

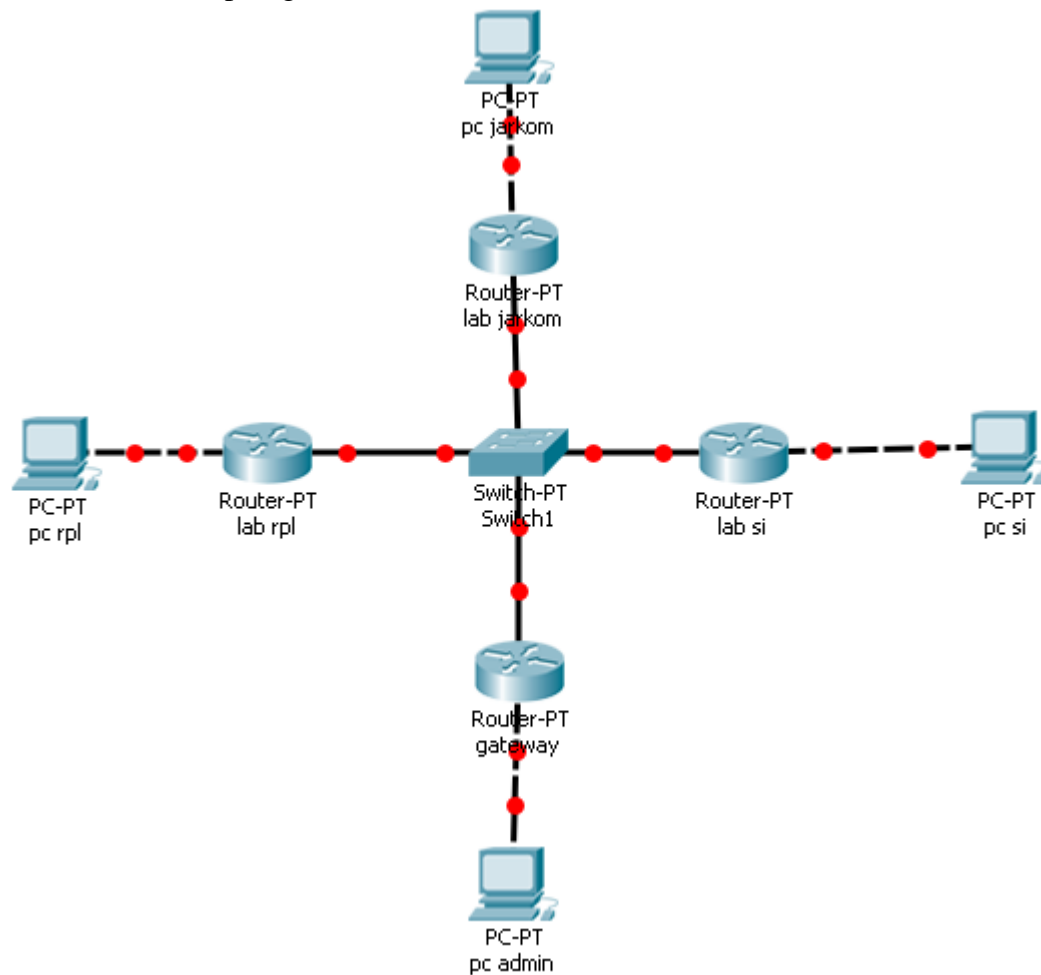
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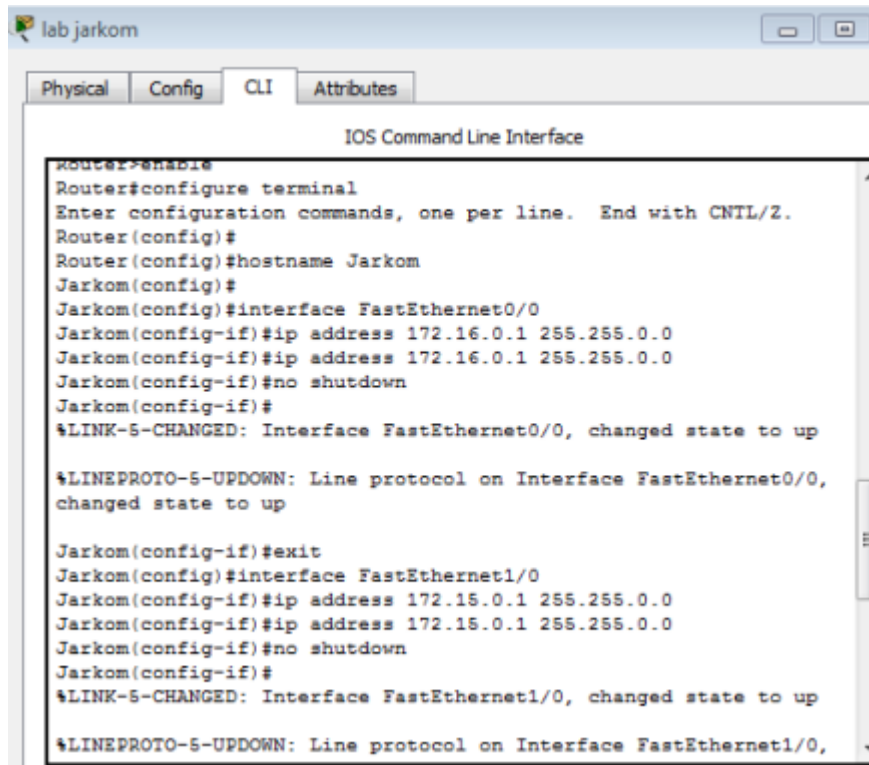
Modul 11

1. Buat struktuk Topologi



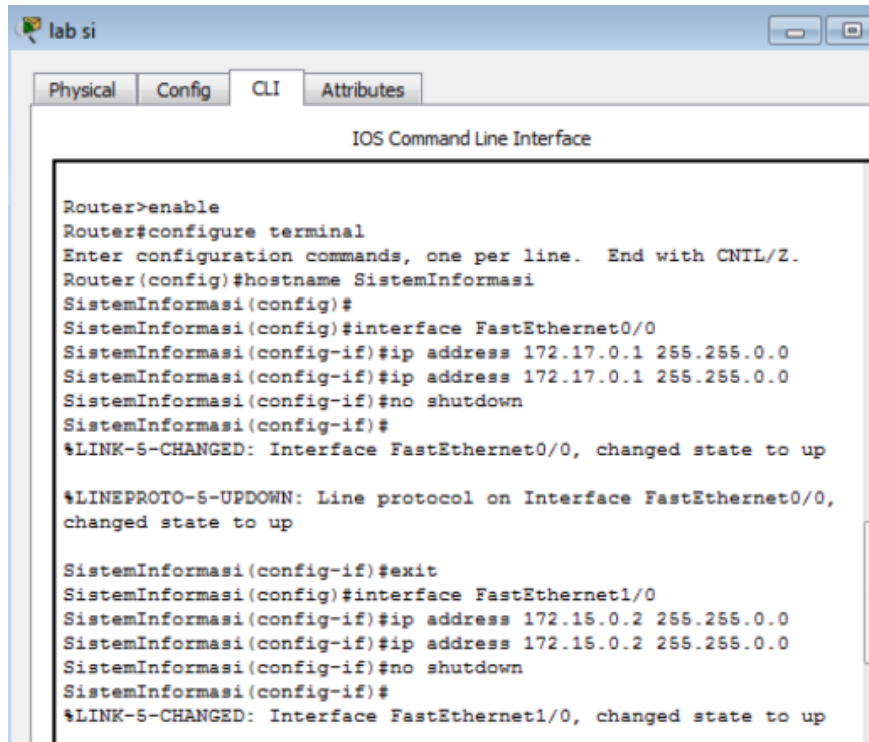
2. Setting IP di tiap-tiap Router

a) Lab JarKom



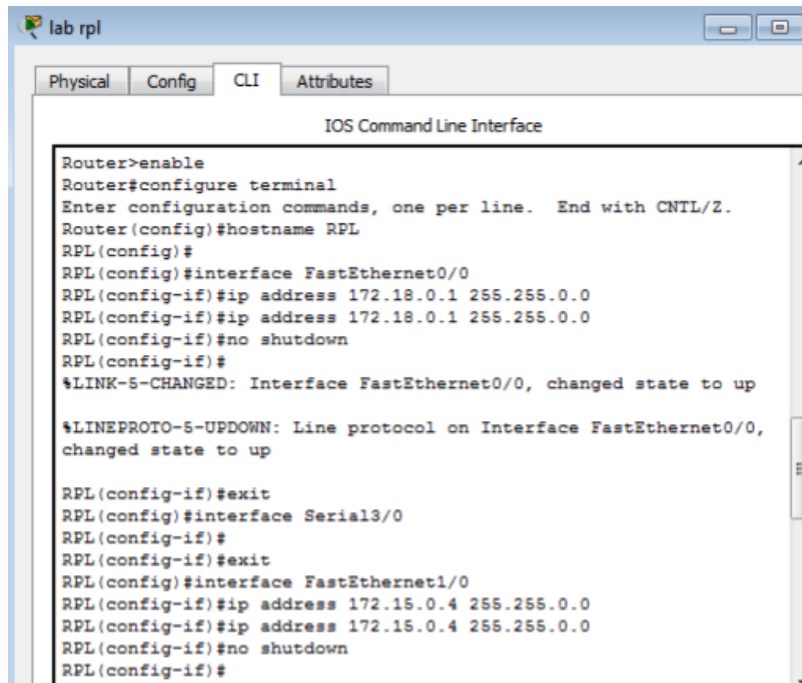
```
lab jarkom
Physical Config CLI Attributes
IOS Command Line Interface
Router>enable
Router#configure terminal
Enter configuration commands, one per line. End with CNTL/Z.
Router(config)#
Router(config)#hostname Jarkom
Jarkom(config)#
Jarkom(config)#interface FastEthernet0/0
Jarkom(config-if)#ip address 172.16.0.1 255.255.0.0
Jarkom(config-if)#ip address 172.16.0.1 255.255.0.0
Jarkom(config-if)#no shutdown
Jarkom(config-if)#
%LINK-5-CHANGED: Interface FastEthernet0/0, changed state to up
%LINEPROTO-5-UPDOWN: Line protocol on Interface FastEthernet0/0,
changed state to up
Jarkom(config-if)#exit
Jarkom(config)#interface FastEthernet1/0
Jarkom(config-if)#ip address 172.15.0.1 255.255.0.0
Jarkom(config-if)#ip address 172.15.0.1 255.255.0.0
Jarkom(config-if)#no shutdown
Jarkom(config-if)#
%LINK-5-CHANGED: Interface FastEthernet1/0, changed state to up
%LINEPROTO-5-UPDOWN: Line protocol on Interface FastEthernet1/0,
```

b) Lab SI



```
lab si
Physical Config CLI Attributes
IOS Command Line Interface
Router>enable
Router#configure terminal
Enter configuration commands, one per line. End with CNTL/Z.
Router(config)#hostname SistemInformasi
SistemInformasi(config)#
SistemInformasi(config)#interface FastEthernet0/0
SistemInformasi(config-if)#ip address 172.17.0.1 255.255.0.0
SistemInformasi(config-if)#ip address 172.17.0.1 255.255.0.0
SistemInformasi(config-if)#no shutdown
SistemInformasi(config-if)#
%LINK-5-CHANGED: Interface FastEthernet0/0, changed state to up
%LINEPROTO-5-UPDOWN: Line protocol on Interface FastEthernet0/0,
changed state to up
SistemInformasi(config-if)#exit
SistemInformasi(config)#interface FastEthernet1/0
SistemInformasi(config-if)#ip address 172.15.0.2 255.255.0.0
SistemInformasi(config-if)#ip address 172.15.0.2 255.255.0.0
SistemInformasi(config-if)#no shutdown
SistemInformasi(config-if)#
%LINK-5-CHANGED: Interface FastEthernet1/0, changed state to up
```

c) Lab RPL



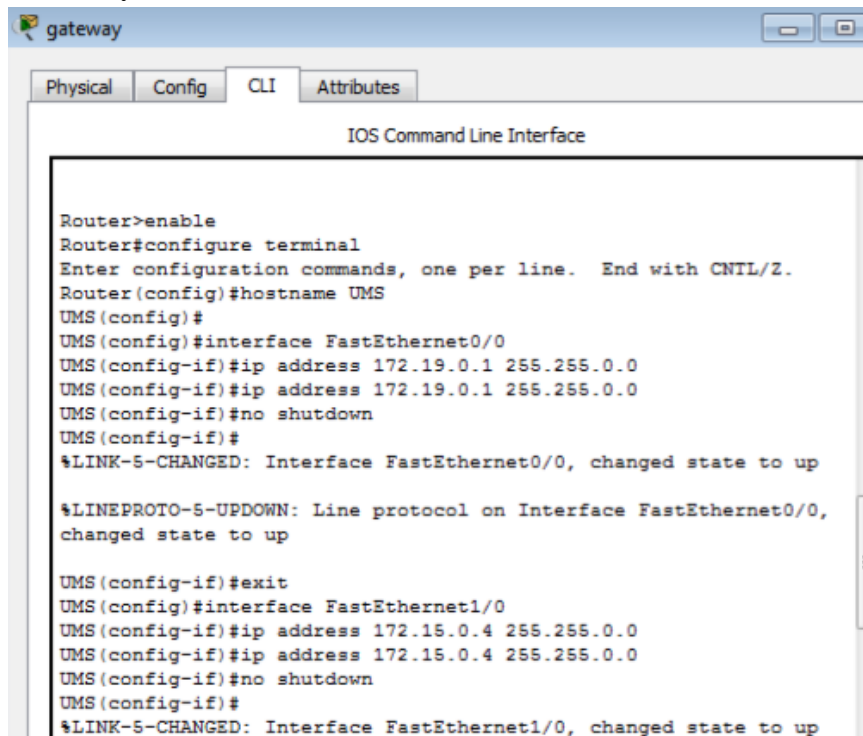
```
lab rpl
Physical Config CLI Attributes
IOS Command Line Interface

Router>enable
Router#configure terminal
Enter configuration commands, one per line. End with CNTL/Z.
Router(config)#hostname RPL
RPL(config)#
RPL(config)#interface FastEthernet0/0
RPL(config-if)#ip address 172.18.0.1 255.255.0.0
RPL(config-if)#ip address 172.18.0.1 255.255.0.0
RPL(config-if)#no shutdown
RPL(config-if)#
%LINK-5-CHANGED: Interface FastEthernet0/0, changed state to up

%LINEPROTO-5-UPDOWN: Line protocol on Interface FastEthernet0/0,
changed state to up

RPL(config-if)#exit
RPL(config)#interface Serial3/0
RPL(config-if)#
RPL(config-if)#exit
RPL(config)#interface FastEthernet1/0
RPL(config-if)#ip address 172.15.0.4 255.255.0.0
RPL(config-if)#ip address 172.15.0.4 255.255.0.0
RPL(config-if)#no shutdown
RPL(config-if)#
```

d) Gateway



```
gateway
Physical Config CLI Attributes
IOS Command Line Interface

Router>enable
Router#configure terminal
Enter configuration commands, one per line. End with CNTL/Z.
Router(config)#hostname UMS
UMS(config)#
UMS(config)#interface FastEthernet0/0
UMS(config-if)#ip address 172.19.0.1 255.255.0.0
UMS(config-if)#ip address 172.19.0.1 255.255.0.0
UMS(config-if)#no shutdown
UMS(config-if)#
%LINK-5-CHANGED: Interface FastEthernet0/0, changed state to up

%LINEPROTO-5-UPDOWN: Line protocol on Interface FastEthernet0/0,
changed state to up

UMS(config-if)#exit
UMS(config)#interface FastEthernet1/0
UMS(config-if)#ip address 172.15.0.4 255.255.0.0
UMS(config-if)#ip address 172.15.0.4 255.255.0.0
UMS(config-if)#no shutdown
UMS(config-if)#
%LINK-5-CHANGED: Interface FastEthernet1/0, changed state to up
```

3. Konfigurasi routing table

a) Lab JarKom

```
Jarkom#conf term
Enter configuration commands, one per line. End with CNTL/Z.
Jarkom(config)#router rip
Jarkom(config-router)#network 172.15.0.0
Jarkom(config-router)#network 172.16.0.0
Jarkom(config-router)#network 172.17.0.0
Jarkom(config-router)#network 172.18.0.0
Jarkom(config-router)#network 172.19.0.0
Jarkom(config-router)#
Jarkom(config-router)#end
Jarkom#configure terminal
Enter configuration commands, one per line. End with CNTL/Z.
Jarkom(config)#interface FastEthernet1/0
Jarkom(config-if)#
%SYS-5-CONFIG_I: Configured from console by console
```

b) Lab SI

```
SistemInformasi(config-if)#ex
SistemInformasi(config)#router rip
SistemInformasi(config-router)#network 172.15.0.0
SistemInformasi(config-router)#network 172.16.0.0
SistemInformasi(config-router)#network 172.17.0.0
SistemInformasi(config-router)#network 172.18.0.0
SistemInformasi(config-router)#network 172.19.0.0
SistemInformasi(config-router)#ex
```

c) Lab RPL

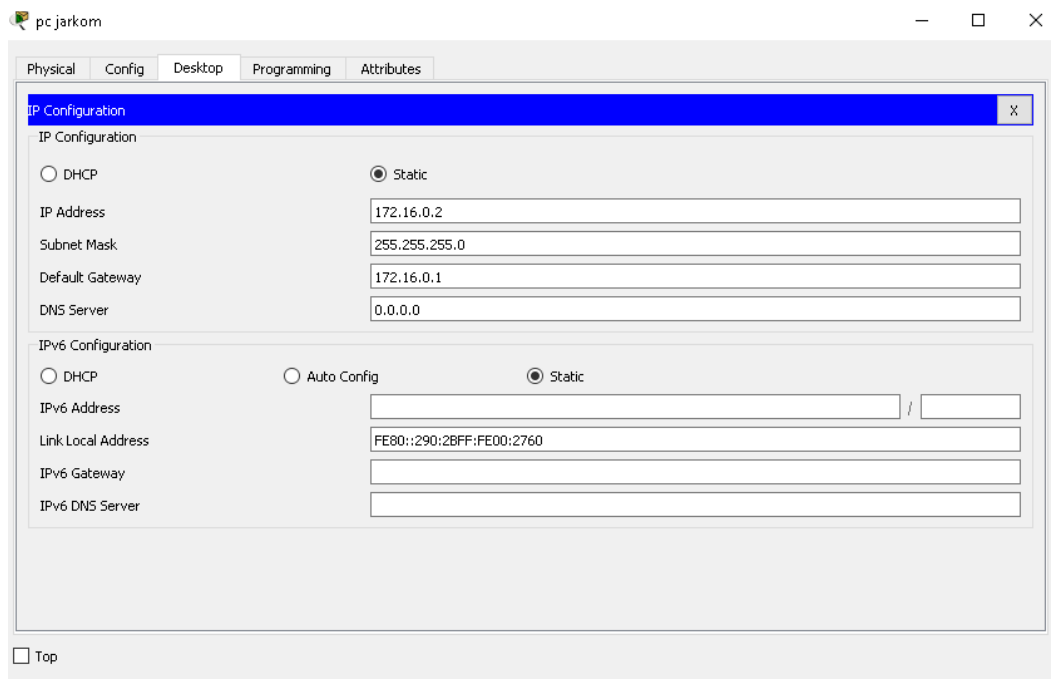
```
RPL(config-if)#ex
RPL(config)#router rip
RPL(config-router)#network 172.15.0.0
RPL(config-router)#network 172.16.0.0
RPL(config-router)#network 172.17.0.0
RPL(config-router)#network 172.18.0.0
RPL(config-router)#network 172.19.0.0
RPL(config-router)#ex
RPL(config)#
RPL#
%SYS-5-CONFIG_I: Configured from console by console
```

d) Gateway

```
UMS(config-if)#ex
UMS(config)#router rip
UMS(config-router)#network 172.15.0.0
UMS(config-router)#network 172.16.0.0
UMS(config-router)#network 172.17.0.0
UMS(config-router)#network 172.18.0.0
UMS(config-router)#network 172.19.0.0
UMS(config-router)#ex
UMS(config)#
UMS#
%SYS-5-CONFIG_I: Configured from console by console
```

4. Konfigurasi IP Address tiap-tiap PC

a) PC JarKom



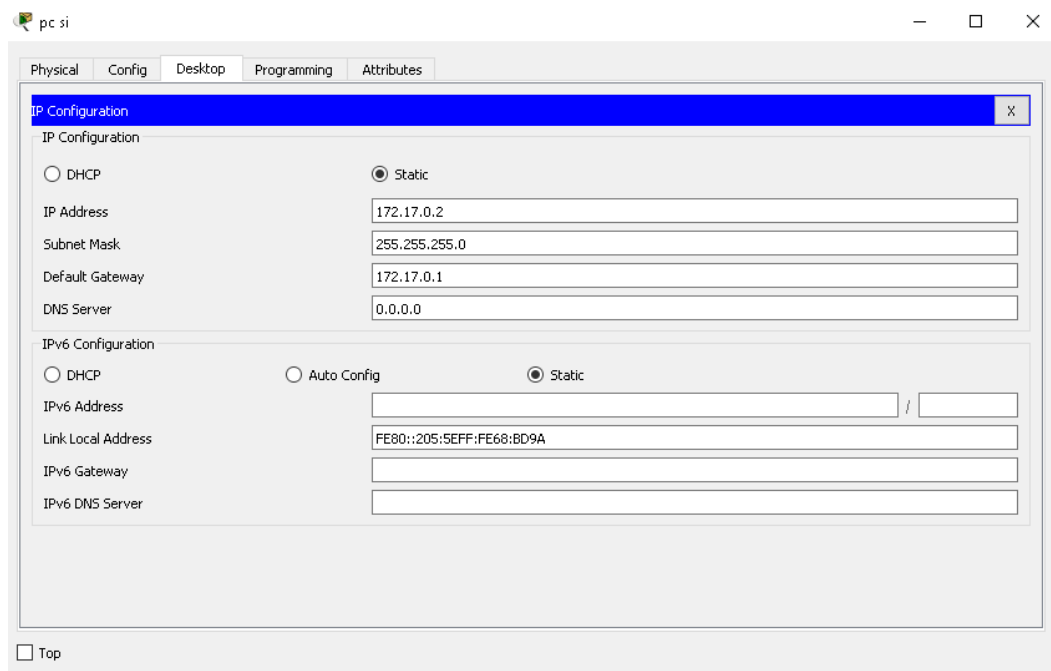
The screenshot shows the configuration window for PC JarKom. The window has tabs for Physical, Config, Desktop, Programming, and Attributes. The Config tab is active, and the IP Configuration section is highlighted. The IP Configuration section has two radio buttons: DHCP and Static. The Static radio button is selected. The fields for IP Address, Subnet Mask, Default Gateway, and DNS Server are filled with the following values: 172.16.0.2, 255.255.255.0, 172.16.0.1, and 0.0.0.0 respectively. The IPv6 Configuration section has three radio buttons: DHCP, Auto Config, and Static. The Static radio button is selected. The fields for IPv6 Address, Link Local Address, IPv6 Gateway, and IPv6 DNS Server are empty. The IPv6 Address field is split into two parts by a slash. The Link Local Address field is filled with FE80::290:2BFF:FE00:2760. The IPv6 Gateway and IPv6 DNS Server fields are empty. A Top button is located at the bottom left of the window.

IP Configuration	
<input type="radio"/> DHCP <input checked="" type="radio"/> Static	
IP Address	172.16.0.2
Subnet Mask	255.255.255.0
Default Gateway	172.16.0.1
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::290:2BFF:FE00:2760
IPv6 Gateway	
IPv6 DNS Server	

☐ Top

b) PC SI



The screenshot shows the configuration window for PC SI. The window has tabs for Physical, Config, Desktop, Programming, and Attributes. The Config tab is active, and the IP Configuration section is highlighted. The IP Configuration section has two radio buttons: DHCP and Static. The Static radio button is selected. The fields for IP Address, Subnet Mask, Default Gateway, and DNS Server are filled with the following values: 172.17.0.2, 255.255.255.0, 172.17.0.1, and 0.0.0.0 respectively. The IPv6 Configuration section has three radio buttons: DHCP, Auto Config, and Static. The Static radio button is selected. The fields for IPv6 Address, Link Local Address, IPv6 Gateway, and IPv6 DNS Server are empty. The IPv6 Address field is split into two parts by a slash. The Link Local Address field is filled with FE80::205:5EFF:FE68:BD9A. The IPv6 Gateway and IPv6 DNS Server fields are empty. A Top button is located at the bottom left of the window.

IP Configuration	
<input type="radio"/> DHCP <input checked="" type="radio"/> Static	
IP Address	172.17.0.2
Subnet Mask	255.255.255.0
Default Gateway	172.17.0.1
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::205:5EFF:FE68:BD9A
IPv6 Gateway	
IPv6 DNS Server	

☐ Top

c) PC RPL

pc rpl

Physical Config Desktop Programming Attributes

IP Configuration

IP Configuration

☐ DHCP ☒ Static

IP Address 172.18.0.2

Subnet Mask 255.255.255.0

Default Gateway 172.18.0.1

DNS Server 0.0.0.0

IPv6 Configuration

☐ DHCP ☐ Auto Config ☒ Static

IPv6 Address /

Link Local Address FE80::250:FFF:FED6:862C

IPv6 Gateway

IPv6 DNS Server

☐ Top

d) PC Admin

pc admin

Physical Config Desktop Programming Attributes

IP Configuration

IP Configuration

☐ DHCP ☒ Static

IP Address 172.19.0.2

Subnet Mask 255.255.255.0

Default Gateway 172.19.0.1

DNS Server 0.0.0.0

IPv6 Configuration

☐ DHCP ☐ Auto Config ☒ Static

IPv6 Address /

Link Local Address FE80::230:A3FF:FE42:E0D

IPv6 Gateway

IPv6 DNS Server

☐ Top

5. Test PING tiap-tiap PC dari PC Admin

a) PC Adim ke PC JarKom

```
C:\>ping 172.16.0.2

Pinging 172.16.0.2 with 32 bytes of data:

Reply from 172.16.0.2: bytes=32 time=1ms TTL=126
Reply from 172.16.0.2: bytes=32 time<1ms TTL=126
Reply from 172.16.0.2: bytes=32 time<1ms TTL=126
Reply from 172.16.0.2: bytes=32 time<1ms TTL=126

Ping statistics for 172.16.0.2:
    Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),
    Approximate round trip times in milli-seconds:
        Minimum = 0ms, Maximum = 1ms, Average = 0ms
```

b) PC Admin ke PC SI

```
C:\>ping 172.17.0.2

Pinging 172.17.0.2 with 32 bytes of data:

Reply from 172.17.0.2: bytes=32 time<1ms TTL=126
Reply from 172.17.0.2: bytes=32 time<1ms TTL=126
Reply from 172.17.0.2: bytes=32 time=1ms TTL=126
Reply from 172.17.0.2: bytes=32 time<1ms TTL=126

Ping statistics for 172.17.0.2:
    Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),
    Approximate round trip times in milli-seconds:
        Minimum = 0ms, Maximum = 1ms, Average = 0ms
```

c) PC Admin ke PC RPL

```
C:\>ping 172.18.0.2

Pinging 172.18.0.2 with 32 bytes of data:

Reply from 172.18.0.2: bytes=32 time=1ms TTL=126
Reply from 172.18.0.2: bytes=32 time=1ms TTL=126
Reply from 172.18.0.2: bytes=32 time<1ms TTL=126
Reply from 172.18.0.2: bytes=32 time<1ms TTL=126

Ping statistics for 172.18.0.2:
    Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),
    Approximate round trip times in milli-seconds:
        Minimum = 0ms, Maximum = 1ms, Average = 0ms
```