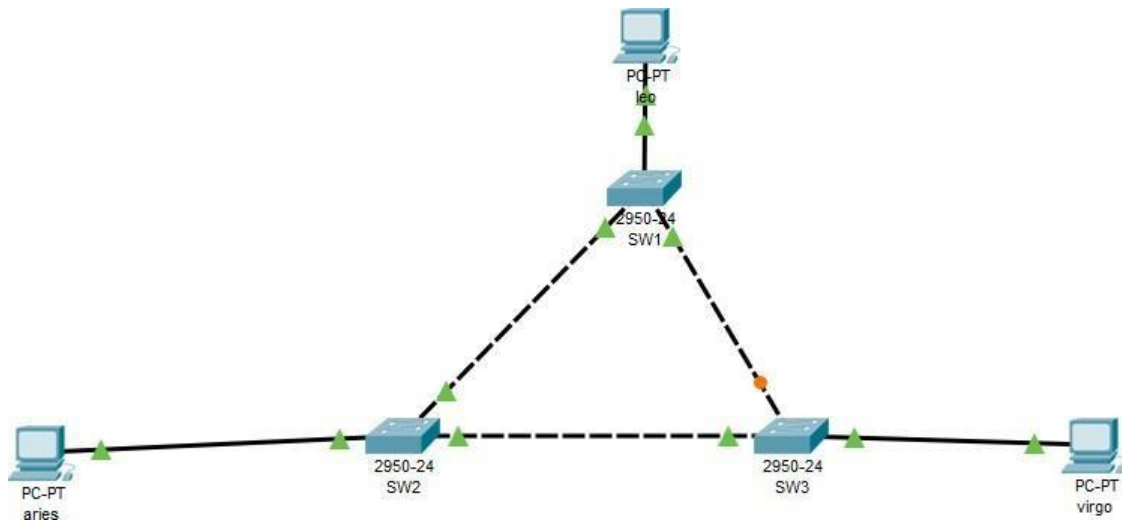


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Modul 6

Praktikum Jaringan Komputer

1. Topologi 1



Tugas 1A:

Pertama kita beri 3 Switch 2950-24 lalu kita beri masing-masing PC per Switch dan sambungkan antar peripheral dengan media transmisi kabel

Tugas 2A:

SW1

Switch>en

Switch#conf t

Enter configuration commands, one per line. End with CNTL/Z.

Switch(config)#hostname SW1

SW1(config)#end

SW2

Switch>en

Switch#conf t

Enter configuration commands, one per line. End with CNTL/Z.

Switch(config)#hostname SW2

SW2(config)#end

SW3

Switch>en

Switch#conf t

Enter configuration commands, one per line. End with CNTL/Z.

Switch(config)#hostname SW3

SW3(config)#end

Tugas 4A:

SW1

The screenshot shows the CLI of switch SW1. The 'CLI' tab is selected. The command 'show spanning-tree' has been executed, displaying the spanning-tree protocol status for VLAN0001. The output shows the root ID, bridge ID, and a table of interfaces with their roles and costs.

```
SW1>en
SW1#show spanning-tree
VLAN0001
  Spanning tree enabled protocol ieee
  Root ID    Priority    32769
             Address     0005.5E1E.E626
             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     0060.3E9B.9385
             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
```

SW1#

Ctrl+F6 to exit CLI focus

Copy Paste

☐ Top

SW2

Physical

Config

CLI

Attributes

SW2

IOS Command Line Interface

changed state to up

SW2>en
SW2#show spanning-tree
VLAN0001
Spanning tree enabled protocol ieee
Root ID Priority 32769
 Address 0005.5E1E.E626
 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 0005.5E1E.E626
 Hello Time 2 sec Max Age 20 sec Forward Delay 15 sec
 Aging Time 20

Interface Role Sts Cost Prio.Nbr Type

Fa0/3 Desg FWD 19 128.3 P2p
Fa0/1 Desg FWD 19 128.1 P2p
Fa0/2 Desg FWD 19 128.2 P2p

SW2#

Ctrl+F6 to exit CLI focus

Copy

Paste

☐ Top

SW3

SW3

Physical Config **CLI** Attributes

IOS Command Line Interface

```
SW3>en
SW3#show spanning-tree
VLAN0001
  Spanning tree enabled protocol ieee
  Root ID    Priority    32769
             Address     0005.5E1E.E626
             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     0090.2BBC.D8B8
             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        Altn BLK 19        128.3    P2p
Fa0/2        Root FWD 19        128.2    P2p

SW3#
```

Ctrl+F6 to exit CLI focus

Copy Paste

☐ Top

Tugas 4B:**SW1**

| No | Variabel | Nilai |
|----|-------------------|----------------|
| 1 | Root ID | 0005.5E1E.E626 |
| 2 | Priority | 32769 |
| 3 | Mac Address | 0060.3E9B.9385 |
| 4 | Bridge ID | 0060.3E9B.9385 |
| 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 |

SW2

| No | Variabel | Nilai |
|----|-------------------|----------------|
| 1 | Root ID | 0005.5E1E.E626 |
| 2 | Priority | 32769 |
| 3 | Mac Address | 0005.5E1E.E626 |
| 4 | Bridge ID | 0005.5E1E.E626 |
| 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

| No | Variabel | Nilai |
|----|-------------------|----------------|
| 1 | Root ID | 0005.5E1E.E626 |
| 2 | Priority | 32769 |
| 3 | Mac Address | 0090.2BBC.D8B8 |
| 4 | Bridge ID | 0090.2BBC.D8B8 |
| 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 : SW2

Designated bridge : SW1

Root port : SW1 (Fa0/2), SW3(Fa0/2)

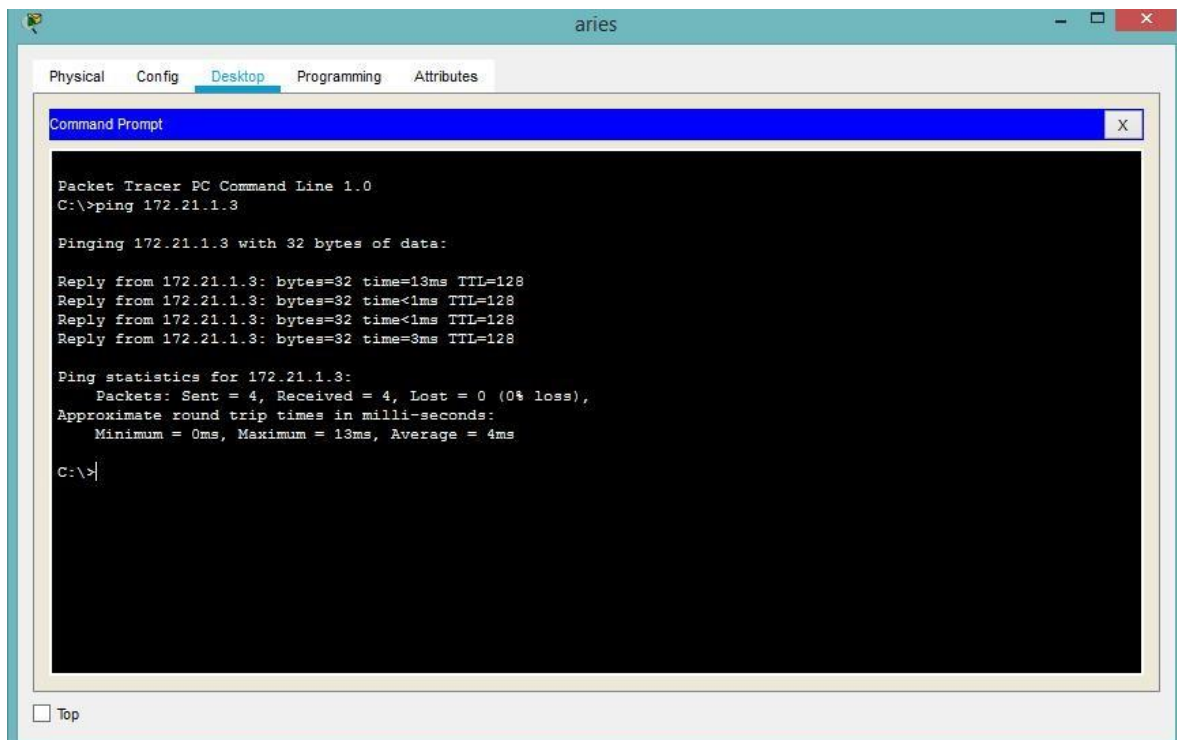
Designated port : SW1(Fa0/1;Fa0/3), SW2(Fa0/1,Fa0/2,Fa0/3), SW3(Fa0/1)

Tugas 4D:

Forwarding :SW1(Fa0/1;Fa0/2;Fa0/3), SW2(Fa0/1;Fa0/2;Fa0/3), SW3(Fa0/1;Fa0/2)

Blocking : SW3(Fa0/3)

Tugas 5A:



Masuk ke PC >> Desktop >> Command Prompt

Lalu ketik “ping 172.21.1.3”

Tugas 6A:

Lakukan perintah dibawah untuk setiap switch :

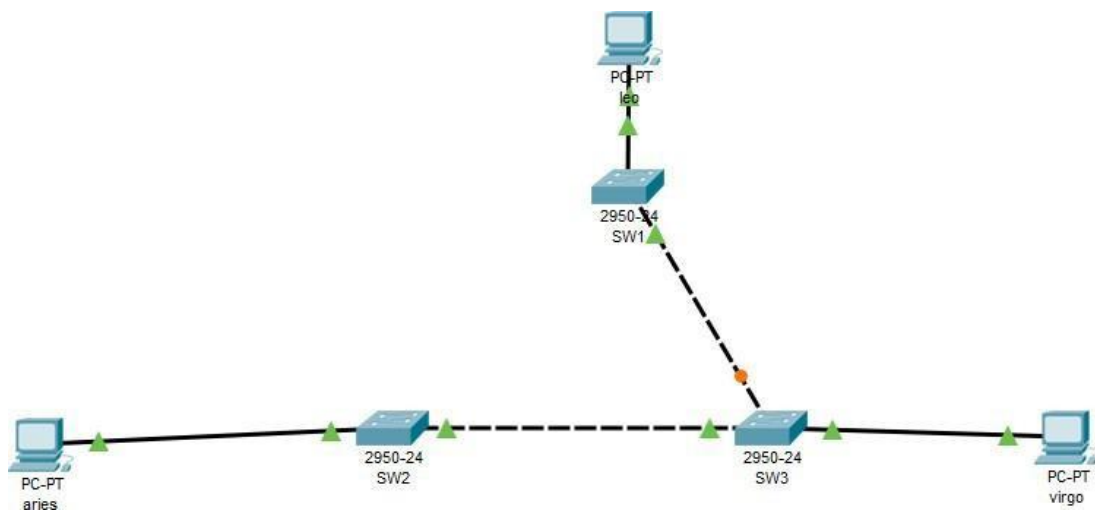
SW1>en

SW1#write

Building configuration...

[OK]

Kegiatan 2. Topologi 2



Tugas 9A:

SW1

The screenshot shows a network simulator window titled 'SW1'. It has four tabs: 'Physical', 'Config', 'CLI', and 'Attributes'. The 'CLI' tab is active, displaying the 'IOS Command Line Interface'. The command history shows 'changed state to down', 'SW1>en', and 'SW1#show spanning-tree'. The output for 'VLAN0001' is as follows:

```
Spanning tree enabled protocol ieee
Root ID    Priority    32769
           Address    0005.5E1E.E626
           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    0060.3E9B.9385
           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#

At the bottom of the CLI window, there is a prompt 'Ctrl+F6 to exit CLI focus' and two buttons: 'Copy' and 'Paste'. Below the CLI window, there is a checkbox labeled 'Top'.

SW2

Physical

Config

CLI

Attributes

SW2

IOS Command Line Interface

```
%LINEPROTO-5-UPDOWN: Line protocol on Interface FastEthernet0/3,
changed state to down

SW2#en
SW2#show spanning-tree
VLAN0001
  Spanning tree enabled protocol ieee
    Root ID    Priority    32769
              Address     0005.5E1E.E626
              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     0005.5E1E.E626
              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

SW2#
```

Ctrl+F6 to exit CLI focus

Copy

Paste

☐ Top

SW3

The screenshot shows the SW3 CLI interface with the following output:

```

SW3>en
SW3#show spanning-tree
VLAN0001
  Spanning tree enabled protocol ieee
  Root ID    Priority    32769
             Address     0005.5E1E.E626
             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     0090.2BBC.D8B8
             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
  
```

Below the CLI output, there are buttons for "Copy" and "Paste", and a "Top" button with a checkbox.

SW1

| No | Variabel | Nilai |
|----|---------------|----------------|
| 1 | Root ID | 0005.5E1E.E626 |
| 2 | Priority | 32769 |
| 3 | Mac Address | 0060.3E9B.9385 |
| 4 | Bridge ID | 0060.3E9B.9385 |
| 5 | Cost(0/2;0/3) | 19/19/19 |
| 6 | Hello Time | 2 sec |
| 7 | MaxAge | 20 sec |

| | | |
|---|---------------|--------|
| 8 | Forward Delay | 15 sec |
|---|---------------|--------|

| No | Variabel | Nilai |
|----|-------------------|----------------|
| 1 | Root ID | 0005.5E1E.E626 |
| 2 | Priority | 32769 |
| 3 | Mac Address | 0090.2BBC.D8B8 |
| 4 | Bridge ID | 0090.2BBC.D8B8 |
| 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 |
|---|---------------|--------|

SW2

| No | Variabel | Nilai |
|----|---------------|----------------|
| 1 | Root ID | 0005.5E1E.E626 |
| 2 | Priority | 32769 |
| 3 | Mac Address | 0005.5E1E.E626 |
| 4 | Bridge ID | 0005.5E1E.E626 |
| 5 | Cost(0/2;0/3) | 19/19 |
| 6 | Hello Time | 2 sec |
| 7 | MaxAge | 20 sec |
| 8 | Forward Delay | 15 sec |

SW3 Root bridge : SW2

Designated bridge : SW3

Root port : SW1 (Fa0/3), SW3(Fa0/2)

Designated port : SW1(Fa0/1), SW2(Fa0/1;Fa0/2), SW3(Fa0/1;Fa0/3)

Forwarding : SW1(Fa0/1;Fa0/3), SW2(Fa0/1;Fa0/2), SW3(Fa0/1;Fa0/2;Fa0/3)

Blocking : None