

Nama : Muhammad Azka Nur Lutfi

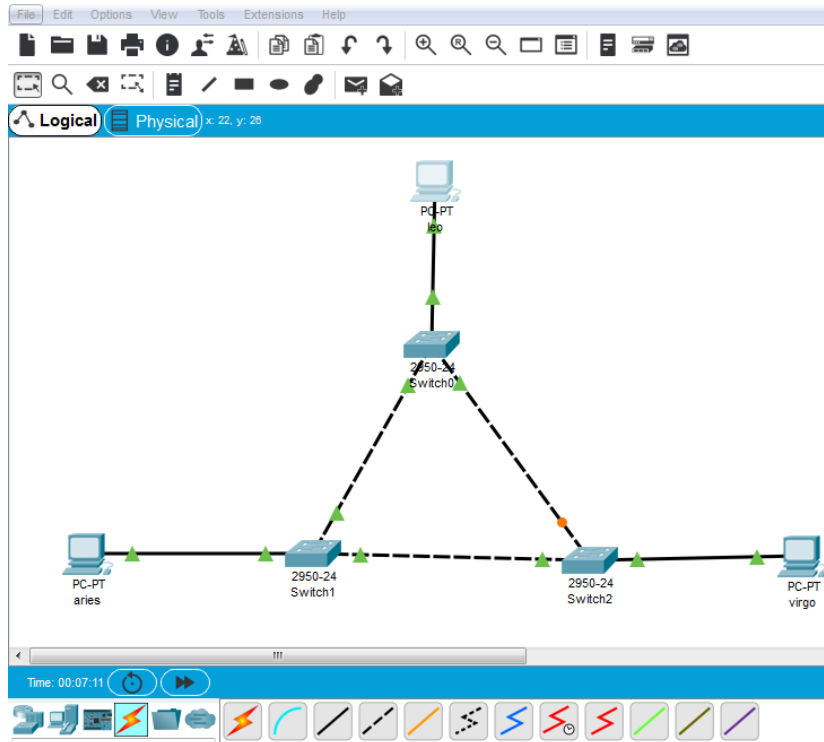
NIM : L200180181

Kelas : E

LAPORAN PRAKTIKUM JARINGAN KOMPUTER

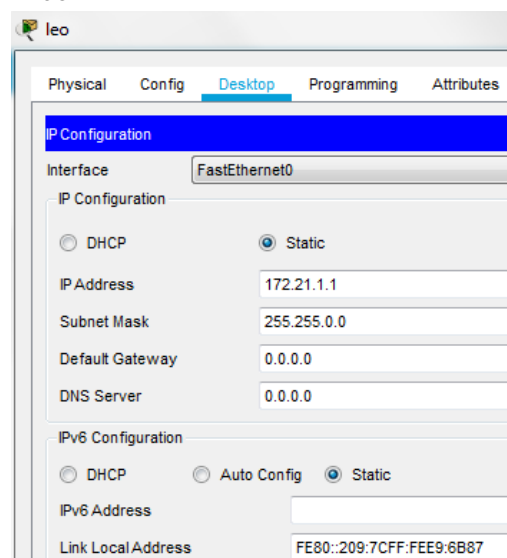
A. Kegiatan 1

a. Gambar Topologi 1



b. Konfigurasi PC

- Leo



- Aries

The screenshot shows the 'aries' configuration window with the 'Desktop' tab selected. Under 'IP Configuration', the 'Static' radio button is selected for the 'FastEthernet0' interface. The IP Address is 172.21.1.2, Subnet Mask is 255.255.0.0, Default Gateway is 0.0.0.0, and DNS Server is 0.0.0.0. Under 'IPv6 Configuration', the 'Static' radio button is selected. The Link Local Address is FE80::2D0:BCFF:FE30:EECD.

- Virgo

The screenshot shows the 'virgo' configuration window with the 'Desktop' tab selected. Under 'IP Configuration', the 'Static' radio button is selected for the 'FastEthernet0' interface. The IP Address is 172.21.1.3, Subnet Mask is 255.255.0.0, Default Gateway is 0.0.0.0, and DNS Server is 0.0.0.0. Under 'IPv6 Configuration', the 'Static' radio button is selected. The Link Local Address is FE80::201:C9FF:FE2E:D195.

c. Melihat status STP pada masing-masing Switch

- Switch 1

The screenshot shows the 'Switch1' CLI window with the 'CLI' tab selected. The command 'show spanning-tree' has been executed, displaying the STP status for VLAN0001. The output shows the Root ID and Bridge ID, both with a priority of 32769. The Root ID is 00D0.BDB9.72AE and the Bridge ID is 00D0.68C7.1078. The interface Fa0/1 is the designated forwarder (Desg FWD) with a cost of 19 and priority 128.1. The interfaces Fa0/2 and Fa0/3 are root forwarders (Root FWD) with a cost of 19 and priority 128.2 and 128.3 respectively.

```
Switch1>enable
Switch1#show spanning-tree
VLAN0001
  Spanning tree enabled protocol ieee
    Root ID    Priority    32769
              Address    00D0.BDB9.72AE
              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    00D0.68C7.1078
              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

Switch1#
```

- Switch 2

```

Switch2
Physical Config CLI Attributes
IOS Command Line Interface

Switch#show spanning tree
% Invalid input detected at '^' marker.

Switch#show spanning-tree
VLAN0001
  Spanning tree enabled protocol ieee
  Root ID    Priority    32769
             Address    000D.BDB9.72AE
             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    000D.BDB9.72AE
             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 3

```

Switch3
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    000D.BDB9.72AE
             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.F715.7CA2
             Hello Time 2 sec Max Age 20 sec Forward Delay 15 sec
             Aging Time 20

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

d. Tabel setiap switch

- Switch 1

No	Variabel	Nilai
1.	Root ID	32769
2.	Priority	32768
3.	MAC Address	00D0.58C7.1078
4.	Bridge ID	32769
5.	Cost	19
6.	Hello Time	2 sec
7.	Max Age	20 sec
8.	Forward Delay	15 sec

- Switch 2

No	Variabel	Nilai
1.	Root ID	32769
2.	Priority	32768
3.	MAC Address	000D.BDB9.72AE
4.	Bridge ID	32769
5.	Cost	19
6.	Hello Time	2 sec
7.	Max Age	20 sec
8.	Forward Delay	15 sec

- Switch 3

No	Variabel	Nilai
1.	Root ID	32769
2.	Priority	32768
3.	MAC Address	00E0.F715.7CA2
4.	Bridge ID	32769
5.	Cost	19
6.	Hello Time	2 sec
7.	Max Age	20 sec
8.	Forward Delay	15 sec

e. Pada kondisi default tersebut, switch dan port mana saja yang :

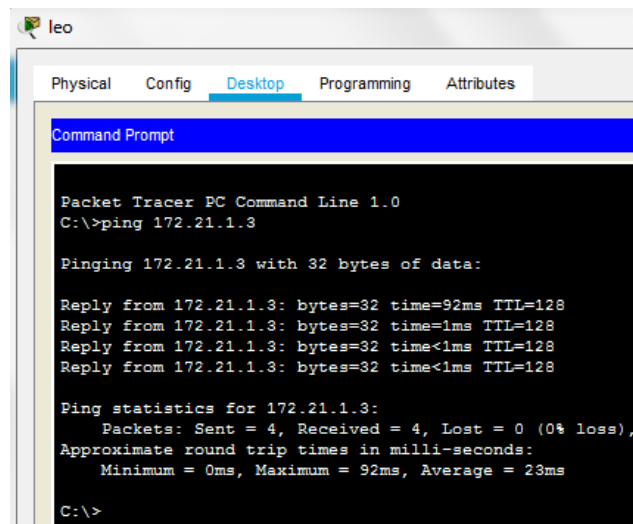
- Menjadi root bridge : Switch 3
- Menjadi designated bride : Switch 1 dan Switch 2
- Menjadi root port : Switch 1(Fa0/3), Switch 2(Fa0/2)
- Menjadi designated port : Switch 1(Fa0/1), Switch 2(Fa0/1 dan Fa0/3), Switch 3(Fa0/1, Fa0/2, dan Fa0/3)

f. Pada kondisi default tersebut, dan port mana saja yang :

- Keadaan forwarding : Switch 1(Fa0/1 dan Fa0/3), Switch 2(Fa0/1 Fa0/2 Fa0/3), Switch 3(Fa0/1 Fa0/2 Fa0/3)
- Keadaan blocking : Switch 1(Fa0/2)

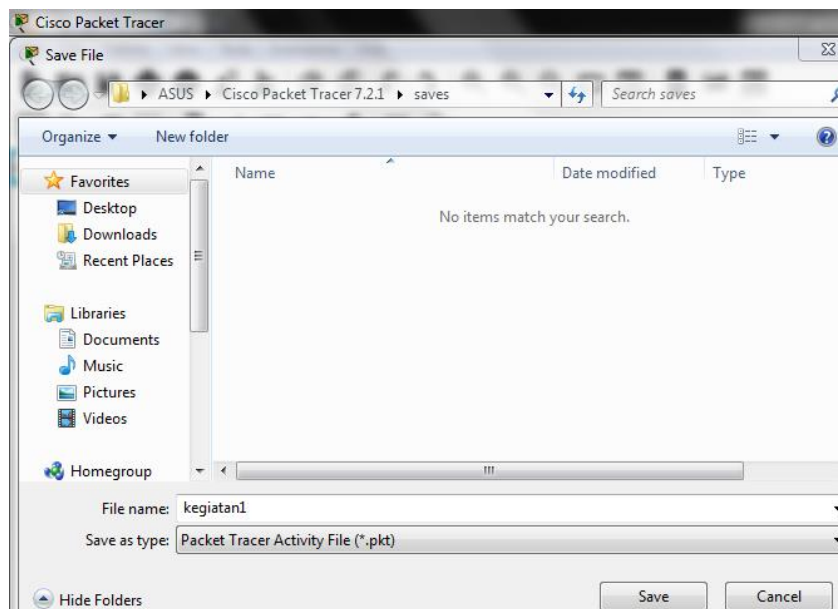
g. Melakukan perintah ping

- Ping PC leo ke PC virgo langkahnya sebagai berikut :
 - Klik PC leo
 - Pilih tab desktop
 - Pilih command prompt
 - Ketikkan ping 172.21.1.3



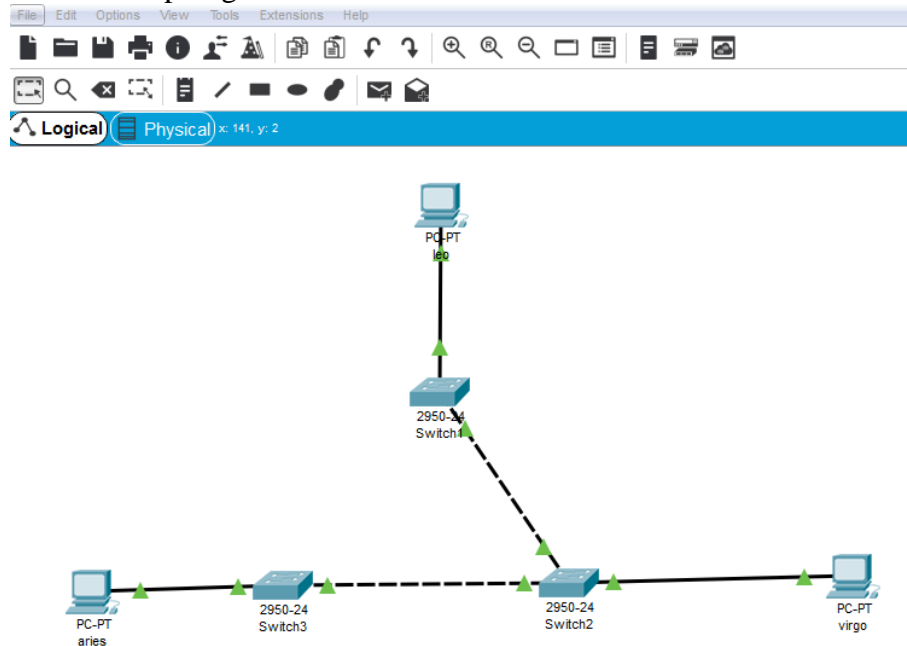
h. Langkah menyimpan konfigurasi jaringan

- Klik file
- Pilih Save
- Beri nama kegiatan1, ekstensi akan menyesuaikan dengan aplikasi yang kita gunakan



B. Kegiatan 2

a. Gambar Topologi 2



b. Melihat status STP pada masing-masing Switch

▪ Switch 1

```
Switch1
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     0001.6375.7626
            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     0060.2F66.392C
            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
```

- Tabel Switch 1

No	Variabel	Nilai
1.	Root ID	32769
2.	Priority	32768
3.	MAC Address	0060.2F56.392C
4.	Bridge ID	32769
5.	Cost	38
6.	Hello Time	2 sec
7.	Max Age	20 sec
8.	Forward Delay	15 sec

- Switch 2

The screenshot shows a window titled 'Switch2' with tabs for 'Physical', 'Config', 'CLI', and 'Attributes'. The 'CLI' tab is active, displaying the 'IOS Command Line Interface'. The command 'Switch#show spanning-tree' has been entered, resulting in the following output:

```

% Invalid input detected at '^' marker.
Switch#show spanning-tree
VLAN0001
  Spanning tree enabled protocol ieee
    Root ID    Priority    32769
              Address    0001.6375.7626
              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.F368.A17B
              Hello Time 2 sec  Max Age 20 sec  Forward Delay 15 sec
              Aging Time 20

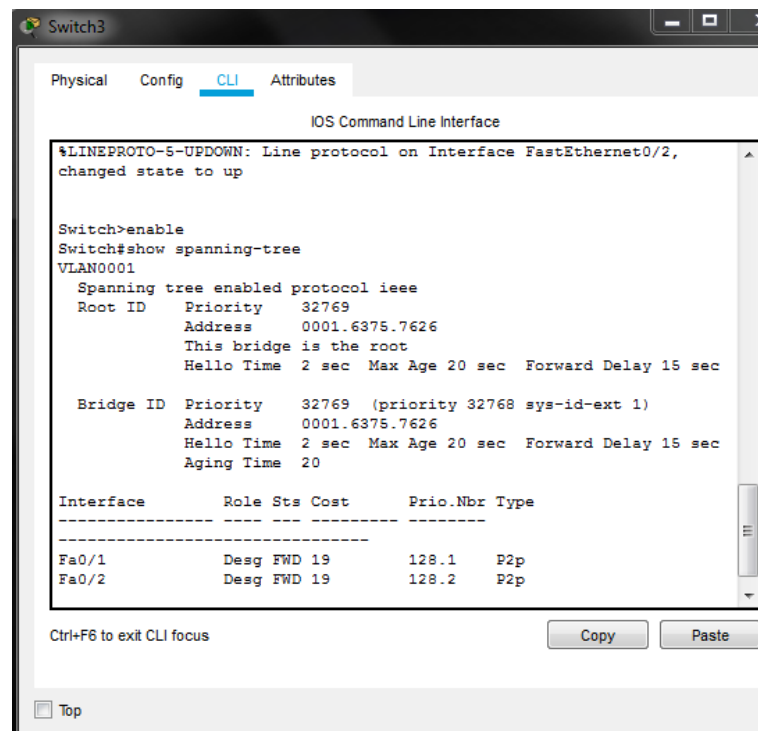
Interface      Role  Sts Cost      Prio.Nbr Type
-----
Fa0/1          Desg FWD 19        128.1   P2p
Fa0/2          Desg FWD 19        128.2   P2p
Fa0/3          Root FWD 19        128.3   P2p
  
```

At the bottom of the CLI window, there is a status bar that says 'Ctrl+F6 to exit CLI focus' and buttons for 'Copy' and 'Paste'.

- Tabel Switch 2

No	Variabel	Nilai
1.	Root ID	32769
2.	Priority	32768
3.	MAC Address	000A.F368.A17B
4.	Bridge ID	32769
5.	Cost	19
6.	Hello Time	2 sec
7.	Max Age	20 sec
8.	Forward Delay	15 sec

- Switch 3



- Tabel Switch 3

No	Variabel	Nilai
1.	Root ID	32769
2.	Priority	32768
3.	MAC Address	0001.6375.7626
4.	Bridge ID	32769
5.	Cost	19
6.	Hello Time	2 sec
7.	Max Age	20 sec
8.	Forward Delay	15 sec

c. Pada kondisi default tersebut, switch dan port mana saja yang :

- Menjadi root bridge : Switch 3
- Menjadi designated bride : Switch 1 dan Switch 2
- Menjadi root port : Switch 1(Fa0/2), Switch 2(Fa0/2)
- Menjadi designated port : Switch 1(Fa0/3), Switch 2(Fa0/3), Switch 3(Fa0/1, Fa0/2, dan Fa0/3)

d. Pada kondisi default tersebut, dan port mana saja yang :

- Keadaan forwarding : Switch 1(Fa0/1 dan Fa0/3), Switch 2(Fa0/1 Fa0/2 Fa0/3), Switch 3(Fa0/1 Fa0/2 Fa0/3)
- Keadaan blocking : tidak ada

e. Melakukan perintah ping

- Ping PC leo ke PC virgo langkahnya sebagai berikut :
 - Klik PC leo
 - Pilih tab desktop
 - Pilih command prompt
 - Ketikkan ping 172.21.1.3

