PRAKTIKUM JARINGAN KOMPUTER

MODUL IV

VIRTUAL LAN DAN TRUNKING

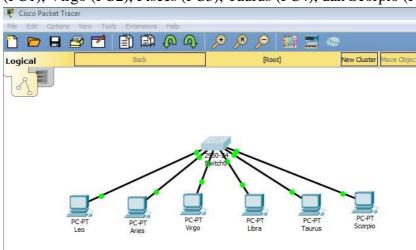
Nama: Agatha Febiananda P

NIM : L200170127

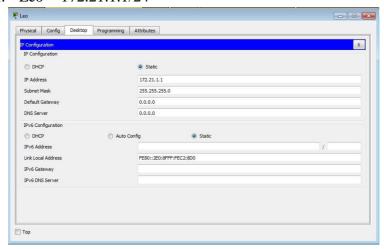
Kelas: C

Kegiatan 1. Topologi 1

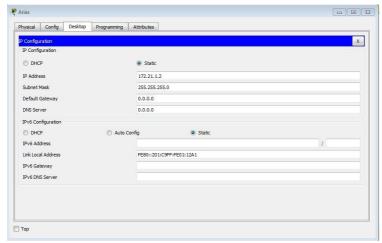
1. Menggunakan *packet tracker* buat topologi berikut ini dengan menggunakan switch dan beri nama masing-masing perangkat dengan SW1 (switch), Leo (PC0), Aries (PC1), Virgo (PC2), Pisces (PC3), Taurus (PC4), dan Scorpio (PC5)



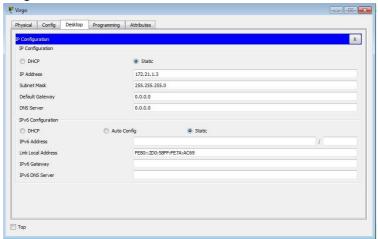
2. Konfigurasi masing-masing PC dengan nama dan alamat IP berikut ini: - Leo = 172.21.1.1/24



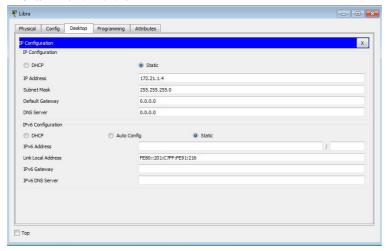
- Aries = 172.21.1.2/24



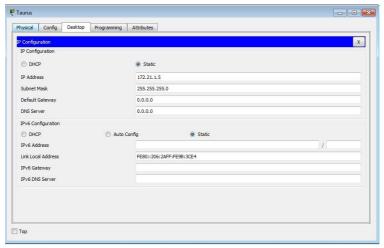
- Virgo = 172.21.1.3/24



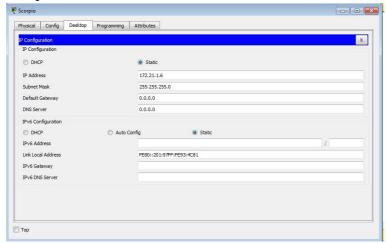
- Libra = 172.21.1.4/24



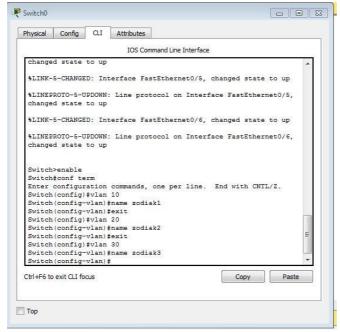
- Taurus = 172.21.1.5/24



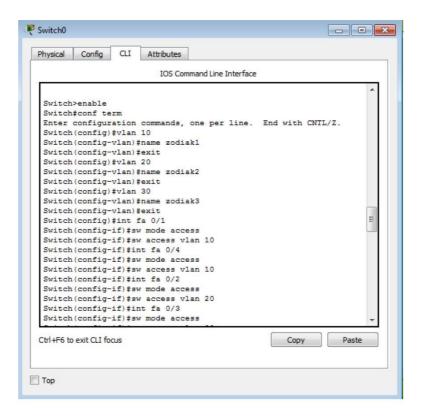
- Scorpio = 172.21.1.6/24

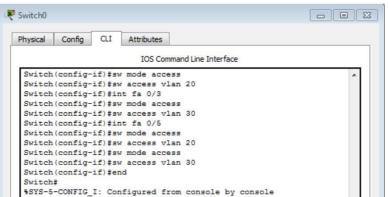


3. Konfigurasi pada switch dengan mode *user* atau mode *privileged*, buat 3 VLAN dengan nama zodiak1, zodiak2, dan zodiak3. Dengan cara klik pada switch 2 kali. Kemudian pilih CLI



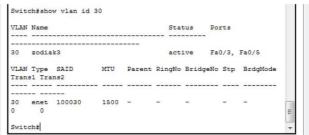
- 4. Pada mode *configuration*, konfigurasi port-port switch kedalam VLAN zodiak1, zodiak2, dan zodiak3 dengan anggota sebagai berikut
 - Zodiak1 = leo dan libra
 - Zodiak2 = aries dan taurus
 - Zodiak3 = virgo dan scorpio





5. Pada mode user atau privileged, lihat konfigurasi VLAN yang telah dibuat. - Informasi VLAN keseluruhan Switch#show vlan brief VLAN Name Ports Status 1 default Fa0/8, Fa0/9 Fa0/6, Fa0/7, 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 Fa0/24
10 zodiak1
20 zodiak2
30 zodiak3
1002 fddi-default
1003 token-ring-default
1004 fddinet-default Fa0/1, Fa0/4 active active active active active Fa0/2 Fa0/3, Fa0/5 active active Informasi VLAN 10 Switch#show vlan id 10 VLAN Name 10 zodiak1 active Fa0/1, Fa0/4 VLAN Type SAID Trans1 Trans2 MTU Parent RingNo BridgeNo Stp BrdgMode enet 100010 Informasi VLAN 20 Switch#show vlan id 20 20 zodiak2 active Fa0/2 VLAN Type SAID MTU Parent RingNo BridgeNo Stp BrdgMode Trans1 Trans2

- Informasi VLAN 30

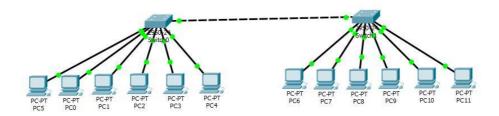


NO	NO. VLAN	NAMA VLAN	PORT	STATUS
1.	10	Zodiak1	Fa0/1, Fa0/4	active
2.	20	Zodiak2	Fa0/2	active
3.	30	Zodiak3	Fa0/3, Fa0/5	active

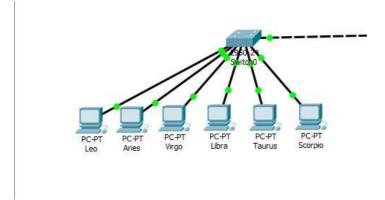
6A. Pada uraian diatas terlihat bahwa memiliki 3 Vlan yaitu 10,20,30 yang bernama zodiak1, zodiak2 dan zodiak3. Pada zodiak1 port yang menjadi anggota Vlan ini yaitu Fa0/1 dan Fa0/4. Lalu pada zodiak2 port yang menjadi anggota Vlan hanya Fa0/2 saja. Kemudian untuk zodiak3 port yang menjadi anggotanya adalah Fa0/3 dan Fa0/5. Semua Vlan disini berstatus ACTIVE.

Kegiatan 2. Topologi 2

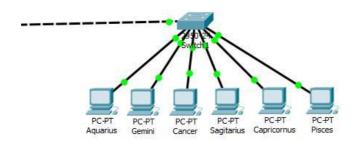
1. Menggunakan cicsco packet tracker buat topologi berikut ini dengan menggunakan switch Catalyst 2950



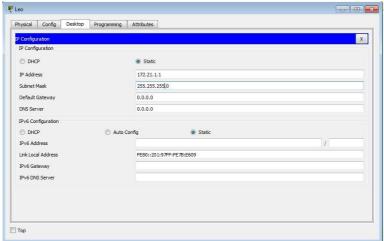
2. Beri nama masing-masing pernagkat dengan SW1 (switch 1), Leo (PC0), Aries (PC1), Virgo (PC2), Pisces (PC3), Taurus (PC4), dan Scorpio (PC5) untuk segmen switch 1



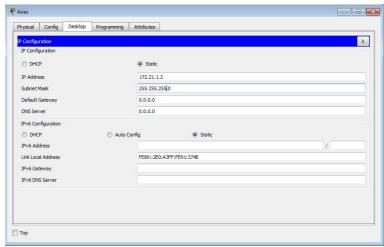
3. Beri nama masing-masing pernagkat dengan SW2 (switch 2), Aquarius (PC6), Gemini (PC7), Cancer (PC8), Sagitarius (PC9), Capricorcus (PC10), dan Pisces (PC11) untuk segmen switch 2



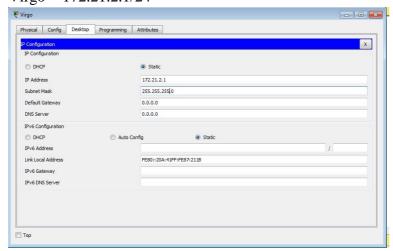
4. Konfigurasi masing-masing PC dengan nama dan alamat IP berikut ini : - Leo = 172.21.1.1/24



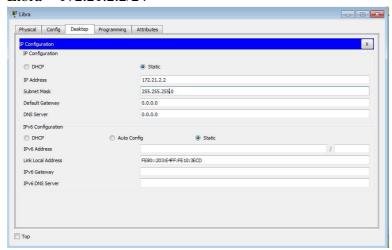
- Aries = 172.21.1.2/24



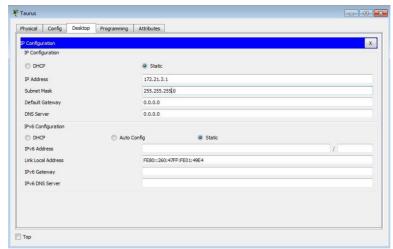
- Virgo = 172.21.2.1/24



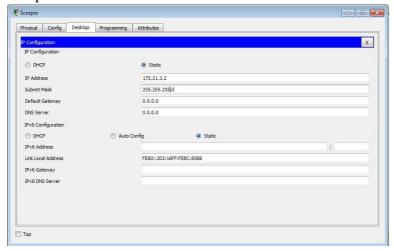
- Libra = 172.21.2.2/24



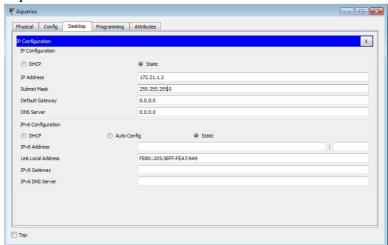
- Taurus = 172.21.3.1/24



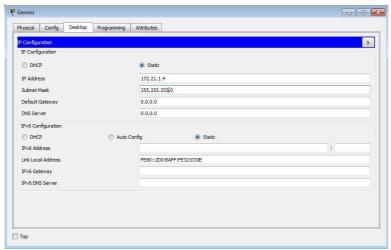
- Scorpio = 172.21.3.2/24



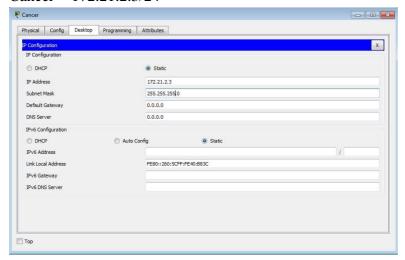
- Aquarius = 172.21.1.3/24



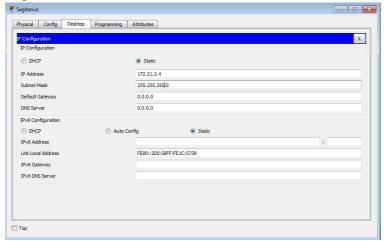
- Gemini = 172.21.1.4/24



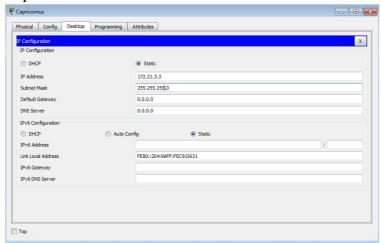
- Cancer = 172.21.2.3/24



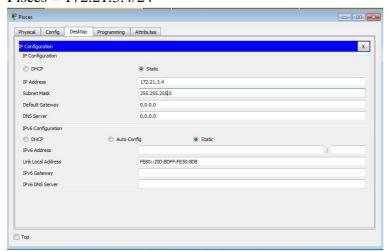
- Sagitarius = 172.21.2.4/24



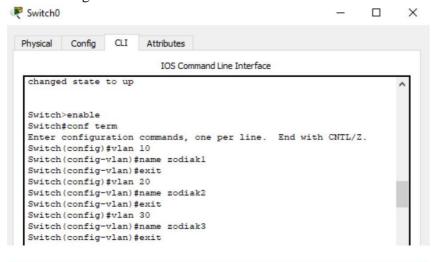
- Capricornus = 172.21.3.3/24

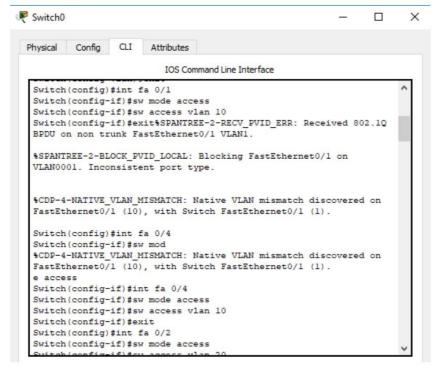


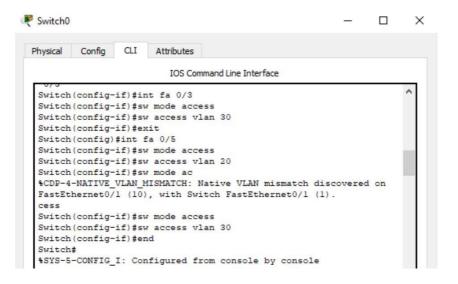
- Pisces = 172.21.3.4/24



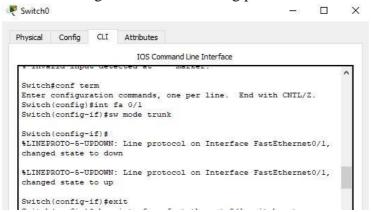
5. Lakukan langkah 4 dan 5 laboratorium 1 untuk switch 1



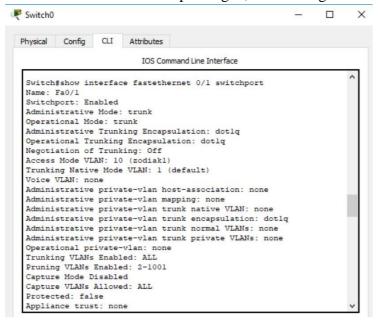


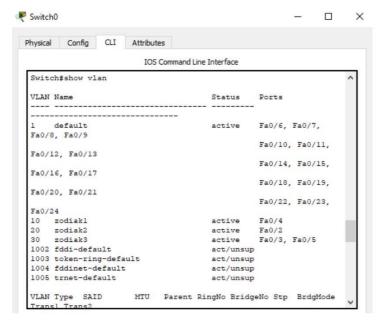


6. Lakukan konfigurasi VLAN trunking pada switch 1



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





8. Lakukan ping ke PC leo ke PC pisces

```
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),
```

8A. ping antar PC leo ke PC pisces request timed out karena PC leo dan PC pisces tidak dapat terkoneksi/terhubung akibat berbeda VLAN

9. Lakukan konfigurasi VLAN trunking pada switch 2 seperti langkah 6

```
Switch>enable
Switch#conf term
Enter configuration commands, one per line. End with CNTL/Z.
Switch(config)#interface fa 0/1
Switch(config-if)#switchport mode trunk
Switch(config-if)#exit
Switch(config)#
```

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

```
105 Commanu Line Interrace
Switch#show vlan
VLAN Name
                                     Status
                                              Ports
                                     active Fa0/2, Fa0/3,
    default
Fa0/4, Fa0/5
                                               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
1002 fddi-default
1003 token-ring-default
1004 fddinet-default
                                    act/unsup
                                     act/unsup
1005 trnet-default
                                     act/unsup
VLAN Type SAID MTU Parent RingNo BridgeNo Stp BrdgMode
```

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							
VLAN	Type	SAID	MTU	Parent	RingNo	BridgeNo	Stp	BrdgMode
Tran	sl Tran	152						

- 11. 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) #int fa 0/1
Switch(config-if) #sw mode access
Switch(config-if) #%SPANTREE-2-RECV PVID ERR: Received 802.1Q BPDU
on non trunk FastEthernet0/1 VLAN1.
%SPANTREE-2-BLOCK PVID LOCAL: Blocking FastEthernet0/1 on
VLAN0001. Inconsistent port type.
sw access
% Incomplete command.
Switch(config-if) #sw access vlan 10
Switch (config-if) #exit
Switch(config) #int fa 0/4
Switch(config-if) #sw mode access
Switch(config-if) #sw access vlan 10
Switch(config-if) #exit
Switch(config) #int fa 0/2
Switch(config-if) #sw mode access
Switch(config-if) #sw access vlan 20
Switch(config-if) #exit
Switch (config) #
%CDP-4-NATIVE_VLAN_MISMATCH: Native VLAN mismatch discovered on
FastEthernet0/1 (10), with Switch FastEthernet0/1 (1).
```

```
Switch (config) #int fa 0/3
Switch(config-if) #sw mode access
Switch(config-if) #sw access vlan 20
Switch(config-if) #sw access vlan 30
Switch (config-if) #
%CDP-4-NATIVE VLAN MISMATCH: Native VLAN mismatch discovered on
FastEthernet0/1 (10), with Switch FastEthernet0/1 (1).
Switch (config-if) #exit
Switch(config) #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
%CDP-4-NATIVE_VLAN_MISMATCH: Native VLAN mismatch discovered on
FastEthernet0/1 (10), with Switch FastEthernet0/1 (1).
```

- 12. Lakukan ping dari PC leo ke PC aries, PC leo ke PC aquarius, PC leo ke PC pisces, PC libra ke cancer, dan PC libra ke PC leo
 - + Leo ke 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),
```

+ Leo ke Aquarius

```
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),
```

+ Leo ke 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),
```

+ Libra ke Cancer

```
Packet Tracer PC Command Line 1.0
C:\>ping 172.21.2.3

Pinging 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),
```

+ Libra ke 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),
```

12A. Hasil ping dari PC Leo ke PC aries, PC Aquarius, PC Pisces, dan PC libra ke cancer, PC Leo RTO semua karena berbeda VLAN antara satu dengan yang lain.