

Nama : Aisyah Goevara

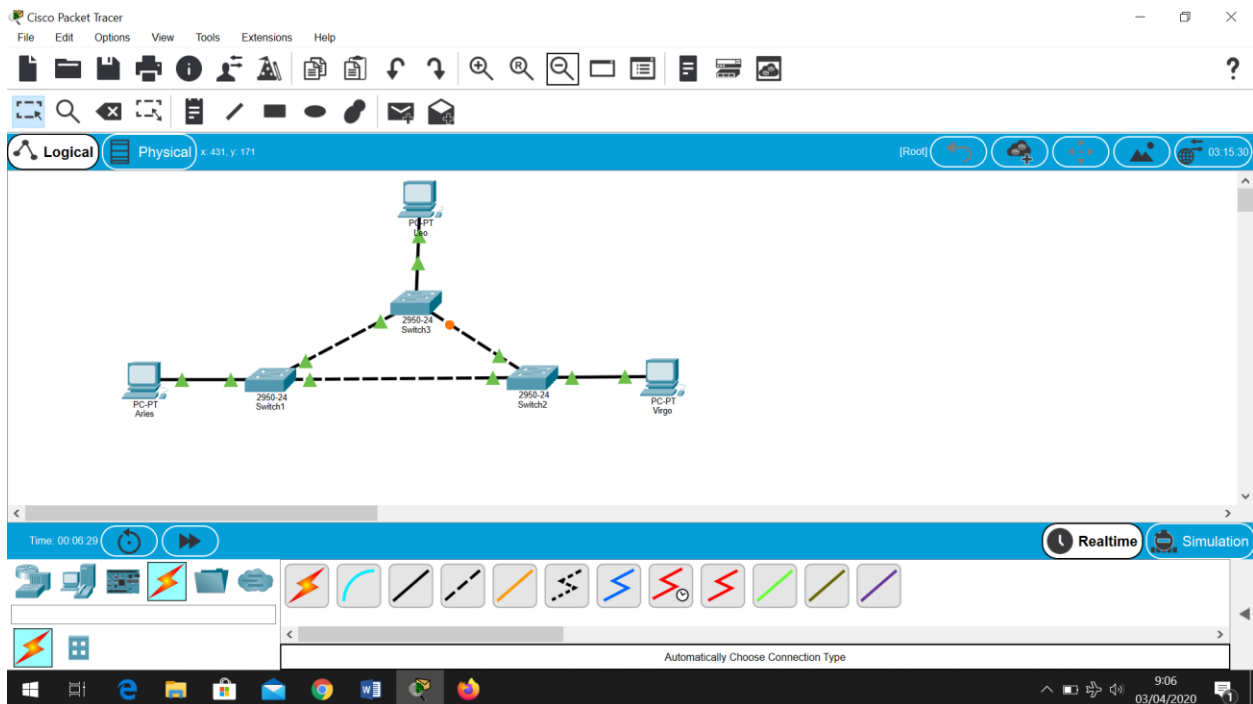
NIM : L200180034

Kelas : B

Modul 6

Spanning Tree Protocol

1. Kegiatan 1. Topologi 1



Tugas 1A

- Pilih pada bagian Network Device, switches, pilih tipe 2950-24, letakkan 3 switch, berikan nama SW1, SW2, SW3 pada masing-masing switch.
- Pilih pada bagian End Device, PC, letakkan 3 komputer, berikan nama Aries, Leo dan Virgo pada masing-masing computer.
- Hubungkan dengan kabel.

Tugas 2A

Langkah-langkah pemberian nama masing-masing dengan SW1, SW2, dan SW3 dengan cara klik enable, ketik conf term, ketik hostname SW1/SW2/SW3 ketik exit.

Switch1

PhysicalConfigCLIAttributes

IOS Command Line Interface

Motherboard revision number: A0
Model number: WS-C2950-24
System serial number: FHK0610Z0WC

Cisco Internetwork Operating System Software
IOS (tm) C2950 Software (C2950-I6Q4L2-M), Version 12.1(22)EA4, RELEASE SOFTWARE(fc1)
Copyright (c) 1986-2005 by cisco Systems, Inc.
Compiled Wed 18-May-05 22:31 by jharirba

Press RETURN to get started!

%LINK-5-CHANGED: Interface FastEthernet0/1, 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

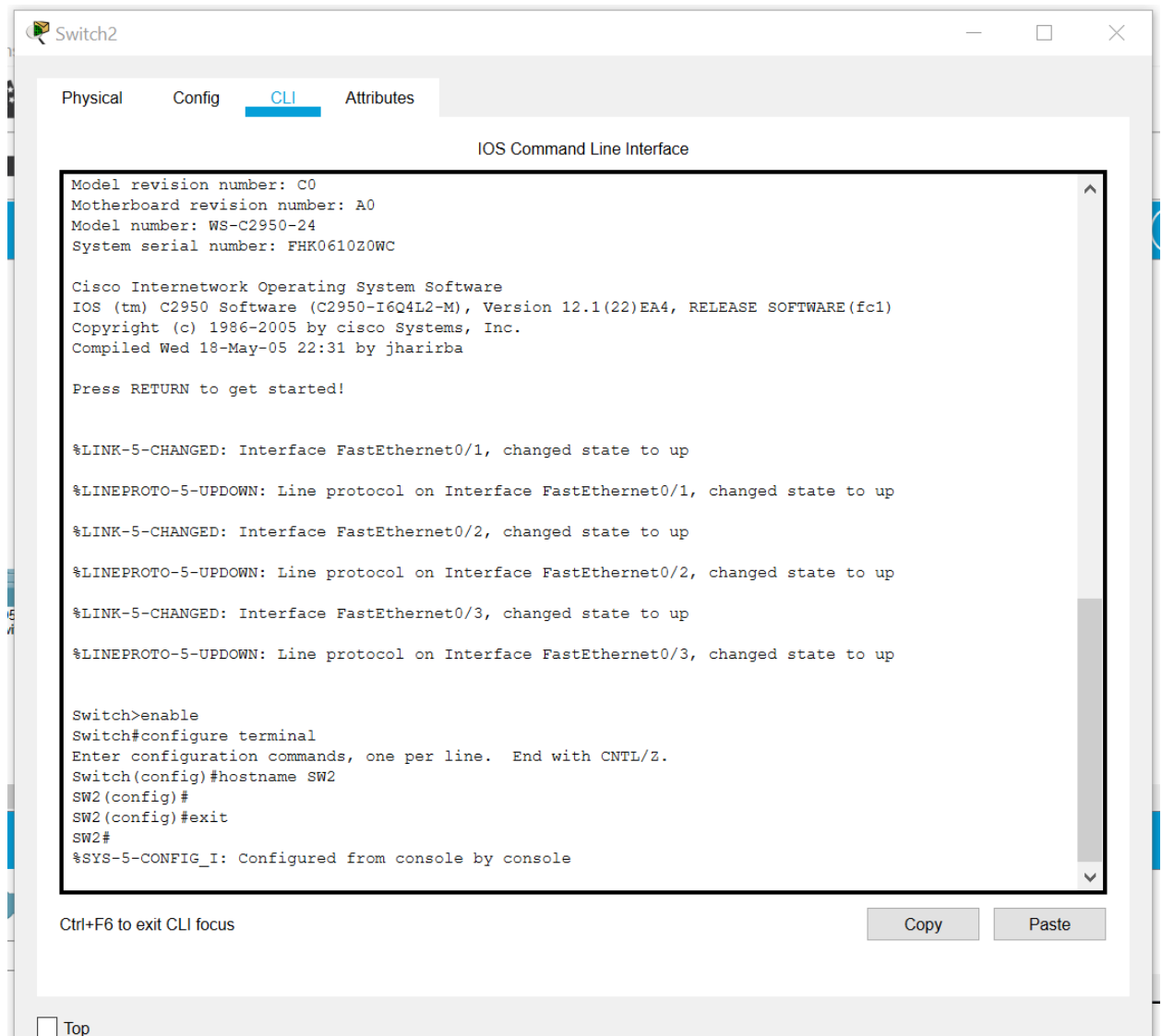
%LINEPROTO-5-UPDOWN: Line protocol on Interface FastEthernet0/3, changed state to up

Switch>enable
Switch#configure terminal
Enter configuration commands, one per line. End with CNTL/Z.
Switch(config)#
Switch(config)#hostname SW1
SW1(config)#
SW1(config)#EXIT
SW1#
%SYS-5-CONFIG_I: Configured from console by console

Ctrl+F6 to exit CLI focus

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☐ Top



Switch3

Physical

Config

CLI

Attributes

IOS Command Line Interface

Power supply serial number: DAB0609127D
Model revision number: C0
Motherboard revision number: A0
Model number: WS-C2950-24
System serial number: FHK0610Z0WC

Cisco Internetwork Operating System Software
IOS (tm) C2950 Software (C2950-I6Q4L2-M), Version 12.1(22)EA4, RELEASE SOFTWARE(fcl)
Copyright (c) 1986-2005 by cisco Systems, Inc.
Compiled Wed 18-May-05 22:31 by jharirba

Press RETURN to get started!

%LINK-5-CHANGED: Interface FastEthernet0/1, 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

Switch>enable
Switch#configure terminal
Enter configuration commands, one per line. End with CNTL/Z.
Switch(config)#hostname SW3
SW3(config)#exit
SW3#
%SYS-5-CONFIG_I: Configured from console by console

Ctrl+F6 to exit CLI focus

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Tugas 4A

IOS Command Line Interface

```
%LINEPROTO-5-UPDOWN: Line protocol on Interface FastEthernet0/2, changed state to down
%LINK-3-UPDOWN: Interface FastEthernet0/3, changed state to down
%LINEPROTO-5-UPDOWN: Line protocol on Interface FastEthernet0/3, changed state to down
%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

SW1#show spanning-tree
VLAN0001
  Spanning tree enabled protocol ieee
    Root ID    Priority    32769
              Address     0001.6497.722A
              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     0001.6497.722A
              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

SW1#
```

Ctrl+F6 to exit CLI focus

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Switch2

Physical

Config

CLI

Attributes

IOS Command Line Interface

%LINK-5-CHANGED: Interface FastEthernet0/3, changed state to up

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

Switch>enable

Switch#configure terminal

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

Switch(config)#hostname SW2

SW2(config)#

SW2(config)#exit

SW2#

%SYS-5-CONFIG_I: Configured from console by console

SW2#show spanning-tree

VLAN0001

Spanning tree enabled protocol ieee

Root ID Priority 32769

Address 0001.6497.722A

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 0060.4702.4A14

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
Fa0/2	Altn	BLK	19	128.2	P2p

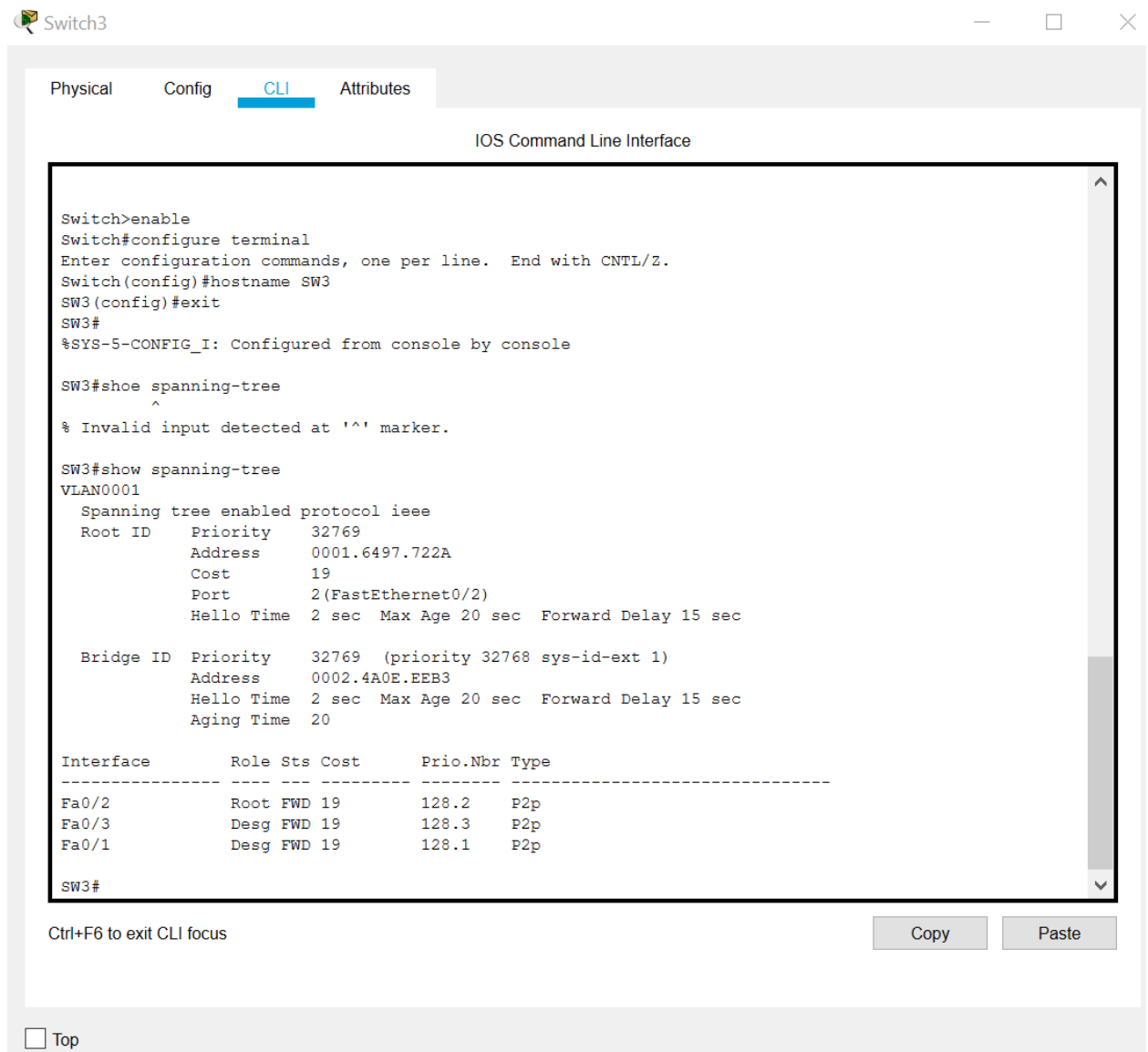
SW2#

Ctrl+F6 to exit CLI focus

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Tugas 4B

Untuk tiap-tiap switch, isikan tabel berikut :

SW1

No	Variabel	Nilai
1	Root ID	32769
2	Priority	32769 (priority 32768 sys-id-ext 1)
3	MAC Address	0001.6497.722A
4	Bridge ID	32769
5	Cost (0/1;0/2;0/3)	19
6	Hello Time	2 sec
7	MaxAge	20 sec
8	Forward Delay	15 sec

SW2

No	Variabel	Nilai
1	Root ID	32769
2	Priority	32769 (priority 32768 sys-id-ext 1)
3	MAC Address	0001.6497.722A
4	Bridge ID	32769
5	Cost (0/1;0/2;0/3)	19
6	Hello Time	2 sec
7	MaxAge	20 sec
8	Forward Delay	15 sec

SW3

No	Variabel	Nilai
1	Root ID	32769
2	Priority	32769 (priority 32768 sys-id-ext 1)
3	MAC Address	0001.6497.722A
4	Bridge ID	32769
5	Cost (0/1;0/2;0/3)	19
6	Hello Time	2 sec
7	MaxAge	20 sec
8	Forward Delay	15 sec

Tugas 4C

Pada kondisi default tersebut mana saja.

- Menjadi root bridge : SW2
- Menjadi designates bridge : SW3
- Menjadi root port : SW1(0/2), SW3(0/3)
- Menjadi designated port : SW3(0/3)

Tugas 4D

Pada kondisi default tersebut, dan port mana saja

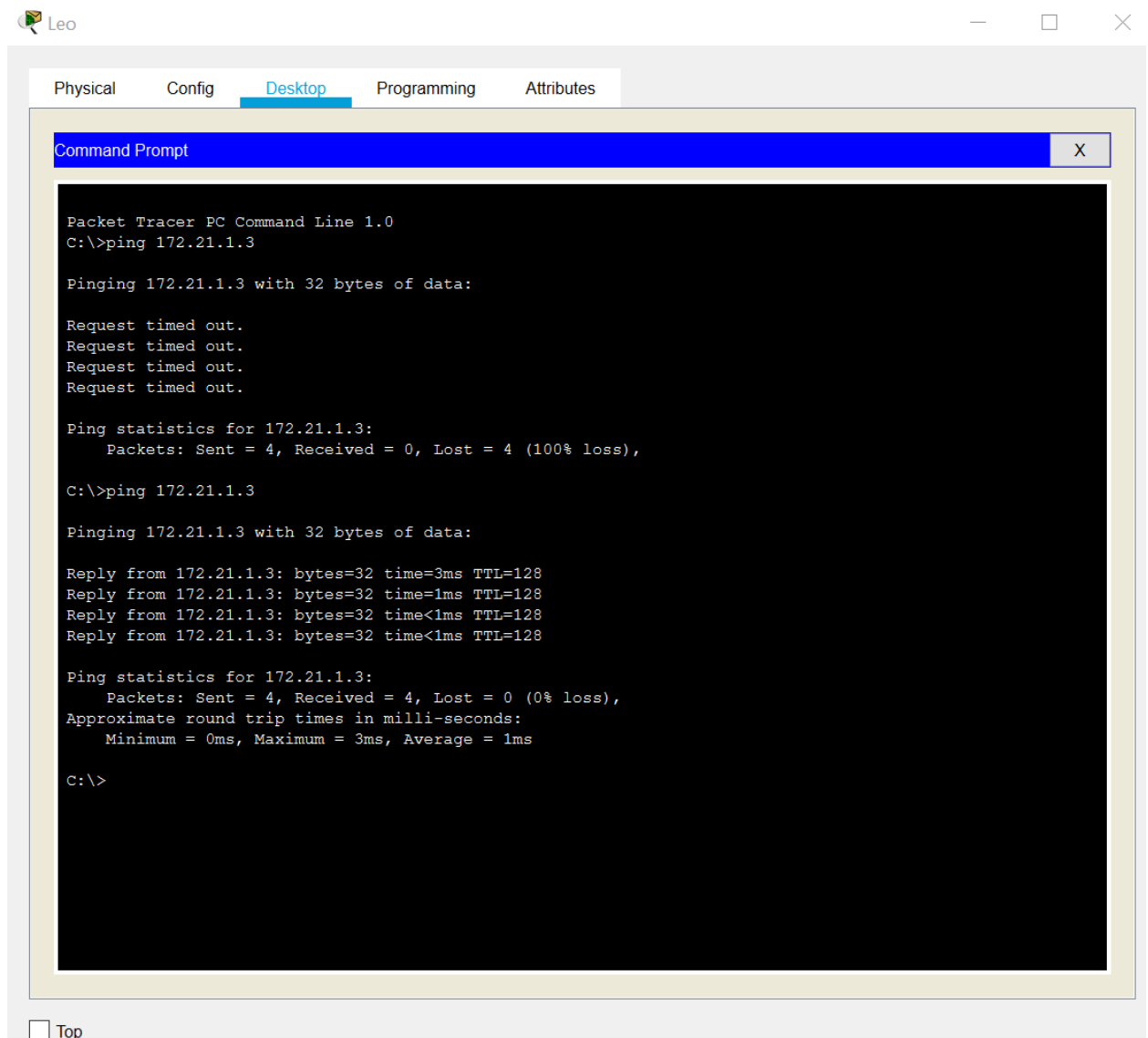
- Berada pada keadaan forwarding : SW1(0/1, 0/2), SW2(0/1, 0/1, 0/1), dan SW3(0/1, 0/2, 0/3)
- Berada pada keadaan blocking : SW1(fa 0/2)

Tugas 5A

Langkah untuk melakukan perintah ping dari PC Leo ke PC Virgo

- 1) Klik pada PC Leo
- 2) Pilih tab desktop
- 3) Pilih command prompt

4) Ketik ping 172.21.1.3

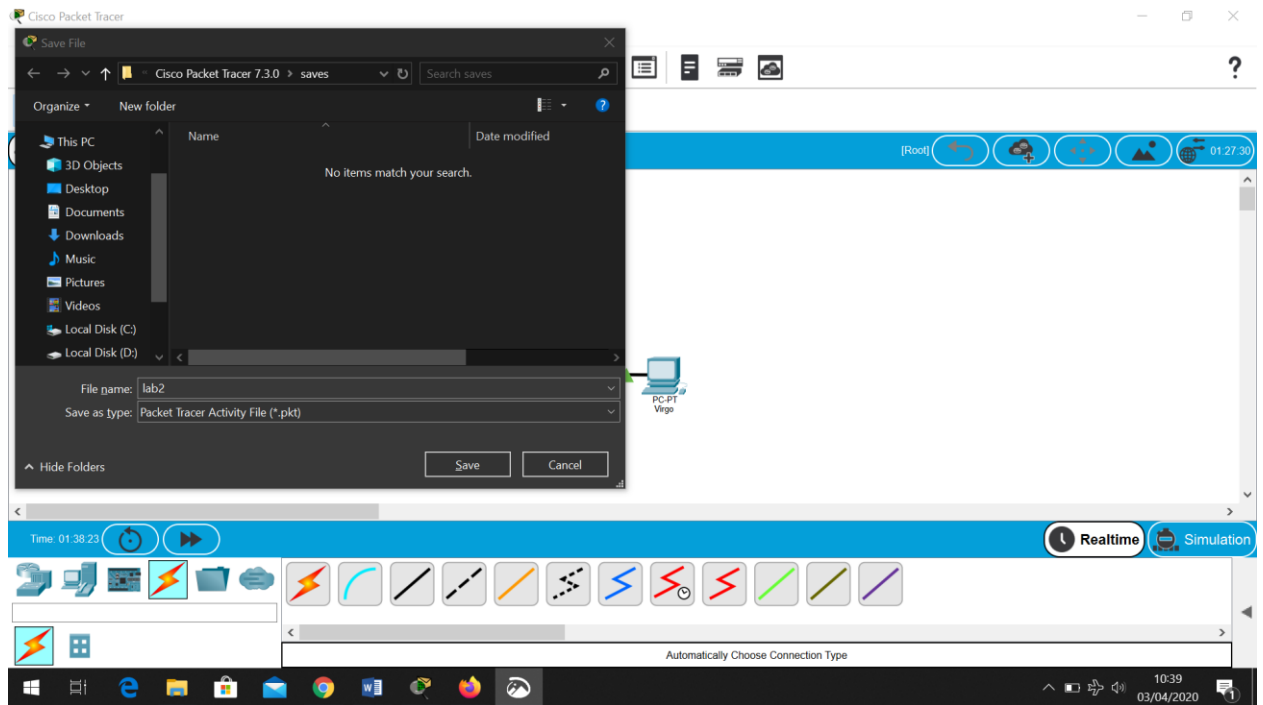


Tugas 6A

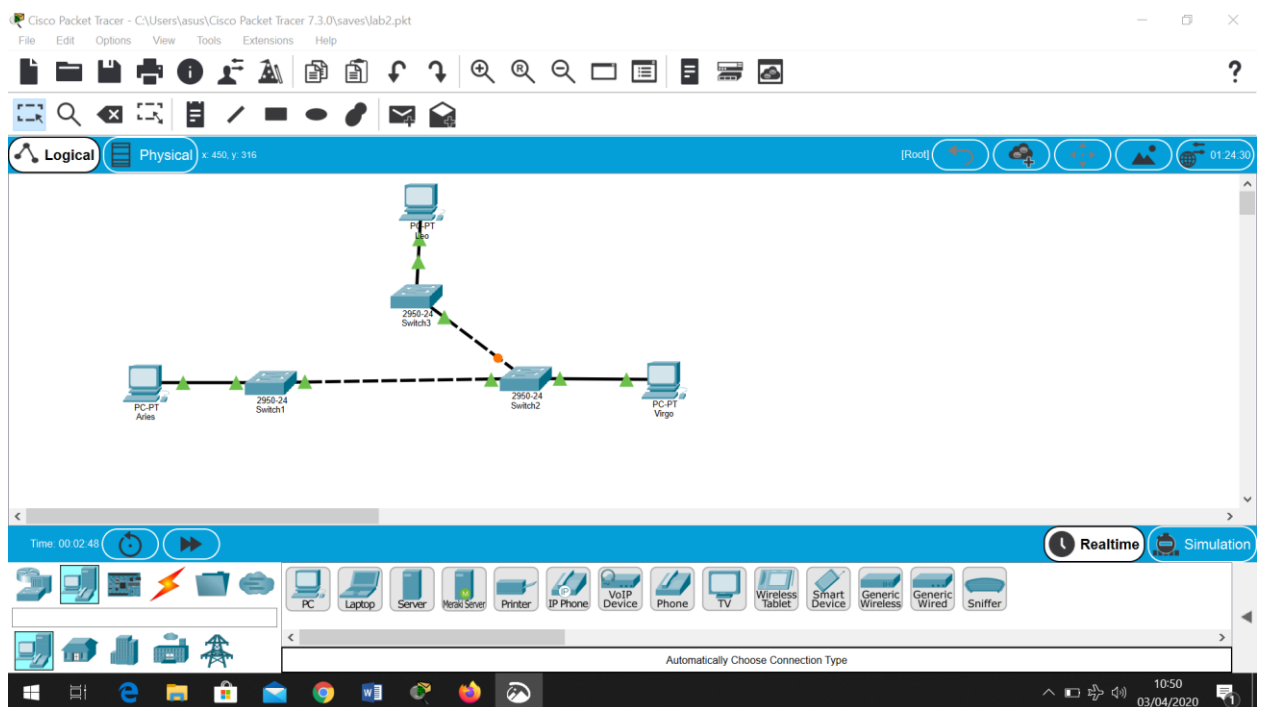
Langkah untuk menyimpan konfigurasi jaringan

1) Ketik CTRL + S

2) Beri nama lab2 yang akan bereksistensi sesuai aplikasi yang digunakan



2. Kegiatan 2. Topologi 2



Tugas 9A

SW1

Switch1

Physical
Config
CLI
Attributes

IOS Command Line Interface

```

%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-3-UPDOWN: Interface FastEthernet0/2, changed state to down
%LINEPROTO-5-UPDOWN: Line protocol on Interface FastEthernet0/2, changed state to down

SW1>show spanning-tree
VLAN0001
  Spanning tree enabled protocol ieee
    Root ID    Priority    32769
              Address    0001.6497.722A
              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    0001.6497.722A
              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

SW1>

```

Ctrl+F6 to exit CLI focus
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Top

No	Variabel	Nilai
1	Root ID	32769
2	Priority	32769 (priority 32768 sys-id-ext 1)
3	MAC Address	0001.6497.722A
4	Bridge ID	32769
5	Cost (0/1;0/2;0/3)	19
6	Hello Time	2 sec
7	MaxAge	20 sec
8	Forwarrrd Delay	15 sec

SW2

Switch2

Physical

Config

CLI

Attributes

IOS Command Line Interface

```

%LINK-5-CHANGED: Interface FastEthernet0/1, 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

SW2>show spanning-tree
VLAN0001
  Spanning tree enabled protocol ieee
  Root ID    Priority    32769
            Address    0001.6497.722A
            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    0060.4702.4A14
            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

SW2>

```

Ctrl+F6 to exit CLI focus

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No	Variabel	Nilai
1	Root ID	32769
2	Priority	32769 (priority 32768 sys-id-ext 1)
3	MAC Address	0001.6497.722A
4	Bridge ID	32769
5	Cost (0/1;0/2;0/3)	19
6	Hello Time	2 sec
7	MaxAge	20 sec
8	Forward Delay	15 sec

SW3

Switch3

Physical

Config

CLI

Attributes

IOS Command Line Interface

```

%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-3-UPDOWN: Interface FastEthernet0/2, changed state to down
%LINEPROTO-5-UPDOWN: Line protocol on Interface FastEthernet0/2, changed state to down

SW3>show spanning-tree
VLAN0001
  Spanning tree enabled protocol ieee
    Root ID    Priority    32769
              Address    0001.6497.722A
              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    0002.4A0E.EEB3
              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

SW3>

```

Ctrl+F6 to exit CLI focus

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Top

No	Variabel	Nilai
1	Root ID	32769
2	Priority	32769 (priority 32768 sys-id-ext 1)
3	MAC Address	0001.6497.722A
4	Bridge ID	32769
5	Cost (0/1;0/2;0/3)	19
6	Hello Time	2 sec
7	MaxAge	20 sec
8	Forward Delay	15 sec

Pada kondisi default tersebut mana saja.

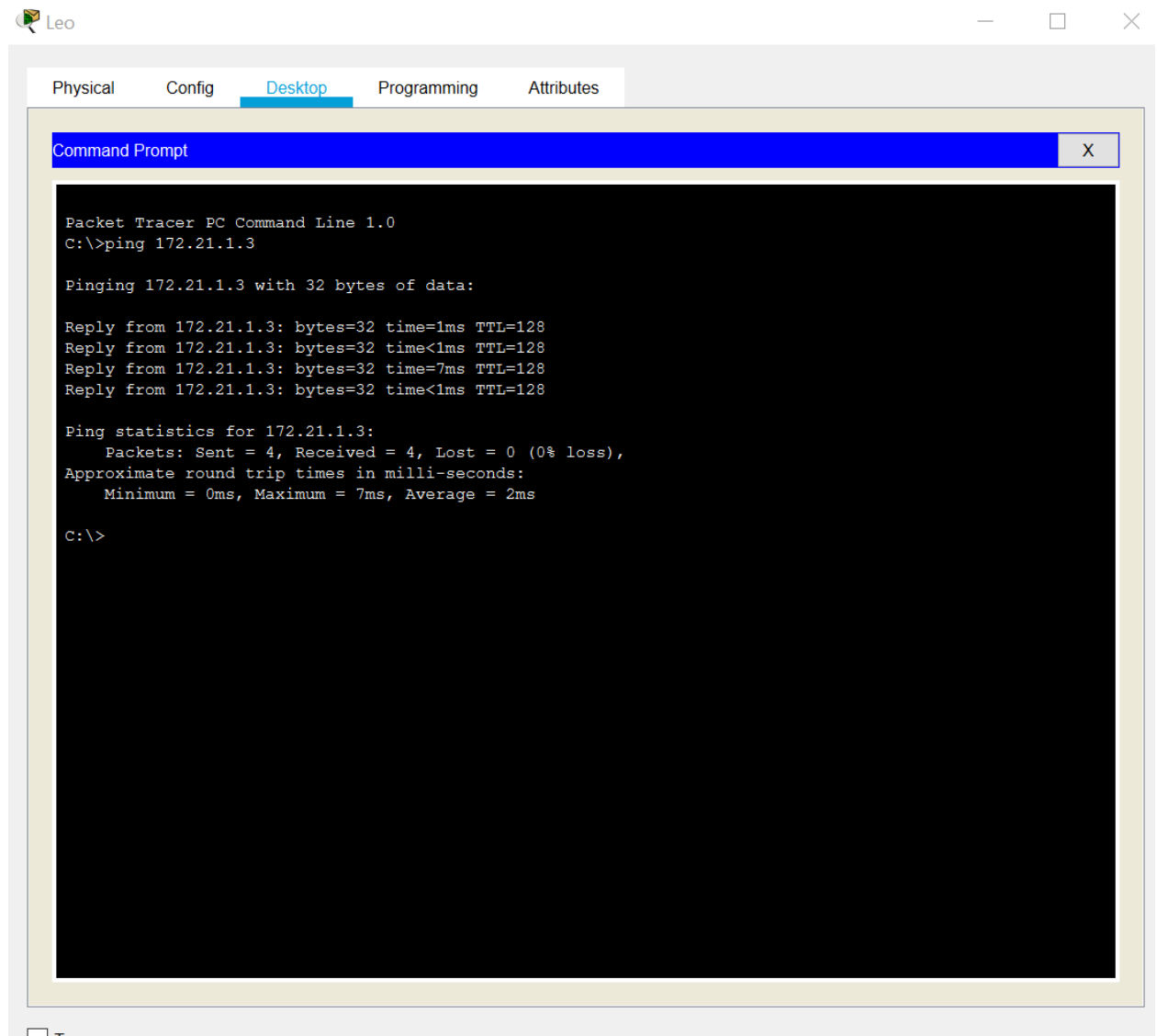
- Menjadi root bridge : SW3
- Menjadi designates bridge : SW1
- Menjadi root port : SW1(0/), SW(0/3)

- Menjadi designated port : SW1(0/1), SW2(0/1, 0/2), SW3(0/1)

Pada kondisi default tersebut, dan port mana saja

- Berada pada keadaan forwarding : SW1(0/1, 0/3), SW2(0/1, 0/3), dan SW3(0/1, 0/2, 0/3)

Melakukan ping dari PC Leo ke PC Virgo



The screenshot shows a Packet Tracer PC Command Line window for PC Leo. The window has tabs for Physical, Config, Desktop, Programming, and Attributes, with Desktop selected. The Command Prompt shows the following output:

```
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=7ms 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 = 7ms, Average = 2ms

C:\>
```