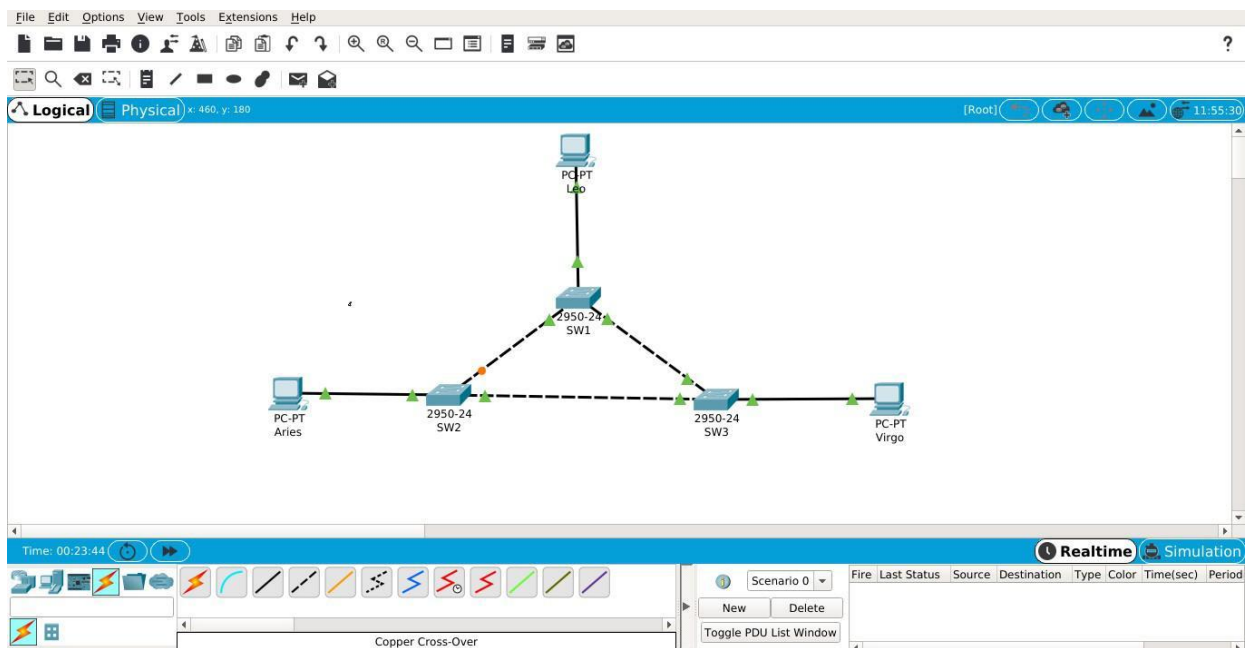


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Kegiatan & Tugas

Kegiatan1. Topologi 1

1. A. Berikut adalah struktur topologi.



2. A. dari struktur jaringan diatas terdapat 3 Switch dan 3 *Workstation*, dengan nama *Switch* yaitu SW1, SW2, dan SW3. Sedangkan *Workstation* ialah Leo, Aries, dan Virgo.
3. Setelah itu konfigurasi setiap *Workstation* dengan IP Address :
 - Leo = 172.21.1.1/24

Leo

Physical Config **Desktop** Programming Attributes

☐ 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::2E0:8FFF:FE0D:8B5

IPv6 Gateway

IPv6 DNS Server

802.1X

☐ Use 802.1X Security

Authentication MD5

☐ Top

◦ Aries = 172.21.1.2/24

Aries

Physical Config **Desktop** Programming Attributes

☐ 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::202:4AFF:FECC:5009

IPv6 Gateway

IPv6 DNS Server

802.1X

☐ Use 802.1X Security

Authentication MD5

☐ Top

◦ Virgo =
172.21.1.3/24

Virgo

Physical Config **Desktop** Programming Attributes

☐ 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::20C:85FF:FEA0:B38B

IPv6 Gateway:

IPv6 DNS Server:

802.1X

☐ Use 802.1X Security

Authentication: MD5

☐ Top

4. A. Tampilan masing-masing status STP(*Spanning Tree Protocol*) pada Switch.

SW1

Physical Config **CLI** Attributes

IOS Command Line Interface

```

APPLY completed.
Exiting....
Switch#
Switch#show spanning-tree
VLAN0001
  Spanning tree enabled protocol ieee
    Root ID    Priority    32769
              Address     0005.5EAA.02D5
              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     000D.BDAD.A092
              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
Switch#
  
```

Ctrl+F6 to exit CLI focus

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☐ Top

SW2

PhysicalConfigCLIAttributes

IOS Command Line Interface

Switch>en
Switch#show spanning-tree
VLAN0001
Spanning tree enabled protocol ieee
Root ID Priority 32769
 Address 0005.5EAA.02D5
 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 0060.7004.B00A
 Hello Time 2 sec Max Age 20 sec Forward Delay 15 sec
 Aging Time 20

Interface Role Sts Cost Prio.Nbr Type

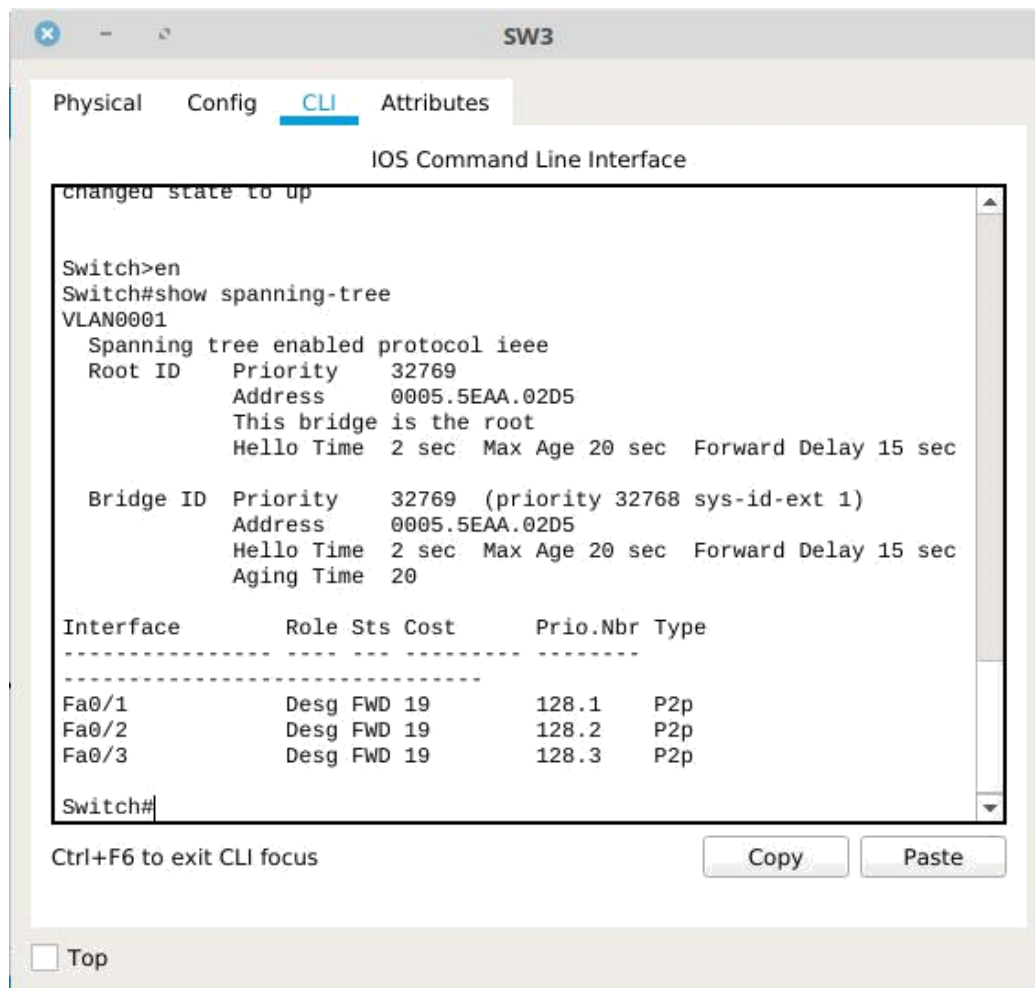
Fa0/1 Desg FWD 19 128.1 P2p
Fa0/2 Altn BLK 19 128.2 P2p
Fa0/3 Root FWD 19 128.3 P2p

Switch#

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☐ Top



B. informasi pada masing-masing

switch. ◦ SW1

No	Variable	Nilai
	Root ID	
1	Priority	32769
2	MAC Adrrss	0005.5EAA.02D5
	Bridge ID	
3	Cost(0/1;0/2;0/3)	19
4	Hello Time	2 Sec
5	Max Age	20 Sec
6	Forward Delay	15 Sec

◦ SW2

No	Variable	Nilai
	RootID	

1	Priority	32769
2	MAC Address	0005.5EAA.02D5
	Bridge ID	

3	Cost(0/1;0/2;0/3)	19
4	Hello Time	2 Sec
5	Max Age	20 Sec
6	Forward Delay	15 Sec

◦ SW3

No	Variable	Nilai
	Root ID	
1	Priority	32769
2	MAC Address	0005.5EAA.02D5
	Bridge ID	
3	Cost(0/1;0/2;0/3)	19
4	Hello Time	2 Sec
5	Max Age	20 Sec
6	Forward Delay	15 Sec

C. Pada kondisi default *Switch* dan *Port* yang menjadi :

- *Root Bridge* ialah **Switch SW3**
- *Designated Bridge* ialah **Switch SW1**
- *Root Port* ialah **Fa0/3** pada **SW1** dan **Fa0/3** pada **SW2**
- *Designated Port* ialah **Fa0/1** dan **Fa0/2**

D. Pada kondisi default port yang :

- Berada pada keadaan *forwarding* pada **SW1(Fa0/1, Fa0/2, dan Fa0/3)**, **SW2(Fa0/1 dan Fa0/3)**, dan **SW3(Fa0/1, Fa0/2, dan Fa0/3)**.
- Berada pada keadaan *blocking* pada **SW2 (Fa0/2)**.

5. A. Ping dari 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:

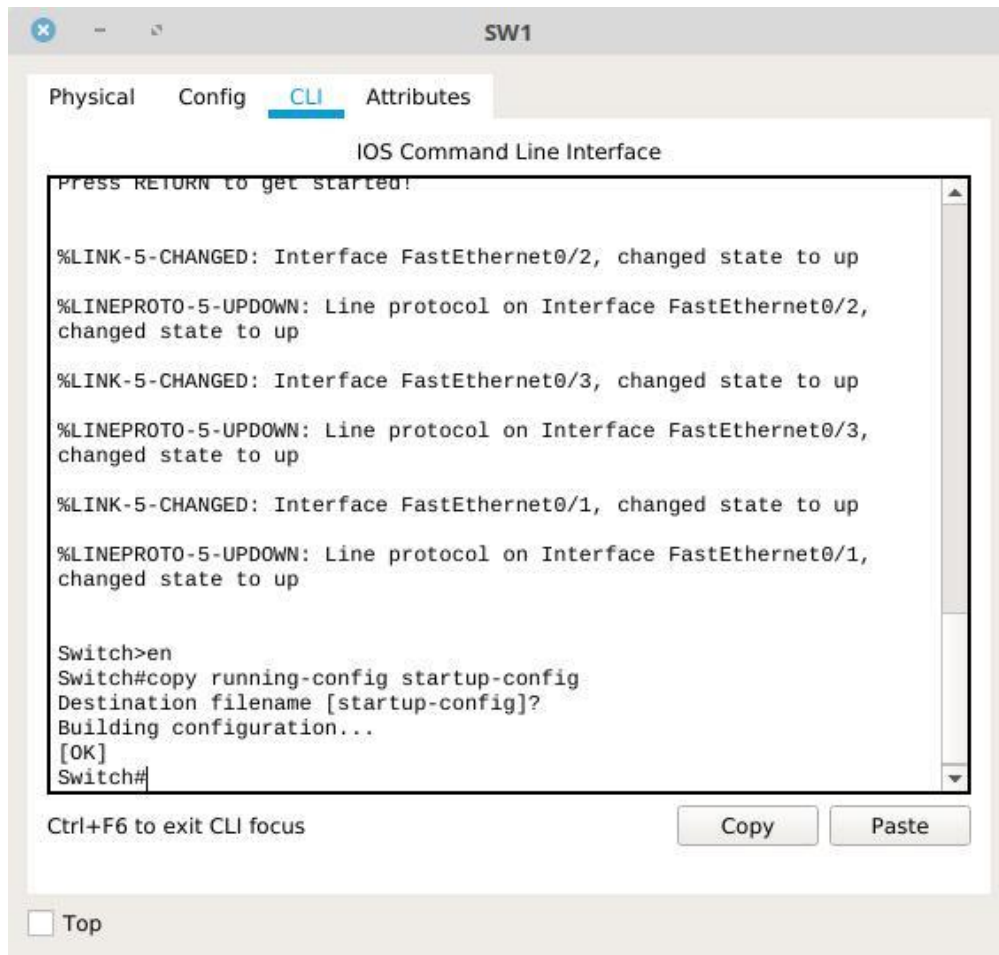
Reply from 172.21.1.3: bytes=32 time=48ms TTL=128
Reply from 172.21.1.3: bytes=32 time<1ms TTL=128
Reply from 172.21.1.3: bytes=32 time<1ms TTL=128
Reply from 172.21.1.3: bytes=32 time<1ms TTL=128

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 = 48ms, Average = 12ms

C:\>|

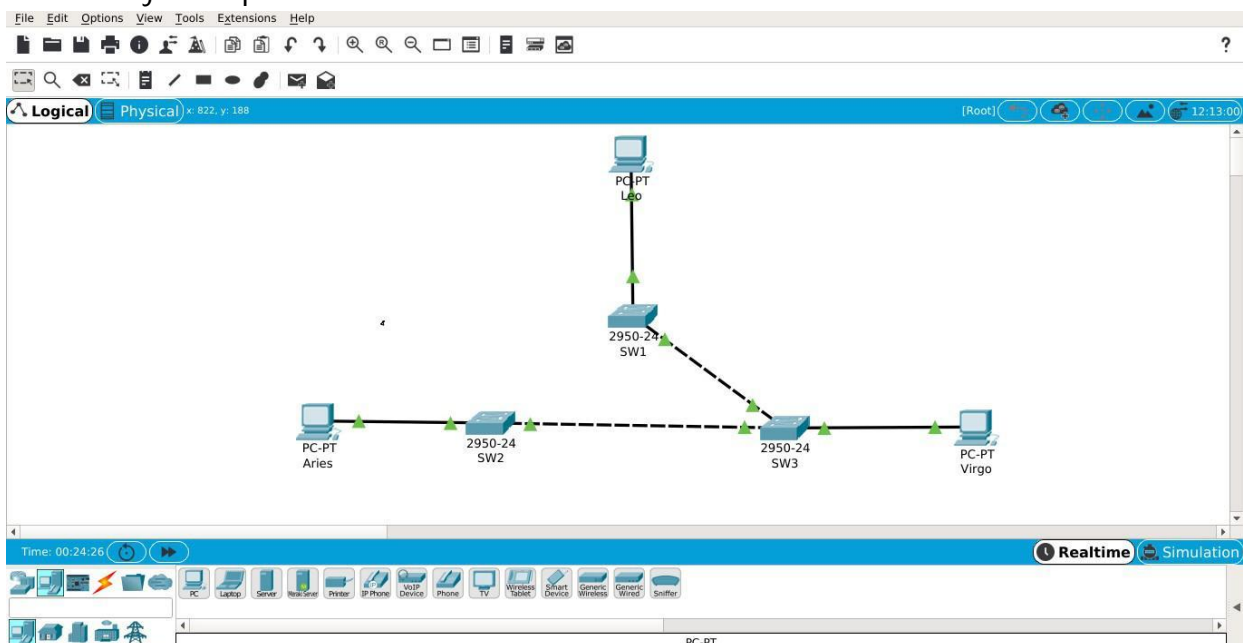
```

6. A. Menyimpan konfigurasi Switch.



Kegiatan 2. Topologi 2

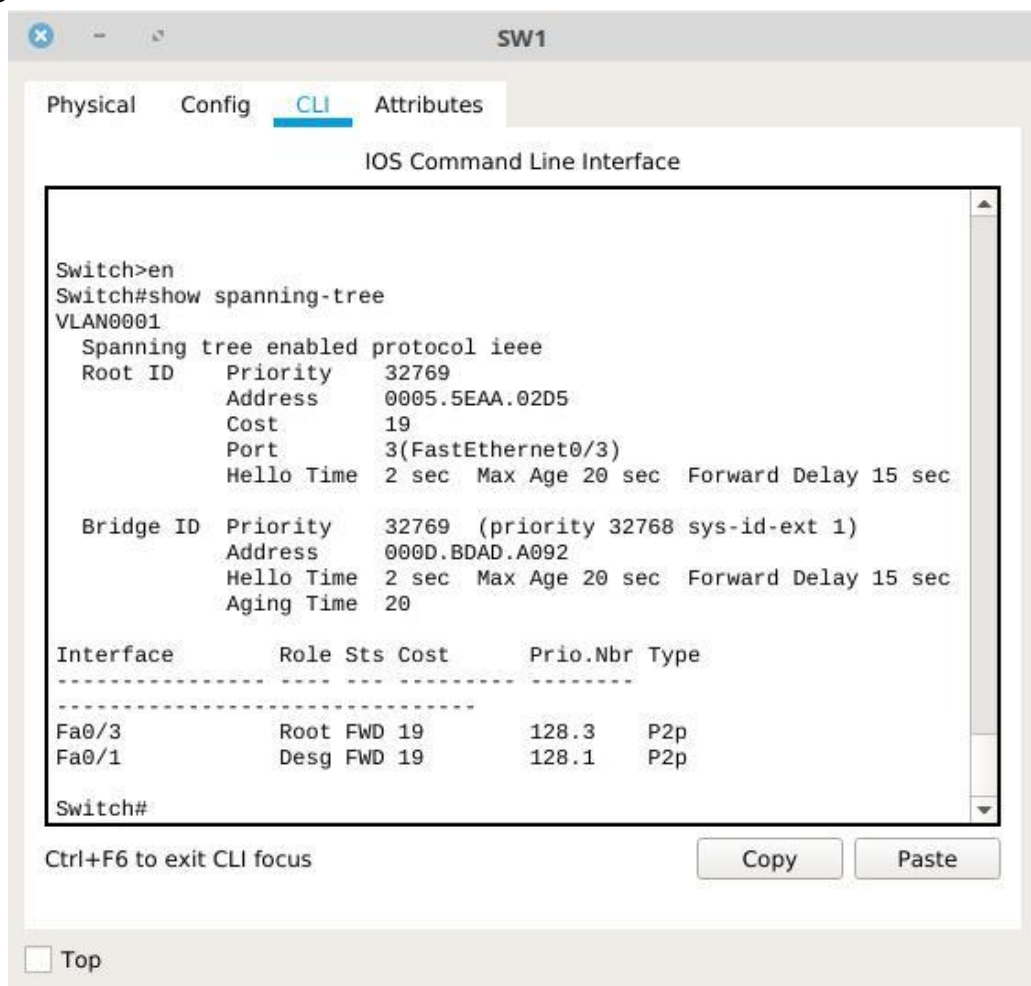
1. menggunakan Packet Tracer mengubah struktur jaringan sebelumnya menjadi seperti dibawah ini.



9. A. Setelah mengubah struktur topologi jaringan selanjutnya lakukan seperti pada kegiatan 1 No 4 menentukan kondisi *default* tersebut, *switch* dan *port* dengan mengetik ***show spanning-tree*** pada masing-masing *Switch* .

- Menjadi *root bridge* adalah **SW3**
- Menjadi *designated bridge* adalah tidak ada yang memiliki jalur terblok.
- Menjadi *root port* adalah **SW1 (Fa0/3) dan SW2(Fa0/3)**.
- Menjadi *designated port* adalah tidak ada *designated port* karena pada *designated bridge* tidak ada jalur yang ter blok.

Pada semua *switch* semua *port* pada keadaan *Forwarding*, tidak ada *port* yang ter *Blocking*.



The screenshot shows a network switch window titled 'SW1' 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 is SW3 (Root ID: 32769, Address: 0005.5EAA.02D5, Port: 3(FastEthernet0/3)). The local switch (SW1) is a designated bridge (Bridge ID: 32769, Address: 000D.BDAD.A092, Port: Fa0/3). The output also shows the role and status of the interfaces Fa0/3 and Fa0/1.

```
Switch>en
Switch#show spanning-tree
VLAN0001
  Spanning tree enabled protocol ieee
  Root ID    Priority    32769
             Address     0005.5EAA.02D5
             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     000D.BDAD.A092
             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
Fa0/1                Desg FWD 19        128.1    P2p

Switch#
```

Ctrl+F6 to exit CLI focus

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☐ Top

SW2

PhysicalConfigCLIAttributes

IOS Command Line Interface

Switch>en
Switch#show spanning-tree
VLAN0001
Spanning tree enabled protocol ieee
Root ID Priority 32769
 Address 0005.5EAA.02D5
 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 0060.7004.B00A
 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
Fa0/1 Desg FWD 19 128.1 P2p

Switch#

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SW3

PhysicalConfigCLIAttributes

IOS Command Line Interface

Switch>en
Switch#show spanning-tree
VLAN0001
Spanning tree enabled protocol ieee
Root ID Priority 32769
 Address 0005.5EAA.02D5
 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 0005.5EAA.02D5
 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#

Ctrl+F6 to exit CLI focus

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