Nama : Veny Fitriana Isnaini

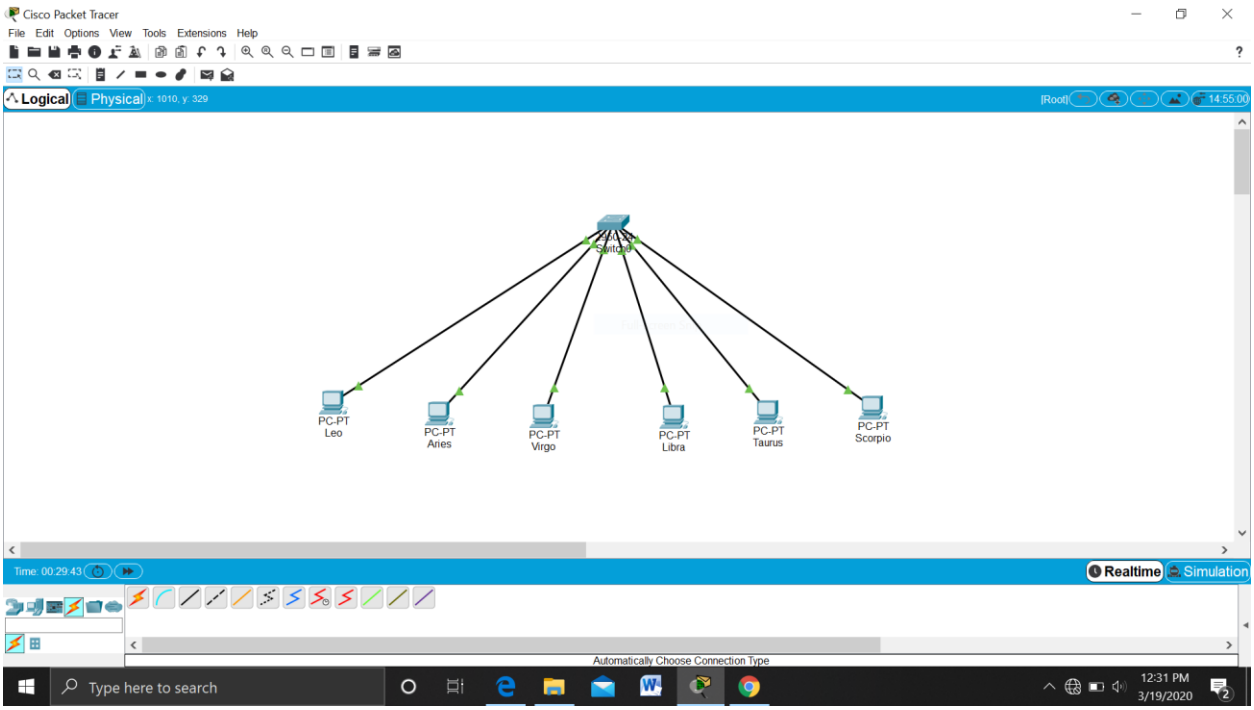
NIM : L200180045

Kelas : B

Modulke-4

Virtual LAN dan Trunking

1. Topologi



Tugas 6A :

VLAN 10

No	Variable	Nilai
1	Nomer Vlan	10
2	Nama Vlan	Zodiak1
3	Port	Fa0/1, Fa0/4
4	Status	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 Trans1 Trans2
---- ----- ---------- ----- ------ ------ -------- ----
-------- ------ ------
10   enet  100010     1500  -      -      -        -    -
0      0
```

VLAN 20

No	Variable	Nilai
1	Nomer Vlan	20
2	Nama Vlan	Zodiak2
3	Port	Fa0/2, Fa0/5
4	Status	Active

```
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 Trans1 Trans2
---- ----- ---------- ----- ------ ------ -------- ----
-------- ------ ------
20   enet  100020     1500  -      -      -        -    -
0      0
```

VLAN 30

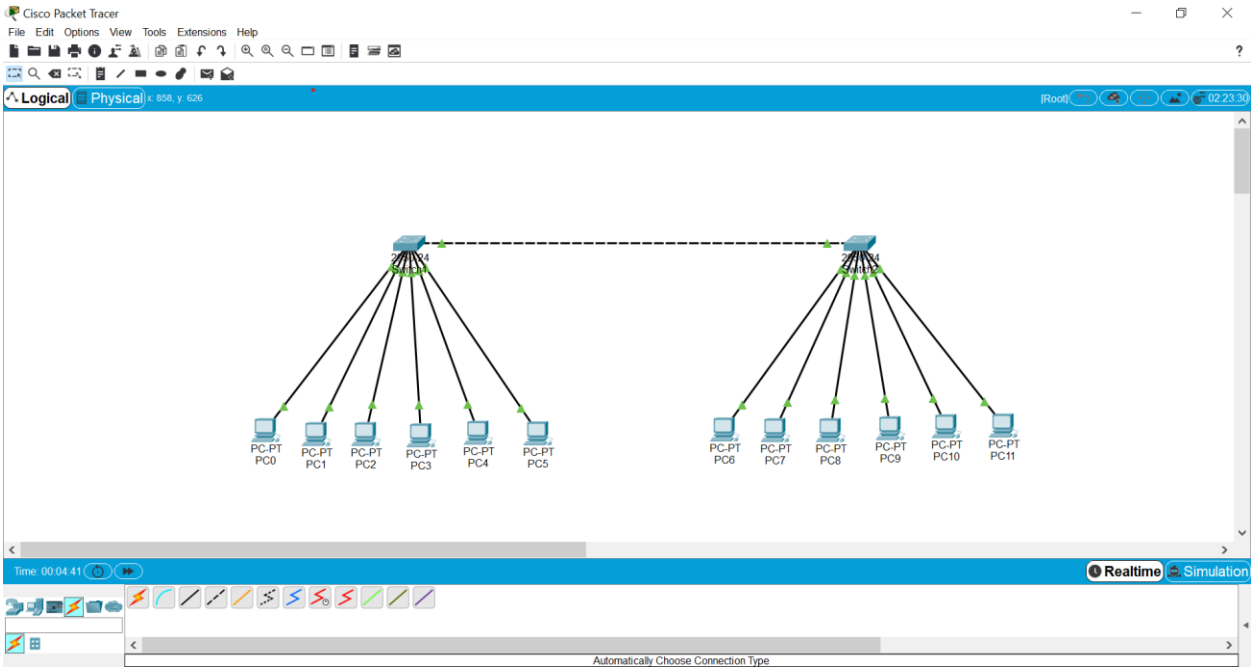
No	Variable	Nilai
1	Nomer Vlan	30
2	Nama Vlan	Zodiak3
3	Port	Fa0/3, Fa0/6
4	Status	Active

```
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 Trans1 Trans2
---- ----- ---------- ----- ------ ------ -------- ----
-------- ------ ------
30   enet  100030     1500  -      -      -        -    -
0      0
```

Tugas 6B :

- Telah membuat Vlan 10 bernama “zodiak1” mempunyai port Fa0/1, Fa0/4 berstatus aktif
- Telah membuat Vlan 20 bernama “zodiak2” mempunyai port Fa0/2, Fa0/5 berstatus aktif
- Telah membuat Vlan 30 bernama “zodiak3” mempunyai port Fa0/3, Fa0/6 berstatus aktif

2. Topologi



Configurasi pada switch untuk membuat 3 Vlan dengan nama zodiak1, zodiak2, zodiak3

```
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)#vlan 20
Switch(config-vlan)#name zodiak2
Switch(config-vlan)#vlan 30
Switch(config-vlan)#name zodiak3
Switch(config-vlan)#exit
Switch(config)#
```

Melakukan konfigurasi port-port switch ke dalam Vlan zodiak1, zodiak2, dan zodiak3 pada switch 1

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

Konfigurasi Vlan trunking pada switch 1

```
Switch(config-if)#
Switch(config-if)#interface FastEthernet0/7
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
exit
Switch(config)#
```

Melihat konfigurasi trunking pada switch 1

```
Switch(config)#exit
Switch#
%SYS-5-CONFIG_I: Configured from console by console
show interface fa 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
```

```
Switch#show 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

Switch#
```

```
Switch#show 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

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
1002 fddi  101002     1500  -      -      -        -    -        0      0
```

Tugas 7A : Hasil yang diperoleh dari langkah 7

Mengaktifkan switch port Fa0/1(port yang digunakan untuk trunk), Administrative mode menjadi trunk dan juga Operational Mode trunk.

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:\>
```

Tugas 8A : Jelaskan secara singkat mengapa hasil yang anda peroleh dari langkah 8 mendapatkan status “RTO”? Ping dari PC leo ke PC Pisces mendapatkan status RTO atau Request Time Out karena keduanya berada pada jaringan yang berbeda dan dalam kondisi VLAN keduanya berada dalam VLAN yang berbeda(VLAN zodiak1 dan VLAN zodiak2)

Konfigurasi trunking Vlan pada switch 2

```
Switch>enable
Switch#vlan database
% Warning: It is recommended to configure VLAN from
config mode,
  as VLAN database mode is being deprecated. Please
consult user
  documentation for configuring VTP/VLAN in config mode.

Switch(vlan)#exit
APPLY completed.
Exiting....
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)#exit
Switch(config)#
```

Melihat konfigurasi trunking pada switch 2

```
Switch#
%SYS-5-CONFIG_I: Configured from console by console
show 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

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

Remote SPAN VLANs
------------------------------------------------------------------------------

Primary Secondary Type              Ports
------- --------- ----------------- ------------------------------------------
```

Tugas 10A : Jelaskan secara singkat hasil yang anda peroleh dari langkah 10.

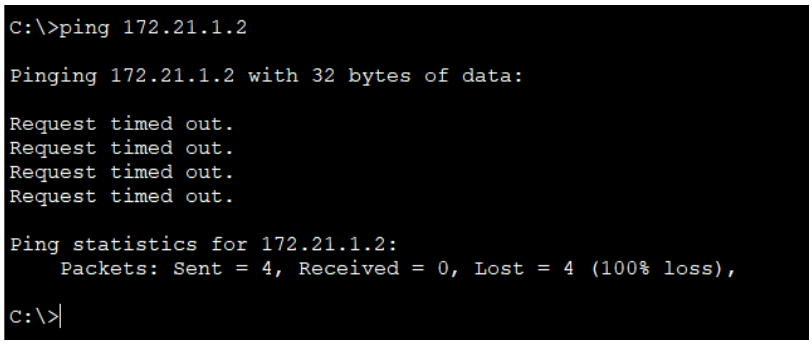
Dapat disimpulkan bahwa pada konfigurasi trunking sudah dilakukan dan dalam switch menunjukkan konfigurasi trunking sudah berjalan. Port yang telah didaftarkan dalam trunking memiliki kapasitas untuk memanaged beberapa hal yang berkaitan dengan domain(1, 10, 20, 30).

Konfigurasi port-port switch ke dalam Vlan zodiak1, zodiak2, zodiak3

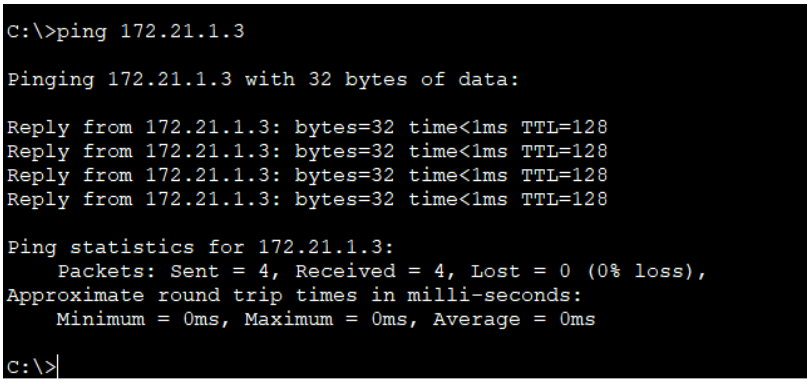
```
Switch#
Switch#conf term
Enter configuration commands, one per line.  End with CNTL/Z.
Switch(config)#vlan 10
Switch(config-vlan)#name zodiak1
Switch(config-vlan)#exit
Switch(config)#vlan 20
Switch(config-vlan)#name zodiak2
Switch(config-vlan)#exit
Switch(config)#vlan 30
Switch(config-vlan)#name zodiak3
Switch(config-vlan)#exit
Switch(config)#
Switch(config)#interface FastEthernet0/1
Switch(config-if)#
Switch(config-if)#
Switch(config-if)#switchport access vlan 10
Switch(config-if)#
Switch(config-if)#exit
Switch(config)#interface FastEthernet0/2
Switch(config-if)#
Switch(config-if)#
Switch(config-if)#exit
Switch(config)#interface FastEthernet0/2
Switch(config-if)#
Switch(config-if)#
Switch(config-if)#switchport access vlan 10
Switch(config-if)#
Switch(config-if)#exit
Switch(config)#interface FastEthernet0/3
Switch(config-if)#
Switch(config-if)#
Switch(config-if)#switchport access vlan 20
Switch(config-if)#
Switch(config-if)#exit
Switch(config)#interface FastEthernet0/4
Switch(config-if)#
Switch(config-if)#
Switch(config-if)#switchport access vlan 20
Switch(config-if)#
Switch(config-if)#exit
Switch(config)#interface FastEthernet0/5
Switch(config-if)#
Switch(config-if)#
```

Uji Coba Ping

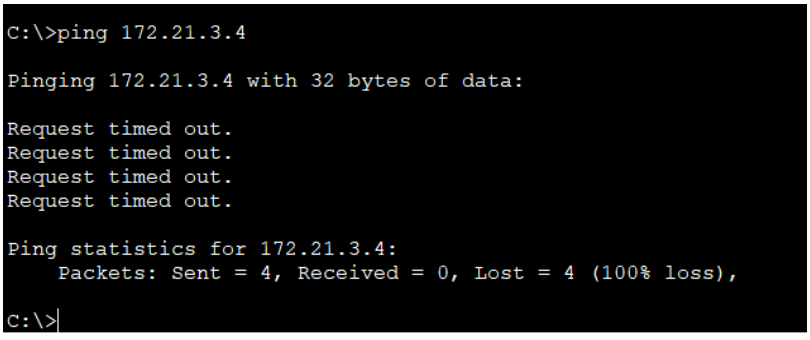
Leo ke Aries



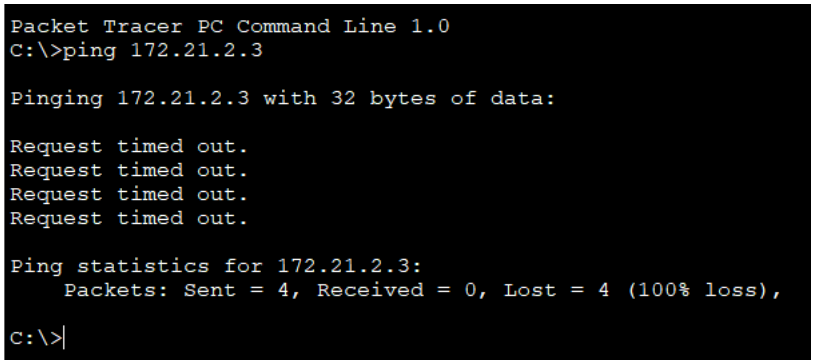
Leo ke Aquarius



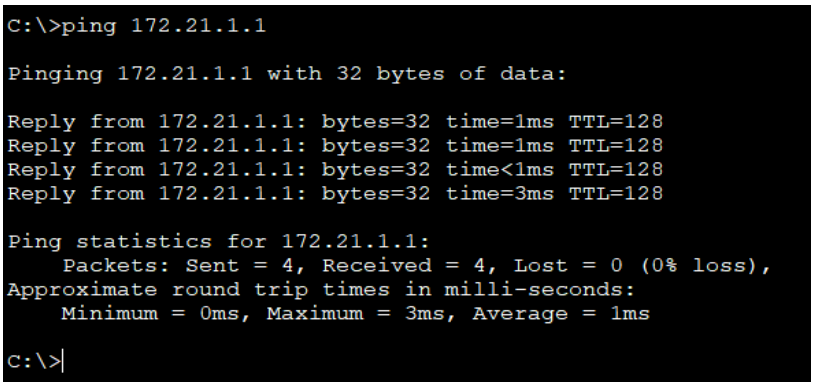
Leo ke Pisces



Libra ke Cancer



Libra ke Leo



Tugas 12 A :

Dari beberapa hasil percobaan diatas, dapat disimpulkan apabila pc berada pada vlan yang sama, maka akan meghasilkan balasan atau reply dari IP tujuan pada saat melakukan pengujian Ping, seperti contohnya pc Leo ke pc Aquarius dan pc Libra ke PC Leo.

Akan tetapi apabila berada pada Vlan yang berbeda akan menghasilkan status RTO, seperti pada contoh pc Leo ke pc Aries, pc Leo ke pc Pisces, dan pc Libra ke pc Cancer.