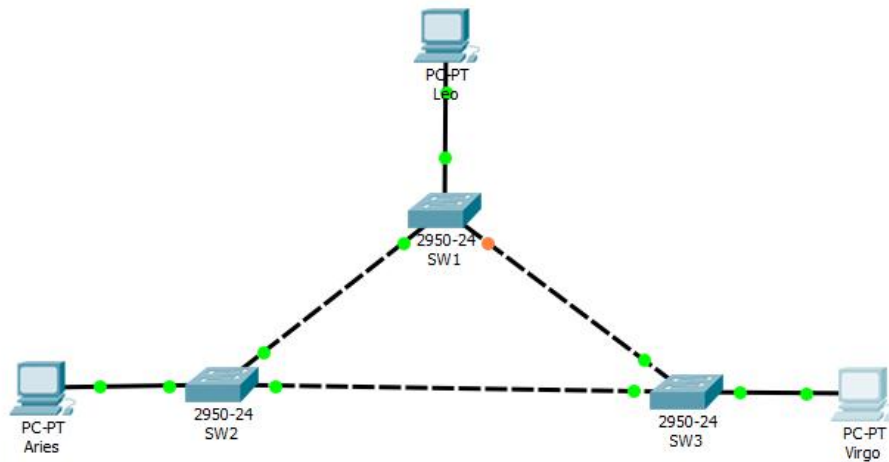


Nama : Amartya Bintang Wijat Ranti
NIM : L200180193
Kelas : E
Mata Kuliah : Praktikum Jaringan Komputer

Modul 6 : Spanning Tree Protocol

1. Kegiatan 1. topologi 1

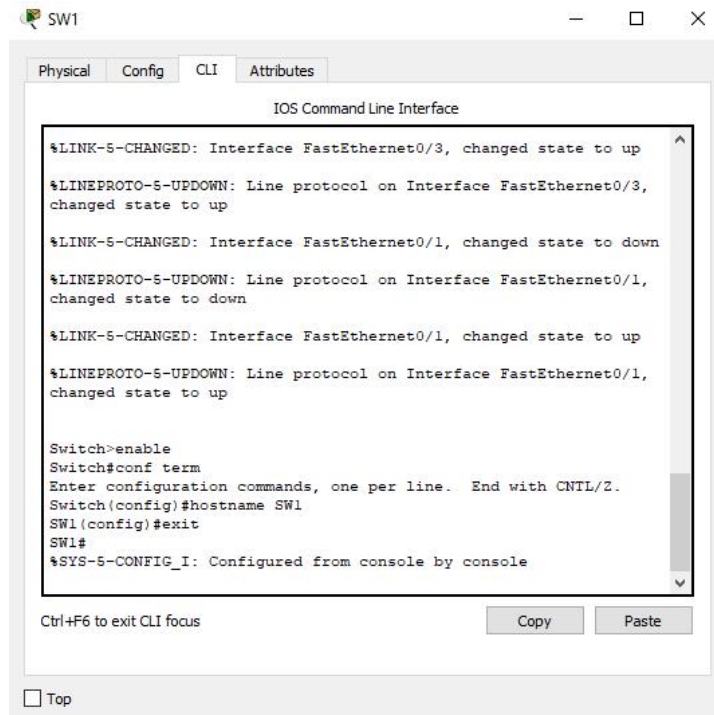
a. Membuat topologi jaringan



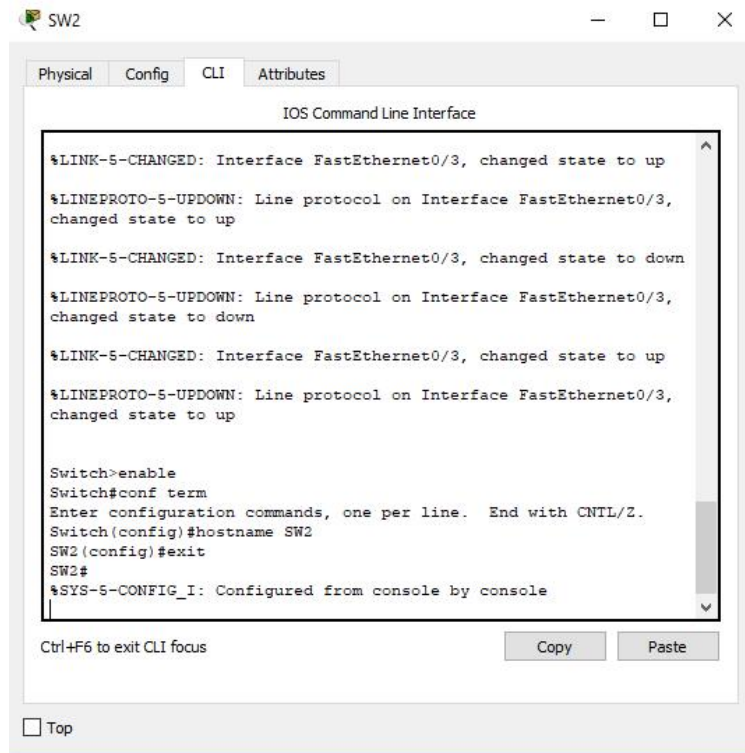
Tugas 1A :

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

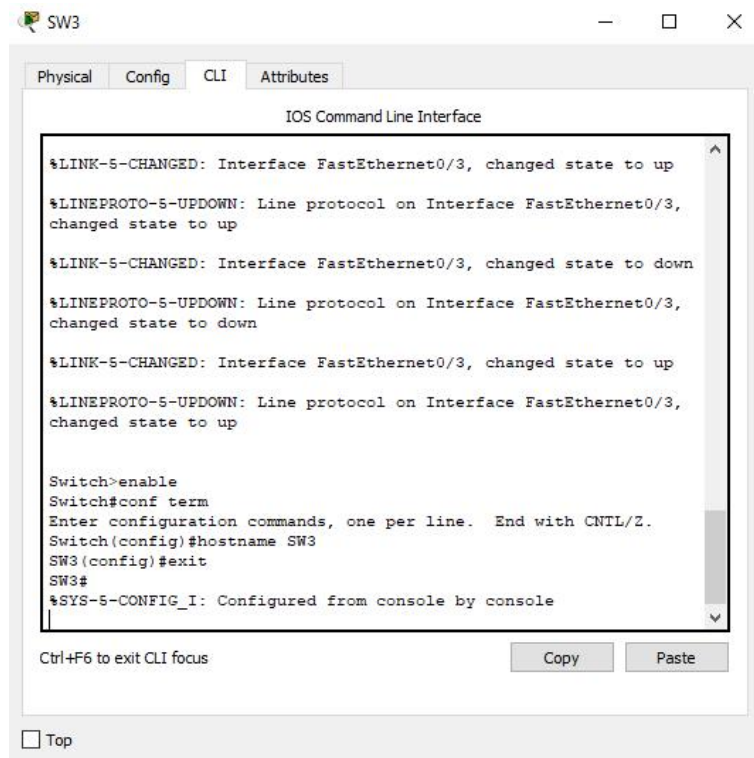
● SW1



- SW2



- SW3



Tugas 2A : tulis langkah pemberian nama switch

- Switch1

Switch>enable

Switch#conf term

Switch(config)#hostname SW1

SW1(config)#

Switch yang lainnya juga begitu

c. Konfigurasi masing-masing PC dengan alamat IP

Leo

Physical Config Desktop Programming Attributes

IP Configuration

IP Configuration

☐ DHCP ☒ Static

IP Address 172.21.1.1

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::290:21FF:FE02:BCB8

IPv6 Gateway

IPv6 DNS Server

Top

Virgo

Physical Config Desktop Programming Attributes

IP Configuration

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

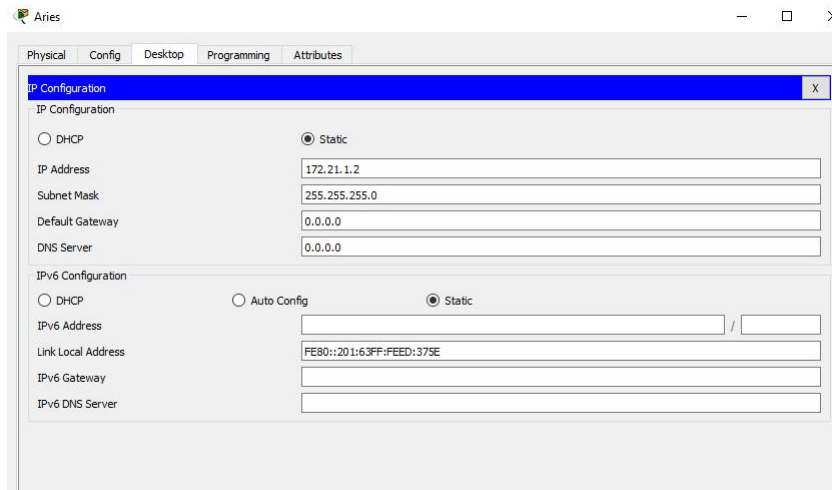
☐ DHCP ☐ Auto Config ☒ Static

IPv6 Address /

Link Local Address FE80::202:16FF:FEE4:9554

IPv6 Gateway

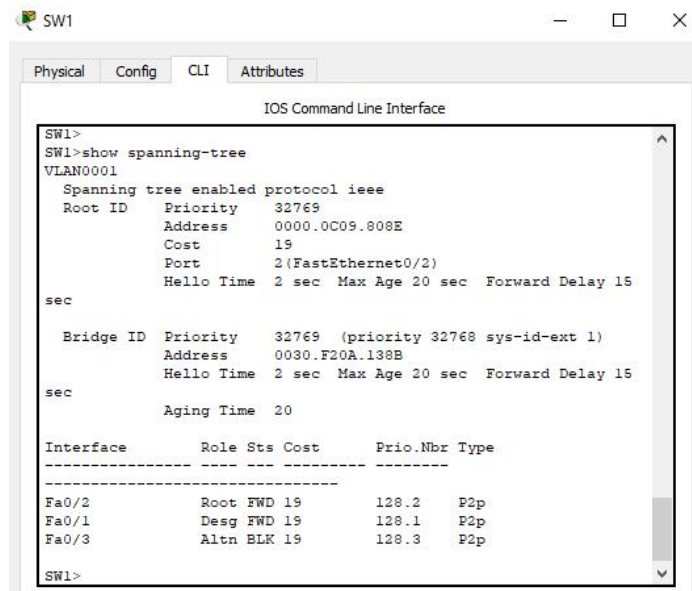
IPv6 DNS Server



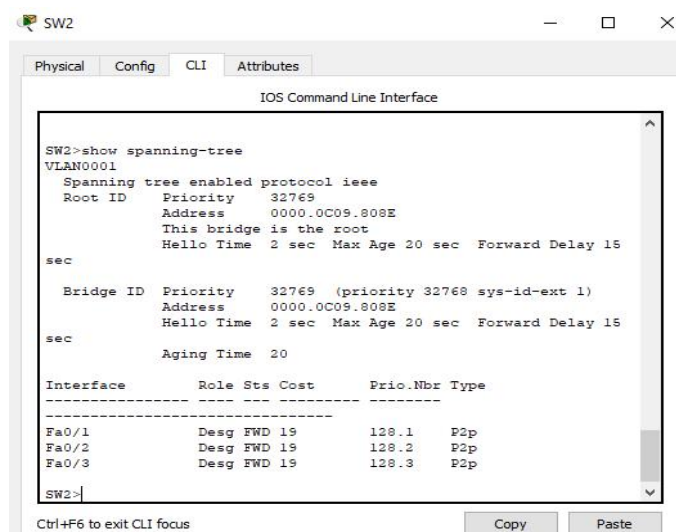
d. Spanning Tree pada Switch

Tugas 4A : Capture masing-masing tampilan switch

- SW1



- SW2



- SW3

```

SW3>show spanning-tree
VLAN0001
  Spanning tree enabled protocol ieee
    Root ID    Priority    32769
      Address    0000.0C09.808E
        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    000A.F3C6.0063
        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          Desg FWD 19        128.2   P2p
  
```

Tugas 4B : Isikan tabel

- SW1

No	Variable	Nilai
1	Root Id	32769
2	Priority	32769
3	MAC Address	0030.F20A.138B
4	Bridge Id	32769
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	Variable	Nilai
1	Root ID	32769
2	Priority	32769
3	MAC Address	0000.0C09.808E
4	Bridge ID	32769
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	Variable	Nilai
1	Root ID	32769
2	Priority	32769
3	MAC Address	000A.FC36.0063
4	Bridge ID	32769
5	Cost (0/1;0/2;0/3)	19
6	Hello Time	2 Sec

7	MaxAge	20 Sec
8	Forward Delay	15 Sec

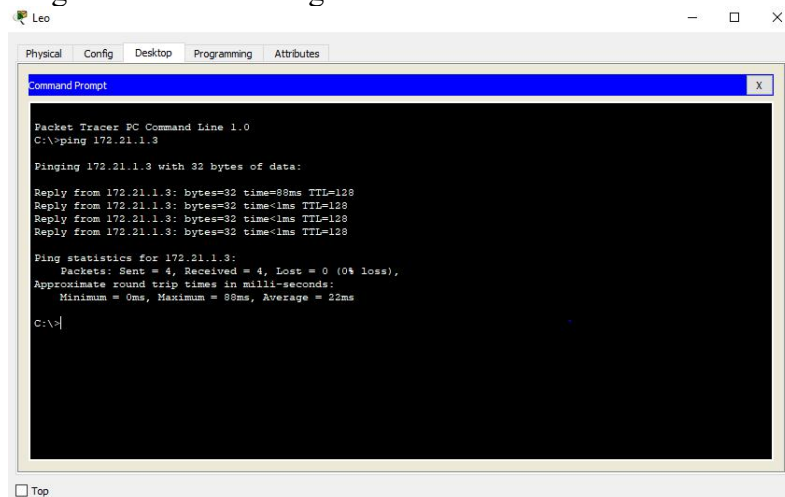
Tugas 4C :

- Root bridge : SW2
- Designated bridge : SW3
- Root port : SW1(fa 0/2) dan SW2(fa 0/3)
- Designated port :
SW1(fa 0/1), SW2(fa 0/1; fa 0/2; fa 0/3) dan SW3(fa 0/1; fa 0/2)

Tugas 4D : Menentukan port yang berada pada keadaan forwarding dan blocking

- Forwarding
SW1(fa 0/1; fa 0/2)
SW2(fa 0/1; fa 0/2; fa 0/3)
SW3(fa 0/1; fa 0/2; fa 0/3)
- Blocking
SW1(fa 0/3)

e. 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=8ms 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 = 80ms, Average = 22ms

C:\>

```

Tugas 5A : Tulis langkah untuk melakukan perintah ping

Klik pada PC Leo, pilih tab desktop, setelah itu pilih command prompt, lalu ketikkan 'ping 172.21.1.3' di command prompt

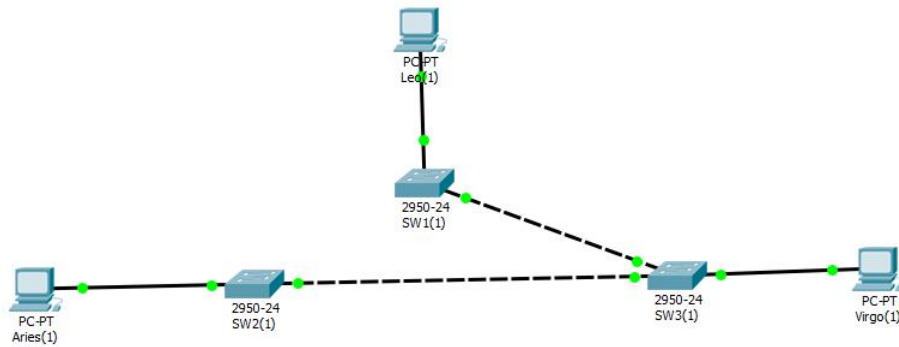
f. Simpan konfigurasi jaringan

Tugas 6A : Tulis langkah untuk menyimpan.

Pilih menu File, lalu pilih Save, simpan dengan nama 'lab2.nwc'

Kegiatan 2. Topologi 2

a. Membuat topologi jaringan



b. Lakukan langkah 4 dan 5

- SW1

```
SW1(1)
Physical Config CLI Attributes
IOS Command Line Interface

SW1>show spanning-tree
VLAN0001
  Spanning tree enabled protocol ieee
  Root ID    Priority    32769
            Address     0001.647C.3996
            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     0040.0B63.1AA4
            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

SW1>
```

- SW2

```
SW2(1)
Physical Config CLI Attributes
IOS Command Line Interface

SW2>show spanning-tree
VLAN0001
  Spanning tree enabled protocol ieee
  Root ID    Priority    32769
            Address     0001.647C.3996
            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     0003.E4DA.9566
            Hello Time  2 sec  Max Age 20 sec  Forward Delay 15
sec
            Aging Time  20

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

SW2>
```

- SW3

```

SW3>show spanning-tree
VLAN0001
  Spanning tree enabled protocol ieee
    Root ID    Priority    32769
              Address    0001.647C.3996
              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    0001.647C.3996
              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
  
```

- SW1

No	Variable	Nilai
1	Root ID	32769
2	Priority	32769
3	MAC Address	0040.0B63.1A44
4	Bridge ID	32769
5	Cost (0/1;0/3)	19; 19
6	Hello Time	2 Sec
7	MaxAge	20 Sec
8	Forward Delay	15 Sec

- SW2

No	Variable	Nilai
1	Root ID	32769
2	Priority	32769
3	MAC Address	0003.E4DA.9566
4	Bridge ID	32769
5	Cost (0/3;0/2)	19; 19
6	Hello Time	2 Sec
7	MaxAge	20 Sec
8	Forward Delay	15 Sec

- SW3

No	Variable	Nilai
1	Root ID	32769
2	Priority	32769
3	MAC Address	0001.647C.3996
4	Bridge ID	32769

5	Cost (0/1;0/2;0/3)	19;19;19
6	Hello Time	2 Sec
7	MaxAge	20 Sec
8	Forward Delay	15 Sec

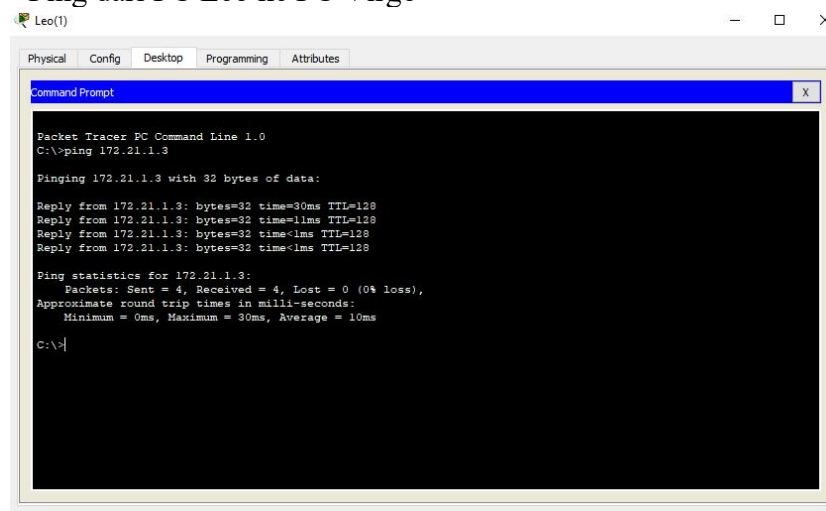
- Root bridge : SW3
- Designated bridge : SW1 dan SW2
- Root port : SW1(fa 0/3) dan SW2(fa 0/3)
- Designated port : SW1(fa 0/1), SW2(fa 0/2), dan SW3(fa 0/1; fa 0/2; fa 0/3)

- Forwarding
 - SW1(fa 0/1; fa 0/3)
 - SW2(fa 0/2; fa 0/3)
 - SW3(fa 0/1; fa 0/2; fa 0/3)
- Blocking
 - Tidak ada yang terblok

Tugas 5A :

Klik pada PC Leo, pilih tab desktop, setelah itu pilih command prompt, lalu ketikan 'ping 172.21.1.3' di command prompt

- 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=30ms TTL=128
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

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 = 30ms, Average = 10ms

C:\>

```