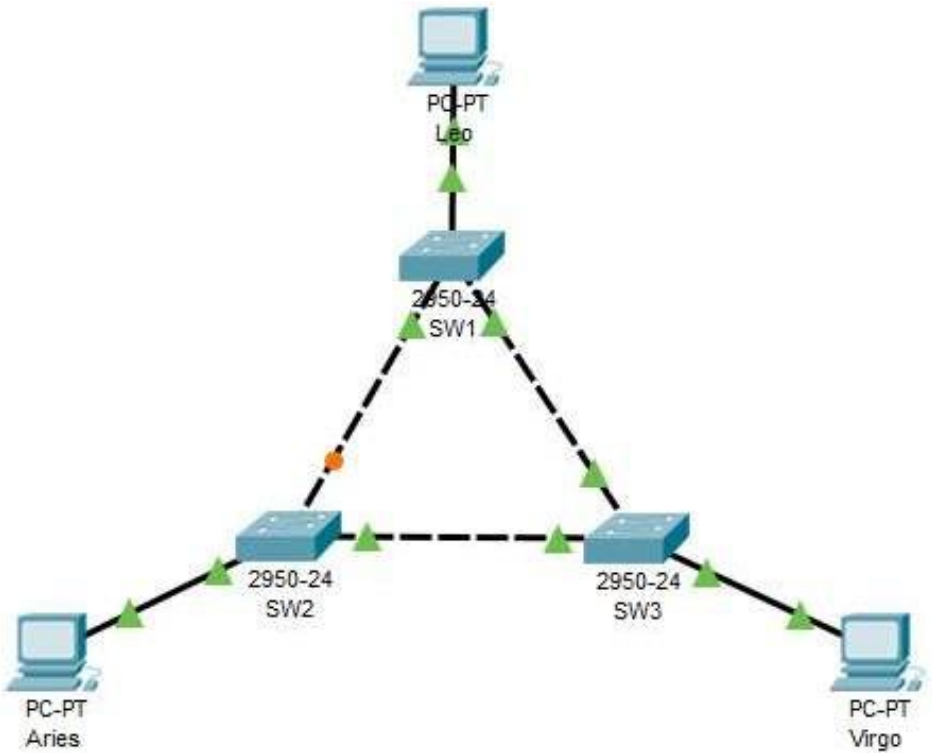
LAPORAN PRAKTIKUM JARINGAN KOMPUTER
MODUL 6 : Spanning Tree Protocol

Oleh : Adnan Shafry Ari Purnama Aji / L200170021
KELAS A

Kegiatan 1. Topologi 1

1. Menggunakan PACKET TRACER buat topologi berikut ini dengan menggunakan switch Catalyst 2950



- Tugas 1A : Tulis langkah pembuatan topologi
  1. Pilih Switch 2950 sebanyak 3 buah.
  2. Pilih PC sebanyak 3 buah.
  3. Gunakan kabel yang auto untuk mempermudah.
  4. Rangkai Rangkaian seperti gambar diatas.

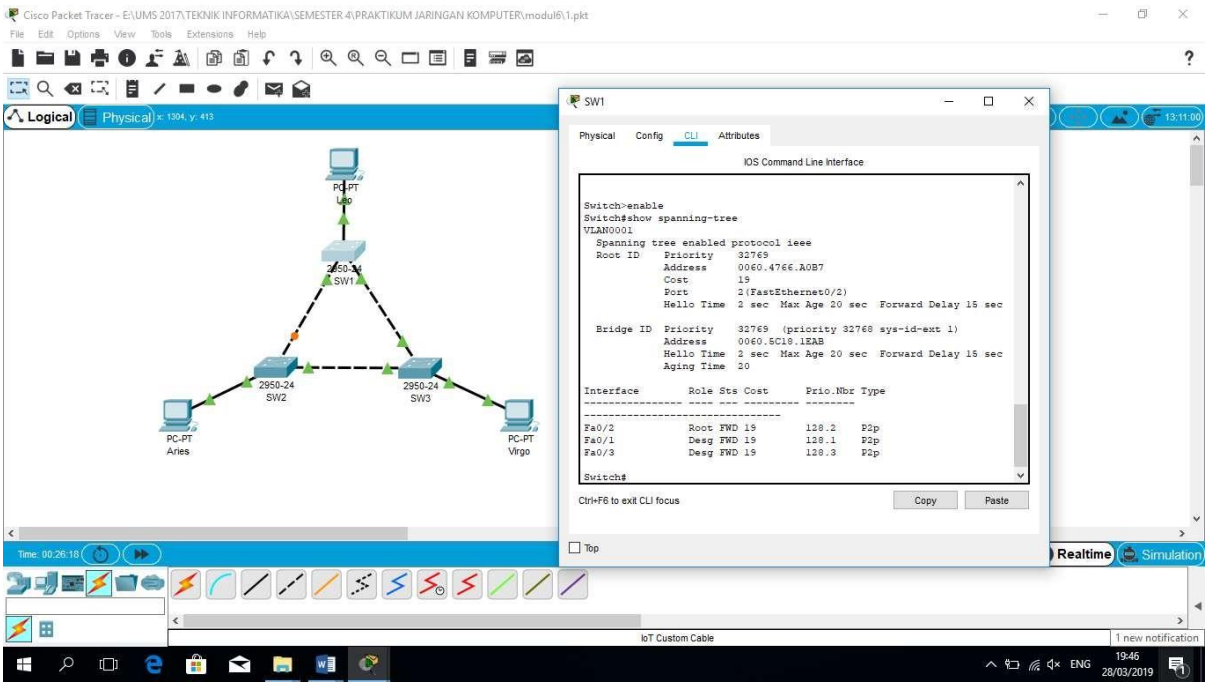
2. Beri nama masing-masing switch dengan SW1, SW2 dan SW3
   - Tugas 2A : Tulis langkah pemberian nama switch mulai dari mode user
     1. Klik Switch yang dipilih
     2. Klik Config
     3. Pada pilihan display name ganti dengan nama switch yang diinginkan

3. Konfigurasi masing-masing PC dengan alamat IP
   - ✓ Leo = 172.21.1.1/24
   - ✓ Aries = 172.21.1.2/24
   - ✓ Virgo = 172.21.1.3/24

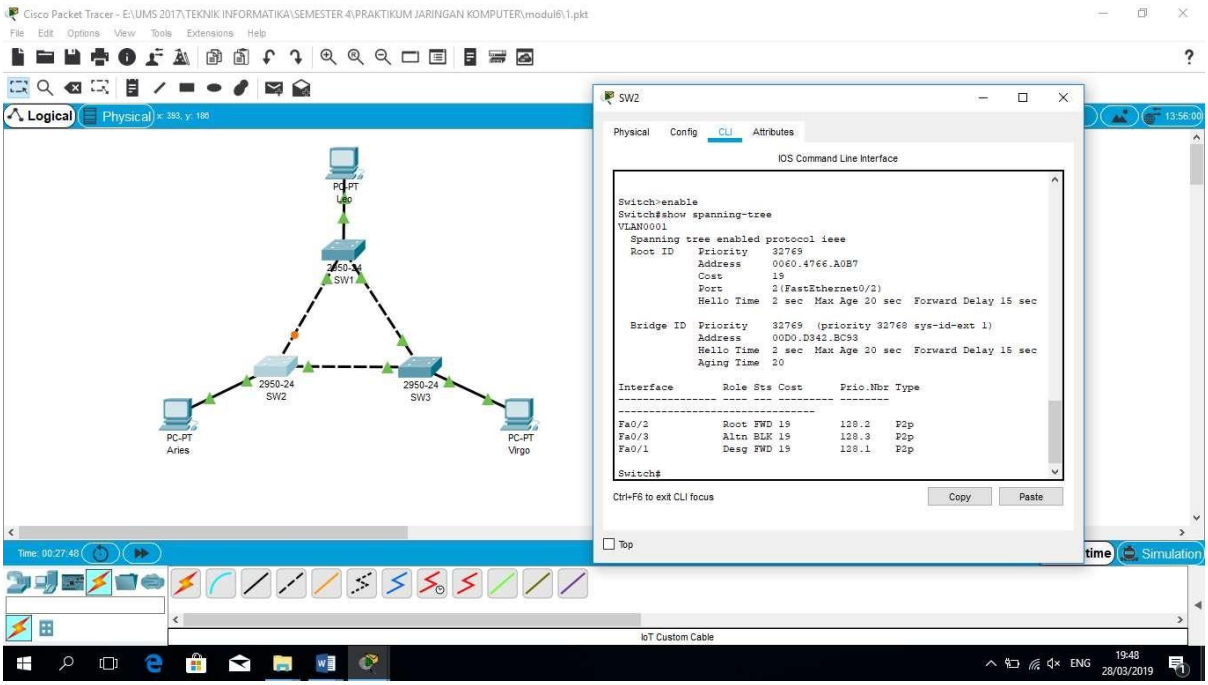
4. Pada mode user atau mode privileged, lihat status STP pada masing-masing switch. Langkah Pengoperasian
   Tekan enter
   Masuk mode privileged (optional)
   Ketik show spanning-tree

   - **<u>Tugas 4A : Pada kondisi default, capture masing-masing tampilan status STP switch (SW1, SW2 dan SW3)</u>**

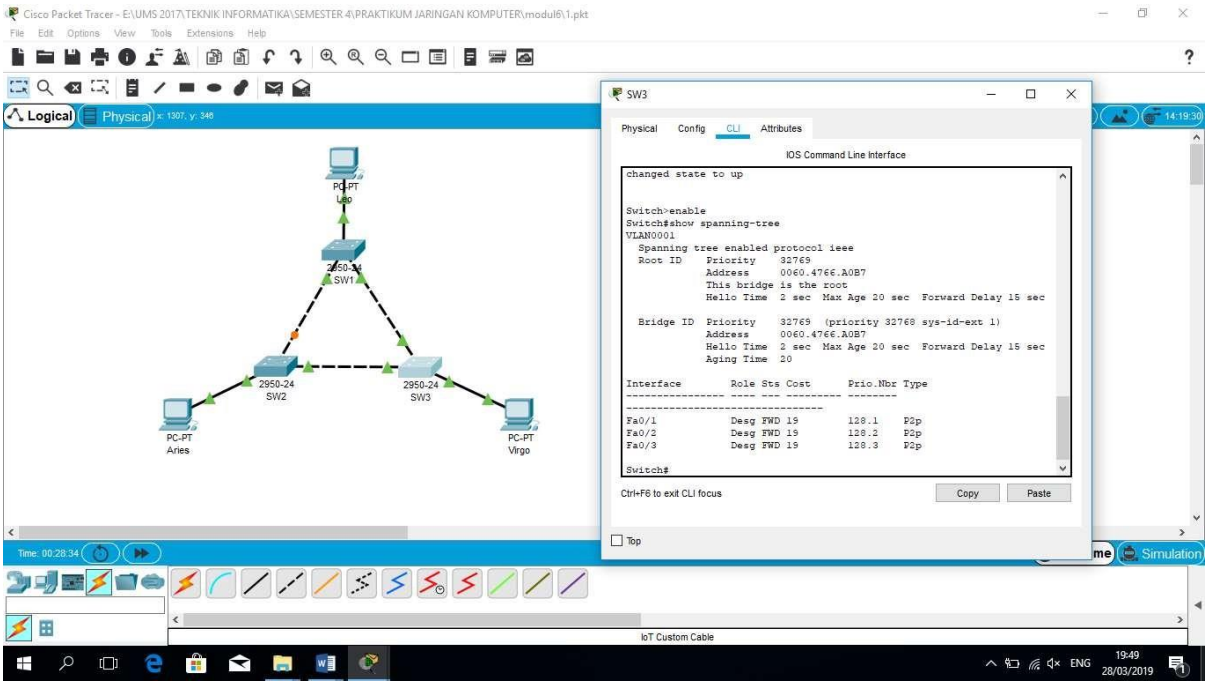
SW1


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 0060.4766.A0B7
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 0060.5C19.1EAB
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
Fa0/3 Desg FWD 19 128.3 P2p
Switch#
Ctrl+F6 to exit CLI focus
Copy
Paste
Top
PC-PT Leo
2950-24 SW1
2950-24 SW2
2950-24 SW3
PC-PT Aries
PC-PT Virgo
IoT Custom Cable

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 0060.4766.A0B7
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 00D0.D342.BC93
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 Altn BLK 19 128.3 P2p
Fa0/1 Desg FWD 19 128.1 P2p
Switch#
Ctrl+F6 to exit CLI focus
Copy
Paste
Top
PC-PT Leo
2950-24 SW1
2950-24 SW2
2950-24 SW3
PC-PT Aries
PC-PT Virgo
IoT Custom Cable

SW3



- **<u>Tugas 4B : Untuk tiap-tiap switch, isikan table berikut</u>:**

SW1

No	Variabel	Nilai
1	Root ID	**32769, 0060.4766.A0B7**
2	Priority	**32769**
3	MAC Address	**0060.4766.A0B7**
4	Bridge ID	**32769, 0060.4766.A0B7**
5	Cost(0/1;0/2;0/3)	**0/1;Desg,FWD,19 0/2;Root,FWD,19 0/3;Desg,FWD,19**
6	Hello Time	**2 sec**
7	Max Age	**20 sec**
8	**Forward Delay**	**15 sec**

SW2

No	Variabel	Nilai
1	Root ID	**32769, 0060.4766.A0B7**
2	Priority	**32769**
3	MAC Address	**0060.4766.A0B7**
4	Bridge ID	**32769, 0060.4766.A0B7**
5	Cost(0/1;0/2;0/3)	**0/1;Desg,FWD,19 0/2;Root,FWD,19 0/3;Altn,BLK,19**
6	Hello Time	**2 sec**
7	Max Age	**20 sec**
8	**Forward Delay**	**15 sec**

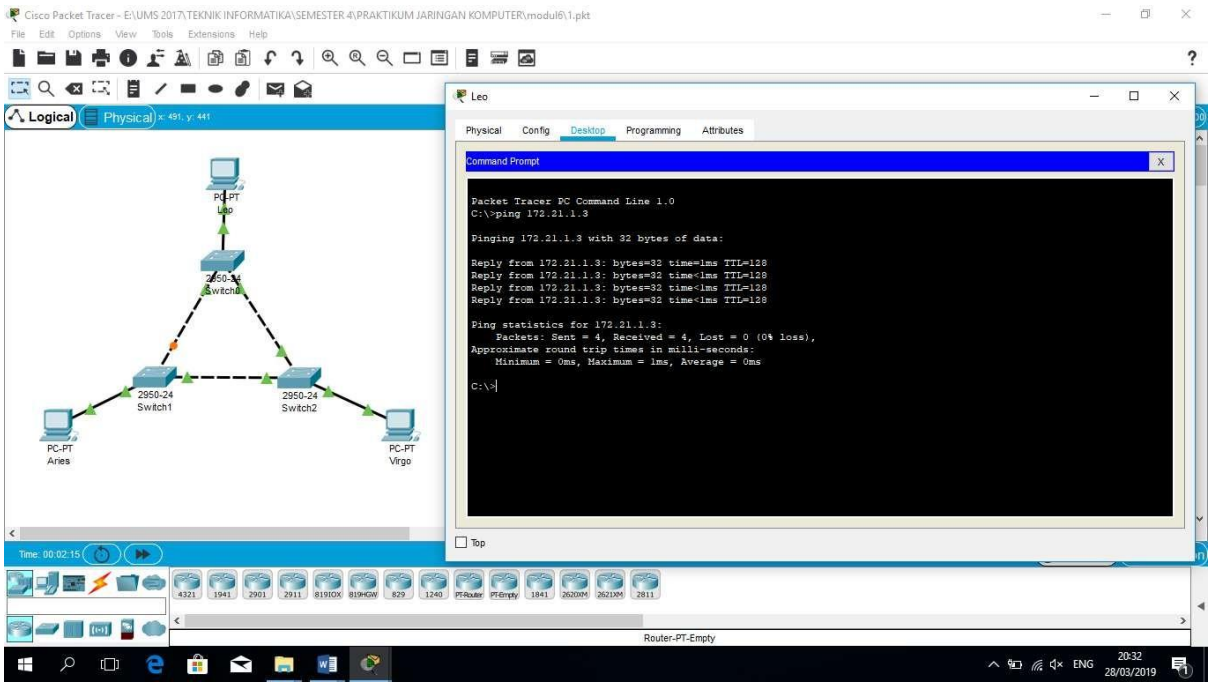
SW3

No	Variabel	Nilai
1	Root ID	**32769, 0060.4766.A0B7**
2	Priority	**32769**
3	MAC Address	**0060.4766.A0B7**
4	Bridge ID	**32769, 0060.4766.A0B7**
5	Cost(0/1;0/2;0/3)	**0/1;Desg,FWD,19 0/2;Desg,FWD,19 0/3;Desg,FWD,19**
6	Hello Time	**2 sec**
7	Max Age	**20 sec**
8	**Forward Delay**	**15 sec**

- **<u>Tugas 4C : Pada Kondisi default, switch dan port mana saja yang:</u>**
  - ✓ Menjadi root bridge : SW3
  - ✓ Menjadi designated bridge : SW3
  - ✓ Menjadi root port : SW1(Fa0/2) dan SW2(Fa0/2)
  - ✓ Menjadi designated port : SW1(Fa0/1, Fa0/3), SW2(Fa0/1) dan SW3(Fa0/1, Fa0/2, Fa0/3)

- T**<u>ugas 4D : Pada Kondisi default, switch dan port mana saja yang:</u>**
  - ✓ Berada pada keadaan forwarding : SW1(Fa0/1, Fa0/2, Fa0/3), SW2(Fa0/1, Fa0/2) dan SW3(Fa0/1, Fa0/2, Fa0/3)
  - ✓ Berada pada keadaan blocking : SW2(Fa0/3)

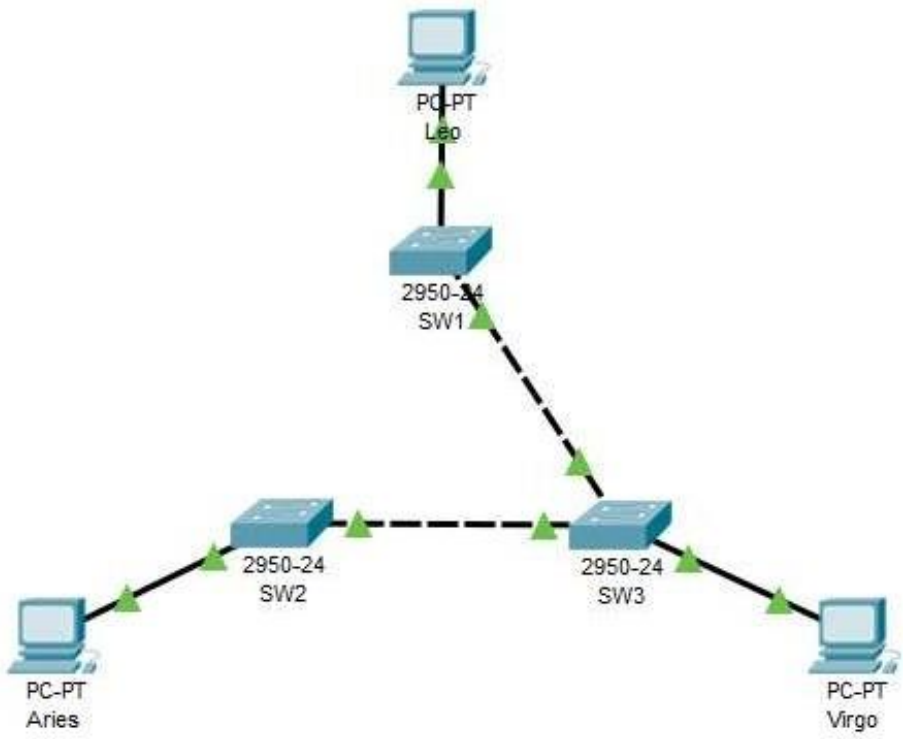
5. Dari PC Leo lakukan ping ke PC Virgo



- **<u>Tugas 5A : Tulis langkah untuk menyimpan perintah ping</u>**
  - ✓ Klik pada PC Leo
  - ✓ Klik Desktop
  - ✓ Klik Command Prompt
  - ✓ Klik Ping IP PC Virgo

Kegiatan 2. Topologi 2

1. Menggunakan PACKET TRACER buat topologi berikut ini dengan menggunakan switch Catalyst 2950



- Tugas 1A : Tulis langkah pembuatan topologi
  1. Pilih Switch 2950 sebanyak 3 buah.
  2. Pilih PC sebanyak 3 buah.
  3. Gunakan kabel yang auto untuk mempermudah.
  4. Rangkai Rangkaian seperti gambar diatas.

2. Beri nama masing-masing switch dengan SW1, SW2 dan SW3

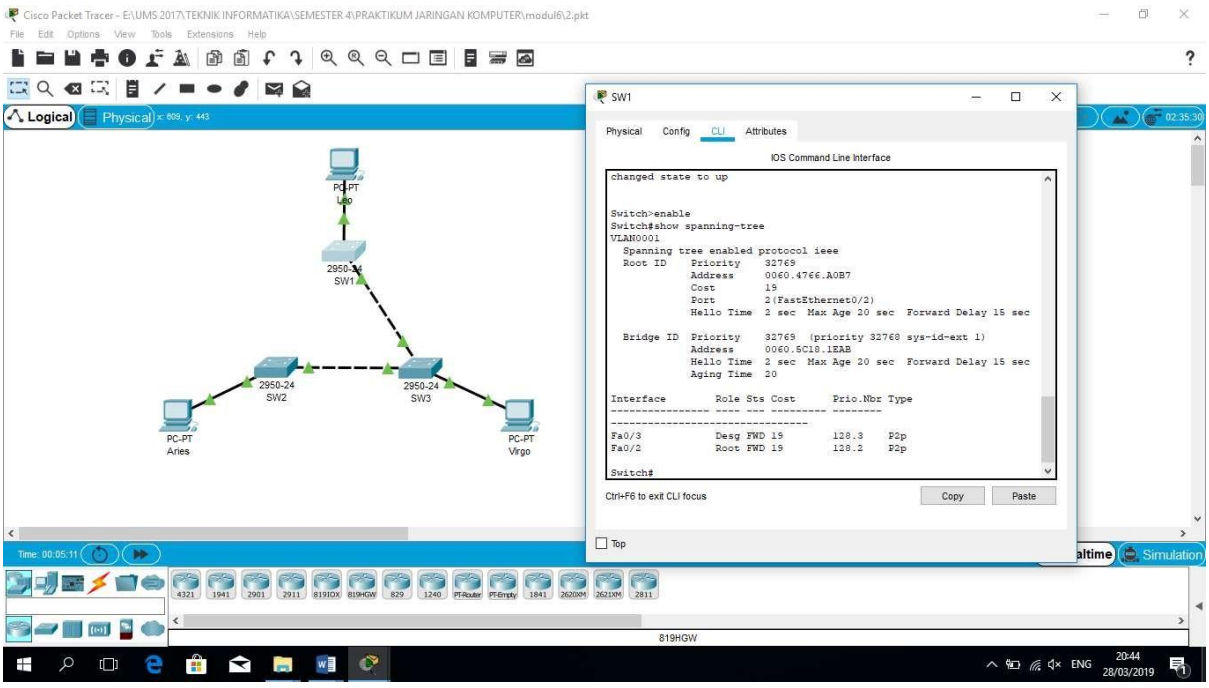
- Tugas 2A : Tulis langkah pemberian nama switch mulai dari mode user
  1. Klik Switch yang dipilih
  2. Klik Config
  3. Pada pilihan display name ganti dengan nama switch yang diinginkan

3. Konfigurasi masing-masing PC dengan alamat IP
   - ✓ Leo = 172.21.1.1/24
   - ✓ Aries = 172.21.1.2/24
   - ✓ Virgo = 172.21.1.3/24

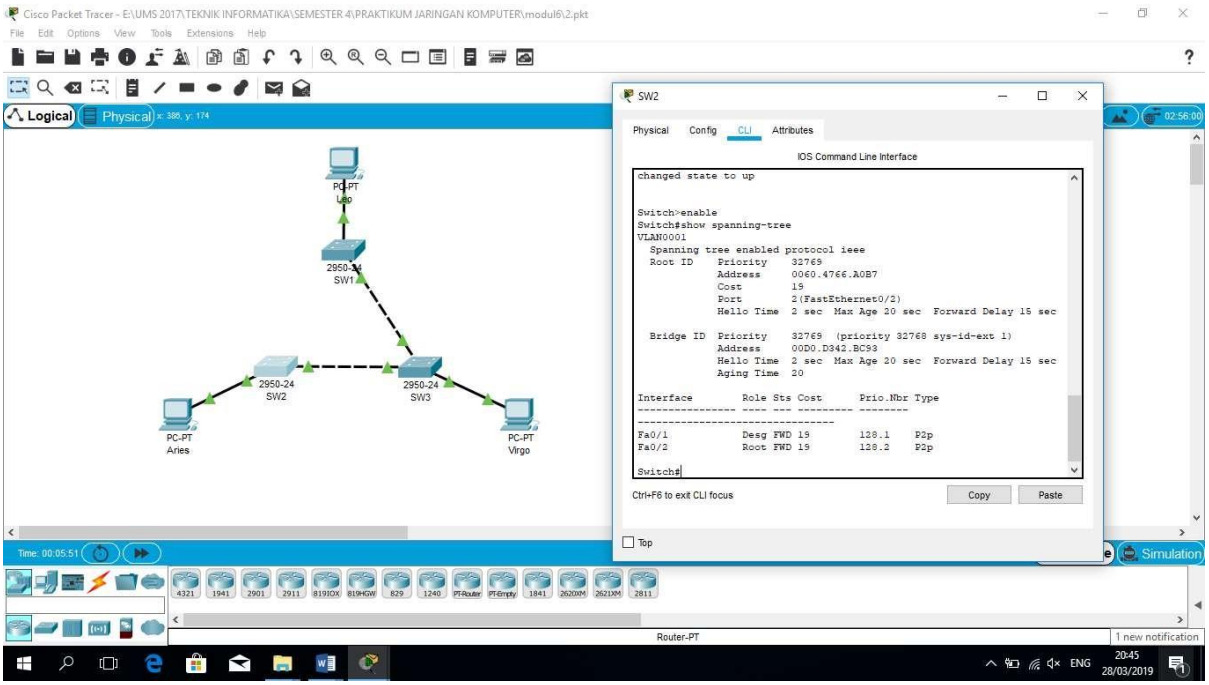
4. Pada mode user atau mode privileged, lihat status STP pada masing-masing switch. Langkah Pengoperasian
   Tekan enter
   Masuk mode privileged (optional)
   Ketik show spanning-tree

- Tugas 4A : Pada kondisi default, capture masing-masing tampilan status STP switch (SW1, SW2 dan SW3)

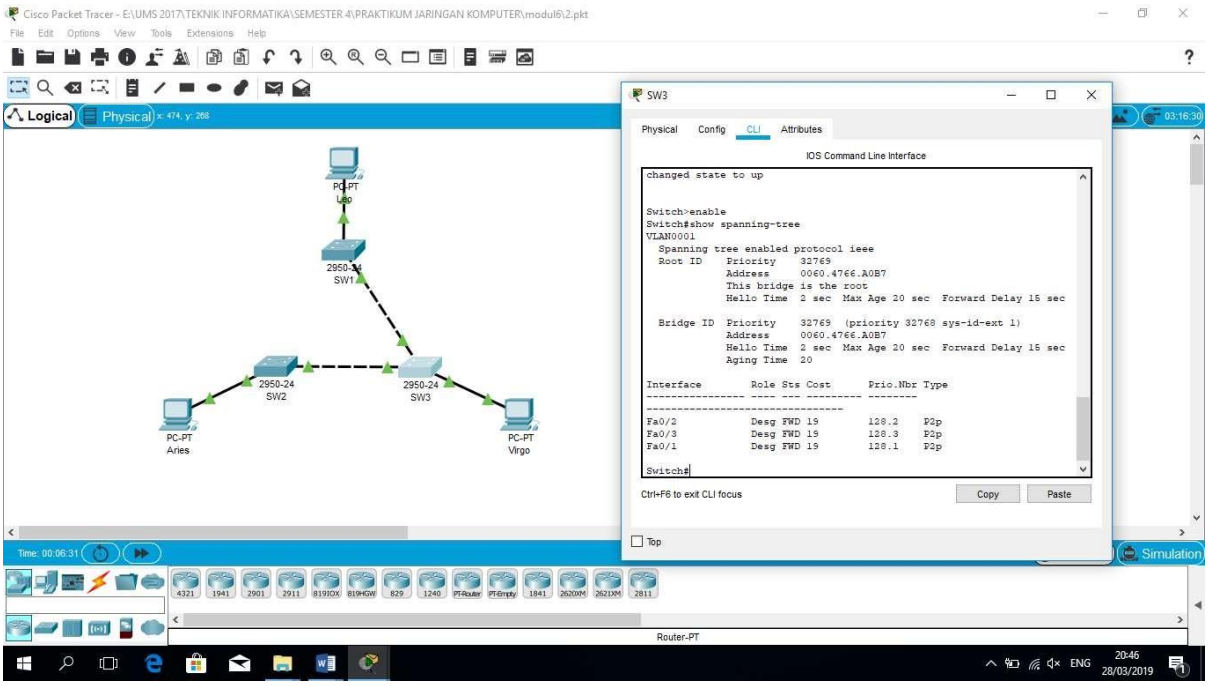
SW1



SW2


Cisco Packet Tracer - E:\UMS 2017\TEKNIK INFORMATIKA\SEMESTER 4\PRAKTIKUM JARINGAN KOMPUTER\modul6\2.pkt
File Edit Options View Tools Extensions Help
Logical
Physical
PC-PT Leo
2950-24 SW1
2950-24 SW2
2950-24 SW3
PC-PT Aries
PC-PT Virgo
SW2
Physical Config CLI Attributes
IOS Command Line Interface
changed state to up
Switch>enable
Switch#show spanning-tree
VLAN0001
Spanning tree enabled protocol ieee
Root ID Priority 32769
Address 0060.4766.A0B7
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 00D0.D342.BC93
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
Simulation
Router-PT
1 new notification
ENG
20:45
28/03/2019

SW3


Cisco Packet Tracer - E:\UMS 2017\TEKNIK INFORMATIKA\SEMESTER 4\PRAKTIKUM JARINGAN KOMPUTER\modul6\2.pkt
File Edit Options View Tools Extensions Help
Logical
Physical
PC-PT Leo
2950-24 SW1
2950-24 SW2
2950-24 SW3
PC-PT Aries
PC-PT Virgo
SW3
Physical Config CLI Attributes
IOS Command Line Interface
changed state to up
Switch>enable
Switch#show spanning-tree
VLAN0001
Spanning tree enabled protocol ieee
Root ID Priority 32769
Address 0060.4766.A0B7
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 0060.4766.A0B7
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
Fa0/3 Desg FWD 19 128.3 P2p
Fa0/1 Desg FWD 19 128.1 P2p
Switch#
Ctrl+F6 to exit CLI focus
Copy
Paste
Top
Simulation
Router-PT
ENG
20:46
28/03/2019

- **Tugas 4B : Untuk tiap-tiap switch, isikan table berikut:**

SW1

No	Variabel	Nilai
1	Root ID	**32769, 0060.4766.A0B7**
2	Priority	**32769**
3	MAC Address	**0060.4766.A0B7**
4	Bridge ID	**32769, 0060.4766.A0B7**
5	Cost(0/1;0/2;0/3)	**0/2;Root,FWD,19 0/3;Desg,FWD,19**
6	Hello Time	**2 sec**
7	Max Age	**20 sec**
8	**Forward Delay**	**15 sec**

SW2

No	Variabel	Nilai
1	Root ID	**32769, 0060.4766.A0B7**
2	Priority	**32769**
3	MAC Address	**0060.4766.A0B7**
4	Bridge ID	**32769, 0060.4766.A0B7**
5	Cost(0/1;0/2;0/3)	**0/1;Desg,FWD,19 0/2;Root,FWD,19**
6	Hello Time	**2 sec**
7	Max Age	**20 sec**
8	**Forward Delay**	**15 sec**

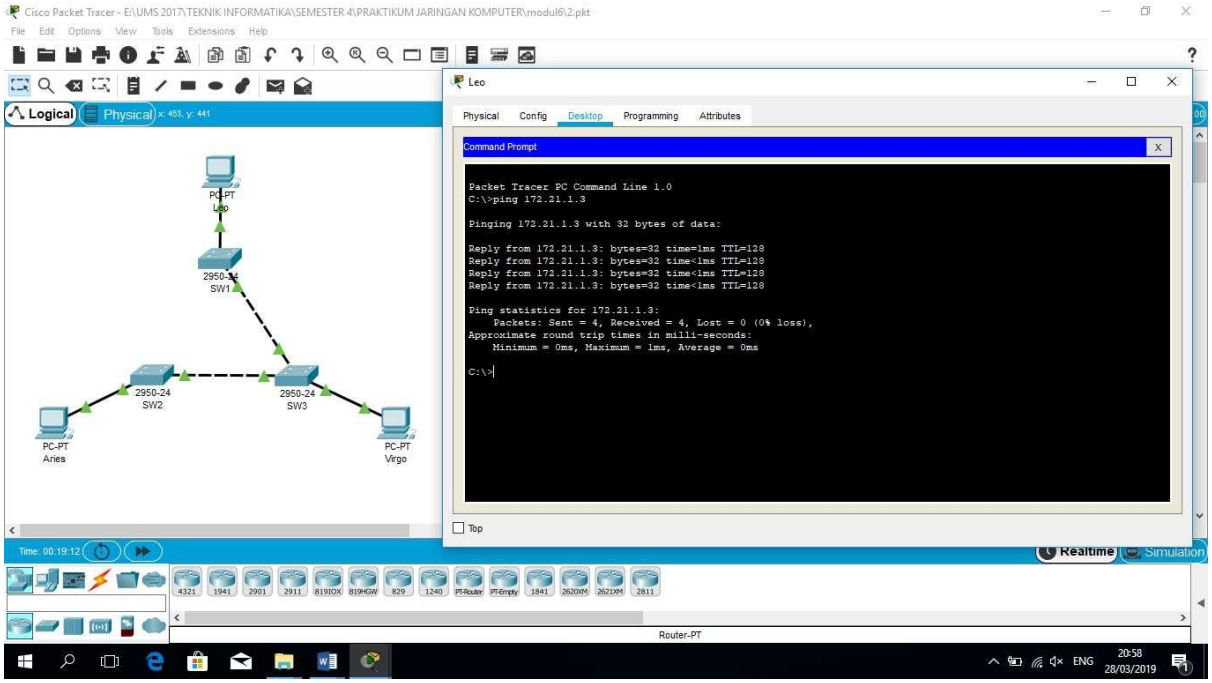
SW3

No	Variabel	Nilai
1	Root ID	**32769, 0060.4766.A0B7**
2	Priority	**32769**
3	MAC Address	**0060.4766.A0B7**
4	Bridge ID	**32769, 0060.4766.A0B7**
5	Cost(0/1;0/2;0/3)	**0/1;Desg,FWD,19 0/2;Desg,FWD,19 0/3;Desg,FWD,19**
6	Hello Time	**2 sec**
7	Max Age	**20 sec**
8	**Forward Delay**	**15 sec**

- Tugas 4C : Pada Kondisi default, switch dan port mana saja yang:
  - ✓ Menjadi root bridge : SW3
  - ✓ Menjadi designated bridge : SW3
  - ✓ Menjadi root port : SW1(Fa0/2) dan SW2(Fa0/2)
  - ✓ Menjadi designated port : SW1(Fa0/3), SW2(Fa0/1) dan SW3(Fa0/1, Fa0/2, Fa0/3)

- Tugas 4D : Pada Kondisi default, switch dan port mana saja yang:
  - ✓ Berada pada keadaan forwarding : SW1(Fa0/2, Fa0/3), SW2(Fa0/1, Fa0/2) dan SW3(Fa0/1, Fa0/2, Fa0/3)
  - ✓ Berada pada keadaan blocking : -

5. Dari PC Leo lakukan ping ke PC Virgo



- Tugas 5A : Tulis langkah untuk menyimpan perintah ping
  - ✓ Klik pada PC Leo
  - ✓ Klik Desktop
  - ✓ Klik Command Prompt