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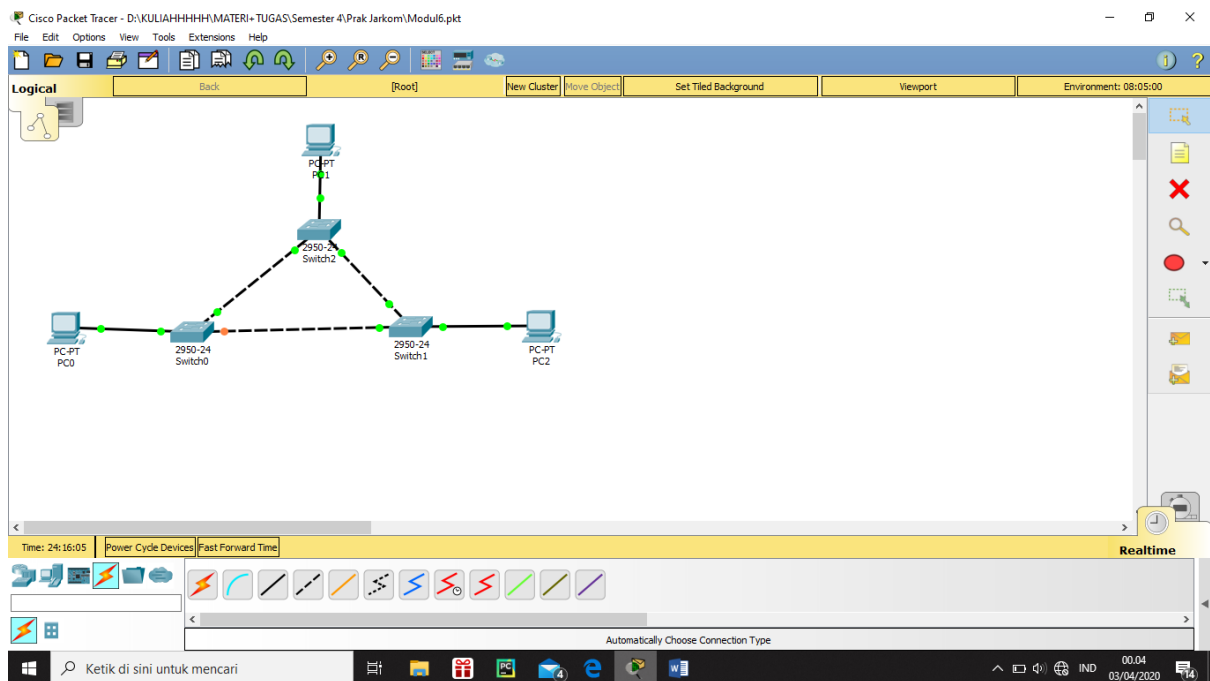
Kelas : E

Modul 6

Praktikum Jaringan dan Komputer

Kegiatan 1

Membuat topologi dengan smengunakan switch Catalyst 2950



Tugas 1A

Switch1

Physical

Config

CLI

Attributes

GLOBAL

Settings

Algorithm Settings

SWITCHING

VLAN Database

INTERFACE

FastEthernet0/1

FastEthernet0/2

FastEthernet0/3

FastEthernet0/4

FastEthernet0/5

FastEthernet0/6

FastEthernet0/7

FastEthernet0/8

FastEthernet0/9

Global Settings

Display Name

Switch1

Hostname

Switch

Serial Number

No Serial Number

NVRAM

Erase

Save

Startup Config

Load...

Export...

Running Config

Export...

Merge...

Equivalent IOS Commands

Switch#copy running-config startup-config
Destination filename [startup-config]?
Building configuration...
[OK]
Switch#

☐ Top

Physical Config CLI Attributes

GLOBAL ^

Settings

Algorithm Settings

SWITCHING

VLAN Database

INTERFACE

FastEthernet0/1

FastEthernet0/2

FastEthernet0/3

FastEthernet0/4

FastEthernet0/5

FastEthernet0/6

FastEthernet0/7

FastEthernet0/8

FastEthernet0/9 v

Global Settings

Display Name

Hostname

Serial Number No Serial Number

NVRAM

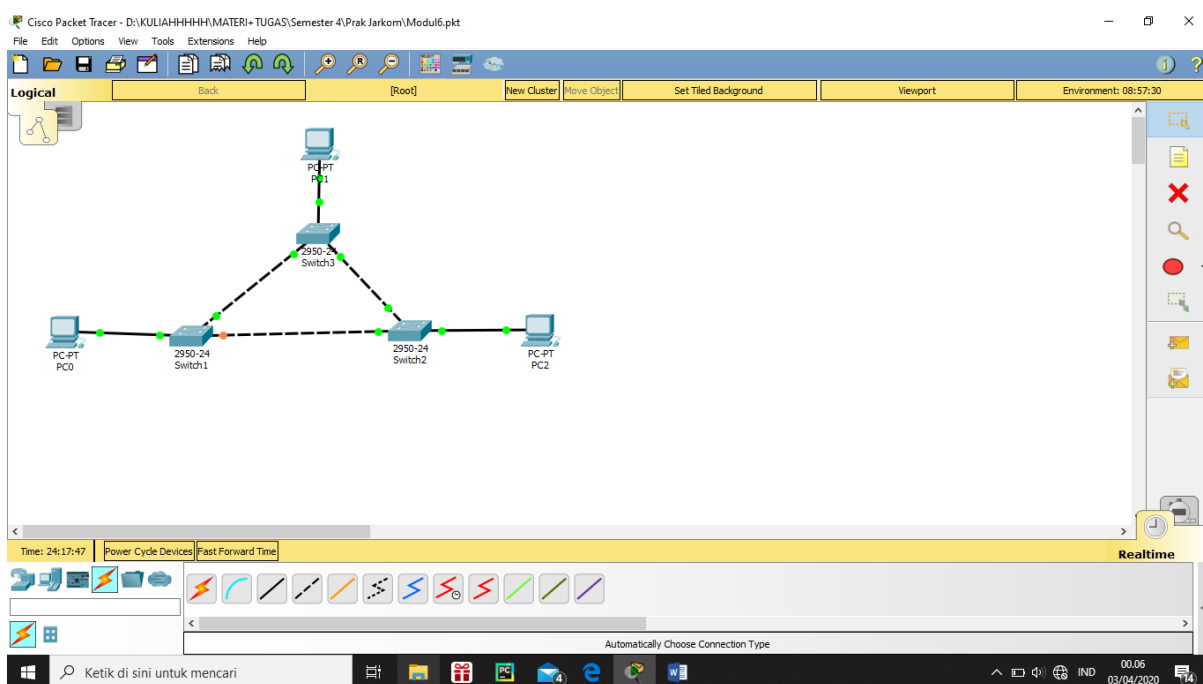
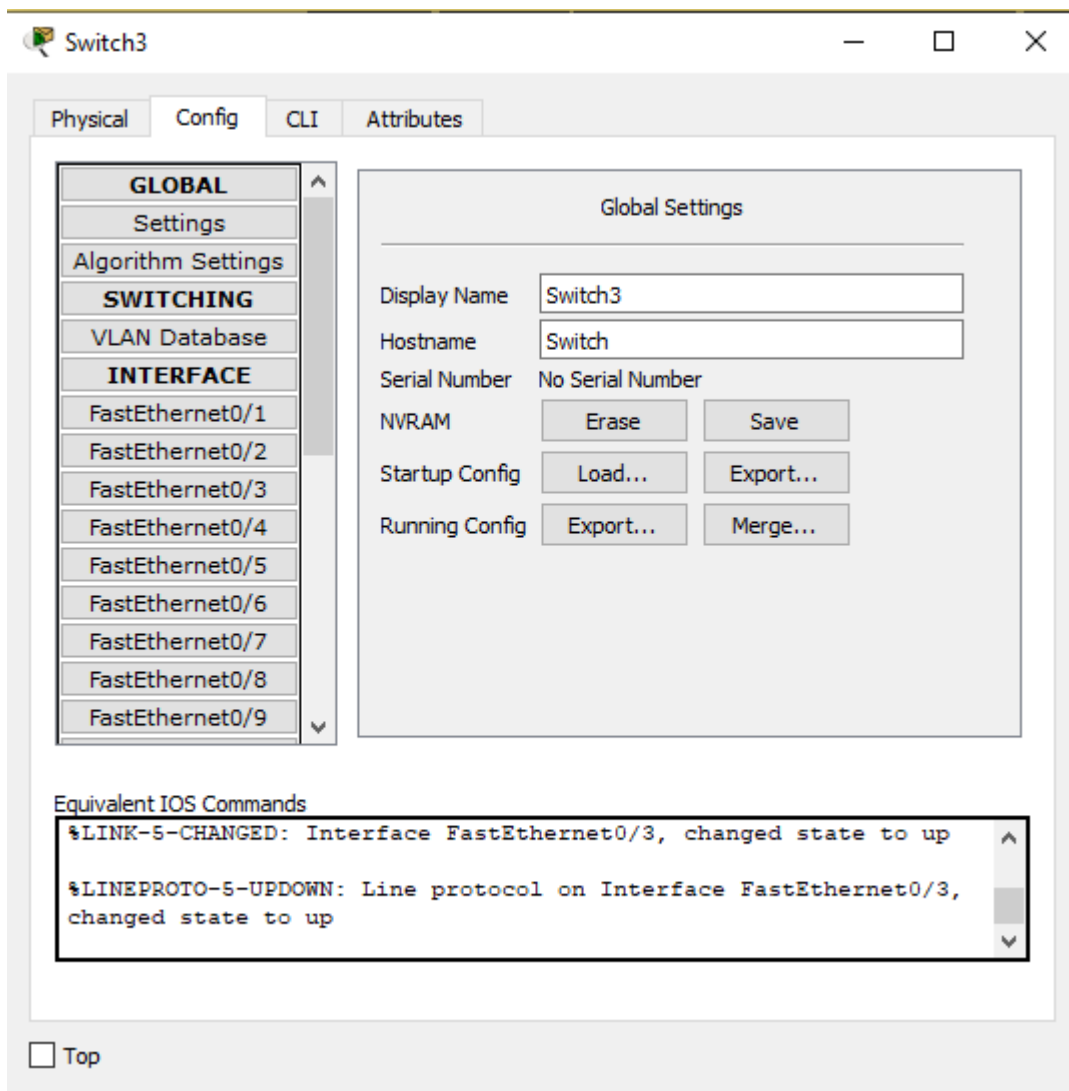
Startup Config

Running Config

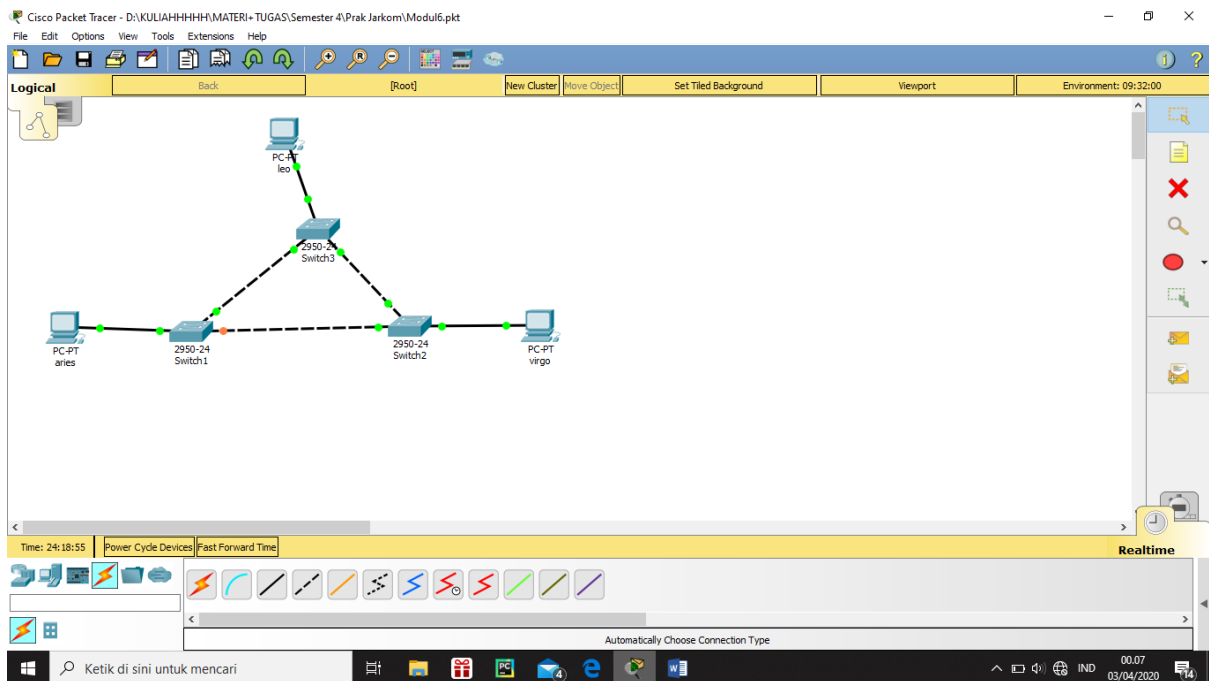
Equivalent IOS Commands

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

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v☐ Top



Tugas 2A



Konfigurasi masing-masing PC

The screenshot shows the 'IP Configuration' window for PC 'leo'. The window has tabs for 'Physical', 'Config', 'Desktop', 'Programming', and 'Attributes'. The 'Config' tab is selected, and the 'IP Configuration' section is expanded. The 'Static' radio button is selected under 'IP Configuration'. The fields are filled with the following values:

Field	Value
IP Address	172.21.1.1
Subnet Mask	255.255.255.0
Default Gateway	0.0.0.0
DNS Server	0.0.0.0

Under 'IPv6 Configuration', the 'Static' radio button is selected. The fields are filled with the following values:

Field	Value
IPv6 Address	
Link Local Address	FE80::201:97FF:FE0D:5BA4
IPv6 Gateway	
IPv6 DNS Server	

At the bottom left, there is a checkbox labeled 'Top' which is currently unchecked.

aries

Physical

Config

Desktop

Programming

Attributes

IP Configuration

X

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::203:E4FF:FE88:6407

IPv6 Gateway

IPv6 DNS Server

Top

virgo

Physical

Config

Desktop

Programming

Attributes

IP Configuration

X

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::2D0:BAFF:FE11:DB

IPv6 Gateway

IPv6 DNS Server

Top

Tugas 4A

Switch1

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     0005.5EE4.287D
             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     0060.70AA.047E
             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          Altn BLK 19        128.1    P2p
Fa0/3          Desg FWD 19        128.3    P2p

Switch#
```

Ctrl+F6 to exit CLI focus

Copy

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☐ Top

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     0005.5EE4.287D
             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     0060.2FE7.0E51
             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          Desg FWD 19        128.3    P2p
Fa0/2          Root FWD 19        128.2    P2p

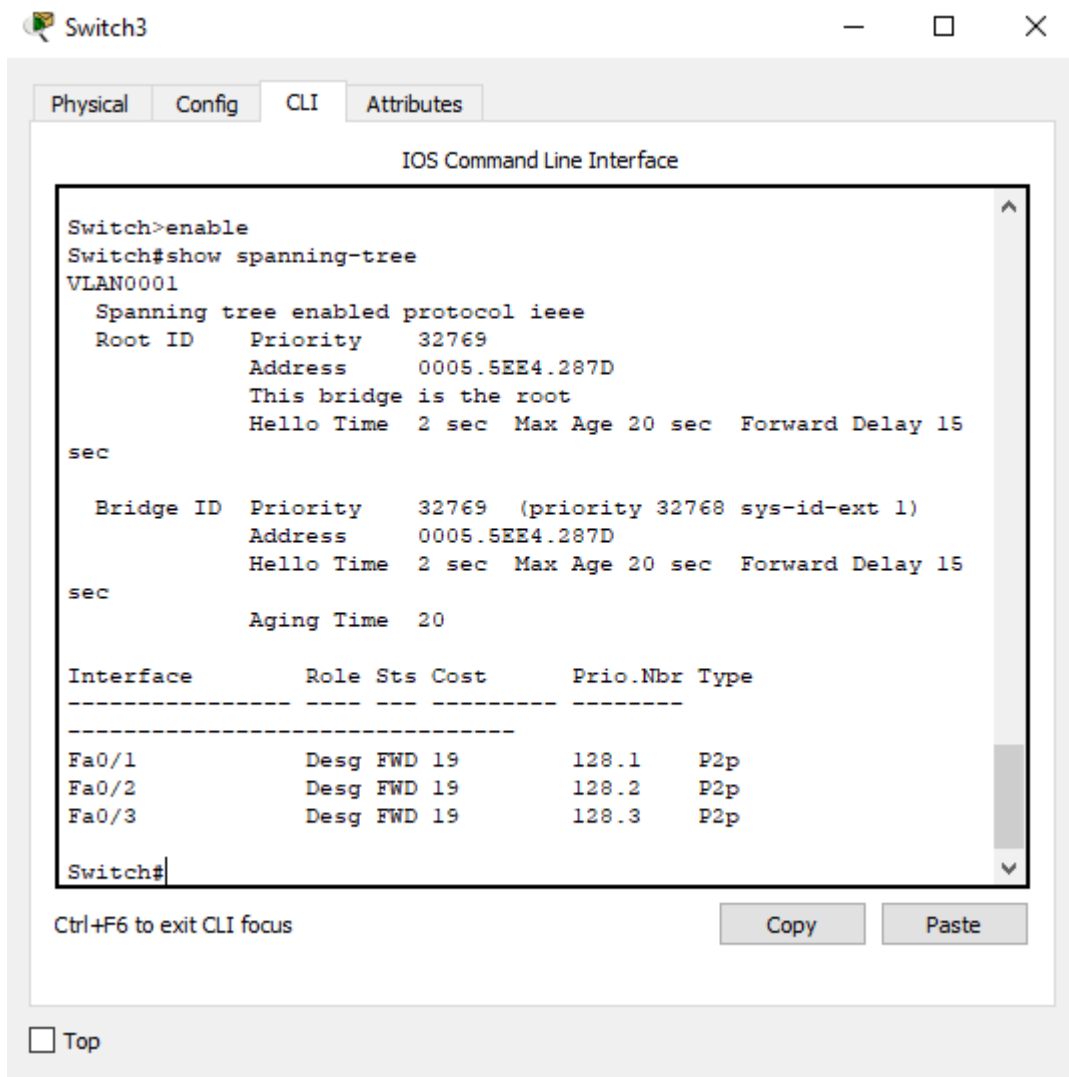
Switch#
```

Ctrl+F6 to exit CLI focus

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Tugas 4B

Switch1

No.	Variabel	Nilai
1.	Root ID	32769
2.	Priority	32768
3.	MAC Address	0005.5EE4.287D
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

Switch2

No.	Variabel	Nilai
1.	Root ID	32769
2.	Priority	32768
3.	MAC Address	0005.5EE4.287D
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

Switch3

No.	Variabel	Nilai
1.	Root ID	32769
2.	Priority	32768
3.	MAC Address	0005.5EE4.287D
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

Tugas 4C

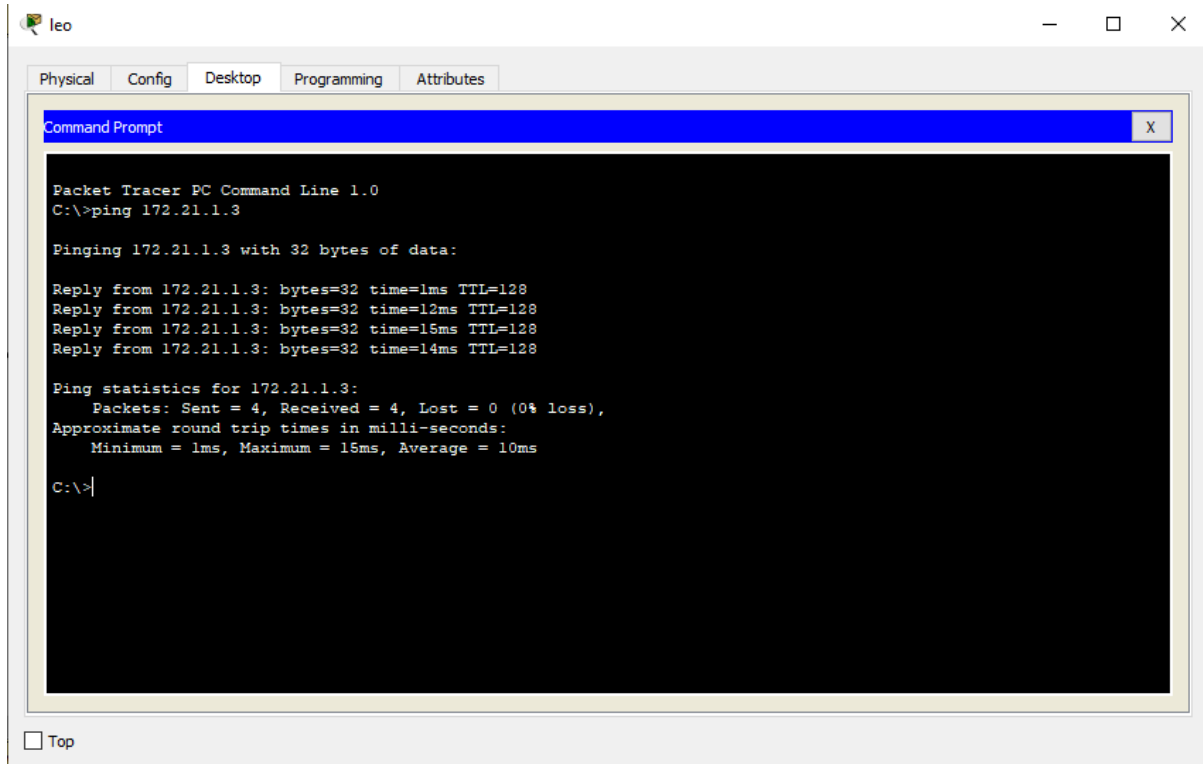
- Root bridge = Switch3 (Fa0/1, Fa0/2, Fa0/3)
- Designated bridge = Switch3(Fa0/1, Fa0/2, Fa0/3)
- Root port = Switch1(Fa0/1), Switch2(Fa0/2)
- Designated port = Switch1(Fa0/2, Fa0/3), Switch2(Fa0/1,Fa0/2,Fa0/3)
Switch3(Fa0/1, Fa0/2, Fa0/3)
-

Tugas 4D

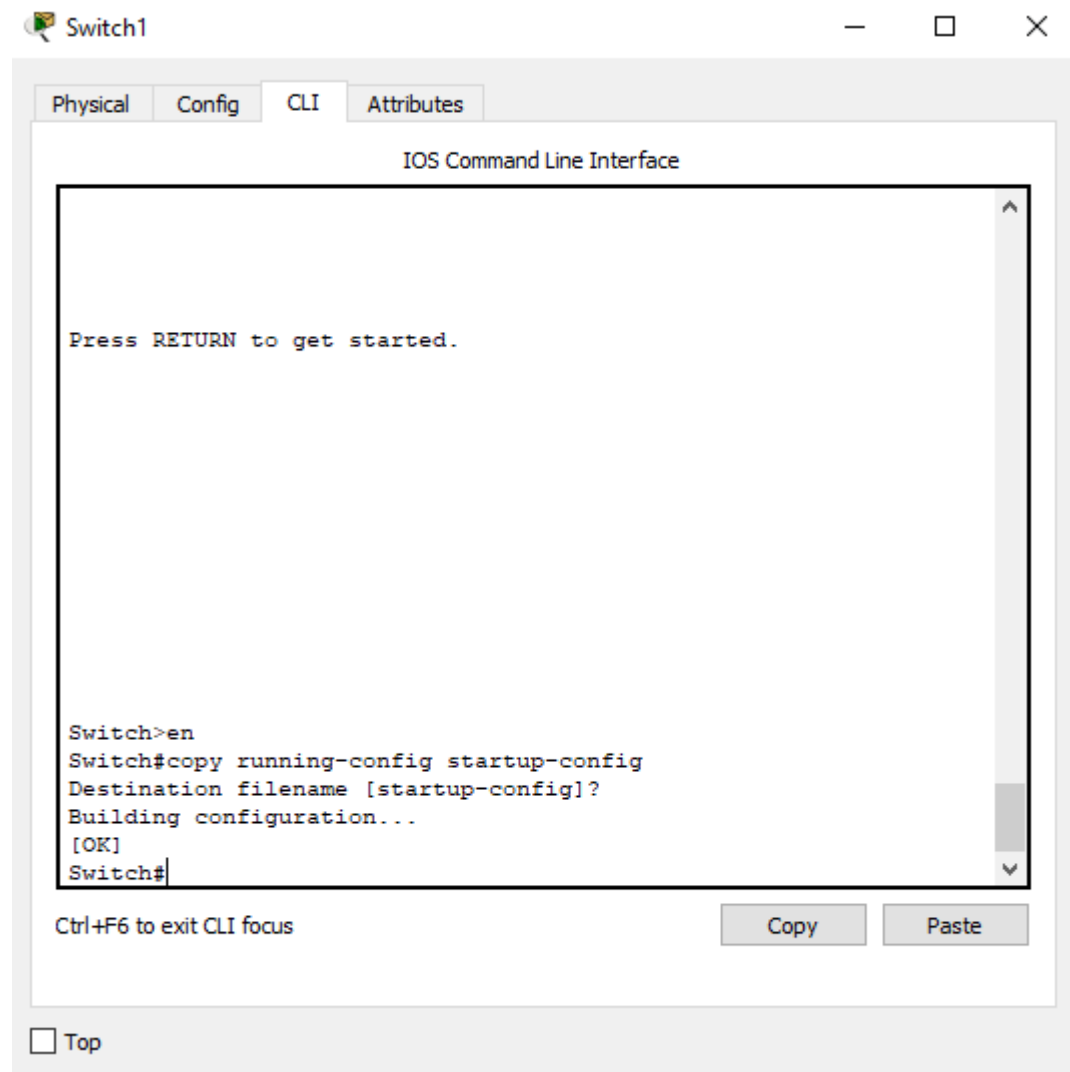
- Forwarding = Switch1(Fa0/2, Fa0/3), Switch2(Fa0/1,Fa0/2,Fa0/3)
Switch3(Fa0/1, Fa0/2, Fa0/3)
- Blocking = Switch1(Fa0/1)

Tugas 5A :

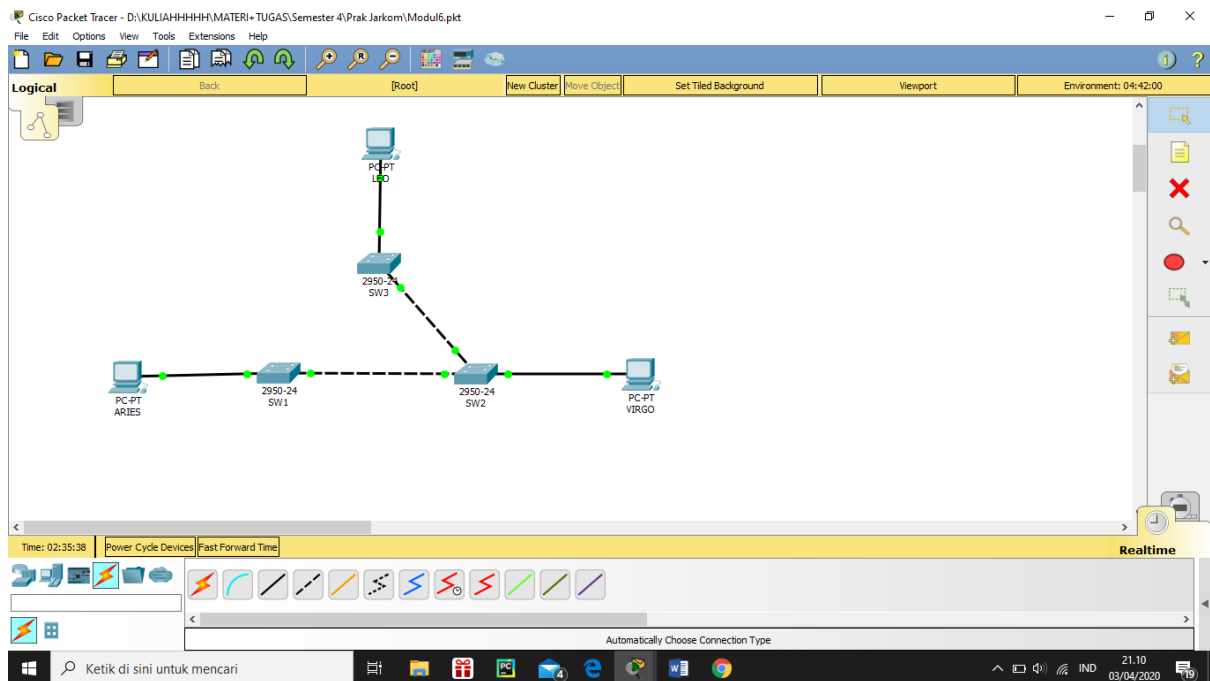
- Klik PC Leo
- Klik tab dekstop
- Pilih command prompt
- Ketikkan ping 172.21.1.2



Tugas 6A



Kegiatan 2



SW1

SW1
— □ ×

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     0001.9616.AE0E
             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     0030.F281.2EC3
             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

```

Ctrl+F6 to exit CLI focus

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No.	Variabel	Nilai
1.	Root ID	32769
2.	Priority	32768
3.	MAC Address	0001.9616.AE0E
4.	Bridge ID	32769
5.	Cost(0/1;0/2;0/3)	19;19
6.	Hello Time	2 sec
7.	MaxAge	20 sec
8.	Forward Delay	15 sec

SW2

The screenshot shows a network switch window titled 'SW2' with tabs for Physical, Config, CLI, and Attributes. The CLI tab is active, displaying the 'IOS Command Line Interface'. The user has entered the command 'show spanning-tree' for 'VLAN0001'. The output shows the spanning tree is enabled with protocol IEEE. The root bridge has ID 32769, priority 32769, address 0001.9616.AE0E, cost 19, and is connected to port 3 (FastEthernet0/3). The bridge ID is 32769, priority is 32768 (sys-id-ext 1), address is 0060.2F59.A2DB, and aging time is 20. The interface roles are: Fa0/3 is Root, Fa0/2 is Designated, and Fa0/1 is Designated. All interfaces have a cost of 19 and priority 128.

```

Switch>en
Switch#show spanning-tree
VLAN0001
  Spanning tree enabled protocol ieee
  Root ID    Priority    32769
             Address     0001.9616.AE0E
             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     0060.2F59.A2DB
             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
Fa0/1          Desg FWD 19        128.1    P2p

Switch#
  
```

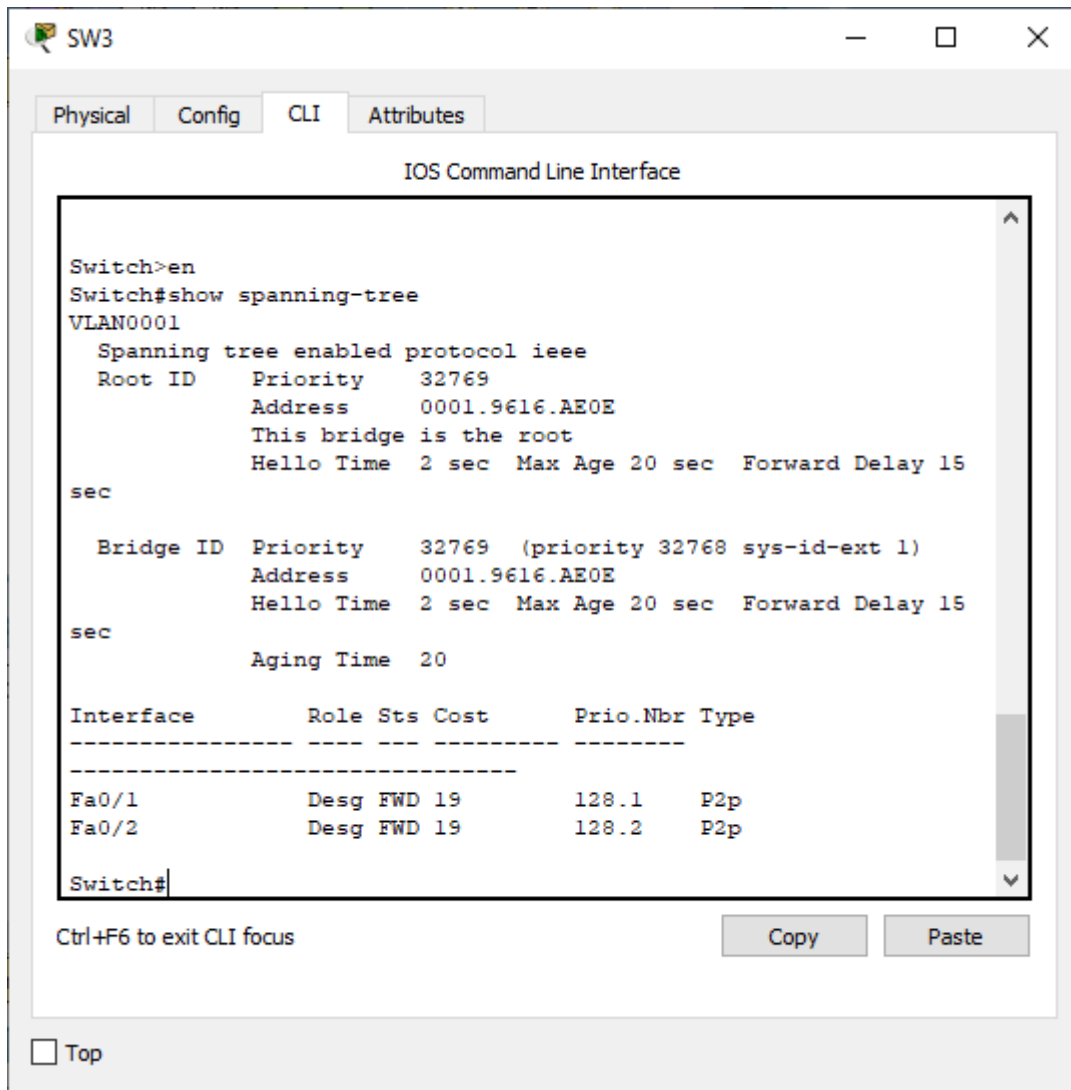
Ctrl+F6 to exit CLI focus

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No.	Variabel	Nilai
1.	Root ID	32769
2.	Priority	32768
3.	MAC Address	0001.9616.AE0E
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

SW3



The screenshot shows the CLI of a switch named SW3. The user has entered the command 'show spanning-tree' for VLAN0001. The output displays the spanning tree configuration, including the root ID (32769), priority (32768), MAC address (0001.9616.AE0E), and the role of the bridge (Designated). It also shows the interface roles and costs for Fa0/1 and Fa0/2.

```

Switch>en
Switch#show spanning-tree
VLAN0001
  Spanning tree enabled protocol ieee
  Root ID    Priority    32769
             Address     0001.9616.AE0E
             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     0001.9616.AE0E
             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
Switch#
  
```

Ctrl+F6 to exit CLI focus

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No.	Variabel	Nilai
1.	Root ID	32769
2.	Priority	32768
3.	MAC Address	0001.9616.AE0E
4.	Bridge ID	32769
5.	Cost(0/1;0/2;0/3)	19;19
6.	Hello Time	2 sec
7.	MaxAge	20 sec
8.	Forward Delay	15 sec

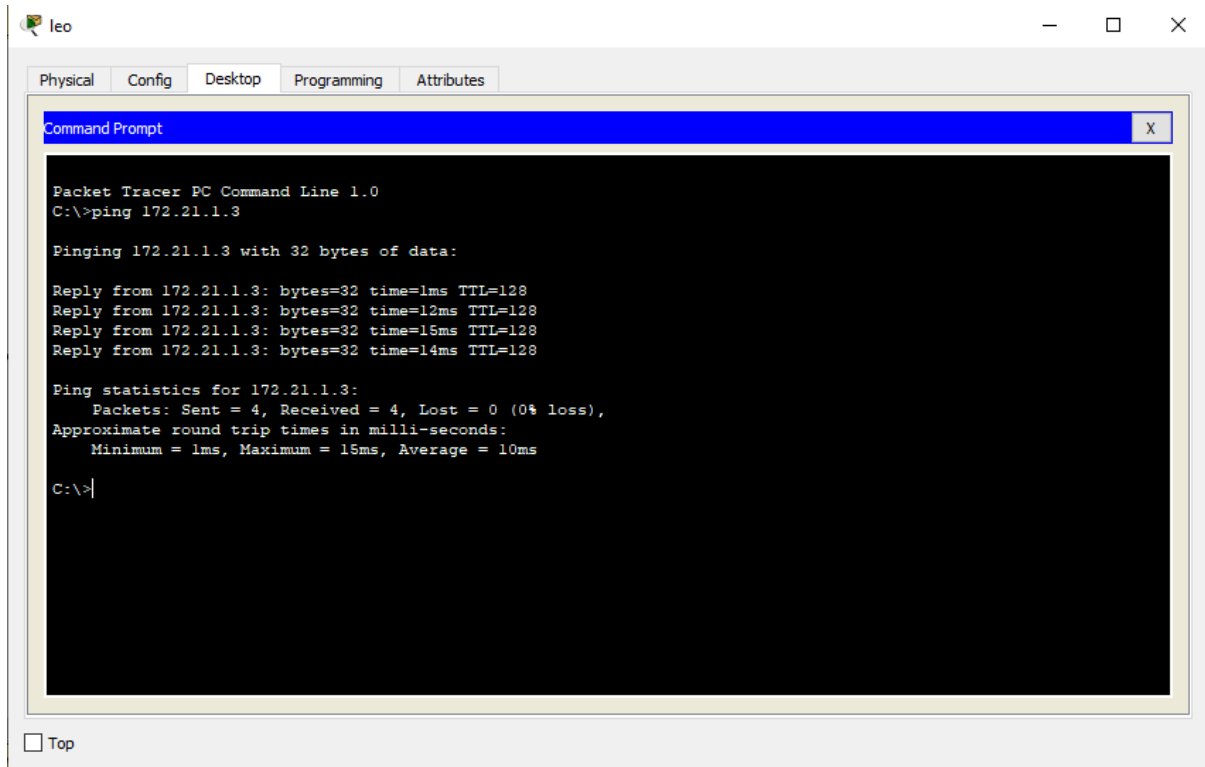
Menentukan :

- Root bridge = SW3(Fa0/1, Fa0/2)
- Designated bridge = SW3(Fa0/1, Fa0/2)
- Root port = SW2(Fa0/3)
- Designated port = SW1(Fa0/1, Fa0/2), SW2(Fa0/1,Fa0/2,Fa0/3), SW3(Fa0/1, Fa0/2)

Menentukan :

- Forwarding = SW1(Fa0/1, Fa0/2), SW2(Fa0/1,Fa0/2,Fa0/3), SW3(Fa0/1, Fa0/2)
- Blocking = Tidak ada

Ping 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=1ms TTL=128
Reply from 172.21.1.3: bytes=32 time=12ms TTL=128
Reply from 172.21.1.3: bytes=32 time=15ms TTL=128
Reply from 172.21.1.3: bytes=32 time=14ms 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 = 1ms, Maximum = 15ms, Average = 10ms

C:\>|
```

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