

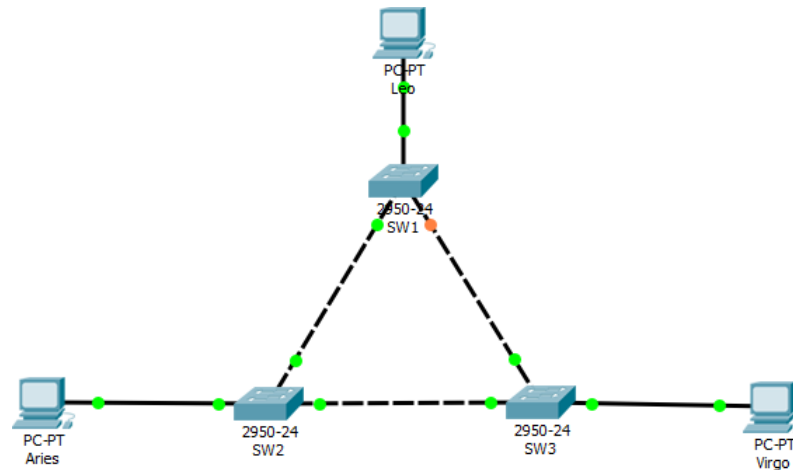
Nama : Bachtiar Nuhri

Nim : L200180031

Kegiatan 1. Topologi 1

MODUL 6

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 title bar and standard Windows window controls. Inside the window, there are five tabs: "Physical", "Config", "Desktop", "Programming", and "Attributes". The "Config" tab is selected. Within the "Config" tab, there is a sub-tab labeled "IP Configuration" with a blue header and a close button (X). The "IP Configuration" sub-tab contains 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: /

Link Local Address: FE80::2D0:58FF:FE36:9368

IPv6 Gateway:

IPv6 DNS Server:

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

- Aries

The screenshot shows the 'Aries' configuration window with the 'Config' tab selected. The 'IP Configuration' section is active, showing 'Static' as the selected option. The IP Address is 172.21.1.2, Subnet Mask is 255.255.0.0, Default Gateway is 0.0.0.0, and DNS Server is 0.0.0.0. The 'IPv6 Configuration' section shows 'Static' as the selected option, with an empty IPv6 Address field, a Link Local Address of FE80::230:F2FF:FEE9:861E, and empty fields for IPv6 Gateway and IPv6 DNS Server. A 'Top' button is at the bottom left.

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:FEE9:861E	
IPv6 Gateway		
IPv6 DNS Server		

☐ Top

- Virgo

The screenshot shows the 'Virgo' configuration window with the 'Config' tab selected. The 'IP Configuration' section is active, showing 'Static' as the selected option. The IP Address is 172.21.1.3, Subnet Mask is 255.255.0.0, Default Gateway is 0.0.0.0, and DNS Server is 0.0.0.0. The 'IPv6 Configuration' section shows 'Static' as the selected option, with an empty IPv6 Address field, a Link Local Address of FE80::20A:F3FF:FE70:BC5E, and empty fields for IPv6 Gateway and IPv6 DNS Server. A 'Top' button is at the bottom left.

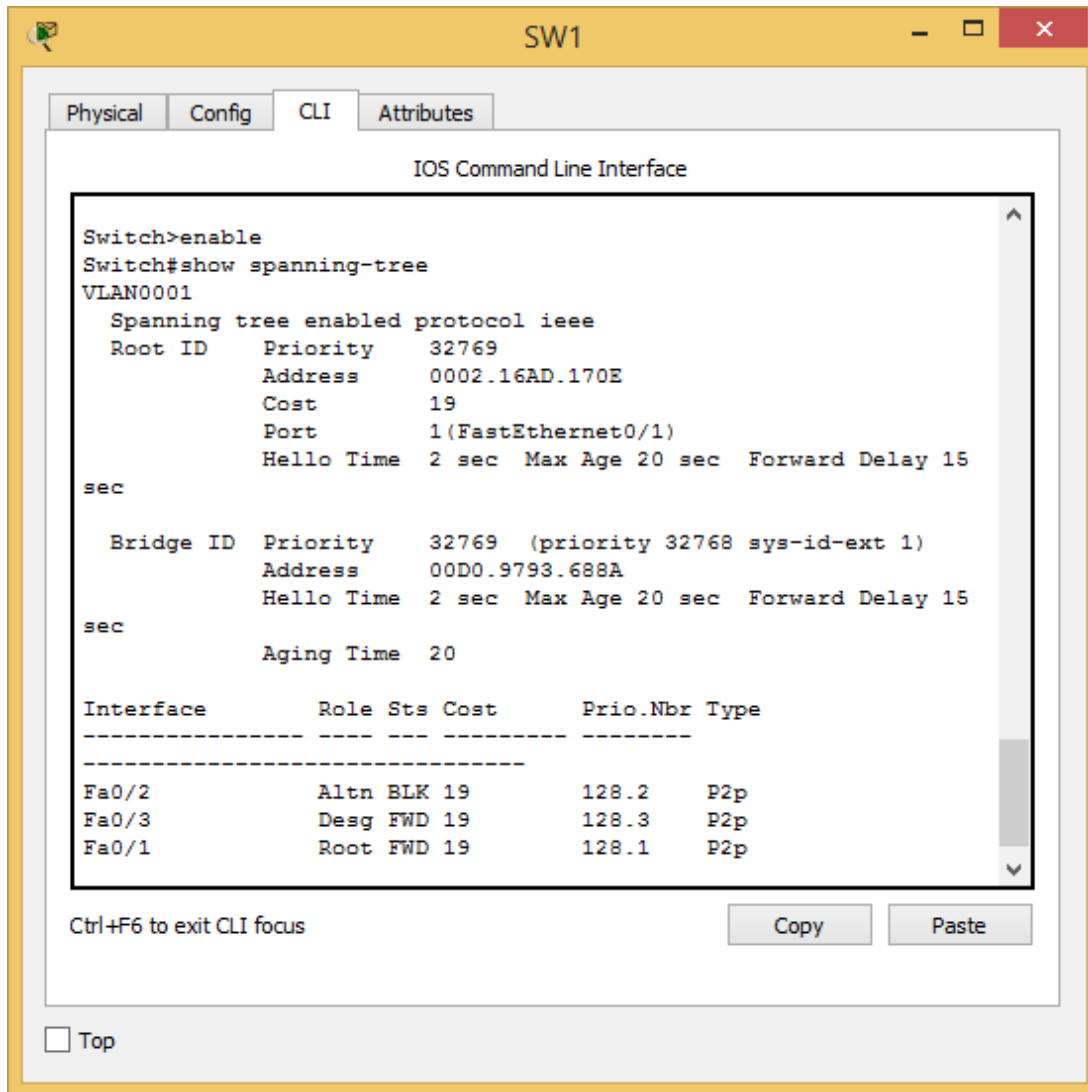
IP Configuration	
<input type="radio"/> DHCP	<input checked="" type="radio"/> Static
IP Address	172.21.1.3
Subnet Mask	255.255.0.0
Default Gateway	0.0.0.0
DNS Server	0.0.0.0

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		

☐ Top

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

- SW1



The screenshot shows a network switch window titled "SW1" 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 privileged mode. The output shows STP details for VLAN0001, including the root ID, priority, address, cost, port, and hello time. It also shows the bridge ID, priority, address, and hello time. At the bottom, there is a table showing the STP status for each interface.

```
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

Copy Paste

☐ Top

- SW2

SW2
- □ ×

Physical
Config
CLI
Attributes

IOS Command Line Interface

```

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

            Aging Time  20

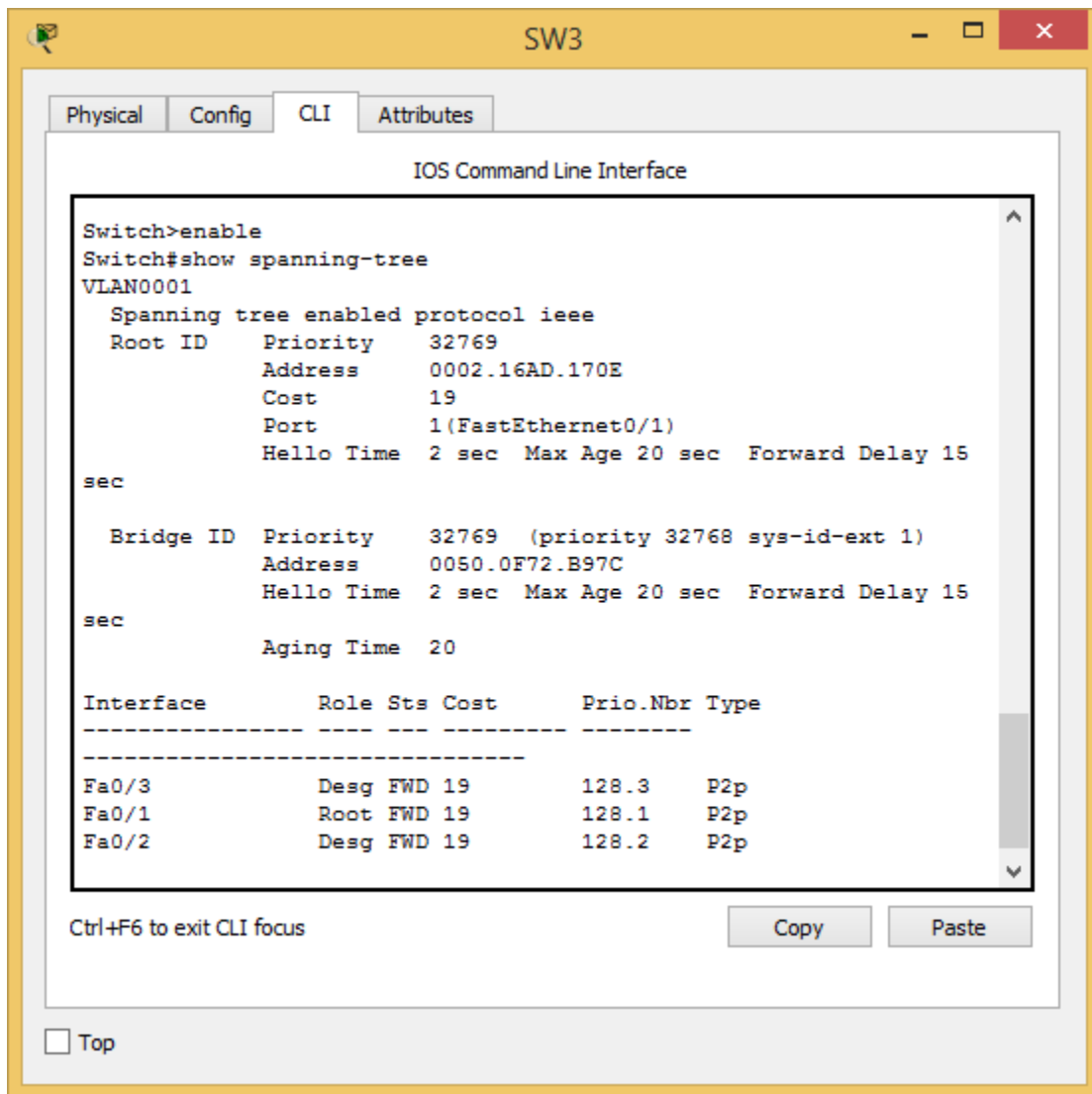
Interface      Role  Sts  Cost      Prio.Nbr  Type
-----
Fa0/3          Desg  FWD  19         128.3     P2p
Fa0/1          Desg  FWD  19         128.1     P2p
Fa0/2          Desg  FWD  19         128.2     P2p

Switch#
          
```

Ctrl+F6 to exit CLI focus
Copy
Paste

☐ Top

- 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

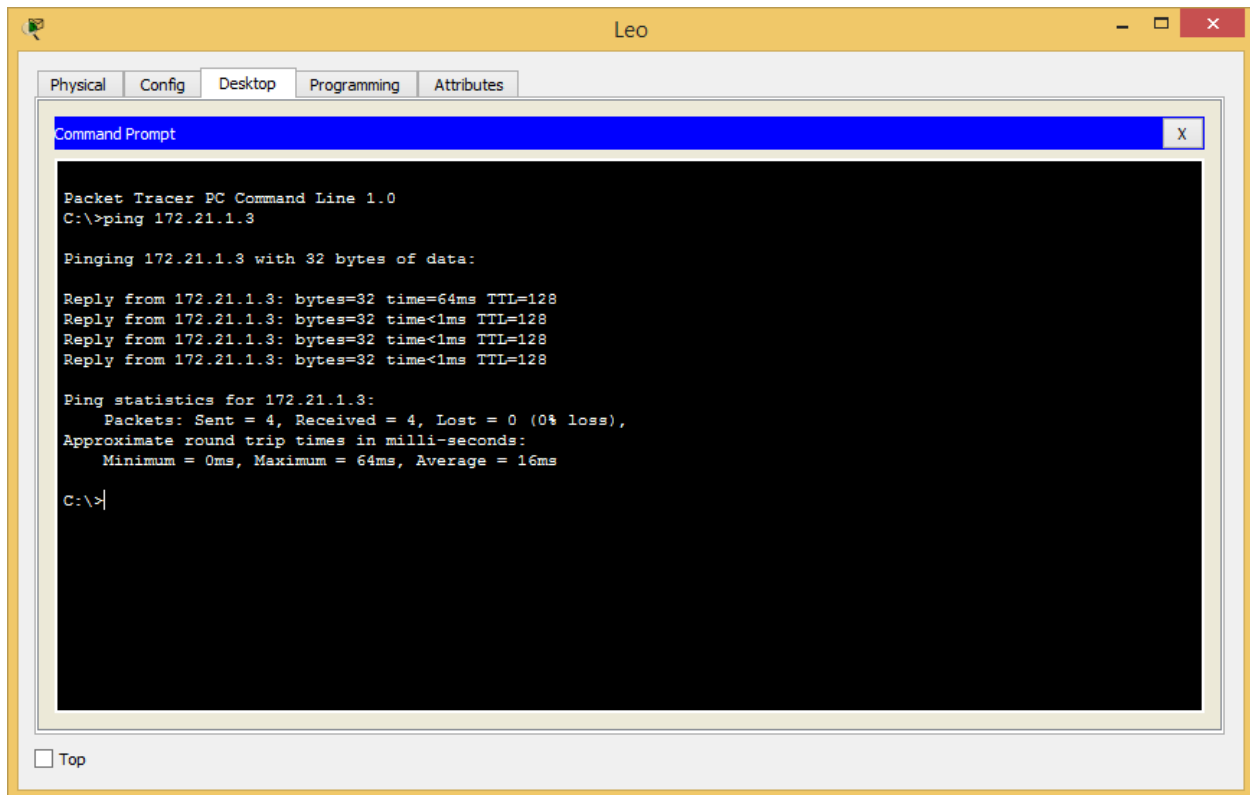
Tugas 4C :

- 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

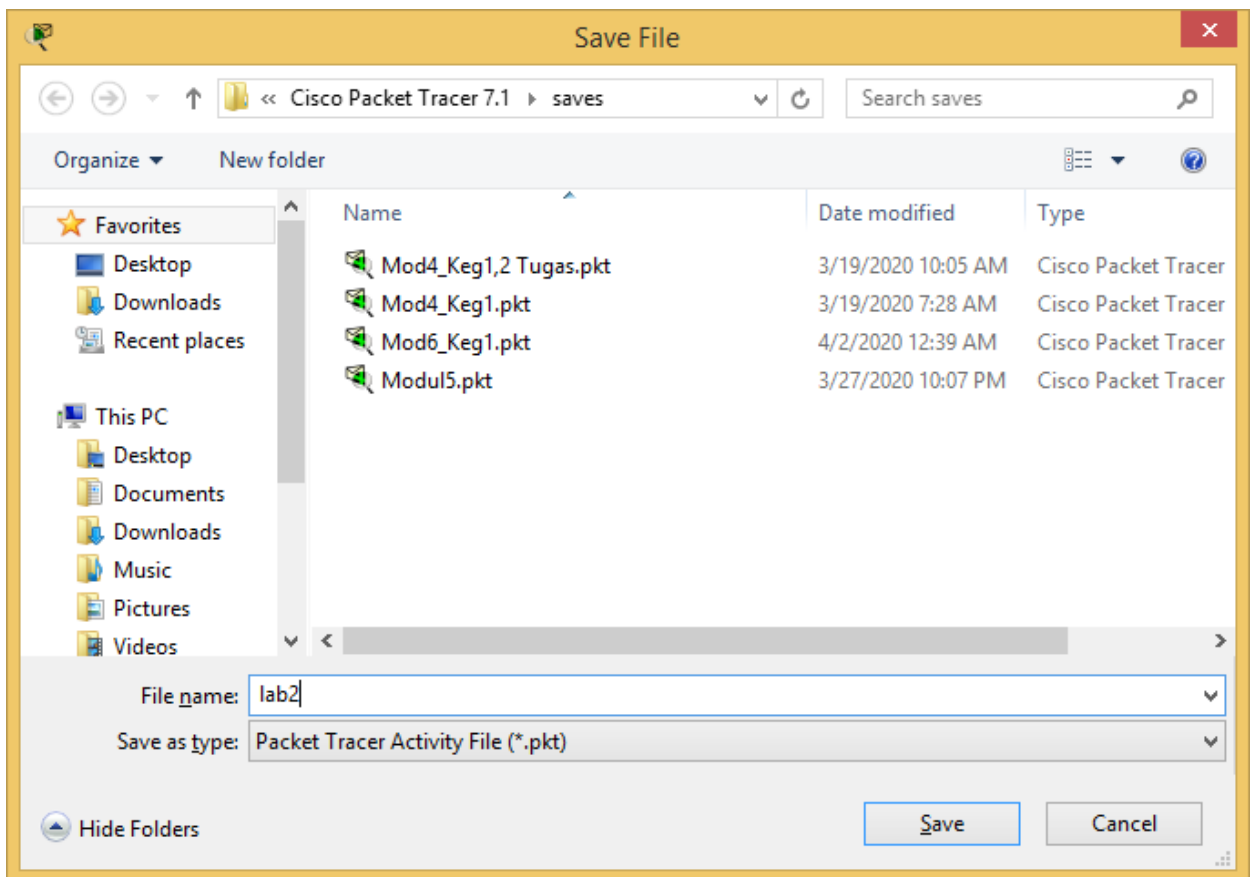


Tugas 5A : Langkah perintah ping

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

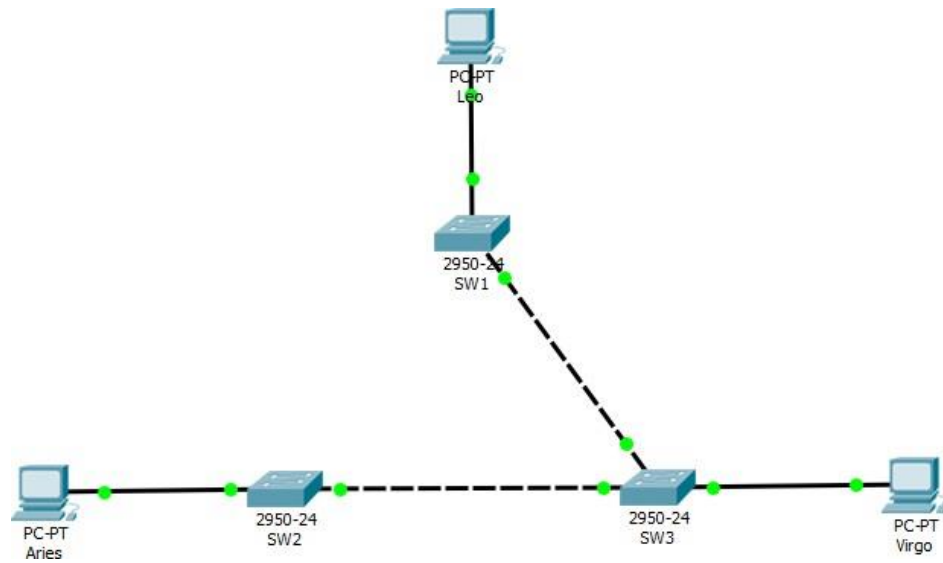
Tugas 6A : Langkah menyimpan konfigurasi jaringan

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



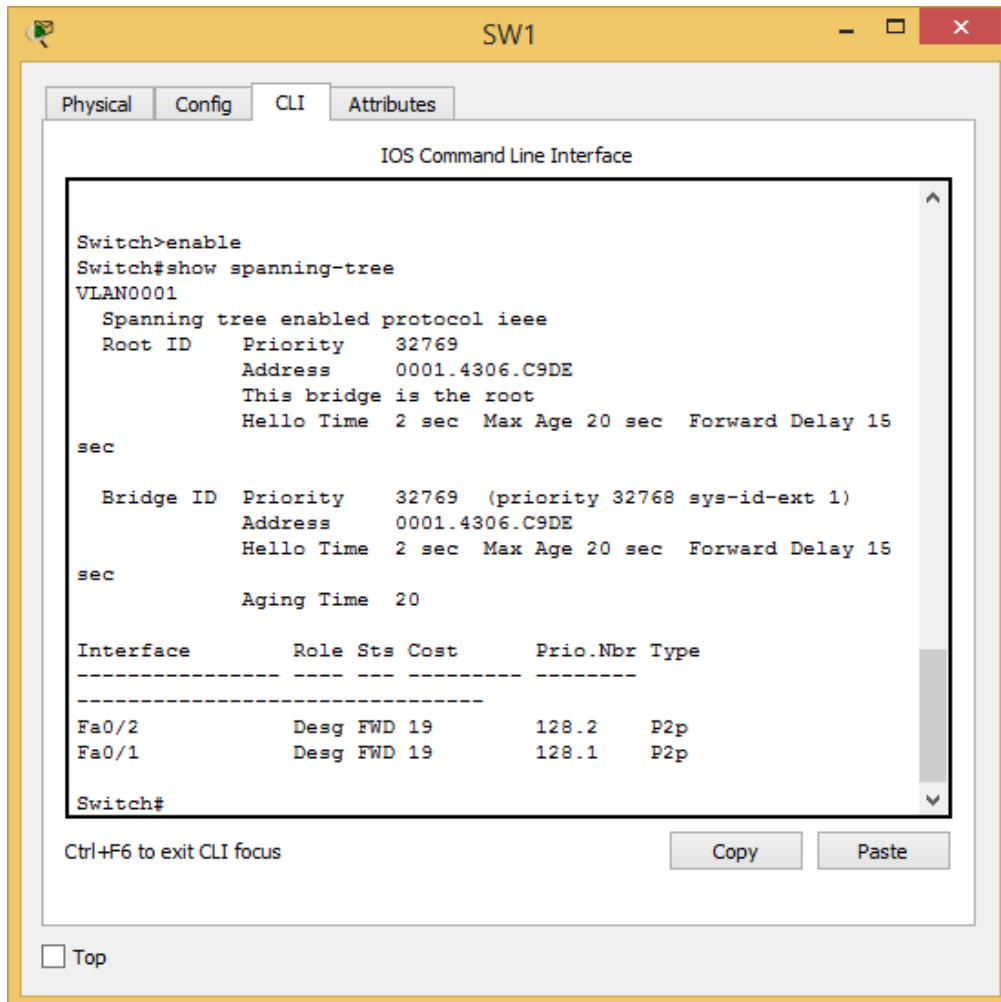
Kegiatan 2. Topologi 2

Membuat topologi



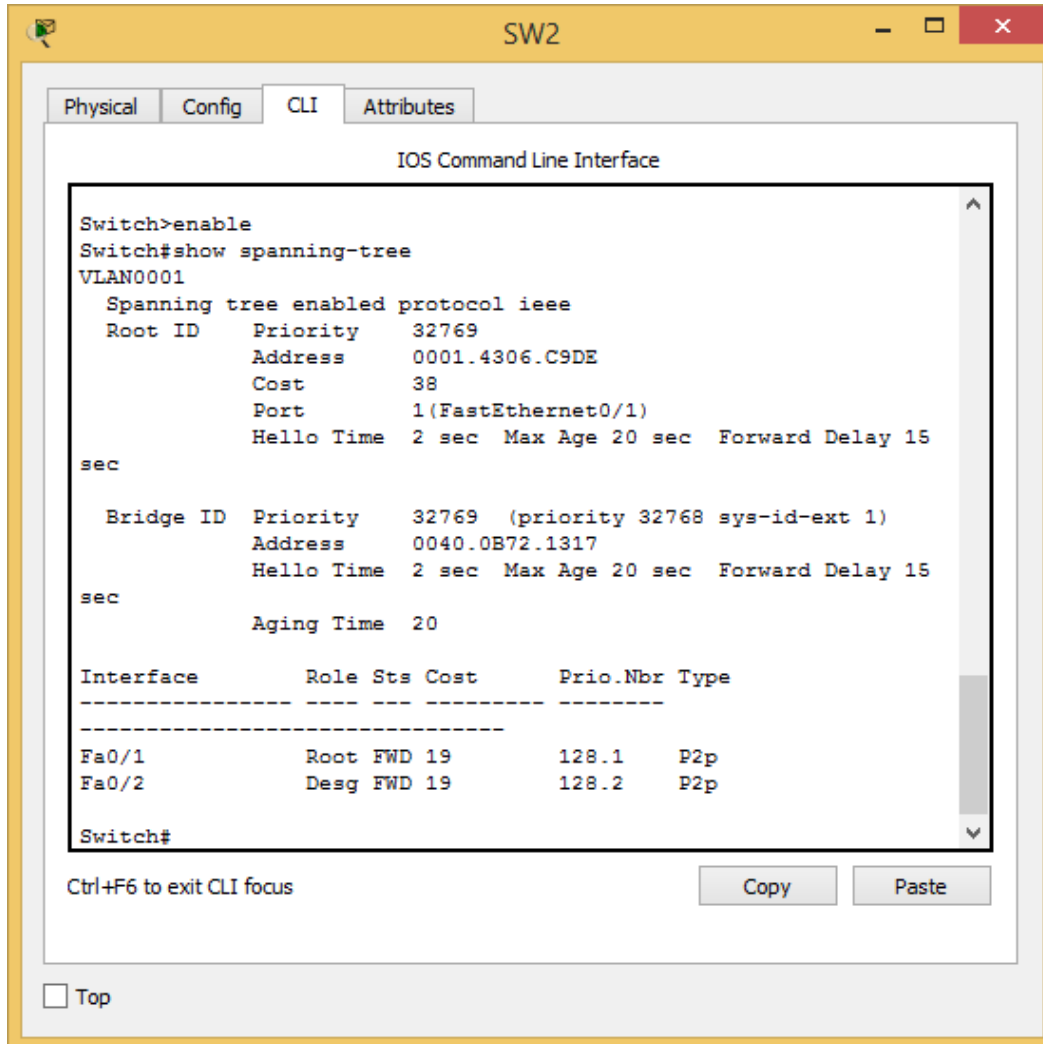
Tugas 9A : Status STP masing-masing switch

- SW1



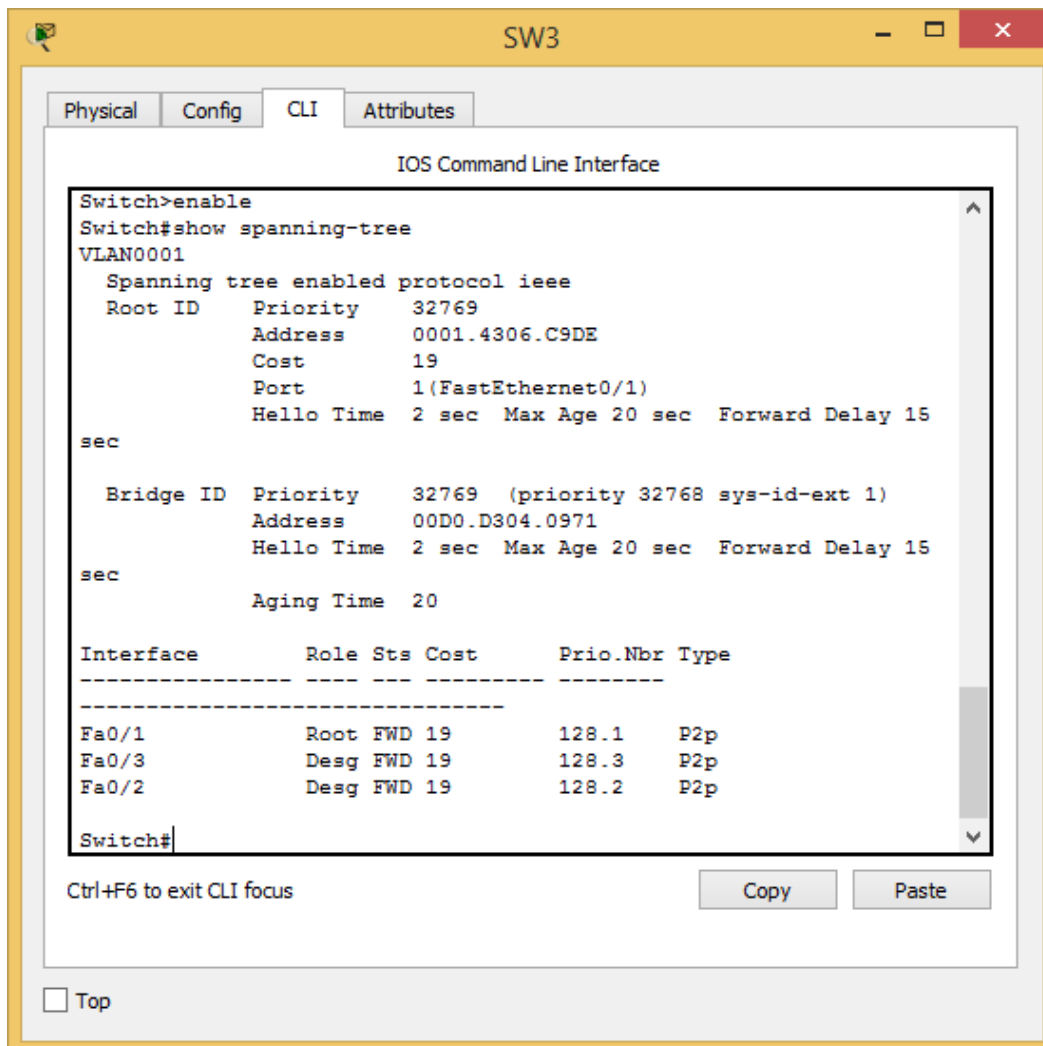
No	Variabel	Nilai
1	Root ID	32769 : 0001.4306.C9DE
2	Priority	32769
3	MAC Address	0001.4306.C9DE
4	Bridge ID	32769 : 0001.4306.C9DE
5	Cost	19
6	Hello Time	2 sec
7	MaxAge	20 sec
8	Forward Delay	15 sec

- 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



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

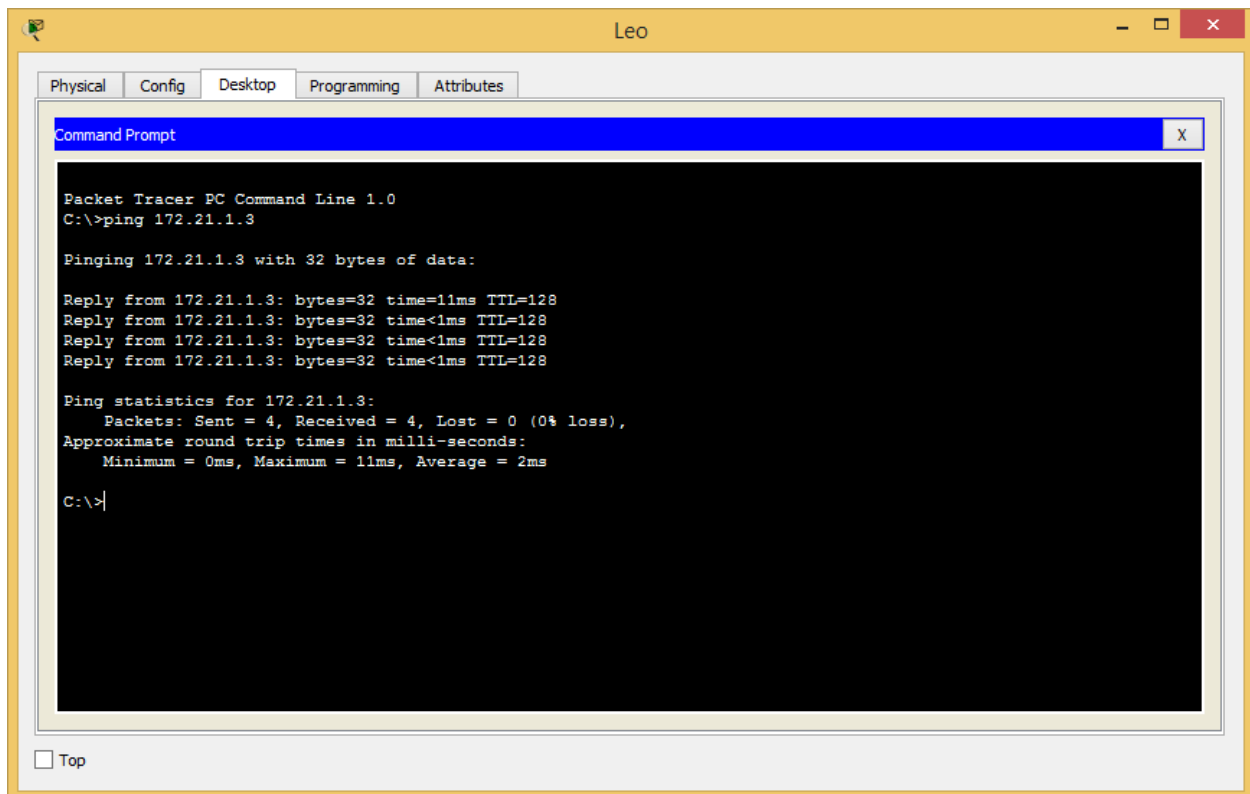
Menentukan :

- 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:\>|
```