

**Nama : NARENDRA GUSTIAJI**  
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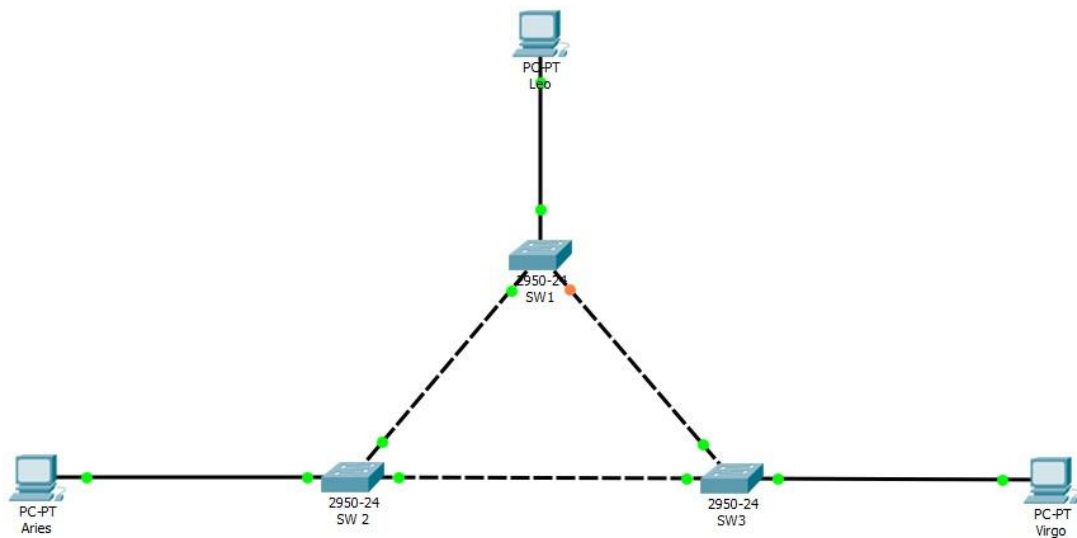
## TUGAS PRAKTIKUM JARKOM

### MODUL 6

#### ( SPANNING TREE PROTOCOL )

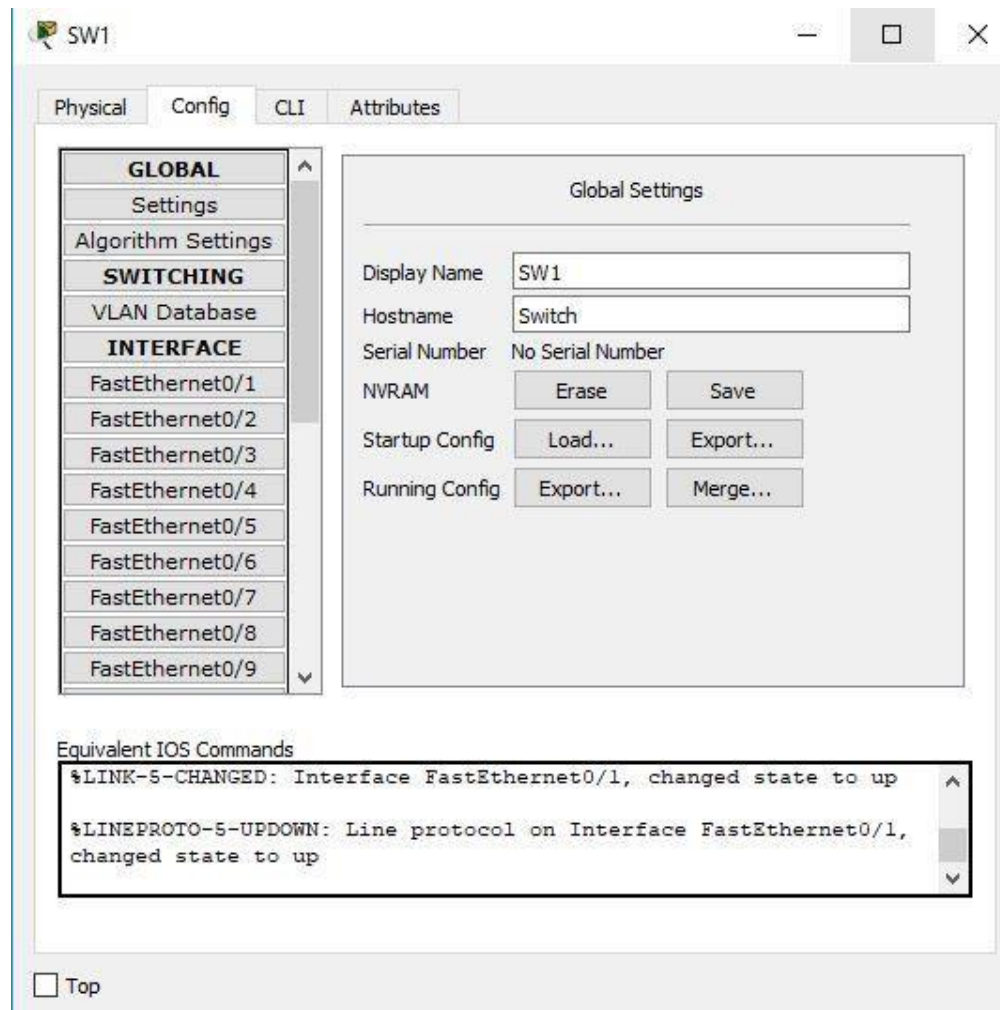
Tugas 1A: Tulis langkah pembuatan topologi!

Jawab : Pilih switch 2950-24 sebanyak 3 buah dengan 3 buah PC. Kemudian hubungkan 3 buah switch tersebut dengan kabel dan hubungkan 3 buah PC tersebut dengan kabel juga.

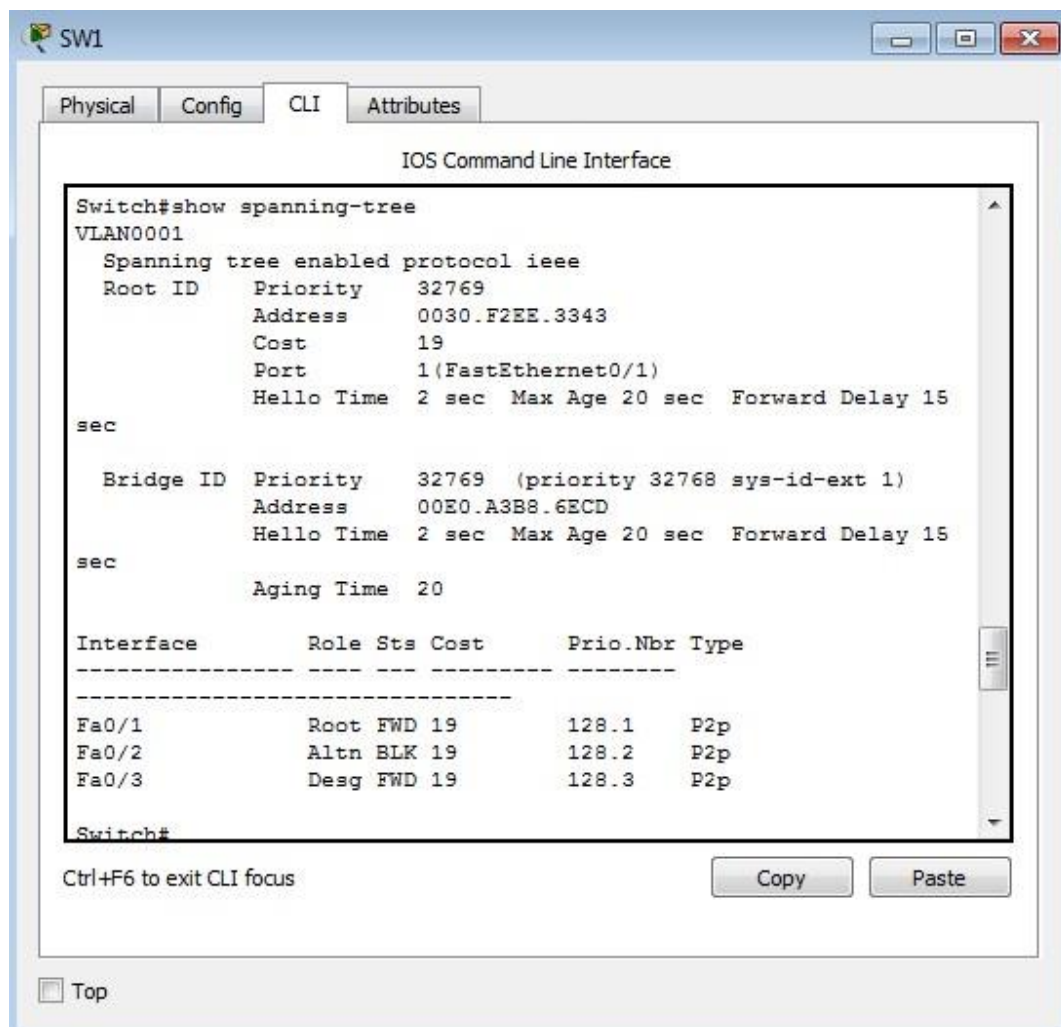


Tugas 2A : Tulis langkah pemberian nama switch mulai dari mode user.

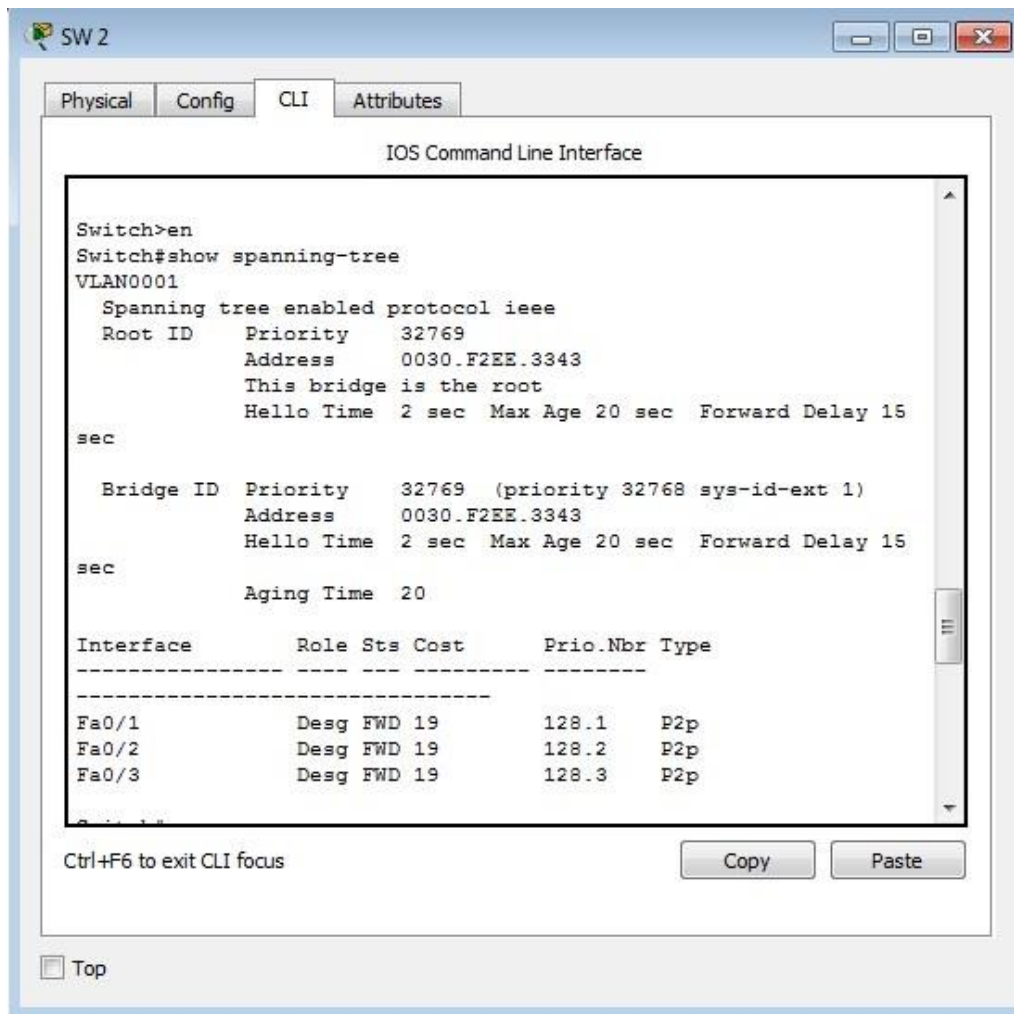
Jawab : Beri nama Switch lalu klik switch yang ingin diberi nama lalu pilih config dan isikan pada kolom global settings atau bisa secara langsung dengan cara mengklik switch nya dan tinggal mengganti namanya.



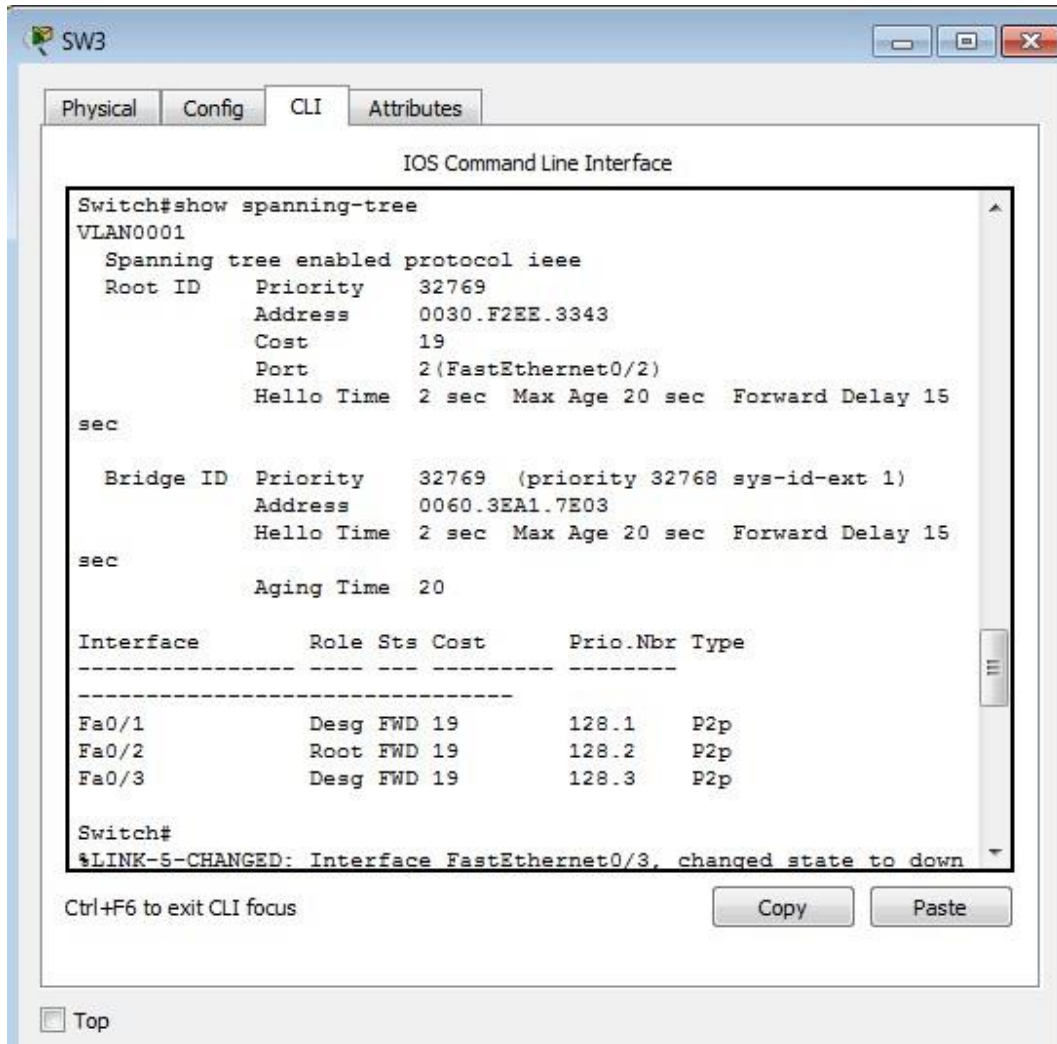
Tugas 4A : Pada kondisi default, capture masing-masing tampilan status STP switch (SW1,SW2, dan SW3)  
a. SW 1



b. SW 2



c. SW 3



Tugas 4B :Untuk tiap-tiap switch, isikan tabel berikut ini :

- SW 1

No	Variabel	Nilai		Interface	Role	Status
1.	Root ID	32769 : 0030.F2EE.3343		Fa 0/1	Root	FWD
2.	Priorty	32769		Fa 0/2	Altn	BLK
3.	MAC Address	00E0.A3B8.6ECD		Fa 0/3	Desg	FWD
4.	Bridge ID	32769 : 00E0. A3B8.6ECD				
5.	Cost(0/1:0/2:0/3)	0/1 = 19 0/2 = 19 0/3 = 19				
6.	Hello Time	2 sec				
7.	Max Age	20 sec				
8.	Forward Delay	15 sec				

- SW2

No	Variabel	Nilai		Interface	Role	Status
1.	Root ID	32769 : 0030.F2EE.3343		Fa 0/1	Desg	FWD
2.	Priorty	32769		Fa 0/2	Desg	FWD
3.	MAC Address	0030.F2EE.3343		Fa 0/3	Desg	FWD
4.	Bridge ID	32769 : 0030.F2EE.3343				
5.	Cost(0/1:0/2:0/3)	0/1 = 19 0/2 = 19 0/3 = 19				
6.	Hello Time	2 sec				
7.	Max Age	20 sec				
8.	Forward Delay	15 sec				

- SW 3

No	Variabel	Nilai	Interface	Role	Status
1.	Root ID	32769 : 0030.F2EE.3343	Fa 0/1	Desg	FWD
2.	Priorty	32769	Fa 0/2	Root	FWD
3.	MAC Address	0060.3EA1.7E03	Fa 0/3	Desg	FWD
4.	Bridge ID	32769 : 0060.3EA1.7E03			
5.	Cost(0/1:0/2:0/3)	0/1 = 19 0/2 = 19 0/3 = 19			
6.	Hello Time	2 sec			
7.	Max Age	20 sec			
8.	Forward Delay	15 sec			

Tugas 4C : Pada kondisi default tersebut, switch dan port mana saja yang :

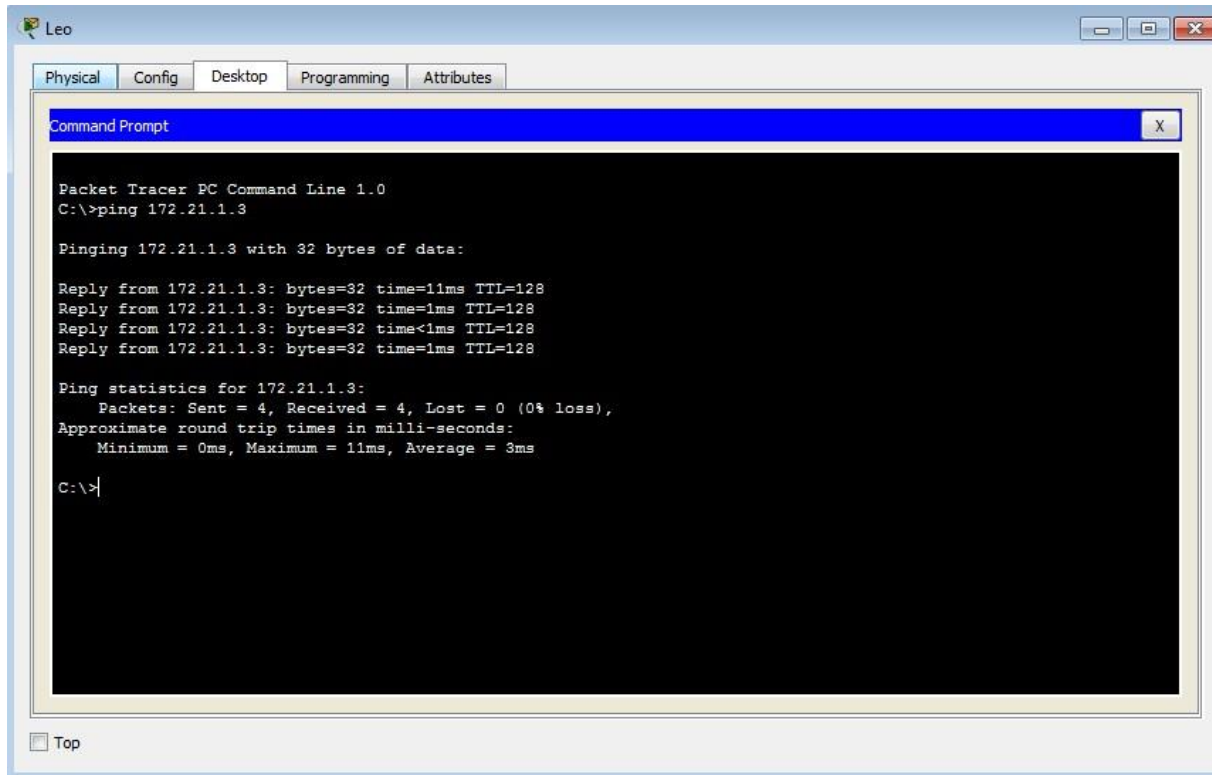
- Menjadi *root bridge* : SW 2
- Menjadi *designated bridge* : SW 1
- Menjadi *root port* : SW 1 Fa 0/1 dan SW 3 Fa 0/3
- Menjadi *designated port* : SW 1 Fa 0/3 , SW 2 (Fa 0/1 ; 0/2; 0/3) dan SW 3 (Fa 0/1, Fa 0/3)

Tugas 4D : Pada kondisi default tersebut, dan port mana saja yang :

- Berada pada keadaan *forwarding* : SW 1 (Fa 0/1; 0/3), SW 2 (Fa 0/1; 0/2; 0/3) SW 3 (Fa 0/1; 0/2; 0/3)
- Berada pada keadaan *blocking* : SW 1 (Fa 0/2)

Tugas 5A : Tulis langkah untuk melakukan perintah ping.

Jawab : Pilih salah satu PC kemudian klik PC tersebut, selanjutnya pilih desktop kemudian pilih command prompt lalu ketik *ping 172.21.1.3* (sesuai dengan ip pada pc yang ingin di ping)



Tugas 6A : Tulis Langkah untuk menyimpan konfigurasi jaringan.

Jawab : Klik switch kemudian pilih CLI masuk ke mode user/privillage kemudian tulis

Switch#copy running-config startup-config

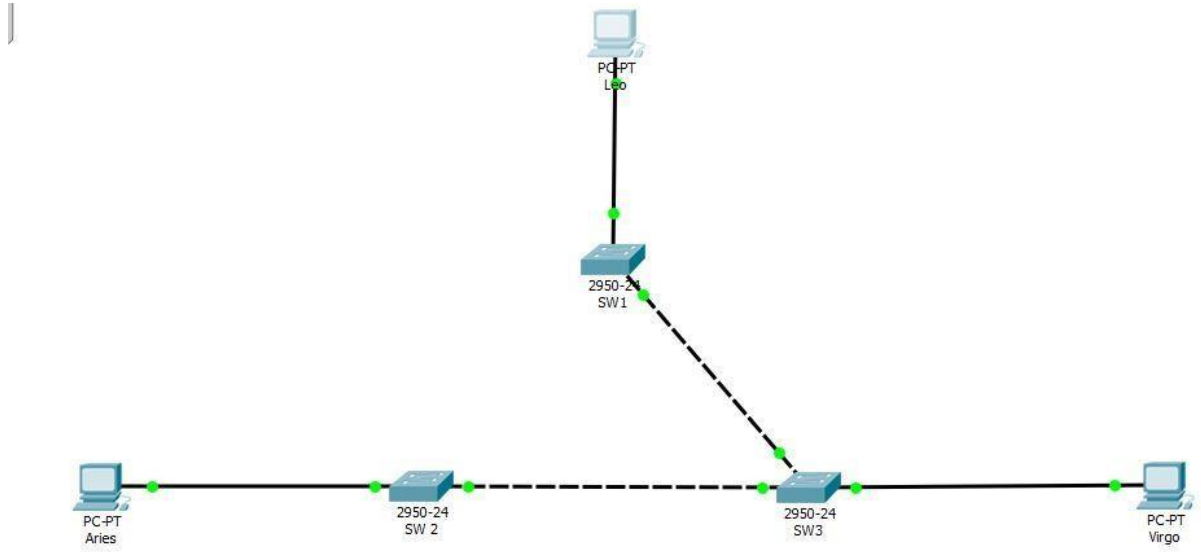
Lalu enter.

Simpan konfigurasi jaringan dengan nama lab2.pkt





Tugas 9A : Kerjakan tugas seperti pada tugas langkah lab.4 .



1. Melihat status STP pada masing-masing switch.
  - SW 1

SW1

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    0030.F2EE.3343  
          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    00E0.A3B0.6ECD  
          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            Root   FWD   19        128.2      P2p  
|  
Switch#

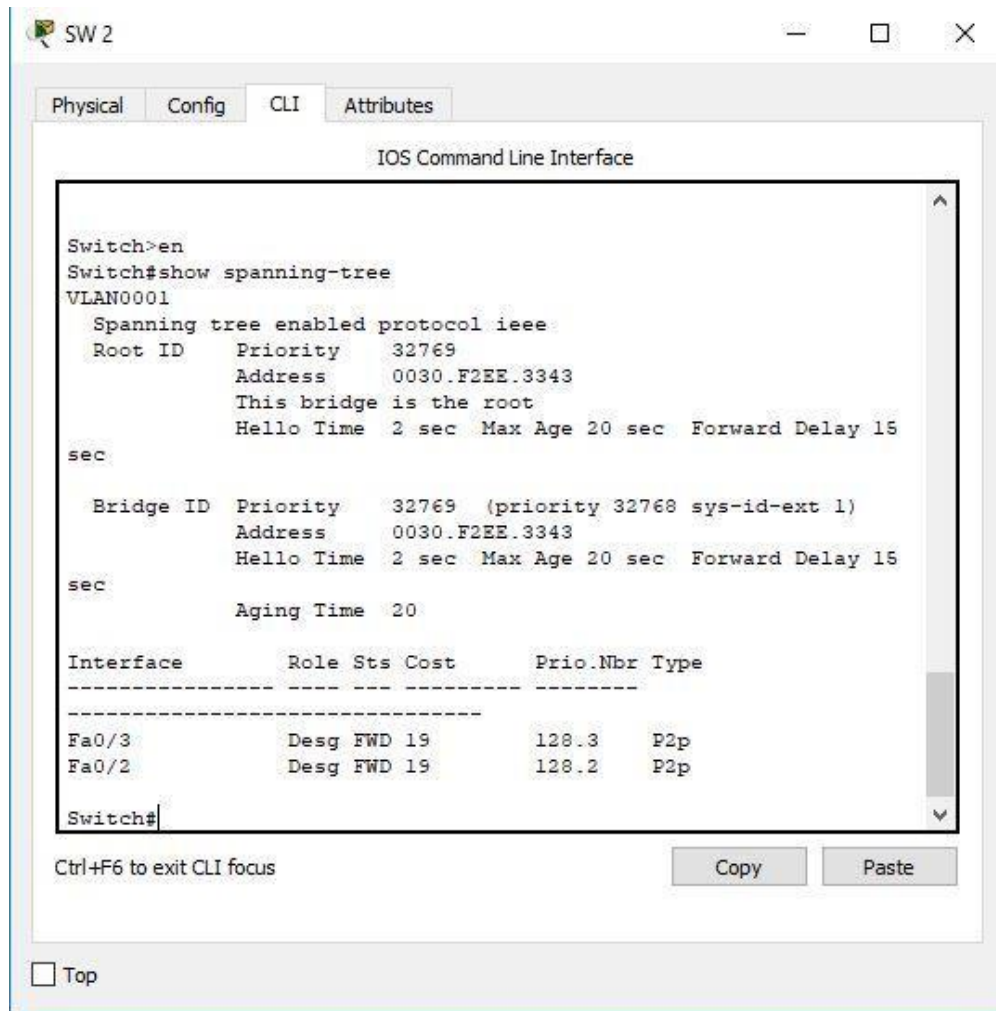
Ctrl+F6 to exit CLI focus

Copy

Paste

☐ Top

- SW 2



The screenshot shows a network switch window titled "SW 2" 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 that the spanning tree is enabled with the IEEE protocol. The root bridge has ID 32769, priority 32769, and address 0030.F2EE.3343. The bridge is the root. The hello time is 2 seconds, max age is 20 seconds, and forward delay is 15 seconds. The bridge ID is 32769, priority is 32769 (priority 32768 sys-id-ext 1), address is 0030.F2EE.3343, hello time is 2 seconds, max age is 20 seconds, forward delay is 15 seconds, and aging time is 20. The interface table shows Fa0/3 and Fa0/2, both in the Designated Forwarding (FWD) state with a cost of 19, priority 128.3, and P2p type.

```
Switch>en
Switch#show spanning-tree
VLAN0001
  Spanning tree enabled protocol ieee
  Root ID    Priority    32769
             Address      0030.F2EE.3343
             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      0030.F2EE.3343
             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

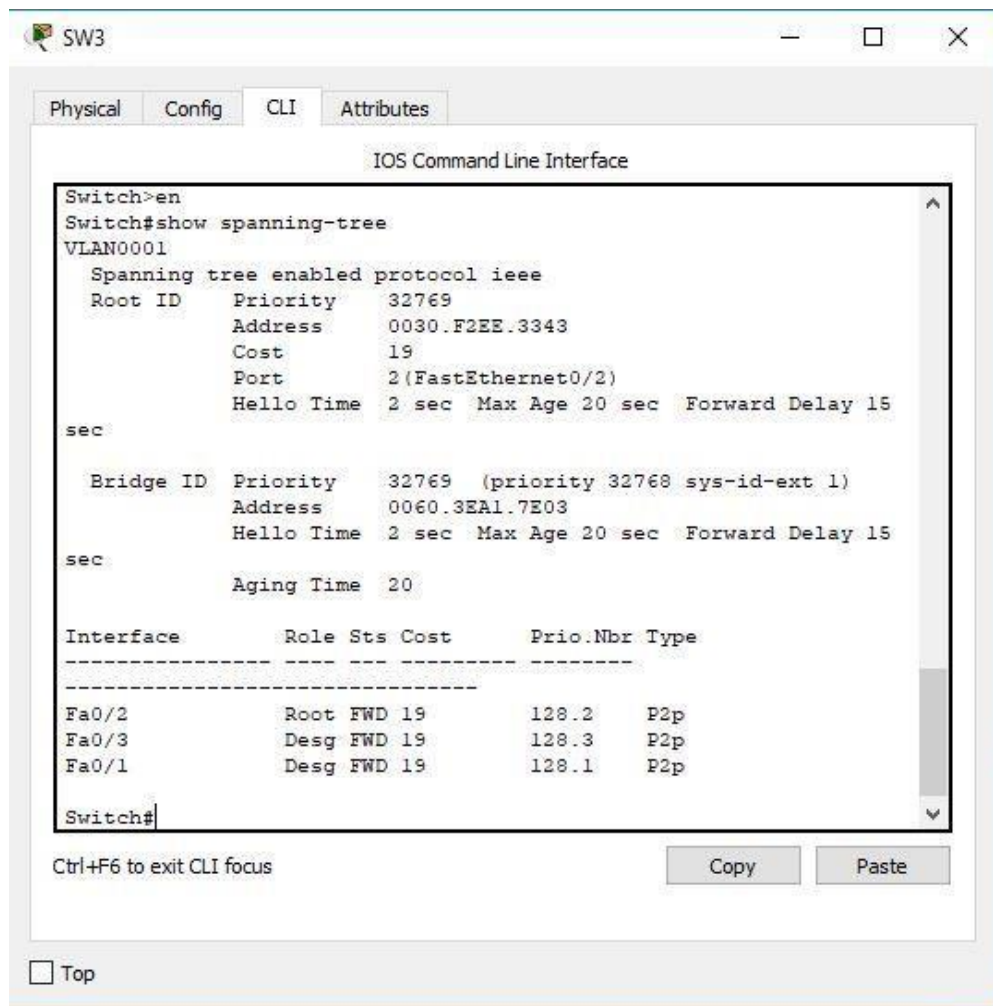
Switch#
```

Ctrl+F6 to exit CLI focus

Copy Paste

☐ Top

- SW 3



The screenshot shows a network switch configuration window titled "SW3". It has tabs for "Physical", "Config", "CLI", and "Attributes". The "CLI" tab is active, displaying the "IOS Command Line Interface". The command sequence entered is:

```
Switch>en
Switch#show spanning-tree
VLAN0001
  Spanning tree enabled protocol ieee
  Root ID    Priority    32769
            Address    0030.F2EE.3343
            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    0060.3EAE.7E03
            Hello Time  2 sec  Max Age 20 sec  Forward Delay 15
sec
            Aging Time  20
```

Below this, a table shows the spanning tree roles for interfaces Fa0/2, Fa0/3, and Fa0/1:

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

The prompt "Switch#" is visible at the bottom of the CLI window. Below the CLI window, there is a "Ctrl+F6 to exit CLI focus" message and "Copy" and "Paste" buttons. At the bottom left of the window, there is a "Top" button.

- SW 1

No	Variabel	Nilai		Interface	Role	Status
1.	Root ID	32769 : 0030.F2EE.3343		Fa 0/3	Desg	FWD
2.	Priorty	32769		Fa 0/2	Root	FWD
3.	MAC Address	00E0.A3B8.6ECD				
4.	Bridge ID	32769: 00E0.A3B8.6ECD				
5.	Cost(0/1:0/2:0/3)	0/3 = 19 0/2 = 19				
6.	Hello Time	2 sec				
7.	Max Age	20 sec				
8.	Forward Delay	15 sec				

- SW 2

No	Variabel	Nilai		Interface	Role	Status
1.	Root ID	32769 : 0030.F2EE.3343		Fa 0/3	Desg	FWD
2.	Priorty	32769		Fa 0/2	Desg	FWD
3.	MAC Address	0030.F2EE.3343				
4.	Bridge ID	32769 : 0030.F2EE.3343				
5.	Cost(0/1:0/2:0/3)	0/3 = 19 0/2 = 19				
6.	Hello Time	2 sec				
7.	Max Age	20 sec				
8.	Forward Delay	15 sec				

- SW 3

No	Variabel	Nilai	Interface	Role	Status
1.	Root ID	32769 : 0030.F2EE.3343	Fa 0/2	Root	FWD
2.	Priorty	32769	Fa 0/3	Desg	FWD
3.	MAC Address	0060.3EA1.7E03	Fa 0/1	Desg	FWD
4.	Bridge ID	32769 : 0060.3EA1.7E03			
5.	Cost(0/1:0/2:0/3)	0/2 = 19 0/3 = 19 0/1 = 19			
6.	Hello Time	2 sec			
7.	Max Age	20 sec			
8.	Forward Delay	15 sec			

Tugas 4C : Pada kondisi default tersebut, switch dan port mana saja yang :

- Menjadi *root bridge* : SW 2
- Menjadi *designated bridge* : SW 1 dan SW 3
- Menjadi *root port* : SW 1 Fa 0/2 dan SW 3 Fa 0/2
- Menjadi *designated port* : SW 1 Fa 0/3 , SW 2 (Fa 0/2;0/3) dan SW 3 (Fa 0/1, Fa 0/3)

Tugas 4D : Pada kondisi default tersebut, dan port mana saja yang :

- Berada pada keadaan *forwarding* : SW 1 (Fa 0/2;0/3), SW 2 (Fa 0/2;0/3) SW 3 (Fa 0/1;0/2;0/3)
- Berada pada keadaan *blocking* : Tidak ada switch dan port dalam keadaan blocking