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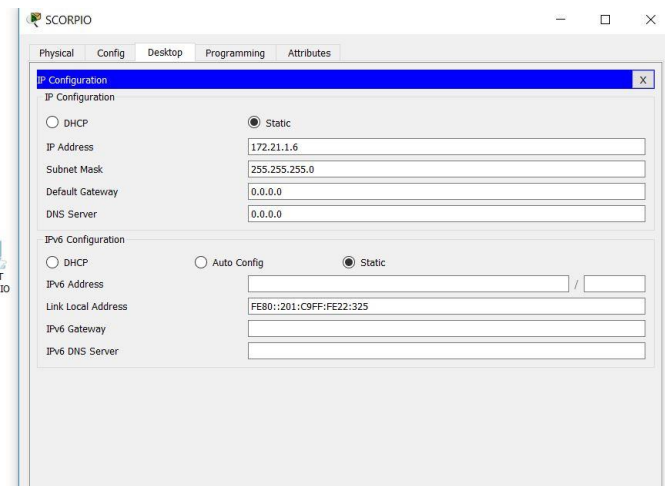
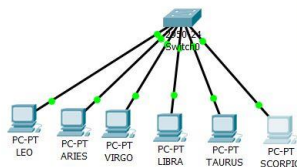
## LAPORAN PRAKTIKUM JARINGAN KOMPUTER

Belajar membuat VLAN pada cisco paket tracer.

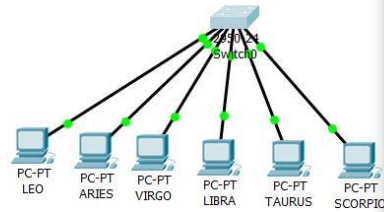
- **Topologi 1**

Nama PC Default	Nama PC Baru	IP Address
PC 0	Leo	172.21.1.1
PC 1	Aries	172.21.1.2
PC 2	Virgo	172.21.1.3
PC 3	Libra	172.21.1.4
PC 4	Taurus	172.21.1.5
PC 5	Scorpio	172.21.1.6

Konfigurasi masing masing PC dengan alamat IP dia atas.



Konfigurasi pada switch dengan mode previlage, buat 3 VLAN dengan nama zodiak1, zodiak2, zodiak3. Seperti pada gambar dibawah :



```

Physical  Config  CLI  Attributes
-----
IOS Command Line Interface

%LINK-3-CHANGED: Interface FastEthernet0/6, changed state to u
%LINEPROTO-5-UPDOWN: Line protocol on Interface FastEthernet0/
changed state to up

Switch>enable
Switch#conf term
Enter configuration commands, one per line. End with CNTL/Z.
Switch(config)#
Switch(config)#vlan zodiak1
^
% Invalid input detected at '^' marker.

Switch(config)#vlan 10
Switch(config-vlan)#name zodiak1
Switch(config-vlan)#
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)#

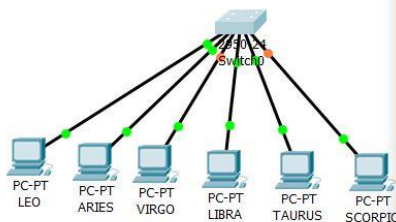
```

Masuk mode configuration, konfigurasi port-port switch ke dalam VLAN, dengan ketentuan :

Zodiak1 = leo dan libra

Zodiak2 = aries dan taurus

Zodiak3 = virgo dan scorpio



```

Physical  Config  CLI  Attributes
-----
IOS Command Line Interface

Switch#
Switch#conf term
Enter configuration commands, one per line. End with CNTL/Z.
Switch(config)#interface Fastethernet 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)#

```

Masuk ke mode previlage lagi, kemudian lihat konfigurasi VLAN yang sudah dibuat.

```
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#show vlan id 10
VLAN Name                Status    Ports
-----
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#
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#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#
```

#### TUGAS 6A

No	Variable	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 0/5
4	Status	Active	Active	Active

#### Tugas 6B :

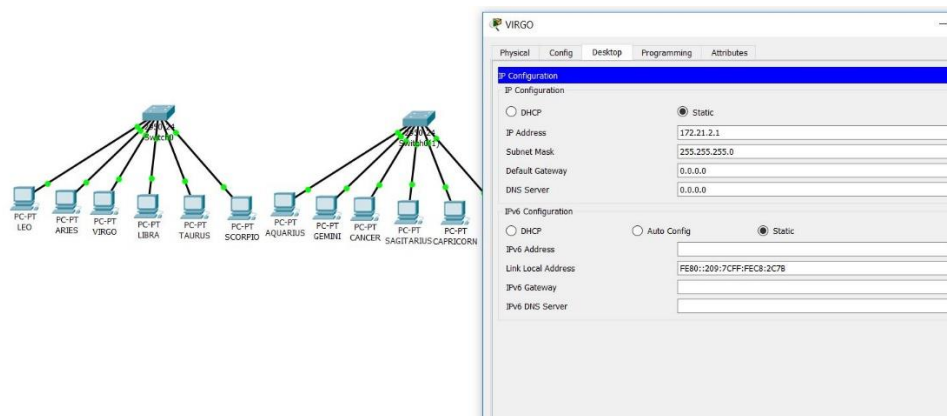
Penjelasan dari table diatas :

- Nomor Vlan 10 nama Vlan zodiak1, memiliki port Fa 0/2(leo) dan Fa 0/4 (Libra). Yang sudah di konfigurasi sesuai dengan yang ada di modul yang statusnya bersifat active. Yang setiap PC sudah mempunya Ip nya masing masing

- Nomor Vlan 20 nama Vlan zodiak1, memiliki port Fa 0/2(Aries) dan Fa 0/5 (Taurus). Yang sudah di konfigurasi sesuai dengan yang ada di modul yang statusnya bersifat active. Yang setiap PC sudah mempunyai Ip nya masing masing
- Nomor Vlan 30 nama Vlan zodiak1, memiliki port Fa 0/3(virgo) dan Fa 0/6 (Scorpio). Yang sudah di konfigurasi sesuai dengan yang ada di modul yang statusnya bersifat active. Yang setiap PC sudah mempunyai Ip nya masing masing

## • Topologi 2

Untuk langkah nomor 1,2,3,4



## 5. untuk SW1 Sudah di sertakan pada SS an kegiatan pertama

Untuk SW2 :

PhysicalConfigCLIAttributes

IOS Command Line Interface

%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)#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)#exit

Switch#

%SYS-5-CONFIG\_I: Configured from console by console

Switch#conf term

Enter configuration commands, one per line. End with CNTL/Z.

Switch(config)#inter Fa 0/1

Switch(config-if)#switchport mode acces

Switch(config-if)#switchport access vlan 10

Switch(config-if)#inter 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)#sw mode access

Switch(config-if)#sw access vlan 20

Switch(config-if)#inter Fa 0/4

Switch(config-if)#sw mode access

Switch(config-if)#sw access vlan 20

Switch(config-if)#exit

Switch(config)#inter Fa 0/5

Switch(config-if)#sw mode access

Switch(config-if)#sw access vlan 30

Ctrl+F6 to exit CLI focus

langkah Nomor 6 dan 7 , konfigurasi VLAN trunking pada switch 1 dan melihat konfigurasi trunking yang sudah dibuat

IOS Command Line Interface

Switch>enable

Switch#conf term

Enter configuration commands, one per line. End with CNTL/Z.

Switch(config)#interface fa 0/7

Switch(config-if)#switchport mode trunk

Switch(config-if)#

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

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

Switch(config-if)#exit

Switch(config)#exit

Switch#

%SYS-5-CONFIG\_I: Configured from console by console

Switch#show interface 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

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

```

Switch#show interface 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

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 Transl 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
--More--

```

Ctrl+F6 to exit CLI focus

## 7A: Penjelasan

Hasil yang diperoleh pada mode privileged pada switch 1 yaitu pada vlans allowed on trunk mempunyai nilai 1-1005 pada port fa 0/7 yang artinya menggunakan jaringan skala kecil dan menengah. Vlan allowed and active in management domain (config untuk manajemen switch) memiliki nilai 1,10,20,30. vlans spanning tree forwarding state and not pruned mempunyai nilai 1,10,20,30.

Mempunyai status trunking mode on, encapsulation 802.1q ( protokol umum yang didukung oleh banyak vektor)

## 8. ping PC leo dan PC pisces

```

Packet Tracer PC Command Line 1.0
C:\>ping 172.21.3.3

Pinging 172.21.3.3 with 32 bytes of data:

Request timed out.
Request timed out.
Request timed out.
Request timed out.

Ping statistics for 172.21.3.3:
    Packets: Sent = 4, Received = 0, Lost = 4 (100% loss),

C:\>

```

Penjelasan :

Hasil ping dari pc leo ke pc pisces bukanlah reply, tetapi request timed out (RTO), karena permintaan koneksi yang lama dan subnet address nya sudah berbeda.

#### 9. Melakukan konfigurasi VLAN trunking pada switch 2

```
Switch>enable
Switch#conf term
Enter configuration commands, one per line.  End with CNTL/Z.
Switch(config)#interface fa 0/7
Switch(config-if)#sw mode trunk
Switch(config-if)#exit
Switch(config)#exit
Switch#
%SYS-5-CONFIG_I: Configured from console by console
Switch#
```

#### 10. pada Mode privileged

Physical
Config
**CLI**
Attributes

IOS Command Line Interface

```

Switch>enable
Switch#conf term
Enter configuration commands, one per line. End with CNTL/Z.
Switch(config)#interface fa 0/7
Switch(config-if)#sw mode trunk
Switch(config-if)#exit
Switch(config)#exit
Switch#
%SYS-5-CONFIG_I: Configured from console by console

Switch#show 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, Fa0/2
20 zodiak2	active	Fa0/3, Fa0/4
30 zodiak3	active	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

```

--More--

```

Ctrl+F6 to exit CLI focus

Physical
Config
**CLI**
Attributes

IOS Command Line Interface

```

%SYS-5-CONFIG_I: Configured from console by console

Switch#show interface 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

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
1	enet	100001	1500	-	-	-	-	0	0
10	enet	100010	1500	-	-	-	-	0	0
20	enet	100020	1500	-	-	-	-	0	0
30	enet	100030	1500	-	-	-	-	0	0

```

--More--

```

Ctrl+F6 to exit CLI focus

Penjelasan 10A :



Hasil yang diperoleh pada mode privileged pada switch 1 yaitu pada vlans allowed on trunk mempunyai nilai 1-1005 pada port fa 0/7 yang artinya menggunakan jaringan skala kecil dan menengah. Vlan allowed and active in management domain (config untuk manajemen switch) memiliki nilai 1,10,20,30. vlans spanning tree forwarding state and not pruned mempunyai nilai 1,10,20,30.

Mempunyai status trunking mode on, encapsulation 802.1q ( protokol umum yang didukung oleh banyak vektor)

## 11. Konfigurasi port port ke zzodiak1

Physical	Config	CLI	Attributes
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IOS Command Line Interface

```
%LINEPROTO-S-UPDOWN: Line protocol on Interface FastEthernet0/6, changed state to up

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)#exit
Switch(config)#int Fa 0/2
Switch(config-if)#sw mode access
Switch(config-if)#sw access vlan 20
Switch(config-if)#int Fa 0/5
Switch(config-if)#sw mode access
Switch(config-if)#sw access vlan 20
Switch(config-if)#exit
Switch(config)#int Fa 0/3
Switch(config-if)#sw mode access vlan 30'
^
% Invalid input detected at '^' marker.

Switch(config-if)#sw mode access vlan 30
^
% Invalid input detected at '^' marker.

Switch(config-if)#sw mode access
Switch(config-if)#sw access vlan 30
Switch(config-if)#int Fa 0/6
Switch(config-if)#sw mode access
Switch(config-if)#sw access vlan 30
Switch(config-if)#exit
Switch(config)#exit
Switch#
%SYS-5-CONFIG_I: Configured from console by console

Switch#show id 10
^
% Invalid input detected at '^' marker.
```

Ctrl+F6 to exit CLI focus

12. Lakukan tes PING dari PC leo ke Aries, Leo keaquarius, leo ke pisces, libra ke cancer , dan libra ke leo

a) Ping 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:\>|
```

b) Ping 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<1ms 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 = 0ms, Average = 0ms

C:\>|
```

c) Ping 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:\>|
```

- d) Ping PC libra ke PC 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),

C:\>|
```

- e) Ping 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),

C:\>|
```

#### Penjelasan 12A:

Hasil ping PC leo ke PC pisces adalah request time out permintaan koneksi yang lama dan karena subnet address nya sudah berbeda.