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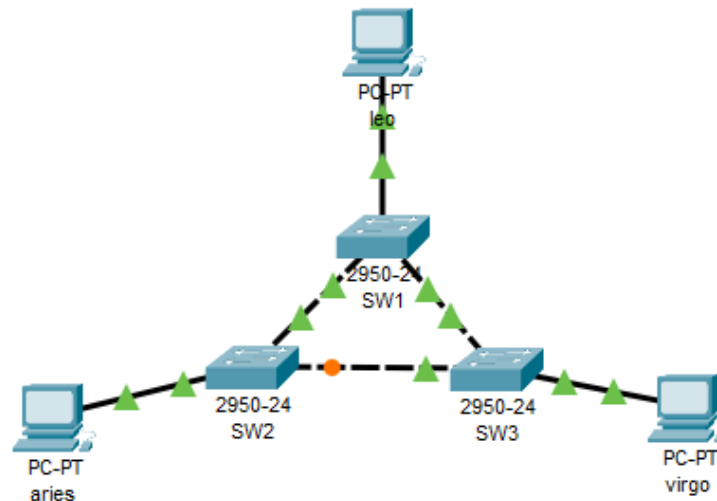
NIM : L200180210

Kelas : E Praktikum Jarkom

MODUL 6 PRAKTIKUM JARINGAN KOMPUTER

1. Kegiatan 1. Topologi 1

Tugas 1A:



Tugas 2A:

PC Leo

leo

Physical Config **Desktop** Programming Attributes

IP Configuration X

Interface: FastEthernet0

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::2D0:BAFF:FEC9:8135

IPv6 Gateway:

IPv6 DNS Server:

802.1X

☐ Use 802.1X Security

☐ Top

PC Aries

The screenshot shows the configuration window for PC Aries. The 'Desktop' tab is selected. The 'IP Configuration' section is expanded, showing the 'FastEthernet0' interface. The 'Static' radio button is selected for IP Configuration. The IP Address is 172.21.1.2, Subnet Mask is 255.255.255.0, Default Gateway is 0.0.0.0, and DNS Server is 0.0.0.0. The 'IPv6 Configuration' section is also expanded, showing 'Static' selected. The IPv6 Address is empty, Link Local Address is FE80::201:97FF:FE6E:C918, IPv6 Gateway is empty, and IPv6 DNS Server is empty. The '802.1X' section is expanded, showing 'Use 802.1X Security' unchecked. A 'Top' button is at the bottom left.

aries

Physical Config **Desktop** Programming Attributes

IP Configuration X

Interface FastEthernet0

IP Configuration

☐ DHCP ☒ Static

IP Address 172.21.1.2

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::201:97FF:FE6E:C918

IPv6 Gateway

IPv6 DNS Server

802.1X

☐ Use 802.1X Security

☐ Top

PC Virgo

The screenshot shows the configuration window for PC Virgo. The 'Desktop' tab is selected. The 'IP Configuration' section is expanded, showing the 'FastEthernet0' interface. The 'Static' radio button is selected for IP Configuration. The IP Address is 172.21.1.3, Subnet Mask is 255.255.255.0, Default Gateway is 0.0.0.0, and DNS Server is 0.0.0.0. The 'IPv6 Configuration' section is also expanded, showing 'Static' selected. The IPv6 Address is empty, Link Local Address is FE80::260:47FF:FE77:8E03, IPv6 Gateway is empty, and IPv6 DNS Server is empty. The '802.1X' section is expanded, showing 'Use 802.1X Security' unchecked. A 'Top' button is at the bottom left.

virgo

Physical Config **Desktop** Programming Attributes

IP Configuration X

Interface FastEthernet0

IP Configuration

☐ DHCP ☒ Static

IP Address 172.21.1.3

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::260:47FF:FE77:8E03

IPv6 Gateway

IPv6 DNS Server

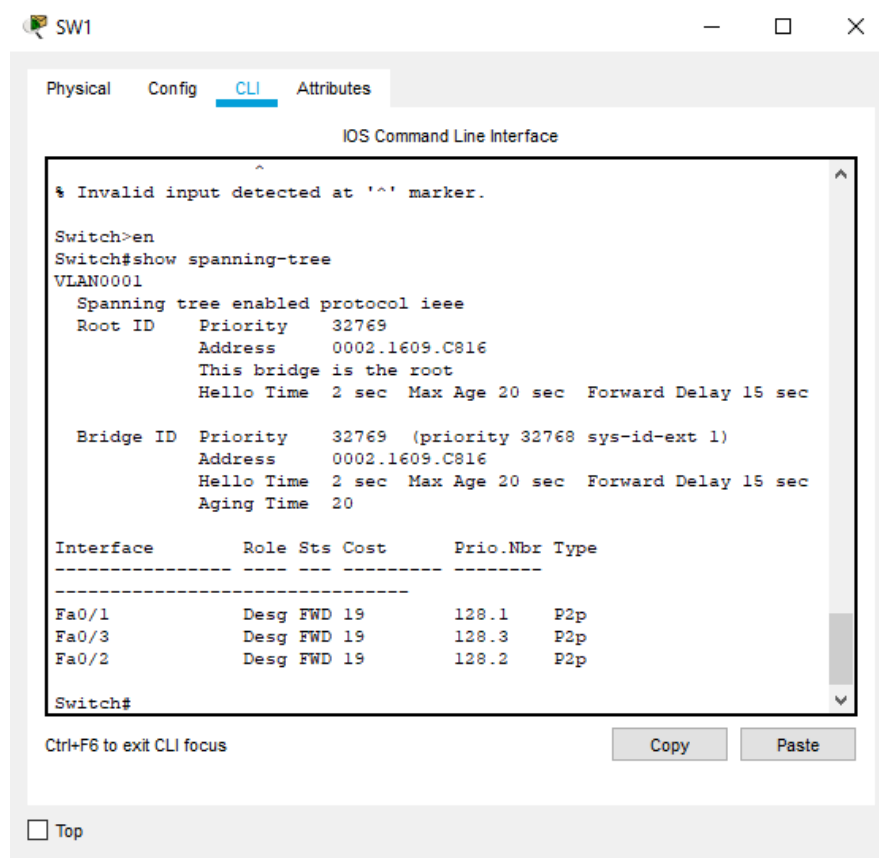
802.1X

☐ Use 802.1X Security

☐ Top

Tugas 4A:

Status STP SW1



SW1

Physical Config **CLI** Attributes

IOS Command Line Interface

```
% Invalid input detected at '^' marker.

Switch>en
Switch#show spanning-tree
VLAN0001
  Spanning tree enabled protocol ieee
  Root ID    Priority    32769
            Address     0002.1609.C816
            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     0002.1609.C816
            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

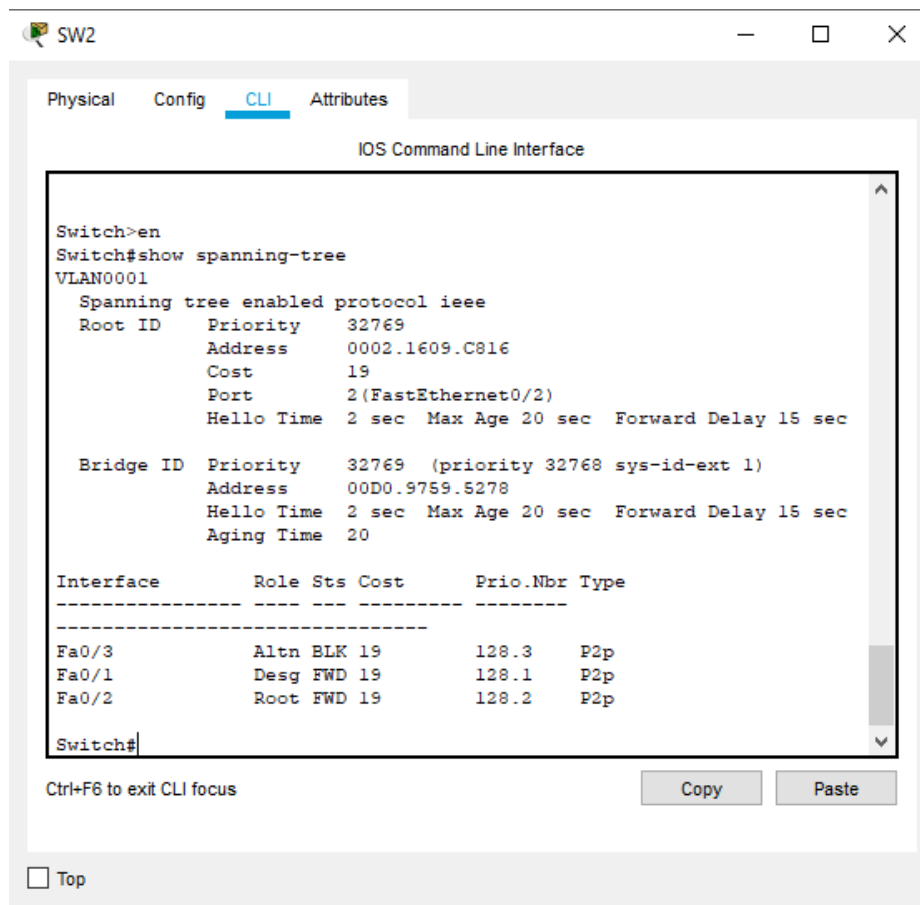
Switch#
```

Ctrl+F6 to exit CLI focus

Copy Paste

☐ Top

Status STP SW2



SW2

Physical Config **CLI** Attributes

IOS Command Line Interface

```
Switch>en
Switch#show spanning-tree
VLAN0001
  Spanning tree enabled protocol ieee
  Root ID    Priority    32769
            Address     0002.1609.C816
            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     00D0.9759.5278
            Hello Time 2 sec Max Age 20 sec Forward Delay 15 sec
            Aging Time 20

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

Switch#
```

Ctrl+F6 to exit CLI focus

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☐ Top

Status STP SW3

```

Switch>en
Switch#show spanning-tree
VLAN0001
  Spanning tree enabled protocol ieee
  Root ID    Priority    32769
             Address     0002.1609.C816
             Cost        19
             Port        1(FastEthernet0/1)
             Hello Time  2 sec  Max Age 20 sec  Forward Delay 15 sec

  Bridge ID  Priority    32769 (priority 32768 sys-id-ext 1)
             Address     0060.5CD9.2774
             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                    Root FWD 19        128.1    P2p
Fa0/3                    Desg FWD 19        128.3    P2p

Switch#
  
```

Ctrl+F6 to exit CLI focus

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☐ Top

Tugas 4B:

SW1

No	Variable	Nilai
1	Root ID	
2	Priority	32769
3	MAC Address	0002.1609.C816
4	Bridge ID	
5	Cost (0/1;0/2;0/3)	19
6	Hello Time	2 sec
7	MaxAge	20 sec
8	Forward Delay	15 sec

SW2

No	Variable	Nilai
1	Root ID	
2	Priority	32769
3	MAC Address	0002.1609.C816
4	Bridge ID	
5	Cost (0/1;0/2;0/3)	19
6	Hello Time	2 sec
7	MaxAge	20 sec
8	Forward Delay	15 sec

SW3

No	Variable	Nilai
1	Root ID	
2	Priority	32769
3	MAC Address	0002.1609.C816
4	Bridge ID	
5	Cost (0/1;0/2;0/3)	19
6	Hello Time	2 sec
7	MaxAge	20 sec
8	Forward Delay	15 sec

Tugas 4C:

- *Root Bridge* = **SW3**
- *Designated Bridge* = **SW1**
- *Root Port* = **Fa0/3** pada **SW1** dan **Fa0/3** pada **SW2**
- *Designated Port* = **Fa0/1** dan **Fa0/2**

Tugas 4D:

- Berada pada keadaan *forwarding* pada SW1(Fa0/1, Fa0/2, dan Fa0/3), SW2(Fa0/1 dan Fa0/3), dan SW3(Fa0/1, Fa0/2, dan Fa0/3).
- Berada pada keadaan *blocking* pada SW2(Fa0/2).

Tugas 5A:

The screenshot shows a Packet Tracer PC Command Line window for a device named 'leo'. The window has tabs for Physical, Config, Desktop (selected), Programming, and Attributes. The Command Prompt shows the following output:

```

Packet Tracer PC Command Line 1.0
C:\>ping 172.21.1.3

Pinging 172.21.1.3 with 32 bytes of data:

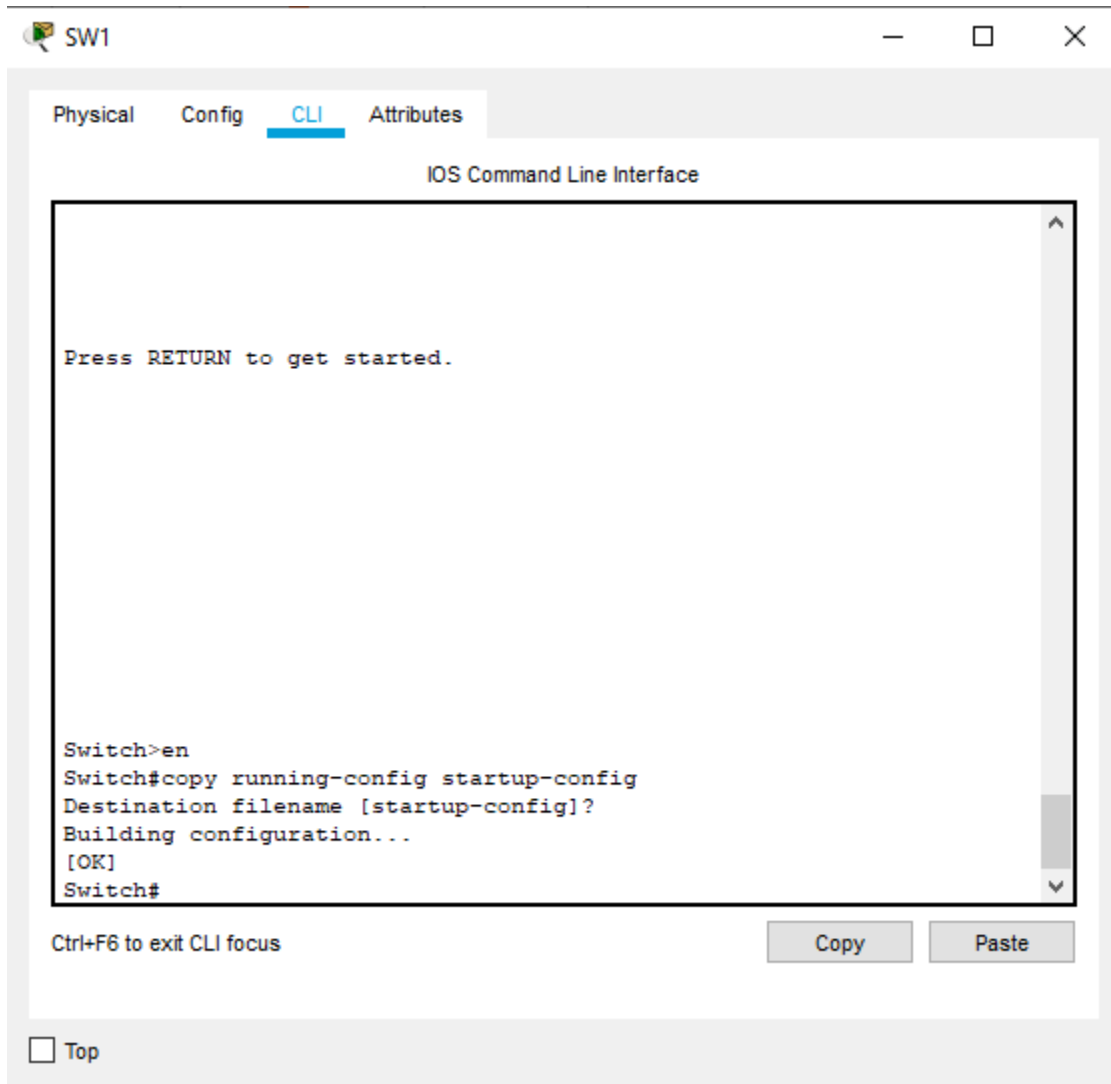
Reply from 172.21.1.3: bytes=32 time<1ms TTL=128
Reply from 172.21.1.3: bytes=32 time<1ms TTL=128
Reply from 172.21.1.3: bytes=32 time<1ms TTL=128
Reply from 172.21.1.3: bytes=32 time<1ms TTL=128

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 = 0ms, Average = 0ms

C:\>
  
```

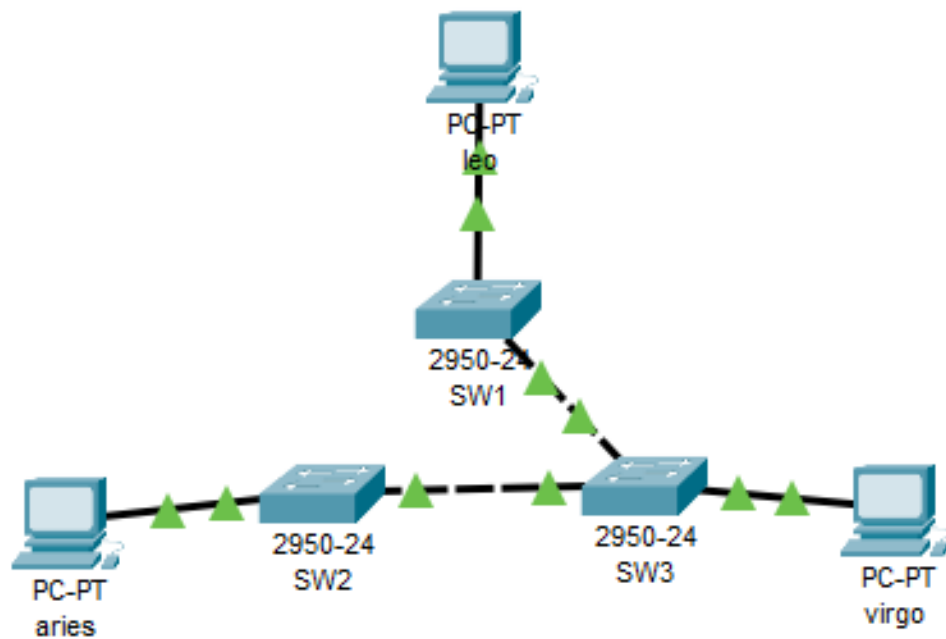
At the bottom of the window, there is a checkbox labeled 'Top' which is currently unchecked.

Tugas 6A:



2. Kegiatan 2. Topologi 2

- a. Menggunakan Packet Tracer ubah topologi menjadi seperti topologi berikut ini

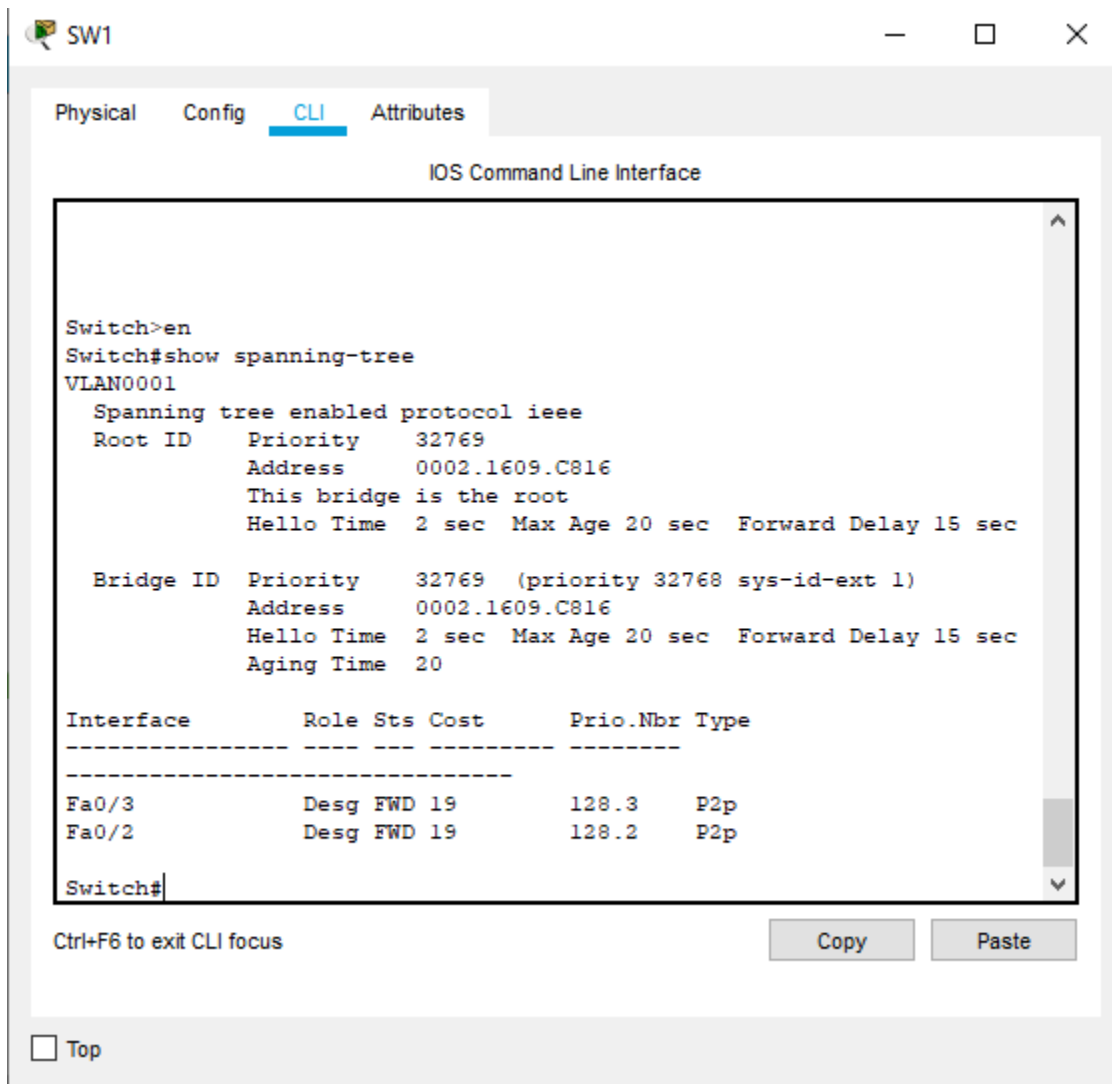


Tugas 9A:

Setelah mengubah struktur topologi jaringan selanjutnya lakukan seperti pada lab.4 dan lab.5 menentukan kondisi *default* tersebut, *switch* dan *port* dengan mengetik *show spanning-tree* pada masing-masing Switch.

- Menjadi *root bridge* adalah **SW3**
- Menjadi *designated bridge* adalah tidak ada yang memiliki jalur terblok.
- Menjadi *root port* adalah **SW1(Fa0/3)** dan **SW2(Fa0/3)**.
- Menjadi *designated port* adalah tidak ada *designated port* karena pada *designated bridge* tidak ada jalur yang terblok.

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



The screenshot shows the CLI window for SW1. The command 'show spanning-tree' has been executed, displaying the following output:

```
Switch>en
Switch#show spanning-tree
VLAN0001
  Spanning tree enabled protocol ieee
  Root ID    Priority    32769
             Address     0002.1609.C816
             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     0002.1609.C816
             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
```

Below the output, there is a 'Ctrl+F6 to exit CLI focus' message and 'Copy' and 'Paste' buttons. At the bottom left, there is a 'Top' button.

IOS Command Line Interface

changed state to down

Switch>en

Switch#show spanning-tree

VLAN0001

Spanning tree enabled protocol ieee

Root ID Priority 32769
 Address 0002.1609.C816
 Cost 38
 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 00D0.9759.5278
 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

Switch#

Ctrl+F6 to exit CLI focus

Copy

Paste

☐ Top

IOS Command Line Interface

Switch>en

Switch#show spanning-tree

VLAN0001

Spanning tree enabled protocol ieee

Root ID Priority 32769
 Address 0002.1609.C816
 Cost 19
 Port 1(FastEthernet0/1)
 Hello Time 2 sec Max Age 20 sec Forward Delay 15 sec

Bridge ID Priority 32769 (priority 32768 sys-id-ext 1)
 Address 0060.5CD9.2774
 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	Root	FWD	19	128.1	P2p
Fa0/3	Desg	FWD	19	128.3	P2p

Switch#

Ctrl+F6 to exit CLI focus

Copy

Paste

☐ Top