

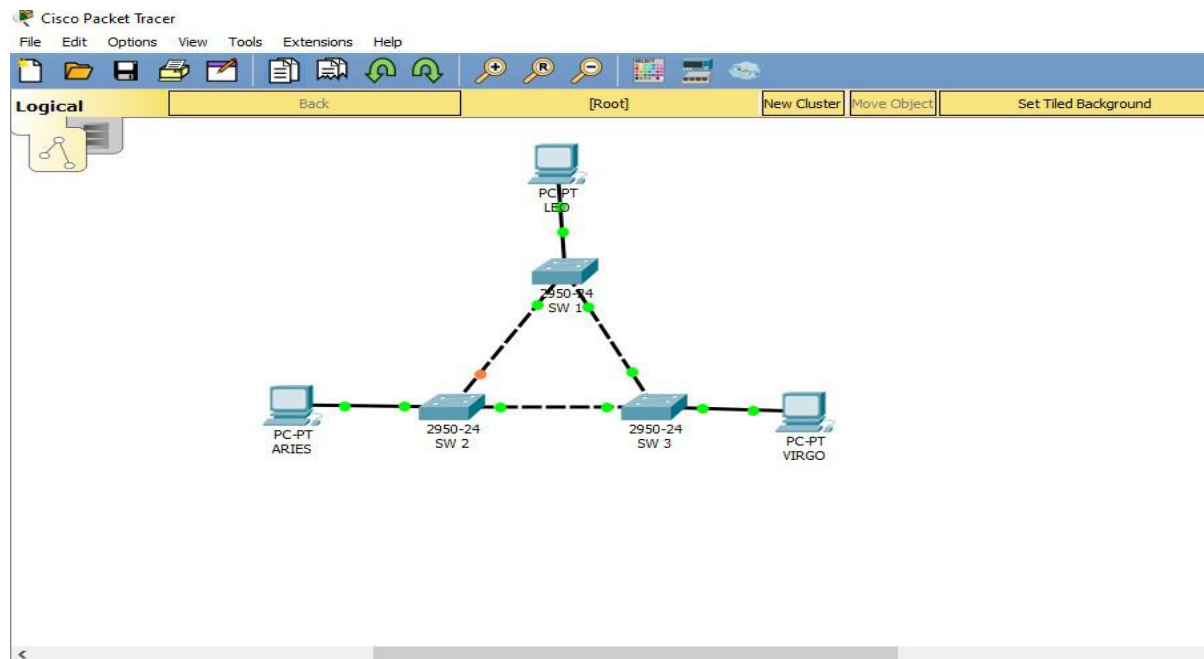
Khumaila Masfarina Yusrifa

L200180198/E

MODUL 6

1. Kegiatan 1

a. Membuat topologi



Tugas 1 A:

b. Beri nama masing” switch dg SW1, SW2, dan SW3

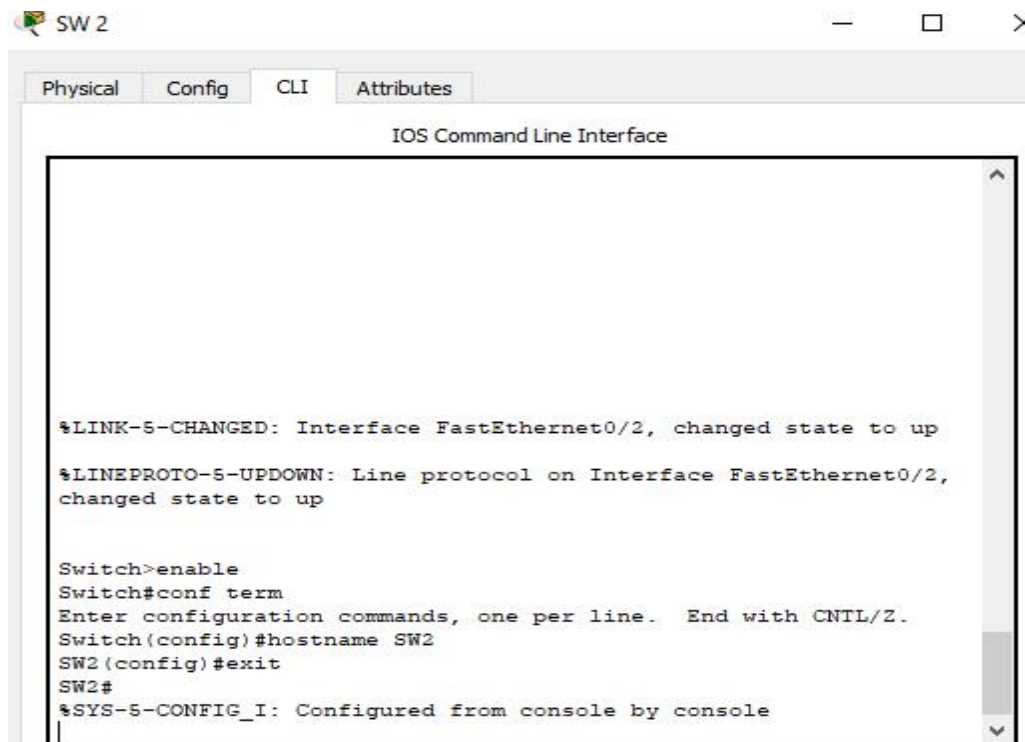
SW 1

The screenshot shows the 'CLI' tab of the configuration window for 'SW 1'. The title bar reads 'IOS Command Line Interface'. The terminal window displays the following text:

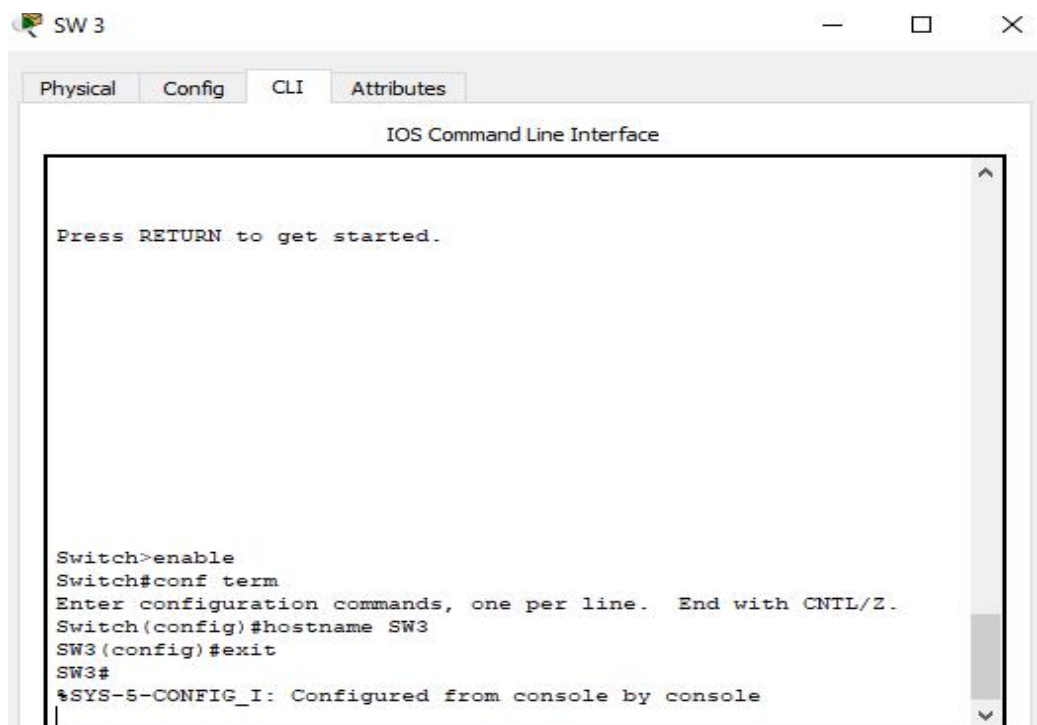
```
%LINK-5-CHANGED: Interface FastEthernet0/2, changed state to up
%LINEPROTO-5-UPDOWN: Line protocol on Interface FastEthernet0/2,
changed state to up

Switch>enable
Switch#conf term
Enter configuration commands, one per line. End with CNTL/Z.
Switch(config)#hostname SW1
SW1(config)#exit
SW1#
%SYS-5-CONFIG_I: Configured from console by console
```

SW 2



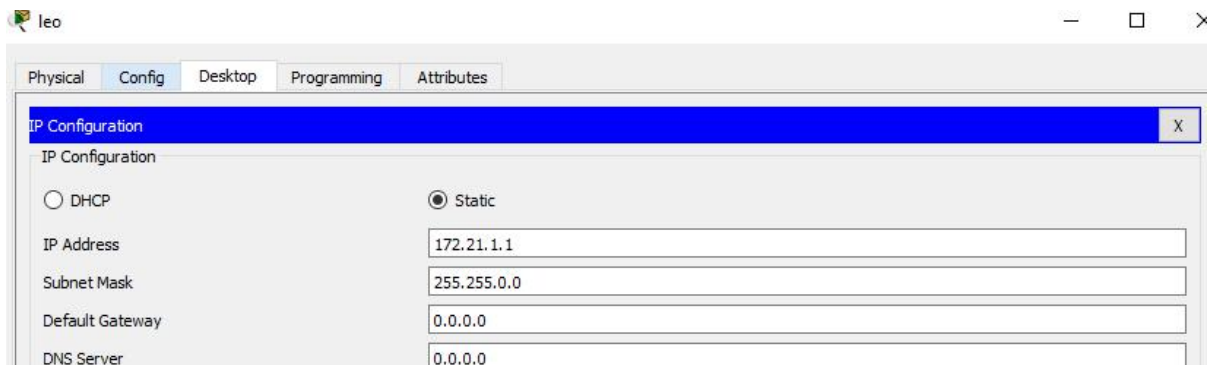
SW 3



Tugas 2 A:

c. Konfigurasi masing” PC

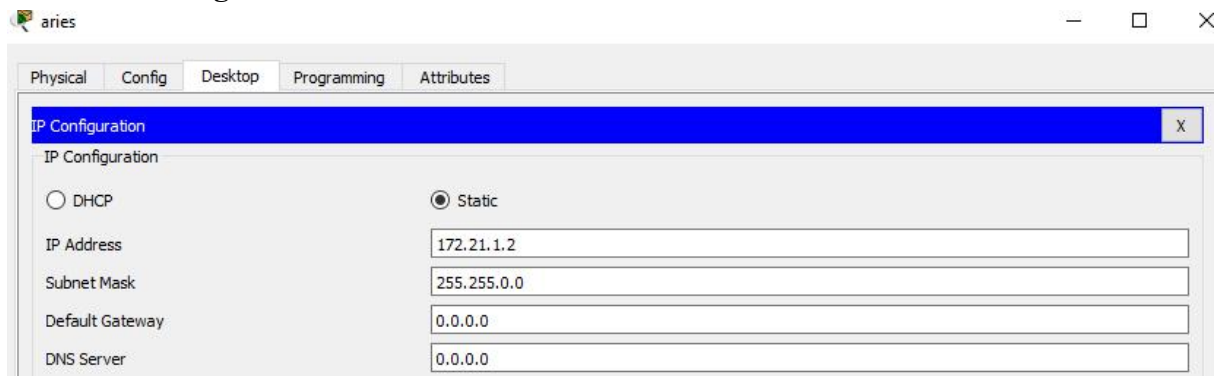
Konfigurasi PC Leo



The screenshot shows the IP Configuration window for PC Leo. The window has a title bar with the name 'leo' and standard minimize, maximize, and close buttons. Below the title bar are tabs for 'Physical', 'Config', 'Desktop', 'Programming', and 'Attributes'. The 'Config' tab is selected, and the 'IP Configuration' section is active. It shows two radio buttons: 'DHCP' (unselected) and 'Static' (selected). Below these are five text input fields: 'IP Address' (172.21.1.1), 'Subnet Mask' (255.255.0.0), 'Default Gateway' (0.0.0.0), and 'DNS Server' (0.0.0.0). A close button 'X' is in the top right corner of the configuration area.

| Field | Value |
|-----------------|-------------|
| IP Address | 172.21.1.1 |
| Subnet Mask | 255.255.0.0 |
| Default Gateway | 0.0.0.0 |
| DNS Server | 0.0.0.0 |

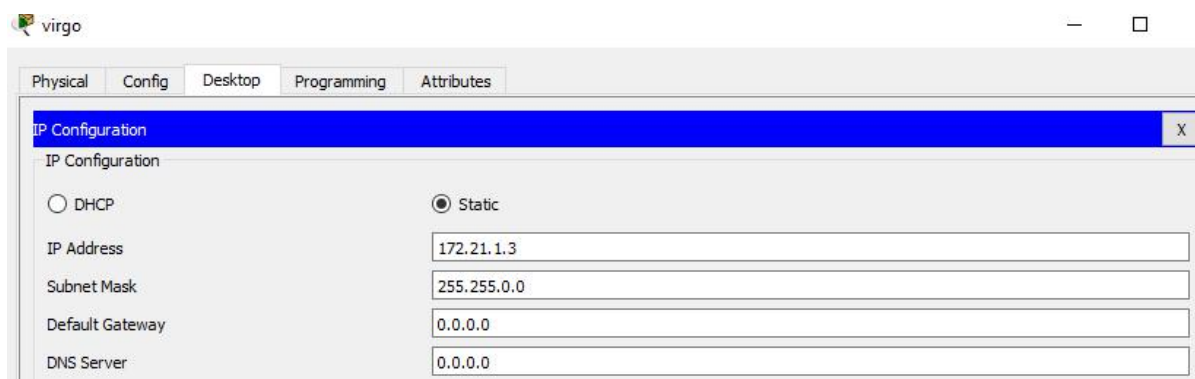
Konfigurasi PC aries



The screenshot shows the IP Configuration window for PC aries. The window has a title bar with the name 'aries' and standard minimize, maximize, and close buttons. Below the title bar are tabs for 'Physical', 'Config', 'Desktop', 'Programming', and 'Attributes'. The 'Config' tab is selected, and the 'IP Configuration' section is active. It shows two radio buttons: 'DHCP' (unselected) and 'Static' (selected). Below these are five text input fields: 'IP Address' (172.21.1.2), 'Subnet Mask' (255.255.0.0), 'Default Gateway' (0.0.0.0), and 'DNS Server' (0.0.0.0). A close button 'X' is in the top right corner of the configuration area.

| Field | Value |
|-----------------|-------------|
| IP Address | 172.21.1.2 |
| Subnet Mask | 255.255.0.0 |
| Default Gateway | 0.0.0.0 |
| DNS Server | 0.0.0.0 |

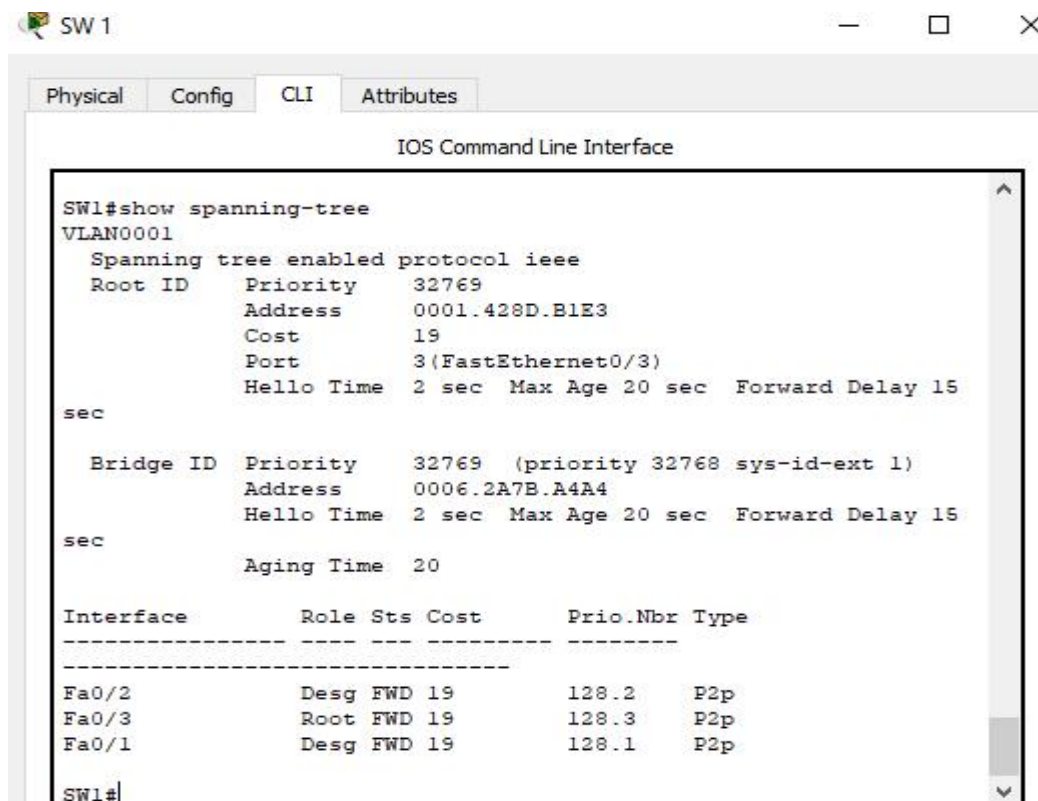
Konfigurasi PC Virgo



The screenshot shows the IP Configuration window for PC Virgo. The window has a title bar with the name 'virgo' and standard minimize, maximize, and close buttons. Below the title bar are tabs for 'Physical', 'Config', 'Desktop', 'Programming', and 'Attributes'. The 'Config' tab is selected, and the 'IP Configuration' section is active. It shows two radio buttons: 'DHCP' (unselected) and 'Static' (selected). Below these are five text input fields: 'IP Address' (172.21.1.3), 'Subnet Mask' (255.255.0.0), 'Default Gateway' (0.0.0.0), and 'DNS Server' (0.0.0.0). A close button 'X' is in the top right corner of the configuration area.

| Field | Value |
|-----------------|-------------|
| IP Address | 172.21.1.3 |
| Subnet Mask | 255.255.0.0 |
| Default Gateway | 0.0.0.0 |
| DNS Server | 0.0.0.0 |

- d. Snapping-tree pada Switch
Status STP SW 1



SW1

Physical Config CLI Attributes

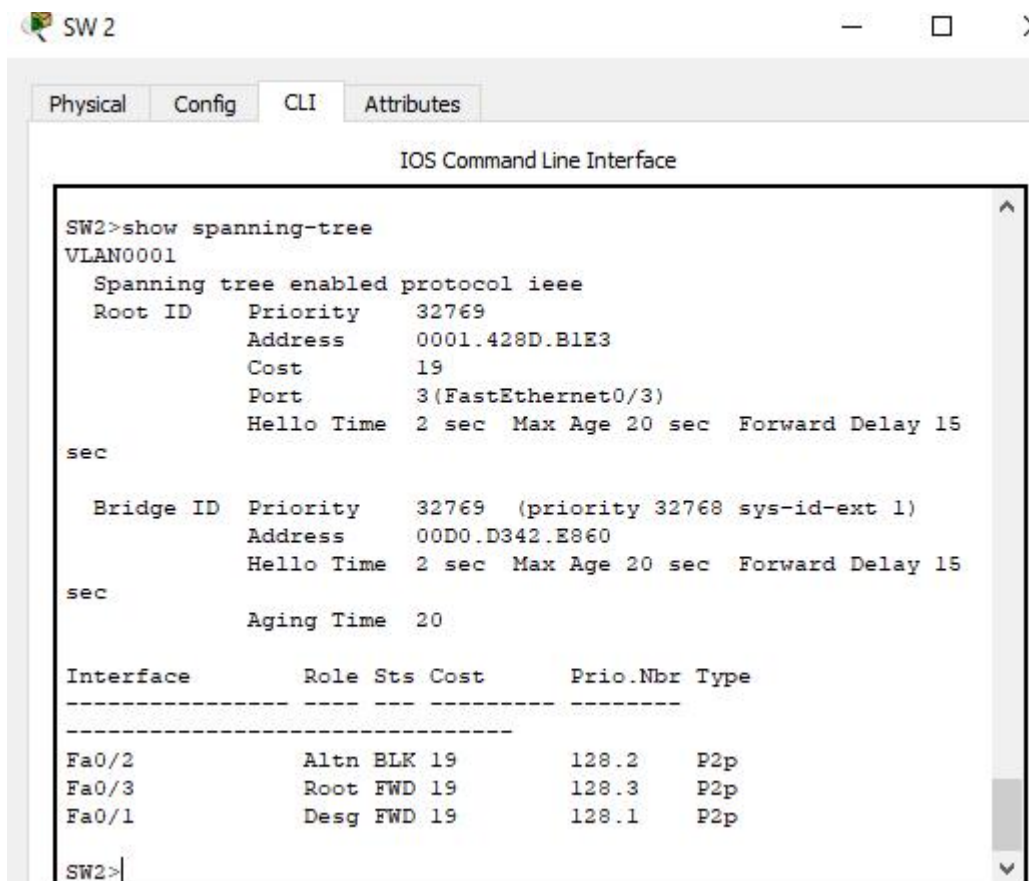
IOS Command Line Interface

```
SW1#show spanning-tree
VLAN0001
  Spanning tree enabled protocol ieee
    Root ID    Priority    32769
              Address     0001.428D.B1E3
              Cost        19
              Port        3(FastEthernet0/3)
              Hello Time  2 sec  Max Age 20 sec  Forward Delay 15
sec
    Bridge ID  Priority    32769 (priority 32768 sys-id-ext 1)
              Address     0006.2A7B.A4A4
              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          Root FWD 19        128.3    P2p
Fa0/1          Desg FWD 19        128.1    P2p

SW1#
```

Status STP SW2



SW2

Physical Config CLI Attributes

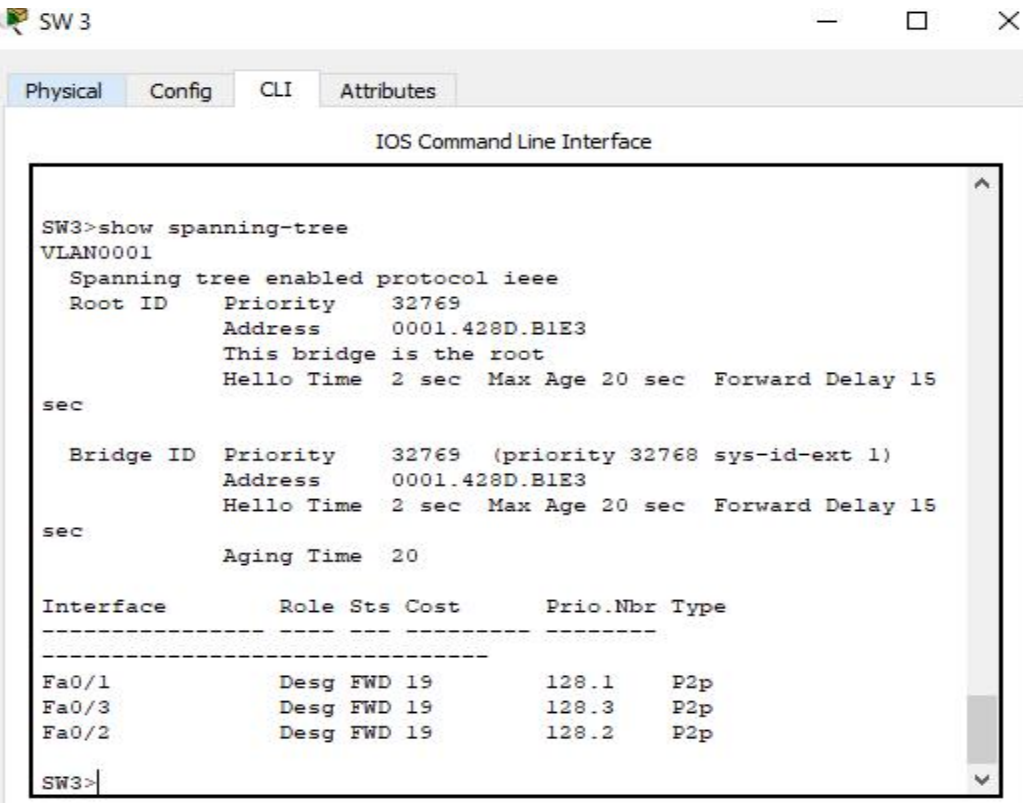
IOS Command Line Interface

```
SW2>show spanning-tree
VLAN0001
  Spanning tree enabled protocol ieee
    Root ID    Priority    32769
              Address     0001.428D.B1E3
              Cost        19
              Port        3(FastEthernet0/3)
              Hello Time  2 sec  Max Age 20 sec  Forward Delay 15
sec
    Bridge ID  Priority    32769 (priority 32768 sys-id-ext 1)
              Address     00D0.D342.E860
              Hello Time  2 sec  Max Age 20 sec  Forward Delay 15
sec
              Aging Time  20

Interface      Role Sts Cost      Prio.Nbr Type
-----
Fa0/2          Altn BLK 19        128.2    P2p
Fa0/3          Root FWD 19        128.3    P2p
Fa0/1          Desg FWD 19        128.1    P2p

SW2>
```

Status STP SW3



```

SW3>show spanning-tree
VLAN0001
  Spanning tree enabled protocol ieee
    Root ID    Priority    32769
              Address     0001.428D.B1E3
              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     0001.428D.B1E3
              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
Fa0/3                    Desg FWD 19           128.3    P2p
Fa0/2                    Desg FWD 19           128.2    P2p
SW3>
  
```

Tugas 4B:

SW 1

| No | Variable | Nilai |
|----|--------------------|----------------|
| 1 | Root ID | - |
| 2 | Priority | 32769 |
| 3 | MAC Address | 0001.428D.B1E3 |
| 4 | Bridge ID | - |
| 5 | Cost (0/1;0/2;0/3) | 19;19;19 |
| 6 | Hello Time | 2 sec |
| 7 | MaxAge | 20 sec |
| 8 | Forward Delay | 15 sec |

SW 2

| No | Variable | Nilai |
|----|--------------------|----------------|
| 1 | Root ID | - |
| 2 | Priority | 32769 |
| 3 | MAC Address | 0001.428D.B1E3 |
| 4 | Bridge ID | - |
| 5 | Cost (0/1;0/2;0/3) | 19;19;19 |
| 6 | Hello Time | 2 sec |
| 7 | MaxAge | 20 sec |
| 8 | Forward Delay | 15 sec |

SW 3

| No | Variable | Nilai |
|----|--------------------|----------------|
| 1 | Root ID | - |
| 2 | Priority | 32769 |
| 3 | MAC Address | 0001.428D.B1E3 |
| 4 | Bridge ID | - |
| 5 | Cost (0/1;0/2;0/3) | 19;19;19 |
| 6 | Hello Time | 2 sec |
| 7 | MaxAge | 20 sec |
| 8 | Forward Delay | 15 sec |

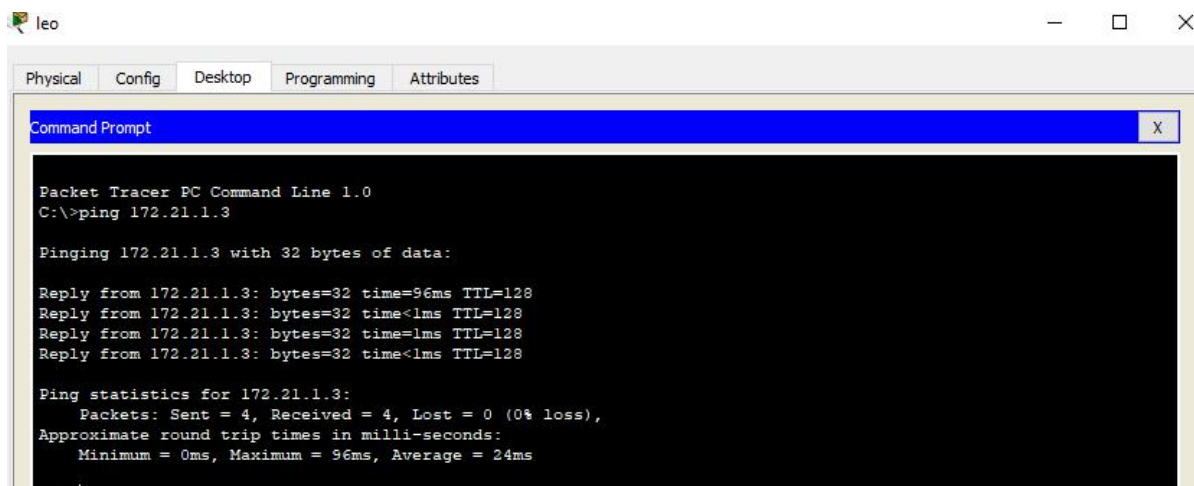
Tugas 4 C :

- Root bridge : **SW 3**
- Designated bridge : **SW 3**
- Root port : **SW1 (Fa0/3) dan SW2 (Fa0/3)**
- Designated port : **SW1 (Fa0/1; Fa0/2), SW2 (Fa0/1), dan SW3 (Fa0/1;Fa0/2; Fa0/3)**

Tugas 4 D:

- Forwarding
SW1 (Fa0/1; Fa0/2; Fa0/3)
SW2 (Fa0/1; Fa0/3)
SW3 (Fa0/1; Fa0/2; Fa0/3)
- Blocking
SW2 (Fa0/2)

Tugas 5 A:



```
leo
Physical Config Desktop Programming Attributes
Command Prompt
Packet Tracer PC Command Line 1.0
C:\>ping 172.21.1.3

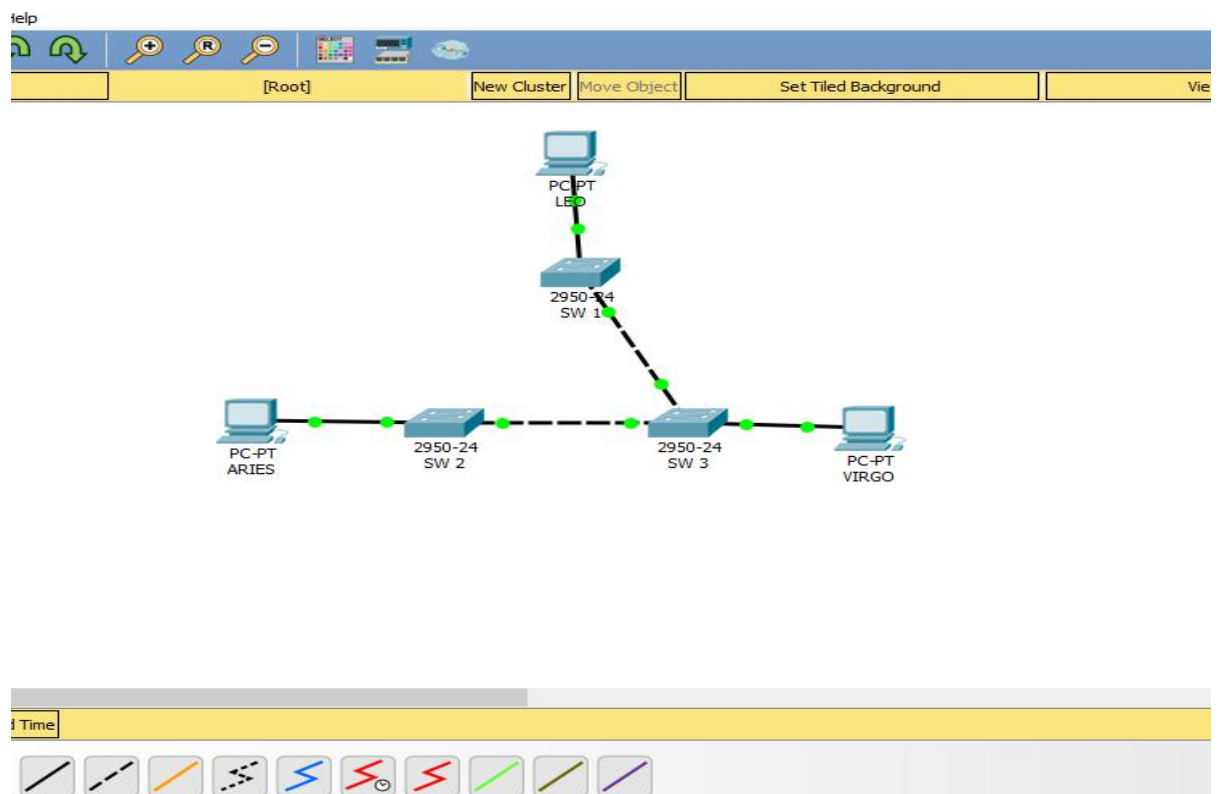
Pinging 172.21.1.3 with 32 bytes of data:

Reply from 172.21.1.3: bytes=32 time=96ms 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 = 96ms, Average = 24ms
```

2. Kegiatan 2

a. Mebuat topologi

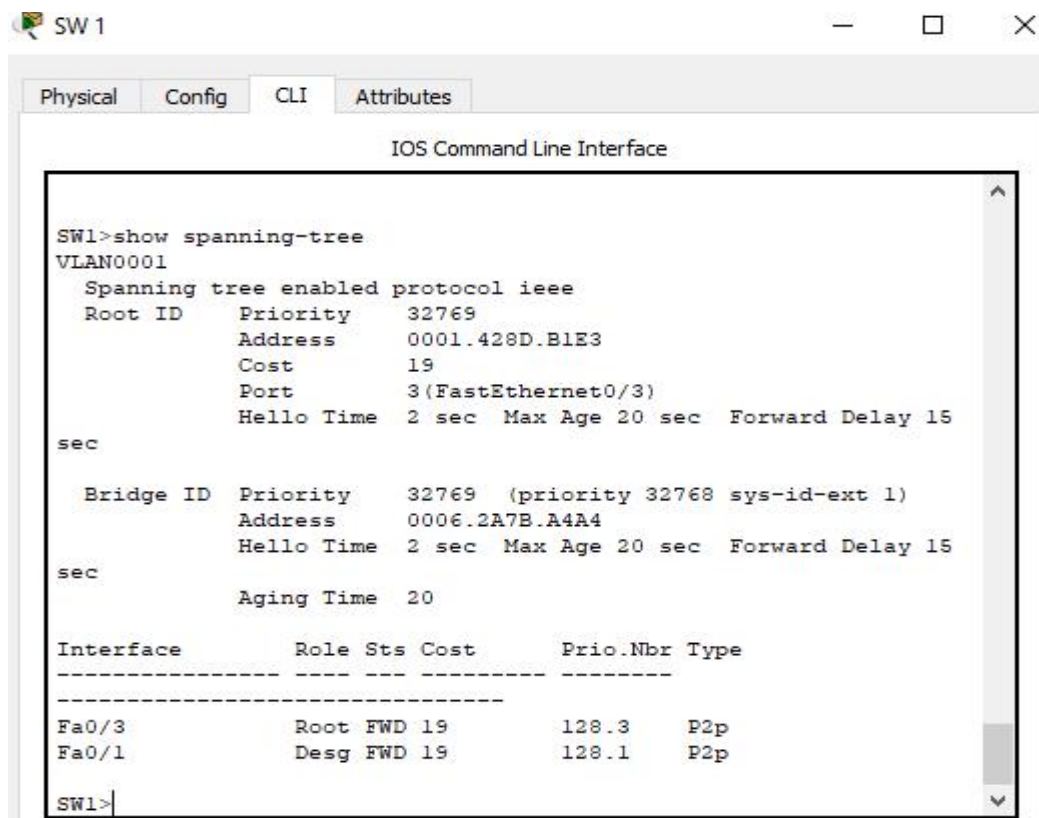


Tugas 9A:

Setelah mengubah struktur topologi jaringan selanjutnya lakukan spt pada lab.4 dan lab.5 menentukan kondisi *default* tsb, *switch*, dan *port* dg mengetik *show spanning-tree* pada masing-masing *switch*.

- Menjadi root bridge adalah **SW3**
- Menjadi designated bridge adalah **SW3**
- Menjadi root port adalah **SW2 (Fa0/3) dan SW1 (Fa0/3)**
- Menjadi designated port adalah **SW1 (Fa0/1), SW2 (Fa0/1), dan SW3 (Fa0/1; Fa0/2; Fa0/3)**

Pada semua **switch** semua port pada keadaan *Forwarding*, tidak ada *port* yg ter *Blocking*.



SW1

Physical Config CLI Attributes

IOS Command Line Interface

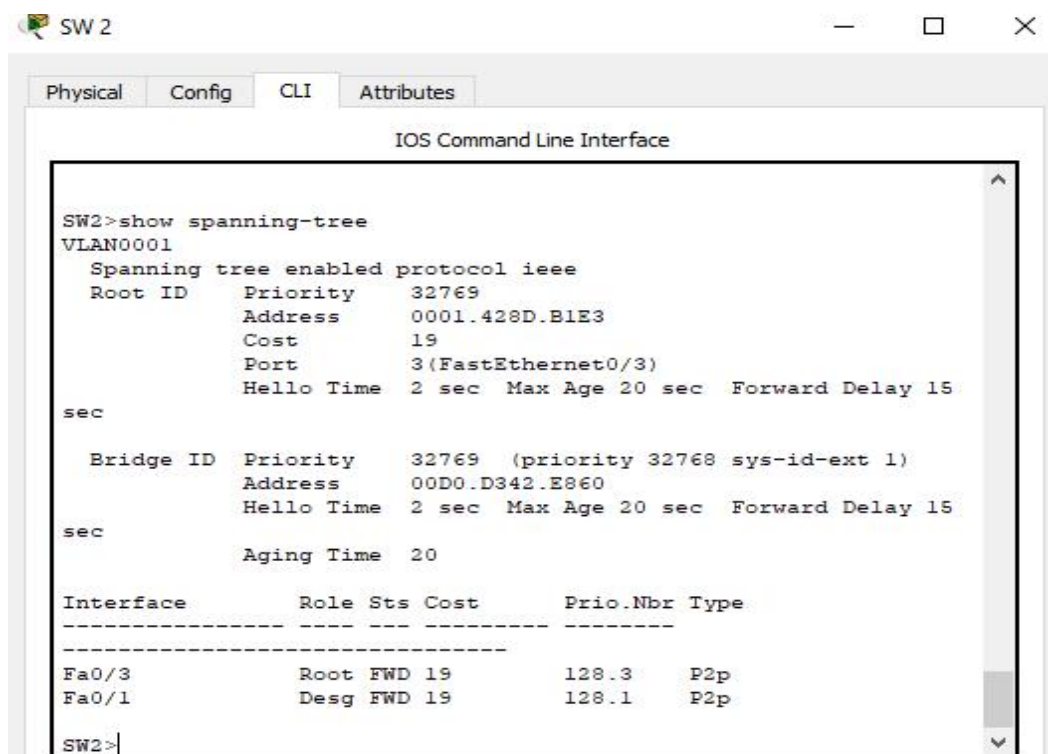
```
SW1>show spanning-tree
VLAN0001
  Spanning tree enabled protocol ieee
  Root ID    Priority    32769
            Address     0001.428D.B1E3
            Cost        19
            Port        3 (FastEthernet0/3)
            Hello Time  2 sec  Max Age 20 sec  Forward Delay 15
sec

  Bridge ID  Priority    32769 (priority 32768 sys-id-ext 1)
            Address     0006.2A7B.A4A4
            Hello Time  2 sec  Max Age 20 sec  Forward Delay 15
sec

            Aging Time  20

Interface      Role Sts Cost      Prio.Nbr Type
-----
Fa0/3          Root FWD 19        128.3    P2p
Fa0/1          Desg FWD 19        128.1    P2p

SW1>
```



SW2

Physical Config CLI Attributes

IOS Command Line Interface

```
SW2>show spanning-tree
VLAN0001
  Spanning tree enabled protocol ieee
  Root ID    Priority    32769
            Address     0001.428D.B1E3
            Cost        19
            Port        3 (FastEthernet0/3)
            Hello Time  2 sec  Max Age 20 sec  Forward Delay 15
sec

  Bridge ID  Priority    32769 (priority 32768 sys-id-ext 1)
            Address     00D0.D342.E860
            Hello Time  2 sec  Max Age 20 sec  Forward Delay 15
sec

            Aging Time  20

Interface      Role Sts Cost      Prio.Nbr Type
-----
Fa0/3          Root FWD 19        128.3    P2p
Fa0/1          Desg FWD 19        128.1    P2p

SW2>
```


Physical

Config

CLI

Attributes

IOS Command Line Interface

```
SW3>show spanning-tree
VLAN0001
  Spanning tree enabled protocol ieee
  Root ID    Priority    32769
             Address     0001.428D.B1E3
             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     0001.428D.B1E3
             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
Fa0/3              Desg FWD 19      128.3    P2p
Fa0/2              Desg FWD 19      128.2    P2p

SW3>
```