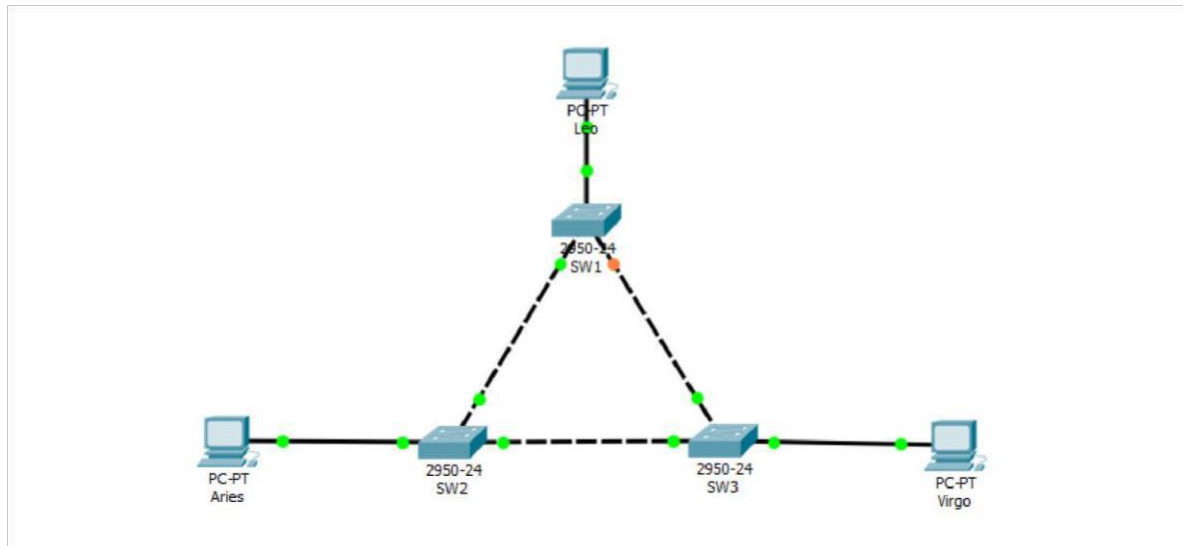


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Kegiatan 1. Topologi 1

Membuat topologi



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

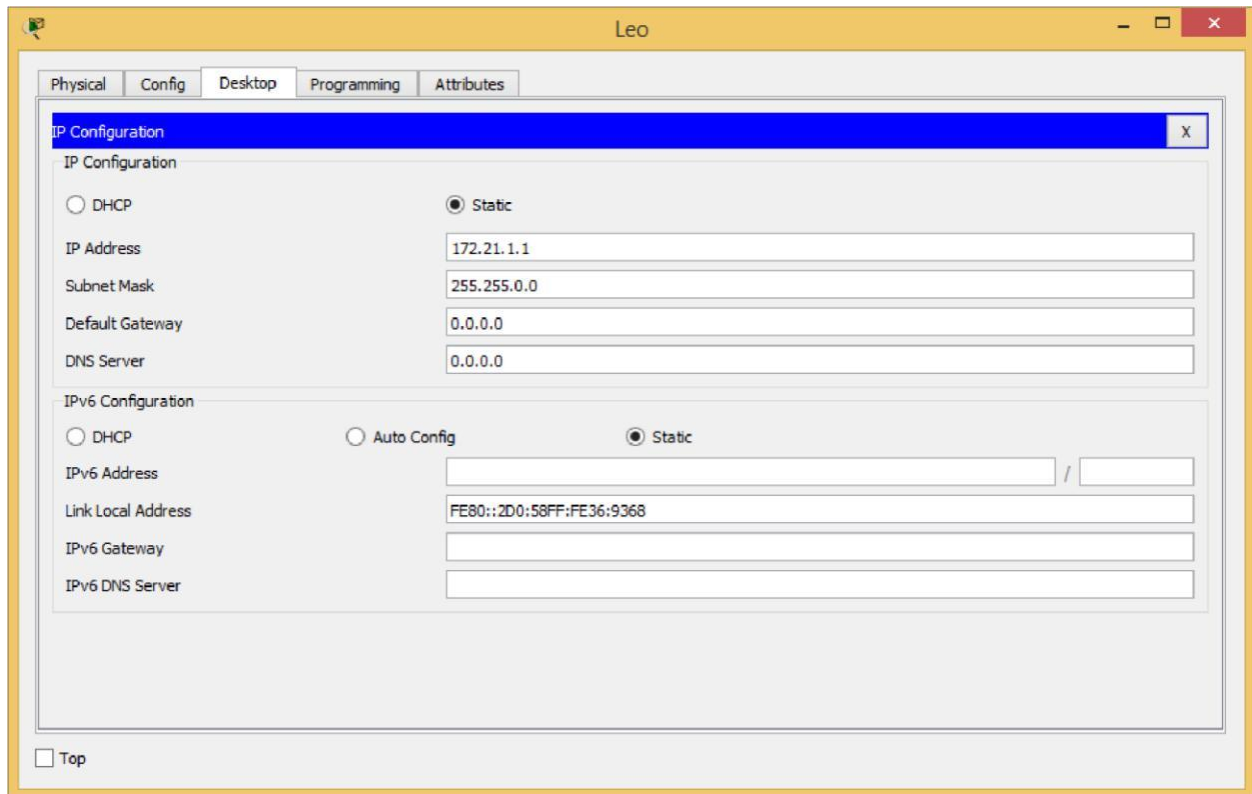
Switch#conf term

Switch(config)#hostname SW1

SW1(config)#end

Konfigurasi masing-masing PC

- Leo



The screenshot shows a window titled "Leo" with a yellow border. Inside, there are five tabs: "Physical", "Config", "Desktop", "Programming", and "Attributes". The "Config" tab is selected. Within the "Config" tab, there is a sub-tab "IP Configuration" which is highlighted in blue. Below this sub-tab, there are two sections: "IP Configuration" and "IPv6 Configuration".

IP Configuration

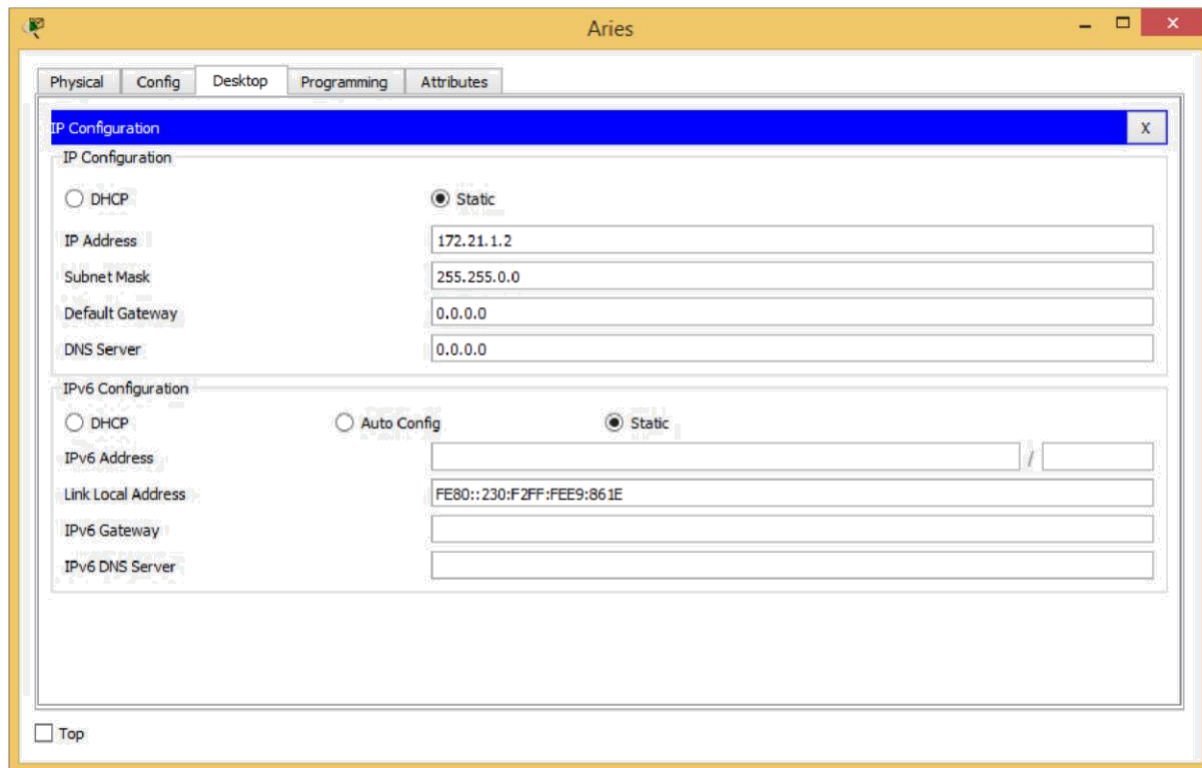
- ☐ DHCP
- ☒ Static
- IP Address: 172.21.1.1
- Subnet Mask: 255.255.0.0
- Default Gateway: 0.0.0.0
- DNS Server: 0.0.0.0

IPv6 Configuration

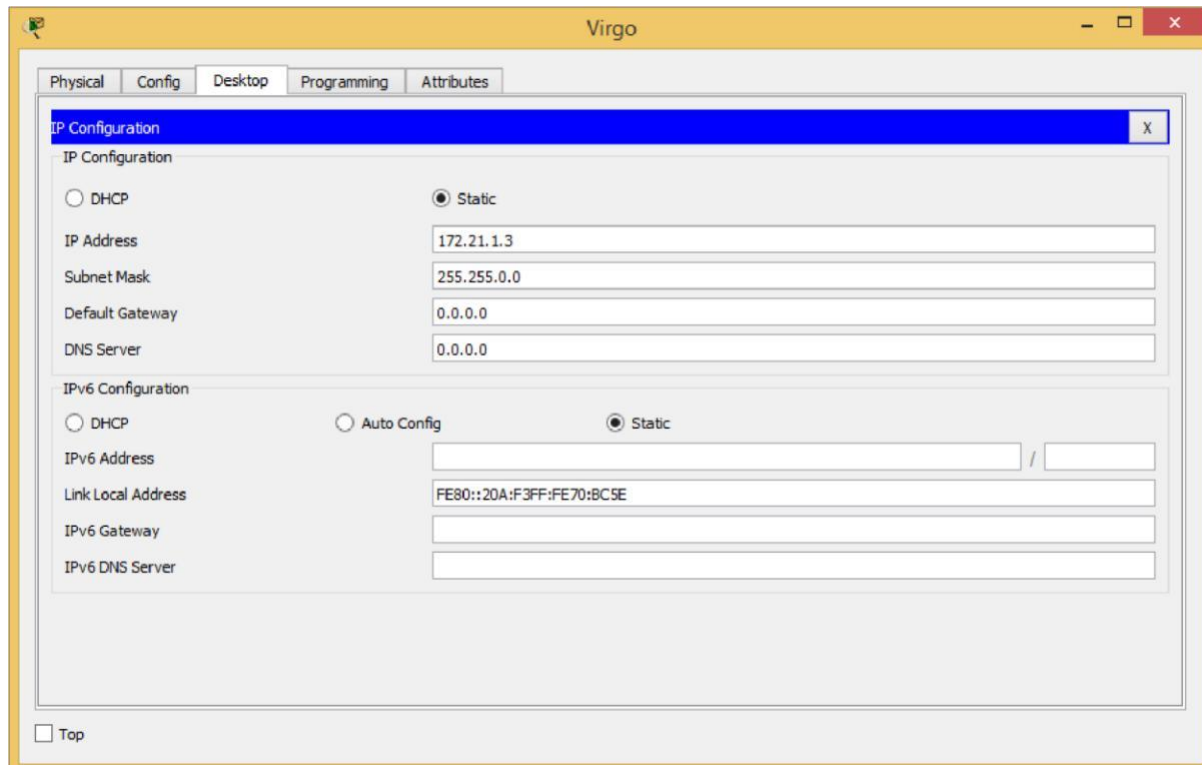
- ☐ DHCP
- ☐ Auto Config
- ☒ Static
- IPv6 Address: [empty] / [empty]
- Link Local Address: FE80::2D0:58FF:FE36:9368
- IPv6 Gateway: [empty]
- IPv6 DNS Server: [empty]

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

- Aries



- Virgo



Tugas 4A : Pada mode *user* atau *privileged*, lihat status STP pada masing-masing switch.

- SW1

The screenshot shows a window titled 'SW1' with tabs for 'Physical', 'Config', 'CLI', and 'Attributes'. The 'CLI' tab is active, displaying the 'IOS Command Line Interface'. The command 'Switch>enable' has been entered, followed by 'Switch#show spanning-tree'. The output shows the spanning tree configuration for VLAN0001, including the root ID, priority, address, cost, port, and hello time. Below this, the bridge ID, priority, address, and hello time are shown. At the bottom, a table lists the interfaces and their roles in the spanning tree.

```
Switch>enable
Switch#show spanning-tree
VLAN0001
  Spanning tree enabled protocol ieee
  Root ID    Priority    32769
             Address     0002.16AD.170E
             Cost        19
             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     00D0.9793.688A
             Hello Time  2 sec  Max Age 20 sec  Forward Delay 15
sec

             Aging Time  20

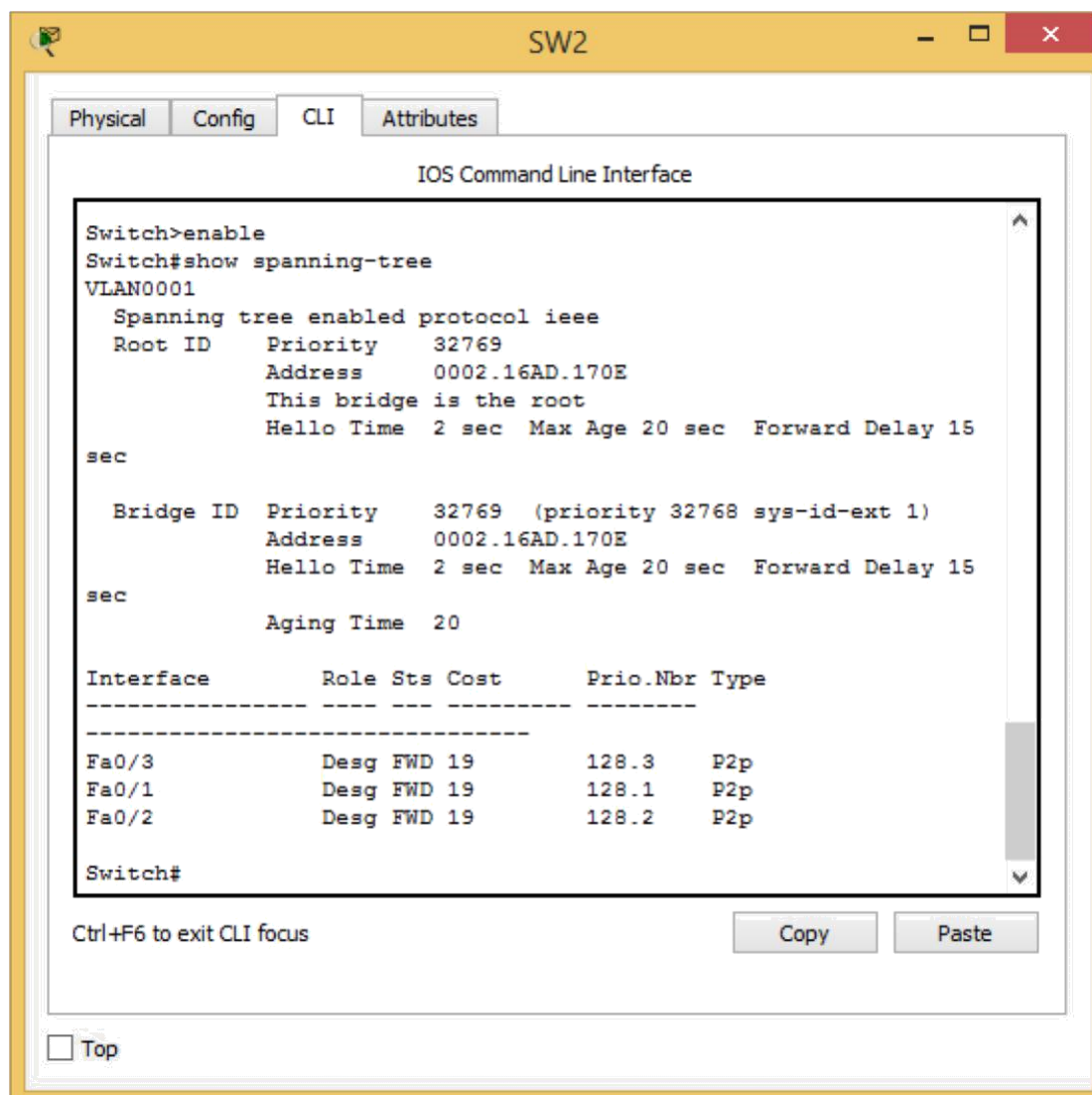
Interface      Role Sts Cost      Prio.Nbr Type
-----
Fa0/2          Altn BLK 19        128.2    P2p
Fa0/3          Desg FWD 19        128.3    P2p
Fa0/1          Root FWD 19        128.1    P2p
```

Ctrl+F6 to exit CLI focus

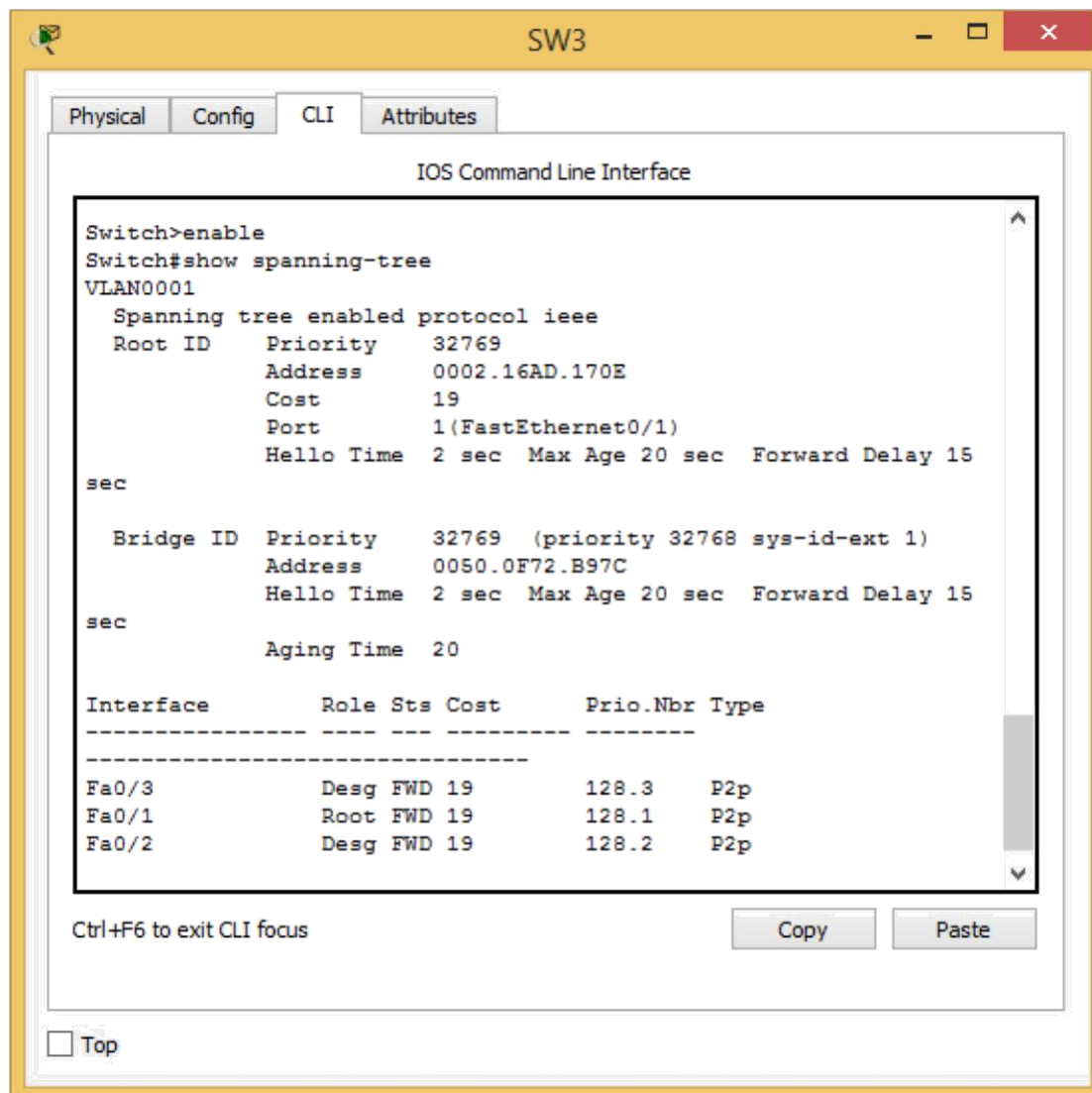
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☐ Top

- 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

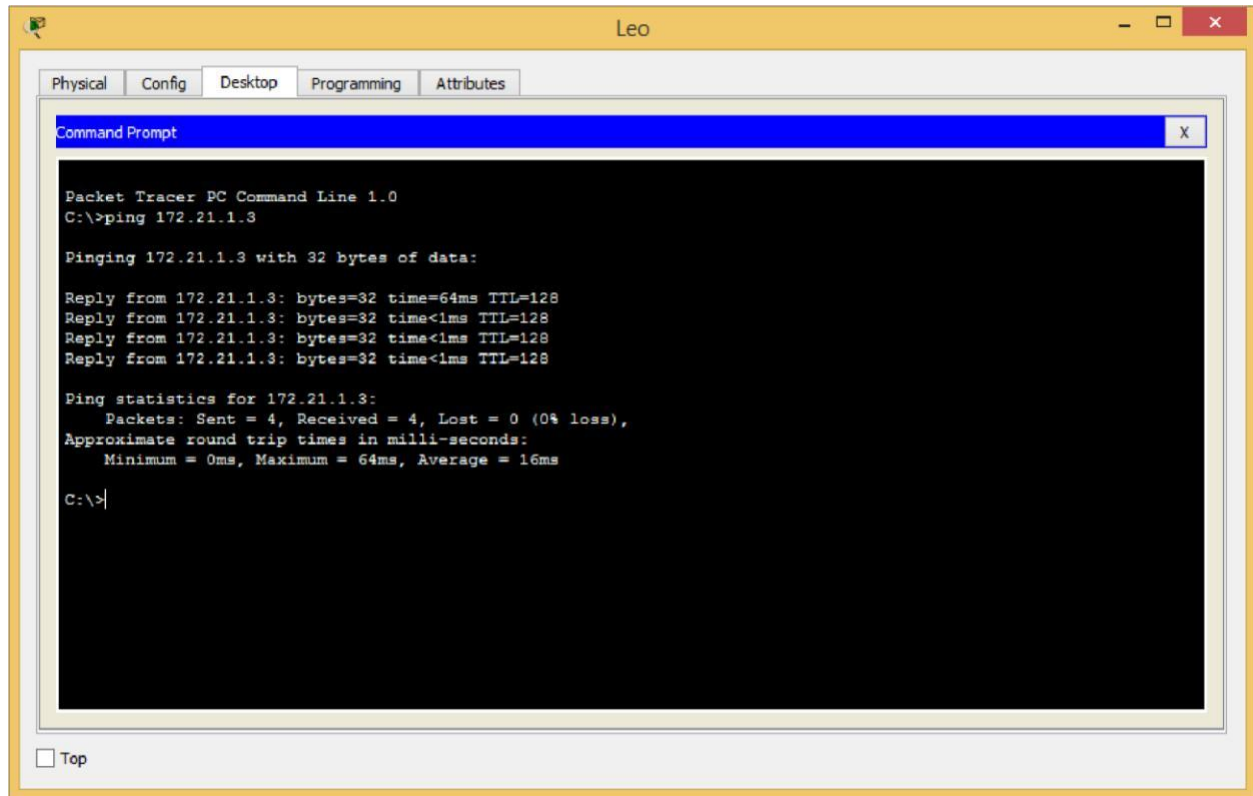
Tugas 4C :

- 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

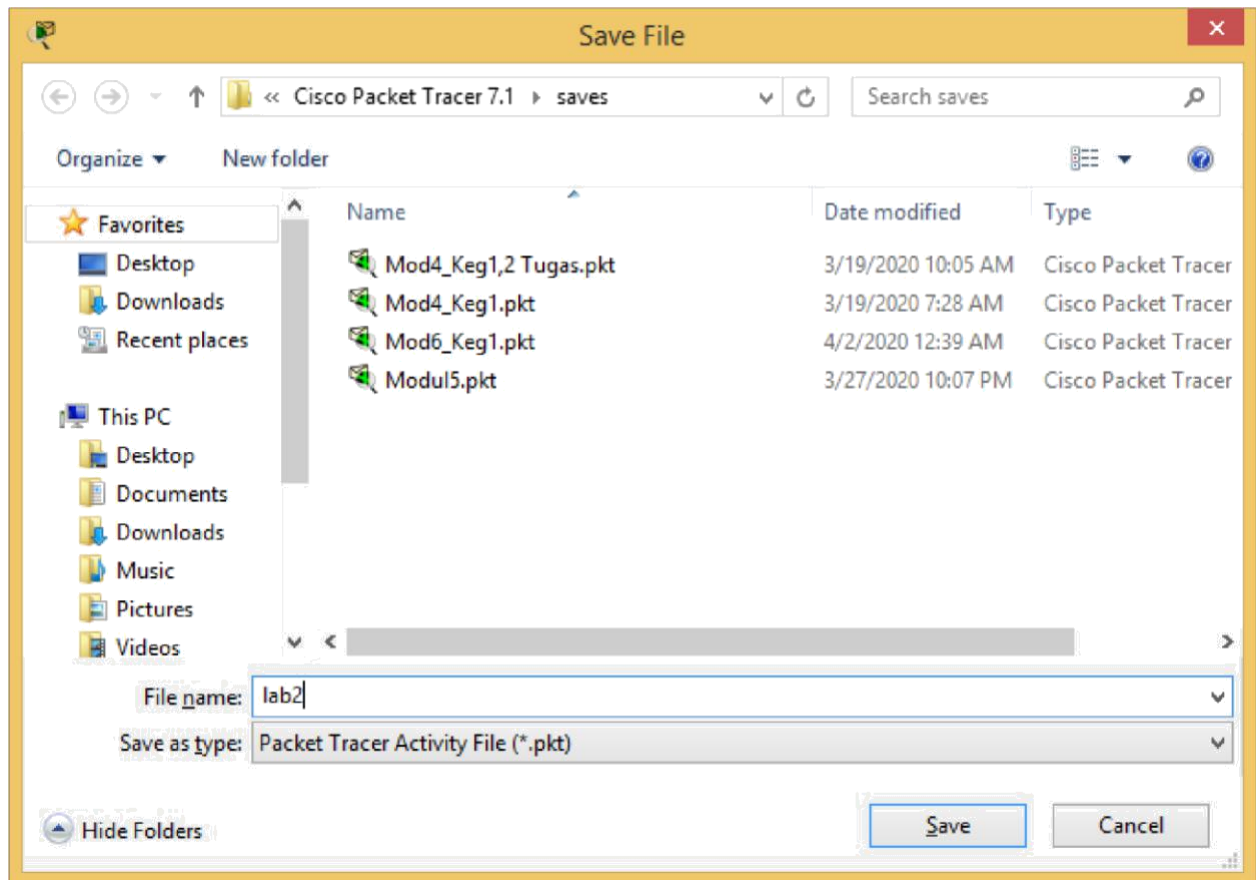


Tugas 5A : Langkah perintah ping

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

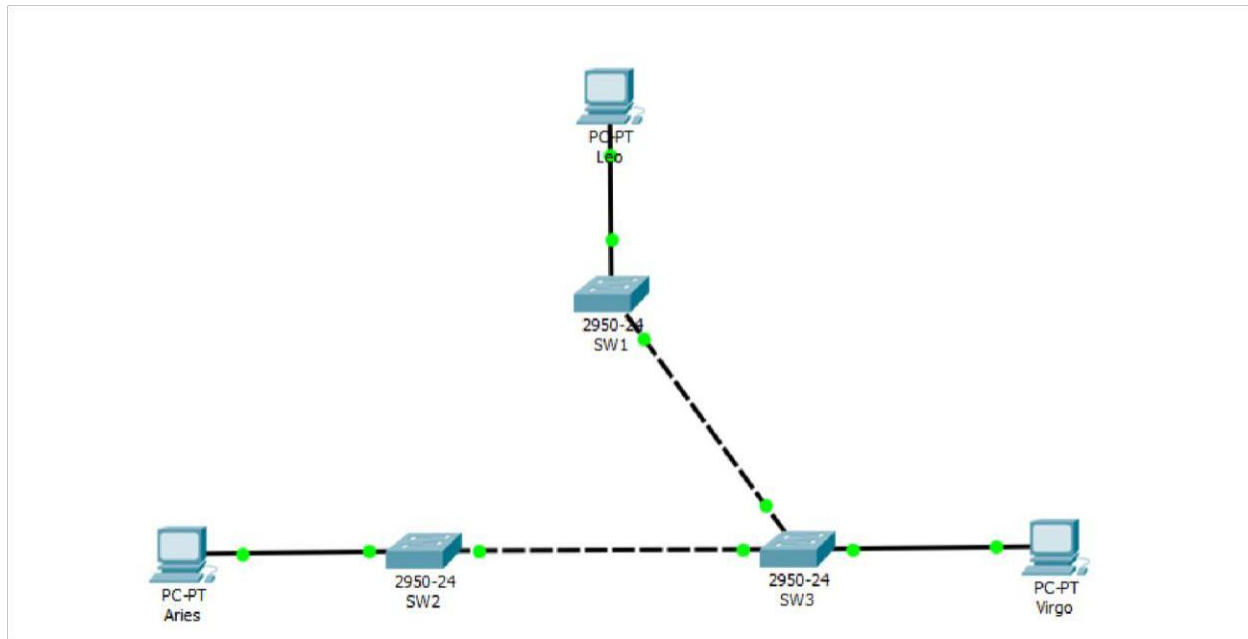
Tugas 6A : Langkah menyimpan konfigurasi jaringan

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



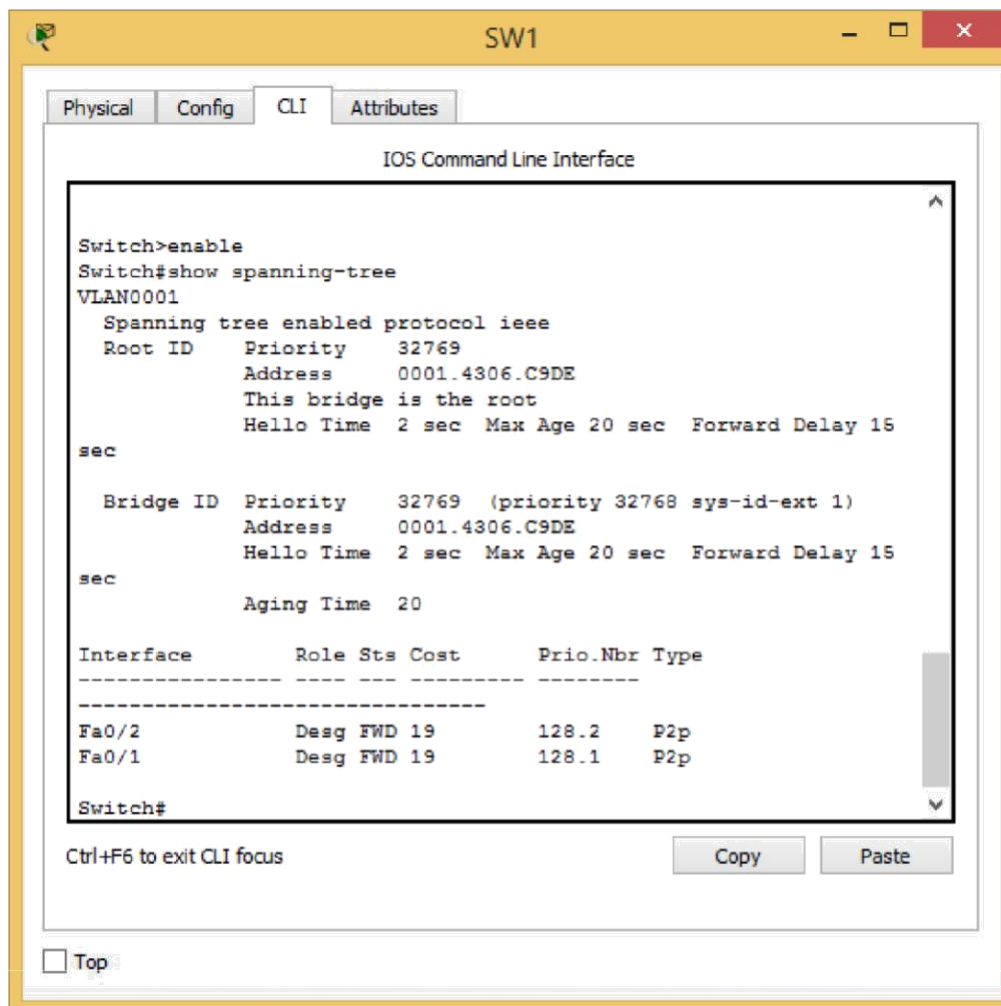
Kegiatan 2. Topologi 2

Membuat topologi



Tugas 9A : Status STP masing-masing switch

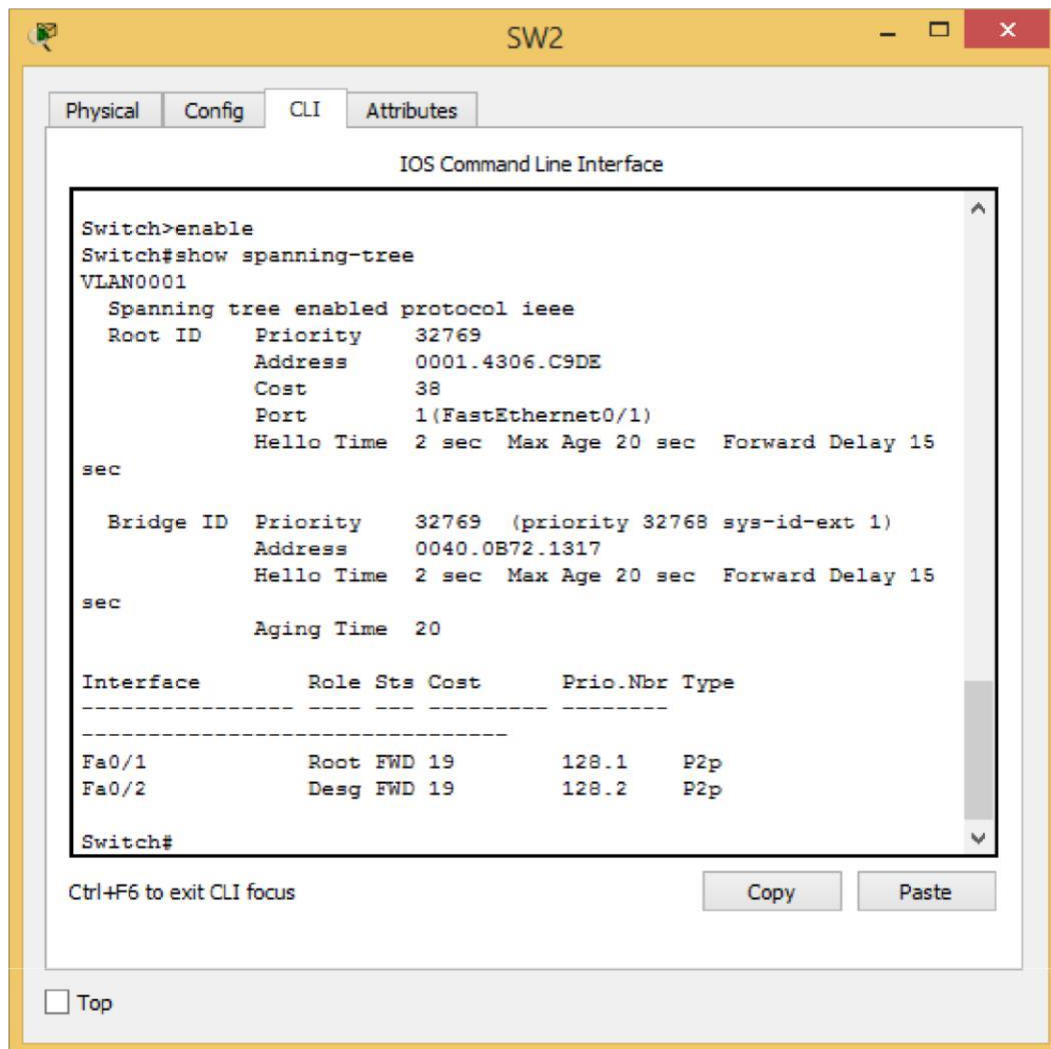
- SW1



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

The screenshot shows a window titled 'SW3' with tabs for 'Physical', 'Config', 'CLI', and 'Attributes'. The 'CLI' tab is active, displaying the 'IOS Command Line Interface'. The command 'Switch#show spanning-tree' has been entered, and the output is shown below. The output indicates that the spanning tree is enabled for VLAN0001 with the IEEE protocol. It lists the root ID as 32769 with priority 32769, address 0001.4306.C9DE, and cost 19. It also shows the bridge ID as 32769 with priority 32768, address 00D0.D304.0971, and cost 19. The aging time is 20 seconds. The output also shows the role and status of the interfaces Fa0/1, Fa0/3, and Fa0/2.

```

Switch>enable
Switch#show spanning-tree
VLAN0001
  Spanning tree enabled protocol ieee
    Root ID    Priority    32769
              Address      0001.4306.C9DE
              Cost        19
              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      00D0.D304.0971
              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
Fa0/3          Desg FWD 19        128.3    P2p
Fa0/2          Desg FWD 19        128.2    P2p
Switch#

```

Ctrl+F6 to exit CLI focus

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☐ Top

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

