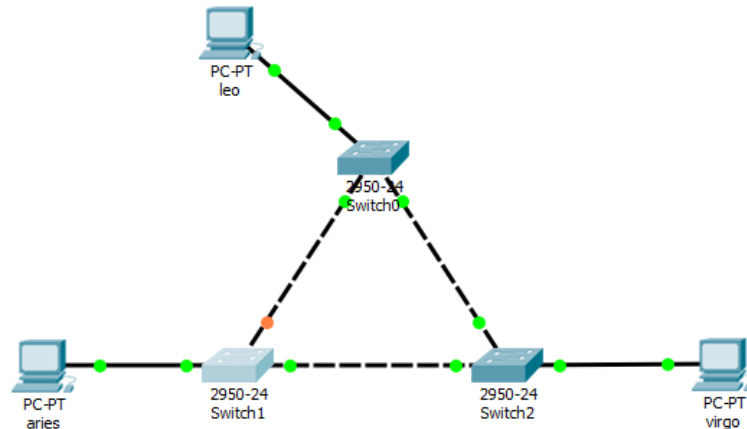


Nama : Nadya Ayu Widya
Kelas : C
NIM : L200180099

Modul 6

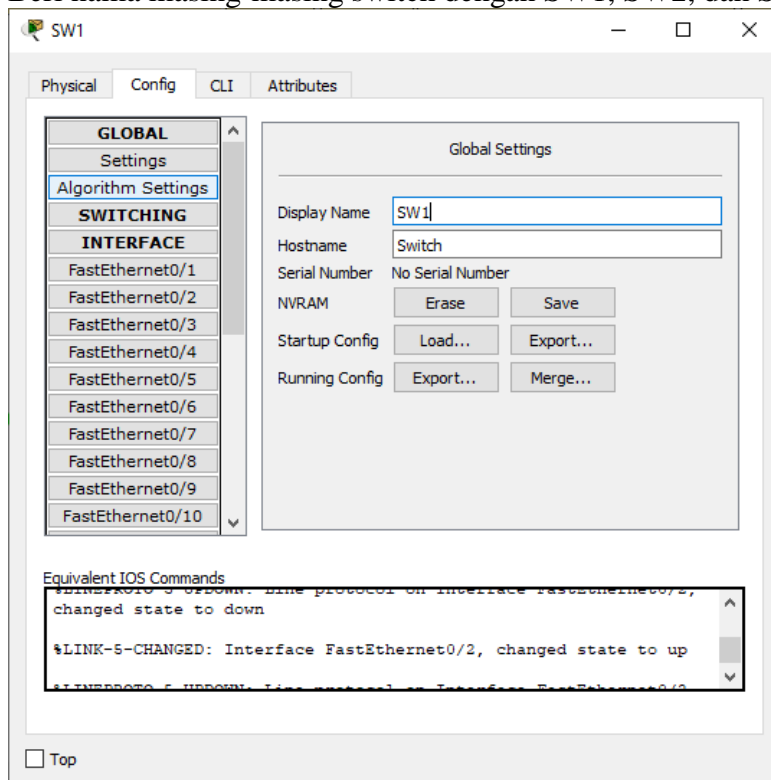
1. Kegiatan 1. Topologi 1

1. Menggunakan PACKET TRACER buat topologi berikut ini dengan menggunakan switch Catalyst 2950.



Tugas 1A: Tulis langkah pembuatan topologi

- 1) Masuk ke aplikasi Cisco Packet Tracer
 - 2) Pilih pada tab “End Devices” dan klik “PC”
 - 3) Drag ke tempat pengerjaan dan lakukan sebanyak 3 kali
 - 4) Pilih pada tab “Switches” dan klik switch 2950-24
 - 5) Drag ke tempat pengerjaan dan lakukan sebanyak 3 kali
 - 6) Hubungkan dengan kabel otomatis
2. Beri nama masing-masing switch dengan SW1, SW2, dan SW3



SW2

Physical
Config
CLI
Attributes

GLOBAL
SWITCHING
VLAN Database
INTERFACE
FastEthernet0/1
FastEthernet0/2
FastEthernet0/3
FastEthernet0/4
FastEthernet0/5
FastEthernet0/6
FastEthernet0/7
FastEthernet0/8
FastEthernet0/9
FastEthernet0/10
FastEthernet0/11

Global Settings
Display Name
SW2
Hostname
Switch
Serial Number
No Serial Number
NVRAM
Erase
Save
Startup Config
Load...
Export...
Running Config
Export...
Merge...

Equivalent IOS Commands
Switch(config)#interface FastEthernet0/6
Switch(config-if)#
Switch(config-if)#exit
Switch(config)#interface FastEthernet0/6
Switch(config-if)#

Top

SW3

Physical
Config
CLI
Attributes

GLOBAL
Settings
Algorithm Settings
SWITCHING
VLAN Database
INTERFACE
FastEthernet0/1
FastEthernet0/2
FastEthernet0/3
FastEthernet0/4
FastEthernet0/5
FastEthernet0/6
FastEthernet0/7
FastEthernet0/8
FastEthernet0/9

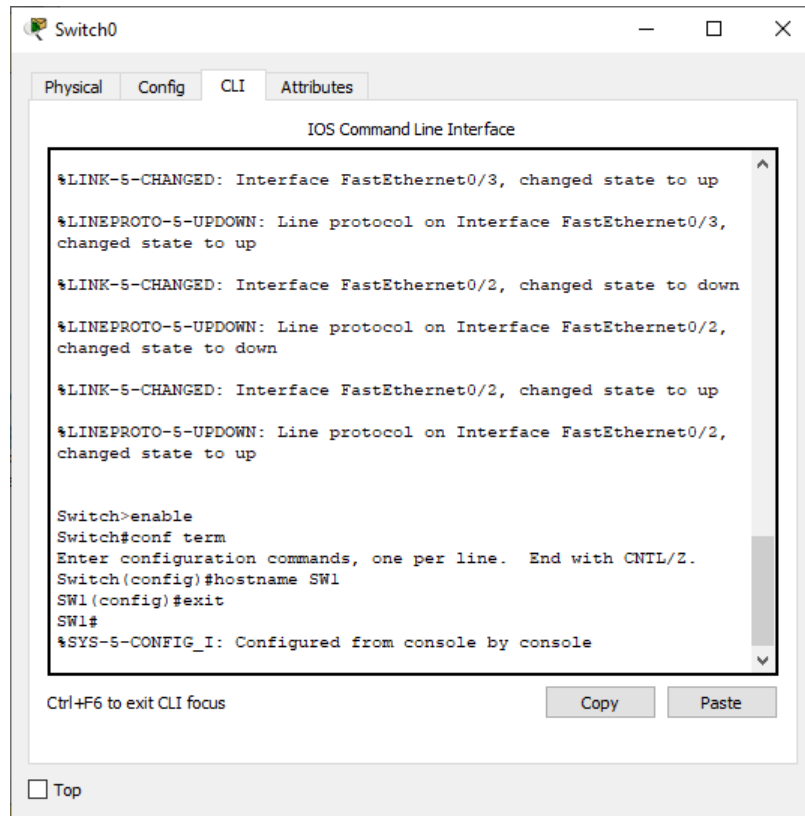
Global Settings
Display Name
SW3
Hostname
Switch
Serial Number
No Serial Number
NVRAM
Erase
Save
Startup Config
Load...
Export...
Running Config
Export...
Merge...

Equivalent IOS Commands
%LINK-3-CHANGED: Interface FastEthernet0/2, changed state to up
%LINEPROTO-5-UPDOWN: Line protocol on Interface FastEthernet0/2, changed state to up
%LINK-3-CHANGED: Interface FastEthernet0/3, changed state to up

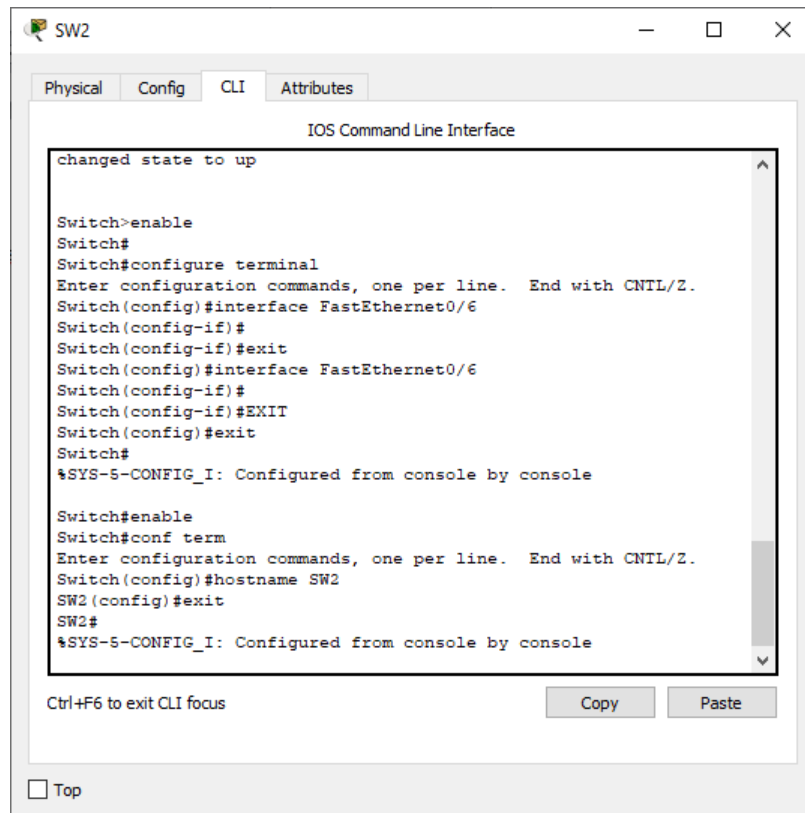
Top

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

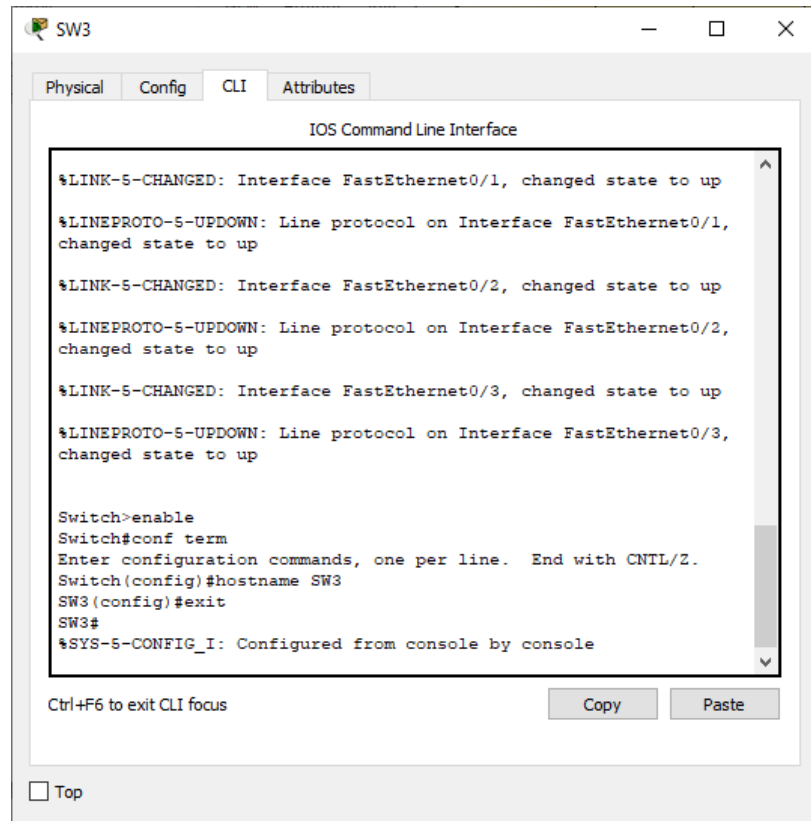
SW1



SW2

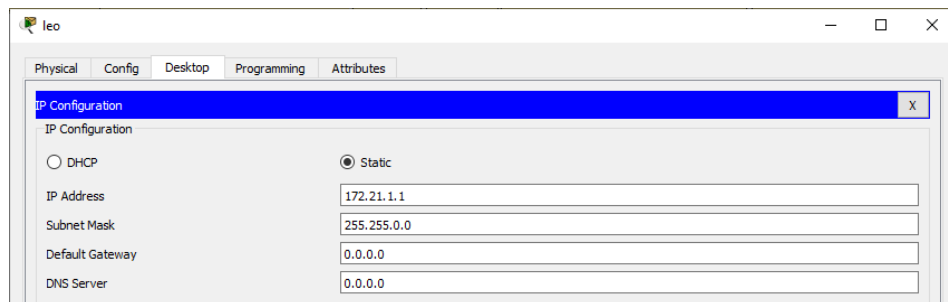


SW3

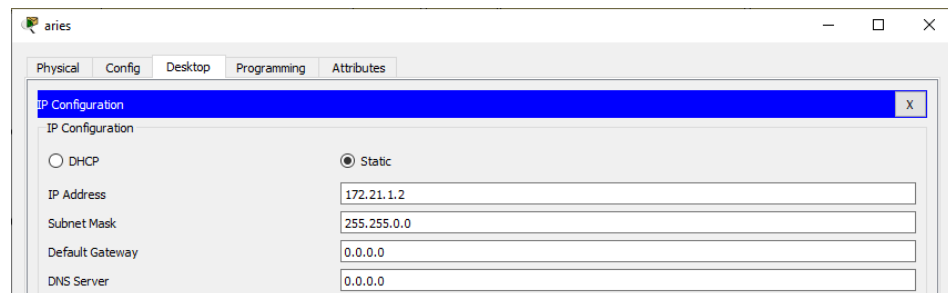


3. Konfigurasi masing-masing PC dengan alamat IP:

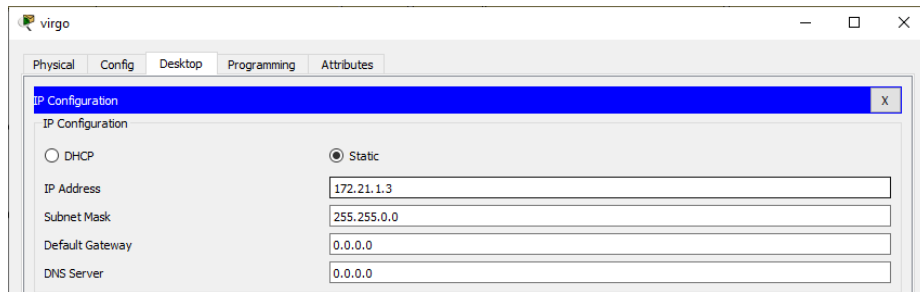
- Leo = 172.21.1.1/24



- Aries = 172.21.1.2/24

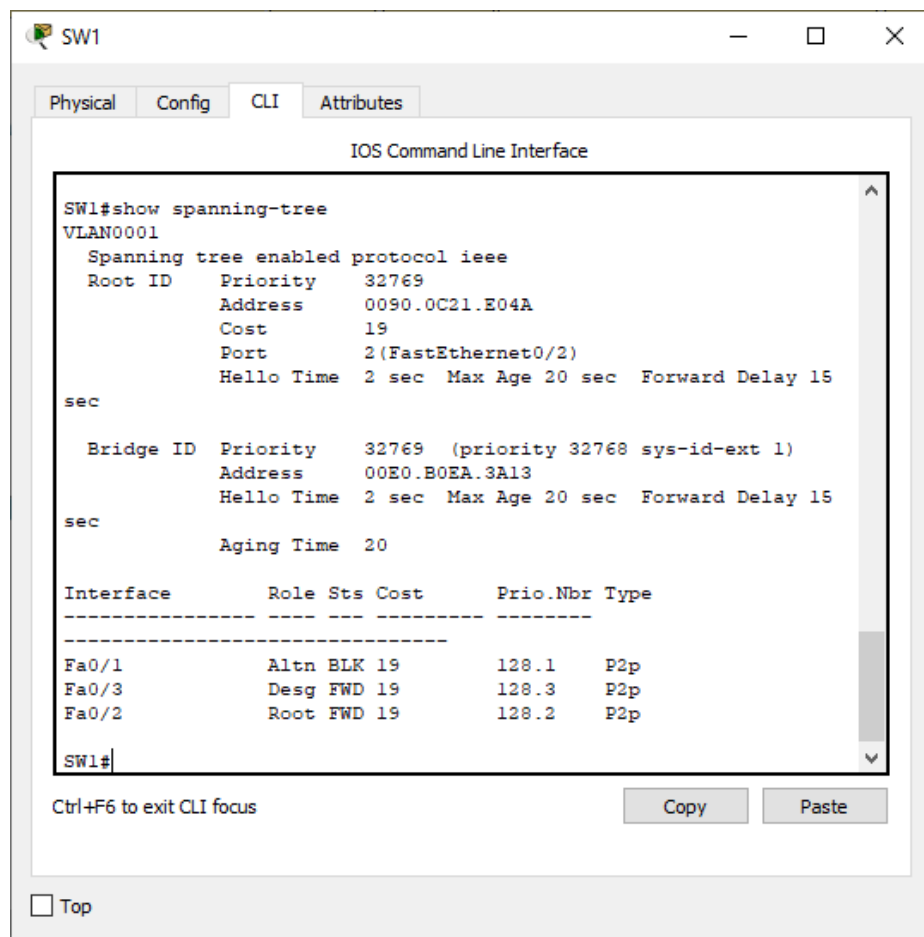


- Virgo = 172.21.1.3/24



4. Pada mode user atau mode privileged, lihat status STP pada masing-masing switch. Langkah pengoperasian
 - Tekan enter
 - Masuk mode privileged(optional)
 - Ketik **show spanning-tree**

Tugas 4A: Pada kondisi default, capture masing-masing tampilan status STP swith SW1



No	Variabel	Nilai
1	Root ID	32769.0090.0C21.E04A
2	Priority	32769
3	MAC Address	00E0.B0EA.3A13
4	Bridge ID	32769.00E0.B0EA.3A13
5	Cost(0/1;0;2;0/3)	19
6	Hello Time	2 sec
7	MaxAge	20 sec
8	Forward Delay	15 sec

SW2

```

SW2>
SW2>show spanning-tree
VLAN0001
  Spanning tree enabled protocol ieee
  Root ID    Priority    32769
            Address    0090.0C21.E04A
            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    00E0.B0AE.9A46
            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              Root FWD 19          128.3    P2p
Fa0/2              Desg FWD 19          128.2    P2p
SW2>
  
```

Ctrl+F6 to exit CLI focus

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No	Variabel	Nilai
1	Root ID	32769.0090.0C21.E04A
2	Priority	32769
3	MAC Address	00E0.B0AE.9A46
4	Bridge ID	32769.00E0.B0AE.9A46
5	Cost(0/1;0;2;0/3)	19
6	Hello Time	2 sec
7	MaxAge	20 sec
8	Forward Delay	15 sec

SW3

```

SW3>
SW3>show spanning-tree
VLAN0001
  Spanning tree enabled protocol ieee
  Root ID    Priority    32769
            Address    0090.0C21.E04A
            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    0090.0C21.E04A
            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
SW3>
  
```

Ctrl+F6 to exit CLI focus

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No	Variabel	Nilai
1	Root ID	32769.0090.0C21.E04A
2	Priority	32769
3	MAC Address	0090.0C21.E04A
4	Bridge ID	32769.0090.0C21.E04A
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: Pada kondisi default tersebut, swith dan port mana saja yang:

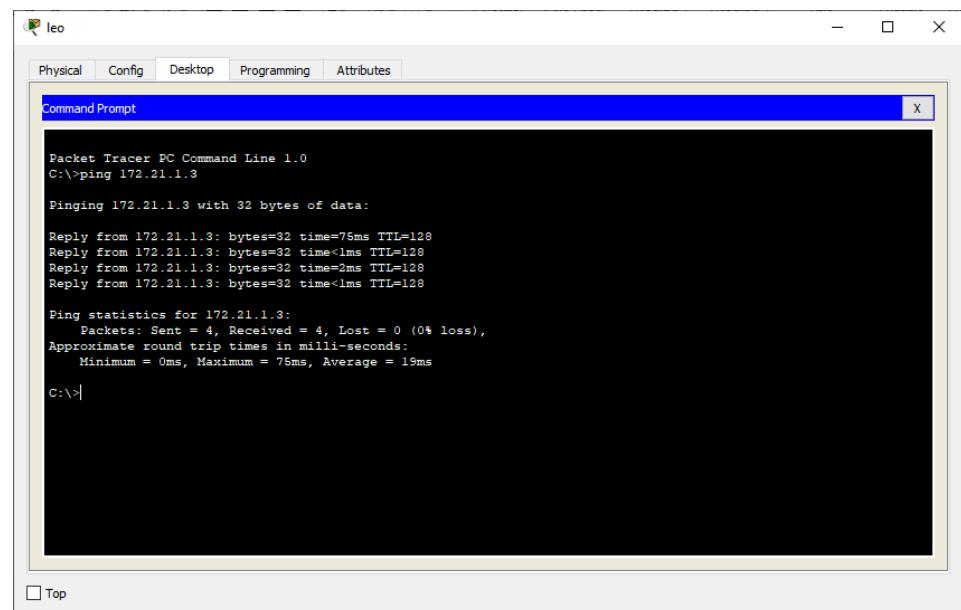
- Menjadi *root bridge* : SW3
- Menjadi *designated bridge* : SW2
- Menjadi *root port* : SW1 Fa0/2, SW2 Fa0/3
- Menjadi *designated port* : SW1 Fa0/3, SW2 Fa0/1 Fa0/2, SW3 Fa0/1 Fa0/2 Fa0/3

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

- Berada pada keadaan forwarding : SW1 Fa0/2 Fa0/3, SW2 Fa0/1 Fa0/2 Fa0/3, SW3 Fa0/1 Fa0/2 Fa0/3
 - Berada pada keadaan blocking : SW1 Fa0/1
5. Dari PC Leo lakukan ping ke PC Virgo

Tugas 5A: Tulis langkah untuk melakukan perintah ping.

- Klik pada PC Leo lalu pilih tab desktop
- Kemudian pilih terminal
- Tuliskan ping 172.21.1.3



```

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=75ms TTL=128
Reply from 172.21.1.3: bytes=32 time<1ms TTL=128
Reply from 172.21.1.3: bytes=32 time=2ms 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 = 75ms, Average = 19ms

C:\>

```

6. Simpan konfigurasi jaringan dengan nama lab2.nwc

Tugas 6A: Tulis langkah untuk menyimpan konfigurasi jaringan

- a. Ketik “Write” pada masing-masing CLI switches

SW1

```
SW1#write
Building configuration...
[OK]
SW1#
```

SW2

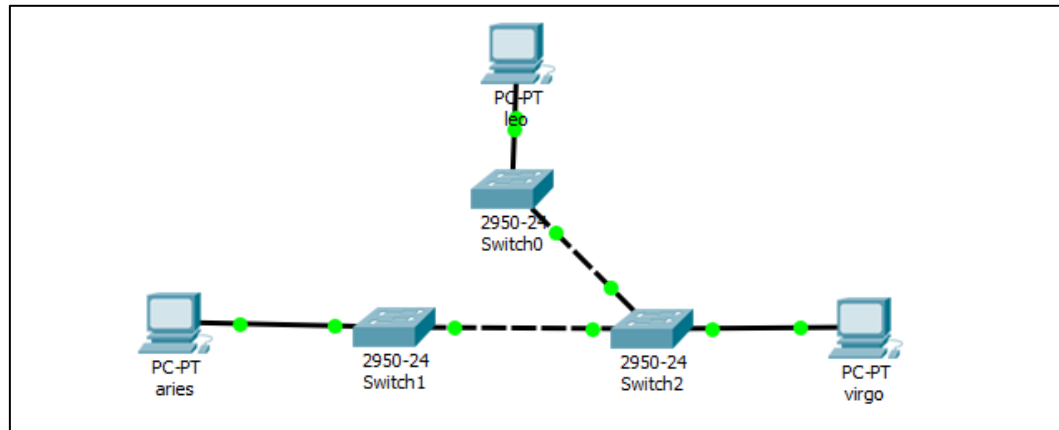
```
SW2#write
Building configuration...
[OK]
SW2#
```

SW3

```
SW3#write
Building configuration...
[OK]
SW3#
```


2. Kegiatan 2. Topologi 2

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



- b. Pada mode user atau mode privileged, lihat status STP pada masing-masing switch. Lakukan pengoperasian

Tugas 4A: Pada kondisi default, capture masing masing tampilan status STP switch(Switch0, Switch1, Switch2)

Switch0

```
Switch0#
%SYS-5-CONFIG_I: Configured from console by console

Switch0#show spanning-tree
VLAN0001
  Spanning tree enabled protocol ieee
  Root ID    Priority    32769
             Address     0000.0C2C.6B5E
             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     0000.0C2C.6B5E
             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        Desg FWD 19      128.3     P2p

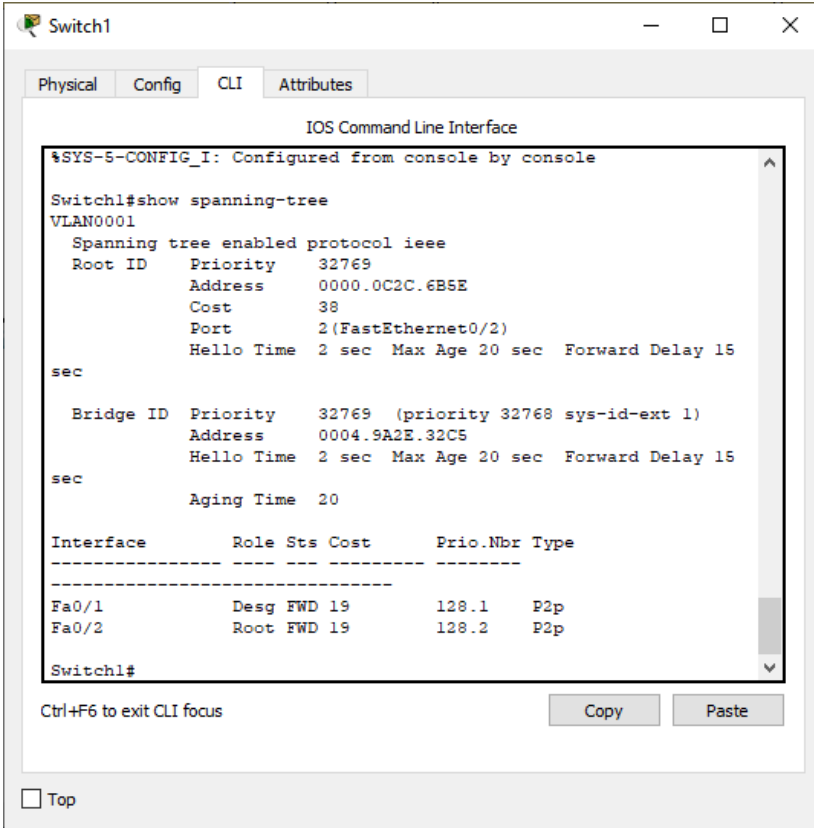
Switch0#
```

Ctrl+F6 to exit CLI focus

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☐ Top

Switch1



Switch1

Physical Config CLI Attributes

IOS Command Line Interface

```
%SYS-5-CONFIG_I: Configured from console by console

Switch1#show spanning-tree
VLAN0001
  Spanning tree enabled protocol ieee
  Root ID    Priority    32769
            Address    0000.0C2C.6B5E
            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    0004.9A2E.32C5
            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

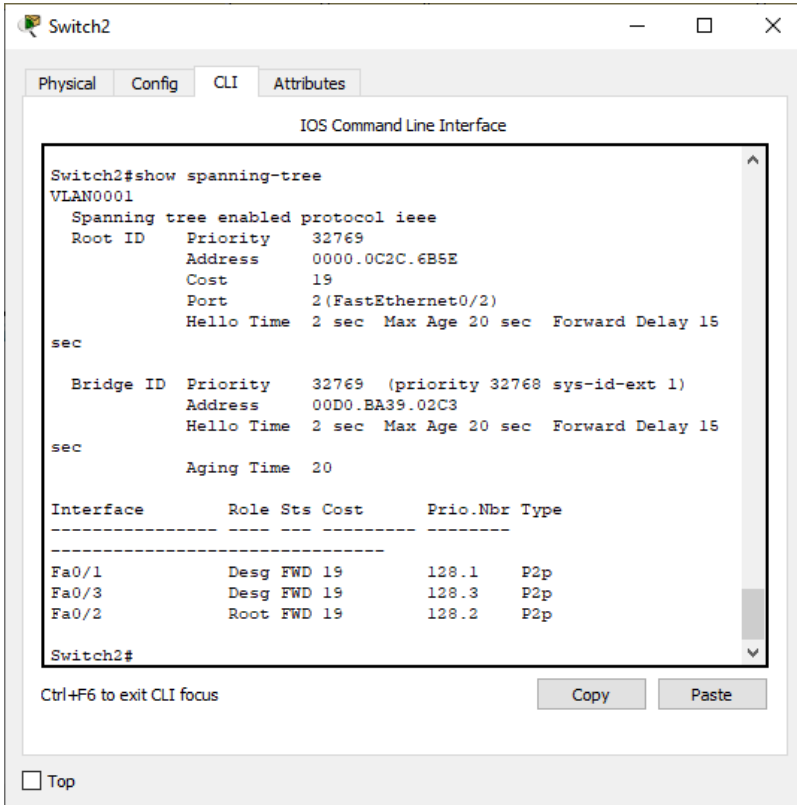
Switch1#
```

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Switch2



Switch2

Physical Config CLI Attributes

IOS Command Line Interface

```
Switch2#show spanning-tree
VLAN0001
  Spanning tree enabled protocol ieee
  Root ID    Priority    32769
            Address    0000.0C2C.6B5E
            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.BA39.02C3
            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          Root FWD 19        128.2    P2p

Switch2#
```

Ctrl+F6 to exit CLI focus

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Tugas 4B: untuk tiap-tiap switch isikan tabel berikut

Swicth0

No	Variabel	Nilai
1	Root ID	32769.0090.0C2C.6B5E
2	Priority	32769
3	MAC Address	0090.0C2C.6B5E
4	Bridge ID	32769.0090.0C2C.6B5E
5	Cost(0/1;0;2;0/3)	19
6	Hello Time	2 sec
7	MaxAge	20 sec
8	Forward Delay	15 sec

Swicth1

No	Variabel	Nilai
1	Root ID	32769.0000.0C2C.6B5E
2	Priority	32769
3	MAC Address	0004.9A2E.32C5
4	Bridge ID	32769.0090.0C21.E04A
5	Cost(0/1;0;2;0/3)	19
6	Hello Time	2 sec
7	MaxAge	20 sec
8	Forward Delay	15 sec

Switch2

No	Variabel	Nilai
1	Root ID	32769.0000.0C2C.6B5E
2	Priority	32769
3	MAC Address	00D0.BA39.02C3
4	Bridge ID	32769.00D0.BA39.02C3
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: Pada kondisi default tersevut, swicth dan port mana saja yang:

- Menjadi *root bridge* : Switch1
- Menjadi *designated bridge* : Swicth2
- Menjadi *root port* : Swicth1 Fa0/2, Switch2 Fa0/2
- Menjadi *designated port* : Swicth0 Fa0/2 Fa0/3, Swicth1 Fa0/1, Swicth2 Fa0/1 Fa0/3

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

- Berada pada keadaan forwarding : Swicth0 Fa0/2 Fa0/3, Switch1 Fa0/1 Fa0/2 , Switch2 Fa0/1 Fa0/2 Fa0/3
- Berada pada keadaan blocking : Tidak ada

Dari PC Leo lakukan ping ke PC Virgo

Tugas 5A: Tulis langkah untuk melakukan perintah ping.

- Klik pada PC Leo lalu pilih tab desktop
- Kemudian pilih terminal
- Tuliskan ping 172.21.1.3

```
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=30ms TTL=128
Reply from 172.21.1.3: bytes=32 time<1ms TTL=128
Reply from 172.21.1.3: bytes=32 time=11ms 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 = 30ms, Average = 10ms
```