

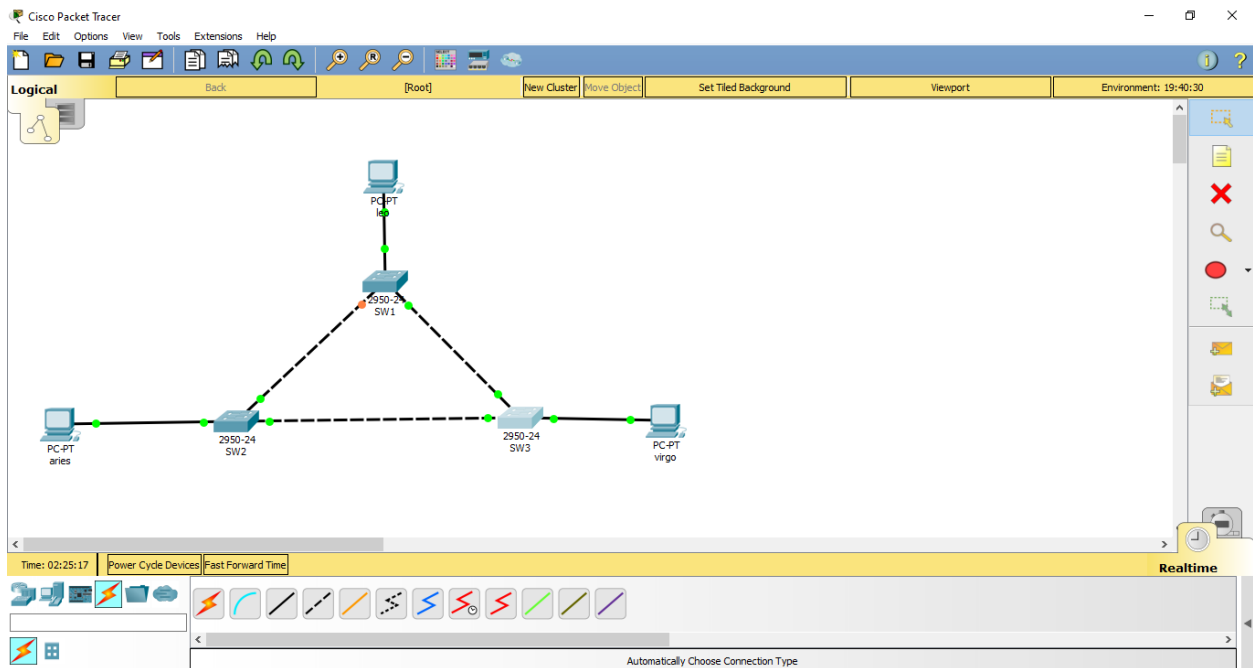
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**NIM : L200180146**

**Kelas : D**

## **Modul 6**

### **Kegiatan 1. Topologi 1**



#### **Tugas 1A:**

Pertama kita beri 3 Switch 2950-24 lalu kita beri masing-masing PC per Switch dan sambungkan antar peripheral dengan media transmisi kabel.

**Tugas 2A:** Memberi nama Switch melalui mode user

**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

## Konfigurasi masing-masing PC

The screenshot shows a window titled 'leo' with a menu bar containing 'Physical', 'Config', 'Desktop', 'Programming', and 'Attributes'. The 'Config' tab is active, displaying the 'IP Configuration' dialog box. The dialog has a blue header bar with a close button (X). It is divided into two sections: 'IP Configuration' and 'IPv6 Configuration'.

**IP Configuration Section:**

- Radio buttons: ☐ DHCP, ☒ Static
- IP Address: 172.21.1.1
- Subnet Mask: 255.255.0.0
- Default Gateway: 0.0.0.0
- DNS Server: 0.0.0.0

**IPv6 Configuration Section:**

- Radio buttons: ☐ DHCP, ☐ Auto Config, ☒ Static
- IPv6 Address: (empty field) / (empty field)
- Link Local Address: FE80::2E0:B0FF:FEB3:B86B
- IPv6 Gateway: (empty field)
- IPv6 DNS Server: (empty field)

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

aries

Physical Config Desktop Programming Attributes

IP Configuration X

IP Configuration

☐ DHCP ☒ Static

IP Address 172.21.1.2

Subnet Mask 255.255.0.0

Default Gateway 0.0.0.0

DNS Server 0.0.0.0

IPv6 Configuration

☐ DHCP ☐ Auto Config ☒ Static

IPv6 Address /

Link Local Address FE80::209:7CFF:FE19:BD2A

IPv6 Gateway

IPv6 DNS Server

☐ Top

virgo

Physical Config Desktop Programming Attributes

IP Configuration X

IP Configuration

☐ DHCP ☒ Static

IP Address 172.21.1.3

Subnet Mask 255.255.0.0

Default Gateway 0.0.0.0

DNS Server 0.0.0.0

IPv6 Configuration

☐ DHCP ☐ Auto Config ☒ Static

IPv6 Address /

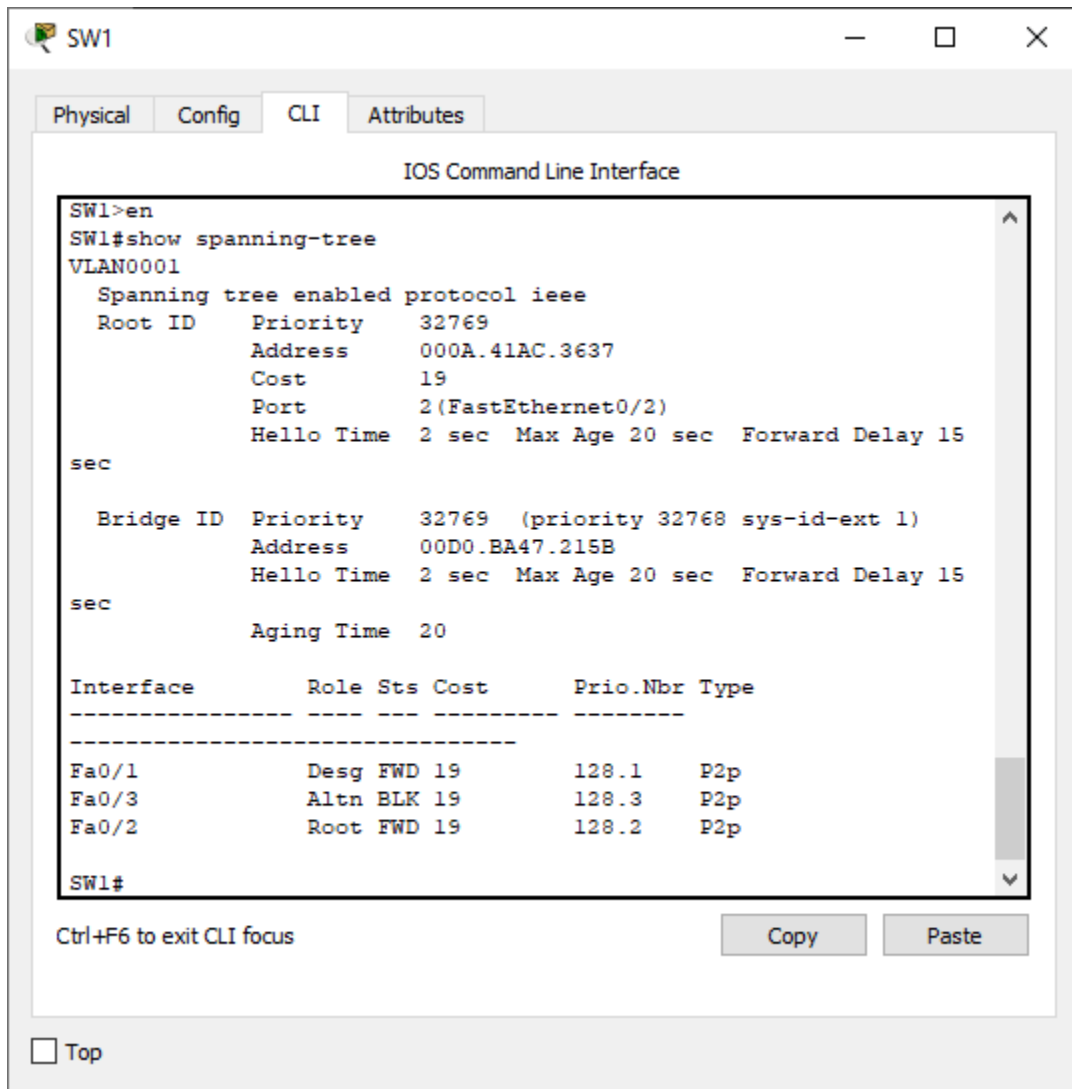
Link Local Address FE80::260:47FF:FE56:C5CE

IPv6 Gateway

IPv6 DNS Server

☐ Top

**Tugas 4A:** Pada mode *user* atau *privileged*, lihat 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 user has entered the command "show spanning-tree" in privileged mode. The output shows STP details for VLAN0001, including the root ID, bridge ID, and a table of interface roles and costs.

```
SW1>en
SW1#show spanning-tree
VLAN0001
  Spanning tree enabled protocol ieee
  Root ID    Priority    32769
             Address     000A.41AC.3637
             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.BA47.215B
             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          Altn BLK 19        128.3    P2p
Fa0/2          Root FWD 19        128.2    P2p

SW1#
```

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

SW2

Physical

Config

CLI

Attributes

IOS Command Line Interface

SW2#en  
SW2#show spanning-tree  
VLAN0001  
Spanning tree enabled protocol ieee  
Root ID    Priority    32769  
          Address    000A.41AC.3637  
          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    0060.471B.1706  
          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            Desg   FWD   19        128.3    P2p  
  
SW2#

Ctrl+F6 to exit CLI focus

Copy

Paste

☐ Top

SW3

Physical

Config

CLI

Attributes

IOS Command Line Interface

SW3#en  
SW3#show spanning-tree  
VLAN0001  
Spanning tree enabled protocol ieee  
Root ID      Priority      32769  
              Address      000A.41AC.3637  
              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      000A.41AC.3637  
              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           Desg   FWD   19      128.2      P2p  
Fa0/3           Desg   FWD   19      128.3      P2p  
  
SW3#

Ctrl+F6 to exit CLI focus

Copy

Paste

☐ Top

**Tugas 4B:** Tabel tiap switch

**SW1**

No	Variable	Nilai
1	Root ID	000A.41AC.3637
2	Priority	32769
3	MAC Address	00D0.BA47.215B
4	Bridge ID	00D0.BA47.215B
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

**SW2**

No	Variable	Nilai
1	Root ID	000A.41AC.3637
2	Priority	32769
3	MAC Address	0060.471B.1706
4	Bridge ID	0060.471B.1706
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

### SW3

No	Variable	Nilai
1	Root ID	000A.41AC.3637
2	Priority	32769
3	MAC Address	000A.41AC.3637
4	Bridge ID	000A.41AC.3637
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 4C:

**Root bridge :** SW3

**Designated bridge :** SW2

**Root port :** SW1 (Fa0/2), SW2(Fa0/2)

**Designated port :** SW1(Fa0/1) , SW2(Fa0/1;Fa0/3), SW3(Fa0/1;Fa0/2;Fa0/3)

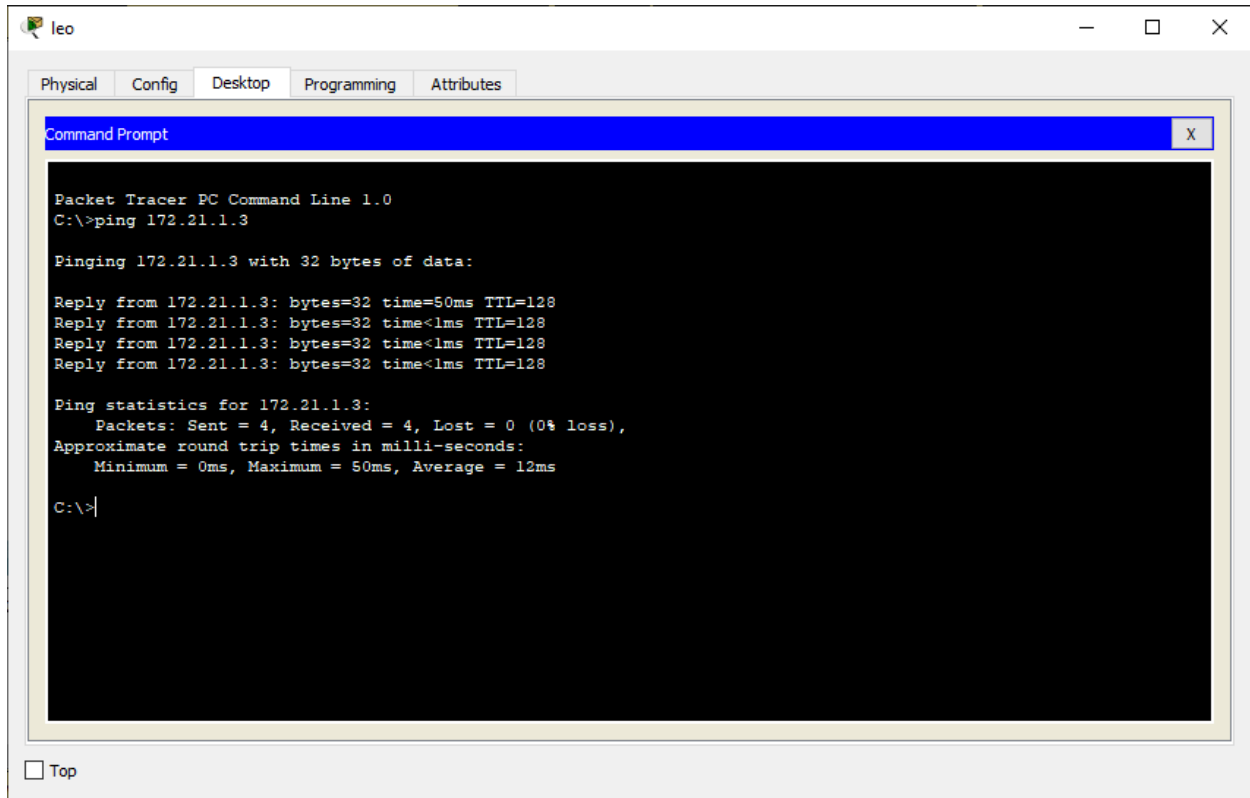
#### Tugas 4D:

**Forwarding :** SW1(Fa0/1;Fa0/2), SW2(Fa0/1;Fa0/2;Fa0/3), SW3 Fa0/1;Fa0/2;Fa0/3)

**Blocking :** SW1(Fa0/3)



## Tugas 5A:



Masuk ke PC leo >> Desktop >> Command Prompt

Lalu ketik “ping 172.21.1.3”

## Tugas 6A:

### SW1

*SW1>en*

*SW1#write*

*Building configuration...*

*[OK]*

### SW2

*SW2>en*

*SW2#write*

*Building configuration...*

*[OK]*

**SW3**

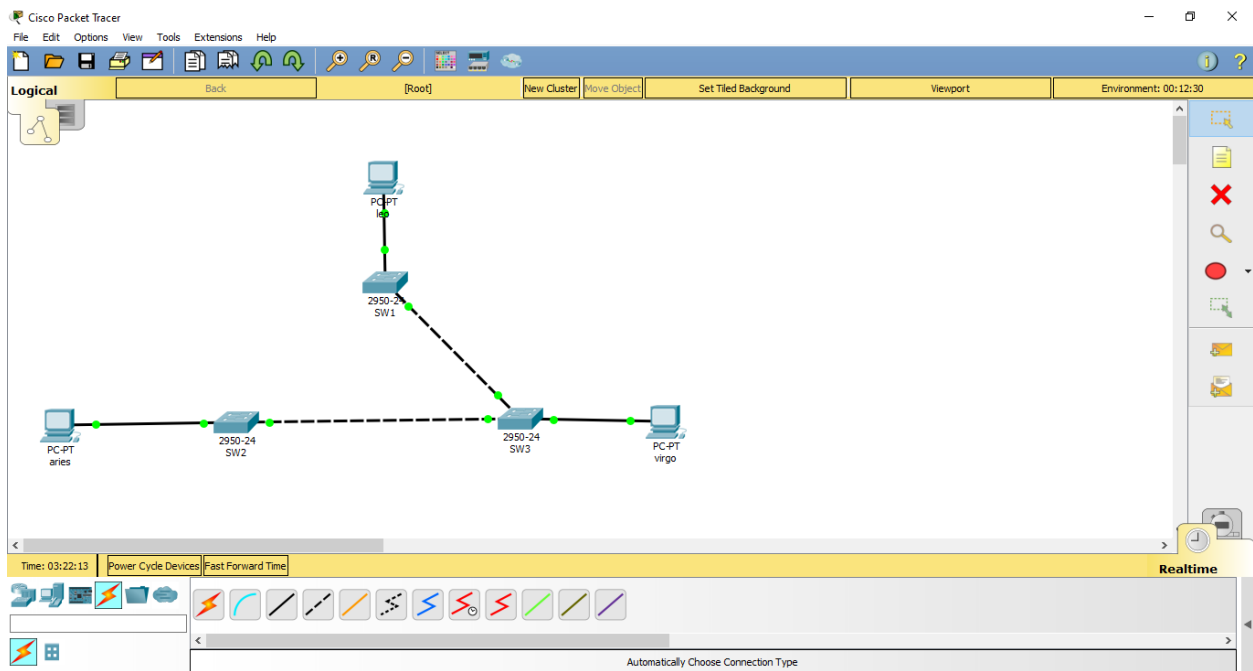
*SW3>en*

*SW3#write*

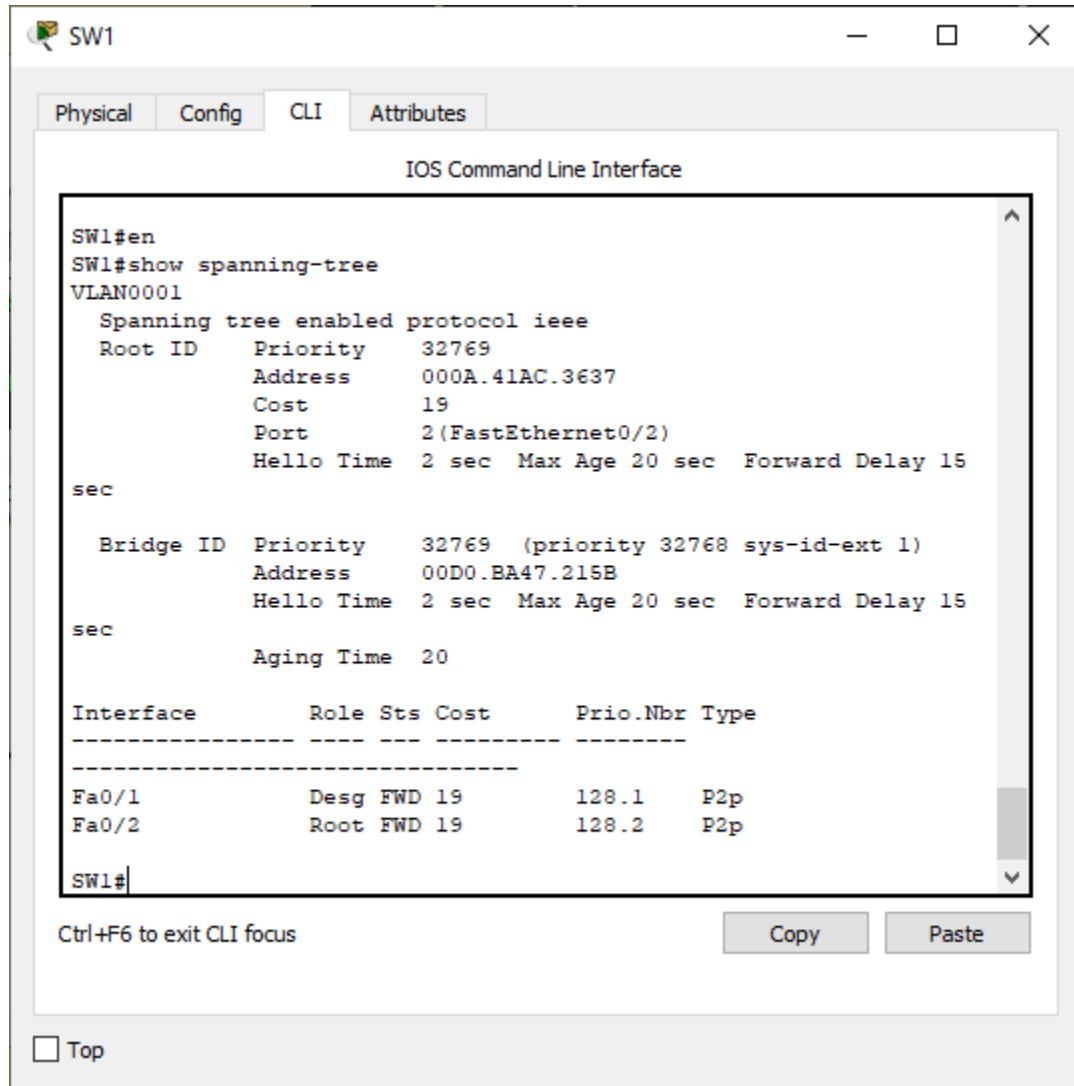
*Building configuration...*

*[OK]*

## Kegiatan 2. Topologi 2



## Tugas 9A:



The screenshot shows a network switch (SW1) with tabs for Physical, Config, CLI, and Attributes. The CLI tab is active, displaying the IOS Command Line Interface. The user has entered the command `show spanning-tree` in VLAN0001. The output shows the spanning tree enabled protocol IEEE, with the root ID having a priority of 32769, address 000A.41AC.3637, cost 19, and port 2 (FastEthernet0/2). The bridge ID has a priority of 32769 (priority 32768 sys-id-ext 1), address 00D0.BA47.215B, and a hello time of 2 seconds. The aging time is 20 seconds. A table shows the roles of the interfaces Fa0/1 and Fa0/2.

```
SW1#en
SW1#show spanning-tree
VLAN0001
  Spanning tree enabled protocol ieee
  Root ID    Priority    32769
             Address     000A.41AC.3637
             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.BA47.215B
             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

SW1#
```

Ctrl+F6 to exit CLI focus

Copy Paste

☐ Top

SW2

Physical

Config

CLI

Attributes

IOS Command Line Interface

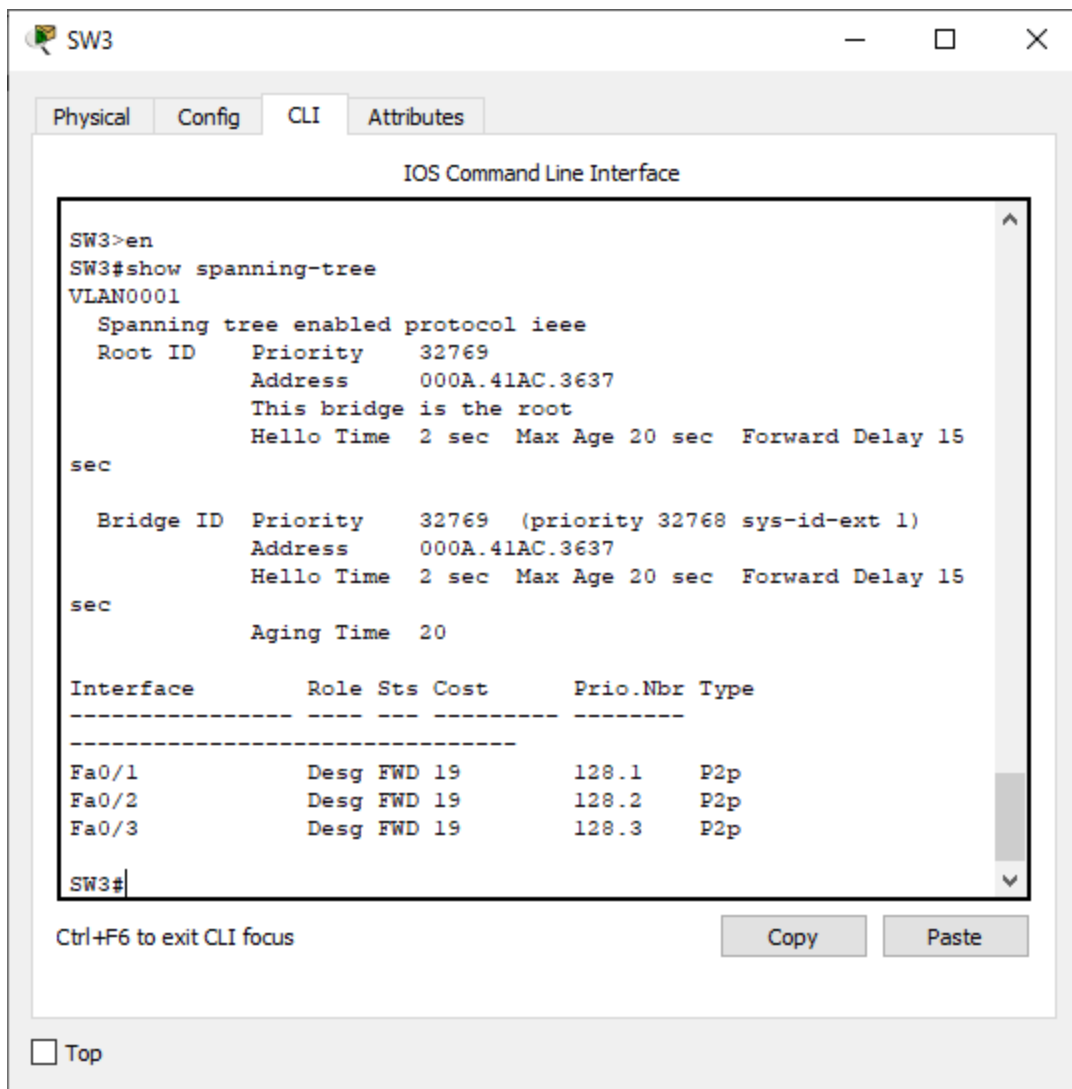
SW2>en  
SW2#show spanning-tree  
VLAN0001  
Spanning tree enabled protocol ieee  
Root ID    Priority    32769  
          Address    000A.41AC.3637  
          Cost        19  
          Port        2(FastEthernet0/2)  
          Hello Time 2 sec    Max Age 20 sec    Forward Delay 15  
sec  
  
          Bridge ID   Priority    32769 (priority 32768 sys-id-ext 1)  
          Address    0060.471B.1706  
          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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Paste

☐ Top



## SW1

No	Variable	Nilai
1	Root ID	000A.41AC.3637
2	Priority	32769
3	MAC Adress	00D0.BA47.215B
4	Bridge ID	00D0.BA47.215B
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

## SW2

No	Variable	Nilai
1	Root ID	000A.41AC.3637
2	Priority	32769
3	MAC Address	0060.471B.1706
4	Bridge ID	0060.471B.1706
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

## SW3

No	Variable	Nilai
1	Root ID	000A.41AC.3637
2	Priority	32769
3	MAC Address	000A.41AC.3637
4	Bridge ID	000A.41AC.3637
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

### Menentukan :

**Root bridge :** SW3

**Designated bridge :** SW2

**Root port :** SW1 (Fa0/2), SW2(Fa0/2)

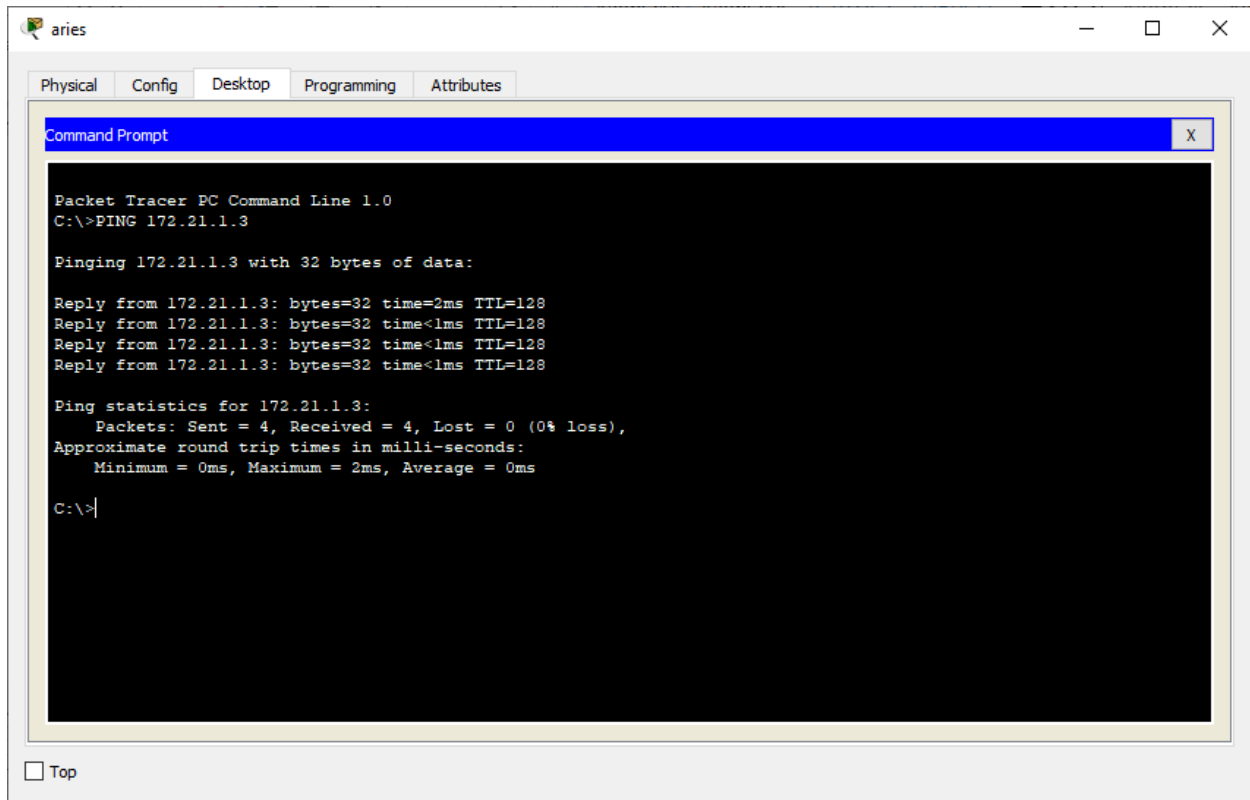
**Designated port :** SW1(Fa0/1 ), SW2(Fa0/1), SW3(Fa0/1;Fa0/2;Fa0/3)

**Menentukan :**

**Forwarding :** SW1(Fa0/1;Fa0/2), SW2(Fa0/1;Fa0/2),SW3(Fa0/1;Fa0/2;Fa0/3)

**Blocking :** None

**Ping PC aries ke PC virgo**



Masuk ke PC aries >> Desktop >> Command Prompt

Lalu ketik “ping 172.21.1.3”

**Langkah untuk menyimpan konfigurasi jaringan**

**SW1**

SW1>en

SW1#write

Building configuration...

[OK]

**SW2**

*SW2>en*

*SW2#write*

*Building configuration...*

*[OK]*

**SW3**

*SW3>en*

*SW3#write*

*Building configuration...*

*[OK]*