

# LAPORAN PRAKTIKUM JARINGAN KOMPUTER

## MODUL 11

### “PERANCANGAN JARINGAN LABORATORIUM SEDERHANA MENGUNAKAN PACKET TRACER”

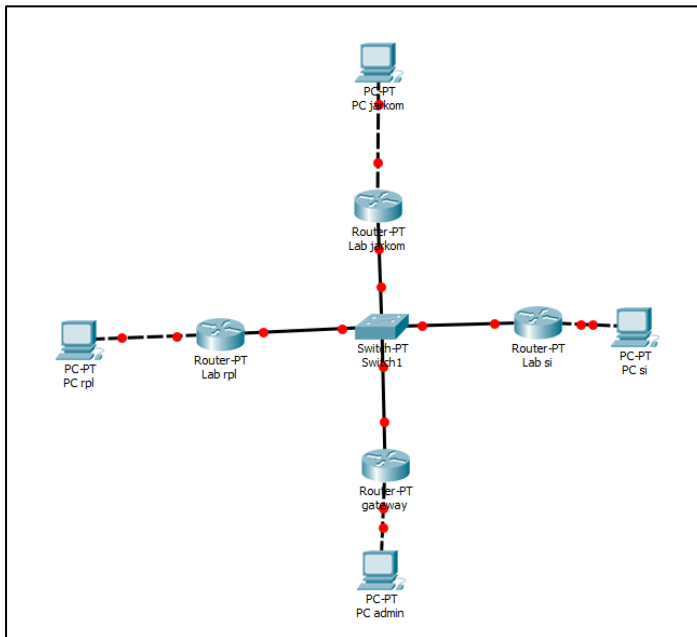
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#### Kegiatan Praktikum

1. Buat topologi seperti pada gambar



2. Konfigurasi semua router

- Router 1

```
Router>en
Router#conf term
Enter configuration commands, one per line. End with CNTL/Z.
Router(config)#hostname Jarkom
Jarkom(config)#int fa0/0
Jarkom(config-if)#ip address 172.16.0.1 255.255.255.0
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)#int fa1/0
Jarkom(config-if)#ip address 172.15.0.1 255.255.255.0
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,
changed state to up

Jarkom(config-if)#exit
Jarkom(config)#
```

- Router 2

```
Router>en
Router#conf term
Enter configuration commands, one per line. End with CNTL/Z.
Router(config)#hostname SistemInformasi
SistemInformasi(config)#int fa 0/0
SistemInformasi(config-if)#ip address 172.17.0.1 255.255.255.0
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)#int fa 1/0
SistemInformasi(config-if)#ip address 172.15.0.2 255.255.255.0
SistemInformasi(config-if)#no shutdown

SistemInformasi(config-if)#
%LINK-5-CHANGED: Interface FastEthernet1/0, changed state to up

%LINEPROTO-5-UPDOWN: Line protocol on Interface FastEthernet1/0,
changed state to up

SistemInformasi(config-if)#exit
```

- Router 3

```
Router>en
Router#conf term
Enter configuration commands, one per line. End with CNTL/Z.
Router(config)#hostname RPL
RPL(config)#int fa0/0
RPL(config-if)#ip address 172.18.0.1 255.255.255.0
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)#int fa1/0
RPL(config-if)#ip address 172.15.0.3 255.255.255.0
RPL(config-if)#no shutdown

RPL(config-if)#
%LINK-5-CHANGED: Interface FastEthernet1/0, changed state to up

%LINEPROTO-5-UPDOWN: Line protocol on Interface FastEthernet1/0,
changed state to up

RPL(config-if)#exit
```

- Router 4

```
Router>en
Router#conf term
Enter configuration commands, one per line. End with CNTL/Z.
Router(config)#hostname UMS
UMS(config)#int fa0/0
UMS(config-if)#ip address 172.19.0.1 255.255.255.0
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)#int fa1/0
UMS(config-if)#ip address 172.15.0.4 255.255.255.0
UMS(config-if)#no shutdown

UMS(config-if)#
%LINK-5-CHANGED: Interface FastEthernet1/0, changed state to up

%LINEPROTO-5-UPDOWN: Line protocol on Interface FastEthernet1/0,
changed state to up

UMS(config-if)#exit
```

### 3. Konfigurasi routing table pada 4 router

- Routing table pada router 1 / Jarkom

```
Jarkom(config-if)#exit
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)#
```

- Routing table pada router 2 / SI

```
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)#
```

- Routing table pada router 3 / RPL

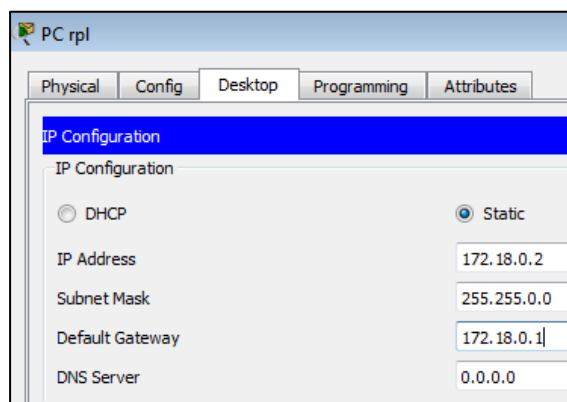
```
RPL(config)#router rip
RPL(config-router)#network 172.15.0.0
RPL(config-router)#network 172.16.0.0
RPL(config-router)#network 172.17.0.0
RPL(config-router)#network 172.18.0.0
RPL(config-router)#network 172.19.0.0
RPL(config-router)#
```

- Routing table pada router 4 / gateway UMS

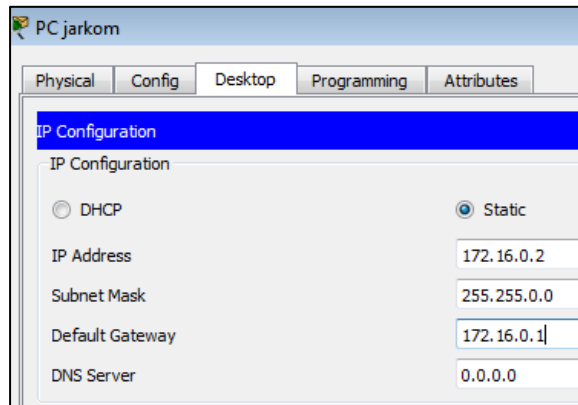
```
UMS(config)#router rip
UMS(config-router)#network 172.15.0.0
UMS(config-router)#network 172.16.0.0
UMS(config-router)#network 172.17.0.0
UMS(config-router)#network 172.18.0.0
UMS(config-router)#network 172.19.0.0
UMS(config-router)#
```

### 4. Konfigurasi IP pada masing-masing PC

- PC lab RPL



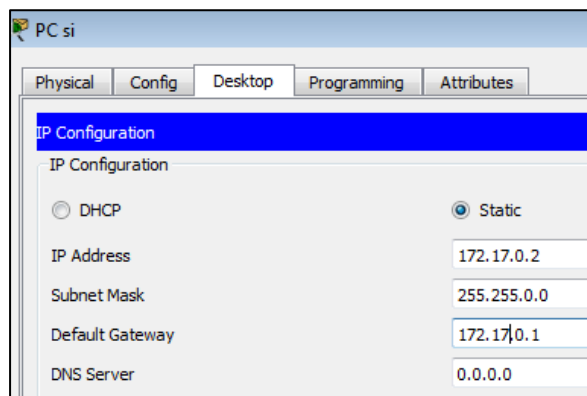
- PC lab Jarkom



The screenshot shows the 'IP Configuration' window for 'PC jarkom'. The 'Config' tab is selected. Under 'IP Configuration', the 'Static' radio button is chosen. The fields are filled with: IP Address: 172.16.0.2, Subnet Mask: 255.255.0.0, Default Gateway: 172.16.0.1, and DNS Server: 0.0.0.0.

Field	Value
IP Address	172.16.0.2
Subnet Mask	255.255.0.0
Default Gateway	172.16.0.1
DNS Server	0.0.0.0

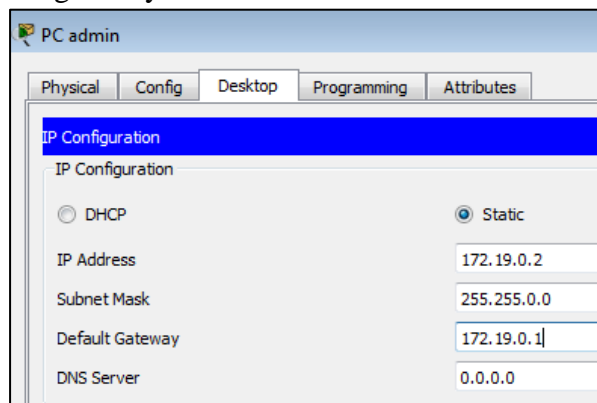
- PC lab SI



The screenshot shows the 'IP Configuration' window for 'PC si'. The 'Config' tab is selected. Under 'IP Configuration', the 'Static' radio button is chosen. The fields are filled with: IP Address: 172.17.0.2, Subnet Mask: 255.255.0.0, Default Gateway: 172.17.0.1, and DNS Server: 0.0.0.0.

Field	Value
IP Address	172.17.0.2
Subnet Mask	255.255.0.0
Default Gateway	172.17.0.1
DNS Server	0.0.0.0

- PC gateway



The screenshot shows the 'IP Configuration' window for 'PC admin'. The 'Config' tab is selected. Under 'IP Configuration', the 'Static' radio button is chosen. The fields are filled with: IP Address: 172.19.0.2, Subnet Mask: 255.255.0.0, Default Gateway: 172.19.0.1, and DNS Server: 0.0.0.0.

Field	Value
IP Address	172.19.0.2
Subnet Mask	255.255.0.0
Default Gateway	172.19.0.1
DNS Server	0.0.0.0

5. Lakukan pengujian ICMP request (ping) untuk tes koneksi

```
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 = 0ms, Average = 0ms

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:\>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 = 0ms, Average = 0ms
```