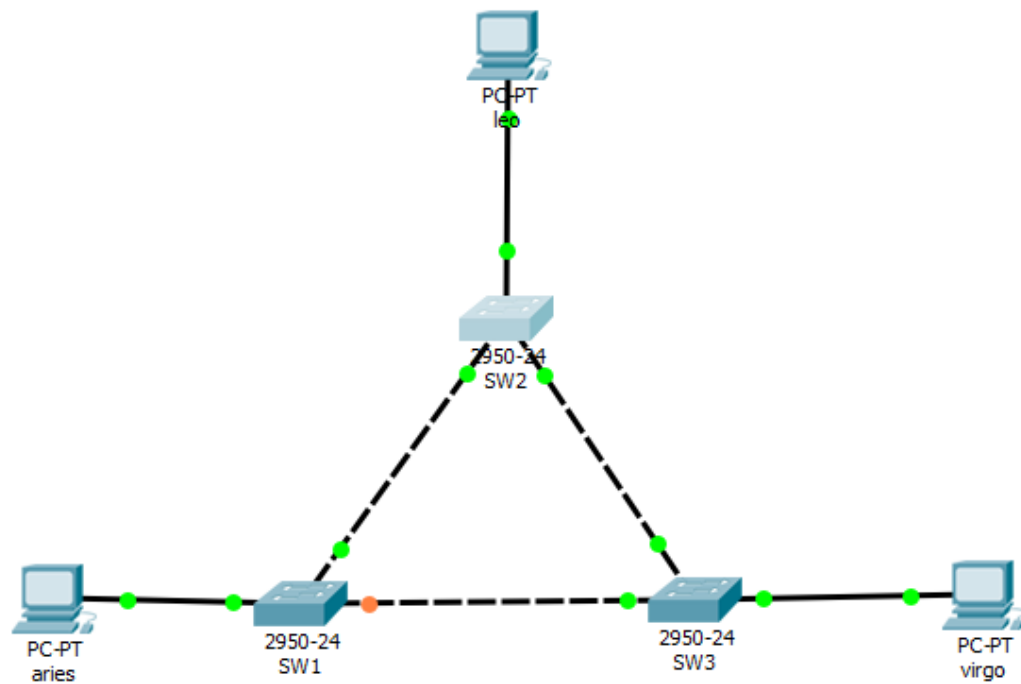


Name : Muhammad Rafi  
NIM : L200174138

## Tugas Modul 6

### Kegiatan 1

#### 1. Merangkai jaringan



#### 2. Mengubah IP PC yang terhubung ke Switch

leo

Physical Config Desktop Programming Attributes

### IP Configuration

IP Configuration

☐ DHCP ☒ Static

IP Address: 172.21.1.1

Subnet Mask: 255.255.255.0

Default Gateway: 0.0.0.0

DNS Server: 0.0.0.0

IPv6 Configuration

☐ DHCP ☐ Auto Config ☒ Static

IPv6 Address: /

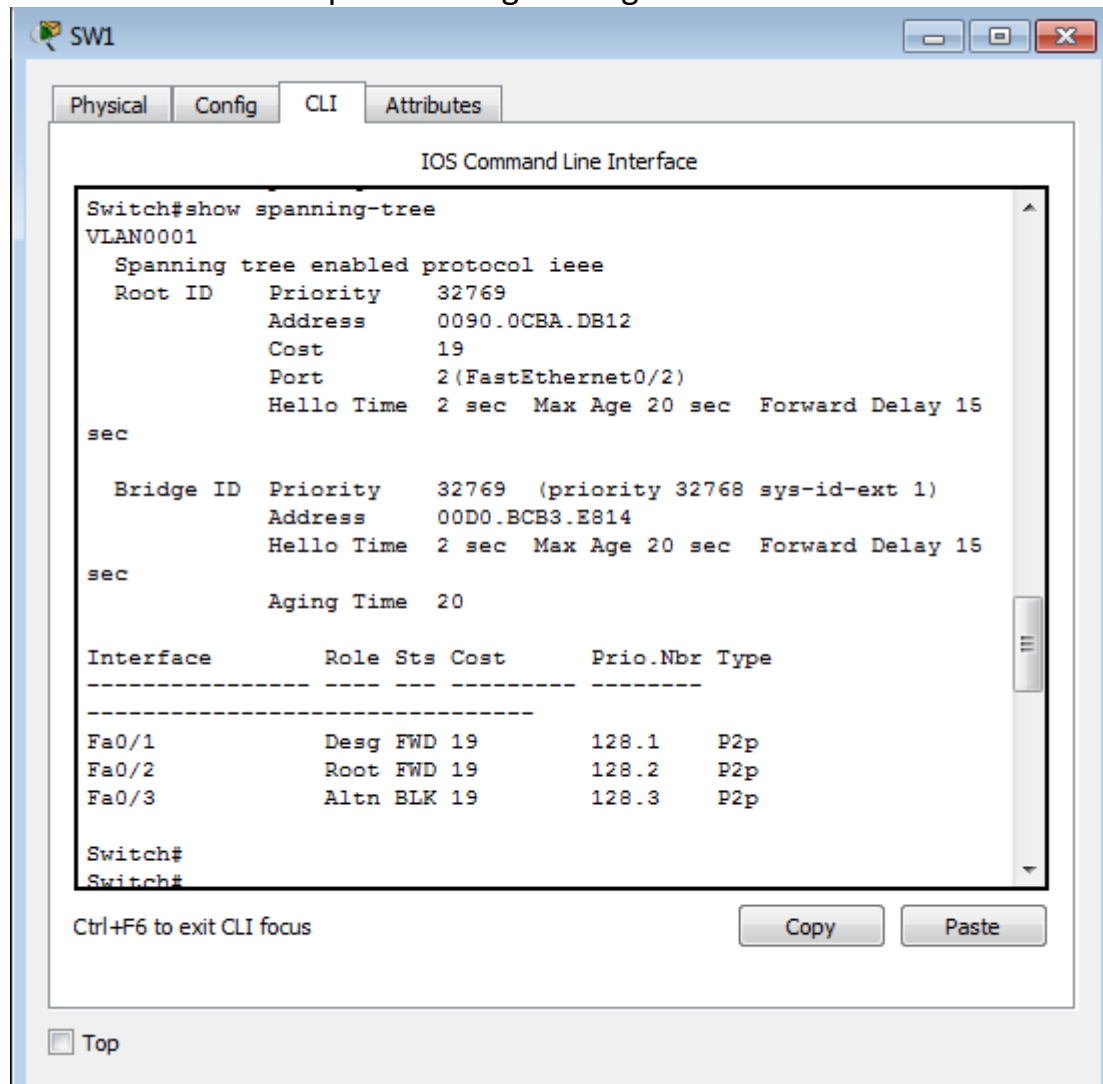
Link Local Address: FE80::201:64FF:FE99:53BD

IPv6 Gateway:

IPv6 DNS Server:

☐ Top

### 3. Melihat status STP pada masing-masing Switch



The screenshot shows a network switch window titled "SW1" with tabs for Physical, Config, CLI, and Attributes. The CLI tab is active, displaying the "IOS Command Line Interface". The command "Switch#show spanning-tree" has been executed, showing the STP status for VLAN0001. The output includes the root ID, priority, address, cost, port, hello time, max age, forward delay, and aging time. A table at the bottom lists the interfaces and their roles in the STP topology.

```
Switch#show spanning-tree
VLAN0001
  Spanning tree enabled protocol ieee
  Root ID    Priority    32769
             Address     0090.0CBA.DB12
             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     00D0.BCB3.E814
             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
Fa0/3          Altn BLK 19       128.3    P2p

Switch#
Switch#
```

Ctrl+F6 to exit CLI focus

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SW2

Physical

Config

CLI

Attributes

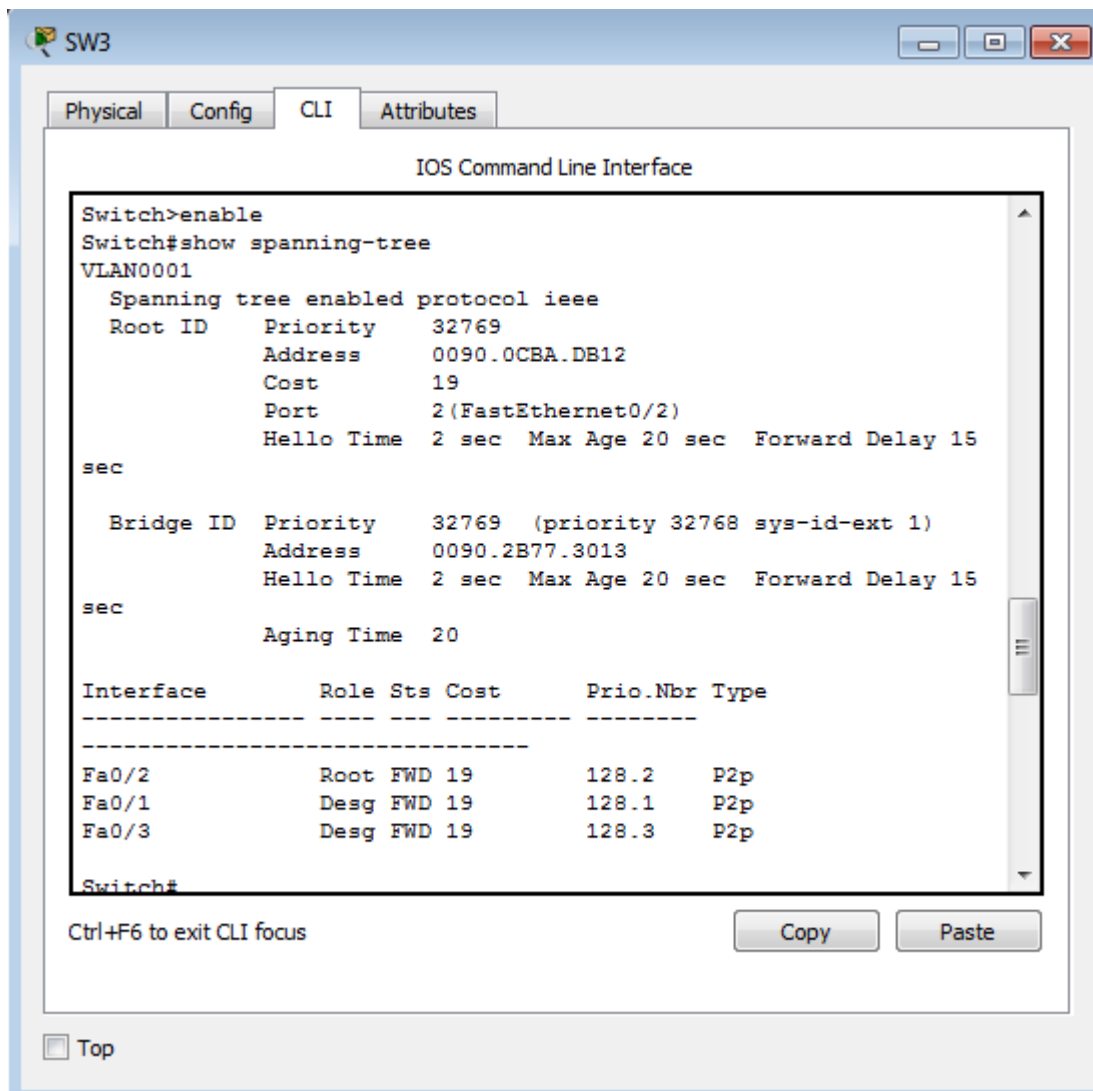
IOS Command Line Interface

Switch>enable  
Switch#show spanning-tree  
VLAN0001  
Spanning tree enabled protocol ieee  
Root ID    Priority    32769  
          Address    0090.0CBA.DB12  
          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    0090.0CBA.DB12  
          Hello Time 2 sec    Max Age 20 sec    Forward Delay 15  
sec  
  
          Aging Time    20  
  
Interface            Role    Sts    Cost            Prio.Nbr    Type  
-----  
Fa0/3                Desg   FWD   19            128.3    P2p  
Fa0/2                Desg   FWD   19            128.2    P2p  
Fa0/1                Desg   FWD   19            128.1    P2p  
  
Switch#

Ctrl+F6 to exit CLI focus

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### Switch 1

No	Variabel	Nilai
1	Root ID	32769:00D0.BCB3.E814
2	Priority	32769
3	MAC Adress	00D0.BCB3.E814
4	Bridge ID	32769
5	Cost (0/1;0/2;0/3)	19;19;19
6	Hello Time	2 Sec
7	MaxAge	20 Sec
8	Forward Delay	15

#### Switch 2

No	Variabel	Nilai
1	Root ID	32769:0090.DCBA.DB12
2	Priority	32769
3	MAC Adress	0090.DCBA.DB12
4	Bridge ID	32769
5	Cost (0/1;0/2;0/3)	19;19;19
6	Hello Time	2 Sec
7	MaxAge	20 Sec
8	Forward Delay	15

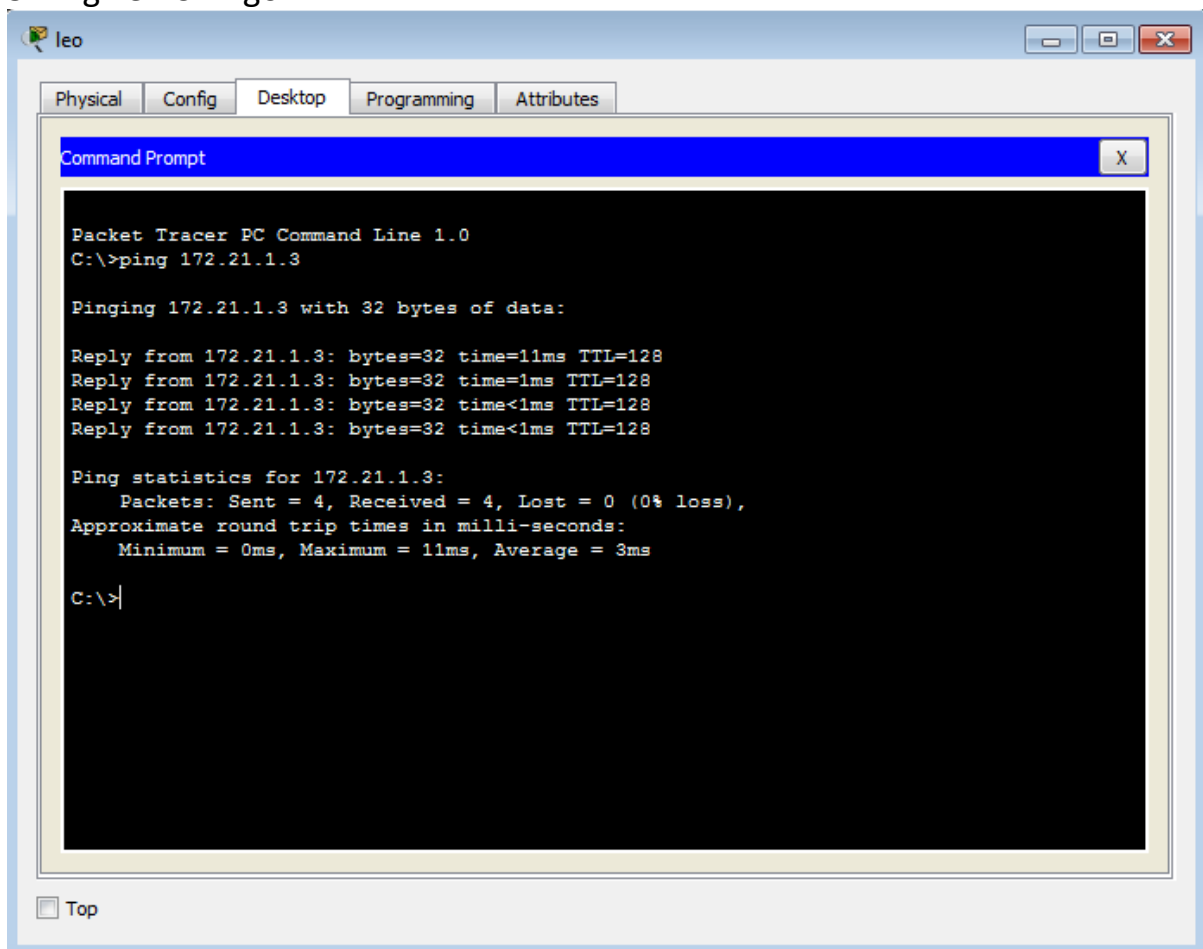
#### Switch 3

No	Variabel	Nilai
1	Root ID	32769:0090.2B77.3013
2	Priority	32769
3	MAC Adress	0090.2B77.3013
4	Bridge ID	32769
5	Cost (0/1;0/2;0/3)	19;19;19
6	Hello Time	2 Sec
7	MaxAge	20 Sec
8	Forward Delay	15

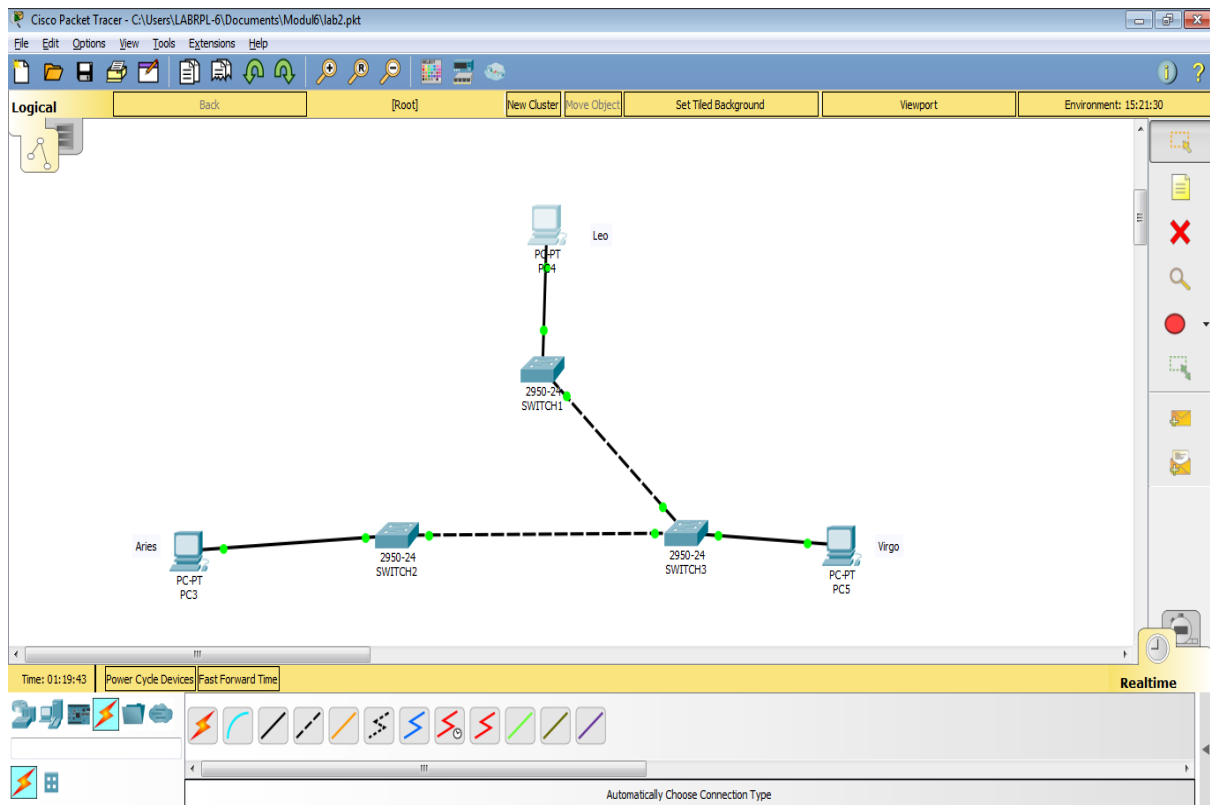
#### 4. Menentukan :

- Root Bridge (**SW2**)
- Designated Bridge (**SW3**)
- Root Port (**SW1(0/2)** & **SW3(0/2)**)
- Designated Port (**SW3(0/3)**)
- Keadaan Forwarding  
 ((**SW1(0/1)**),(0/2)) || (**SW2(0/1)**),(0/2),(0/3)) || (**SW3(0/1)**),(0/2),(0/3)))
- Keadaan Blocking (**SW1(0/3)**)

## 5. Ping ke PC Virgo

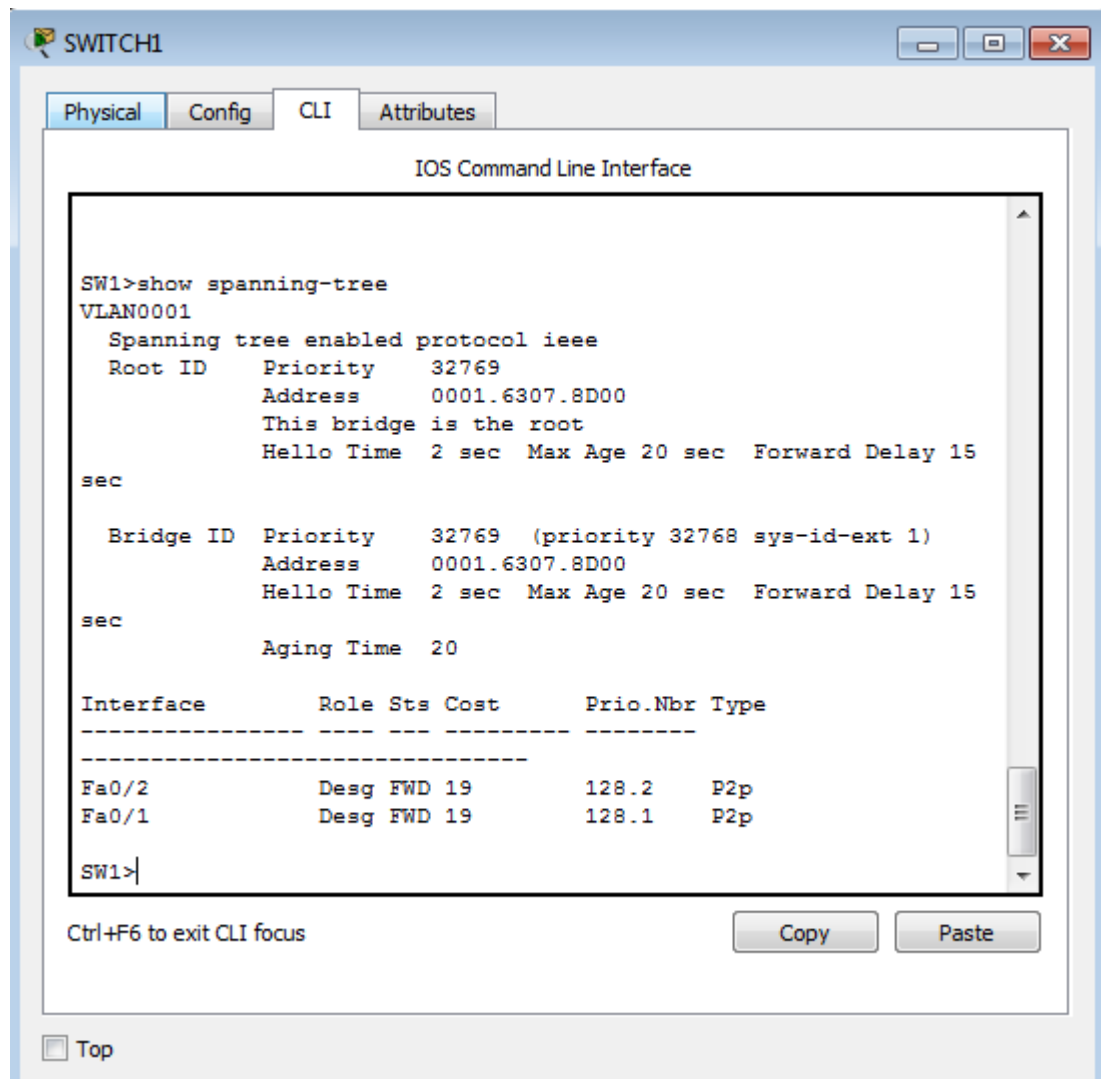


## Kegiatan 2





## 1. Melihat status STP pada masing masing switch



The screenshot shows a network switch window titled "SWITCH1" with tabs for Physical, Config, CLI, and Attributes. The CLI tab is active, displaying the "IOS Command Line Interface". The command "SW1>show spanning-tree" has been entered, showing the STP status for VLAN0001. The output indicates that the spanning tree is enabled using the IEEE protocol, with the root ID being 32769 and the address 0001.6307.8D00. The bridge ID is also 32769, and the address is 0001.6307.8D00. The hello time is 2 seconds, the max age is 20 seconds, and the forward delay is 15 seconds. The aging time is 20 seconds. A table shows the interfaces Fa0/2 and Fa0/1, both in the Designated Forwarding (Desg FWD) state with a cost of 19, priority of 128, and type P2p.

```
SW1>show spanning-tree
VLAN0001
  Spanning tree enabled protocol ieee
  Root ID    Priority    32769
             Address     0001.6307.8D00
             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     0001.6307.8D00
             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
Fa0/1          Desg FWD 19        128.1    P2p

SW1>
```

Ctrl+F6 to exit CLI focus

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SWITCH2

Physical

Config

CLI

Attributes

IOS Command Line Interface

SW2>show spanning-tree

VLAN0001

Spanning tree enabled protocol ieee

Root ID      Priority      32769

Address      0001.6307.8D00

Cost      38

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      0001.970A.7C00

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

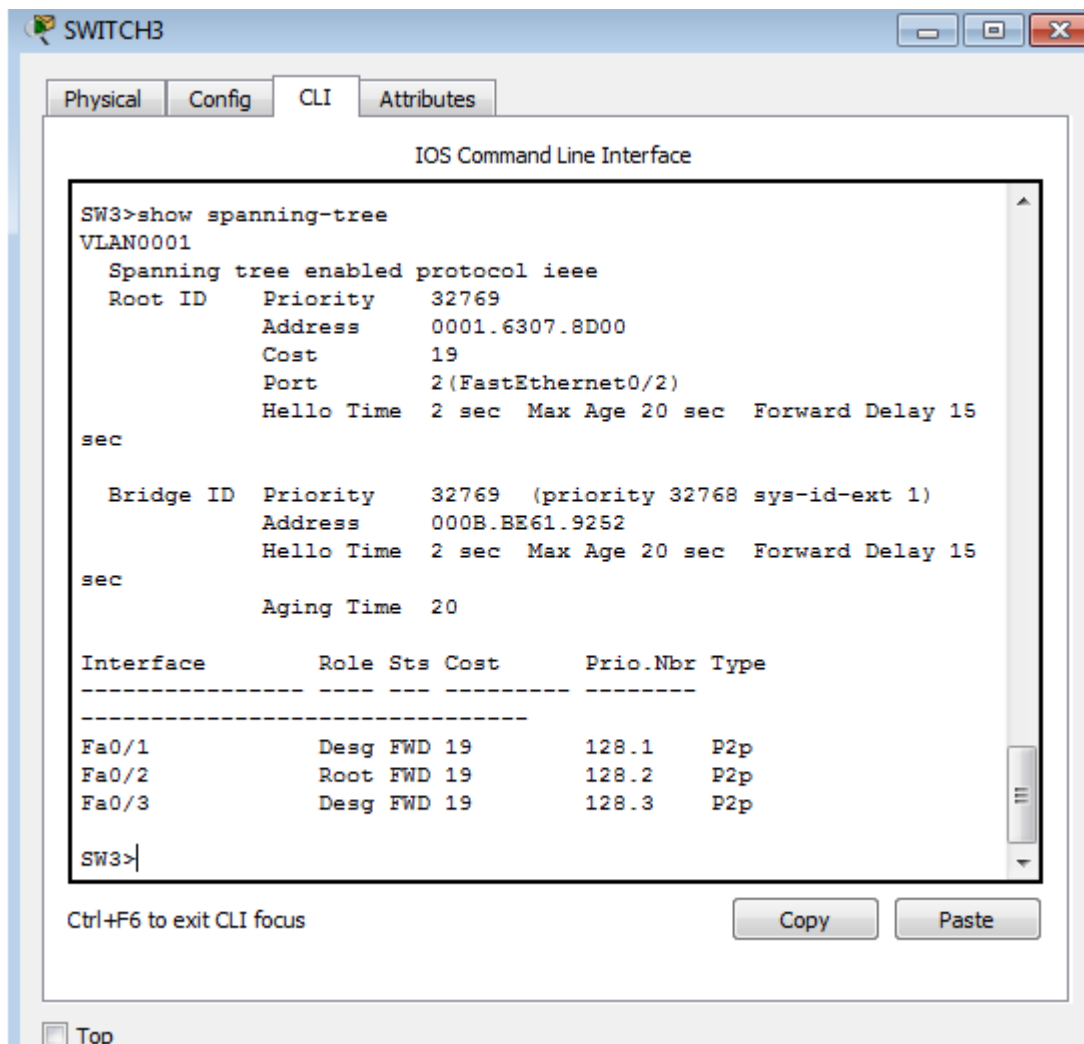
SW2>

Ctrl+F6 to exit CLI focus

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## 2.Tabel

### SWITCH1

No.	Variabel	Nilai
1.	Root ID	32769:0001.6307.8D00
2.	Priority	32769
3.	MAC Address	0001.6307.8D00
4.	Bridge ID	32769: 0001.6307.8D00
5.	Cost	19
6.	Hello Time	2 Sec
7.	Max Age	20 Sec
8.	Forward Delay	15 Sec

### SWITCH2

No.	Variabel	Nilai
1.	Root ID	32769: 0001.6307.8D00
2.	Priority	32769
3.	MAC Address	0001.970A:7C00
4.	Bridge ID	32769: 0001.970A:7C00
5.	Cost	38
6.	Hello Time	2 Sec
7.	Max Age	20 Sec
8.	Forward Delay	15 Sec

### SWITCH3

No.	Variabel	Nilai
1.	Root ID	32769: 0001.6307.8D00
2.	Priority	32769
3.	MAC Address	000B.BE61.9252
4.	Bridge ID	32769: 000B.BE61.9252
5.	Cost	19
6.	Hello Time	2 Sec
7.	Max Age	20 Sec
8.	Forward Delay	15 Sec

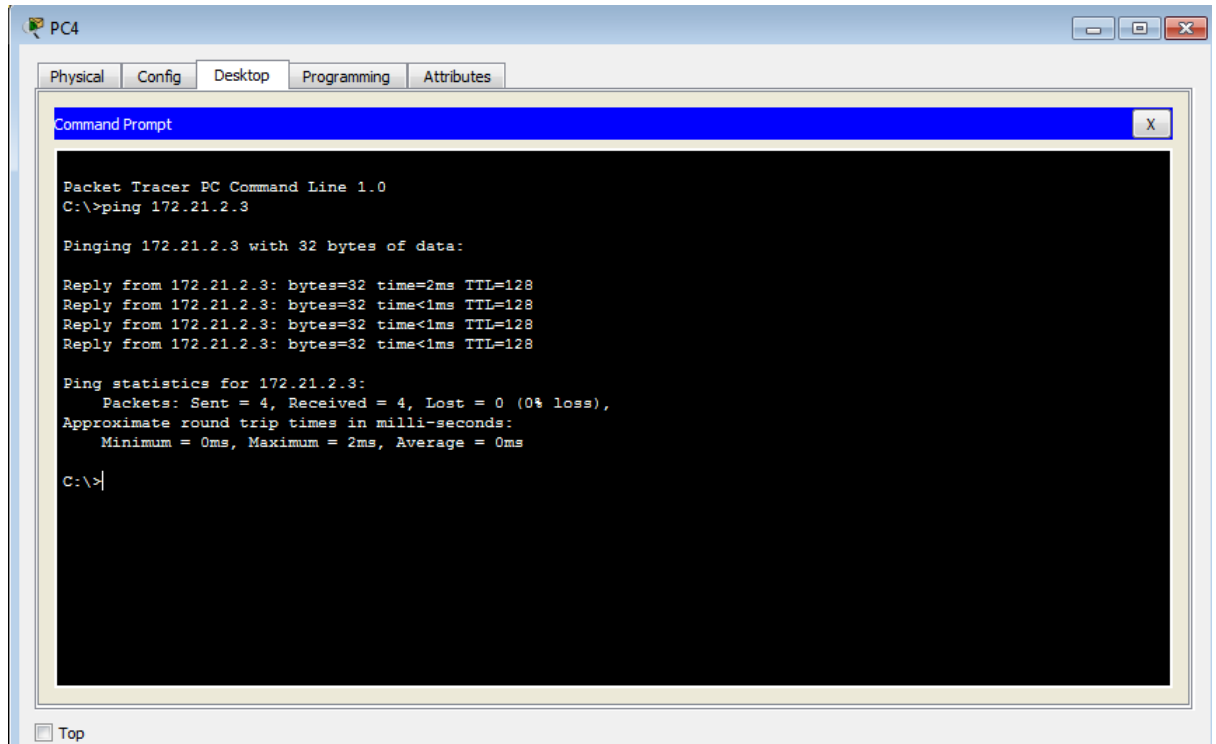
### 3. Menentukan :

- a. Root Bridge
  - **(SWITCH1)**
- b. Designated Bridge
  - **(SWITCH3)**
- c. Root Port:
  - **SWITCH2 (Fa 0/2)**
  - **SWITCH3 (Fa 0/2)**
- d. Designated Port
  - **SWITCH1 (Fa 0/1, Fa 0/2)**
  - **SWITCH2 (Fa 0/1)**
  - **SWITCH3 (Fa 0/1, Fa 0/3)**
- e. Port Forwarding
  - **SWITCH1 (Fa 0/1 FWD, Fa 0/2 FWD)**
  - **SWITCH2 (Fa 0/1 FWD, Fa 0/2 FWD)**
  - **SWITCH3 (Fa 0/1 FWD, Fa 0/2 FWD, Fa 0/3 FWD)**

f. Port Blocking

- **NONE**

4. Ping PC Leo ke PC Virgo



The screenshot shows a Packet Tracer PC Command Line window for PC4. The window has tabs for Physical, Config, Desktop, Programming, and Attributes. The Command Prompt is open, displaying the output of a ping command to 172.21.2.3. The output shows four successful replies with 32 bytes of data, a time of 2ms, and a TTL of 128. The ping statistics show 4 packets sent, 4 received, and 0% loss. The approximate round trip times are 0ms, 2ms, and 0ms.

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

Pinging 172.21.2.3 with 32 bytes of data:

Reply from 172.21.2.3: bytes=32 time=2ms TTL=128
Reply from 172.21.2.3: bytes=32 time<1ms TTL=128
Reply from 172.21.2.3: bytes=32 time<1ms TTL=128
Reply from 172.21.2.3: bytes=32 time<1ms TTL=128

Ping statistics for 172.21.2.3:
    Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),
    Approximate round trip times in milli-seconds:
        Minimum = 0ms, Maximum = 2ms, Average = 0ms

C:\>|
```