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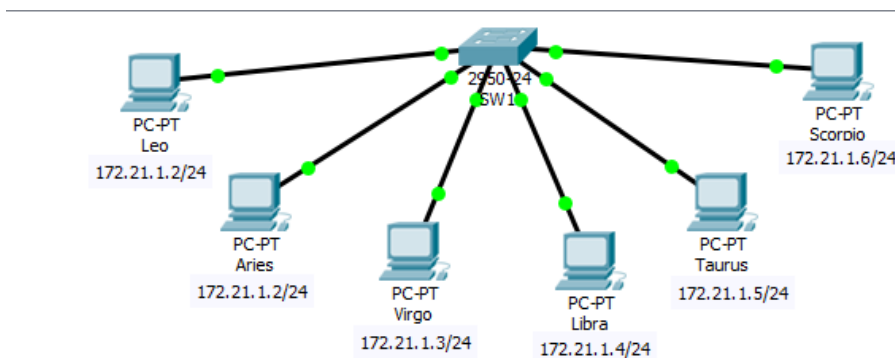
Kelas : D

Modul: IV

Kegiatan Praktikum Modul IV

Kegiatan 1. Topologi 1

1. Menggunakan packet tracer buat topologi berikut ini dengan menggunakan switch. Beri nama masing-masing perangkat serta konfigurasi alamat IP sesuai gambar dibawah ini.



2. Konfigurasi pada switch dengan mode user atau mode privileged, buat 3 VLAN dengan nama zodiak1, zodiak2, dan zodiak3. Klik pada switch 2 kali kemudian pilih CLI. Lakukan langkah pengoperasian seperti gambar berikut.

```
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)#
```

Ctrl+F6 to exit CLI focus

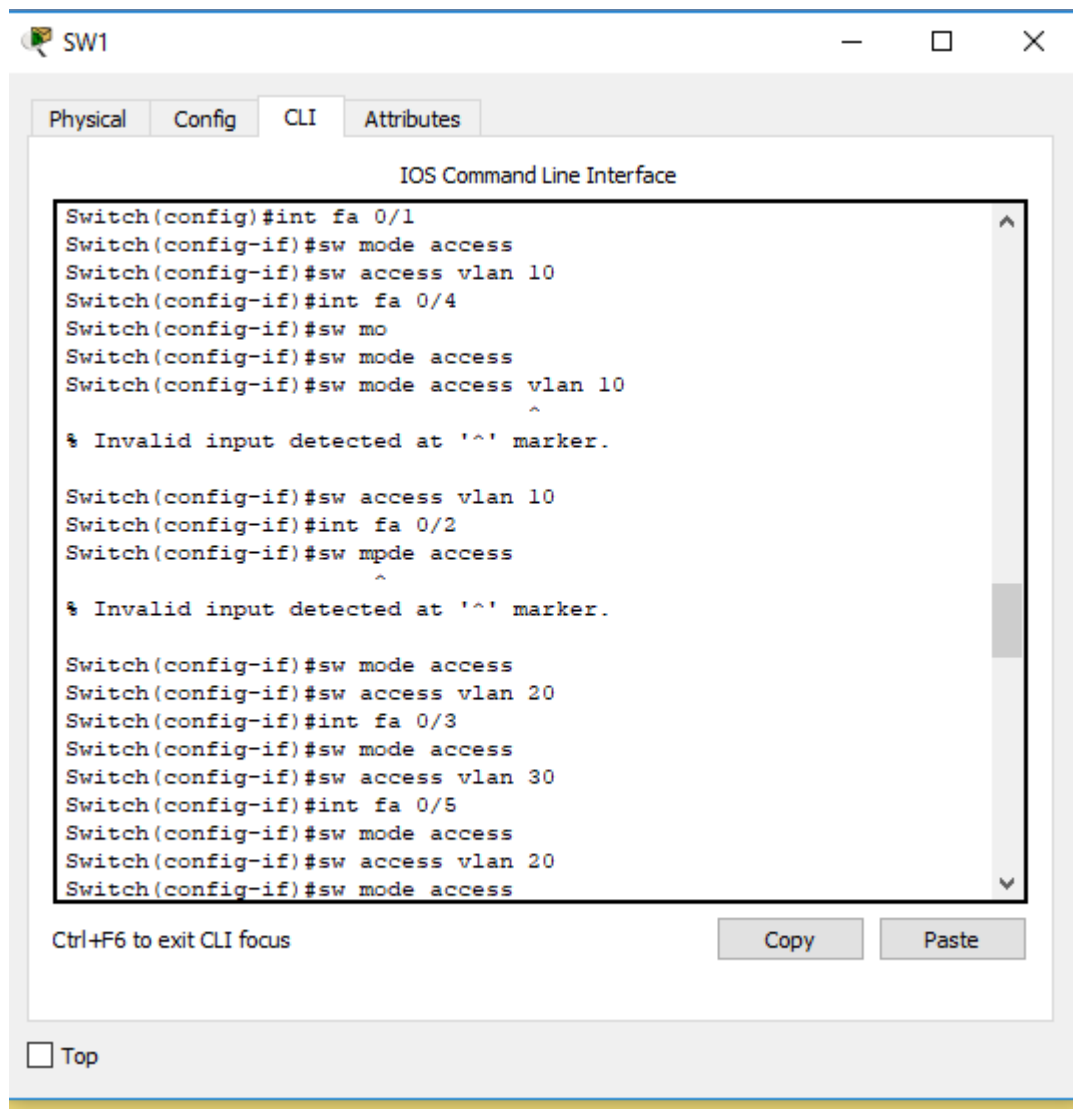
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3. Pada mode configuration, konfigurasi port-port switch ke dalam VLAN zodiak1, zodiak2, dan zodiak3 dengan anggota sebagai berikut:

- Zodiak1 = leo dan libra
- Zodiak2 = aries dan taurus
- Zodiak3 = virgo dan scorpio

Lalu lakukan langkah pengoperasian



```

Switch(config-if)#sw mode access
Switch(config-if)#sw access vlan 20
Switch(config-if)#int fa 0/3
Switch(config-if)#sw mode access
Switch(config-if)#sw access vlan 30
Switch(config-if)#int fa 0/5
Switch(config-if)#sw mode access
Switch(config-if)#sw access vlan 20
Switch(config-if)#sw mode access
Switch(config-if)#sw access vlan 30
Switch(config-if)#end
Switch#
%SYS-5-CONFIG I: Configured from console by console

```

Ctrl+F6 to exit CLI focus

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4. Pada mode user, lihat konfigurasi VLAN yang telah dibuat. Show vlan brief untuk melihat informasi vlan keseluruhan

```
show vlan brief
```

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

Show vlan id 10 untuk melihat vlan 2

```
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						

Show vlan id 20 untuk melihat vlan 3

```
Switch#show vlan id 20
```

VLAN Name	Status	Ports
20 zodiak2	active	Fa0/2

VLAN Type	SAID	MTU	Parent	RingNo	BridgeNo	Stp	BrdgMode
Trans1	Trans2						
20	enet	100020	1500	-	-	-	-
0	0						

Show vlan id 30 untuk melihat vlan 4

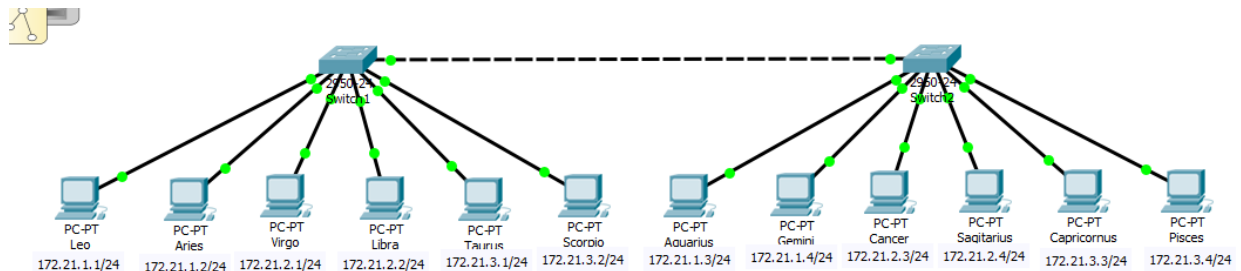
```
Switch#show vlan id 30
```

VLAN Name	Status	Ports
30 zodiak3	active	Fa0/3, Fa0/5

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

Kegiatan 2. Topologi 2

1. Menggunakan cisco packet tracer buat topologi berikut dengan menggunakan switch Catalyst 2950. Beri nama dan konfigurasi alamat IP masing-masing PC seperti gambar berikut.



2. Konfigurasi pada switch dengan mode user atau mode privileged, buat 3 VLAN dengan nama zodiak1, zodiak2, dan zodiak3. Klik pada switch 2 kali kemudian pilih CLI. Lakukan langkah pengoperasian seperti gambar berikut.

```
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)#
```

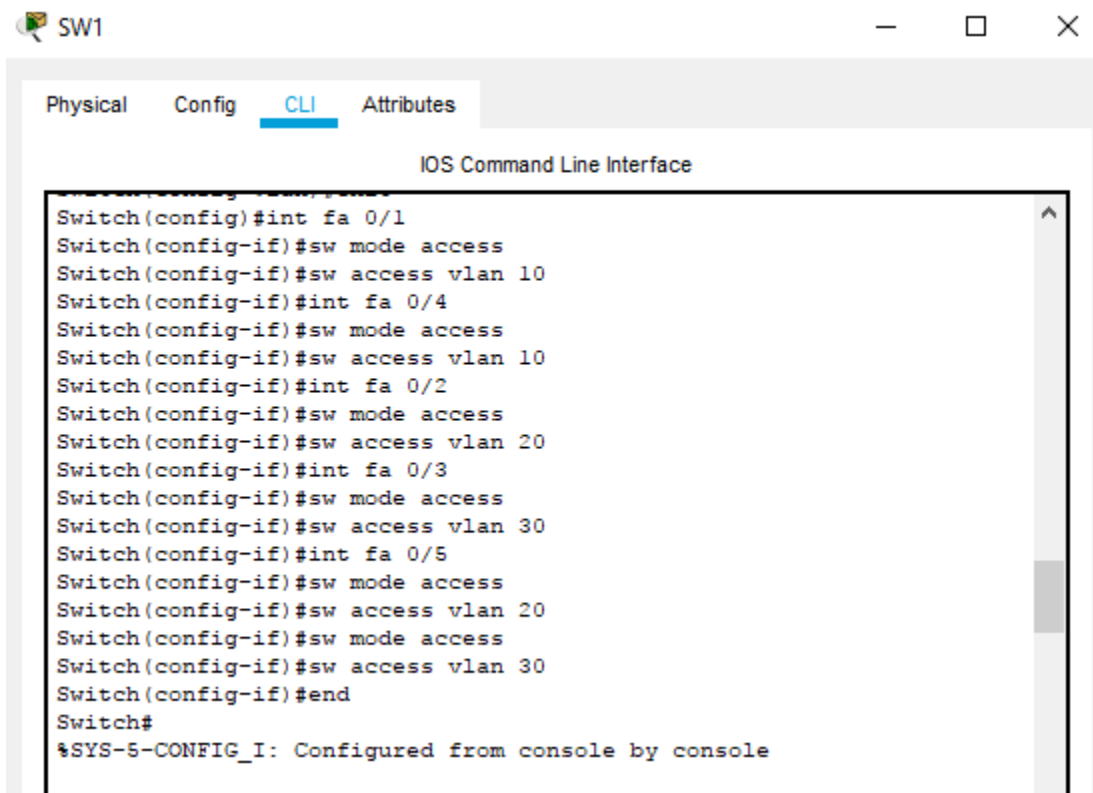
Ctrl+F6 to exit CLI focus

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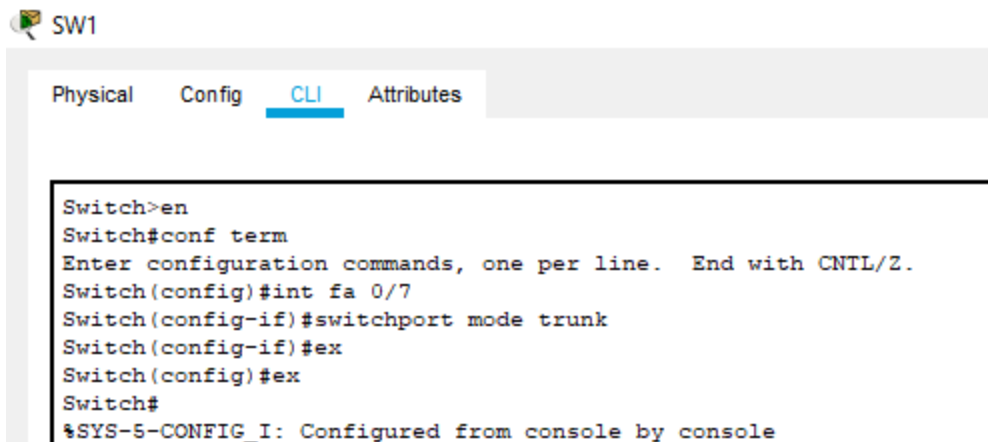
3. Pada mode configuration, konfigurasikan port-port switch ke dalam VLAN zodiak1, zodiak2, dan zodiak3 dengan anggota sebagai berikut:
 - Zodiak1 = leo dan libra
 - Zodiak2 = aries dan taurus
 - Zodiak3 = virgo dan scorpio

Lalu lakukan langkah pengoperasian



```
Switch(config)#int fa 0/1
Switch(config-if)#sw mode access
Switch(config-if)#sw access vlan 10
Switch(config-if)#int fa 0/4
Switch(config-if)#sw mode access
Switch(config-if)#sw access vlan 10
Switch(config-if)#int fa 0/2
Switch(config-if)#sw mode access
Switch(config-if)#sw access vlan 20
Switch(config-if)#int fa 0/3
Switch(config-if)#sw mode access
Switch(config-if)#sw access vlan 30
Switch(config-if)#int fa 0/5
Switch(config-if)#sw mode access
Switch(config-if)#sw access vlan 20
Switch(config-if)#sw mode access
Switch(config-if)#sw access vlan 30
Switch(config-if)#end
Switch#
%SYS-5-CONFIG_I: Configured from console by console
```

4. Lakukan konfigurasi VLAN trunking pada SW1.



```
Switch>en
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)#ex
Switch(config)#ex
Switch#
%SYS-5-CONFIG_I: Configured from console by console
```

Show interface fastethernet 0/7 switchport

```
sh int fastethernet 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
```

Show interface trunk

```
Switch#sh 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

Show vlan

```
Switch#sh vlan
```

VLAN	Name	Status	Ports
1	default	active	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
10	zodiak1	active	Fa0/1, Fa0/4
20	zodiak2	active	Fa0/2
30	zodiak3	active	Fa0/3, Fa0/5
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

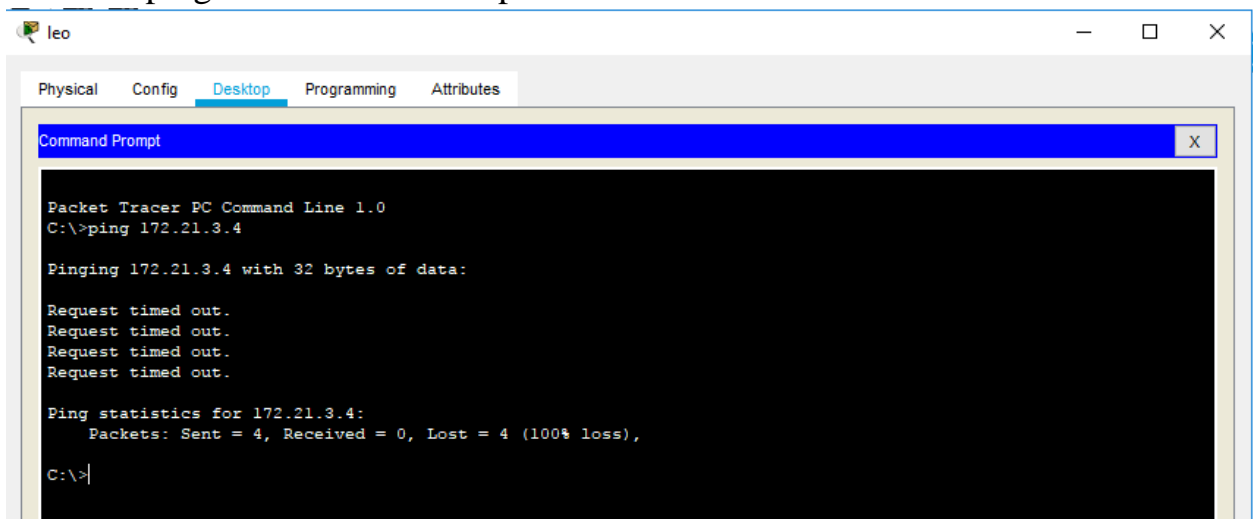
VLAN	Type	SAID	MTU	Parent	RingNo	BridgeNo	Stp	BrdgMode	Trans1	Trans2
1	enet	100001	1500	-	-	-	-	-	0	0
10	enet	100010	1500	-	-	-	-	-	0	0
20	enet	100020	1500	-	-	-	-	-	0	0
30	enet	100030	1500	-	-	-	-	-	0	0
1002	fddi	101002	1500	-	-	-	-	-	0	0
1003	tr	101003	1500	-	-	-	-	-	0	0
1004	fdnet	101004	1500	-	-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

Remote SPAN VLANs


Primary	Secondary	Type	Ports

```
Switch#
```

5. Lakukan ping dari PC leo ke PC pisces




6. Lakukan konfigurasi VLAN trunking pada SW2 seperti langkah 4.

 SW2

```
Physical  Config  CLI  Attributes

Switch>en
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)#ex
Switch(config)#ex
Switch#
%SYS-5-CONFIG I: Configured from console by console
```

Show interface fastethernet 0/7 switchport

 SW2

```
Physical  Config  CLI  Attributes

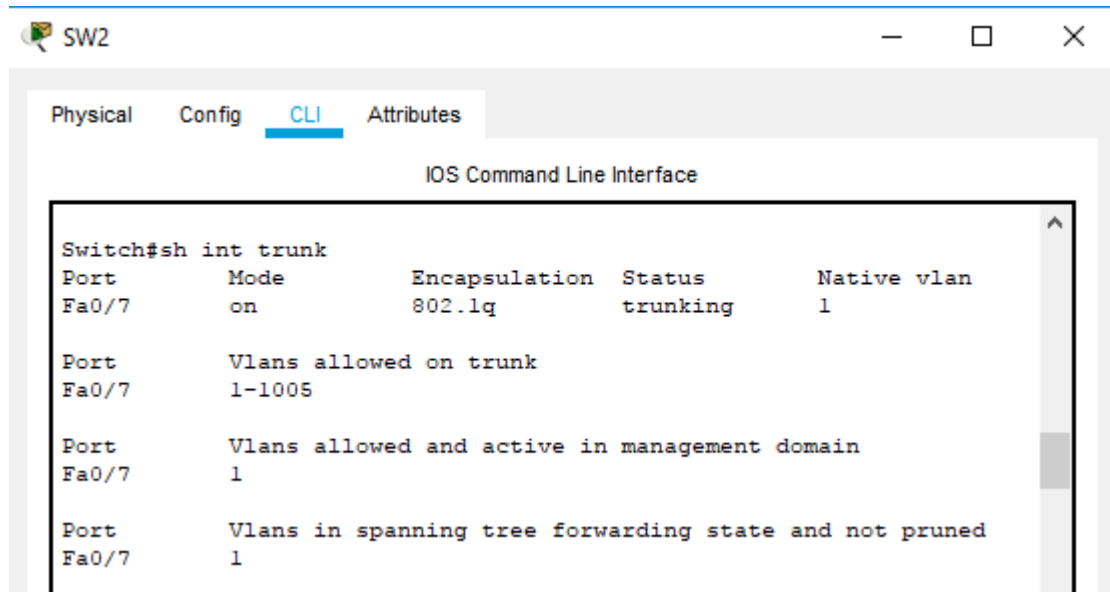
IOS Command Line Interface

%SYS-5-CONFIG_I: Configured from console by console
sh interface fastethernet 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

Ctrl+F6 to exit CLI focus
```

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Show interface trunk



Show vlan

```

sh 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

Remote SPAN VLANs

Primary	Secondary	Type	Ports
Switch#			

7. 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

 SW2

Physical Config **CLI** Attributes

```
Switch>en
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)#ex
Switch(config)#vlan 20
Switch(config-vlan)#name zodiak2
Switch(config-vlan)#ex
Switch(config)#vlan 30
Switch(config-vlan)#name zodiak3
Switch(config-vlan)#ex
Switch(config)#int fa 0/1
Switch(config-if)#sw mode access
Switch(config-if)#sw access vlan 10
Switch(config-if)#int fa 0/4
Switch(config-if)#sw mode access
Switch(config-if)#sw access vlan 10
Switch(config-if)#int fa 0/2
Switch(config-if)#sw mode access
Switch(config-if)#sw access vlan 20
Switch(config-if)#int fa 0/3
Switch(config-if)#sw mode access
Switch(config-if)#sw access vlan 30
Switch(config-if)#int fa 0/5
Switch(config-if)#sw mode access
Switch(config-if)#sw access vlan 20
Switch(config-if)#sw mode access
Switch(config-if)#sw access vlan 30
Switch(config-if)#end
Switch#
%SYS-5-CONFIG_I: Configured from console by console
```

Show vlan brief

```
sh vlan brief
```

VLAN	Name	Status	Ports
1	default	active	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
10	zodiak1	active	Fa0/1, Fa0/4
20	zodiak2	active	Fa0/2
30	zodiak3	active	Fa0/3, Fa0/5
1002	fddi-default	active	
1003	token-ring-default	active	
1004	fddinet-default	active	
1005	trnet-default	active	

Show vlan id 10

```
Switch#sh 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

Show vlan id 20

```
Switch#sh vlan id 20
```

VLAN	Name	Status	Ports
20	zodiak2	active	Fa0/2

VLAN	Type	SAID	MTU	Parent	RingNo	BridgeNo	Stp	BrdgMode	Trans1	Trans2
20	enet	100020	1500	-	-	-	-	-	0	0

Show vlan id 30

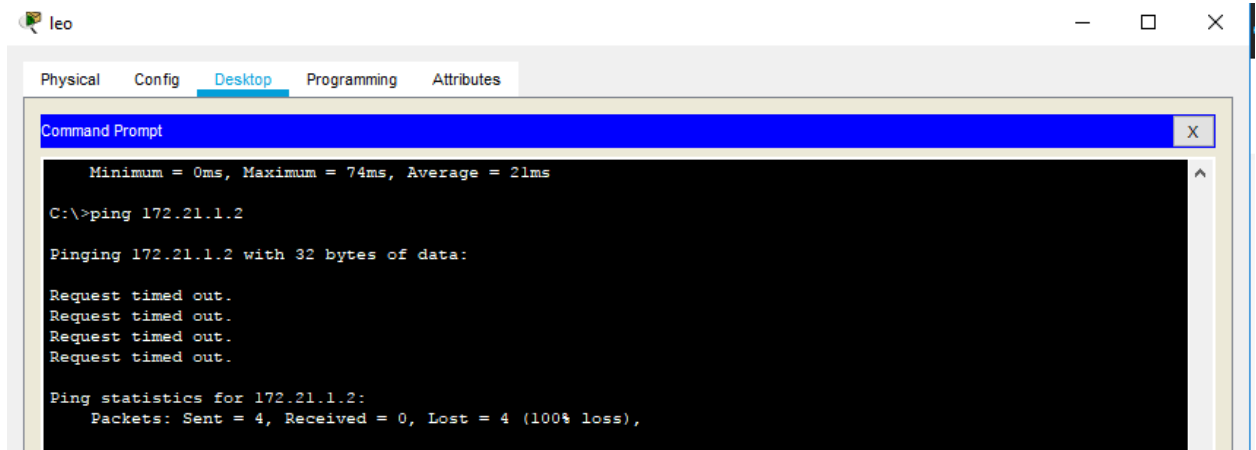
```
Switch#sh vlan id 30
```

VLAN	Name	Status	Ports
30	zodiak3	active	Fa0/3, Fa0/5

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

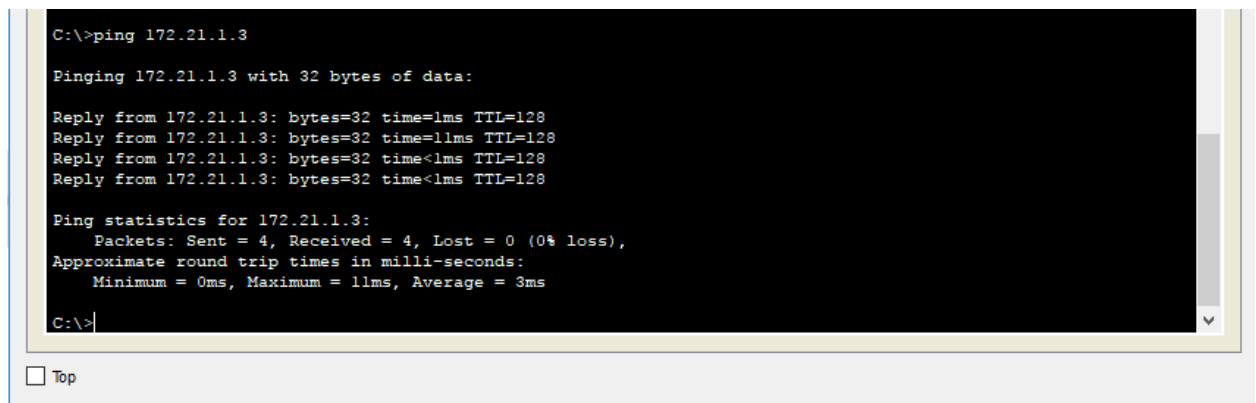

```
Switch#
```

8. Melakukan ping
- Dari PC leo ke PC aries



```
Physical Config Desktop Programming Attributes
Command Prompt
Minimum = 0ms, Maximum = 74ms, Average = 21ms
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),
```

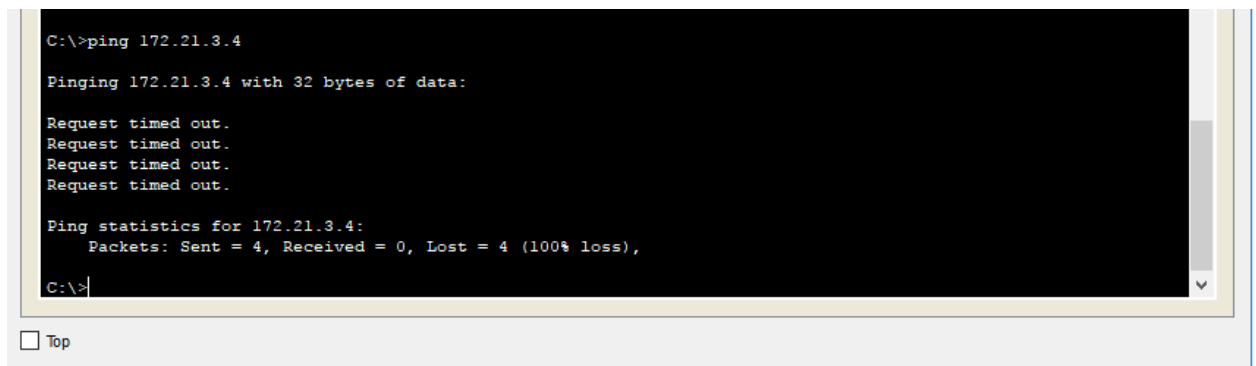
- Dari PC leo ke PC aquarius



```
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=1ms TTL=128
Reply from 172.21.1.3: bytes=32 time=11ms 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 = 11ms, Average = 3ms
C:\>
```

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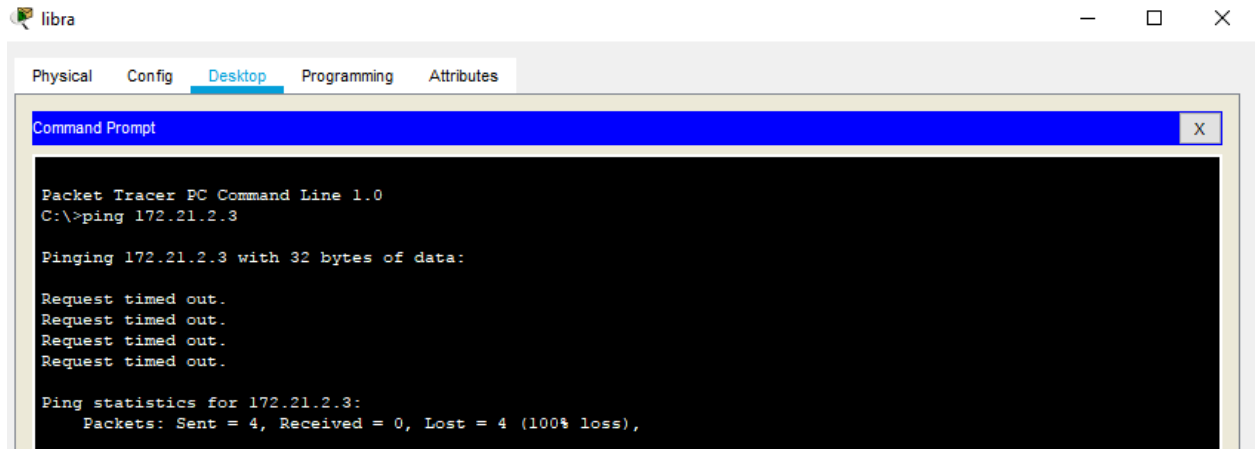
- Dari PC leo ke PC pisces



```
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:\>
```

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- Dari PC libra ke PC cancer



- Dari PC libra ke PC leo

