

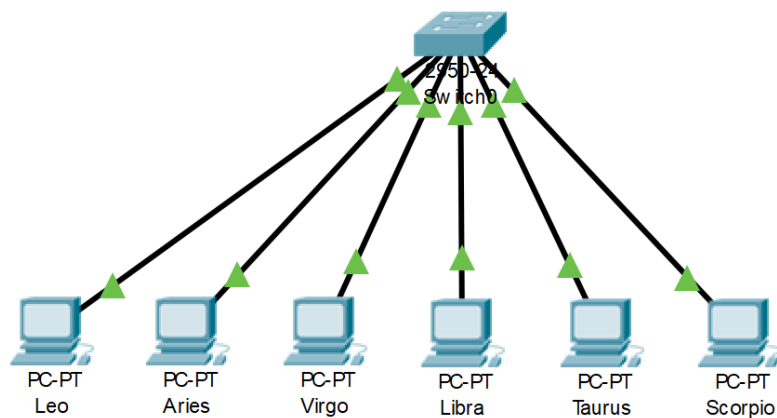
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MODUL IV

Kegiatan 1. Topologi 1

1.

Konfigurasi masing – masing PC dengan nama dan alamat IP berikut ini :

- Leo = 172.21.1.1/24
- Aries = 172.21.1.2/24
- Virgo = 172.21.1.3/24
- Libra = 172.21.1.4/24
- Taurus = 172.21.1.5/24
- Scorpio = 172.21.1.6/24



2. Konfigurasi Pada switch dengan *mode user* atau *mode privileged*, buat 3 VLAN dengan nama zodiak1, zodiak2, dan zodiak3.

CLI.

```
%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. Pada *mode configuration*, 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

```
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 0/4
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. Pada *mode user* atau *mode privileged*, lihat konfigurasi VLAN yang telah dibuat.
- Informasi VLAN keseluruhan

```
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

```
Fa0/21, Fa0/22            Fa0/19, Fa0/20,
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>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>
```

- Informasi VLAN id 20

```
-----
10   zodiak1                               active   Fa0/1, Fa0/4
-----
VLAN Type  SAID      MTU   Parent RingNo BridgeNo Stp   BrdgMode
Transl 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
Transl Trans2
-----
20   enet  100020     1500  -     -     -     -     -     0
0

Switch>
```

- Informasi VLAN id 30

```
-----
20   zodiak2                               active      Fa0/2, Fa0/5
-----
VLAN Type  SAID      MTU   Parent RingNo BridgeNo Stp   BrdgMode
Transl 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
Transl Trans2
-----
30   enet  100030     1500  -     -     -     -     -     0
0

Switch>
```

- a. Tugas 4A : Capture masing – masing tampilan informasi VLAN da nisi table berikut.

No	Variabel	Nilai		
1	Nomor VLAN	10	20	30
2	Nama VLAN	Zodiak1	Zodiak2	Zodiak3
3	Port	Fa 0/1, fa	Fa 0/2, fa	Fa 0/3, fa

		0/4	0/5	0/6
4	Status	Aktif	Aktif	Aktif

b. Tugas 4B : Jelaskan secara singkat hasil yang anda peroleh dari tugas 4A.

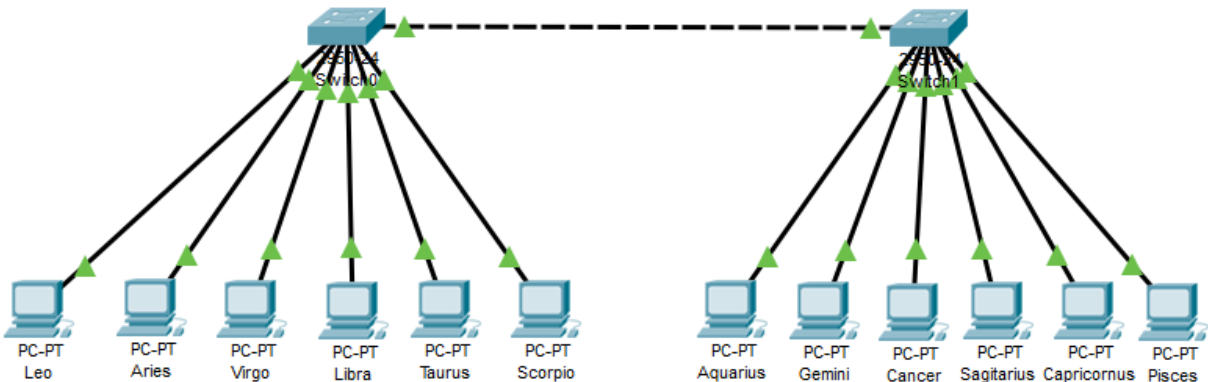
- Zodiak1 dengan no vlan 10, port fa 0/1, fa 0/4 berstatus aktif
- Zodiak2 dengan no vlan 20, port fa 0/2, fa 0/5 berstatus aktif
- Zodiak3 dengan no vlan 30, port fa 0/3, fa 0/6 berstatus aktif

Kegiatan 2. Topologi 2

1.

Konfigurasi masing – masing PC dengan nama dan alamat IP berikut ini :

- Leo = 172.21.1.1/24
- Aries = 172.21.1.2/24
- Virgo = 172.21.2.1/24
- Libra = 172.21.2.2/24
- Taurus = 172.21.3.1/24
- Scorpio = 172.21.3.2/24
- Aquarius = 172.21.1.3/24
- Gemini = 172.21.1.4/24
- Cancer = 172.21.2.3/24
- Sagitarius= 172.21.2.4/24
- Capricornus = 172.21.3.3/24
- Pisces = 172.21.3.4/24



2. Konfigurasi Pada switch dengan *mode user* atau *mode privileged*, buat 3 VLAN dengan nama zodiak1, zodiak2, dan zodiak3.

CLI.

```
%LINK-S-CHANGED: Interface FastEthernet0/5, changed state to up
%LINEPROTO-S-UPDOWN: Line protocol on Interface FastEthernet0/5,
changed state to up
%LINK-S-CHANGED: Interface FastEthernet0/6, changed state to up
%LINEPROTO-S-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. Pada *mode configuration*, 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

```
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 0/4
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. Lakukan konfigurasi VLAN trunking pada switch 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)#
Switch(config)#int fa 0/7
Switch(config-if)#switchport mode trunk
Switch(config-if)#exit
Switch(config)#
```

5. Pada *mode user* atau *mode privileged*, lihat konfigurasi *trunking* yang telah dibuat.

- Informasi *interface fashethernet 0/7 switchport*

```
Switch#show int 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
```

- Informasi *interface fashethernet 0/7*

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

Switch#
```

- Informasi VLAN

```
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          MTU   Parent RingNo BridgeNo Stp   BrdgMode
Trans1 Trans2
```

Jelaskan secara singkat hasil yang anda peroleh dari langkah 5

Informasi *interface fashethernet 0/7 switchport* menampilkan :

Switchport : enable

Administrative mode : trunk

Operational mode : trunk

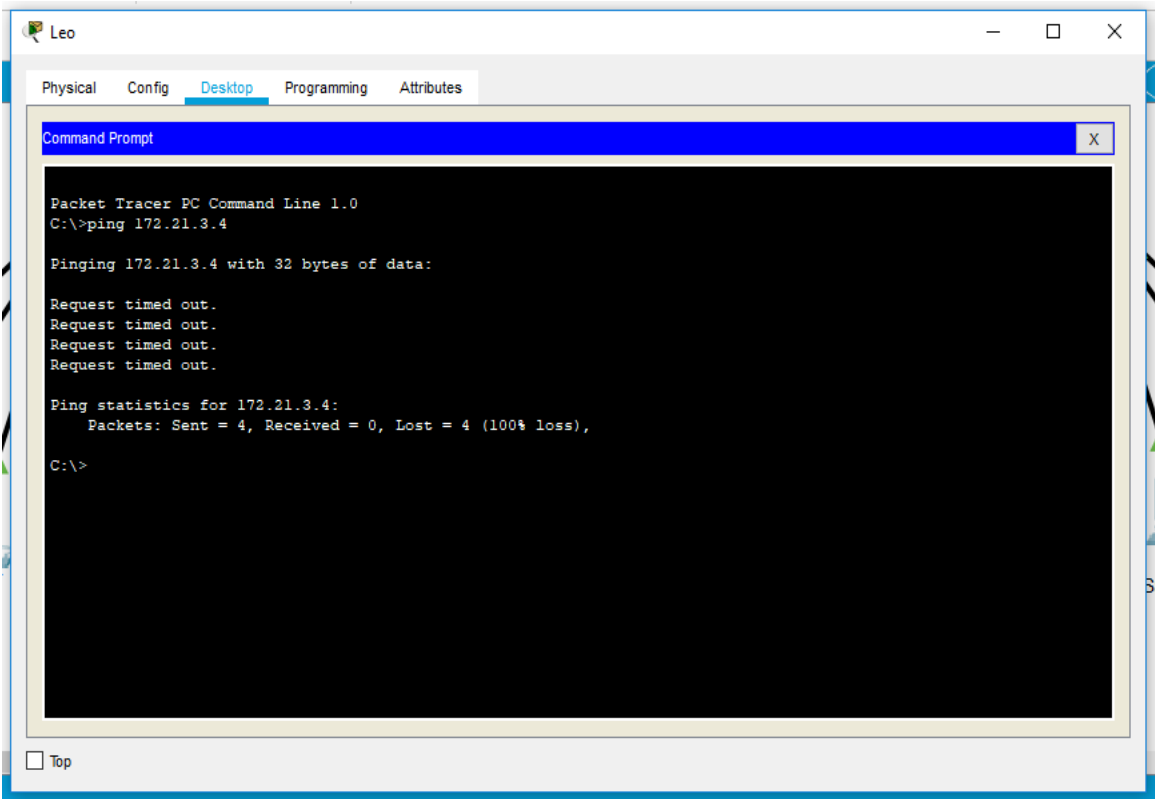
Informasi *interface fashethernet 0/7* menampilkan :

Invalid

Informasi VLAN menampilkan :

No	Variabel	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	Aktif	Aktif	Aktif

6. Lakukan ping dari PC leo ke PC pisces



Jelaskan secara singkat mengapa hasil yang anda peroleh dari langkah 6 mendapatkan status “reply”?

Hasil yang anda peroleh dari langkah 6 mendapatkan status timed out.

7. Lakukan konfigurasi VLAN trunking pada switch 2 seperti langkah 4.

```
changed state to up

%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

%LINK-5-CHANGED: Interface FastEthernet0/7, changed state to up

%LINEPROTO-5-UPDOWN: Line protocol on Interface FastEthernet0/7,
changed state to up

Switch>enable
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)#
```

8. Pada *mode user* atau *mode privileged*, lihat konfigurasi VLAN pada switch 2.

```
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, Fa0/2
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    BrgdMode
Trans1 Trans2
```

Jelaskan secara singkat hasil yang anda peroleh dari langkah 8.

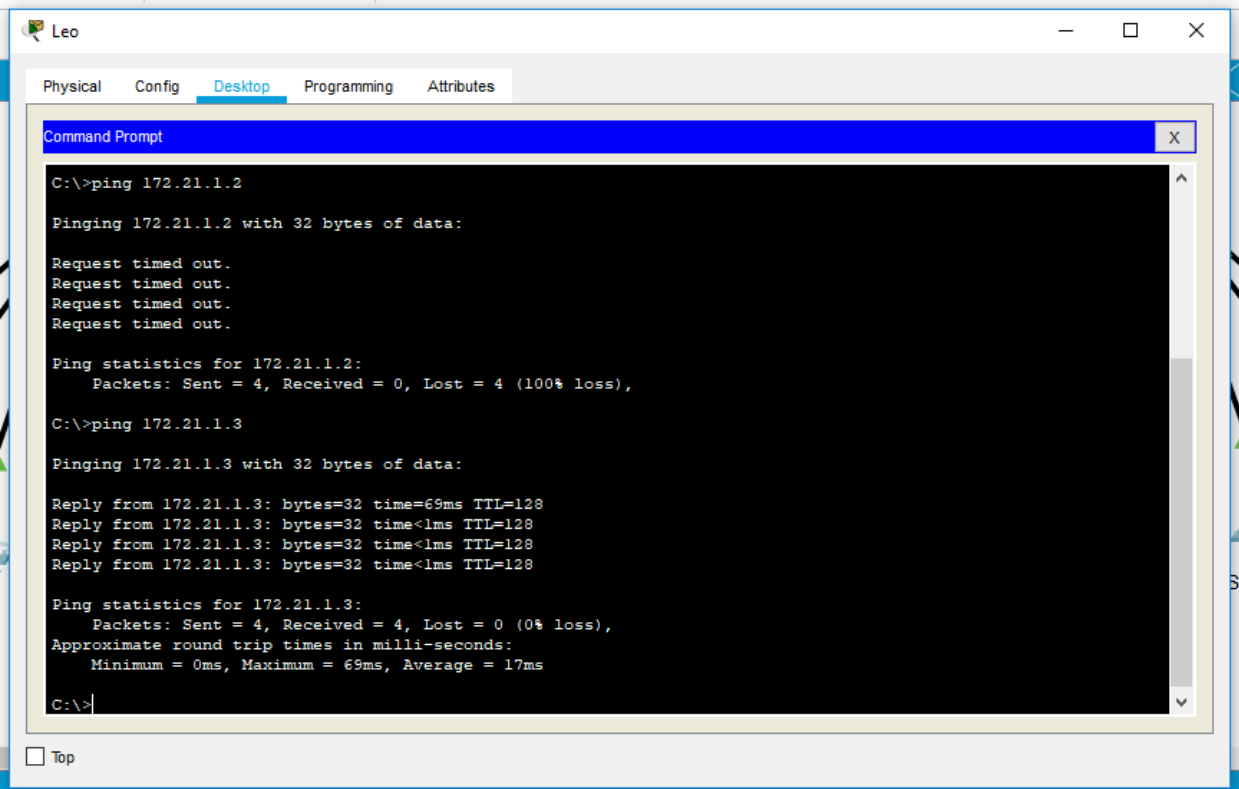
No	Variabel	Nilai		
1	Nomor VLAN	10	20	30
2	Nama VLAN	Zodiak1	Zodiak2	Zodiak3
3	Port	Fa 0/1, fa 0/2	Fa 0/3, fa 0/4	Fa 0/5, fa 0/6
4	Status	Aktif	Aktif	Aktif

9. Pada *mode configuration*, konfigurasi port – port switch ke dalam VLAN zodiak1, zodiak2, dan zodiak3 dengan anggota sebagai berikut.

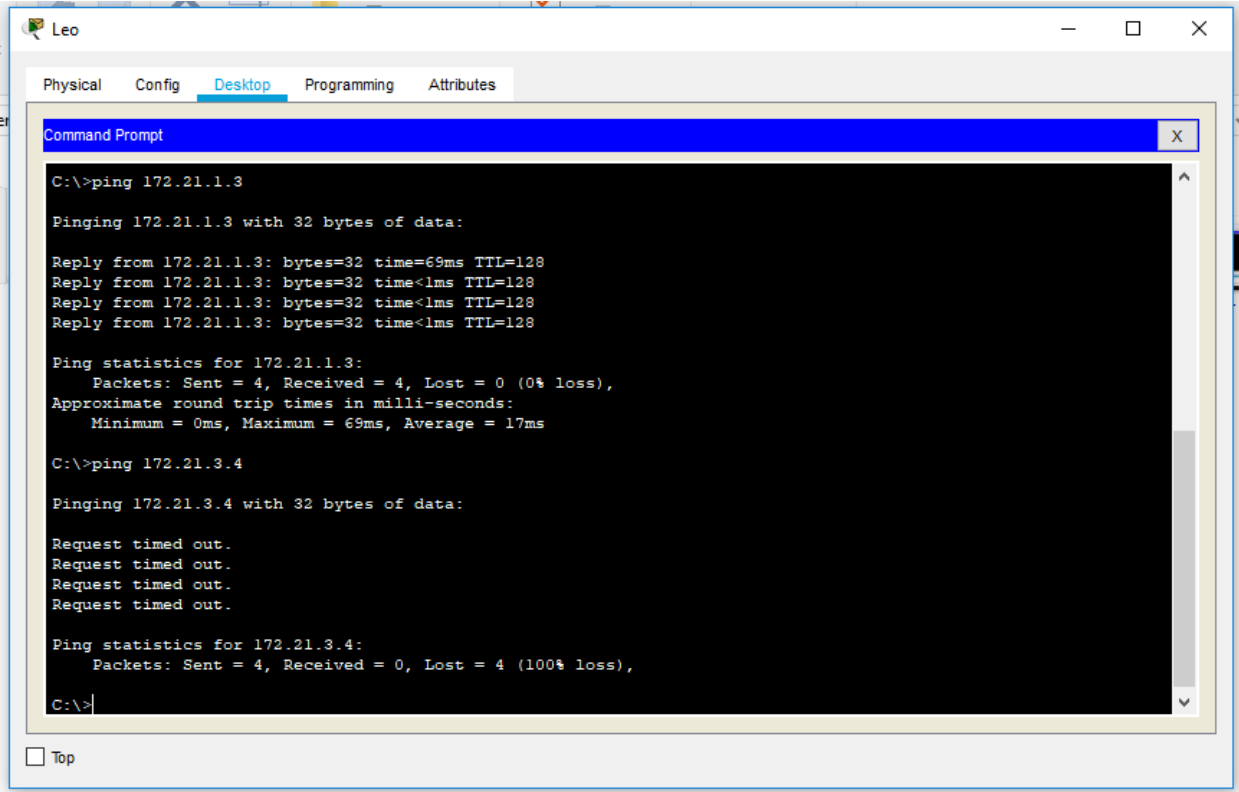
- Zodiak1 = aquarius dan gemini
- Zodiak2 = cancer dan sagitarius
- Zodiak3 = capricornus dan pisces

```
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)#
```

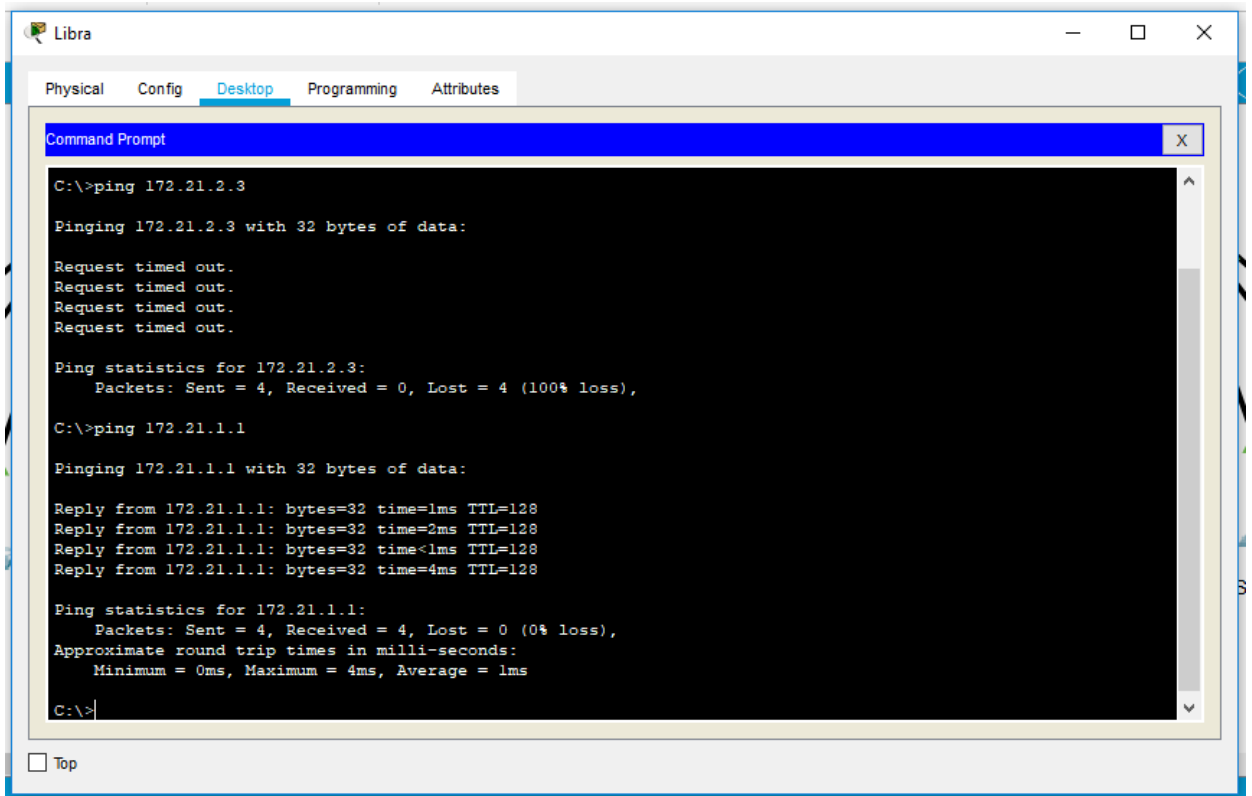
10. Ping PC leo ke PC aries, PC leo ke PC aquarius



Ping PC leo ke PC pisces



Ping PC libra ke PC cancer, PC libra ke PC leo.



Dari hasil diatas :

Ping PC leo ke PC aries : timed out

Ping PC leo ke PC aquarius : sent = 4, received = 4

Ping PC leo ke PC pisces : timed out

Ping PC libra ke PC cancer : timed out

Ping PC libra ke PC leo : sent = 4, received = 4