

Nama : Krisna Alif Meilana

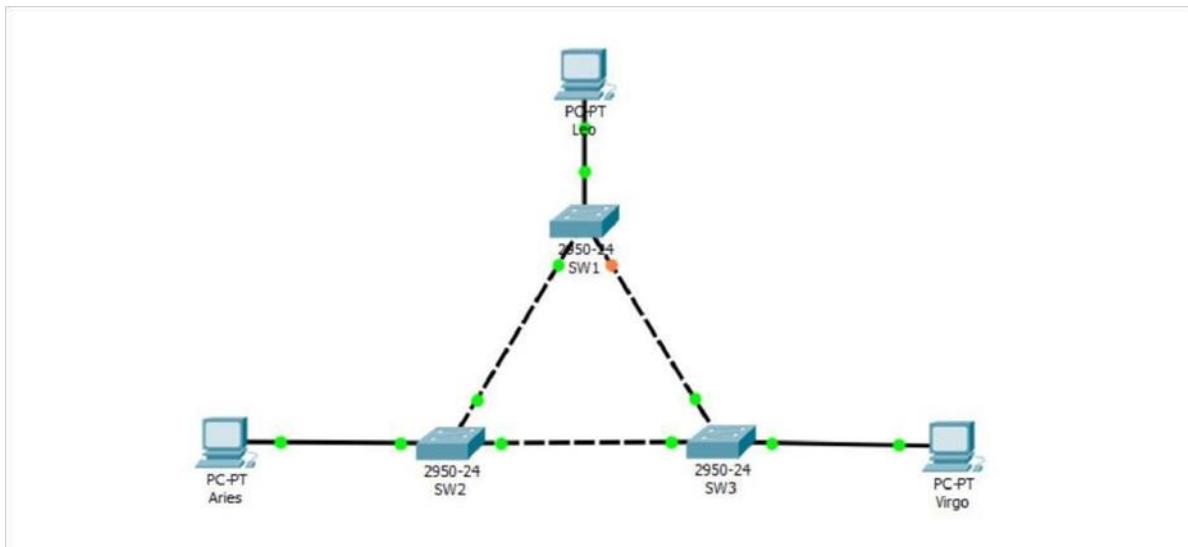
NIM : L200180028

Kelas : A

Modul 6

Kegiatan 1.

Topologi 1



Tugas 1A : Langkah pembuatan topologi

- Pada bagian Network Devices, klik bagian Switches, dan letakkan 3 buah Switch tipe 2950-24 dengan rangkai seperti gambar.
- Klik ikon End Devices, klik ikon PC dengan keterangan Generic Computer, letakkan 3 buah di dekat Switch masing-masing satu.
- Untuk menghubungkan Switch dan PC, pada bagian Connections klik ikon petir, lalu sambungkan rangkaian.

Tugas 2A : Memberi nama Switch melalui mode user

```
Switch>enable
```

```
Switch#conf term
```

```
Switch(config)#hostname SW1
```

```
SW1(config)#end
```

Konfigurasi Masing – Masing PC

Leo

The screenshot shows the 'Leo' configuration window with the 'Config' tab selected. The 'IP Configuration' section has 'Static' selected, with IP Address 172.21.1.1, Subnet Mask 255.255.0.0, Default Gateway 0.0.0.0, and DNS Server 0.0.0.0. The 'IPv6 Configuration' section has 'Static' selected, with IPv6 Address, Link Local Address FE80::2D0:58FF:FE36:9368, IPv6 Gateway, and IPv6 DNS Server.

Field	Value	
IP Configuration		
<input type="radio"/> DHCP	<input checked="" type="radio"/> 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		
<input type="radio"/> DHCP	<input type="radio"/> Auto Config	<input checked="" type="radio"/> Static
IPv6 Address		
Link Local Address	FE80::2D0:58FF:FE36:9368	
IPv6 Gateway		
IPv6 DNS Server		

Aries

The screenshot shows the 'Aries' configuration window with the 'Config' tab selected. The 'IP Configuration' section has 'Static' selected, with IP Address 172.21.1.2, Subnet Mask 255.255.0.0, Default Gateway 0.0.0.0, and DNS Server 0.0.0.0. The 'IPv6 Configuration' section has 'Static' selected, with IPv6 Address, Link Local Address FE80::230:F2FF:FE9:861E, IPv6 Gateway, and IPv6 DNS Server.

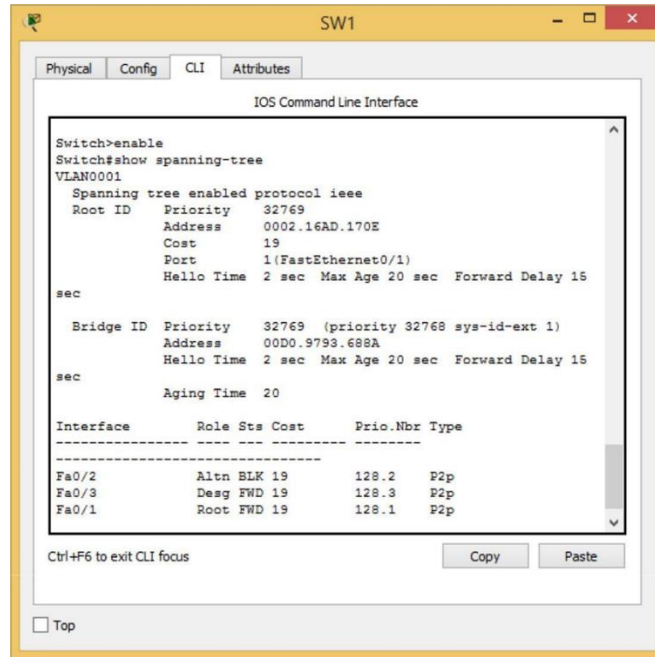
Field	Value	
IP Configuration		
<input type="radio"/> DHCP	<input checked="" type="radio"/> Static	
IP Address	172.21.1.2	
Subnet Mask	255.255.0.0	
Default Gateway	0.0.0.0	
DNS Server	0.0.0.0	
IPv6 Configuration		
<input type="radio"/> DHCP	<input type="radio"/> Auto Config	<input checked="" type="radio"/> Static
IPv6 Address		
Link Local Address	FE80::230:F2FF:FE9:861E	
IPv6 Gateway		
IPv6 DNS Server		

Virgo

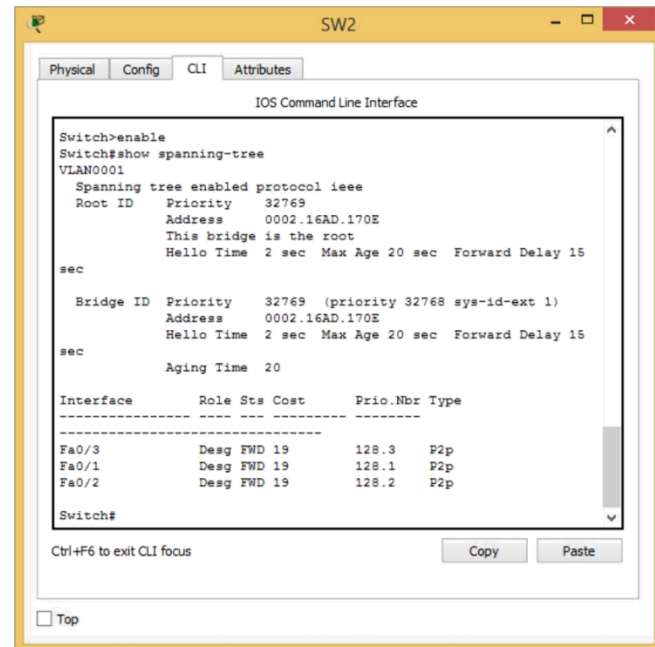
The screenshot shows the 'Virgo' configuration window with the 'Config' tab selected. The 'IP Configuration' section has 'Static' selected, with IP Address 172.21.1.3, Subnet Mask 255.255.0.0, Default Gateway 0.0.0.0, and DNS Server 0.0.0.0. The 'IPv6 Configuration' section has 'Static' selected, with IPv6 Address, Link Local Address FE80::20A:F3FF:FE70:BC5E, IPv6 Gateway, and IPv6 DNS Server.

Field	Value	
IP Configuration		
<input type="radio"/> DHCP	<input checked="" type="radio"/> 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		
<input type="radio"/> DHCP	<input type="radio"/> Auto Config	<input checked="" type="radio"/> Static
IPv6 Address		
Link Local Address	FE80::20A:F3FF:FE70:BC5E	
IPv6 Gateway		
IPv6 DNS Server		

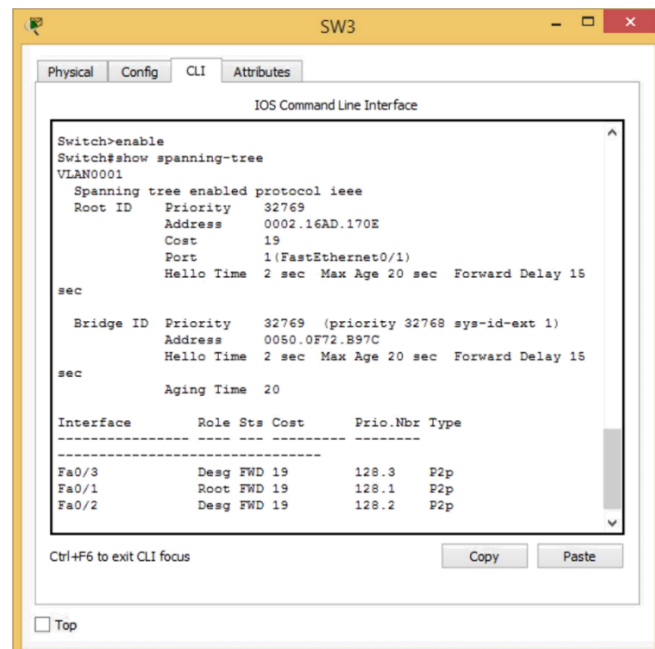
SW1



SW2



SW3



Tugas 4B : Tabel tiap switch

SW1

No	Variabel	Nilai
1	Root ID	32769 : 0002.16AD.170E
2	Priority	32769
3	MAC Address	00D0.9793.688A
4	Bridge ID	32769 : 00D0.9793.688A
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	Variabel	Nilai
1	Root ID	32769 : 0002.16AD.170E
2	Priority	32769
3	MAC Address	0002.16AD.170E
4	Bridge ID	32769 : 0002.16AD.170E
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	Variabel	Nilai
1	Root ID	32769 : 0002.16AD.170E
2	Priority	32769
3	MAC Address	0050.0F72.B97C
4	Bridge ID	32769 : 0050.0F72.B97C
5	Cost (0/1 ; 0/2 ; 0/3)	19
6	Hello Time	2 sec
7	MaxAge	20 sec
8	Forward Delay	15 sec

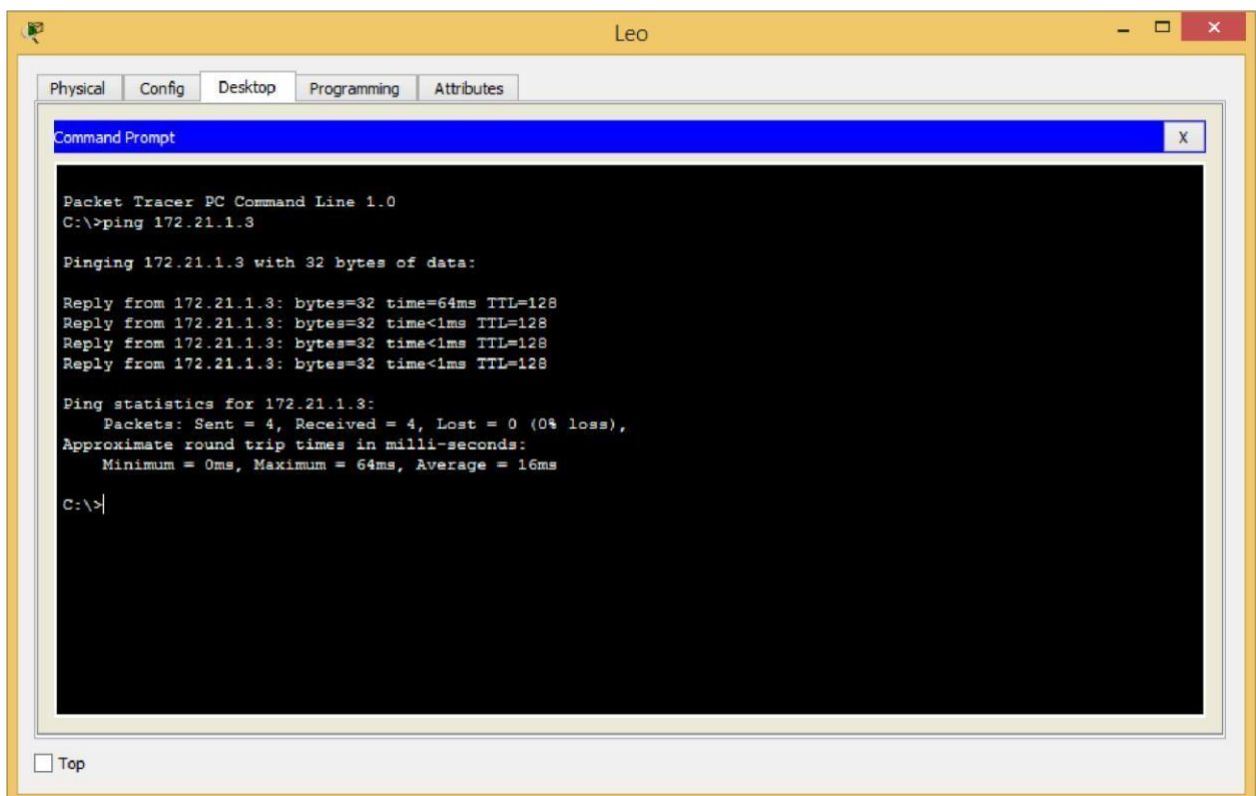
Tugas 4C :

- Root bridge : SW2
- Designated bridge : SW3
- Root port : SW1 (Fa0/1), SW3 (Fa0/1)
- Designated port : SW1 (Fa0/3), SW2 (Fa0/1, Fa0/2, Fa0/3), SW3 (Fa0/2, Fa0/3)

Tugas 4D :

- Keadaan forwarding :
 - SW1 (Fa0/1, Fa0/3),
 - SW2 (Fa0/1, Fa0/2, Fa0/3),
 - SW3 (Fa0/1, Fa
- Keadaan Blocking : SW1 (Fa0/2)

PC Leo melakukan ping ke PC Virgo

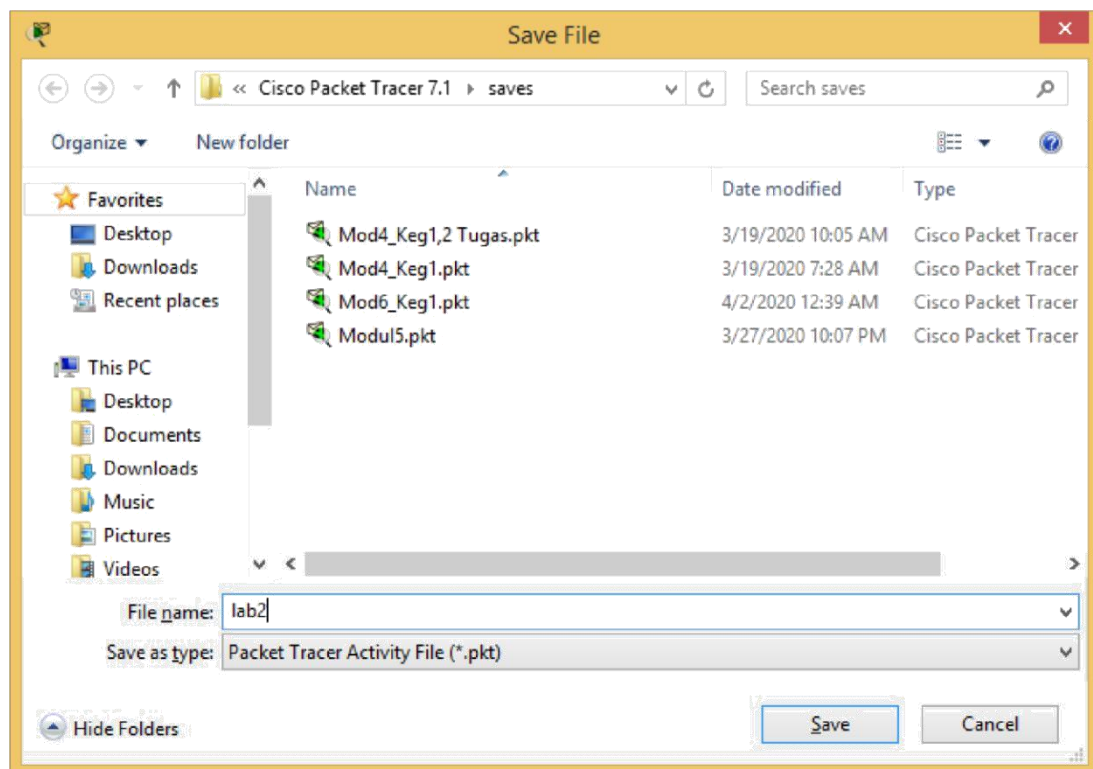


Tugas 5A : Langkah perintah ping

1. Klik PC Leo
2. Pilih tab desktop
3. Pilih command promp
4. Ketikkan ping 172.21.1.3

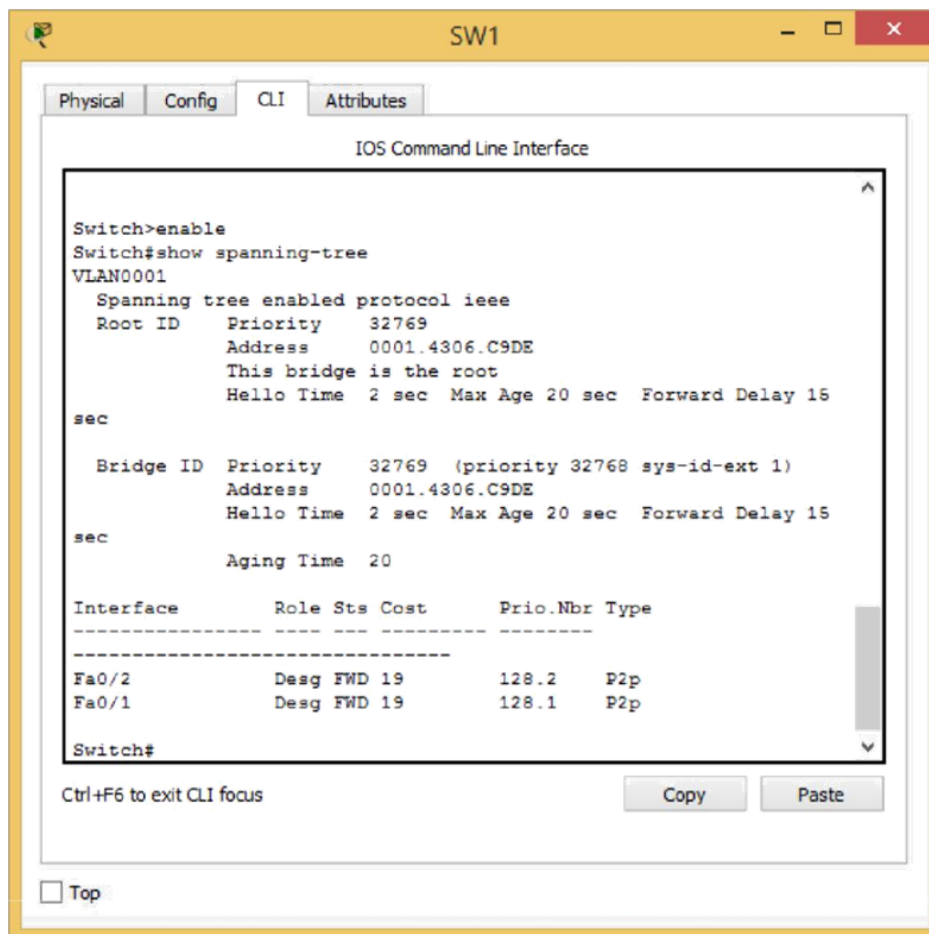
Tugas 6A : Langkah menyimpan konfigurasi jaringan

1. Klik File
2. Pilih Save
3. Beri nama lab2.ekstensi akan menyesuaikan dengan aplikasi yg digunakan



Tugas 9A : Status STP masing-masing switch

SW1



The screenshot shows the CLI of switch SW1. The user has entered the command `show spanning-tree` in VLAN0001. The output displays the spanning tree protocol status, including the root ID, priority, address, and various timers. It also shows the bridge ID, priority, address, and timers for the local bridge. Finally, it lists the interfaces and their roles, costs, and priorities.

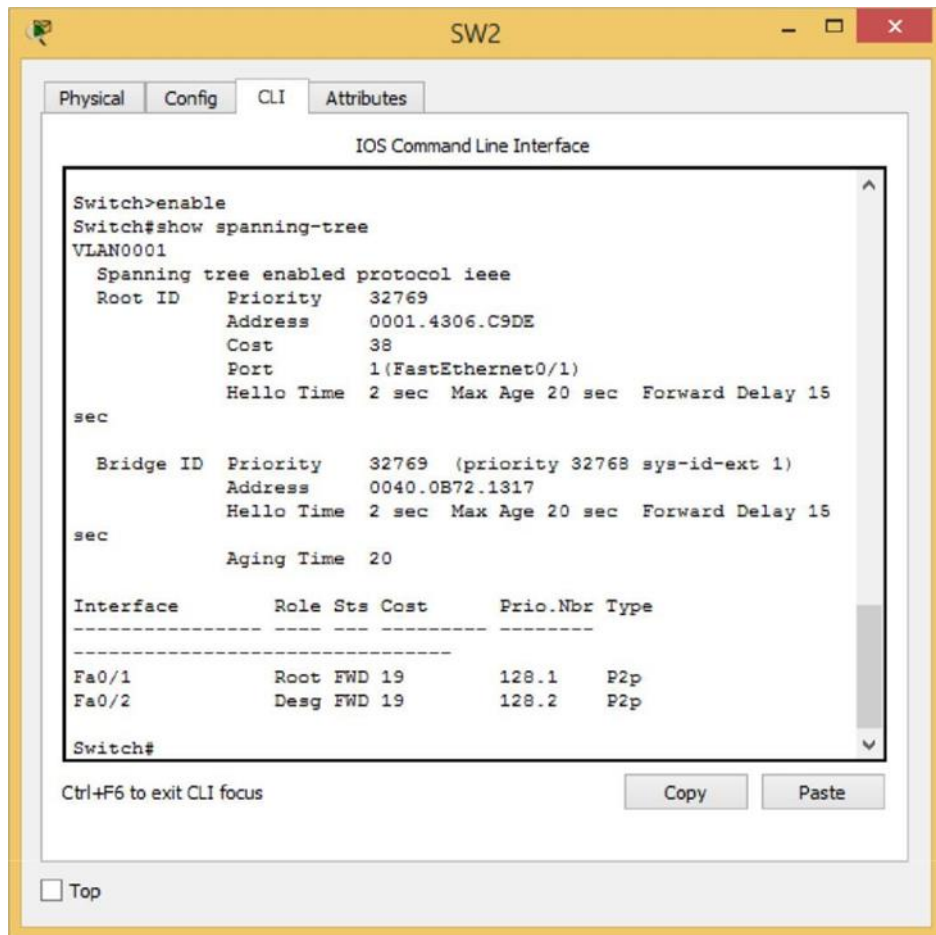
```
Switch>enable
Switch#show spanning-tree
VLAN0001
  Spanning tree enabled protocol ieee
    Root ID    Priority    32769
              Address     0001.4306.C9DE
              This bridge is the root
              Hello Time 2 sec  Max Age 20 sec  Forward Delay 15
sec
    Bridge ID  Priority    32769 (priority 32768 sys-id-ext 1)
              Address     0001.4306.C9DE
              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#
```

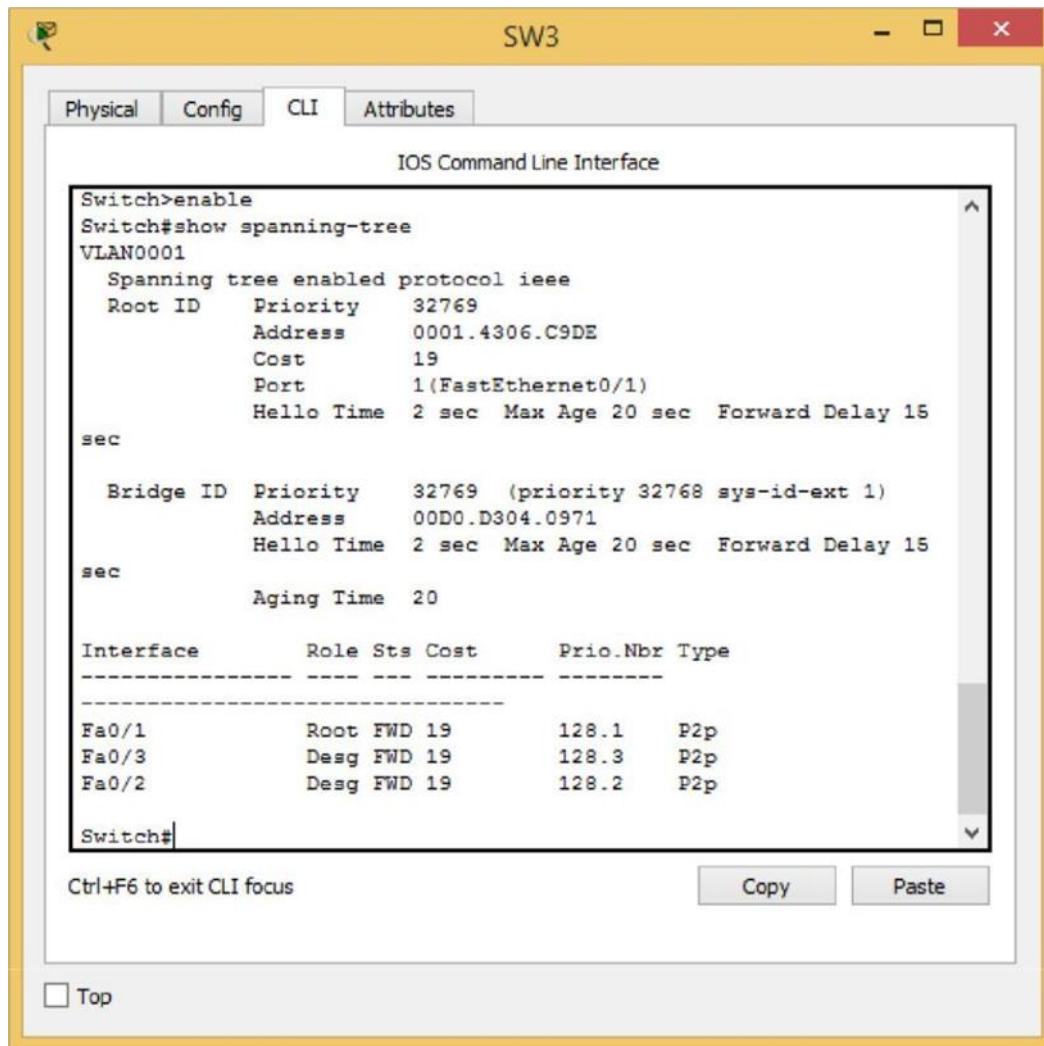
No	Variabel	Nilai
1	Root ID	32769 : 0001.4306.C9DE
2	Priority	32769
3	MAC Address	0001.4306.C9DE
4	Bridge ID	32769 : 0001.4306.C9DE
5	Cost	19
6	Hello Time	2 sec
7	MaxAge	20 sec
8	Forward Delay	15 sec

SW2



No	Variabel	Nilai
1	Root ID	32769 : 0001.4306.C9DE
2	Priority	32769
3	MAC Address	0040.0B72.1317
4	Bridge ID	32769 : 0040.0B72.1317
5	Cost	19
6	Hello Time	2 sec
7	MaxAge	20 sec
8	Forward Delay	15 sec

SW3



No	Variabel	Nilai
1	Root ID	32769 : 0001.4306.C9DE
2	Priority	32769
3	MAC Address	00D0.D304.0971
4	Bridge ID	32769 : 00D0.D304.0971
5	Cost	19
6	Hello Time	2 sec
7	MaxAge	20 sec
8	Forward Delay	15 sec

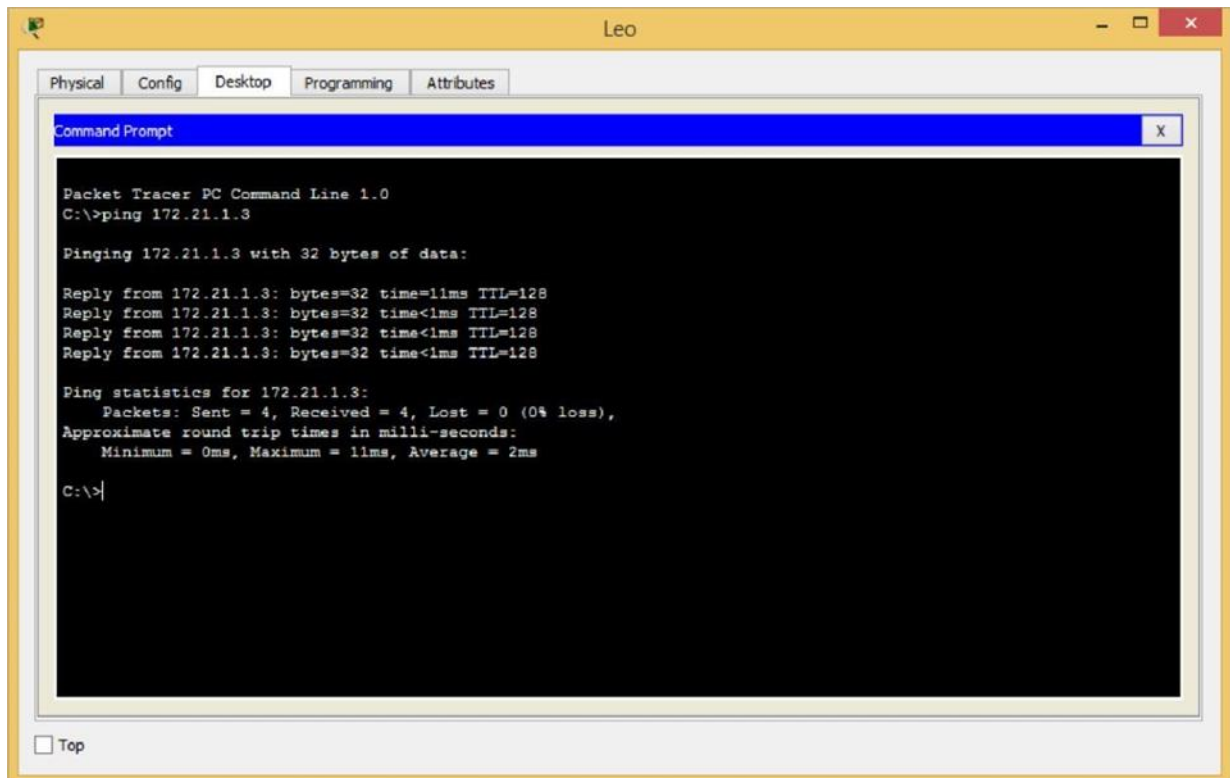
Menentukan :

- Root bridge : SW1
- Designated bridge : SW3
- Root Port : SW2 (Fa0/1), SW3(Fa0/1)
- Designated Port : SW1 (Fa0/1, Fa0/2), SW2 (Fa0/2), SW3 (Fa0/2, Fa0/3)

Menentukan :

- Keadaan Forwarding :
 - SW1 (Fa0/1, Fa0/2)
 - SW2 (Fa0/1, Fa0/2)
 - SW3 (Fa0/1, Fa0/2, Fa0/3)
- Keadaan Blocking : Tidak Ada

Ping PC Leo 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=11ms 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 = 11ms, Average = 2ms

C:\>|
```