

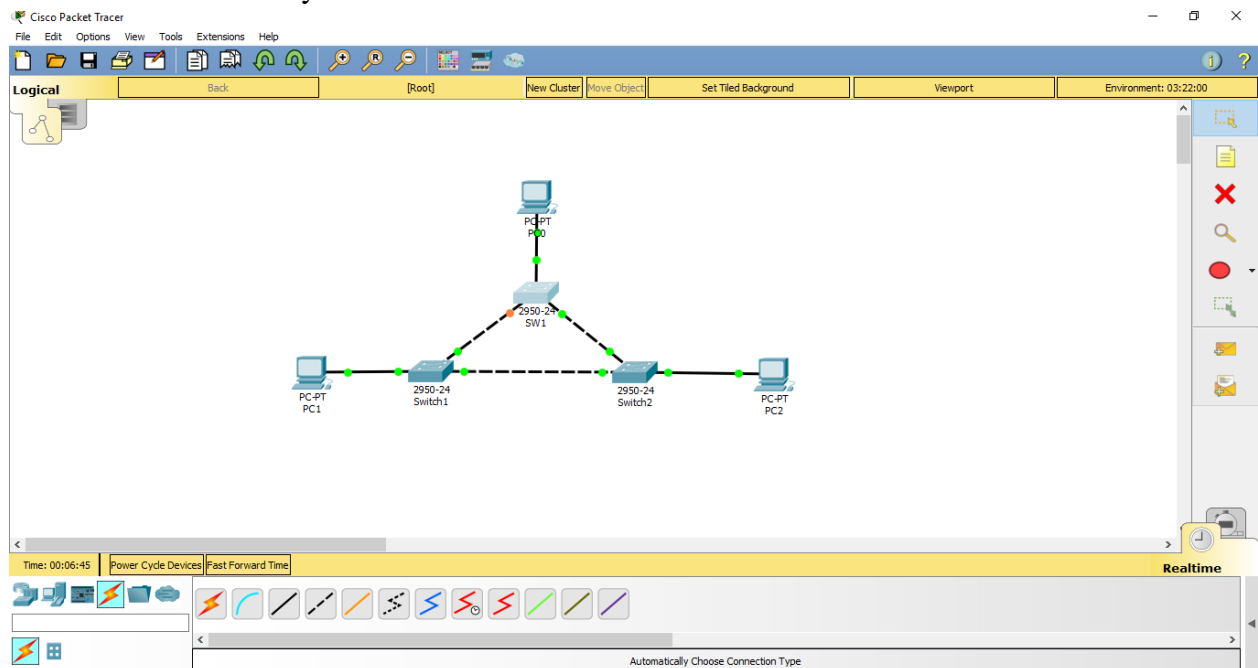
Nama : Willi Susanti

NIM : L200180060

Kelas : B

1. Kegiatan 1. Topologi 1

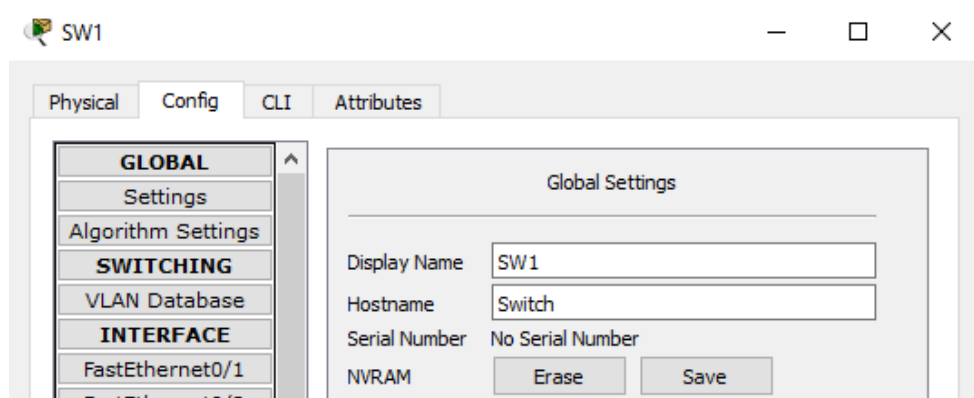
A. Menggunakan Packet Tracer buat topologi berikut ini dengan menggunakan switch Catalyst 2950

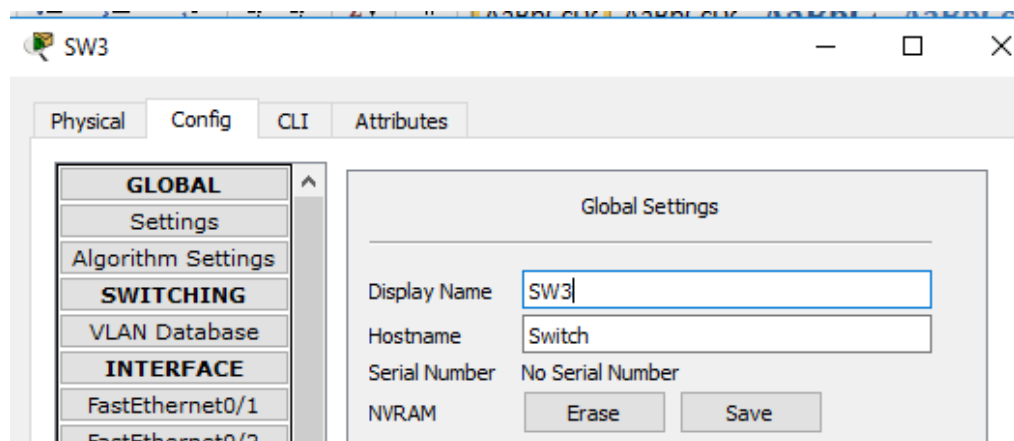
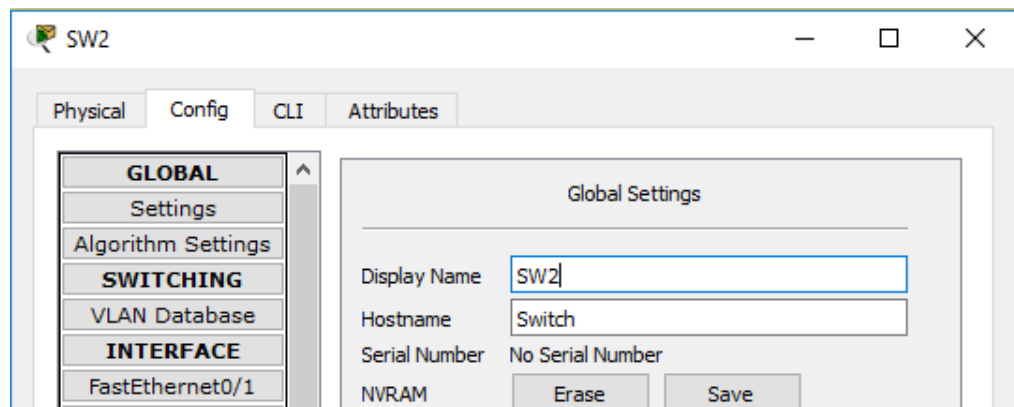


Tugas 1A : Tulis langkah pembuatan topologi

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

B. Memberi Nama Switch





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

- SW 1

```
Switch>en
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
```

Ctrl+F6 to exit CLI focus

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- SW2

```
Switch>enable
Switch#conf term
Enter configuration commands, one per line. End with CNTL/Z.
Switch(config)#hostname SW2
SW2(config)#exit
SW2#
%SYS-5-CONFIG_I: Configured from console by console
```

Ctrl+F6 to exit CLI focus

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- SW3

```
Switch>enable
Switch#conf term
Enter configuration commands, one per line. End with CNTL/Z.
Switch(config)#hostname SW3
SW3(config)#exit
SW3#
%SYS-5-CONFIG_I: Configured from console by console
```

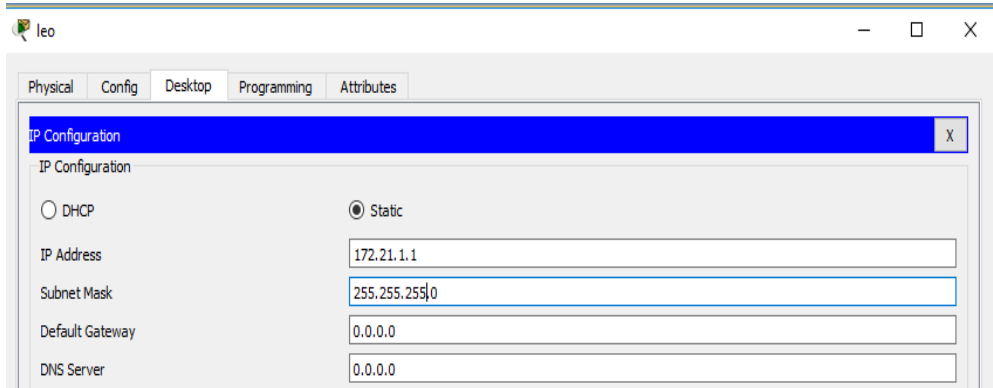
Ctrl+F6 to exit CLI focus

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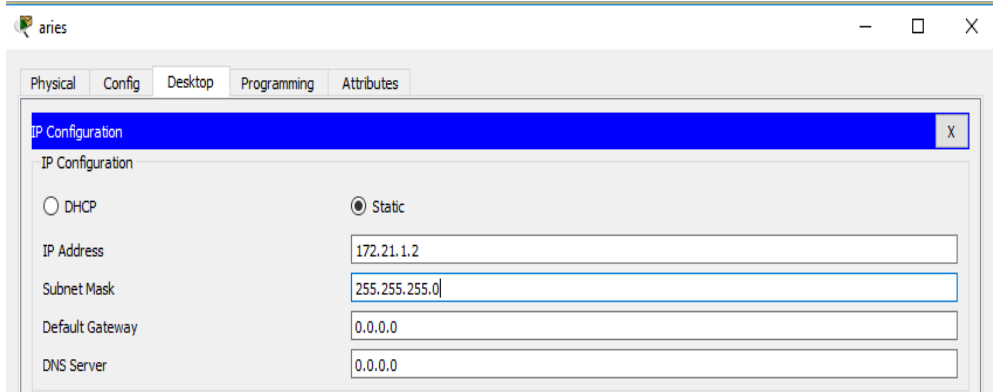
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C. Konfigurasi masing-masing PC dengan alamat IP

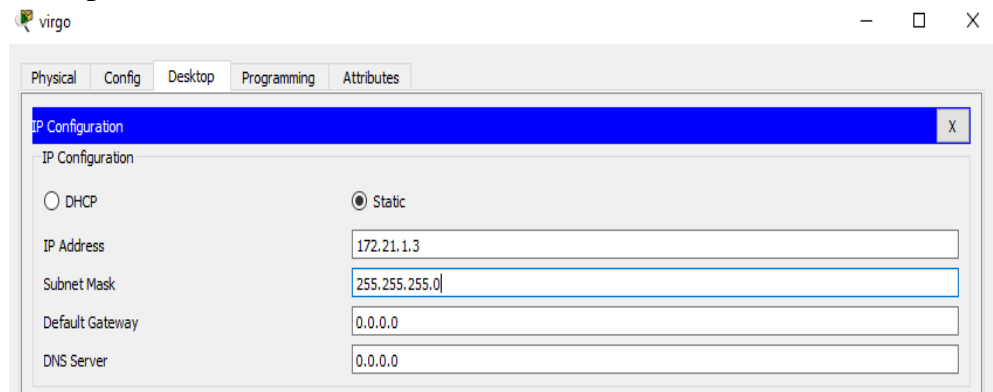
- Leo = 172.21.1.1/24



- Aries = 172.21.1.2/24



- Virgo

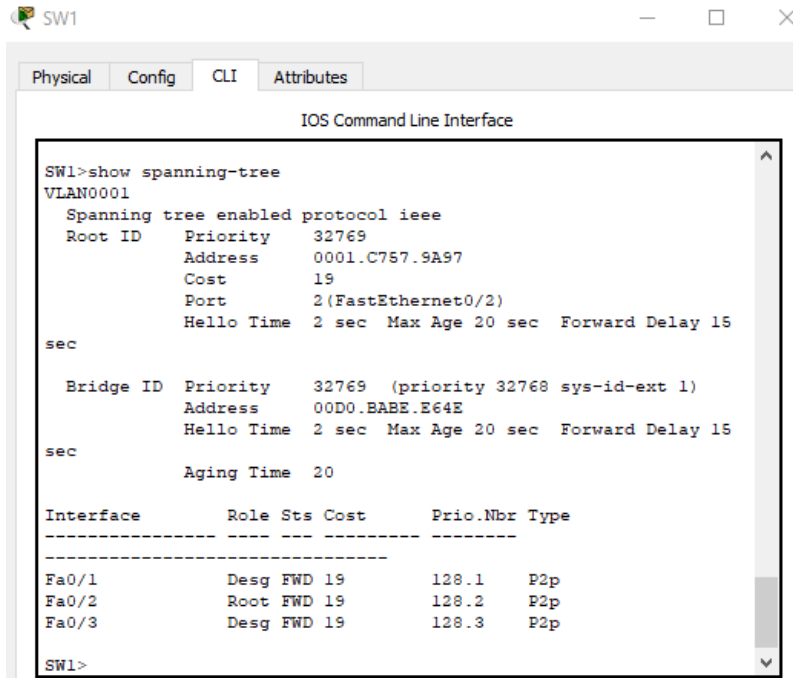


D. Pada mode user atau mode privileged, lihat status STP pada masing-masing switch. Langkah pengoperasian

- Tekan enter
- Masuk mode privileged (optional)
- Ketik *Show spanning-tree*

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

- SW 1



SW1

Physical Config CLI Attributes

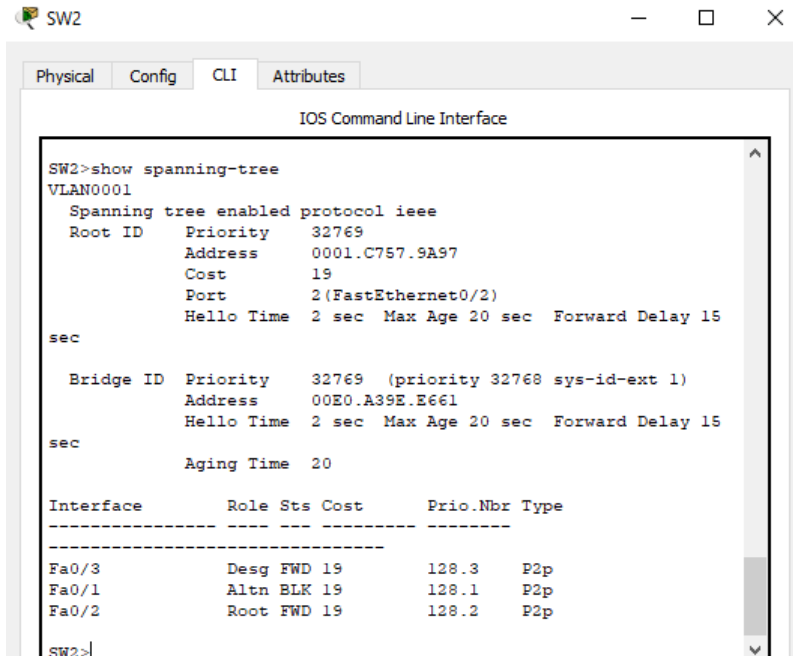
IOS Command Line Interface

```
SW1>show spanning-tree
VLAN0001
  Spanning tree enabled protocol ieee
  Root ID    Priority    32769
            Address     0001.C757.9A97
            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.BABE.E64E
            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

SW1>
```

- SW 2



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.C757.9A97
            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     00E0.A39E.E661
            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
Fa0/1        Altn BLK 19        128.1    P2p
Fa0/2        Root FWD 19        128.2    P2p

SW2>
```

• SW 3

```

SW3>show spanning-tree
VLAN0001
  Spanning tree enabled protocol ieee
  Root ID    Priority    32769
             Address     0001.C757.9A97
             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.C757.9A97
             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    F2p
Fa0/3        Desg FWD 19      128.3    F2p
Fa0/2        Desg FWD 19      128.2    F2p
  
```

Tugas 4B : Untuk tiap-tiap switch, isikan tabel beri

No	Variabel	Nilai
1	Root ID	32769.0001.C757.9A97
2	Priority	32769
3	MAC Address	00D0.BABE.E64E
4	Bridge ID	32769.00D0.BABE.E64E
5	Cost(0/1;0;2;0/3)	19
6	Hello Time	2 sec
7	MaxAge	20 sec
8	Forward Delay	15 sec

No	Variabel	Nilai
1	Root ID	32769.0001.C757.9A97
2	Priority	32769
3	MAC Address	00E0.A39E.E661
4	Bridge ID	32769.00E0.A39E.E661
5	Cost(0/1;0;2;0/3)	19
6	Hello Time	2 sec
7	MaxAge	20 sec
8	Forward Delay	15 sec

No	Variabel	Nilai
1	Root ID	32769.0001.C757.9A97
2	Priority	32769
3	MAC Address	0001.C575.9A97
4	Bridge ID	32769.0001.C757.9A97
5	Cost(0/1;0;2;0/3)	-
6	Hello Time	2 sec
7	MaxAge	20 sec
8	Forward Delay	15 sec

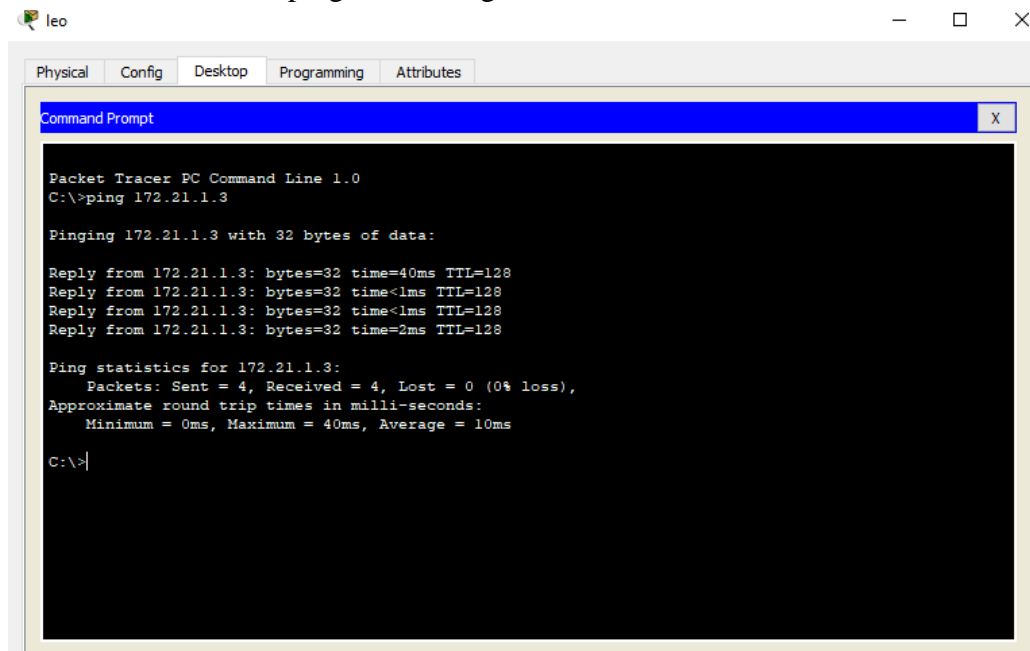
Tugas 4C : Pada kondisi default tersebut, switch dan port mana saja yang :

- a. Menjadi root bridge : SW1
- b. Menjadi designated bridge : SW2
- c. Menjadi root port : SW1 Fa 0/2, SW2 Fa 0/2
- d. Menjadi designated port : SW1 Fa 0/1 Fa 0/3, SW2 Fa 0/3, SW3 Fa0/3, SW3 Fa0/1 Fa0/2 Fa0/3

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

- Berada pada keadaan forwarding: SW1 Fa 0/1 Fa0/2 Fa0/3, SW2 Fa0/2 Fa0/3, SW3 Fa0/1 Fa0/2 Fa0/3
- Berada pada keadaan blocking: SW2 Fa0/1

E. Dari PC Leo lakukan ping ke PC Virgo



Tugas 5A : Tulis langkah untuk melakukan perintah ping

- ✓ Klik pada PC Leo
- ✓ Lalu pilih tab dekstop
- ✓ Kemudian pilih terminal (Command Prompt)
- ✓ Tuliskan ping 172.21.1.3

F. Simpan konfigurasi jaringan dengan nama lab2.nwc

Tugas 6A : Tulis langkah untuk menyimpan konfigurasi jaringan

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

- SW 1

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

- SW 2

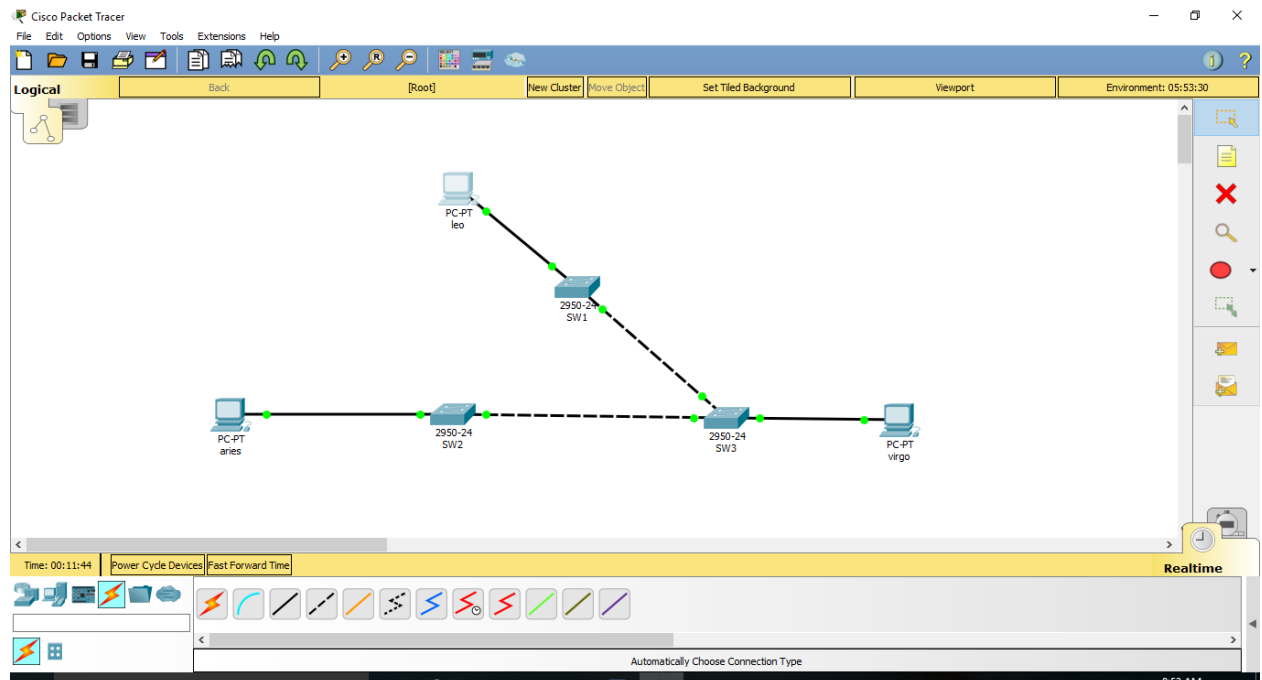
```
SW2>enable
SW2#write
Building configuration...
[OK]
SW2#
```

- SW3

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

2. Kegiatan 2. Topologi 2

A. Menggunakan packet tracer ubah topologi menjadi topologi berikut ini



B. Pada mode user atau privileged , lihat status STP pada masing-masing switch.

Langkah pengoperasian :

- Tekan enter
- Masuk mode privileged (optional)
- Ketik *Show spanning-tree*

Tugas 9A : Pada kondisi default, capture masing-masing tampilan status STP switch

SW1

Physical Config CLI Attributes

IOS Command Line Interface

```
changed state to up

Switch>show spanning-tree
VLAN0001
  Spanning tree enabled protocol ieee
  Root ID    Priority    32769
             Address     0002.17CE.ABE3
             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     0002.17CE.ABE3
             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          Desg FWD 19        128.1    P2p

Switch>
```

Ctrl+F6 to exit CLI focus

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SW2

Physical Config CLI Attributes

IOS Command Line Interface

```
Switch>show spanning-tree
VLAN0001
  Spanning tree enabled protocol ieee
  Root ID    Priority    32769
             Address     0002.17CE.ABE3
             Cost         38
             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     0090.2BA3.4BCE
             Hello Time  2 sec  Max Age 20 sec  Forward Delay 15
sec

             Aging Time  20

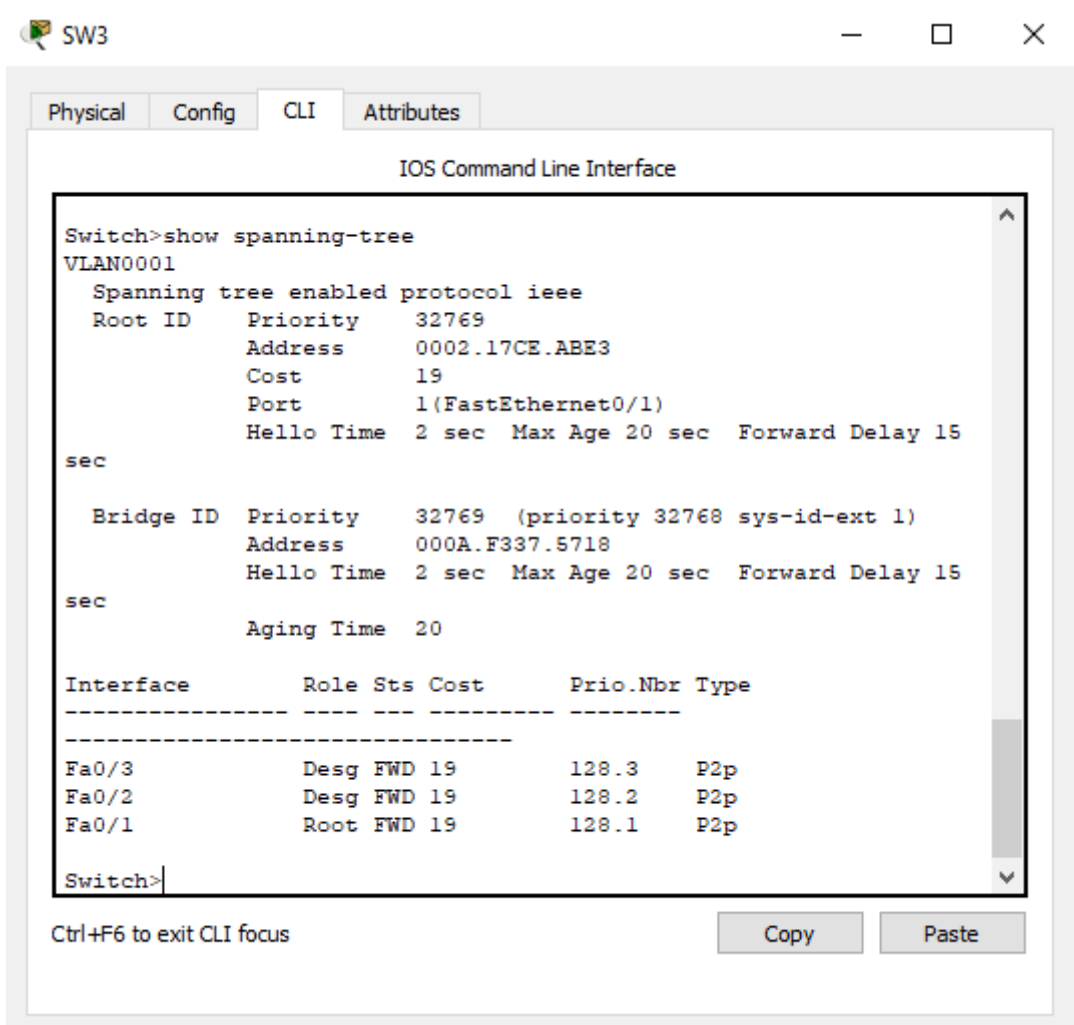
Interface      Role Sts Cost      Prio.Nbr Type
-----
Fa0/1          Root FWD 19        128.1    P2p
Fa0/2          Desg FWD 19        128.2    P2p

Switch>
```

Ctrl+F6 to exit CLI focus

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Tugas 9A : Untuk tiap-tiap switch, isikan tabel berikut

- SW1

No	Variabel	Nilai
1	Root ID	32769.0002.17CE.ABE3
2	Priority	32769
3	MAC Address	0002.17CE.ABE3
4	Bridge ID	32769.0002.17CE.ABE3
5	Cost(0/1;0;2;0/3)	-
6	Hello Time	2 sec
7	MaxAge	20 sec
8	Forward Delay	15 sec

No	Variabel	Nilai
1	Root ID	32769.0002.17CE.ABE3
2	Priority	32769
3	MAC Address	0090.2AB3.4BCE
4	Bridge ID	32769.0090.2AB3.4BCE
5	Cost(0/1;0;2;0/3)	38
6	Hello Time	2 sec
7	MaxAge	20 sec
8	Forward Delay	15 sec

No	Variabel	Nilai
1	Root ID	32769.0002.17CE.ABE3
2	Priority	32769
3	MAC Address	000A.F337.5718
4	Bridge ID	32769.000A.F337.5178
5	Cost(0/1;0;2;0/3)	19
6	Hello Time	2 sec
7	MaxAge	20 sec
8	Forward Delay	15 sec

Tugas 9A : Pada kondisi default tersebut, switch dan port mana saja yang :

- Menjadi root bridge : SW2
- Menjadi designated bridge : SW3
- Menjadi root port : SW2 Fa0/1,SW3 Fa0/1
- Menjadi designated port : SW1 Fa 0/1 Fa0/2,SW2 Fa0/2,SW3 Fa0/2 Fa0/3

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

- Berada pada keadaan forwarding: SW1 Fa 0/1 Fa0/2,SW2 Fa0/1 Fa0/2,SW3 Fa0/1 Fa0/2 Fa0/3
- Berada pada keadaan blocking:-

C. Dari PC Leo lakukan ping ke PC virgo

```

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=70ms 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 = 70ms, Average = 17ms

C:\>

```

Tugas 5A : Tulis langkah untuk melakukan perintah ping

- ✓ Klik pada PC Leo
- ✓ Lalu pilih tab dekstop
- ✓ Kemudian pilih terminal (Command Prompt)
- ✓ Tuliskan ping 172.21.1.3