

## MODUL 6

Nama : Fachrul Rinaldi  
NIM : L200170042  
Kelas : A

### SW1

The screenshot shows a Cisco Packet Tracer environment. On the left, a network topology is visible with three switches (SW1, SW2, SW3) and several PCs. SW1 is connected to SW2 and SW3. SW2 is connected to PC-PT Leo and PC-PT Aries. SW3 is connected to PC-PT Wega. On the right, the CLI for SW1 is open, displaying the output of the 'show spanning-tree' command for VLAN0001. The output shows that SW1 is the root bridge for this VLAN.

```

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

Switch>show spanning-tree
VLAN0001
  Spanning tree enabled protocol ieee
    Root ID    Priority      32769
              Address      0002.17D7.2401
              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      0002.17D7.2401
              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
  
```

No	Variable	Nilai
1	Root ID	32769 / 0002.17D7.2401
2	Priority	32769
3	Mac Adres	0002.17D7.2401
4	Bridge ID	32769
5	Cost	19
6	Hello time	2 sec
7	Max Age	20 sec
8	Forward Delay	15 sec

Interface	Role	Sts	Cost
Fa 0/1	Desg	FWD	19
Fa 0/2	Desg	FWD	19
Fa 0/3	Desg	FWD	19

## SW2

The screenshot shows a Cisco Packet Tracer environment. On the left, a network diagram displays three switches (SW1, SW2, SW3) connected in a triangle topology. SW1 is connected to PC-PT L20, and SW2 is connected to PC-PT Aries. SW3 is connected to PC-PT V20. The switches are labeled '2950-24'. On the right, the CLI window for SW2 is open, showing the output of the 'show spanning-tree' command for VLAN 0001. The output displays the spanning tree details, including the root ID, priority, address, cost, port, and hello time, as well as the bridge ID, priority, address, hello time, max age, forward delay, and aging time. The interface table at the bottom shows the roles and costs for Fa0/1, Fa0/2, and Fa0/3.

```

Switch#show spanning-tree
VLAN0001
  Spanning tree enabled protocol ieee
    Root ID    Priority    Address       Cost    Port
               32769      0002.17D7.2401  19      3(FastEthernet0/3)
    Hello Time  2 sec    Max Age 20 sec Forward Delay 15 sec

    Bridge ID  Priority    (priority 32768 sys-id-ext 1)
    Address    0060.2F27.1D91
    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 Altn BLK 19 128.2 P2p
Fa0/3 Root FWD 19 128.3 P2p
Switch#
  
```

No	Variable	Nilai
1	Root ID	32769 / 0002.17D7.2401
2	Priority	32769
3	Mac Adres	0002.17D7.2401
4	Bridge ID	32769
5	Cost	19
6	Hello time	2 sec
7	Max Age	20 sec
8	Forward Delay	15 sec

Interface	Role	Sts	Cost
Fa 0/1	Desg	FWD	19
Fa 0/2	Altn	BLK	19
Fa 0/3	Desg	FWD	19

## SW3

The screenshot displays the Cisco Packet Tracer interface. On the left, a network diagram shows three switches (SW1, SW2, SW3) connected in a triangle topology. SW1 is connected to PC-PT L20, and SW2 is connected to PC-PT Aries. SW3 is connected to PC-PT V20. The right pane shows the CLI of switch SW3. The CLI output includes status messages for interface FastEthernet0/3, spanning tree configuration for VLAN0001, and a table showing the spanning tree details for each interface.

```

Switch#
Switch#show spanning-tree
VLAN0001
  Spanning tree enabled protocol ieee
  Root ID    Priority    32769
             Address     0002.17D7.2401
             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     0040.0B04.77A2
             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
Switch#
  
```

No	Variable	Nilai
1	Root ID	32769 / 0002.17D7.2401
2	Priority	32769
3	Mac Adres	0002.17D7.2401
4	Bridge ID	32769
5	Cost	19
6	Hello time	2 sec
7	Max Age	20 sec
8	Forward Delay	15 sec

Interface	Role	Sts	Cost
Fa 0/1	Desg	FWD	19
Fa 0/2	Root	FWD	19
Fa 0/3	Desg	FWD	19

## Tugas 4C

Menjadi root bridge pada SW1

Menjadi designated bridge pada SW1 Fa0/1, Fa0/2, Fa0/3

Menjadi root port pada SW3 Fa0/2 dan SW2 Fa0/3

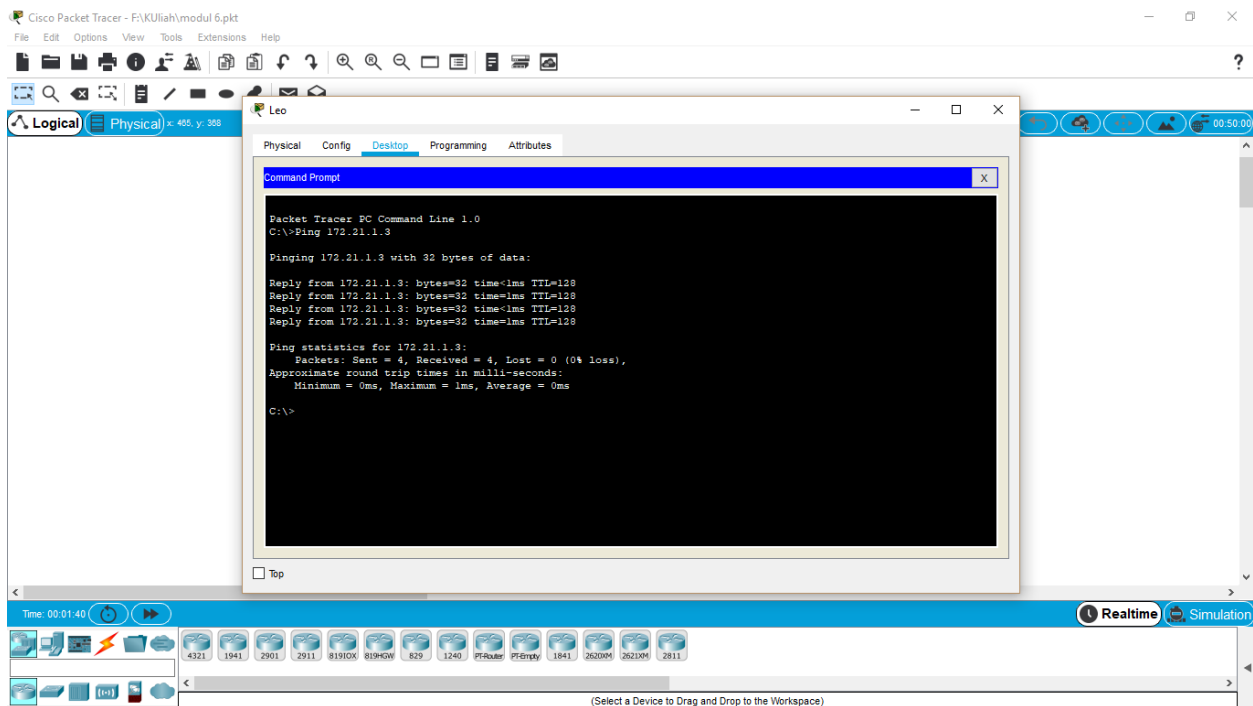
Menjadi designated port pada SW3 Fa 0/1, dan Fa0/3

## Tugas 4D

Keadaan *forwarding* pada SW1 dan SW3

Keadaan *blocking* pada SW2

Ping Leo ke Virgo



## Kegiatan 2

### SW1

The screenshot shows the Cisco Packet Tracer interface. On the left, a network topology is visible with three switches (SW1, SW2, SW3) and several PCs. SW1 is connected to SW2, which is connected to SW3. SW3 is also connected to a PC labeled 'Vino'. The bottom of the interface shows a toolbar with various network components and a status bar indicating the time is 00:04:26.

On the right, the CLI window for switch SW1 is open, showing the following output:

```

IOS Command Line Interface
%LINK-5-CHANGED: Interface FastEthernet0/2, changed state to up
%LINEPROTO-5-UPDOWN: Line protocol on Interface FastEthernet0/1, changed state to up
%LINK-5-CHANGED: Interface FastEthernet0/2, changed state to up
%LINEPROTO-5-UPDOWN: Line protocol on Interface FastEthernet0/2, changed state to up
%LINK-5-CHANGED: Interface FastEthernet0/3, changed state to up
%LINEPROTO-5-UPDOWN: Line protocol on Interface FastEthernet0/3, changed state to up
%LINK-5-CHANGED: Interface FastEthernet0/2, changed state to down
%LINEPROTO-5-UPDOWN: Line protocol on Interface FastEthernet0/2, changed state to down

Switch#en
Switch#show spanning-tree
VLAN0001
  Spanning tree enabled protocol ieee
    Root ID    Priority    32769
              Address    0002.17D7.2401
              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    0002.17D7.2401
              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

Switch#
  
```

No	Variable	Nilai
1	Root ID	32769 / 0002.17D7.2401
2	Priority	32769
3	Mac Adres	0002.17D7.2401
4	Bridge ID	32769
5	Cost	19
6	Hello time	2 sec
7	Max Age	20 sec
8	Forward Delay	15 sec

Interface	Role	Sts	Cost
Fa 0/1	Desg	FWD	19
Fa 0/3	Desg	FWD	19

## SW2

The screenshot shows a Cisco Packet Tracer interface with a network topology and the CLI for switch SW2. The topology includes PC-PT Leo, SW1, SW2, and PC-PT Aries. SW2 is connected to SW1 and SW3. The CLI shows the configuration of VLAN 0001 and the spanning-tree protocol.

```

Switch>EN
Switch#show spanning-tree
VLAN0001
  Spanning tree enabled protocol ieee
  Root ID    Priority    32769
             Address     0002.17D7.2401
             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     0060.2F27.1D91
             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
  
```

No	Variable	Nilai
1	Root ID	32769 / 0002.17D7.2401
2	Priority	32769
3	Mac Adres	0002.17D7.2401
4	Bridge ID	32769
5	Cost	19
6	Hello time	2 sec
7	Max Age	20 sec
8	Forward Delay	15 sec

Interface	Role	Sts	Cost
Fa 0/1	Desg	FWD	19
Fa 0/2	Desg	FWD	19
Fa 0/3	Root	FWD	19

## SW3

The image shows a Cisco Packet Tracer network diagram and the CLI configuration for switch SW3. The network diagram on the left shows a topology with three switches: SW1, SW2, and SW3. SW1 is connected to SW2, and SW2 is connected to SW3. SW3 is also connected to a PC-PT Leo. The CLI window on the right shows the configuration for SW3, including the spanning-tree protocol settings and the status of the interfaces.

**SW3 CLI Configuration:**

```

Switch#show spanning-tree
VLAN0001
  Spanning tree enabled protocol ieee
    Root ID    Priority
    Address    0002.17D7.2401
    Cost       38
    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      0040.0B04.77A2
  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
  
```

No	Variable	Nilai
1	Root ID	32769 / 0002.17D7.2401
2	Priority	32769
3	Mac Adres	0002.17D7.2401
4	Bridge ID	32769
5	Cost	38
6	Hello time	2 sec
7	Max Age	20 sec
8	Forward Delay	15 sec

Interface	Role	Sts	Cost
Fa 0/1	Desg	FWD	19
Fa 0/3	root	FWD	19

## Tugas 4C

Menjadi root bridge pada SW1

Menjadi designated bridge pada SW1 Fa0/1, Fa0/2

Menjadi root port pada SW3 Fa0/3 dan SW2 Fa0/3

Menjadi designated port pada SW3 Fa 0/1

## Tugas 4D

Keadaan *forwarding* pada SW1, SW2 dan SW3

Keadaan *blocking* pada –

Ping Leo ke Virgo

The image displays two side-by-side windows from the Cisco Packet Tracer application.

The left window, titled "Cisco Packet Tracer - F:\Kuliah\modul 6.1.pkt", shows a network topology in the "Logical" tab. The network consists of three switches: SW1 (2950-24), SW2 (2950-24), and SW3 (2950-24). SW1 is connected to SW2, and SW2 is connected to SW3. PC-PT Leo is connected to SW1, and PC-PT Aries is connected to SW2. PC-PT Virgo is connected to SW3. The status bar at the bottom indicates "Time: 00:01:22" and "Realtime" mode.

The right window, titled "Leo", shows a "Command Prompt" window. The output of the command "C:\>ping 172.21.1.3" is displayed, showing four successful replies from 172.21.1.3 with 32 bytes of data, each taking 1ms. The ping statistics show 4 packets sent, 4 received, and 0% loss.

```
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=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 = 1ms, Average = 0ms

C:\>
```