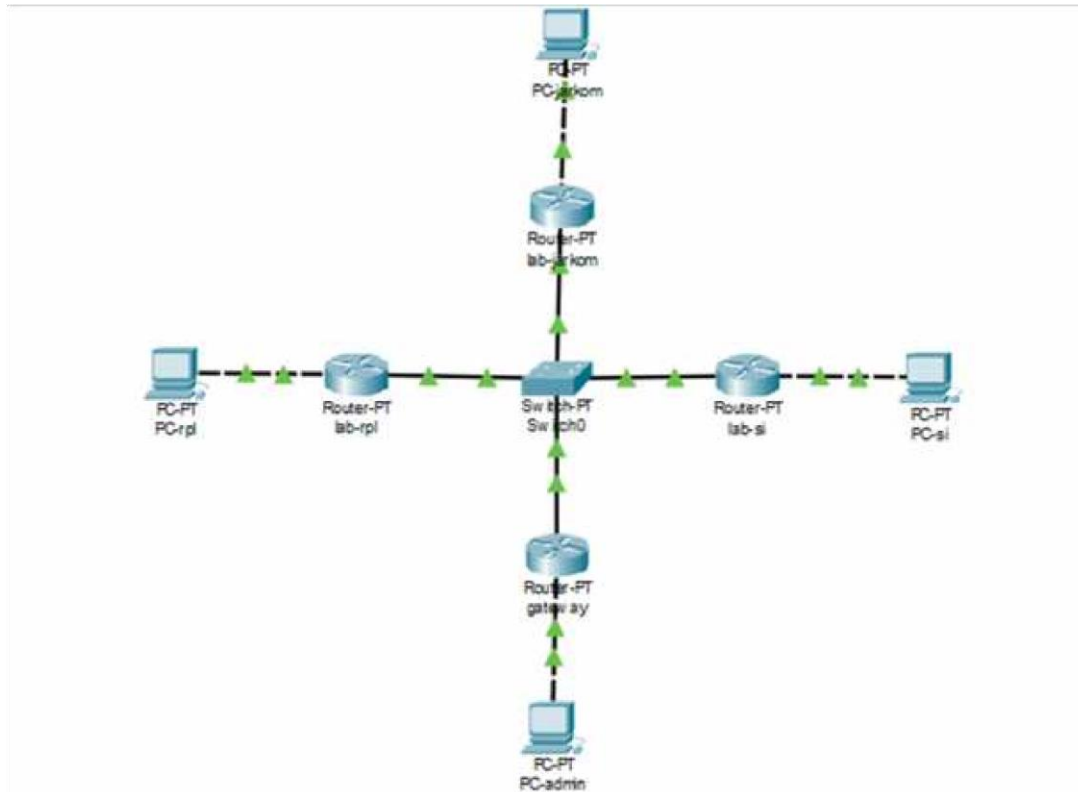


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NIM : L200170110
Kelas : C
Modul : Kegiatan 11

Kegiatan

1. Buat topologi dengan 4 router 2514 dengan buka netmap, 4 PC, dan 1 switch



2. Konfigurasi Semua Router

- Konfigurasi 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 rip
```

- Konfigurasi Router 2

```
Router>en
Router#conf term
Enter configuration commands, one per line. End with CNTL/Z.
Router(config)#hostname SistemInformasi
SistemInformasi(config)#int fa0/0
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 fa1/0
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
SistemInformasi(config)#router rip
```

- Konfigurasi 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
RPL(config)#router rip
```

- Konfigurasi 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
UMS(config)#router rip
```

3. Konfigurasi Routing Table pada 4 Router.

- Membuat Routing Table pada Router 1 / Router 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)#network 172.19.0.0
Jarkom(config-router)#
```

- Membuat Routing Table pada Router 2 / Router Sistem Informasi

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

- Membuat Routing Table pada Router 3 / Router RPL

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

- Membuat Routing Table pada Router 4 / Gateway UMS

```
UMS(config-if)#exit
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.

- Setting IP untuk PC lab RPL 172.18.0.2 / 24

PC-rpl

Physical Config **Desktop** Programming Attributes

☐ DHCP ☒ Static

IP Address: 172.18.0.2

Subnet Mask: 255.255.255.0

Default Gateway: 172.17.0.1

DNS Server: 0.0.0.0

IPv6 Configuration

☐ DHCP ☐ Auto Config ☒ Static

IPv6 Address: /

Link Local Address: FE80::20C:CFFF:FE80:2541

IPv6 Gateway:

IPv6 DNS Server:

802.1X

☐ Use 802.1X Security

Authentication: RADIUS

Username:

Password:

☐ Top

- Setting IP untuk PC lab Jarkom 172.16.0.2 / 24

PC-jarkom

Physical Config **Desktop** Programming Attributes

☐ DHCP ☒ 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

☐ DHCP ☐ Auto Config ☒ Static

IPv6 Address: /

Link Local Address: FE80::201:63FF:FEE4:7C53

IPv6 Gateway:

IPv6 DNS Server:

802.1X

☐ Use 802.1X Security

Authentication: RADIUS

Username:

Password:

☐ Top

- Setting IP untuk PC lab SI 172.17.0.2 / 24

The screenshot shows the 'PC-i' configuration window with the 'Desktop' tab selected. The 'Static' radio button is chosen for IP configuration. The fields are filled with the following values:

Field	Value
IP Address	172.17.0.2
Subnet Mask	255.255.255.0
Default Gateway	172.18.0.1
DNS Server	0.0.0.0

Below the IPv4 section, the 'IPv6 Configuration' section has the 'Static' radio button selected. The fields are empty except for the 'Link Local Address' which is set to 'FE80:20A:F3FF:FE18:3865'. The '802.1X' section has 'Use 802.1X Security' unchecked, and the 'Authentication' dropdown is set to 'MD5'. The 'Username' and 'Password' fields are empty.

- Setting IP untuk PC Gateway 172.19.0.2 / 24

The screenshot shows the 'PC-admin' configuration window with the 'Desktop' tab selected. The 'Static' radio button is chosen for IP configuration. The fields are filled with the following values:

Field	Value
IP Address	172.19.0.2
Subnet Mask	255.255.255.0
Default Gateway	172.19.0.1
DNS Server	0.0.0.0

Below the IPv4 section, the 'IPv6 Configuration' section has the 'Static' radio button selected. The fields are empty except for the 'Link Local Address' which is set to 'FE80:20C:CFFF:FE4B:B04'. The '802.1X' section has 'Use 802.1X Security' unchecked, and the 'Authentication' dropdown is set to 'MD5'. The 'Username' and 'Password' fields are empty.

5. Pengujian ICMP request (ping) untuk test koneksi

- Proses ping dari PC Admin 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=10ms TTL=126
Reply from 172.16.0.2: bytes=32 time=1ms TTL=126
Reply from 172.16.0.2: bytes=32 time=12ms 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 = 1ms, Maximum = 12ms, Average = 6ms
```

- Proses ping dari 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=2ms 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 = 2ms, Average = 0ms
```

- Proses ping dari 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=10ms TTL=126
Reply from 172.18.0.2: bytes=32 time<1ms TTL=126
Reply from 172.18.0.2: bytes=32 time=14ms 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 = 14ms, Average = 6ms
```