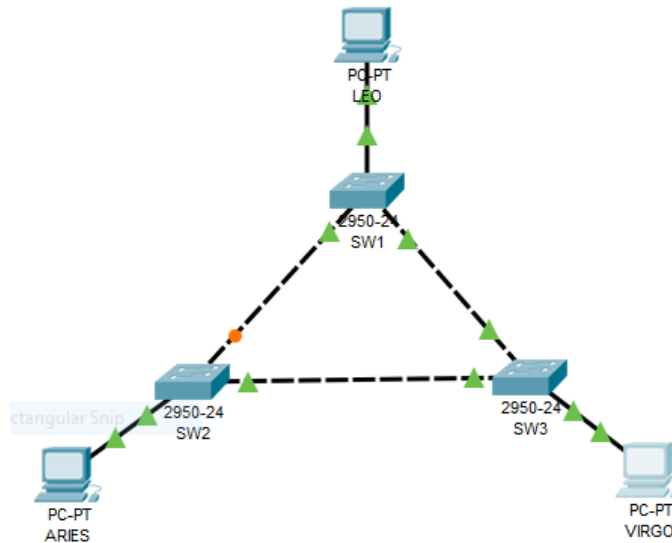


**Nama : Berlian Vidia Puspa**  
**NIM : L200180107**  
**Kelas : D**  
**Modul : BAB VI (Spanning Tree Protocol)**

### 1. Kegiatan-1 (Topologi 1)

1. Menggunakan Packet Tracer buat topologi berikut ini dengan menggunakan switch Catalyst 2950. Dan pemberian nama switch dari mode user



#### Tugas1A:

Tulis langkah pembuatan topologi.

- > - Masuk Cisco Packet Tracer
- Lalu masuk ke tab “Switches”
- Pilih switch catalyst 2950 dan drag ke dalam cisco sebanyak 3 kali
- Masuk ke tab “End Device”
- Lalu pilih PC, setelah itu drag ke dalam cisco sebanyak 3 kali
- Mengganti nama sesuai keinginan dan mengisi IP Address tiap PC
- Terakhir hubungkan dengan kabel

#### Tugas2A:

##### SW1

Switch>en

Switch#conf t

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

Switch(config)#hostname SW1

SW1(config)#end

##### SW2

Switch>en

Switch#conf t

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

Switch(config)#hostname SW2

SW2(config)#end

### SW3

Switch>en

Switch#conf t

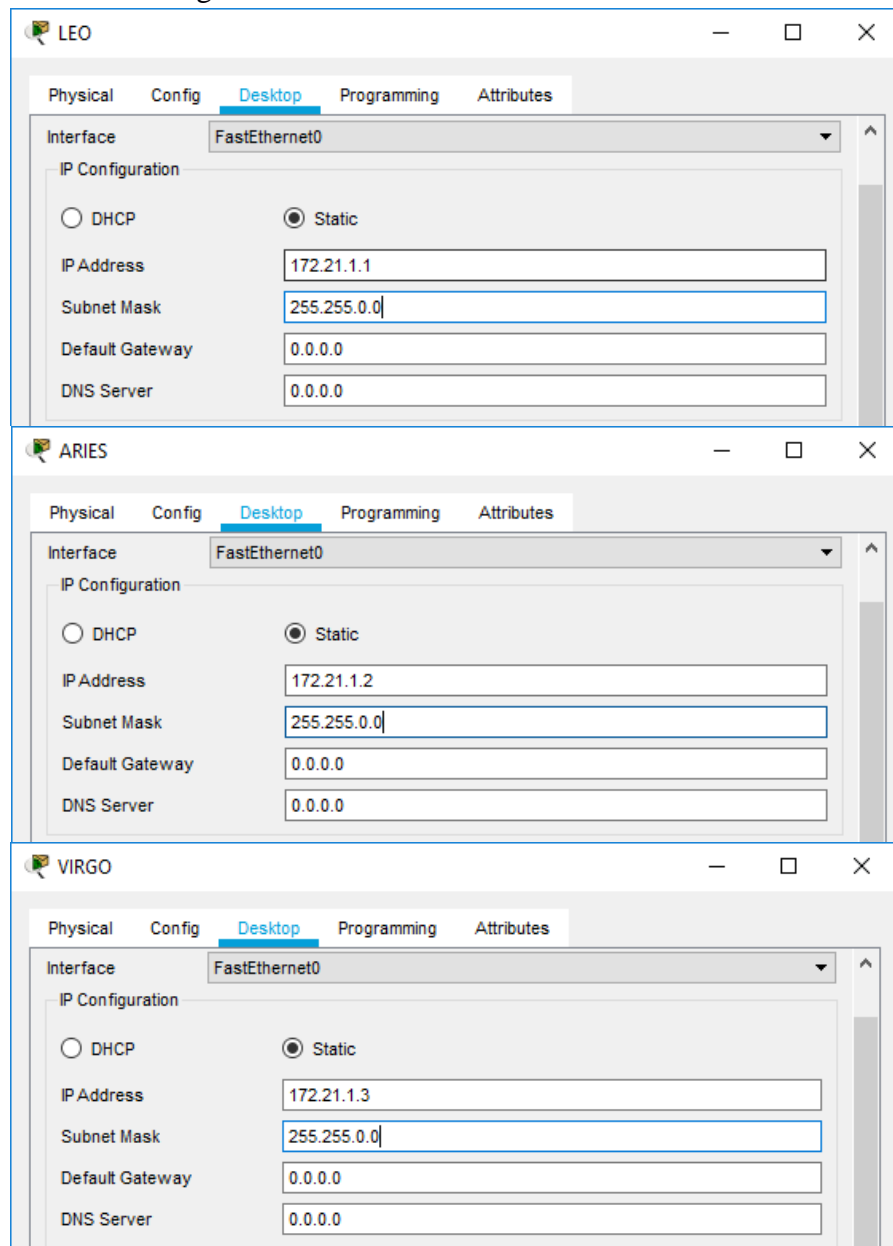
Enter configuration commands, one per line. End with CNTL/Z.

Switch(config)#hostname SW3

SW3(config)#end

#### 2. Konfigurasi masing-masing PC dengan IP :

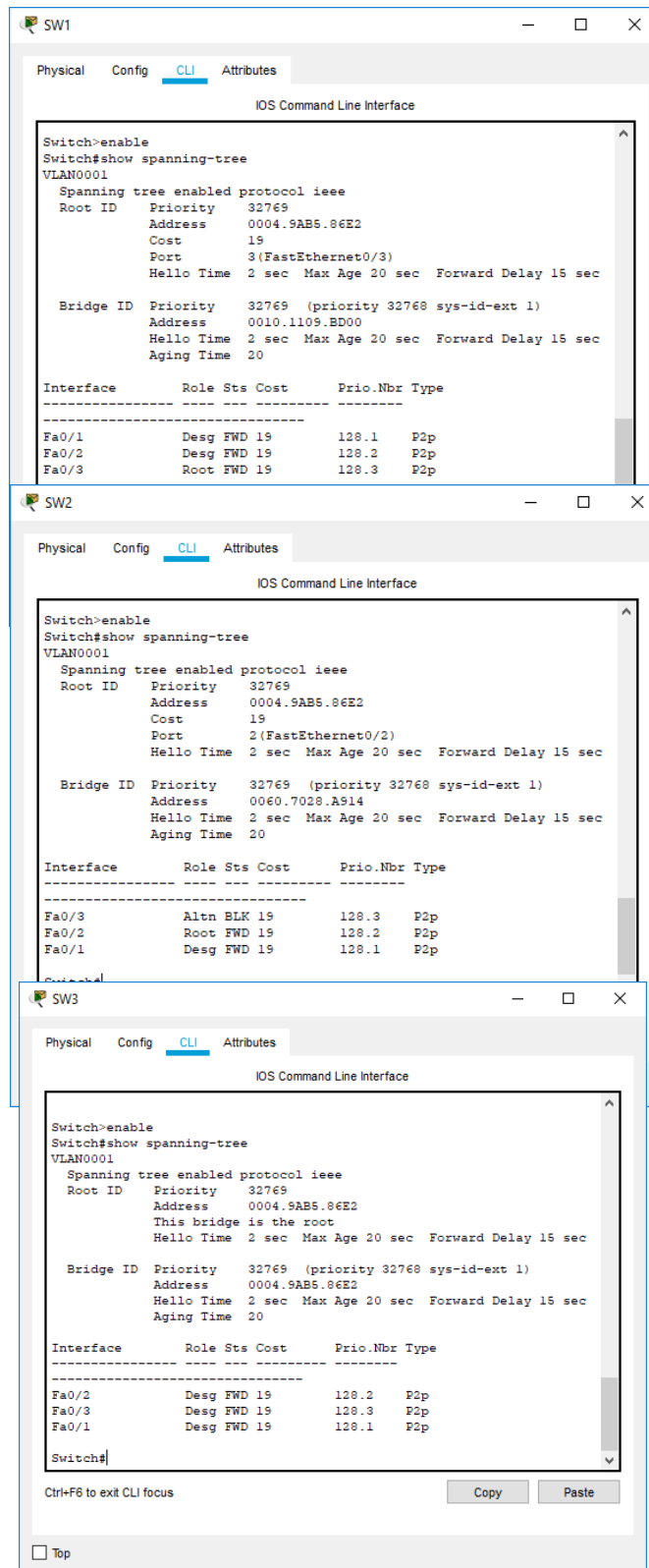
- Leo = 172.21.1.1/24
- Aries = 172.21.1.2/24
- Virgo = 172.21.1.3/24



## Tugas 4A:

3. Pada mode user atau mode privileged, lihat status STP pada masing-masing switch. Langkah pengoperasian

- ✓ Tekan Enter
- ✓ Masuk mode privileged (Optional)
- ✓ Ketik show spanning-tree



**Tugas 4B:**

4. Untuk tiap switch, isikan table berikut :

**SW 1**

No	Variabel	Nilai	Role	Stat
1	Root ID	32769 : 0004.9AB5.86E2	Desg	FWD
2	Priority	32769	Desg	FWD
3	MAC Address	0004.9AB5.86E2	Root	FWD
4	Bridge ID	32769 : 0010.1109.BD00		
5	Cost (0/1;0/2;0/3)	Fa0/1 --> 19, Fa0/2 --> 19, Fa03 --> 19		
6	Hello Time	2 Sec		
7	MaxAge	20 Sec		
8	Forward Delay	15 Sec		

**SW 2**

No	Variabel	Nilai	Role	Stat
1	Root ID	32769 : 0004.9AB5.86E2	Altn	BLK
2	Priority	32769	Root	FWD
3	MAC Address	0004.9AB5.86E2	Desg	FWD
4	Bridge ID	32769 : 0060.7028.A914		
5	Cost (0/1;0/2;0/3)	Fa0/1 --> 19, Fa0/2 --> 19, Fa03 --> 19		
6	Hello Time	2 Sec		
7	MaxAge	20 Sec		
8	Forward Delay	15 Sec		

**SW 3**

No	Variabel	Nilai	Role	Stat
1	Root ID	32769 : 0004.9AB5.86E2	Desg	FWD
2	Priority	32769	Desg	FWD
3	MAC Address	0004.9AB5.86E2	Desg	FWD
4	Bridge ID	32769 : 0004.9AB5.86E2		
5	Cost (0/1;0/2;0/3)	Fa0/1 --> 19, Fa0/2 --> 19, Fa03 --> 19		
6	Hello Time	2 Sec		
7	MaxAge	20 Sec		
8	Forward Delay	15 Sec		

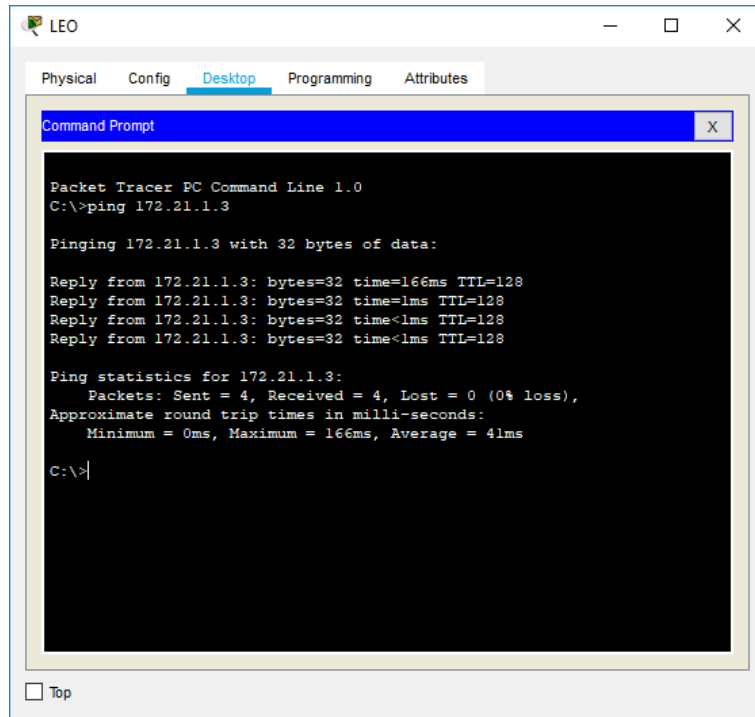
**Tugas 4C:**

- Root Bridge : SW 3
- Designated bride : SW 1
- Root Port : SW 1 Fa0/3, SW 2 Fa0/2
- Designated Port : SW 1(Fa 0/1;0/2), SW 2 Fa0/1, SW 3(Fa 0/1;0/2;0/3)

**Tugas 4D:**

- Port yang berada pada keadaan forwarding : SW 1(Fa 0/1;0/2;0/3) , SW 2(Fa 0/1;0/2), dan SW 3(Fa 0/1;0/2;0/3)
- Port yang berada pada keadaan blocking : SW 2 (Fa 0/3)

Ping dari PC LEO ke PC VIRGO



#### **Tugas 5A :**

Tulis langkah untuk melakukan perintah ping.

- > Klik pada PC awal (Leo) pilih tab desktop, pilih command prompt, kemudian ketikkan “ping” dan IP Address PC tujuan (ping 172.21.1.3).

Simpan konfigurasi jaringan dengan nama lab2.nwc

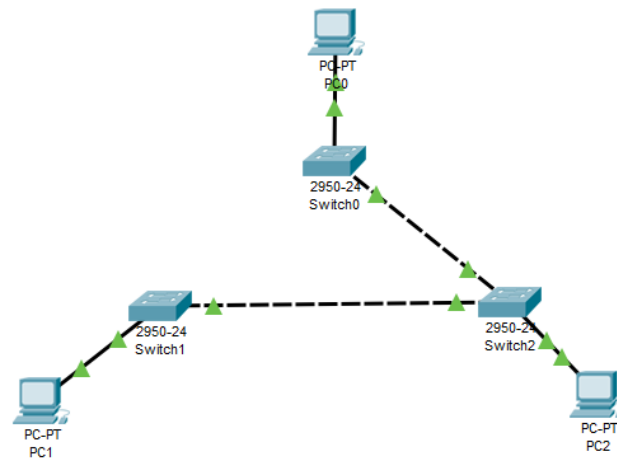
#### **Tugas 6A :**

Tulis langkah untuk menyimpan konfigurasi jaringan.

- > Lakukan perintah dibawah untuk setiap switch  
SW1>en  
SW1#write  
Building configuration...  
[OK]  
SW1#  
SW1#

## 2. Kegiatan-2 (Topologi 2)

1. Menggunakan Packet Tracer buat topologi berikut ini dengan menggunakan switch Catalyst 2950.



4. Pada mode user atau mode privileged, lihat status STP pada masing-masing switch. Langkah pengoperasian
  - ✓ Tekan Enter
  - ✓ Masuk mode privileged (Optional)
  - ✓ Ketik show spanning-tree

**Tugas 4A :** Pada kondisi default, capture masing - masing tampilan status STP switch (SW1, SW2, dan SW3).

```
SW1
Physical Config CLI Attributes
IOS Command Line Interface
changed state to up

Switch>en
Switch#show spanning-tree
VLAN0001
  Spanning tree enabled protocol ieee
  Root ID    Priority    32769
             Address     0009.7CBC.9C68
             Cost        19
             Port        2(FastEthernet0/2)
             Hello Time  2 sec  Max Age 20 sec  Forward Delay 15 sec

  Bridge ID  Priority    32769 (priority 32768 sys-id-ext 1)
             Address     00E0.F785.20AA
             Hello Time  2 sec  Max Age 20 sec  Forward Delay 15 sec
             Aging Time  20

Interface    Role Sts Cost      Prio.Nbr Type
-----
Fa0/1        Desg FWD 19        128.1    P2p
Fa0/2        Root FWD 19        128.2    P2p

Switch#
```

SW2

Physical Config CLI Attributes

IOS Command Line Interface

```
% Invalid input detected at '^' marker.  
Switch#show spanning-tree  
VLAN0001  
Spanning tree enabled protocol ieee  
Root ID    Priority    32769  
           Address    0009.7CBC.9C68  
           Cost        19  
           Port        2(FastEthernet0/2)  
           Hello Time  2 sec  Max Age 20 sec  Forward Delay 15 sec  
  
Bridge ID  Priority    32769 (priority 32768 sys-id-ext 1)  
           Address    000C.CFED.B013  
           Hello Time  2 sec  Max Age 20 sec  Forward Delay 15 sec  
           Aging Time  20  
  
Interface      Role Sts Cost      Prio.Nbr Type  
-----  
Fa0/1          Desg FWD 19        128.1    P2p  
Fa0/2          Root FWD 19        128.2    P2p  
  
Switch#  
Switch#
```

Ctrl+F6 to exit CLI focus

Copy Paste

☐ Top

SW3

Physical Config CLI Attributes

IOS Command Line Interface

```
changed state to up  
  
Switch>en  
Switch#show spanning-tree  
VLAN0001  
Spanning tree enabled protocol ieee  
Root ID    Priority    32769  
           Address    0009.7CBC.9C68  
           This bridge is the root  
           Hello Time  2 sec  Max Age 20 sec  Forward Delay 15 sec  
  
Bridge ID  Priority    32769 (priority 32768 sys-id-ext 1)  
           Address    0009.7CBC.9C68  
           Hello Time  2 sec  Max Age 20 sec  Forward Delay 15 sec  
           Aging Time  20  
  
Interface      Role Sts Cost      Prio.Nbr Type  
-----  
Fa0/2          Desg FWD 19        128.2    P2p  
Fa0/3          Desg FWD 19        128.3    P2p  
Fa0/1          Desg FWD 19        128.1    P2p  
  
Switch#
```

Ctrl+F6 to exit CLI focus

Copy Paste

☐ Top

**Tugas 4B:**

5. Untuk tiap switch, isikan table berikut :

**SW 1**

No	Variabel	Nilai	Role	Stat
1	Root ID	32769 : 0009.7CBC.9C68	Desg	FWD
2	Priority	32769	Root	FWD
3	MAC Address	0009.7CBC.9C68		
4	Bridge ID	32769 : 00E0.F785.20AA		
5	Cost (0/1;0/2)	Fa0/1 --> 19, Fa0/2 --> 19		
6	Hello Time	2 Sec		
7	MaxAge	20 Sec		
8	Forward Delay	15 Sec		

**SW 2**

No	Variabel	Nilai	Role	Stat
1	Root ID	32769 : 0009.7CBC.9C68	Desg	FWD
2	Priority	32769	Root	FWD
3	MAC Address	0009.7CBC.9C68		
4	Bridge ID	32769 : 000C.CFED.B013		
5	Cost (0/1;0/2)	Fa0/1 --> 19, Fa0/2 --> 19		
6	Hello Time	2 Sec		
7	MaxAge	20 Sec		
8	Forward Delay	15 Sec		

**SW 3**

No	Variabel	Nilai	Role	Stat
1	Root ID	32769 : 0009.7CBC.9C68	Desg	FWD
2	Priority	32769	Desg	FWD
3	MAC Address	0009.7CBC.9C68	Desg	FWD
4	Bridge ID	32769 : 0009.7CBC.9C68		
5	Cost (0/1;0/2;0/3)	Fa0/1 --> 19, Fa0/2 --> 19, Fa03 --> 19		
6	Hello Time	2 Sec		
7	MaxAge	20 Sec		
8	Forward Delay	15 Sec		

**Tugas 4C:**

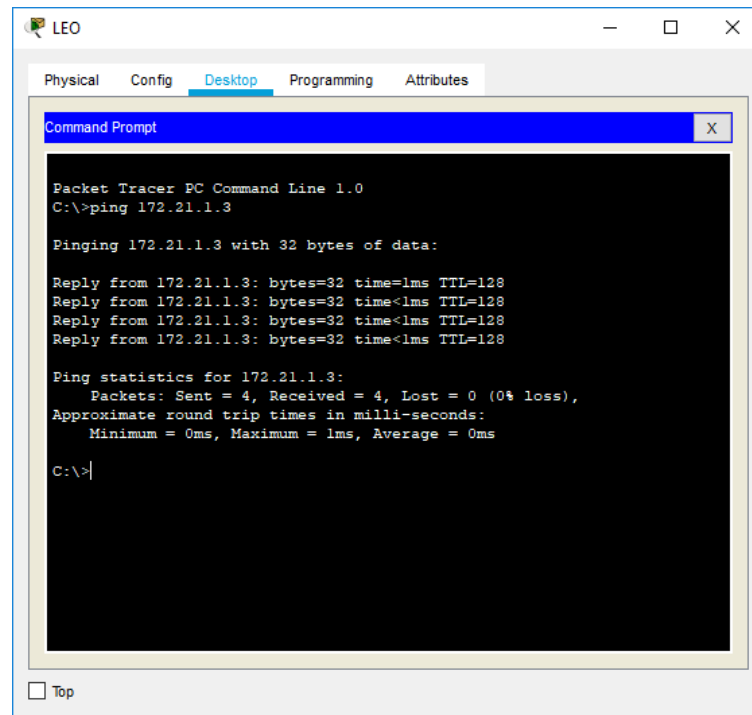
- Root Bridge : SW 3
- Designated bride : SW 2
- Root Port : SW 1 Fa0/2, SW 2 Fa0/2
- Designated Port : SW 1 Fa0/1, SW 2 Fa0/1, SW 3 Fa0/1 Fa0/2 Fa0/3

**Tugas 4D:**

- Port yang berada pada keadaan forwarding :  
SW1(Fa 0/1;0/2;0/3) , SW2(Fa 0/1;0/2;0/3), dan SW3(Fa 0/1;0/2;0/3)
- Port yang berada pada keadaan blocking  
:-



Lakukan ping dr PC LEO ke PC VIRGO



The screenshot shows a Packet Tracer PC window for a device named 'LEO'. The 'Desktop' tab is selected, displaying a 'Command Prompt' window. The command prompt shows the execution of the 'ping 172.21.1.3' command. The output indicates that the ping was successful, with four replies received from 172.21.1.3, each with a time of 1ms and a TTL of 128. The ping statistics show 4 packets sent, 4 received, and 0 lost, with an average round trip time of 0ms.

```
Packet Tracer PC Command Line 1.0
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 = 1ms, Average = 0ms

C:\>
```

### Tugas 5A :

Tulis langkah untuk melakukan perintah ping.

- > Klik pada PC awal (Leo) pilih tab desktop, pilih command prompt, kemudian ketikkan “ping” dan IP Address PC tujuan (ping 172.21.1.3).