

Nama : Galih Prayoga

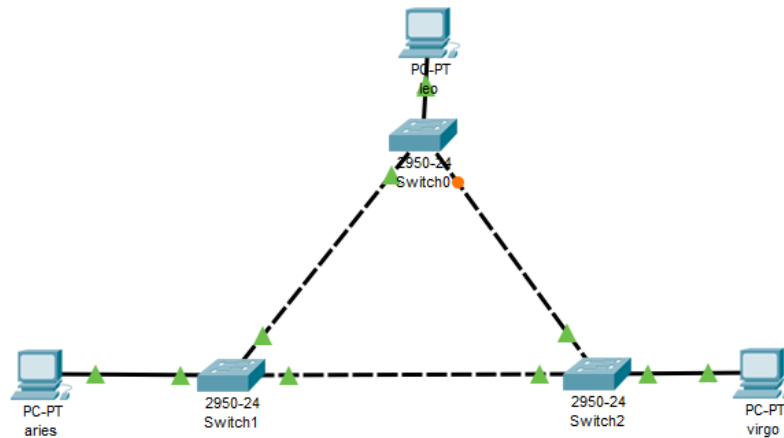
NIM : L200180006

Kelas : A

Praktikum Jarkom (Modul 6)

1. Kegiatan 1. Topologi 1

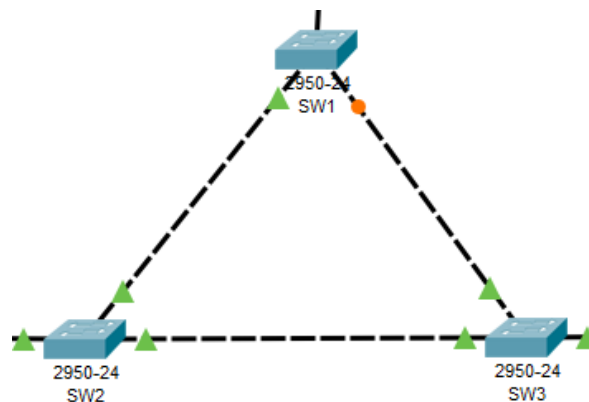
a.



Tugas 1A: Langkah pembuatan topologi

1. Buat 3 buah PC dan diberi nama leo, aries dan virgo
2. Buat 3 buah switch 2950-24
3. Hubungkan pc leo dengan switch0, aries dengan switch1, virgo dengan switch2.
4. Hubungkan antara switch0, switch1 dan switch2.

b.



Tugas 2A: klik pada nama switch kemudian ubah Switch0 menjadi SW1, Switch1 menjadi SW2 dan Switch2 menjadi SW3.

c. Konfigurasi masing-masing PC

The image shows two side-by-side configuration windows for PCs named 'leo' and 'aries'. Both windows have tabs for Physical, Config, Desktop, Programming, and Attributes. The 'Desktop' tab is active, showing network configuration options. In both, 'Static' is selected for IP configuration. The IP Address, Subnet Mask (255.255.0.0), Default Gateway (0.0.0.0), and DNS Server (0.0.0.0) are set. IPv6 Configuration is also shown with 'Static' selected. For 'leo', the IPv6 Address is empty, Link Local Address is FE80::201:43FF:FE0B:E270, and IPv6 Gateway and DNS Server are empty. For 'aries', the IPv6 Address is empty, Link Local Address is FE80::201:C7FF:FE37:D3D7, and IPv6 Gateway and DNS Server are empty. Both have '802.1X' security disabled and 'MD5' authentication selected. A 'Top' button is at the bottom left of each window.

The image shows a configuration window for a PC named 'virgo'. It has tabs for Physical, Config, Desktop, Programming, and Attributes. The 'Desktop' tab is active, showing network configuration options. In this window, 'Static' is selected for IP configuration. The IP Address is 172.21.1.3, Subnet Mask is 255.255.0.0, Default Gateway is 0.0.0.0, and DNS Server is 0.0.0.0. IPv6 Configuration is also shown with 'Static' selected. The IPv6 Address is empty, Link Local Address is FE80::250:FFF:FEA6:67DC, and IPv6 Gateway and DNS Server are empty. Both have '802.1X' security disabled and 'MD5' authentication selected. A 'Top' button is at the bottom left of the window.

d. Pada mode user atau mode privileged, lihat status STP pada masing-masing switch.
Langkah pengoperasian:

1. Tekan enter
2. Masuk mode privileged (optional)
3. Ketik show spanning-tree.

Tugas 4A: Pada kondisi default, capture masing-masing tampilan status STP switch (SW1, SW2, SW3).

SW1

PhysicalConfigCLIAttributes

IOS Command Line Interface

Switch>enable
Switch#show spanning-tree
VLAN0001
Spanning tree enabled protocol ieee
Root ID Priority 32769
Address 0001.6478.761C
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 0060.7053.9A85
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 Altn BLK 19 128.3 P2p

Switch#

Ctrl+F6 to exit CLI focus

CopyPaste

☐ Top

SW2

PhysicalConfigCLIAttributes

IOS Command Line Interface

changed state to up

Switch>enable
Switch#show spanning-tree
VLAN0001
Spanning tree enabled protocol ieee
Root ID Priority 32769
Address 0001.6478.761C
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 0001.6478.761C
Hello Time 2 sec Max Age 20 sec Forward Delay 15 sec
Aging Time 20

Interface Role Sts Cost Prio.Nbr Type

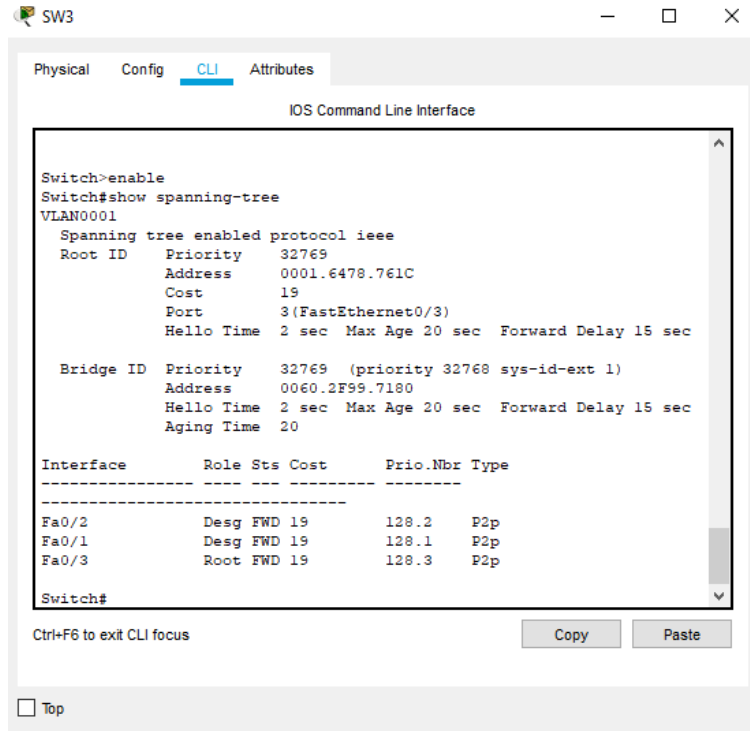
Fa0/1 Desg FWD 19 128.1 P2p
Fa0/3 Desg FWD 19 128.3 P2p
Fa0/2 Desg FWD 19 128.2 P2p

Switch#

Ctrl+F6 to exit CLI focus

CopyPaste

☐ Top



Tugas 4B: Untuk tiap-tiap switc, isikan tabel berikut:

SW1

No	Variabel	Nilai
1	Root ID	32769, 0001.6478.761C
2	Priority	32769
3	MAC Address	0001.6478.761C
4	Bridge ID	0060.7053.9A85
5	Cost (0/1;0/2;0/3)	Fa0/1: Desg;FWD;19;128.1;P2p Fa0/2: Root;FWD;19;128.2;P2p Fa0/3: Altn;BLK;19;128.3;P2p
6	Hello Time	2 sec
7	MaxAge	20 sec
8	Forward Delay	15 sec

SW2

No	Variabel	Nilai
1	Root ID	32769, 0001.6478.761C
2	Priority	32769
3	MAC Address	0001.6478.761C
4	Bridge ID	0001.6478.761C
5	Cost (0/1;0/2;0/3)	Fa0/1: Desg;FWD;19;128.1;P2p Fa0/2: Desg;FWD;19;128.2;P2p Fa0/3: Desg;FWD;19;128.3;P2p
6	Hello Time	2 sec
7	MaxAge	20 sec
8	Forward Delay	15 sec

SW3

No	Variabel	Nilai
1	Root ID	32769, 0001.6478.761C
2	Priority	32769
3	MAC Address	0001.6478.761C
4	Bridge ID	0060.2F99.7180
5	Cost (0/1;0/2;0/3)	Fa0/1: Desg;FWD;19;128.2;P2p Fa0/2: Desg;FWD;19;128.1;P2p Fa0/3: Root;FWD;19;128.3;P2p
6	Hello Time	2 sec
7	MaxAge	20 sec
8	Forward Delay	15 sec

Tugas 4C: pada kondisi default tersebut, switch dan port manakah yang:

- Menjadi root bridge: SW2
- Menjadi designated bridge: SW2
- Menjadi root port: SW1(Fa0/2), SW3(Fa0/3)
- Menjadi designated port : SW2

Tugas 4D: Pada kondisi default tersebut, switch dan port manakah yang:

- Berada pada keadaan Forwarding: SW2, SW3
- Berada pada keadaan Blocking: SW1(Fa0/3)

e. Dari PC Leo lakukan ping ke PC Virgo



```

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=2ms 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 = 2ms, Average = 0ms

C:\>

```

Tugas 5A: Langkah melakukan perintah ping.

Klik pc yang akan digunakan untuk melakukan ping, kemudian pilih menu command prompt. Ketik perintah 'ping' diikuti ip PC yang menjadi tujuan ping lalu tekan enter.

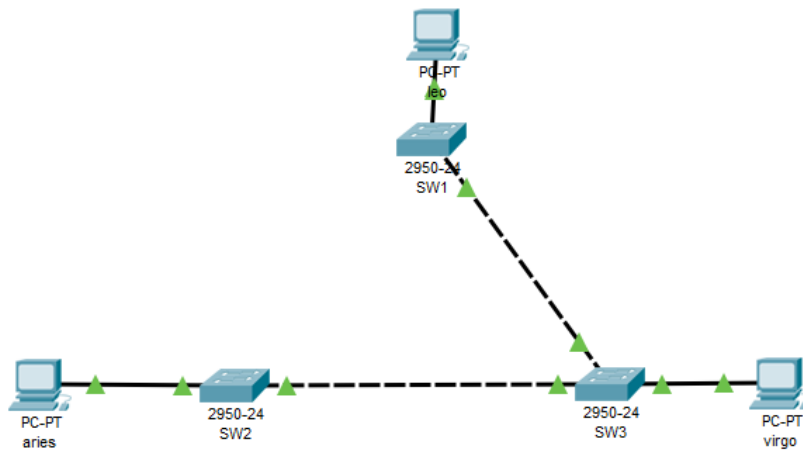
- f. Simpan konfigurasi dengan nama lab2.nwc

Tugas 6A: Tulis langkah-langkah menyimpan konfigurasi jaringan.

1. Pilih menu file.
2. Klik save.
3. Pilih lokasi dimana file akan disimpan.
4. Tuliskan nama yang diinginkan.
5. Klik save

2. Kegiatan 2. Topologi2

a.



Tugas 1A: Langkah pembuatan topologi

5. Buat 3 buah PC dan diberi nama leo, aries dan virgo
6. Buat 3 buah switch 2950-24
7. Hubungkan pc leo dengan switch0, aries dengan switch1, virgo dengan switch2.
8. Hubungkan antara switch0, switch1 dan switch2.

b.

Tugas 2A: klik pada nama switch kemudian ubah Switch0 menjadi SW1, Switch1 menjadi SW2 dan Switch2 menjadi SW3.

c. Konfigurasi masing-masing PC

The image displays three screenshots of network configuration windows for different PCs, each showing the 'Desktop' tab with static IP configuration and IPv6 settings.

PC leo:

- Static Configuration:**
 - IP Address: 172.21.1.1
 - Subnet Mask: 255.255.0.0
 - Default Gateway: 0.0.0.0
 - DNS Server: 0.0.0.0
- IPv6 Configuration:**
 - Mode: Static
 - IPv6 Address: (empty)
 - Link Local Address: FE80::201:43FF:FE0B:E270
 - IPv6 Gateway: (empty)
 - IPv6 DNS Server: (empty)
- 802.1X:**
 - Use 802.1X Security: ☐
 - Authentication: MDS
 - Username: (empty)
 - Password: (empty)

PC aries:

- Static Configuration:**
 - IP Address: 172.21.1.2
 - Subnet Mask: 255.255.0.0
 - Default Gateway: 0.0.0.0
 - DNS Server: 0.0.0.0
- IPv6 Configuration:**
 - Mode: Static
 - IPv6 Address: (empty)
 - Link Local Address: FE80::201:C7FF:FE37:D3D7
 - IPv6 Gateway: (empty)
 - IPv6 DNS Server: (empty)
- 802.1X:**
 - Use 802.1X Security: ☐
 - Authentication: MDS
 - Username: (empty)
 - Password: (empty)

PC virgo:

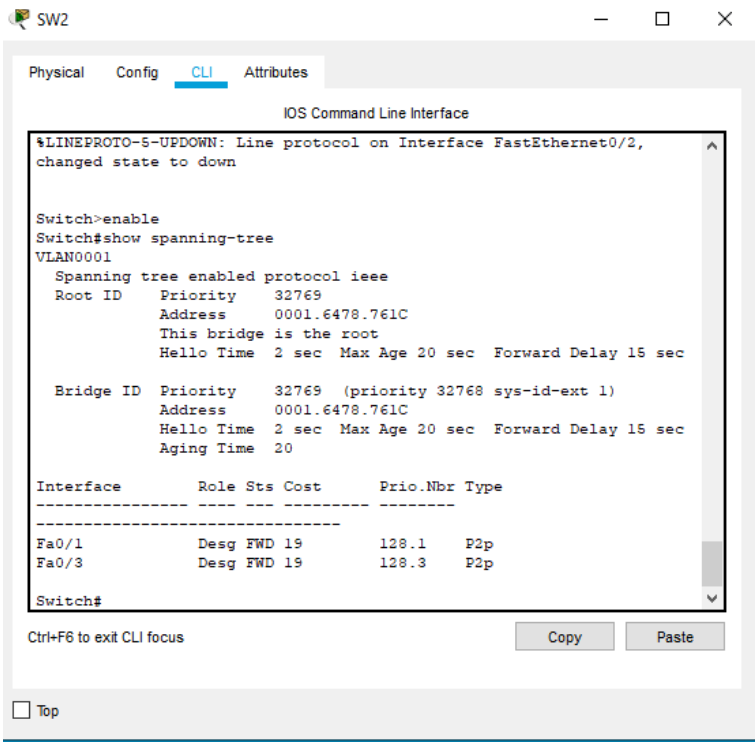
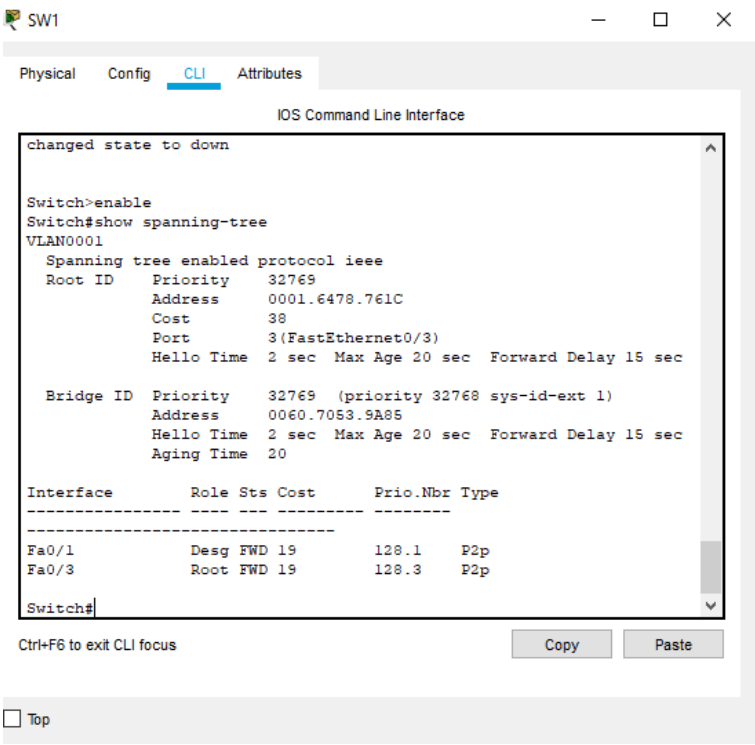
- Static Configuration:**
 - IP Address: 172.21.1.3
 - Subnet Mask: 255.255.0.0
 - Default Gateway: 0.0.0.0
 - DNS Server: 0.0.0.0
- IPv6 Configuration:**
 - Mode: Static
 - IPv6 Address: (empty)
 - Link Local Address: FE80::250:FFF:FEA6:67DC
 - IPv6 Gateway: (empty)
 - IPv6 DNS Server: (empty)
- 802.1X:**
 - Use 802.1X Security: ☐
 - Authentication: MDS
 - Username: (empty)
 - Password: (empty)

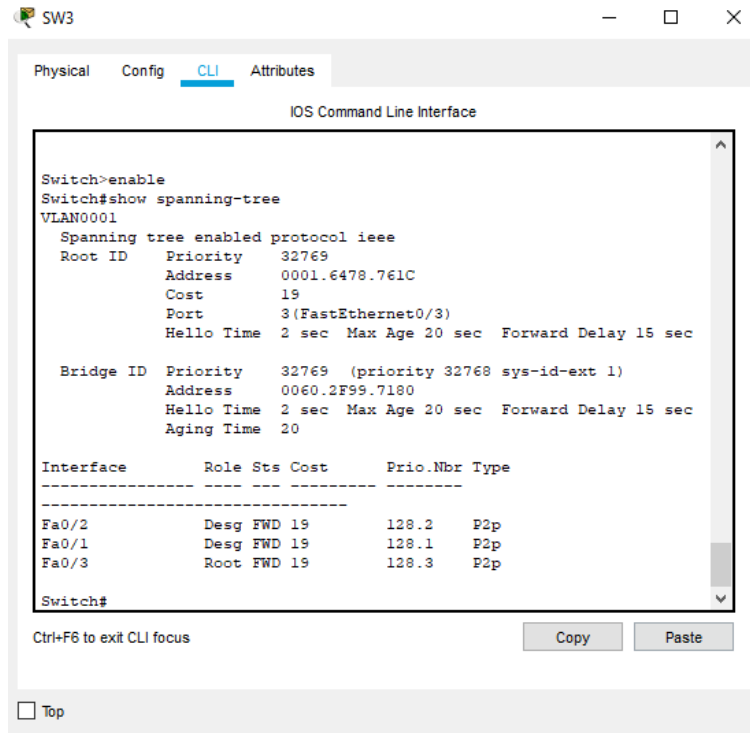
d. Pada mode user atau mode privileged, lihat status STP pada masing-masing switch.

Langkah pengoperasian:

1. Tekan enter
2. Masuk mode privileged (optional)
3. Ketik show spanning-tree.

Tugas 4A: Pada kondisi default, capture masing-masing tampilan status STP switch (SW1, SW2, SW3).





Tugas 4B: Untuk tiap-tiap switc, isikan tabel berikut:

SW1

No	Variabel	Nilai
1	Root ID	32769, 0001.6478.761C
2	Priority	32769
3	MAC Address	0001.6478.761C
4	Bridge ID	0060.7053.9A85
5	Cost (0/1;0/2;0/3)	Fa0/1: Desg;FWD;19;128.1;P2p Fa0/3: Root;FWD;19;128.3;P2p
6	Hello Time	2 sec
7	MaxAge	20 sec
8	Forward Delay	15 sec

SW2

No	Variabel	Nilai
1	Root ID	32769, 0001.6478.761C
2	Priority	32769
3	MAC Address	0001.6478.761C
4	Bridge ID	0001.6478.761C
5	Cost (0/1;0/2;0/3)	Fa0/1: Desg;FWD;19;128.1;P2p Fa0/3: Desg;FWD;19;128.3;P2p
6	Hello Time	2 sec
7	MaxAge	20 sec
8	Forward Delay	15 sec

SW3

No	Variabel	Nilai
1	Root ID	32769, 0001.6478.761C
2	Priority	32769
3	MAC Address	0001.6478.761C
4	Bridge ID	0060.2F99.7180
5	Cost (0/1;0/2;0/3)	Fa0/1: Desg;FWD;19;128.1;P2p Fa0/2: Desg;FWD;19;128.2;P2p Fa0/3: Root;FWD;19;128.3;P2p
6	Hello Time	2 sec
7	MaxAge	20 sec
8	Forward Delay	15 sec

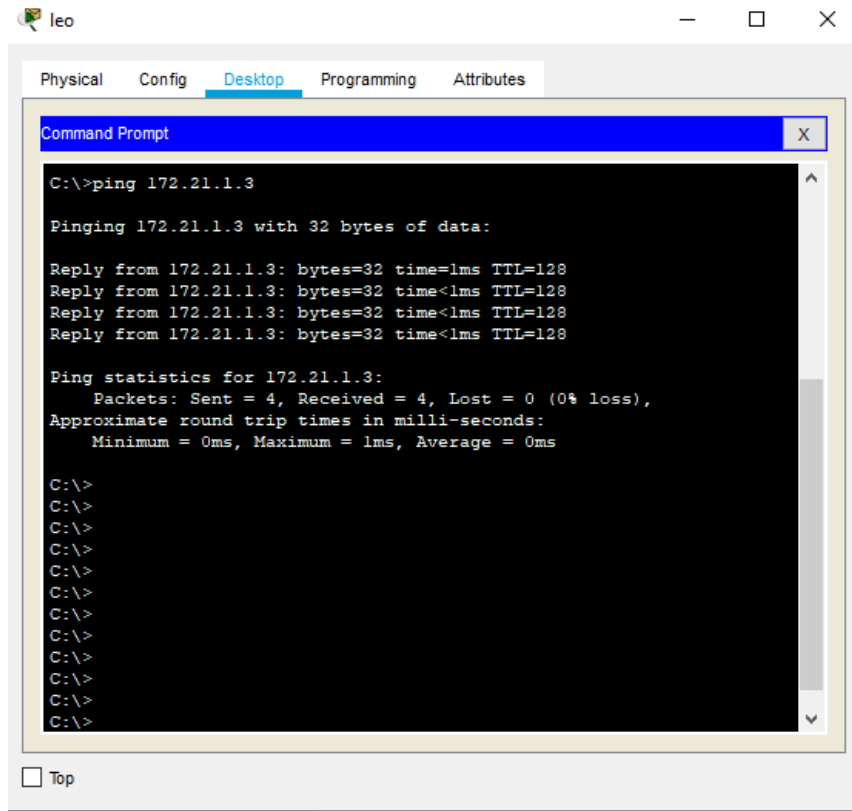
Tugas 4C: pada kondisi default tersebut, switch dan port manakah yang:

- Menjadi root bridge: SW1
- Menjadi designated bridge: SW1
- Menjadi root port: SW2(Fa0/3), SW3(Fa0/3)
- Menjadi designated port: SW1

Tugas 4D: Pada kondisi default tersebut, switch dan port manakah yang:

- Berada pada keadaan Forwarding: SW1, SW2, SW3
- Berada pada keadaan Blocking: Tidak ada

e. Dari PC Leo lakukan ping ke PC Virgo



Tugas 5A: Langkah melakukan perintah ping.

Klik pc yang akan digunakan untuk melakukan ping, kemudian pilih menu command prompt. Ketik perintah 'ping' diikuti ip PC yang menjadi tujuan ping lalu tekan enter.

- f. Simpan konfigurasi dengan nama lab2.nwc

Tugas 6A: Tulis langkah-langkah menyimpan konfigurasi jaringan.

1. Pilih menu file.
2. Klik save.
3. Pilih lokasi dimana file akan disimpan.
4. Tuliskan nama yang diinginkan.
5. Klik save