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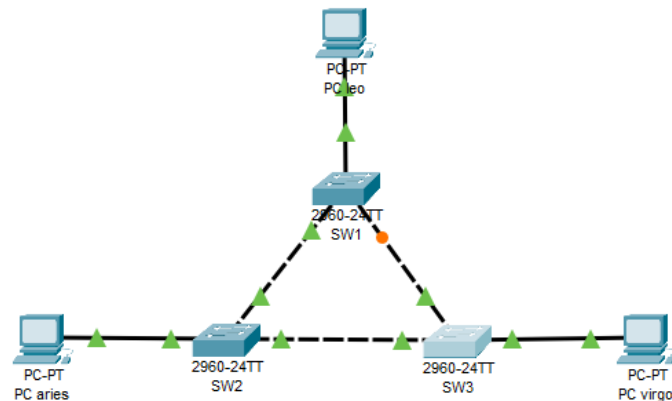
NIM : L200180121

Kelas : C

## Modul 6

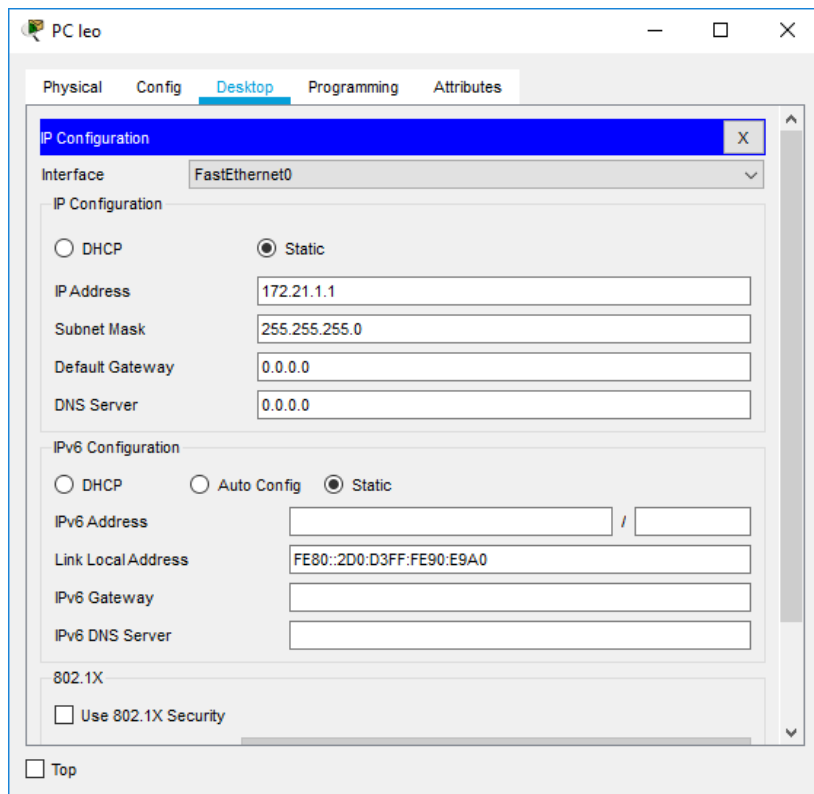
### Kegiatan 1. Topologi 1

Tugas 1A: Membuat topologi

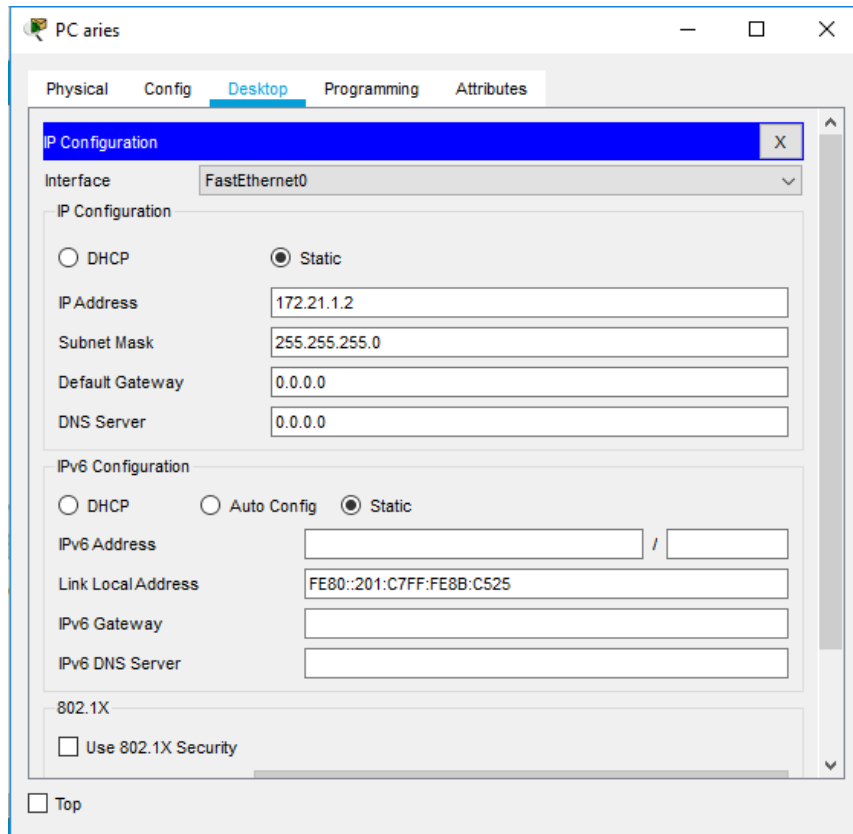


Tugas 2A: Konfigurasi masing-masing PC dengan alamat IP

- Leo = 172.21.1.1



- Aries = 172.21.1.2



The screenshot shows the 'PC aries' configuration window with the 'Desktop' tab selected. The 'IP Configuration' section is expanded, showing the 'FastEthernet0' interface. The 'Static' radio button is selected under 'IP Configuration'. The IP Address is set to 172.21.1.2, Subnet Mask to 255.255.255.0, Default Gateway to 0.0.0.0, and DNS Server to 0.0.0.0. The 'IPv6 Configuration' section shows 'Static' selected, with an empty IPv6 Address field, Link Local Address set to FE80::201:C7FF:FE8B:C525, and empty fields for IPv6 Gateway and IPv6 DNS Server. The '802.1X' section has 'Use 802.1X Security' unchecked. A 'Top' button is at the bottom left.

PC aries

Physical Config **Desktop** Programming Attributes

IP Configuration X

Interface FastEthernet0

IP Configuration

☐ DHCP ☒ Static

IP Address 172.21.1.2

Subnet Mask 255.255.255.0

Default Gateway 0.0.0.0

DNS Server 0.0.0.0

IPv6 Configuration

☐ DHCP ☐ Auto Config ☒ Static

IPv6 Address /

Link Local Address FE80::201:C7FF:FE8B:C525

IPv6 Gateway

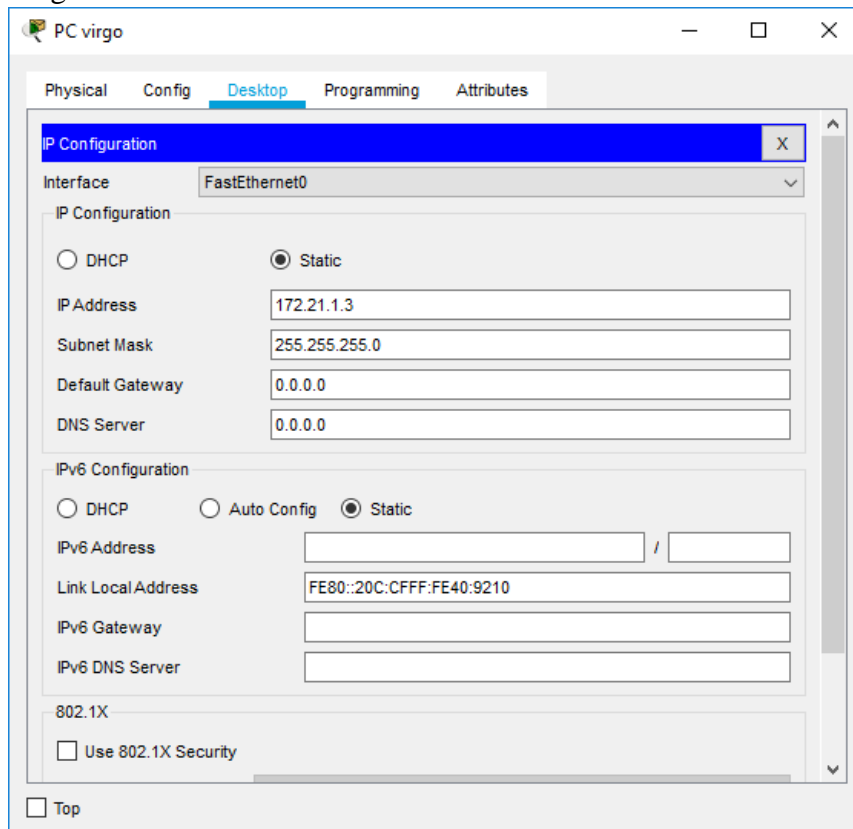
IPv6 DNS Server

802.1X

☐ Use 802.1X Security

☐ Top

- Virgo = 172.21.1.3



The screenshot shows the 'PC virgo' configuration window with the 'Desktop' tab selected. The 'IP Configuration' section is expanded, showing the 'FastEthernet0' interface. The 'Static' radio button is selected under 'IP Configuration'. The IP Address is set to 172.21.1.3, Subnet Mask to 255.255.255.0, Default Gateway to 0.0.0.0, and DNS Server to 0.0.0.0. The 'IPv6 Configuration' section shows 'Static' selected, with an empty IPv6 Address field, Link Local Address set to FE80::20C:CFFF:FE40:9210, and empty fields for IPv6 Gateway and IPv6 DNS Server. The '802.1X' section has 'Use 802.1X Security' unchecked. A 'Top' button is at the bottom left.

PC virgo

Physical Config **Desktop** Programming Attributes

IP Configuration X

Interface FastEthernet0

IP Configuration

☐ DHCP ☒ Static

IP Address 172.21.1.3

Subnet Mask 255.255.255.0

Default Gateway 0.0.0.0

DNS Server 0.0.0.0

IPv6 Configuration

☐ DHCP ☐ Auto Config ☒ Static

IPv6 Address /

Link Local Address FE80::20C:CFFF:FE40:9210

IPv6 Gateway

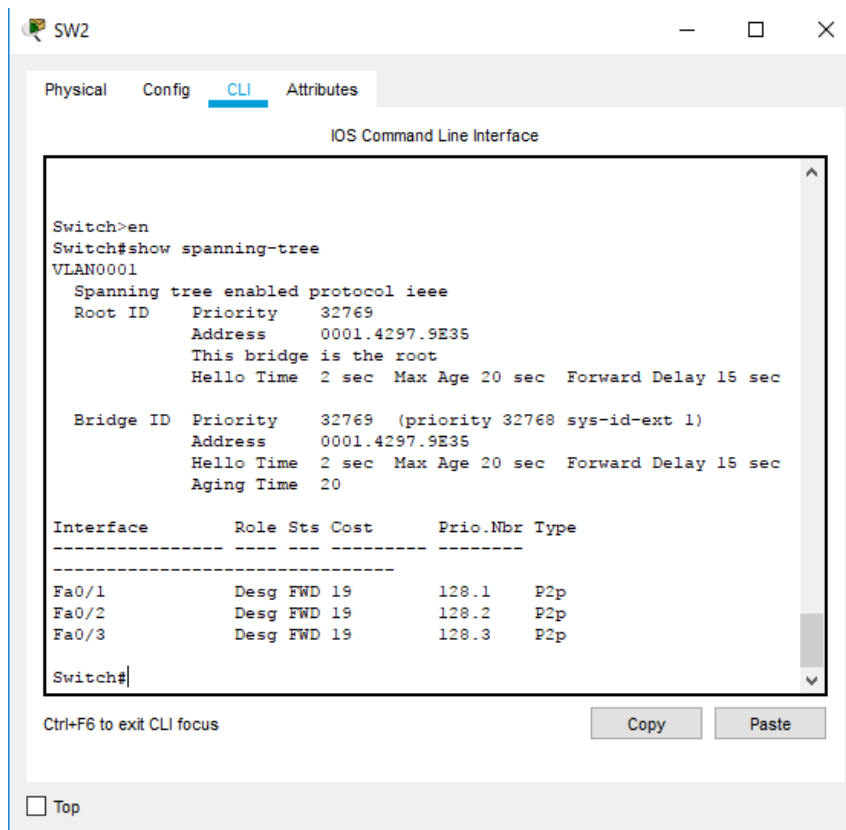
IPv6 DNS Server

802.1X

☐ Use 802.1X Security

☐ Top

- SW1



- SW3

```

Switch>en
Switch#show spanning-tree
VLAN0001
  Spanning tree enabled protocol ieee
    Root ID    Priority    32769
              Address    0001.4297.9E35
              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    0001.9767.C509
              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#
  
```

Tugas 3B: Untuk tiap-tiap switch, isikan tabel berikut:

- SW1

NO	Variable	Nilai
1	Root ID	32769, 0001.4297.9E35
2	Priority	32769
3	MAC Address	0001.4297.9E35
4	Bridge ID	32769, 0001.4297.9E35
5	Cost (0/1;0/2;0/3)	Fa0/2 Altn;BLK;19;128.2;P2p Fa0/3 Desg;FWD;19;128.3;P2p Fa0/1 Root;FWD19;128.1;P2p
6	Hello Time	2 sec
7	MaxAge	20 sec
8	Forward Delay	15 sec

- SW2

NO	Variable	Nilai
1	Root ID	32769, 0001.4297.9E35
2	Priority	32769
3	MAC Address	0001.4297.9E35

4	Bridge ID	32769, 0001.4297.9E35
5	Cost (0/1;0/2;0/3)	Fa0/1 Desg;FWD;19;128.1;P2p Fa0/2 Desg;FWD;19;128.2;P2p Fa0/3 Desg;FWD;19;128.3;P2p
6	Hello Time	2 sec
7	MaxAge	20 sec
8	Forward Delay	15 sec

- SW3

NO	Variable	Nilai
1	Root ID	32769, 0001.4297.9E35
2	Priority	32769
3	MAC Address	0001.4297.9E35
4	Bridge ID	32769, 0001.4297.9E35
5	Cost (0/1;0/2;0/3)	Fa0/1 Root;FWD;19;128.1;P2p Fa0/3 Desg;FWD;19;128.3;P2p Fa0/2 Desg;FWD;19;128.2;P2p
6	Hello Time	2 sec
7	MaxAge	20 sec
8	Forward Delay	15 sec

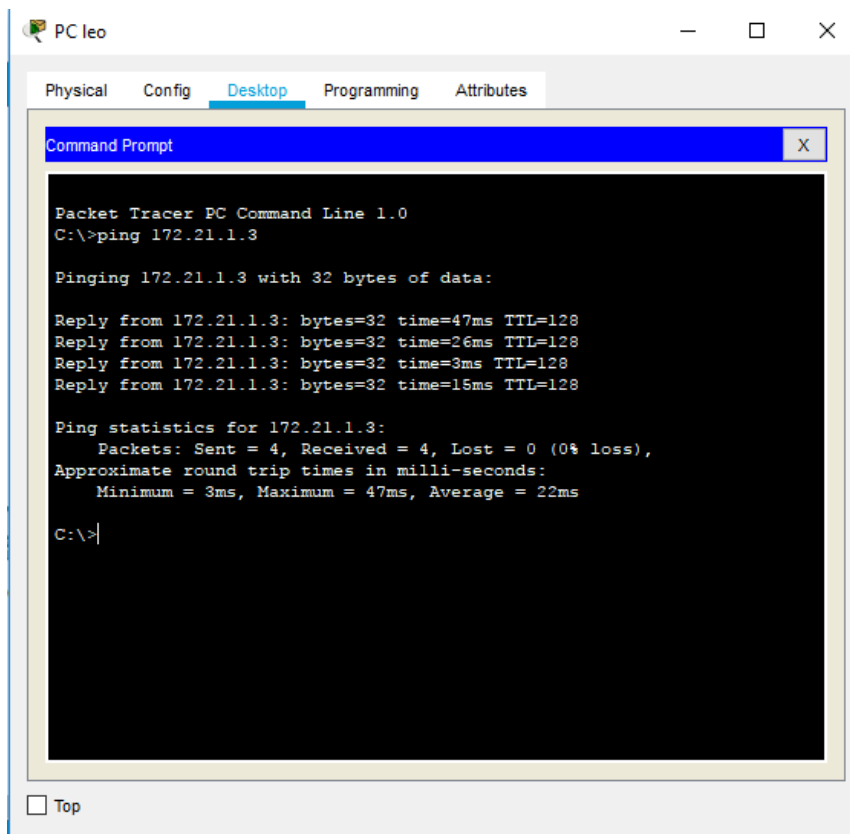
Tugas 4C: Pada kondisi default tersebut, switch dan port mana saja yang:

- Menjadi *root brided* : SW2
- Menjadi *designated brided* : SW2
- Menjadi *root port* : SW1 (Fa0/1), SW3 (Fa0/3)
- Menjadi *designated port* :SW3

Tugas 4D: Pada kondisi defaulttersebut, dan port mana saja yang:

- Berada pada keadaan *forwarding* : SW2, SW3, dan SW1 (Fa0/3 dan Fa0/1)
- Berada pada keadaan *blocking* : SW1 (Fa0/2)

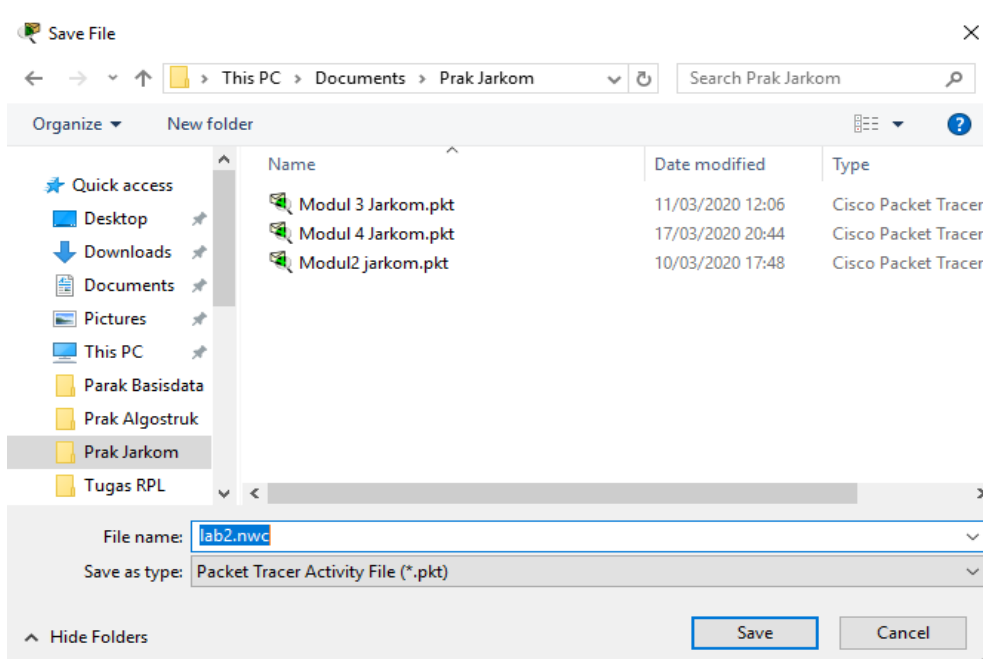
Dari PC Leo lakukan ping ke PC Virgo



Tugas 5A: Tuliskan langkah untuk melakukan perintah ping

Jawab : Klik PC leo pilih menu “Desktop” lalu pilih Command Prompt” lalu ketikan perintah ‘ping 172.21.1.3’ pada Command Prompt tanpa tanda petik.

Simpan konfigurasi jaringan dengan nama lab2.nwc



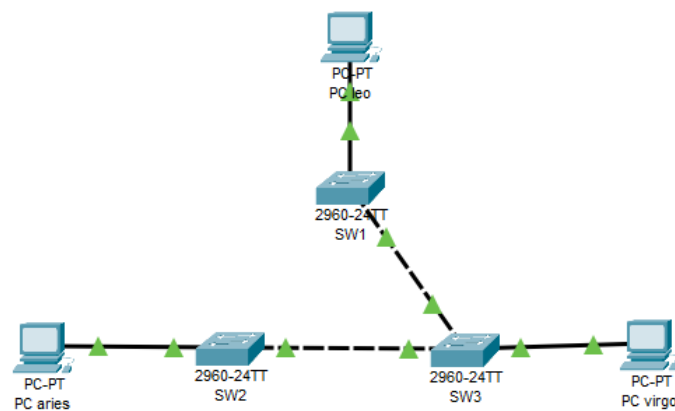
Tugas 6A: Tuliskan langkah untuk menyimpan konfigurasi jaringan.

Jawab :

- Klik "File"
- Pilih "Save as"
- Pilih directori
- Ketikan nama file "lab2.nwc"
- Klik "save"

## Kegiatan 2. Topologi 2

a. Membuat topologi



b. Lakukan langkah lab 4 dan lab 5

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

- SW1

SW1

Physical Config **CLI** Attributes

IOS Command Line Interface

```
changed state to down

Switch>en
Switch#show spanning-tree
VLAN0001
  Spanning tree enabled protocol ieee
    Root ID    Priority    32769
              Address    0001.4297.9E35
              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    0060.473E.E518
              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

Switch#
```

Ctrl+F6 to exit CLI focus

Copy Paste

☐ Top

- SW2

SW2

Physical Config **CLI** Attributes

IOS Command Line Interface

```
%LINEPROTO-5-UPDOWN: Line protocol on Interface FastEthernet0/1,
changed state to down

Switch>en
Switch#show spanning-tree
VLAN0001
  Spanning tree enabled protocol ieee
    Root ID    Priority    32769
              Address    0001.4297.9E35
              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    0001.4297.9E35
              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

Switch#
```

Ctrl+F6 to exit CLI focus

Copy Paste

☐ Top



- SW3

```

Switch>en
Switch#show spanning-tree
VLAN0001
  Spanning tree enabled protocol ieee
    Root ID    Priority    32769
              Address     0001.4297.9E35
              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     0001.9767.C509
              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#
  
```

Tugas 3B: Untuk tiap-tiap switch, isikan tabel berikut:

- SW1

NO	Variable	Nilai
1	Root ID	32769, 0001.4297.9E35
2	Priority	32769
3	MAC Address	0001.4297.9E35
4	Bridge ID	32769, 0001.4297.9E35
5	Cost (0/1;0/2;0/3)	Fa0/2 Root;FWD;19;128.2;P2p Fa0/3 Desg;FWD;19;128.3;P2p
6	Hello Time	2 sec
7	MaxAge	20 sec
8	Forward Delay	15 sec

- SW2

NO	Variable	Nilai
1	Root ID	32769, 0001.4297.9E35
2	Priority	32769
3	MAC Address	0001.4297.9E35
4	Bridge ID	32769, 0001.4297.9E35
5	Cost (0/1;0/2;0/3)	Fa0/2 Desg;FWD;19;128.2;P2p

		Fa0/3 Desg;FWD;19;128.3;P2p
6	Hello Time	2 sec
7	MaxAge	20 sec
8	Forward Delay	15 sec

- SW3

NO	Variable	Nilai
1	Root ID	32769, 0001.4297.9E35
2	Priority	32769
3	MAC Address	0001.4297.9E35
4	Bridge ID	32769, 0001.4297.9E35
5	Cost (0/1;0/2;0/3)	Fa0/1 Root;FWD19;128.1;P2p Fa0/3 Desg;FWD;19;128.3;P2p Fa0/2 Desg;FWD;19;128.2;P2p
6	Hello Time	2 sec
7	MaxAge	20 sec
8	Forward Delay	15 sec

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

- Menjadi *root brided* : SW2
- Menjadi *designated brided* : SW2
- Menjadi *root port* : SW1 (Fa0/2), SW3 (Fa0/1)
- Menjadi *designated port* :SW2

Tugas 4D: Pada kondisi defaulttersebut, dan port mana saja yang:

- Berada pada keadaan *forwarding* : SW1, SW2, dan SW3
- Berada pada keadaan *blocking* : tidak ada

Dari PC Leo lakukan ping ke PC Virgo

```
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=23ms TTL=128
Reply from 172.21.1.3: bytes=32 time=11ms TTL=128
Reply from 172.21.1.3: bytes=32 time=21ms TTL=128
Reply from 172.21.1.3: bytes=32 time=22ms 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 = 11ms, Maximum = 23ms, Average = 19ms

C:\>
```

Tugas 5A: Tuliskan langkah untuk melakukan perintah ping

Jawab : Klik PC lalu pilih menu “Desktop” lalu pilih Command Prompt” lalu ketikkan perintah ‘ping 172.21.1.3’ pada Command Prompt tanpa tanda petik.