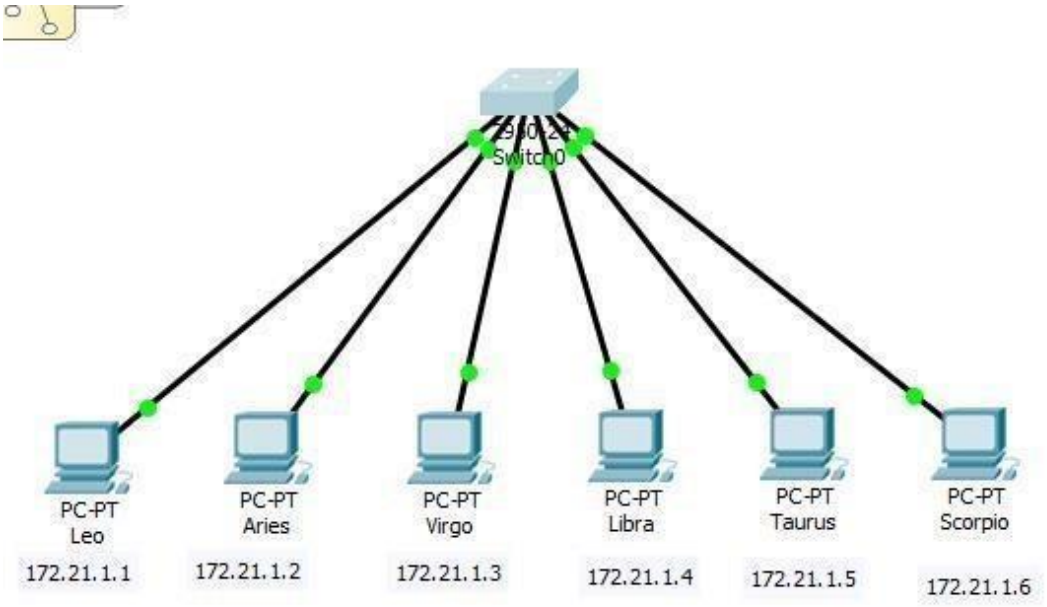
Nama : Guntur Jatmiko
NIM : L200180039
Kelas : B

MODUL 4

Kegiatan 1.



Konfigurasi pada switch dengan mode user atau mode privilaged, membuat 3 VLAN dengan nama zodiac

```
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)#
%LINK-5-CHANGED: Interface FastEthernet0/1, changed state to down

%LINEPROTO-5-UPDOWN: Line protocol on Interface FastEthernet0/1, changed state to down

%LINK-5-CHANGED: Interface FastEthernet0/1, changed state to up

%LINEPROTO-5-UPDOWN: Line protocol on Interface FastEthernet0/1, 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
```

1, zodiak2, zodiak3

Konfigurasi port-port switch ke dalam VLAN zodiak1, zodiak2, zodiak3 dengan anggota sebagai berikut:

- zodiak1 : Leo dan Libra
- zodiak2 : Aries dan Taurus
- zodiak3 : Virgo dan Scorpio

```
Switch(config)#int fa 0/2
Switch(config-if)#sw mode access
Switch(config-if)#switchport access vlan 10
Switch(config-if)#int fa 0/2
Switch(config-if)#sw mode access
Switch(config-if)#switchport access vlan 10
Switch(config-if)#int fa 0/5
Switch(config-if)#sw mode access
Switch(config-if)#switchport access vlan 10
Switch(config-if)#int fa 0/3
Switch(config-if)#sw mode access
Switch(config-if)#switchport access vlan 20
Switch(config-if)#int fa 0/6
Switch(config-if)#sw mode access
Switch(config-if)#switchport access vlan 20
Switch(config-if)#int fa 0/4
Switch(config-if)#sw mode access
Switch(config-if)#switchport access vlan 30
Switch(config-if)#int fa 0/7
Switch(config-if)#sw mode access
Switch(config-if)#switchport access vlan 30
Switch(config-if)#exit
Switch(config)#exit
```

Melihat konfigurasi VLAN yang telah dibuat:

```
show vlan brief

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    Fa0/2, Fa0/5
20   zodiak2                           active    Fa0/3, Fa0/6
30   zodiak3                           active    Fa0/4, Fa0/7
1002 fddi-default                      active
1003 token-ring-default                active
1004 fddinet-default                   active
1005 trnet-default                     active
Switch#
```

```
Switch#show vlan id 10

VLAN Name                              Status    Ports
---- --------------------------------- ---------
-------------------------------
10   zodiak1                           active    Fa0/2, Fa0/5

VLAN Type  SAID       MTU   Parent RingNo BridgeNo Stp  BrdgMode
Trans1 Trans2
---- ----- ---------- ----- ------ ------ -------- ---- --------
------ ------
10   enet  100010     1500  -      -      -        -    -        0
0

Switch#show vlan id 20

VLAN Name                              Status    Ports
---- --------------------------------- ---------
-------------------------------
20   zodiak2                           active    Fa0/3, Fa0/6

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

Switch#show vlan id 30

VLAN Name                              Status    Ports
---- --------------------------------- ---------
-------------------------------
30   zodiak3                           active    Fa0/4, Fa0/7

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

Switch#
```

Tugas 6A

```
Switch>show vlan id 10

VLAN Name                              Status    Ports
---- --------------------------------- ---------
-------------------------------
10   zodiak1                           active    Fa0/2, Fa0/5

VLAN Type  SAID       MTU   Parent RingNo BridgeNo Stp  BrdgMode
Trans1 Trans2
---- ----- ---------- ----- ------ ------ -------- ---- --------
------ ------
10   enet  100010     1500  -      -      -        -    -        0
0
```

Nomor VLAN 10
Nama : zodiak1
Port : Fa 0/2 , Fa 0/5

Status : Active

```
Switch>show vlan id 20

VLAN Name                             Status    Ports
---- -------------------------------- ---------
-------------------------------
20   zodiak2                          active    Fa0/3, Fa0/6

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

Nomor VLAN 20
Nama : zodiak2
Port : Fa 0/3 , Fa 0/6
Status : Active

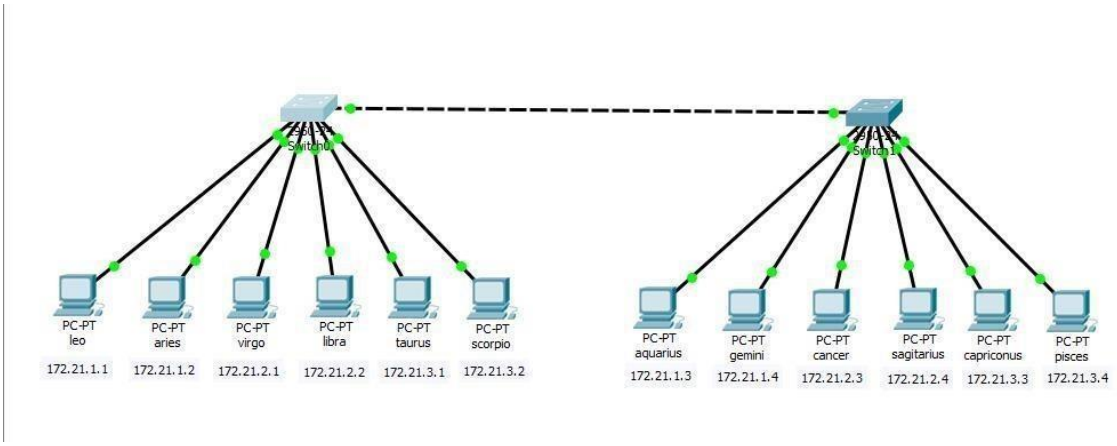
```
Switch>show vlan id 30

VLAN Name                             Status    Ports
---- -------------------------------- ---------
-------------------------------
30   zodiak3                          active    Fa0/4, Fa0/7

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

Nomor VLAN 30
Nama : zodiak3
Port : Fa 0/4 , Fa 0/7
Status : Active

Tugas 6B

Hasil yang saya dapat dari tugas 6A adalah nomor vlan yang saya buat menggunakan vlan 10, vlan 20, dan vlan 30 dengan nama zodiak1, zodiak2, dan zodiak3. Dimana memasukkan port yang berjumlah 6 dibagi menjadi masing-masing 2 port. Menggunakan switchport mode access lalu switchport access vlan 10 dan ketik interface FastEthernet 0/1.

Kegiatan 2.



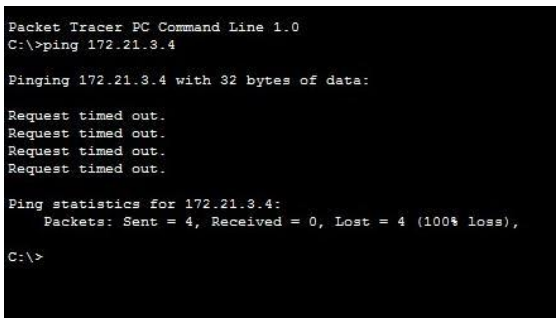
Konfigurasi pada switch dengan mode user atau mode privilaged, membuat 3 VLAN dengan nama zodiak1, zodiak2, zodiak3 dan Konfigurasikan port-port switch ke dalam VLAN zodiak1, zodiak2, zodiak3:

```
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)#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)#
Switch(config)#int fa 0/2
Switch(config-if)#sw mode access
Switch(config-if)#sw access vlan 10
Switch(config-if)#int fa 0/3
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
%LINK-5-CHANGED: Interface FastEthernet0/4, changed state to down
```

Konfigurasi VLAN trunking pada switch 1:

```
Switch(config-if)#int fa 0/5
Switch(config-if)#sw mode access
Switch(config-if)#sw access vlan 10
Switch(config-if)#int fa 0/6
Switch(config-if)#sw mode access
Switch(config-if)#sw access vlan 10
Switch(config-if)#int fa 0/7
Switch(config-if)#sw mode access
Switch(config-if)#sw access vlan 10
Switch(config-if)#exit
Switch(config)#end
Switch#
%SYS-5-CONFIG_I: Configured from console by console

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

Switch(config-if)#
%LINEPROTO-5-UPDOWN: Line protocol on Interface FastEthernet0/1,
changed state to down

%LINEPROTO-5-UPDOWN: Line protocol on Interface FastEthernet0/1,
changed state to up
changed state to up

Switch(config-if)#exit
Switch(config)#end
Switch#
%SYS-5-CONFIG_I: Configured from console by console

Switch#show interface fastethernet 0/1 switcport
                                               ^
% Invalid input detected at '^' marker.

Switch#show interface fastethernet 0/1 switchport
Name: Fa0/1
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
```

Melakukan ping dari PC Leo ke PC Pisces:



Konfigurasi VLAN trunking pada switch 2:

```
Switch>en
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)#
```

Melihat Konfigrasi VLAN pada switch 2:

```
Switch#show vlan

VLAN Name                              Status    Ports
---- --------------------------------- ---------
--------------------------------
1    default                           active    Fa0/2, Fa0/3, 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                      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
```

```
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

 --More--
```

Konfigurasi port-port switch ke dalam VLAN zodiak1, zodiak2, zodiak3 dengan anggota sebagai berikut:

- zodiak1 : Aquarius dan Gemini
- zodiak2 : Cancer dan Sagitarius
- zodiak3 : Capricornus dan Pisces

```
Switch(config)#interface Fastethernet 0/2
Switch(config-if)#switchport mode access
Switch(config-if)#switchport access vlan10
                                         ^
% Invalid input detected at '^' marker.

Switch(config-if)#switchport access vlan 10
Switch(config-if)#interface Fastethernet 0/3
Switch(config-if)#switchport mode access
Switch(config-if)#switchport access vlan 10
Switch(config-if)#interface Fastethernet 0/4
Switch(config-if)#switchport mode access
Switch(config-if)#switchport access vlan 20
Switch(config-if)#interface Fastethernet 0/5
Switch(config-if)#switchport mode access
Switch(config-if)#switchport access vlan 20
Switch(config-if)#interface Fastethernet 0/6
Switch(config-if)#switchport mode access
Switch(config-if)#switchport access vlan 30
Switch(config-if)#interface Fastethernet 0/7
Switch(config-if)#switchport mode access
Switch(config-if)#switchport access vlan 30
Switch(config-if)#exit
```

Melihat konfigurasi VLAN pada switch 2:

```
Switch#show vlan brief

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    Fa0/2, Fa0/3
20   zodiak2                           active    Fa0/4, Fa0/5
30   zodiak3                           active    Fa0/6, Fa0/7
1002 fddi-default                      active
1003 token-ring-default                active
1004 fddinet-default                   active
1005 trnet-default                     active
Switch#
```

Ping antar PC:

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),
```

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=12ms 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 = 12ms, Average = 3ms
```

Tugas 7A

Hasil dari konfigurasi Trunk di switch satu dan switch dua adalah mengaktifkan switch port Fa 0/1 (port yang digunakan untuk truk) dan Administrative Mode mejadi trunk serta Operational Mode trunk.

```
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:\>
```

Tugas 8A

```
Switch#show vlan brief

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    Fa0/2, Fa0/3
20   zodiak2                           active    Fa0/4, Fa0/5
30   zodiak3                           active    Fa0/6, Fa0/7
1002 fddi-default                      active
1003 token-ring-default                active
1004 fddinet-default                   active
1005 trnet-default                     active
Switch#
```

Setelah melakukan konfigurasi port pada switch 2 dan konfigurasi trunking, maka port masuk ke dalam VLAN zodiak1, zodiak2, zodiak3 yang telah ditentukan.

Tugas 10A

```
VLAN Type  SAID       MTU   Parent RingNo BridgeNo Stp  BrdgMode
Trans1 Trans2

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)#
Switch(config)#interface FastEthernet0/7
Switch(config-if)#
Switch(config-if)#exit
Switch(config)#interface FastEthernet0/1
Switch(config-if)#switchport mode access
Switch(config-if)#switchport access vlan 10
Switch(config-if)#interface FastEthernet0/2
Switch(config-if)#switchport mode access
Switch(config-if)#switchport access vlan 10
Switch(config-if)#interface FastEthernet0/3
Switch(config-if)#switchport mode access
Switch(config-if)#switchport access vlan 20
Switch(config-if)#interface FastEthernet0/4
Switch(config-if)#switchport mode access
Switch(config-if)#switchport access vlan 20
Switch(config-if)#interface FastEthernet0/5
Switch(config-if)#switchport mode access
Switch(config-if)#switchport access vlan 30
Switch(config-if)#interface FastEthernet0/6
Switch(config-if)#switchport mode access
Switch(config-if)#switchport access vlan 30
Switch(config-if)#exit
Switch(config)#
```

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),
```

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=12ms 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 = 12ms, Average = 3ms
```

Ping PC Leo ke PC Pisces

```
C:\>
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),
```

Ping PC Libra ke PC Cancer

```
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),
```

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),
```

Tugas 12A

Dari langkah 8, hasil yang diperoleh yaitu akan mendapatkan hasil *reply* apabila PC berada pada jaringan dan VLAN yang sama. Sedangkan apabila hanya sama dari salah satu vlan atau jaringan maka hasilnya juga akan RTO.