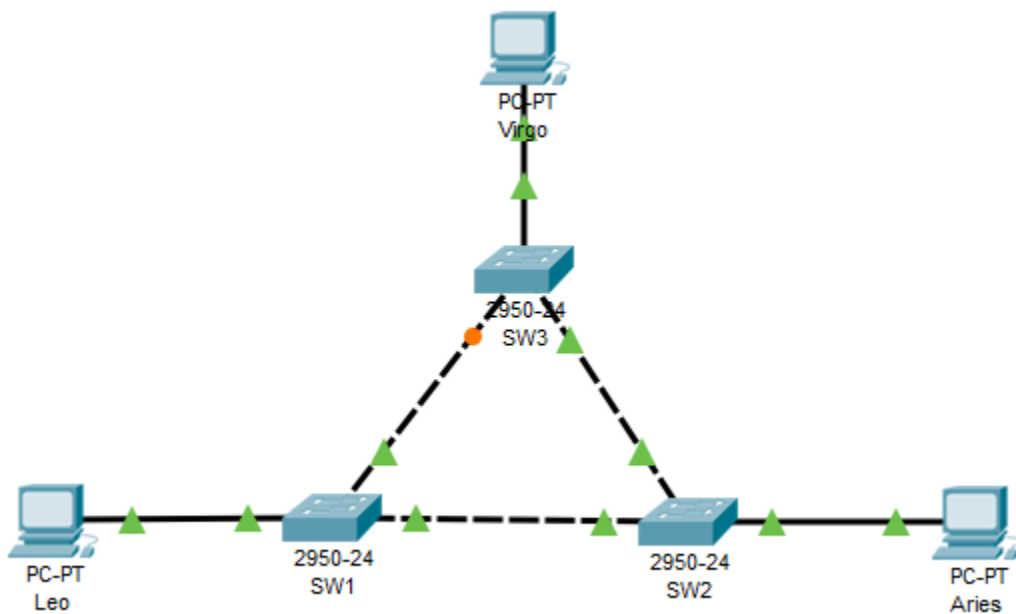


Nama : Maulana Lutfi Sholihin
NIM : L200170048
Kelas : B
Modul : 6

MODUL 6

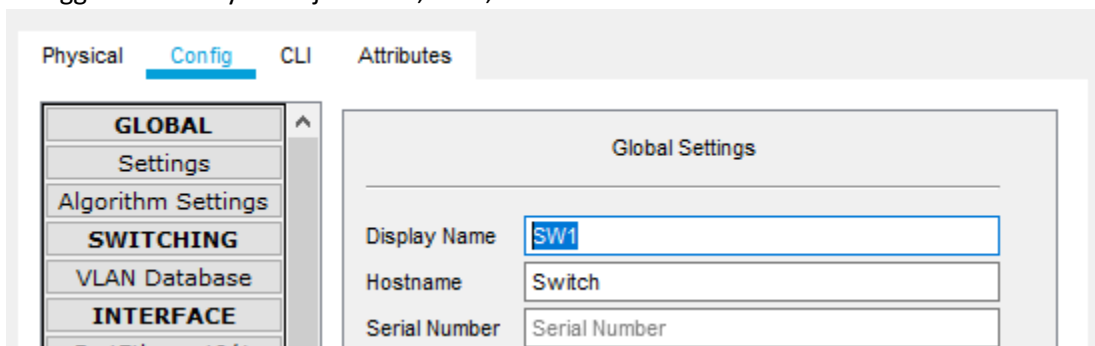
Kegiatan 1. Topologi 1

1. Membuat desain topologi



Menginputkan atau mencari PC dan switch masing-masing sebanyak 3 buah, kemudian hubungkan dengan kabel.

2. Ubah nama Switch menjadi SW1, SW2, dan SW3, seperti contoh pada SW1, kemudian lakukan hal sama pada SW2 dan SW3. Atau juga bias langsung meng-klik tulisan Switch0, Switch1, dan Switch2 kemudian tinggal mengganti Namanya menjadi SW1, SW2, dan SW3



3. Mengkonfigurasi IP address pada masing masing PC

Leo

Physical Config **Desktop** Programming Attributes

☐ DHCP ☒ Static

IP Address

Subnet Mask

Default Gateway

DNS Server

Aries

Physical Config **Desktop** Programming Attributes

☐ DHCP ☒ Static

IP Address

Subnet Mask

Default Gateway

DNS Server

Virgo

Physical Config **Desktop** Programming Attributes

☐ DHCP ☒ Static

IP Address

Subnet Mask

Default Gateway

DNS Server

4. Melihat status STP pada masing-masing Switch

- SW1

SW1

Physical Config **CLI** Attributes

IOS Command Line Interface

```
Switch>
Switch>en
Switch#show spanning-tree
VLAN0001
  Spanning tree enabled protocol ieee
  Root ID    Priority    32769
             Address     0030.A363.84A9
             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     0060.4775.CE60
             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

Switch#
```

Ctrl+F6 to exit CLI focus

Copy Paste

☐ Top

- SW2

SW2
— □ ×

Physical
Config
CLI
Attributes

IOS Command Line Interface

```

changed state to up

Switch>en
Switch#show spanning-tree
VLAN0001
  Spanning tree enabled protocol ieee
  Root ID    Priority    32769
            Address     0030.A363.84A9
            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     0030.A363.84A9
            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

- SW3

SW3
— □ ×

Physical
Config
CLI
Attributes

IOS Command Line Interface

```

Switch>en
Switch#show spanning-tree
VLAN0001
  Spanning tree enabled protocol ieee
  Root ID    Priority    32769
            Address     0030.A363.84A9
            Cost         19
            Port         3(FastEthernet0/3)
            Hello Time 2 sec Max Age 20 sec Forward Delay 15 sec

  Bridge ID  Priority    32769 (priority 32768 sys-id-ext 1)
            Address     00D0.97EA.97A1
            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
Fa0/3        Root FWD 19      128.3    P2p
Fa0/2        Altn BLK 19      128.2    P2p
Switch#

```

Ctrl+F6 to exit CLI focus

Copy

Paste

☐ Top

- Mengisi table pada masing masing switch

- SW1

No.	Variabel	Nilai	interface	Role	Status
1.	Root ID	32769 : 0030.A363.84A9	Fa 0/1	Desg	FWD
2.	Priority	32769	Fa 0/2	Root	FWD
3.	MAC Address	0060.4775.CE60	Fa 0/3	Desg	FWD
4.	Bridge ID	32769 : 0060.4775.CE60			
5.	Cost (0/1;0/2;0/3)	0/1 -> 19 0/2 -> 19 0/3 -> 19			
6.	Hello Time	2 sec			
7.	Max Age	20 sec			
8.	Forword Delay	15 sec			

- SW2

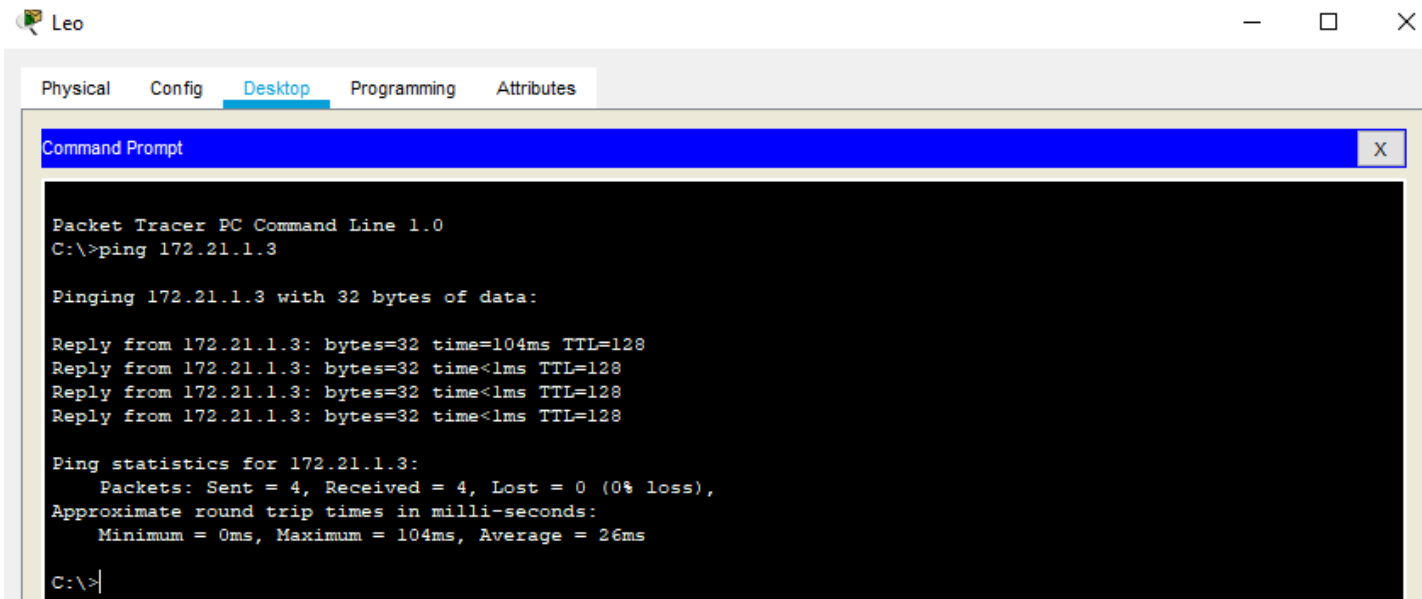
No.	Variabel	Nilai	Interface	Role	Status
1.	Root ID	32769 : 0030.A363.84A9	Fa 0/1	Desg	FWD
2.	Priority	32769	Fa 0/2	Desg	FWD
3.	MAC Address	0030.A363.84A9	Fa 0/3	Desg	FWD
4.	Bridge ID	32769 : 0030.A363.84A9			
5.	Cost (0/1;0/2;0/3)	0/1 -> 19 0/2 -> 19 0/3 -> 19			
6.	Hello Time	2 sec			
7.	Max Age	20 sec			
8.	Forword Delay	15 sec			

- SW3

No.	Variabel	Nilai	Interface	Role	Status
1.	Root ID	32769 : 0030.A363.84A9	Fa 0/1	Desg	FWD
2.	Priority	32769	Fa 0/3	Root	FWD
3.	MAC Address	00D0.97EA.97A1	Fa 0/2	Altn	Blk
4.	Bridge ID	32769 : 00D0.97EA.97A1			
5.	Cost (0/1;0/2;0/3)	0/1 -> 19 0/2 -> 19 0/3 -> 19			
6.	Hello Time	2 sec			
7.	Max Age	20 sec			
8.	Forword Delay	15 sec			

- Root bridge : SW2
- Designated bride : SW1
- Root port : SW1(Fa 0/2) dan SW3(Fa 0/3)
- Designated port : SW1(Fa 0/1;0/3) , SW2(Fa 0/1;0/2;0/3), dan SW3(Fa 0/1)
- Port yang berada pada keadan forwarding :
SW1(Fa 0/1;0/2;0/3) , SW2(Fa 0/1;0/2;0/3), dan SW3(Fa 0/1;0/3)
- Port yang berada pada keadan blocking :
SW3 (Fa 0/2)

5. Ping dari PC Leo 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:

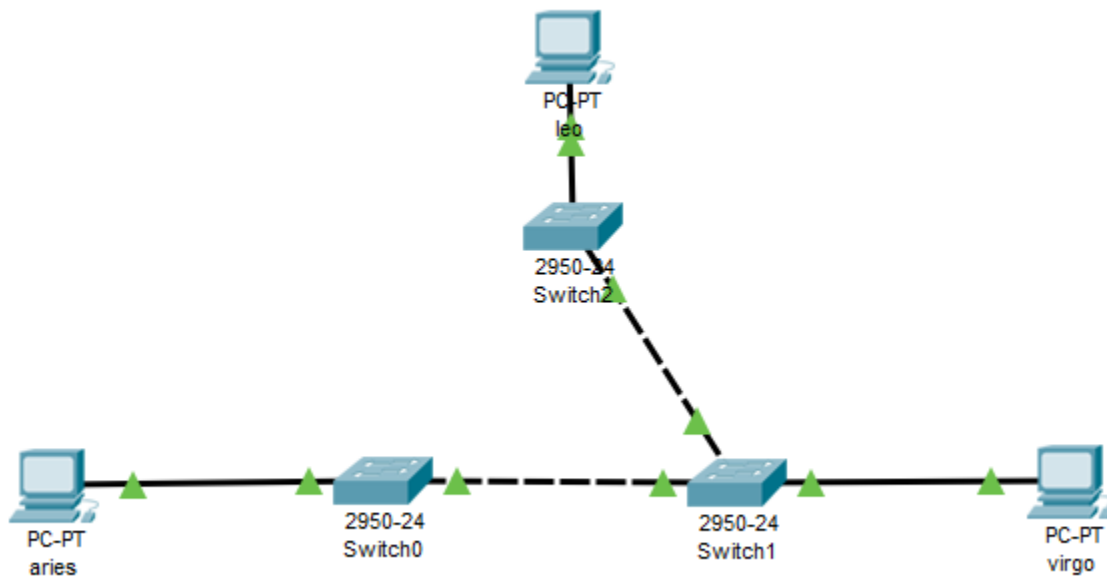
Reply from 172.21.1.3: bytes=32 time=104ms TTL=128
Reply from 172.21.1.3: bytes=32 time<1ms TTL=128
Reply from 172.21.1.3: bytes=32 time<1ms TTL=128
Reply from 172.21.1.3: bytes=32 time<1ms TTL=128

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 = 104ms, Average = 26ms

C:\>
```

Kegiatan2. Topologi 2

1. Membuat desain topologi



2. Mengkonfigurasi IP address pada masing masing PC seperti pada kegiatan sebelumnya, seperti kegiatan sebelumnya, nama PC diganti menjadi aries, virgo, dan leo.

Leo

Physical	Config	Desktop	Programming	Attributes
<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		

Aries

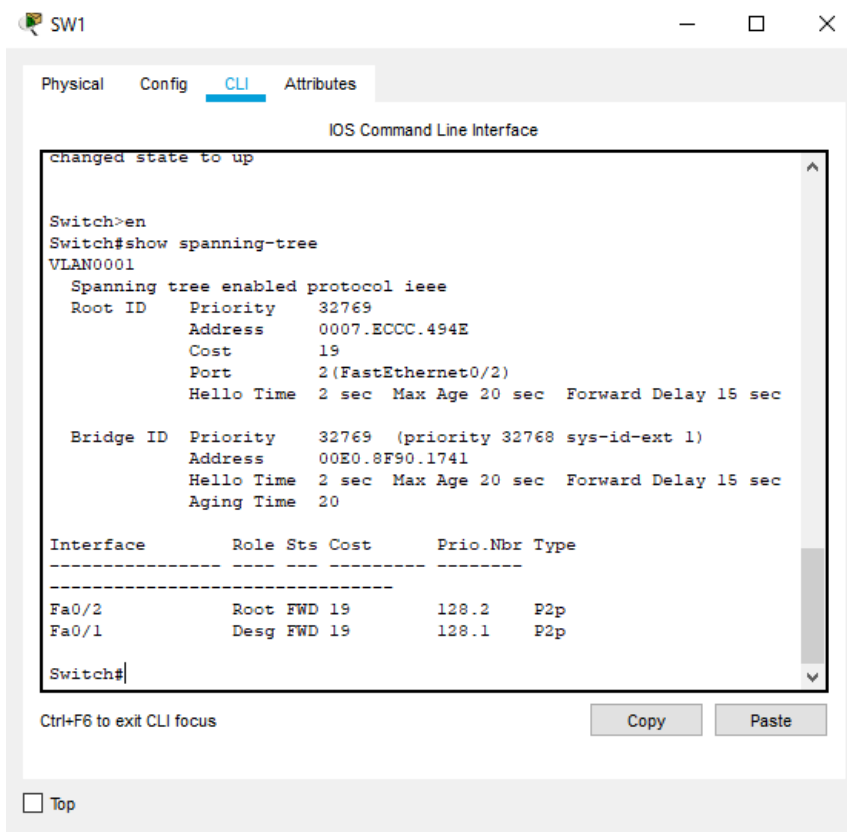
Physical	Config	Desktop	Programming	Attributes
<input type="radio"/> DHCP <input checked="" type="radio"/> Static				
IP Address		172.21.1.2		
Subnet Mask		255.255.0.0		
Default Gateway		0.0.0.0		
DNS Server		0.0.0.0		

Virgo

Physical	Config	Desktop	Programming	Attributes
<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		

3. Melihat status STP pada masing-masing Switch, sebelumnya switch0, switch1, dan switch2 masing-masing diubah Namanya menjadi SW1, SW2, dan SW3.

- SW1



The screenshot shows the CLI of switch SW1. The command `show spanning-tree` has been executed, displaying STP details for VLAN0001. The output indicates that the spanning tree is enabled with the IEEE protocol. The root bridge is identified as the local switch (Bridge ID 32769). The interface Fa0/2 is the root port, and Fa0/1 is the designated port.

```
changed state to up

Switch>en
Switch#show spanning-tree
VLAN0001
  Spanning tree enabled protocol ieee
    Root ID    Priority    32769
              Address     0007.ECCC.494E
              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     00E0.8F90.1741
              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
Fa0/1          Desg FWD 19        128.1    P2p

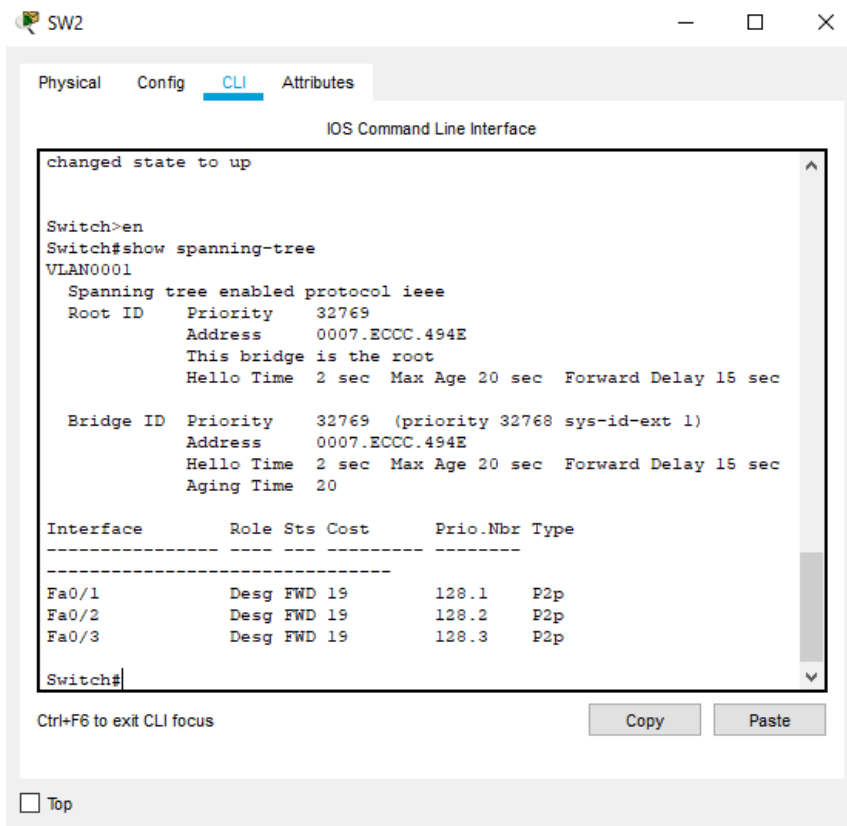
Switch#
```

Ctrl+F6 to exit CLI focus

Copy Paste

Top

- SW2



The screenshot shows the CLI of switch SW2. The command `show spanning-tree` has been executed, displaying STP details for VLAN0001. The output indicates that the spanning tree is enabled with the IEEE protocol. The root bridge is identified as the local switch (Bridge ID 32769). The interface Fa0/1 is the designated port, and Fa0/2 and Fa0/3 are also designated ports.

```
changed state to up

Switch>en
Switch#show spanning-tree
VLAN0001
  Spanning tree enabled protocol ieee
    Root ID    Priority    32769
              Address     0007.ECCC.494E
              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     0007.ECCC.494E
              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

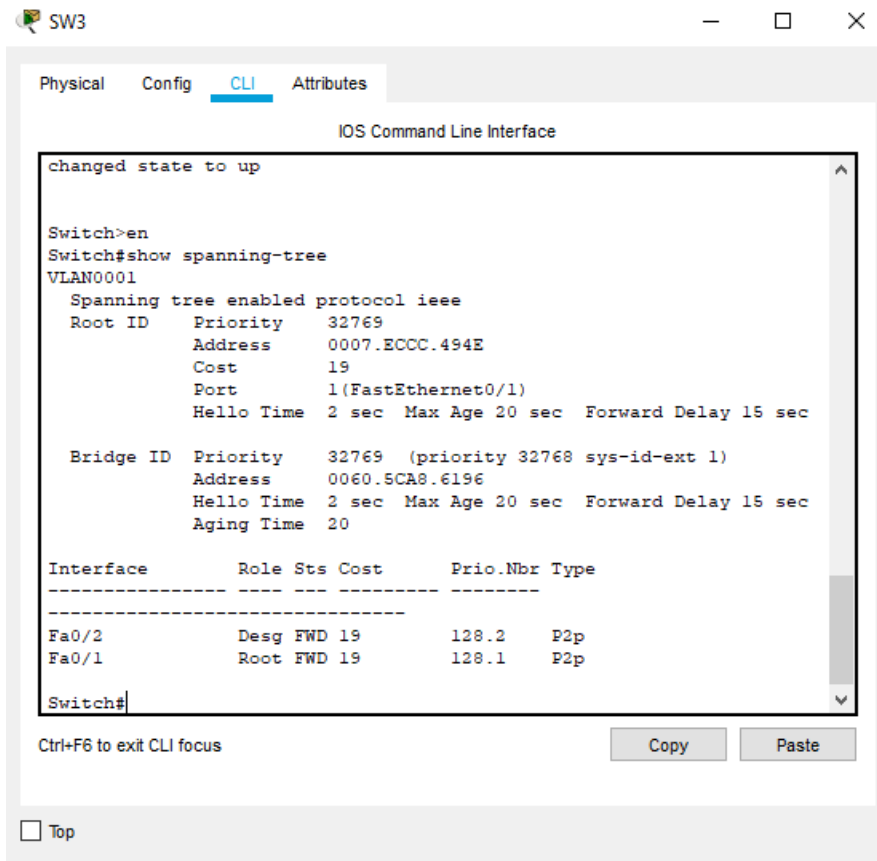
Switch#
```

Ctrl+F6 to exit CLI focus

Copy Paste

Top

- SW3



- Mengisi table pada masing masing switch

• SW1

No.	Variabel	Nilai	Interface	Role	Status
1.	Root ID	32769 : 0007.ECCC.494E	Fa 0/2	Root	FWD
2.	Priority	32769	Fa 0/1	Desg	FWD
3.	MAC Address	00E0.8F90:1741			
4.	Bridge ID	32769 : 00E0.8F90:1741			
5.	Cost (0/1;0/2)	0/1 -> 19 0/2 -> 19			
6.	Hello Time	2 sec			
7.	Max Age	20 sec			
8.	Forward Delay	15 sec			

• SW2

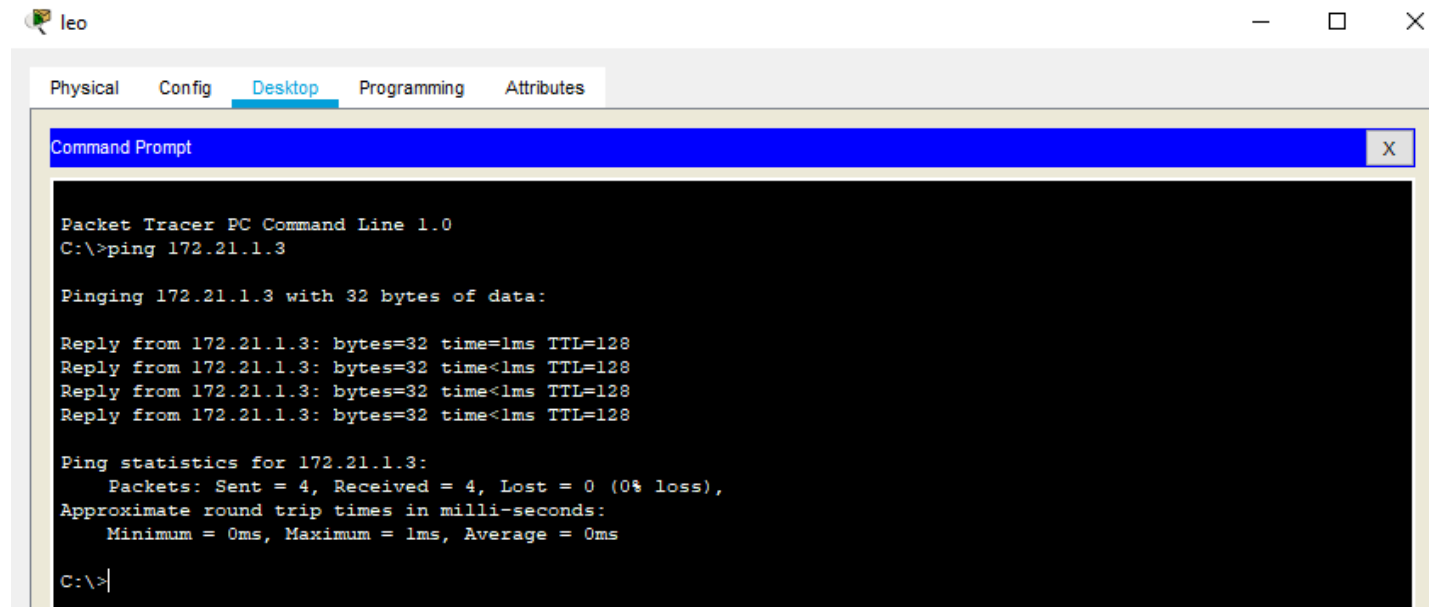
No.	Variabel	Nilai	Interface	Role	Status
1.	Root ID	32769 : 0007.ECCC.494E	Fa 0/1	Desg	FWD
2.	Priority	32769	Fa 0/2	Desg	FWD
3.	MAC Address	0007.ECCC.494E	Fa 0/3	Desg	FWD
4.	Bridge ID	32769 : 0007.ECCC.494E			
5.	Cost (0/1;0/2;0/3)	0/1 -> 19 0/2 -> 19 0/3 -> 19			
6.	Hello Time	2 sec			
7.	Max Age	20 sec			
8.	Forward Delay	15 sec			

- SW3

No.	Variabel	Nilai	Interface	Role	Status
1.	Root ID	32769 : 0007.ECCC.494E	Fa 0/2	Root	FWD
2.	Priority	32769	Fa 0/1	Desg	FWD
3.	MAC Address	0060.5CA8.6196			
4.	Bridge ID	32769 : 0060.5CA8.6196			
5.	Cost (0/1;0/2)	0/1 -> 19 0/2 -> 19			
6.	Hello Time	2 sec			
7.	Max Age	20 sec			
8.	Forward Delay	15 sec			

- Root bridge : SW2
- Designated bride : SW1 dan SW3
- Root port : SW1(Fa0/2) dan SW3(Fa 0/2)
- Designated port : SW1(Fa 0/1), SW2(Fa 0/1;0/2;0/3), dan SW3 (Fa 0/1)
- Port yang berada pada keadan forwarding : pada semua switch dalam keadaan forward
- Port yang berada pada keadan blocking : tidak ada port yang dalam keadaan blocking

4. Ping dari 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=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 = 1ms, Average = 0ms

C:\>
  
```