Nama: Angieta Putri Wahendra

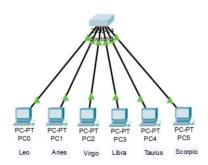
NIM : L200170096

Kelas : C

Modul: 4

Topologi 1

1. Rancangan Jaringan.



2. Konfigurasi pada switch untuk membuat 3 VLAN dengan nama zodiak 1, zodiak 2, zodiak 3.

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

- 3. Konfigurasi port-port switch ke dalam VLAN berikut:
 - Zodiak1 = Leo dan Libra
 - Zodiak2 = Aries dan Taurus
 - Zodiak3 = Virgo dan Scorpio

```
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. Melihat Konfigurasi VLAN yang telah dibuat.

Switch#show vlan brief		
VLAN Name	Status	Ports
1 default Fa0/10	active	Fa0/7, Fa0/8, Fa0/9,
Fa0/13, Fa0/14		Fa0/11, Fa0/12,
Fa0/17, Fa0/18		Fa0/15, Fa0/16,
Fa0/21, Fa0/22		Fa0/19, Fa0/20, Fa0/23, Fa0/24
10 zodiakl	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 Switch#	active	

5. Informasi VLAN 10

ı	Swite	ch#sho	w vlan id	10						
	VLAN	Name				Sta	tus Po	rts		
	10	zodia	k1			act:	ive Fa	0/1,	Fa0/4	
		Type sl Tra		MTU	Parent	RingNo	BridgeNo	Stp	BrdgMode	
	10	enet	100010	1500	-	-	-	-	-	0

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

Penjelasan : Membuat no VLAN 10 dengan nama zodiak 1 yang memiliki anggota Leo dan Libra, memiliki port FAO/1 dan FaO/4 yang berstatus Active.

6. Informasi VLAN 20

Swite	ch#sho	w vlan id 2	0						
VLAN	Name				Stat	tus I	Ports		
20	zodia	k2			act:	ive I	Ta0/2,	Fa0/5	
	Type sl Tran		MTU	Parent	RingNo	Bridgel	No Stp	BrdgMode	
20	enet	100020	1500	-	-	-	-	-	0

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

Penjelasan : Membuat no VLAN 20 dengan nama zodiak 2 yang memiliki anggota Aries dan Taurus, memiliki port FAO/2 dan FaO/5 yang berstatus Active.

7. Informasi VLAN 30

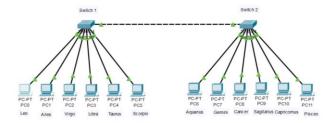
Swit	ch#sho	w vlan id	30						
VLAN	Name				Sta	tus Po	rts		
30	zodia	k3			act:	ive Fa	0/3,	Fa0/6	
	Type sl Tra		MTU	Parent	RingNo	BridgeNo	Stp	BrdgMode	
30 0	enet	100030	1500	-	-	-	-	-	0

No	Variabel	Nilai
1.	Nomor VLAN	30
2.	Nama VLAN	Zodiak3
3.	Port	Fa 0/3, Fa 0/6
4.	Status	Active

Penjelasan : Membuat no VLAN 30 dengan nama zodiak 3 yang memiliki anggota Virgo dan Scorpio, memiliki port FAO/3 dan FaO/6 yang berstatus Active.

Topologi 2

1. Rancangan Jaringan



2. Konfigurasi pada switch untuk membuat 3 VLAN dengan nama zodiak 1, zodiak 2, zodiak 3.

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

3. Konfigurasi port-port switch ke dalam VLAN.

```
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)#
```

4. Trunking pada switch 1.

```
Switch#show int fa 0/7 switchport
Name: Fa0/7
Switchport: Enabled
Administrative Mode: trunk
Operational Mode: trunk
Administrative Trunking Encapsulation: dotlq
Operational Trunking Encapsulation: dotlq
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: dotlq
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# Switch#

Switch#show int fa 0/7 trunk

% Invalid input detected at '^' marker.

Switch#show int trunk

Mode Encapsulation Status Native vlan on 802.1q trunking 1 Port Fa0/7

Vlans allowed on trunk 1-1005 Port

Fa0/7

Vlans allowed and active in management domain Port

Fa0/7 1,10,20,30

Vlans in spanning tree forwarding state and not pruned 1,10,20,30Port

Fa0/7

Switch#show vlan	Swite	:h#sl	how :	vlan
------------------	-------	-------	-------	------

Switch#

	Name				Sta	tus I	orts			
	defaul				act	ive F	@a0/8,	Fa0/9, Fa	0/10,	
						F	a0/12,	Fa0/13,		
Fa0/1	14, Fa(0/15				I	a0/16,	Fa0/17,		
Fa0/1	18, Fa(0/19					C=0/20	Fa0/21,		
Fa0/2	22, Fa	0/23						140/21,		
Fa0/24 10 zodiakl 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										
		SAID	MTU	Parent	RingNo	BridgeN	lo Stp	BrdgMode		
		ns2 								
0	enet	100001	1500	-	-	-	-	-	0	
10 0	enet	100010	1500	-	-	-	-	-	0	
20 0	enet	100020	1500	-	-	-	-	-	0	
_	enet	100030	1500	-	-	-	-	-	0	
	fddi	101002	1500	-	-	-	-	-	0	
_	tr	101003	1500	-	-	-	-	-	0	
1004	fdnet	101004	1500	-	-	-	ieee	-	0	
1005	trnet	101005	1500	-	-	-	ibm	-	0	
Trans	sl Tra	SAID ns2			_		_	_		
ı										
Remot	te SPA1	N VLANs								
	_	condary Typ			Ports					
					-					

Penjelasan: Pada Langkah ini port yang sudah terkonfiguasi ke dalam vlan yaitu port 0/1 sampai port 0/6,sedangkan port 0/7 untuk trunking antar switch.

5. Melakukan ping dari PC Leo ke PC pisces.

```
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:\>
```

Penjelasan: Hasil ping dari PC Leo ke PC Pisces "Request Timed Out" karena PC Leo dan PC Pisces tidak berada dalam satu VLAN yang sama dan memiliki network acces yang berbeda.

6. Trunking pada Switch 2

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

```
Switch#
Switch#show vlan
VLAN Name
                              Status Ports
                               active Fa0/1, Fa0/2, Fa0/3,
1 default
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
                             active
active
active
1002 fddi-default
1002 fddi-default
1003 token-ring-default
1004 fddinet-default
1004 fddinet-default
1005 trnet-default
                              active
VLAN Type SAID MTU Parent RingNo BridgeNo Stp BrdgMode
Transl Trans2
---- ----- ----- -----
1 enet 100001 1500 -
1002 fddi 101002
                 1500 -
1003 tr 101003 1500 -
1004 fdnet 101004 1500 -
                                          ieee -
                                                    0
0
1005 trnet 101005 1500 -
                                         ibm -
                                                    0
VLAN Type SAID MTU Parent RingNo BridgeNo Stp BrdgMode
Transl Trans2
Remote SPAN VLANs
Primary Secondary Type
Switch#
```

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

7. Melakukan Ping dari PC Leo ke PC Aries

```
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:\>
```

Penjelasan: Hasil Ping dari PC Leo ke PC Aries "Request Timed Out" karena PC Leo dan PC Aries tidak berada dalam satu VLAN meskipun memiliki network acces yang sama.

8. Melakukan Ping 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=118ms TTL=128
Reply from 172.21.1.3: bytes=32 time<lms 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:\>
```

Penjelasan: Hasil Ping dari PC Leo ke PC Aquarius "Reply" karena PC Leo dan PC Aquarius berada dalam satu VLAN dan memiliki network acces yang sama.

9. Melakukan Ping 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:\>
```

Penjelasan: Hasil Ping dari PC Leo ke PC Pisces "Request Timed Out" karena PC Leo dan PC Pisces tidak berada dalam satu VLAN dan memiliki network acces yang berbeda.

10. Melakukan Ping dari PC Libra ke PC Cancer

```
C:\>ping 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:\>
```

Penjelasan: Hasil Ping dari PC Libra ke PC Cancer "Request Timed Out" karena PC Libra dan PC Cancer tidak berada dalam satu VLAN meskipun memiliki network acces yang sama.

11. Melakukan Ping dari PC Libra ke PC Leo

```
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),
```

Penjelasan: Hasil Ping dari PC Libra ke PC Leo" "Request Time Out" karena PC Libra dan PC Leo tidak berada dalam satu VLAN dan memiliki network acces yang berbeda.