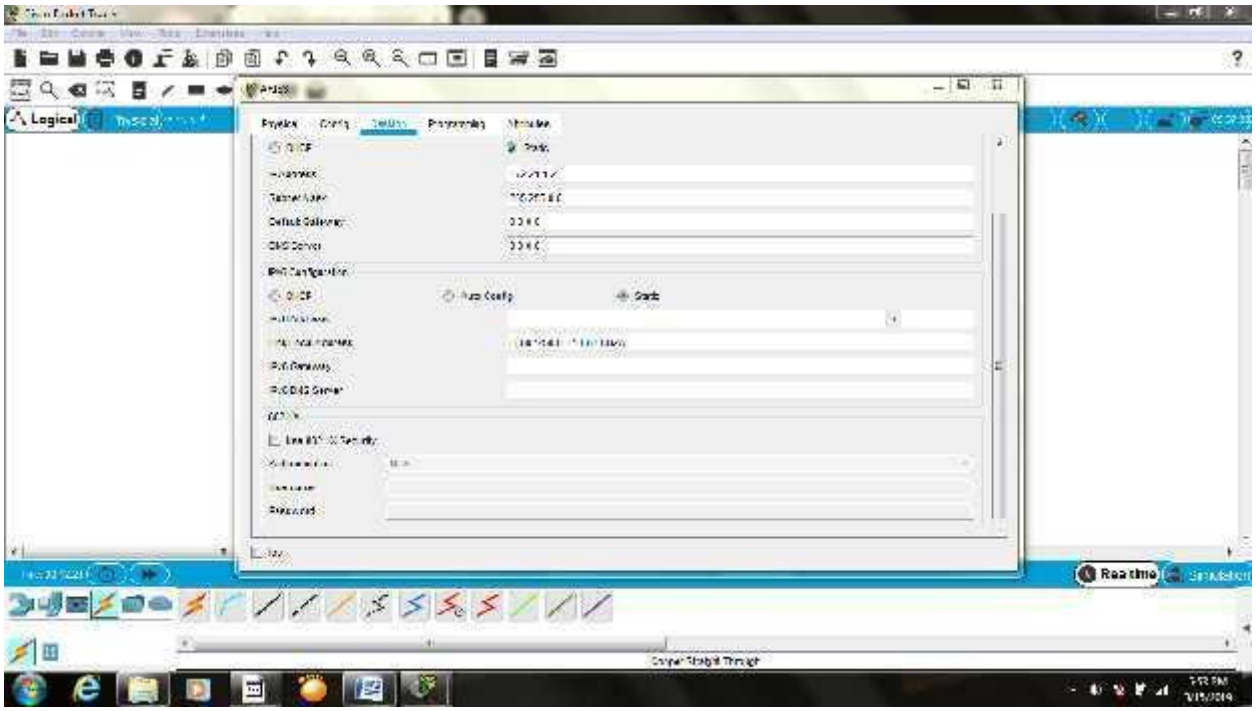
MODUL : 4

KEGIATAN PRAKTIKUM

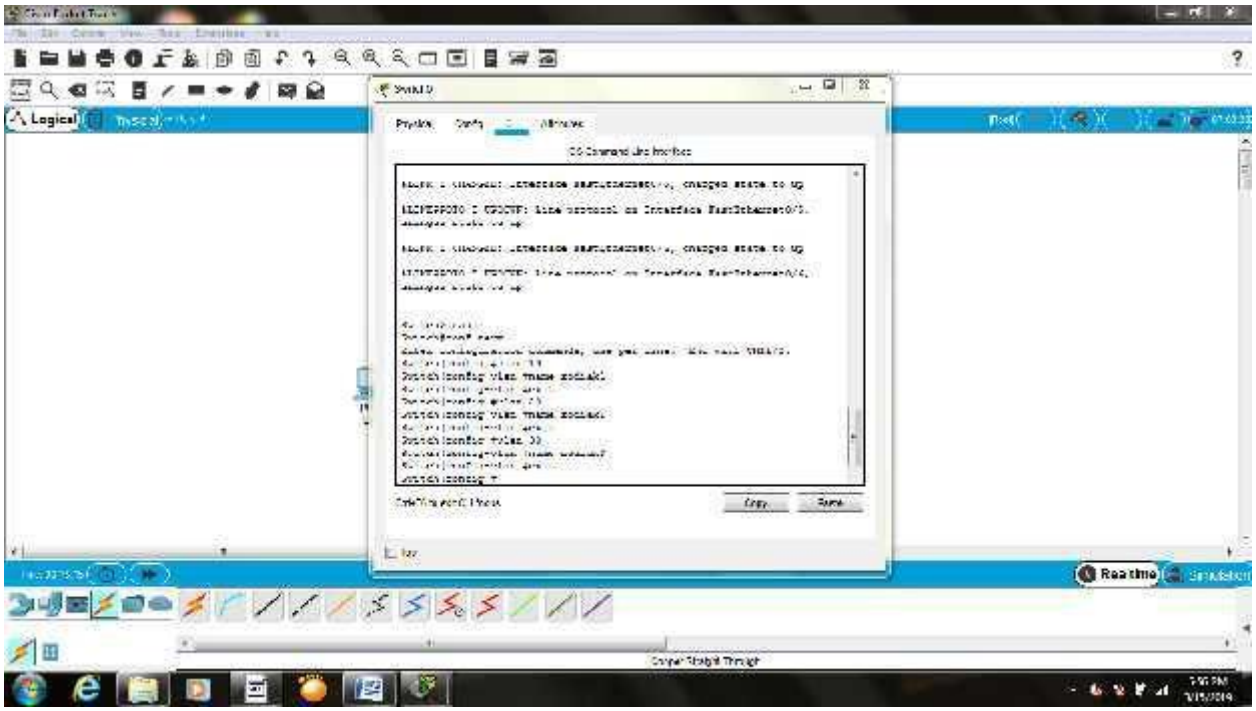
Kegiatan 1.



- Pemberian nama dan IP pada masing-masing PC.



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



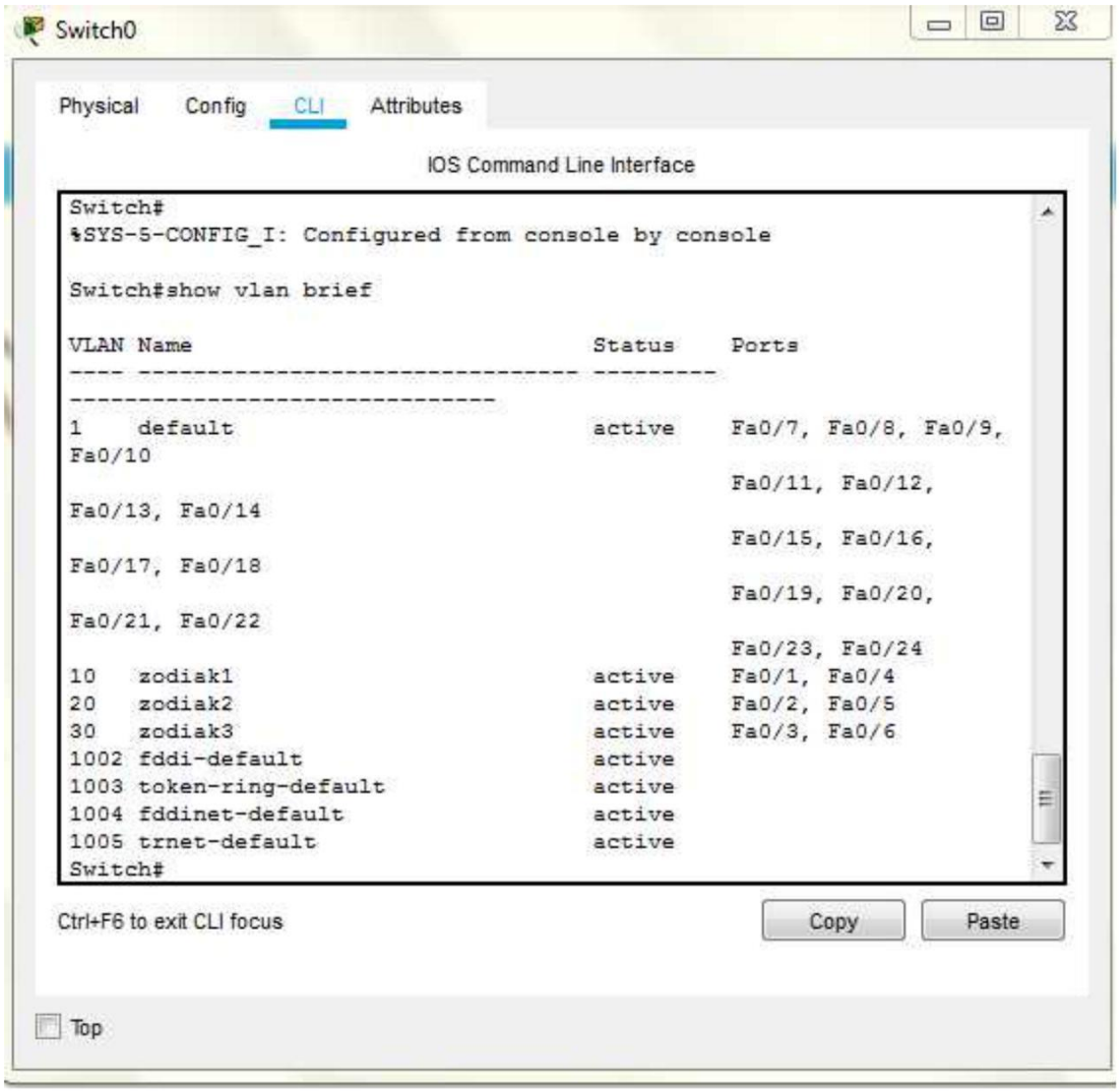
- Mengkonfigurasi port-port pada switch ke dalam VLAN.

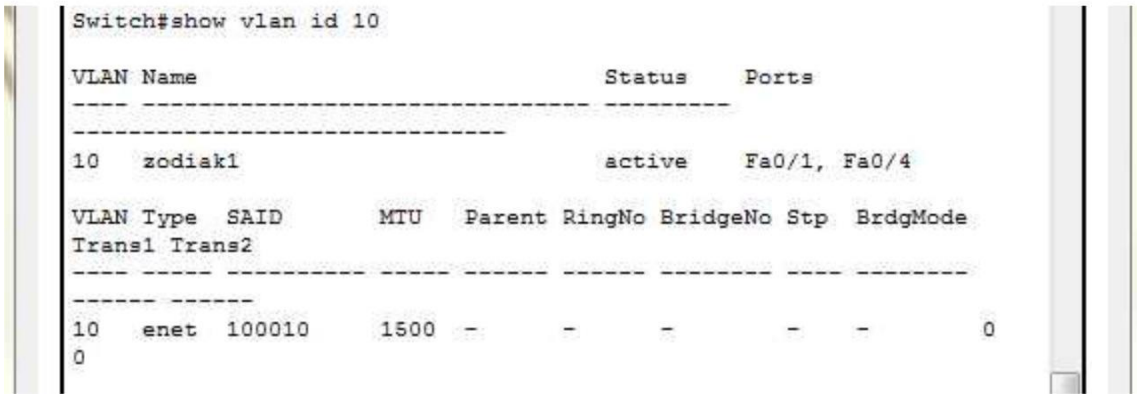
```
Switch(config)#interface FastEthernet0/1
Switch(config-if)#switchport mode access
Switch(config-if)#switch acces vlan 10
Switch(config-if)#interface Fastethernet0/4
Switch(config-if)#switchport mode access
Switch(config-if)#switch access vlan 10
Switch(config-if)#exit
```

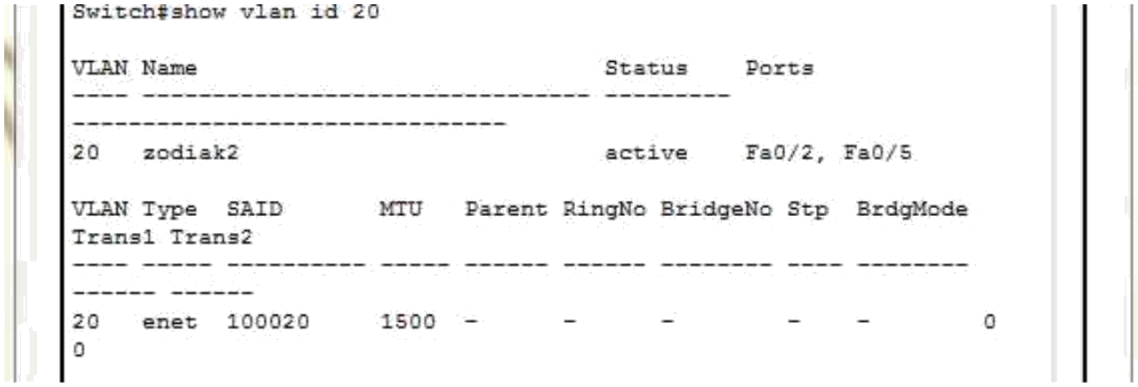
```
Switch(config)#interface Fastethernet0/2
Switch(config-if)#switchport mode acces
Switch(config-if)#switchport acces vlan 20
Switch(config-if)#interface Fastethernet0/5
Switch(config-if)#switchport acces vlan 20
Switch(config-if)#exit
```

```
Switch(config)#interface Fastethernet0/3
Switch(config-if)#switchport mode access
Switch(config-if)#switchport acces vlan 30
Switch(config-if)#interface Fastethernet0/6
Switch(config-if)#switchport mode access
Switch(config-if)#switchport acces vlan 30
Switch(config-if)#exit
```

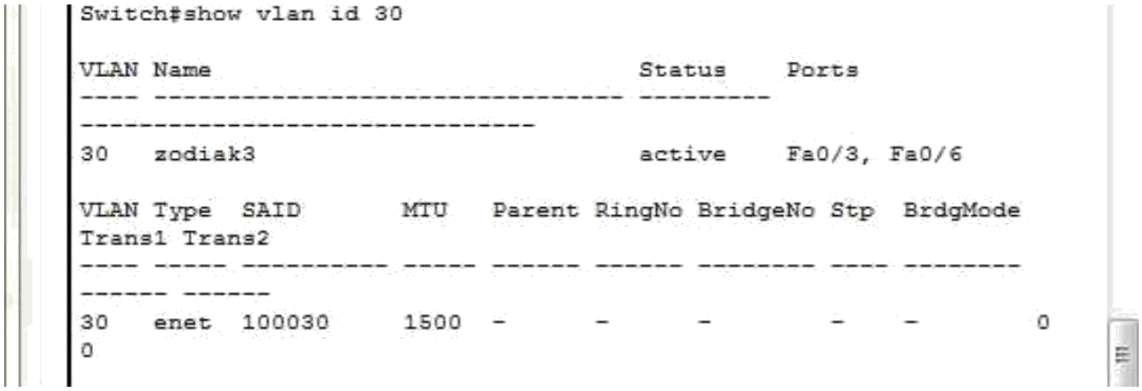
- Konfigurasi VLAN.







```
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

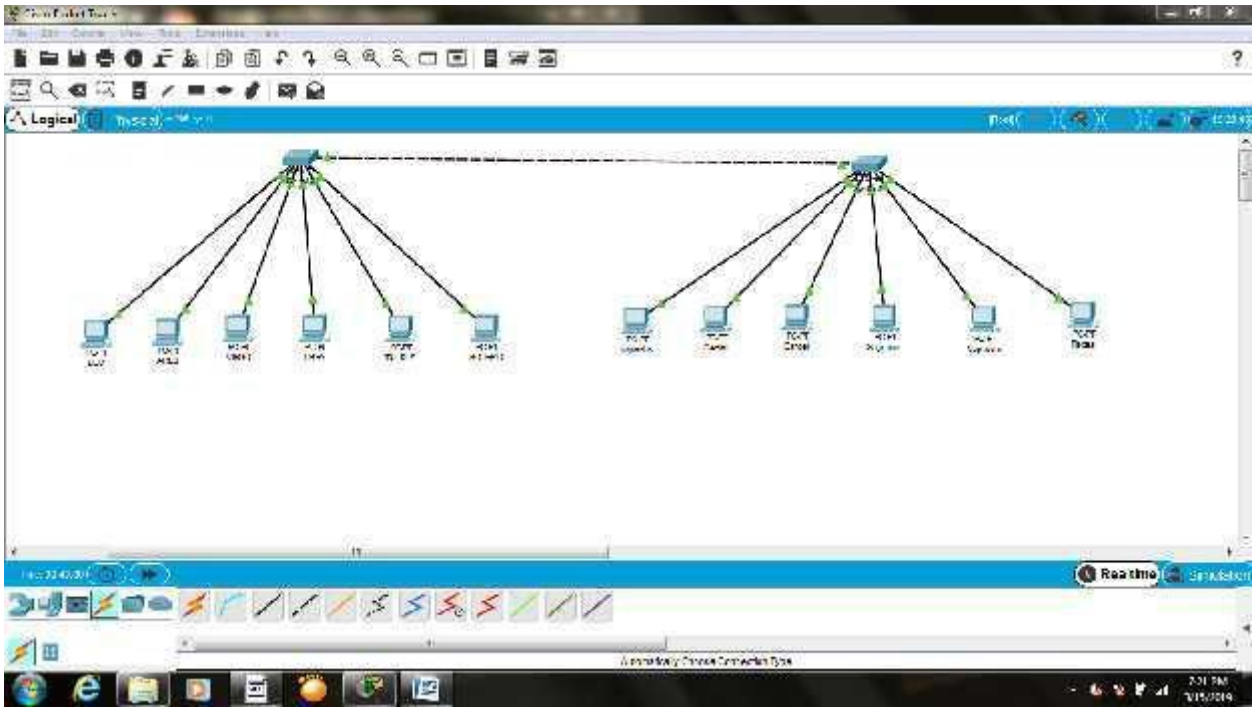
No	Variable	Nilai
1	Nomor VLAN	30
2	Nama VLAN	Zodiak3
3	Port	Fa 0/3, Fa 0/6

4	Status	Active

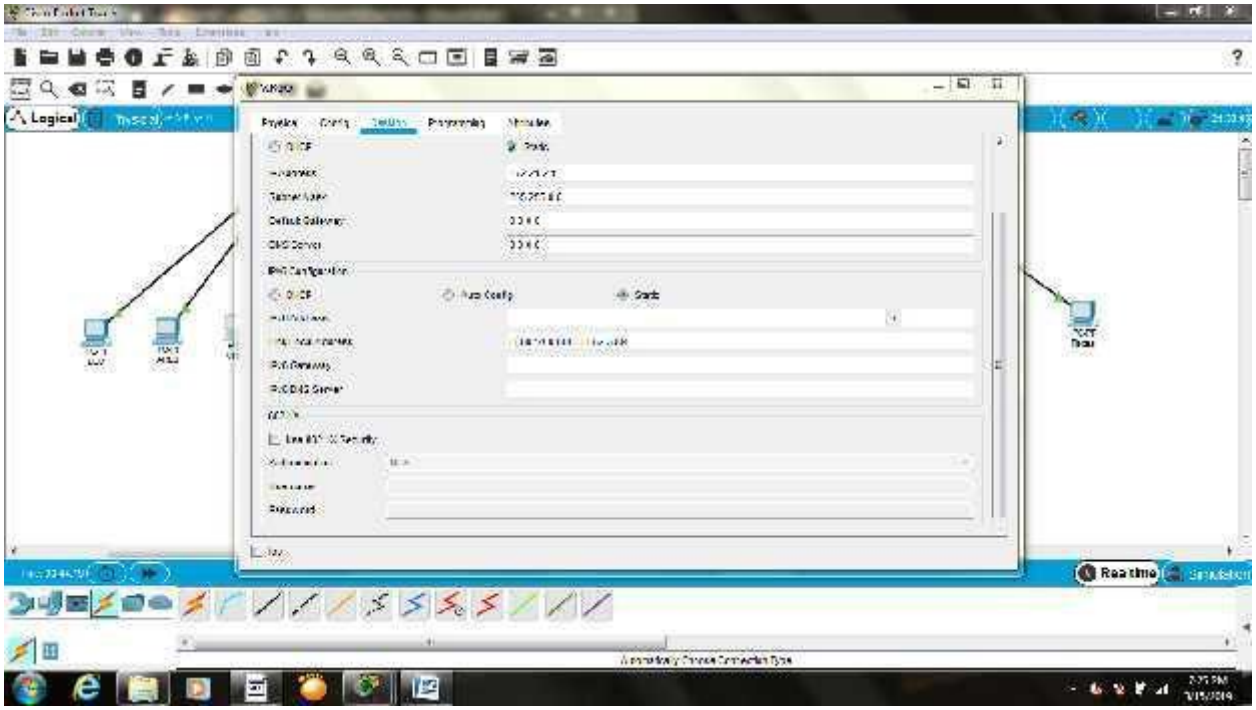
Kesimpulan Nomer 6 :

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.

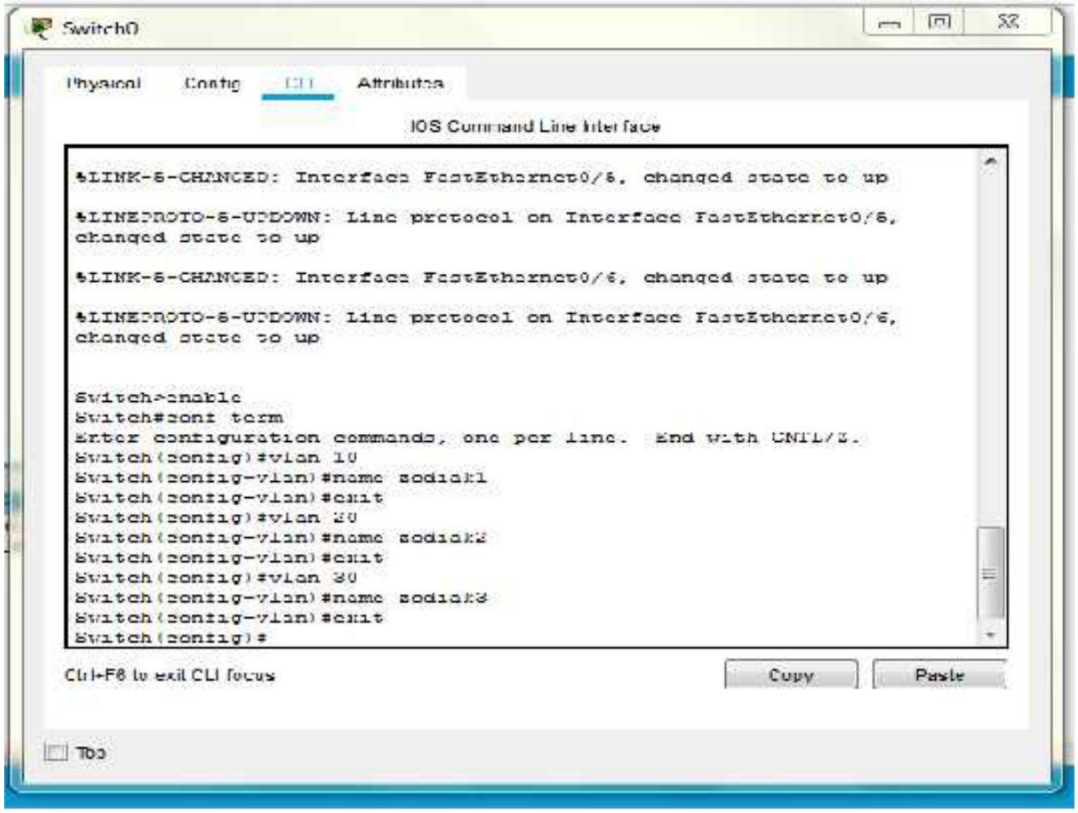
Kegiatan 2.



- 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 acces 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 acces
Switch(config-if)#switchport acces vlan 20
Switch(config-if)#interface Fastethernet0/5
Switch(config-if)#switchport acces vlan 20
Switch(config-if)#exit
```

```
Switch(config)#interface Fastethernet0/3
Switch(config-if)#switchport mode access
Switch(config-if)#switchport acces vlan 30
Switch(config-if)#interface Fastethernet0/6
Switch(config-if)#switchport mode access
Switch(config-if)#switchport acces 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
```

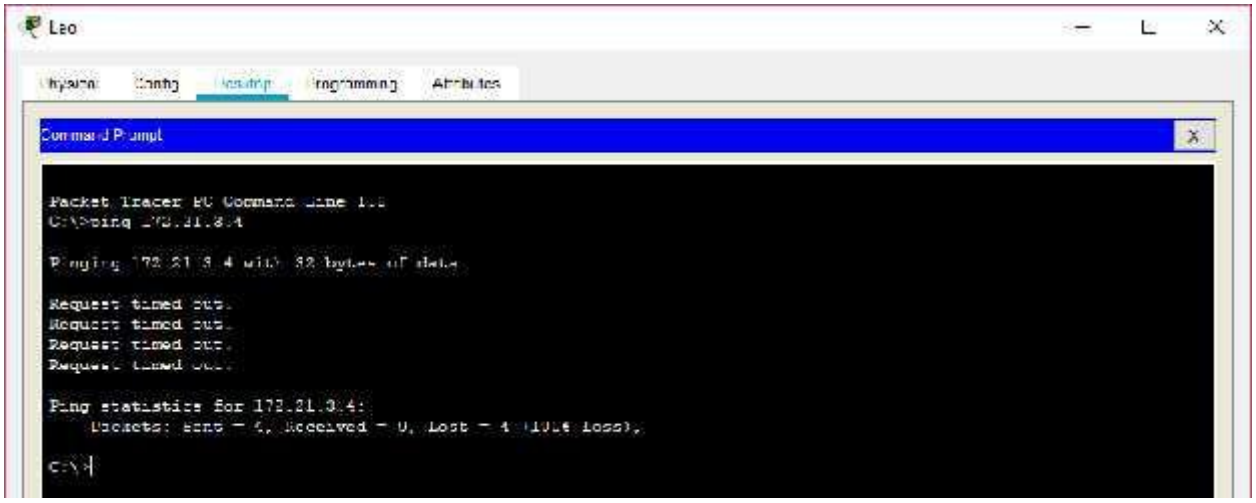
```
Switch#show interface fastethernet0/24
FastEthernet0/24 is up, line protocol is up (connected)
  Hardware is Lance, address is 0060.5c7b.ea10 (bia 00d0.bc7b.ea10)
  BW 100000 Kbit, DLY 1000 usec,
     reliability 255/255, txload 1/255, rxload 1/255
  Encapsulation ARPA, loopback not set
  Keepalive 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 00:00:05, output hang never
  Last 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
  5 minute output rate 0 bits/sec, 0 packets/sec
     956 packets input, 193851 bytes, 0 no buffer
     Received 956 broadcasts, 0 runts, 0 giants, 0 throttles
     0 input errors, 0 CRC, 0 frame, 0 overrun, 0 ignored, 0 abort
     0 watchdog, 0 multicast, 0 pause input
     0 input packets with dribble condition detected
     2307 packets output, 203570 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                              Status    Ports
---- --------------------------------- --------- -------------------------------
     default                           active    Gi0/2, Gi0/3, Fa0/4
                                                 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
 1   [illegible]                       active    Gi0/1, Gi0/4
30   [illegible]                       active    Fa0/2, Fa0/6
31   [illegible]                       active    Gi0/1, Gi0/4
1002 fddi-default                      active
1003 [illegible]                       active
1004 fddinet-default                   active
1005 [illegible]                       active

VLAN Type  SAID       MTU   Parent RingNo BridgeNo Stp  BrdgMode Trans1 Trans2
---- ----- ---------- ----- ------ ------ -------- ---- -------- ------ ------
1    enet  100001     1500  -      -      -        -    -        0      0
10   enet  100010     1500  -      -      -        -    -        0      0
30   enet  100030     1500                                     0      0
31   enet  100031     1500  -      -      -        -    -        0      0
[illegible]
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
```

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
------- --------- ----------------- ------------------------------------------
```

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)

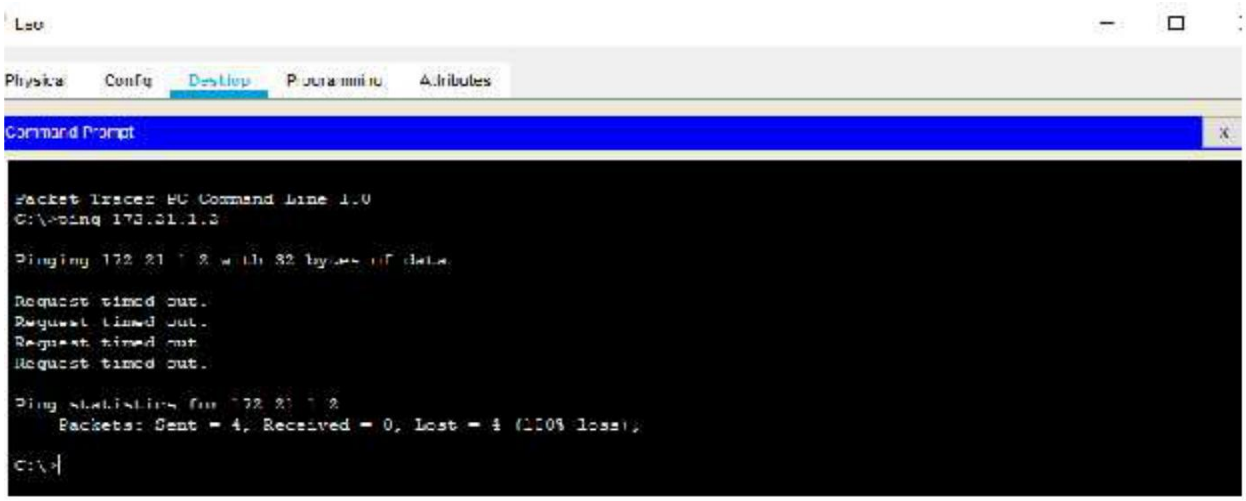
```
Switch#conf term
Enter configuration commands, one per line.  End with CNTL/Z.
Switch(config)#vlan 10
Switch(config-vlan)#name zodiak1
Switch(config-vlan)#exit
Switch(config)#vlan 20
Switch(config-vlan)#name zodiak2
Switch(config-vlan)#exit
Switch(config)#vlan 30
Switch(config-vlan)#name zodiak3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

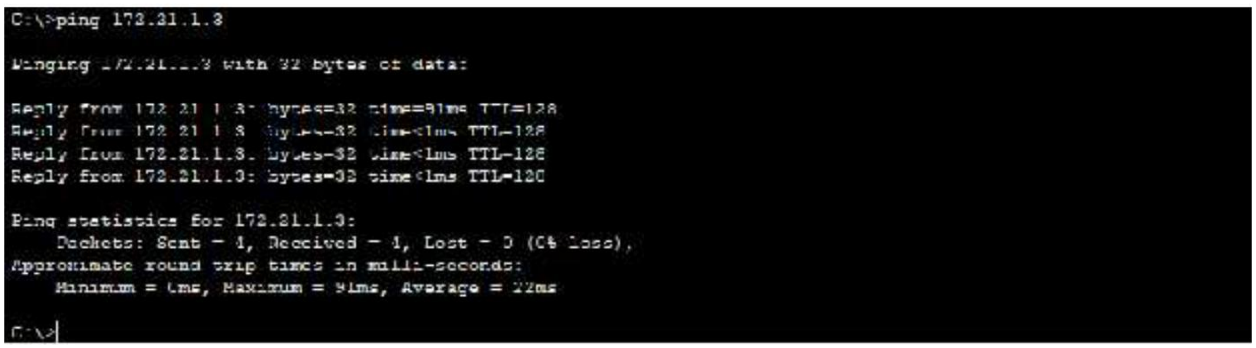
```
Switch(config)#interface Fastethernet0/2
Switch(config-if)#switch mode access
Switch(config-if)#switch access vlan 10
Switch(config-if)#interface Fastethernet0/1
Switch(config-if)#switch mode access
Switch(config-if)#switch access vlan 10
Switch(config-if)#exit
Switch(config)#
```

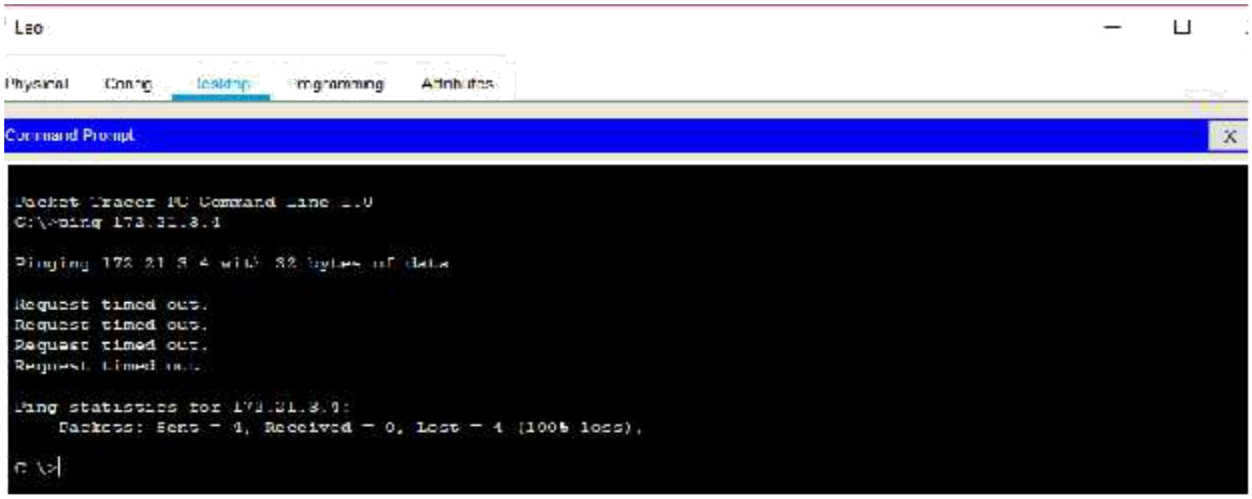
```
Switch(config)#interface Fastethernet0/3
Switch(config-if)#switch mode access
Switch(config-if)#switch access vlan 20
Switch(config-if)#interface Fastethernet0/4
Switch(config-if)#switch mode access
Switch(config-if)#switch access vlan 20
Switch(config-if)#exit
Switch(config)#
```

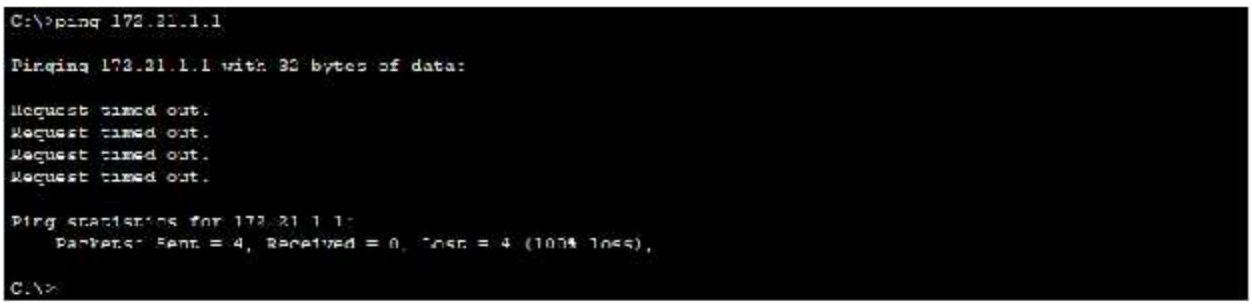
```
Switch(config)#interface Fastethernet0/5
Switch(config-if)#switch mode access
Switch(config-if)#switch access vlan 30
Switch(config-if)#interface Fastethernet0/6
Switch(config-if)#switch mode access
Switch(config-if)#switch access vlan 30
Switch(config-if)#exit
Switch(config)#
```

- 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









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.