

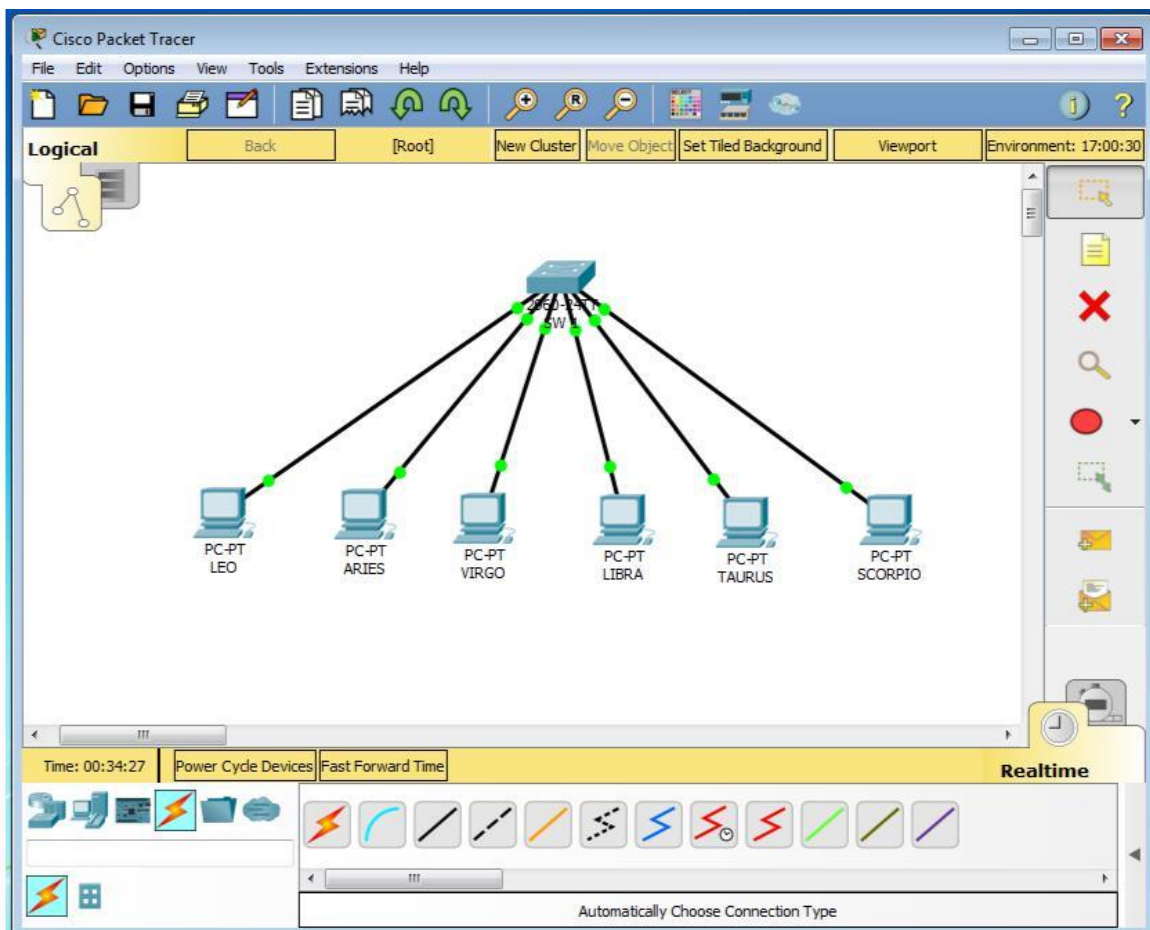
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Laporan Praktikum

MODUL 4

Kegiatan 1

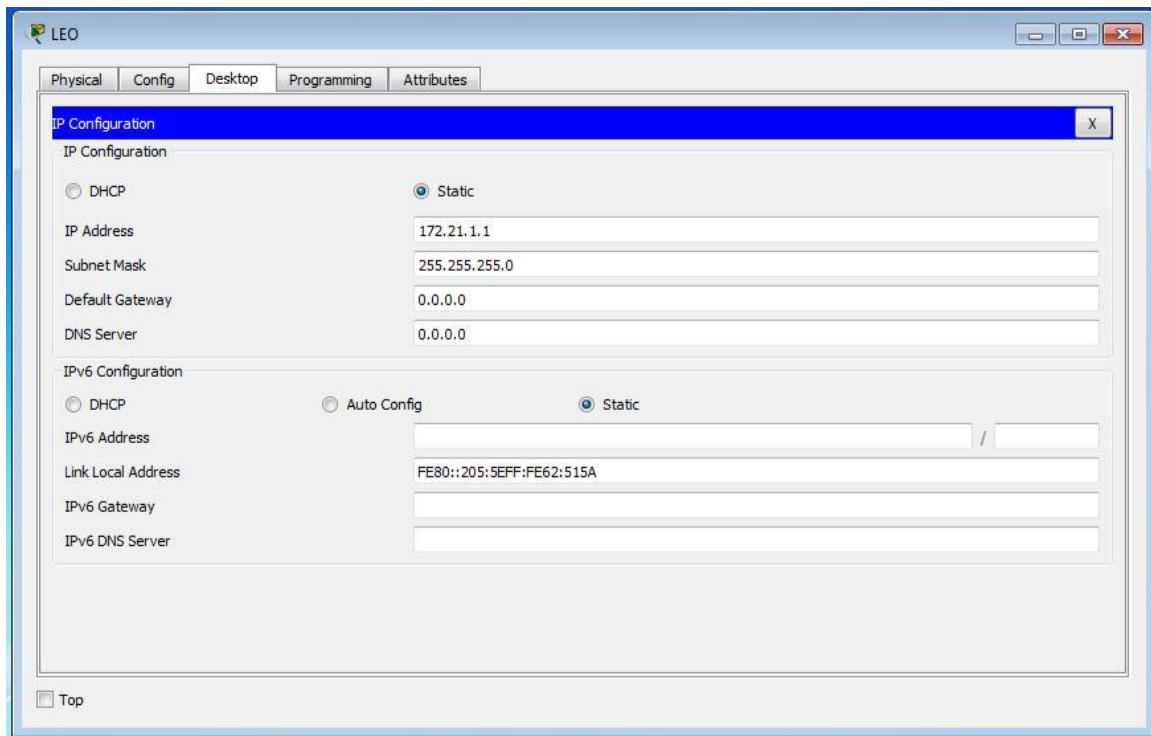
1. Membuat topologi berikut ini menggunakan packet tracer
2. Memberi nama masing masing perangkat
 - a. Switch : SW
 - b. Pc1: Leo
 - c. Pc2: Aries
 - d. Pc3: Virgo
 - e. Pc4: Libra
 - f. Pc5: Taurus
 - g. Pc6: Scorpio



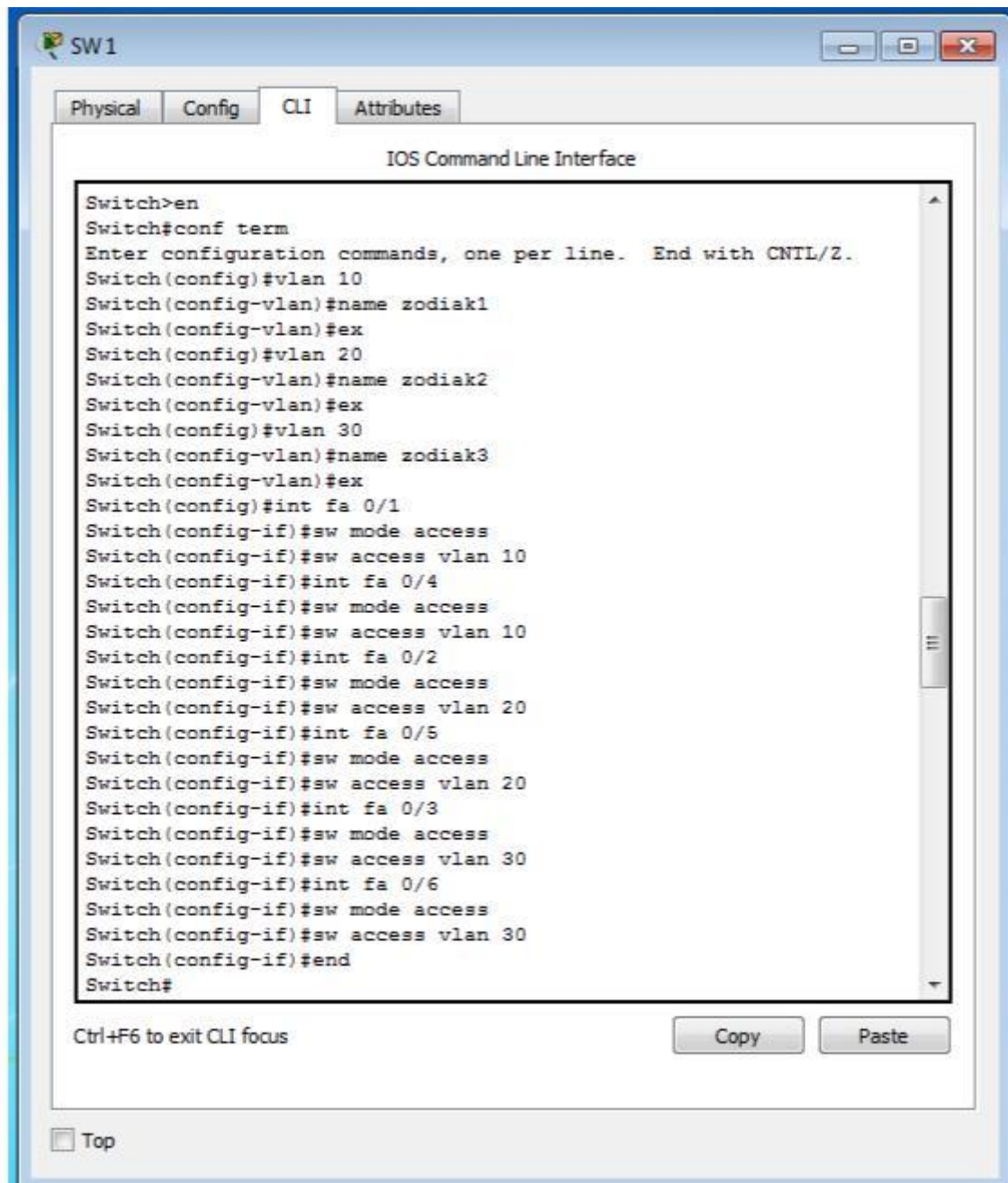
3. Merubah konfigurasi tiap PC

- a. Leo : 172.21.1.1/24
- b. Aries : 172.21.1.2/24
- c. Virgo : 172.21.1.3/24
- d. Libra : 172.21.1.4/24
- e. Taurus : 172.21.1.5/24
- f. Scorpio : 172.21.1.6/24

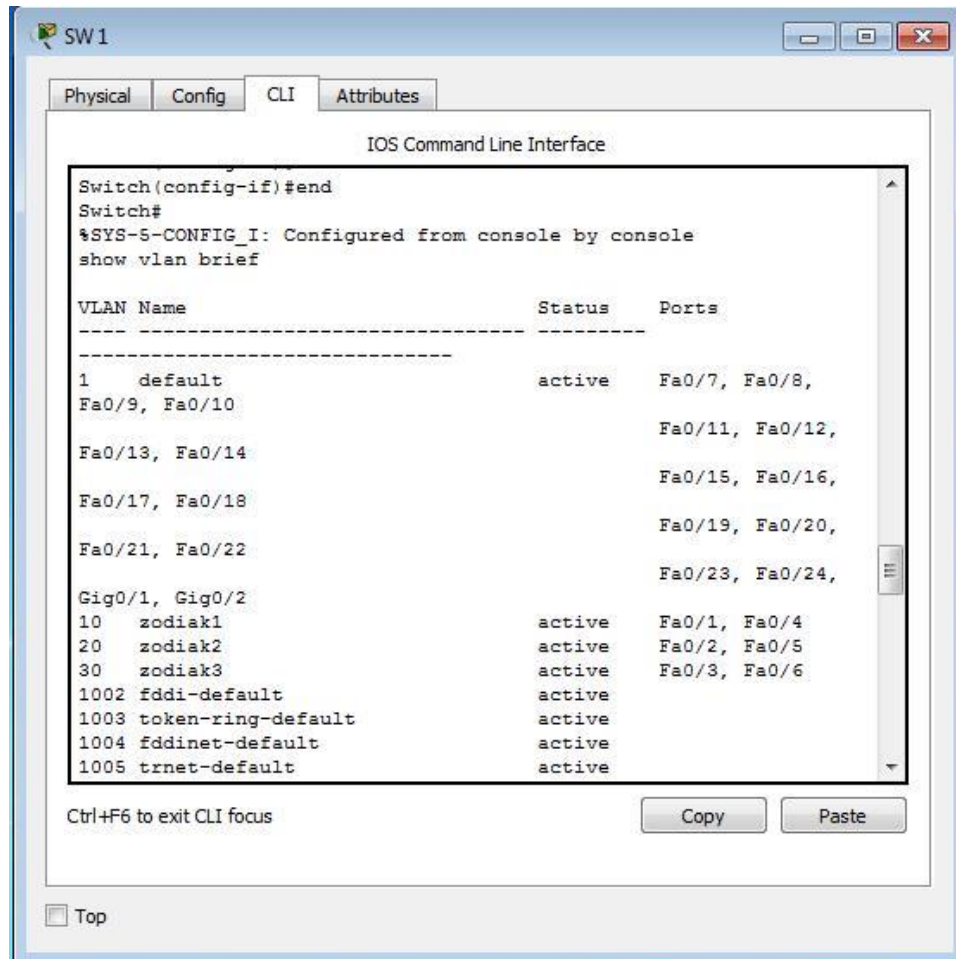
/24 maksudnya adalah masuk kelas c



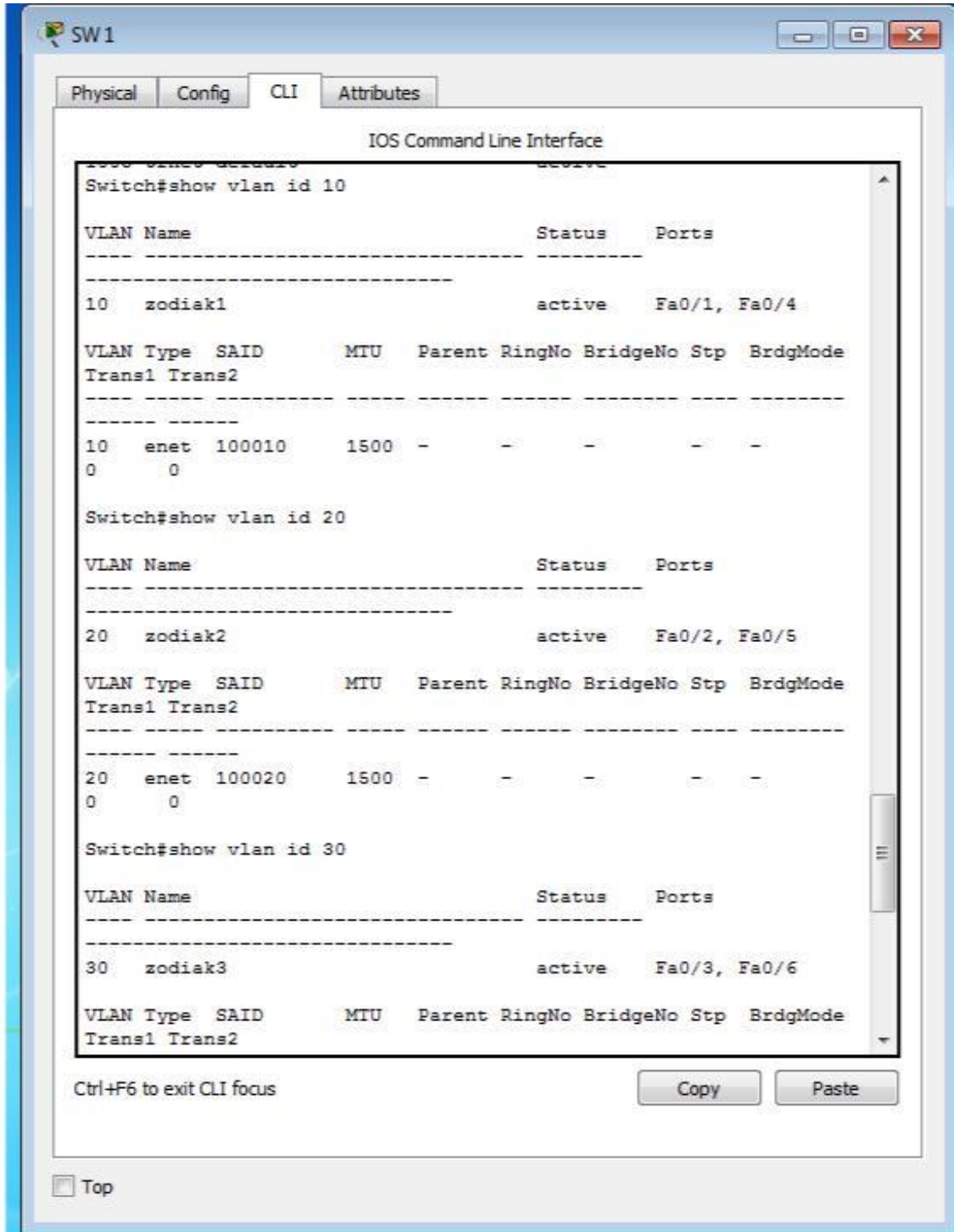
4. Membuat 3 buah VLAN dengan nama zodiak1, zodiak2, dan zodiak3
5. Selanjutnya pada mode konfigurasi, kelompokkan port-port switch kedalam VLAN zodiak1, zodiak2, dan zodiak3. Pengaturannya sebagai berikut :
 - Zodiak1 : leo dan libra
 - Zodiak2 : aries dan Taurus
 - Zodiak3 : virgo dan scorpio



6. Menampilkan informasi VLAN secara keseluruhan



7. Menampilkan informasi VLAN 10, 20, dan 30



The screenshot shows a network switch interface 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 `Switch#show vlan id 10`, and the output shows VLAN 10 named 'zodiak1' with status 'active' and ports 'Fa0/1, Fa0/4'. Below this, a table shows VLAN details for VLAN 10, including VLAN Type, SAID, MTU, Parent, RingNo, BridgeNo, Stp, and BrdgMode. The user then enters the command `Switch#show vlan id 20`, and the output shows VLAN 20 named 'zodiak2' with status 'active' and ports 'Fa0/2, Fa0/5'. Below this, a table shows VLAN details for VLAN 20. Finally, the user enters the command `Switch#show vlan id 30`, and the output shows VLAN 30 named 'zodiak3' with status 'active' and ports 'Fa0/3, Fa0/6'. Below this, a table shows VLAN details for VLAN 30. The interface also includes a 'Ctrl+F6 to exit CLI focus' message and 'Copy' and 'Paste' buttons.

Switch#show vlan id 10

VLAN Name	Status	Ports
10 zodiak1	active	Fa0/1, Fa0/4

VLAN Type SAID MTU Parent RingNo BridgeNo Stp BrdgMode
Trans1 Trans2

10	enet	100010	1500	-	-	-	-	-
0	0							

Switch#show vlan id 20

VLAN Name	Status	Ports
20 zodiak2	active	Fa0/2, Fa0/5

VLAN Type SAID MTU Parent RingNo BridgeNo Stp BrdgMode
Trans1 Trans2

20	enet	100020	1500	-	-	-	-	-
0	0							

Switch#show vlan id 30

VLAN Name	Status	Ports
30 zodiak3	active	Fa0/3, Fa0/6

VLAN Type SAID MTU Parent RingNo BridgeNo Stp BrdgMode
Trans1 Trans2

Ctrl+F6 to exit CLI focus

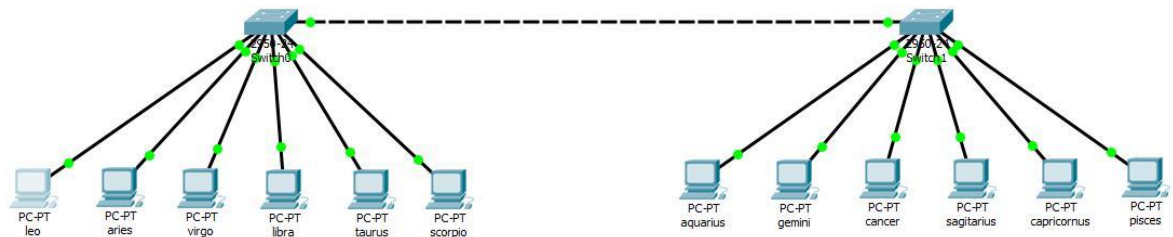
Copy Paste

☐ Top

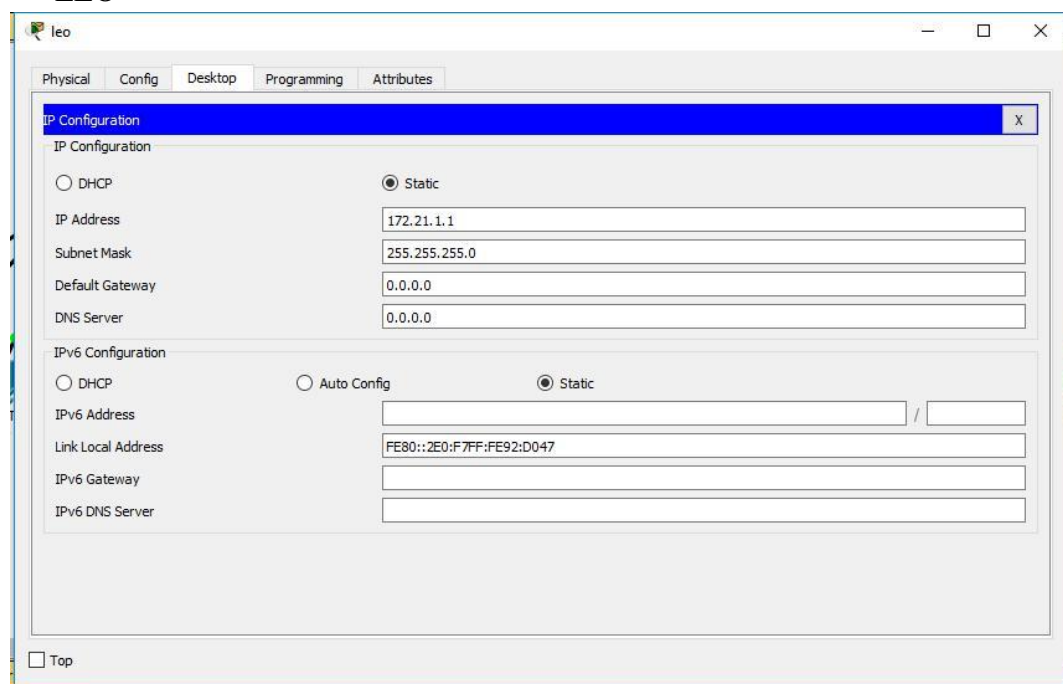
Kegiatan 2

Kegiatan 2

1. Topologi menggunakan switch Catalyst 2950



- Konfigurasi masing-masing pc LEO



- ARIES

The screenshot shows a window titled 'aries' with a tabbed interface. The 'Config' tab is active, displaying the 'IP Configuration' section. This section has a blue header bar with a close button. Below the header, there are two main configuration areas: 'IP Configuration' and 'IPv6 Configuration'. In the 'IP Configuration' area, the 'Static' radio button is selected, and the fields for IP Address, Subnet Mask, Default Gateway, and DNS Server are all filled with the value '0.0.0.0'. In the 'IPv6 Configuration' area, the 'Static' radio button is also selected, and the 'Link Local Address' field is filled with the value 'FE80::201:96FF:FE4D:C165'. The 'Top' checkbox at the bottom left is unchecked.

aries

Physical Config Desktop Programming Attributes

IP Configuration

☐ 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::201:96FF:FE4D:C165

IPv6 Gateway

IPv6 DNS Server

☐ Top

- VIRGO

virgo

PhysicalConfigDesktopProgrammingAttributes

IP Configuration

X

IP Configuration

☐ DHCP

☒ Static

IP Address

172.21.2.1

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::201:64FF:FE09:C05B

IPv6 Gateway

IPv6 DNS Server

☐ Top

- LIBRA

The screenshot shows the 'libra' application window with the 'Config' tab selected. The 'IP Configuration' section is active, showing settings for both IPv4 and IPv6. The IPv4 section has 'Static' selected, with IP Address '172.21.2.2', Subnet Mask '255.255.255.0', Default Gateway '0.0.0.0', and DNS Server '0.0.0.0'. The IPv6 section has 'Static' selected, with IPv6 Address, Link Local Address 'FE80::201:97FF:FE94:B2A7', IPv6 Gateway, and IPv6 DNS Server fields.

libra

Physical Config Desktop Programming Attributes

IP Configuration X

IP Configuration

☐ DHCP ☒ Static

IP Address 172.21.2.2

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::201:97FF:FE94:B2A7

IPv6 Gateway

IPv6 DNS Server

☐ Top

- TAURUS

The screenshot shows the 'taurus' application window with the 'Config' tab selected. The 'IP Configuration' section is active, showing settings for both IPv4 and IPv6. The IPv4 section has 'Static' selected, with IP Address '172.21.3.1', Subnet Mask '255.255.255.0', Default Gateway '0.0.0.0', and DNS Server '0.0.0.0'. The IPv6 section has 'Static' selected, with IPv6 Address, Link Local Address 'FE80::204:9AFF:FEE5:8601', IPv6 Gateway, and IPv6 DNS Server fields.

taurus

Physical Config Desktop Programming Attributes

IP Configuration X

IP Configuration

☐ DHCP ☒ Static

IP Address 172.21.3.1

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::204:9AFF:FEE5:8601

IPv6 Gateway

IPv6 DNS Server

☐ Top

- SCORPIO

The screenshot shows the 'scorpio' configuration window with the 'Config' tab selected. The 'IP Configuration' section has 'Static' selected, with fields for IP Address (172.21.3.2), Subnet Mask (255.255.255.0), Default Gateway (0.0.0.0), and DNS Server (0.0.0.0). The 'IPv6 Configuration' section has 'Static' selected, with fields for IPv6 Address (empty), Link Local Address (FE80::2D0:8CFF:FE53:511E), IPv6 Gateway (empty), and IPv6 DNS Server (empty). A 'Top' button is at the bottom left.

IP Configuration	
<input type="radio"/> DHCP	<input checked="" type="radio"/> Static
IP Address	172.21.3.2
Subnet Mask	255.255.255.0
Default Gateway	0.0.0.0
DNS Server	0.0.0.0

IPv6 Configuration		
<input type="radio"/> DHCP	<input type="radio"/> Auto Config	<input checked="" type="radio"/> Static
IPv6 Address		
Link Local Address	FE80::2D0:8CFF:FE53:511E	
IPv6 Gateway		
IPv6 DNS Server		

☐ Top

- AQUARIUS

The screenshot shows the 'aquarius' configuration window with the 'Config' tab selected. The 'IP Configuration' section has 'Static' selected, with fields for IP Address (172.21.1.3), Subnet Mask (255.255.255.0), Default Gateway (0.0.0.0), and DNS Server (0.0.0.0). The 'IPv6 Configuration' section has 'Static' selected, with fields for IPv6 Address (empty), Link Local Address (FE80::20C:85FF:FE9C:6980), IPv6 Gateway (empty), and IPv6 DNS Server (empty). A 'Top' button is at the bottom left.

IP Configuration	
<input type="radio"/> DHCP	<input checked="" type="radio"/> 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		
<input type="radio"/> DHCP	<input type="radio"/> Auto Config	<input checked="" type="radio"/> Static
IPv6 Address		
Link Local Address	FE80::20C:85FF:FE9C:6980	
IPv6 Gateway		
IPv6 DNS Server		

☐ Top

- GEMINI

The screenshot shows the 'gemini' application window with the 'Config' tab selected. The 'IP Configuration' section is active, showing settings for both IPv4 and IPv6. The IPv4 configuration is set to 'Static' with an IP address of 172.21.1.4 and a subnet mask of 255.255.255.0. The IPv6 configuration is also set to 'Static' with a link local address of FE80::230:A3FF:FE23:3C1E. The 'Top' button is visible at the bottom left.

IP Configuration	
<input type="radio"/> DHCP <input checked="" type="radio"/> Static	
IP Address	172.21.1.4
Subnet Mask	255.255.255.0
Default Gateway	0.0.0.0
DNS Server	0.0.0.0

IPv6 Configuration	
<input type="radio"/> DHCP <input type="radio"/> Auto Config <input checked="" type="radio"/> Static	
IPv6 Address	/
Link Local Address	FE80::230:A3FF:FE23:3C1E
IPv6 Gateway	
IPv6 DNS Server	

☐ Top

- CANCER

The screenshot shows the 'cancer' application window with the 'Config' tab selected. The 'IP Configuration' section is active, showing settings for both IPv4 and IPv6. The IPv4 configuration is set to 'Static' with an IP address of 172.21.2.3 and a subnet mask of 255.255.255.0. The IPv6 configuration is also set to 'Static' with a link local address of FE80::2D0:D3FF:FE51:BC4A. The 'Top' button is visible at the bottom left.

IP Configuration	
<input type="radio"/> DHCP <input checked="" type="radio"/> Static	
IP Address	172.21.2.3
Subnet Mask	255.255.255.0
Default Gateway	0.0.0.0
DNS Server	0.0.0.0

IPv6 Configuration	
<input type="radio"/> DHCP <input type="radio"/> Auto Config <input checked="" type="radio"/> Static	
IPv6 Address	/
Link Local Address	FE80::2D0:D3FF:FE51:BC4A
IPv6 Gateway	
IPv6 DNS Server	

☐ Top

- SAGITARIUS

The screenshot shows the 'sagitarius' application window with the 'Config' tab selected. The 'IP Configuration' section is active, showing options for DHCP and Static IP. The Static IP is selected with a radio button. The IP Address is 172.21.2.4, Subnet Mask is 255.255.255.0, Default Gateway is 0.0.0.0, and DNS Server is 0.0.0.0. The 'IPv6 Configuration' section is also visible, with options for DHCP, Auto Config, and Static. The Static option is selected. The IPv6 Address is empty, Link Local Address is FE80::202:16FF:FE7D:236, IPv6 Gateway is empty, and IPv6 DNS Server is empty. A 'Top' button is at the bottom left.

sagitarius

Physical Config Desktop Programming Attributes

IP Configuration

☐ DHCP ☒ Static

IP Address 172.21.2.4

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::202:16FF:FE7D:236

IPv6 Gateway

IPv6 DNS Server

☐ Top

- CAPRICONUS

The screenshot shows the 'capricornus' application window with the 'Config' tab selected. The 'IP Configuration' section is active, showing options for DHCP and Static IP. The Static IP is selected with a radio button. The IP Address is 172.21.3.3, Subnet Mask is 255.255.255.0, Default Gateway is 0.0.0.0, and DNS Server is 0.0.0.0. The 'IPv6 Configuration' section is also visible, with options for DHCP, Auto Config, and Static. The Static option is selected. The IPv6 Address is empty, Link Local Address is FE80::201:42FF:FE76:A8E2, IPv6 Gateway is empty, and IPv6 DNS Server is empty. A 'Top' button is at the bottom left.

capricornus

Physical Config Desktop Programming Attributes

IP Configuration

☐ DHCP ☒ Static

IP Address 172.21.3.3

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::201:42FF:FE76:A8E2

IPv6 Gateway

IPv6 DNS Server

☐ Top

- PISCES

piscs

Physical Config Desktop Programming Attributes

IP Configuration

IP Configuration

☐ DHCP ☒ Static

IP Address 172.21.3.4

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::201:96FF:FE63:3601

IPv6 Gateway

IPv6 DNS Server

☐ Top

3. Langkah 4 & 5

```
Switch>enable
Switch#conf term
Enter configuration commands, one per line. End with CNTL/Z.
Switch(config)#vlan 10
Switch(config-vlan)#name zodiak1
Switch(config-vlan)#exit
Switch(config)#vlan 20
Switch(config-vlan)#name zodiak2
Switch(config-vlan)#exit
Switch(config)#vlan 30
Switch(config-vlan)#name zodiak3
Switch(config-vlan)#exit
```

```
Switch(config)#int fa 0/1
Switch(config-if)#sw mode access
Switch(config-if)#sw access vlan 10
Switch(config-if)#exit%SPANTREE-2-RECV_PVID_ERR: Received 802.1Q
BPDU on non trunk FastEthernet0/1 VLAN1.
```

```
%SPANTREE-2-BLOCK_PVID_LOCAL: Blocking FastEthernet0/1 on
VLAN0001. Inconsistent port type.
```

```
%CDP-4-NATIVE_VLAN_MISMATCH: Native VLAN mismatch discovered on
FastEthernet0/1 (10), with Switch FastEthernet0/1 (1).
```

```
Switch(config)#int fa 0/4
Switch(config-if)#sw mod
%CDP-4-NATIVE_VLAN_MISMATCH: Native VLAN mismatch discovered on
FastEthernet0/1 (10), with Switch FastEthernet0/1 (1).
e access
```

```
Switch(config-if)#int fa 0/4
Switch(config-if)#sw mode access
Switch(config-if)#sw access vlan 10
Switch(config-if)#exit
Switch(config)#int fa 0/2
Switch(config-if)#sw mode access
```

```
Switch(config-if)#int fa 0/3
Switch(config-if)#sw mode access
Switch(config-if)#sw access vlan 30
Switch(config-if)#exit
Switch(config)#int fa 0/5
Switch(config-if)#sw mode access
Switch(config-if)#sw access vlan 20
Switch(config-if)#sw mode ac
```

```
%CDP-4-NATIVE_VLAN_MISMATCH: Native VLAN mismatch discovered on
FastEthernet0/1 (10), with Switch FastEthernet0/1 (1).
cess
```

```
Switch(config-if)#sw mode access
Switch(config-if)#sw access vlan 30
Switch(config-if)#end
Switch#
```

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

Activate W
on 2025-08-27

4. Konfigurasi vlan trunking pada switch 1

```
Switch#conf term
Enter configuration commands, one per line.  End with CNTL/Z.
Switch(config)#int fa 0/1
Switch(config-if)#sw mode trunk

Switch(config-if)#
%LINEPROTO-5-UPDOWN: Line protocol on Interface FastEthernet0/1,
changed state to down

%LINEPROTO-5-UPDOWN: Line protocol on Interface FastEthernet0/1,
changed state to up

Switch(config-if)#exit
```

5. Pada mode user dan mode privileged lihat konfigurasi trunking switch 1 yang telah dibuat

```
Switch#show interface fastethernet 0/1 switchport
Name: Fa0/1
Switchport: Enabled
Administrative Mode: trunk
Operational Mode: trunk
Administrative Trunking Encapsulation: dot1q
Operational Trunking Encapsulation: dot1q
Negotiation of Trunking: Off
Access Mode VLAN: 10 (zodiak1)
Trunking Native Mode VLAN: 1 (default)
Voice VLAN: none
Administrative private-vlan host-association: none
Administrative private-vlan mapping: none
Administrative private-vlan trunk native VLAN: none
Administrative private-vlan trunk encapsulation: dot1q
Administrative private-vlan trunk normal VLANs: none
Administrative private-vlan trunk private VLANs: none
Operational private-vlan: none
Trunking VLANs Enabled: ALL
Pruning VLANs Enabled: 2-1001
Capture Mode Disabled
Capture VLANs Allowed: ALL
Protected: false
Appliance trust: none
```



```
Switch#show vlan
```

VLAN Name	Status	Ports
1 default	active	Fa0/6, Fa0/7, Fa0/8, Fa0/9 Fa0/10, Fa0/11, Fa0/12, Fa0/13 Fa0/14, Fa0/15, Fa0/16, Fa0/17 Fa0/18, Fa0/19, Fa0/20, Fa0/21 Fa0/22, Fa0/23, Fa0/24
10 zodiak1	active	Fa0/4
20 zodiak2	active	Fa0/2
30 zodiak3	active	Fa0/3, Fa0/5
1002 fddi-default	act/unsup	
1003 token-ring-default	act/unsup	
1004 fddinet-default	act/unsup	
1005 trnet-default	act/unsup	

VLAN Type	SAID	MTU	Parent	RingNo	BridgeNo	Stp	BrdgMode
-----------	------	-----	--------	--------	----------	-----	----------

6. Lakukan ping dari pc leo ke pc pisces

```
C:\>ping 172.21.1.2

Pinging 172.21.1.2 with 32 bytes of data:

Request timed out.
Request timed out.
Request timed out.
Request timed out.

Ping statistics for 172.21.1.2:
    Packets: Sent = 4, Received = 0, Lost = 4 (100% loss),
```

7. Lakukan konfigurasi vlan trunking pada switch 2

```
Switch>enable
Switch#conf term
Enter configuration commands, one per line. End with CNTL/Z.
Switch(config)#interface fa 0/1
Switch(config-if)#switchport mode trunk
Switch(config-if)#exit
Switch(config)#
```

8. Pada mode user dan mode privileged lihat konfigurasi trunking switch 2 yang telah dibuat

```
Switch#show vlan
```

VLAN Name	Status	Ports
1 default	active	Fa0/2, Fa0/3, Fa0/4, Fa0/5 Fa0/6, Fa0/7, Fa0/8, Fa0/9 Fa0/10, Fa0/11, Fa0/12, Fa0/13 Fa0/14, Fa0/15, Fa0/16, Fa0/17 Fa0/18, Fa0/19, Fa0/20, Fa0/21 Fa0/22, Fa0/23, Fa0/24
1002 fddi-default	act/unsup	
1003 token-ring-default	act/unsup	
1004 fddinet-default	act/unsup	
1005 trnet-default	act/unsup	

VLAN Type	SAID	MTU	Parent	RingNo	BridgeNo	Stp	BrdgMode
Transl	Trans2						

VLAN Type	SAID	MTU	Parent	RingNo	BridgeNo	Stp	BrdgMode
Trans1	Trans2						
1	enet	100001	1500	-	-	-	-
0	0						
1002	fddi	101002	1500	-	-	-	-
0	0						
1003	tr	101003	1500	-	-	-	-
0	0						
1004	fdnet	101004	1500	-	-	-	ieee -
0	0						
1005	trnet	101005	1500	-	-	-	ibm -
0	0						

Remote SPAN VLANs

9. Konfigurasi port-port switch kedalam VLAN zodiak1, zodiak2, zodiak3
Zodiak1 = aquarius & gemini
Zodiak2 = cancer & sagitarius
Zodiak3 = capricornus & pisces

10. Lakukan ping

Ping PC leo ke PC aries

```
C:\>ping 172.21.1.2

Pinging 172.21.1.2 with 32 bytes of data:

Request timed out.
Request timed out.
Request timed out.
Request timed out.

Ping statistics for 172.21.1.2:
    Packets: Sent = 4, Received = 0, Lost = 4 (100% loss),
```

Ping PC leo ke PC aquarius

```
C:\>ping 172.21.1.3

Pinging 172.21.1.3 with 32 bytes of data:

Request timed out.
Request timed out.
Request timed out.
Request timed out.

Ping statistics for 172.21.1.3:
    Packets: Sent = 4, Received = 0, Lost = 4 (100% loss),
```

Ping PC leo ke PC pisces

```
C:\>ping 172.21.3.4

Pinging 172.21.3.4 with 32 bytes of data:

Request timed out.
Request timed out.
Request timed out.
Request timed out.

Ping statistics for 172.21.3.4:
    Packets: Sent = 4, Received = 0, Lost = 4 (100% loss),
```

Ping PC libra ke PC cancer

```
Packet Tracer PC Command Line 1.0
C:\>ping 172.21.2.3

Pinging 172.21.2.3 with 32 bytes of data:

Request timed out.
Request timed out.
Request timed out.
Request timed out.

Ping statistics for 172.21.2.3:
    Packets: Sent = 4, Received = 0, Lost = 4 (100% loss),
```

Ping PC libra ke PC leo

```
C:\>ping 172.21.1.1

Pinging 172.21.1.1 with 32 bytes of data:

Request timed out.
Request timed out.
Request timed out.
Request timed out.

Ping statistics for 172.21.1.1:
    Packets: Sent = 4, Received = 0, Lost = 4 (100% loss),
```