

Laporan Praktikum Jaringan Komputer

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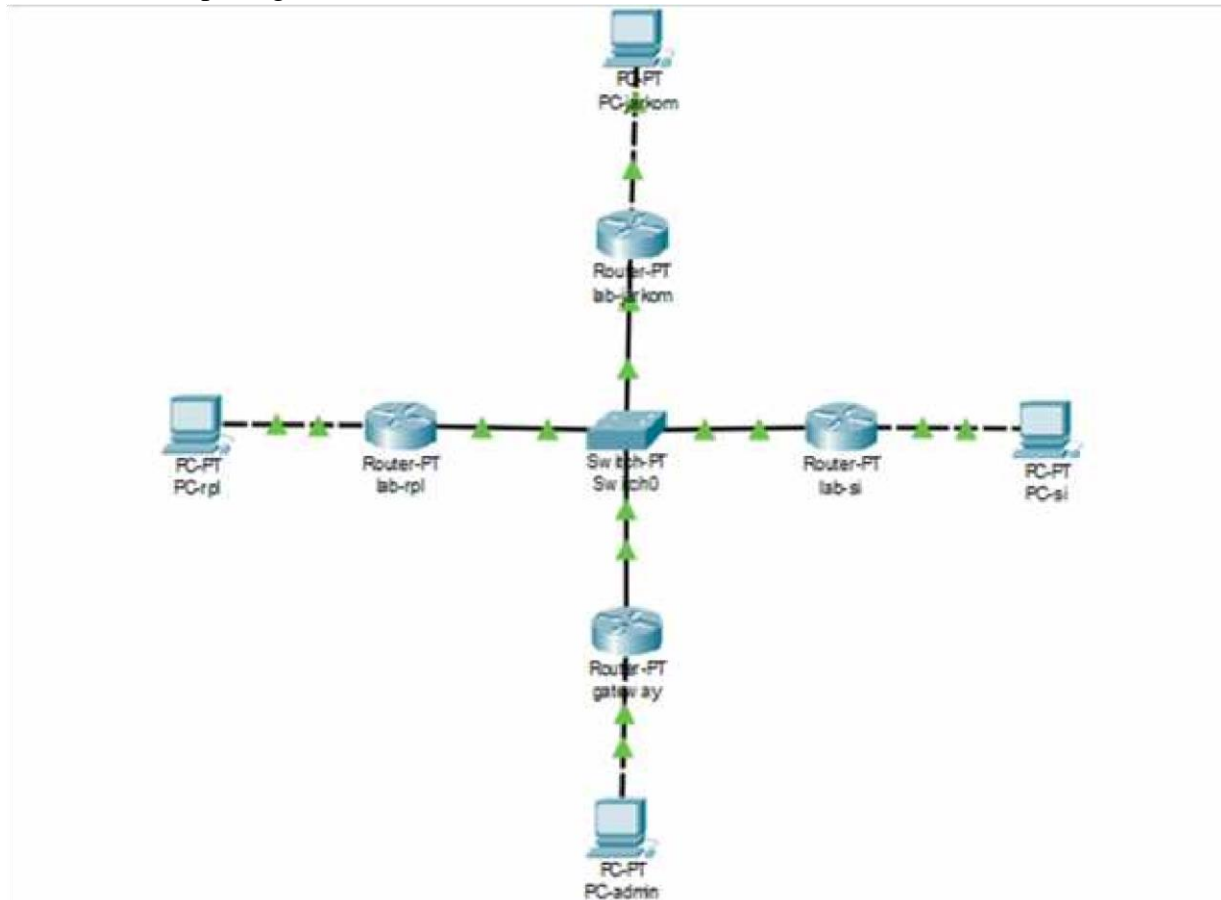
NIM : L200170133

Kelas : C

Modul : 11 (Perancangan Jaringan Laboratorium Sederhana)

Kegiatan Praktikum.

1. Buat netmap dengan router 2514 dan switch 1912.



2. Konfigurasi IP Address pada 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 semua 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)#network 172.19.0.0
Jarkom(config-router)#
```

- Routing Table pada Router 2 (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)#
```

- Routing Table pada Router 3 (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)#
```

- Routing Table pada Gateway (UMS)

4. Konfigurasi IP pada masing-masing PC.

```
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)#
```

- Setting IP untuk PC lab Jarkom (172.16.0.2)

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:FE47:C53

IPv6 Gateway:

IPv6 DNS Server:

802.1X

☐ Use 802.1X Security

Authentication: 802

Username:

Password:

☐ Top

- Setting IP untuk PC lab SI (172.17.0.2)

PC-pi

Physical Config Desktop Programming Attributes

☐ DHCP ☒ Static

IP Address: 172.17.0.2

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::20A:F3FF:FE18:3865

IPv6 Gateway:

IPv6 DNS Server:

802.1X

☐ Use 802.1X Security

Authentication: 802

Username:

Password:

☐ Top

- Setting IP untuk PC lab RPL (172.18.0.2)

PC-rpl

Physical Config **Desktop** Programming Attributes

☐ DHCP ☒ Static

IP Address: 172.16.0.2

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:FE88:2541

IPv6 Gateway:

IPv6 DNS Server:

802.1X

☐ Use 802.1X Security

Authentication: ACS

Username:

Password:

☐ Top

- Setting IP untuk PC Gateway (172.19.0.2)

PC-admin

Physical Config **Desktop** Programming Attributes

☐ 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::20C:CFFF:FE48:B04

IPv6 Gateway:

IPv6 DNS Server:

802.1X

☐ Use 802.1X Security

Authentication: ACS

Username:

Password:

☐ Top

5. Pengujian ICMP request (ping)

- 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=13ms 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 = 13ms, 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
```