

NAMA : HANAN ASKARIM

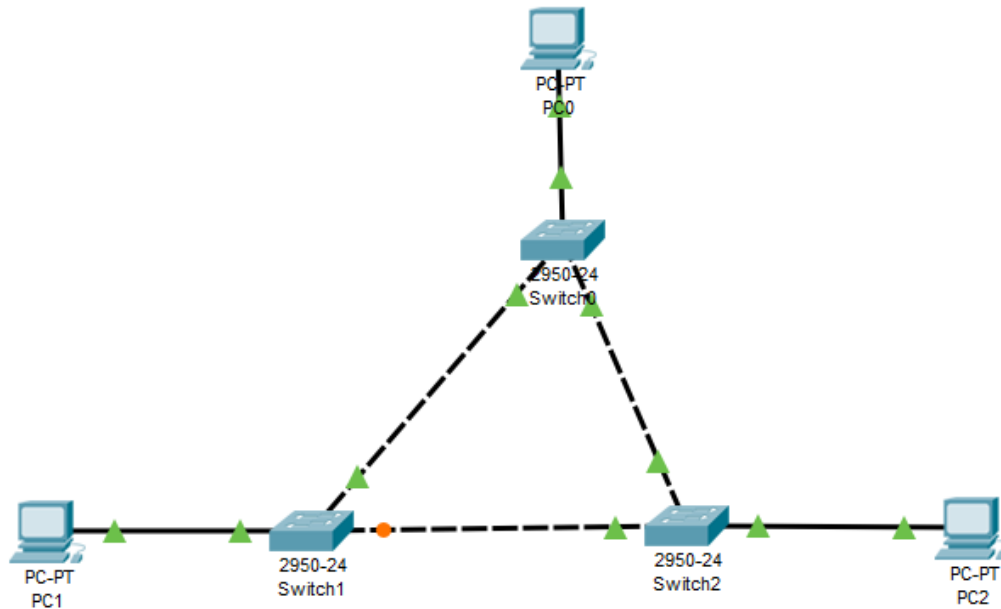
NIM : L200180170

KELAS : D

LAPORAN PRAKTIKUM MODUL 6

Kegiatan 1

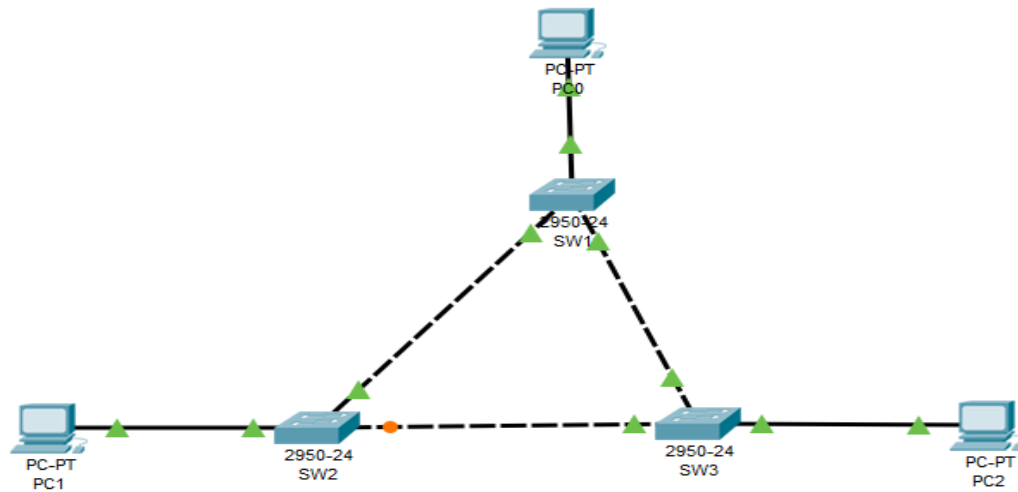
- a. Membuat topologi jaringan dengan menggunakan switch Catalyst 2950



Tugas 1A :

- membuka jendela awal cisco Packet Tracer
- mengklik icon switch dan drag ke halaman kerja
- mengklik icon computer dan drag ke halaman kerja
- setelah semuanya tersedia lalu menyambungkan computer ke switch dan menyambungkan switch ke switch dengan mengklik kabel straight
- setelah itu memasang kabel cross untuk menyambungkan computer ke switch dan lainnya

- b. beri nama masing-masing switch dengan SW1, SW2, dan SW3



Tugas 2A :

SW 1

Switch>enable

Switch#conf

Enter configuration commands, one per line. End with CNTL/Z

Switch(config)#hostname SW1

SW1#end

SW2

Switch>enable

Switch#conf

Enter configuration commands, one per line. End with CTNL/Z

Switch(config)#hostname SW2

SW2#end

SW3

Switch>enable

Switch#conf

Enter configuration commands, one per line. End with CTNL/Z

Switch(config)#hostname SW3

SW3#end

c. konfigurasi masing-masing PC dengan alamat IP

Leo

The screenshot shows the 'leo' application window with the 'Desktop' tab selected. The 'IP Configuration' window is open, showing settings for the 'FastEthernet0' interface. The 'IP Configuration' section has 'Static' selected, with fields for 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 fields for IPv6 Address, Link Local Address (FE80::201:C9FF:FE61:3792), IPv6 Gateway, and IPv6 DNS Server. The '802.1X' section has 'Use 802.1X Security' unchecked, and 'Authentication' set to 'MD5'. There are fields for Username and Password. A 'Top' button is at the bottom left.

IP Configuration	
Interface	FastEthernet0
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::201:C9FF:FE61:3792
IPv6 Gateway	
IPv6 DNS Server	
802.1X	
<input type="checkbox"/> Use 802.1X Security	
Authentication	MD5
Username	
Password	

☐ Top

Aries

The screenshot shows the 'aries' application window with the 'Desktop' tab selected. The 'IP Configuration' panel is active, showing settings for the 'FastEthernet0' interface. The 'Static' radio button is selected for both IP and IPv6 configurations. The IP Address is set to 172.21.1.2, Subnet Mask to 255.255.0.0, Default Gateway to 0.0.0.0, and DNS Server to 0.0.0.0. The IPv6 configuration shows 'Static' selected, with a Link Local Address of FE80::2D0:97FF:FE5E:6E53. The 802.1X section has 'Use 802.1X Security' unchecked, 'Authentication' set to MD5, and empty fields for Username and Password. A 'Top' button is at the bottom left.

aries

Physical Config **Desktop** Programming Attributes

IP Configuration

Interface: FastEthernet0

IP Configuration

☐ DHCP ☒ 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

☐ DHCP ☐ Auto Config ☒ Static

IPv6 Address: /

Link Local Address: FE80::2D0:97FF:FE5E:6E53

IPv6 Gateway:

IPv6 DNS Server:

802.1X

☐ Use 802.1X Security

Authentication: MD5

Username:

Password:

☐ Top

Virgo

The screenshot shows the 'virgo' application window with the 'Desktop' tab selected. The 'IP Configuration' panel is active, showing settings for the 'FastEthernet0' interface. The 'Static' radio button is selected for both IP and IPv6 configurations. The IP Address is set to 172.21.1.3, Subnet Mask to 255.255.0.0, Default Gateway to 0.0.0.0, and DNS Server to 0.0.0.0. The IPv6 configuration shows 'Static' selected, with a Link Local Address of FE80::2D0:D3FF:FE0C:DC04. The 802.1X section has 'Use 802.1X Security' unchecked, 'Authentication' set to MD5, and empty fields for Username and Password. A 'Top' button is at the bottom left.

virgo

Physical Config **Desktop** Programming Attributes

IP Configuration

Interface: FastEthernet0

IP Configuration

☐ DHCP ☒ 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

☐ DHCP ☐ Auto Config ☒ Static

IPv6 Address: /

Link Local Address: FE80::2D0:D3FF:FE0C:DC04

IPv6 Gateway:

IPv6 DNS Server:

802.1X

☐ Use 802.1X Security

Authentication: MD5

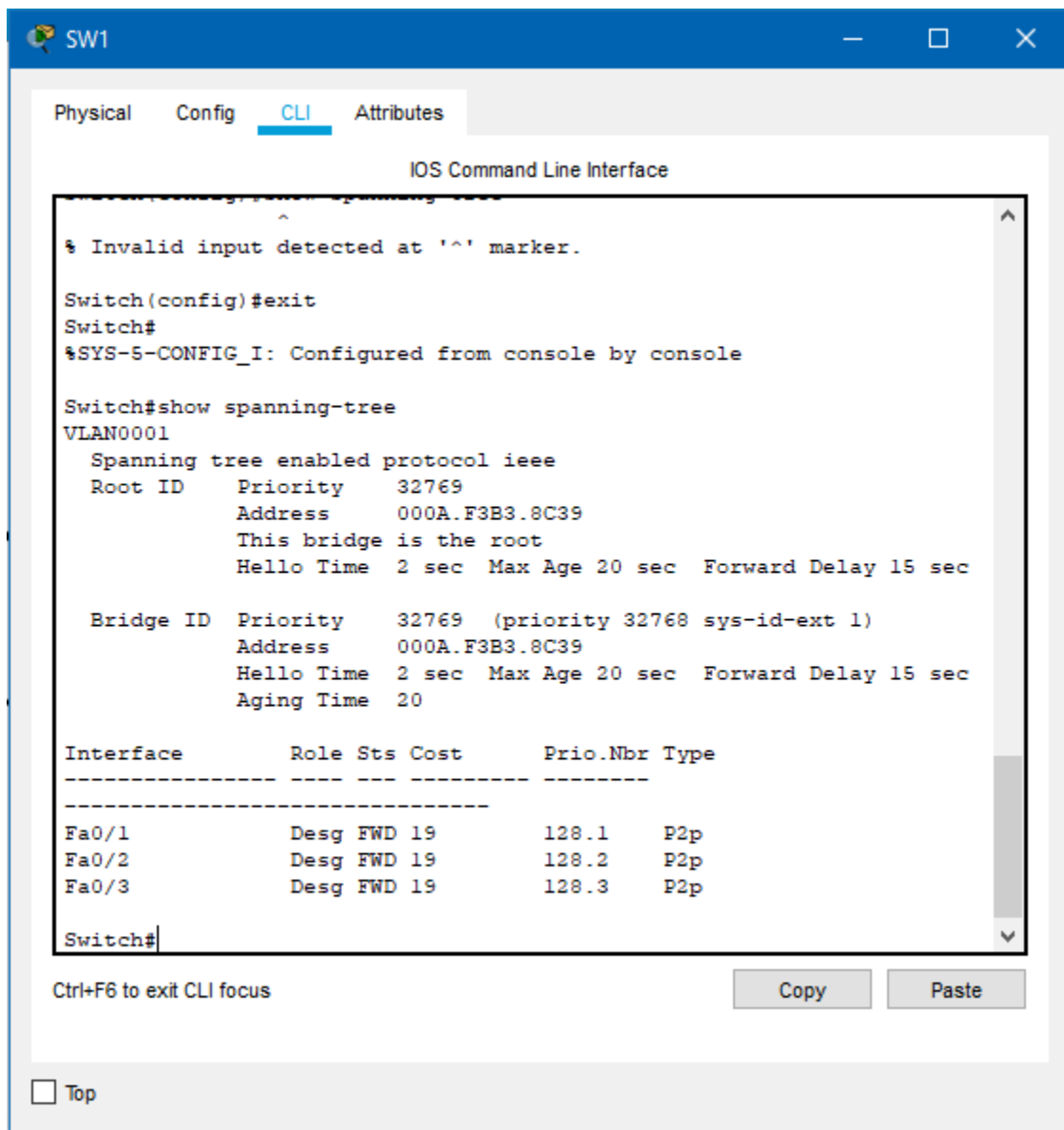
Username:

Password:

☐ Top

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

Tugas 4A : SW1



The screenshot shows the CLI interface of a switch named SW1. The 'CLI' tab is selected. The command history shows the user exiting configuration mode and running the 'show spanning-tree' command. The output displays STP details for VLAN0001, including the root ID, priority, address, and bridge ID. A table at the bottom lists the interfaces and their roles.

```
Switch#show spanning-tree
VLAN0001
  Spanning tree enabled protocol ieee
  Root ID    Priority    32769
             Address     000A.F3B3.8C39
             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     000A.F3B3.8C39
             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        Desg FWD 19        128.2    P2p
Fa0/3        Desg FWD 19        128.3    P2p
```


Switch#

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     000A.F3B3.8C39
            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     00E0.8FBD.5809
            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              Root FWD 19        128.1    P2p
Fa0/3              Altn BLK 19        128.3    P2p

Switch#
```

Ctrl+F6 to exit CLI focus

Copy Paste

☐ Top

The screenshot shows the CLI interface of a switch named SW3. The interface has tabs for Physical, Config, CLI (selected), and Attributes. The CLI window displays the following commands and output:

```
%LINEPROTO-5-UPDOWN: Line protocol on Interface FastEthernet0/3,
changed state to up

Switch>enable
Switch#show spanning-tree
VLAN0001
  Spanning tree enabled protocol ieee
  Root ID    Priority    32769
            Address     000A.F3B3.8C39
            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     000C.8530.C99A
            Hello Time  2 sec  Max Age 20 sec  Forward Delay 15 sec
            Aging Time  20

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

Switch#
```

Below the CLI window, there is a status bar with the text "Ctrl+F6 to exit CLI focus" and two buttons: "Copy" and "Paste". At the bottom left, there is a checkbox labeled "Top".

Tugas 4B :

Sw1

No	Variabel	Nilai
1.	Root ID	
2.	Priority	32769
3.	MAC Address	000A.F3B3.8C39
4.	Bridge ID	
5.	Cost (0/1;0/2;0/3)	19;19;19
6.	Hello Time	2 second
7.	MaxAge	20 second
8.	Forward Delay	15 second

Sw2

No	Variabel	Nilai
1.	Root ID	
2.	Priority	32769
3.	MAC Address	00E0.8FBD.5809
4.	Bridge ID	
5.	Cost (0/1;0/2;0/3)	19;19;19
6.	Hello Time	2 second
7.	MaxAge	20 second
8.	Forward Delay	15 second

Sw3

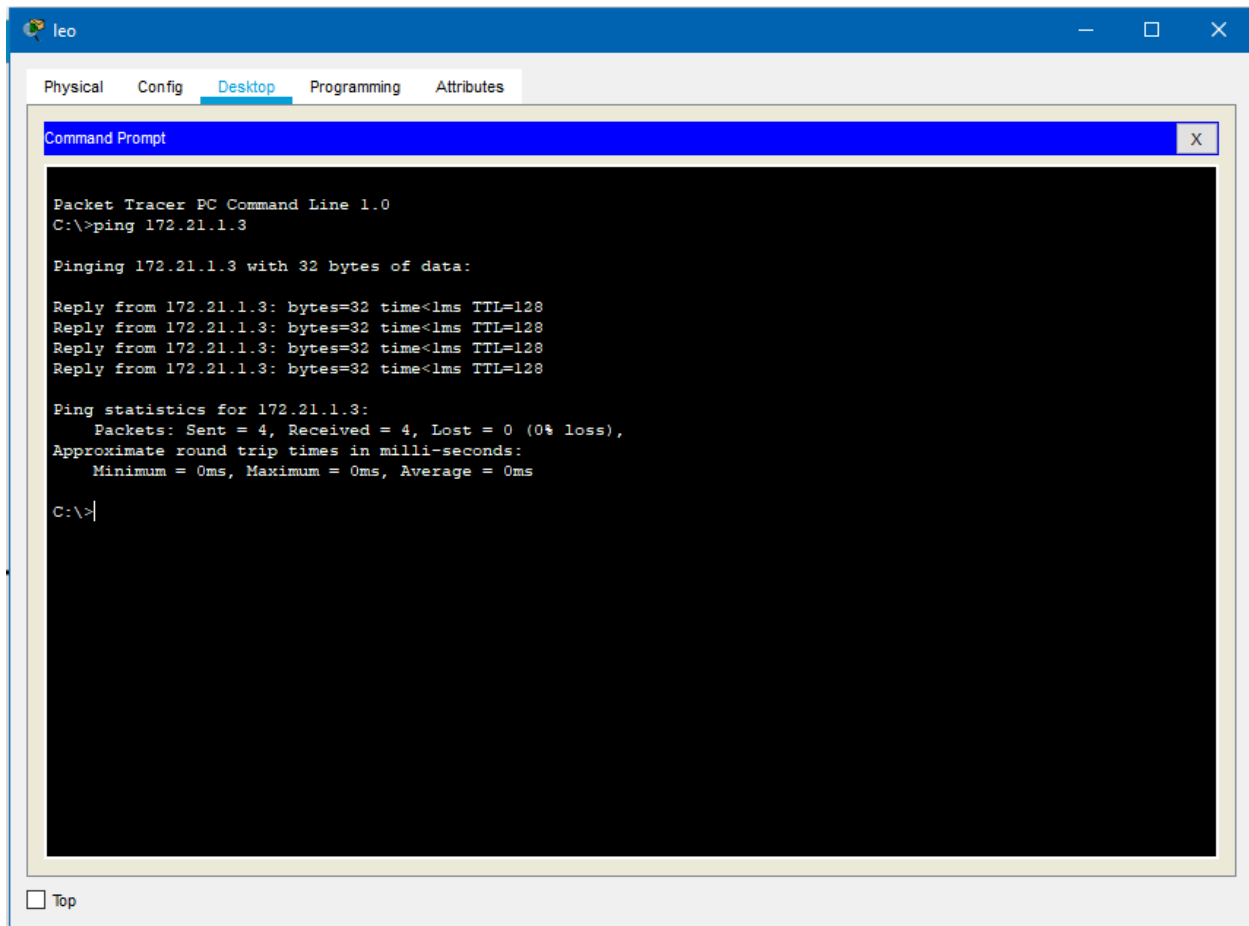
No	Variabel	Nilai
1.	Root ID	
2.	Priority	32769
3.	MAC Address	000C.8530.C99A
4.	Bridge ID	
5.	Cost (0/1;0/2;0/3)	19;19;19
6.	Hello Time	2 second
7.	MaxAge	20 second
8.	Forward Delay	15 second

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

- root bridge : switch SW1
- designated bridge : switch SW2 dan switch SW3
- root port : SW2 1(fastEthernet0/1), SW3 2 (fastEthernet0/2)
- designated port : 1(fastEthernet0/1) dan 3(fastEthernet0/3)

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

- forwarding : fa0/1, fa0/2
- blocking : fa0/3
- e. Dari PC Leo lakukan ping ke PC virgo



```
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<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
Reply from 172.21.1.3: bytes=32 time<1ms TTL=128

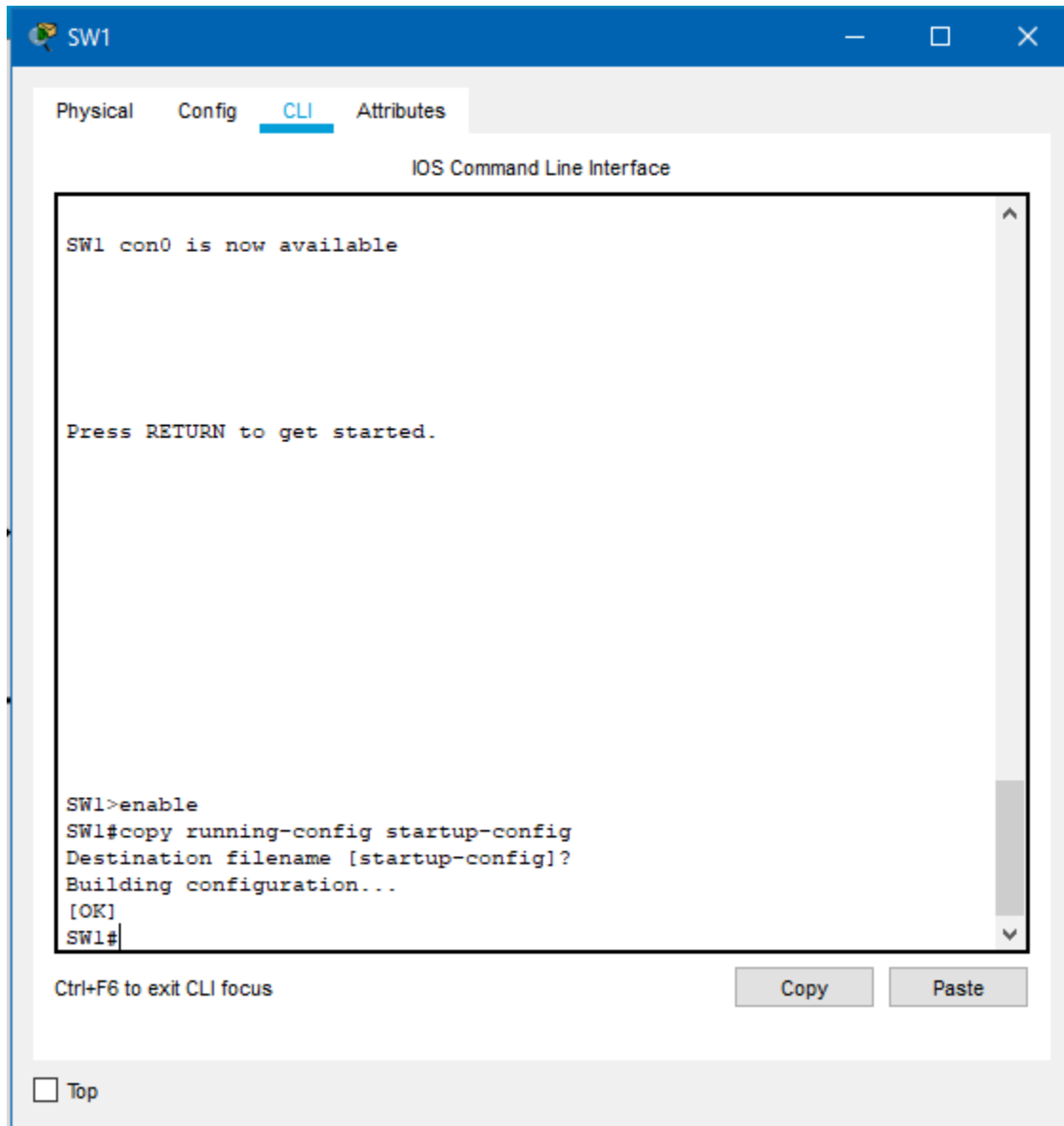
Ping statistics for 172.21.1.3:
    Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),
    Approximate round trip times in milli-seconds:
        Minimum = 0ms, Maximum = 0ms, Average = 0ms

C:\>
```

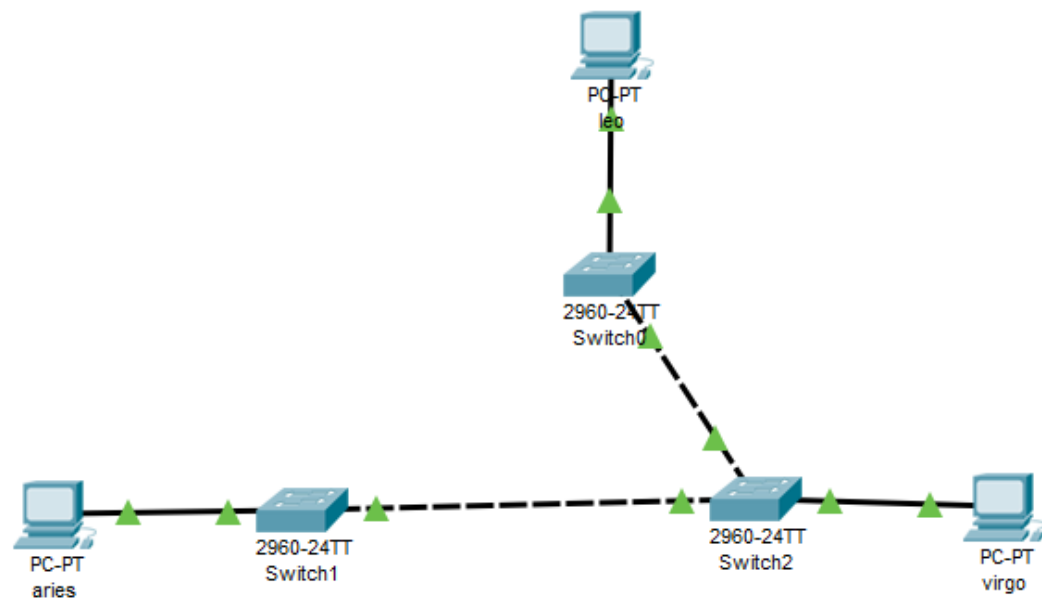
Tugas 5A : Tulis langkah untuk melakukan perintah ping

Klik 2 kali pada PC leo kemudian muncul menu pilih desktop lalu pilih command promd kemudian ketikkan ping pada PC leo, dari PC leo lakukan ping ke PC virgo dengan Ip konfigurasi 127.21.1.3

Tugas 6A : tulis langkah untuk menyimpan konfigurasi



Kegiatan 2



SW1

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    0001.63BE.C0E7
            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    0050.0F46.8600
            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
Switch#

```

Ctrl+F6 to exit CLI focus
Copy
Paste

☐ Top

SW2

Physical
Config
CLI
Attributes

IOS Command Line Interface

```

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

Switch>enable
Switch#show spanning-tree
VLAN0001
  Spanning tree enabled protocol ieee
  Root ID    Priority    32769
            Address    0001.63BE.C0E7
            This bridge is the root
            Hello Time 2 sec  Max Age 20 sec  Forward Delay 15 sec

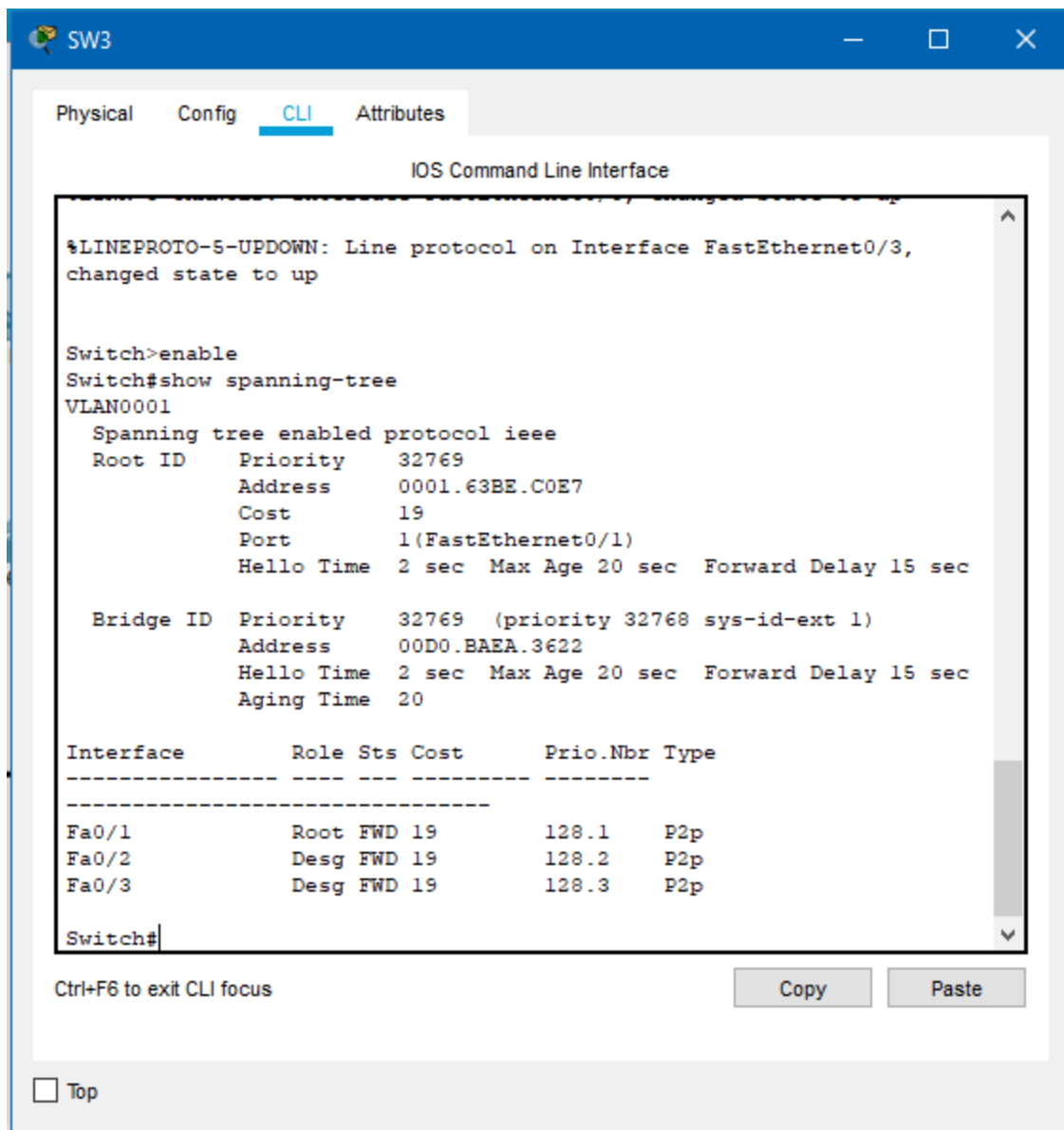
  Bridge ID  Priority    32769 (priority 32768 sys-id-ext 1)
            Address    0001.63BE.C0E7
            Hello Time 2 sec  Max Age 20 sec  Forward Delay 15 sec
            Aging Time 20

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

```

Ctrl+F6 to exit CLI focus
Copy
Paste

☐ Top



SW1

No	Variabel	Nilai
1.	Root ID	
2.	Priority	32769
3.	MAC Address	0050.0F46.8600
4.	Bridge ID	
5.	Cost (0/1;0/2)	19;19
6.	Hello Time	2 second
7.	MaxAge	20 second
8.	Forward Delay	15 second

Sw2

No	Variabel	Nilai
1.	Root ID	
2.	Priority	32769
3.	MAC Address	0001.63BE.C0E7
4.	Bridge ID	
5.	Cost (0/1;0/2)	19;19
6.	Hello Time	2 second
7.	MaxAge	20 second
8.	Forward Delay	15 second

Sw3

No	Variabel	Nilai
1.	Root ID	
2.	Priority	32769
3.	MAC Address	00D0.BAEA.3622
4.	Bridge ID	
5.	Cost (0/1;0/2;0/3)	19;19;19
6.	Hello Time	2 second
7.	MaxAge	20 second
8.	Forward Delay	15 second

- root bridge : SW2
- designated bridge : SW1 dan SW3
- root port : SW1 2(fastEthernet0/2), SW3 1(fastEthernet0/1)
- designated port : SW1: fa0/1, SW2 : fa0/1 dan fa0/2, SW3 : fa0/2 dan fa0/3
- forwarding : fa0/1, fa0/2, fa0/3
- blocking : -