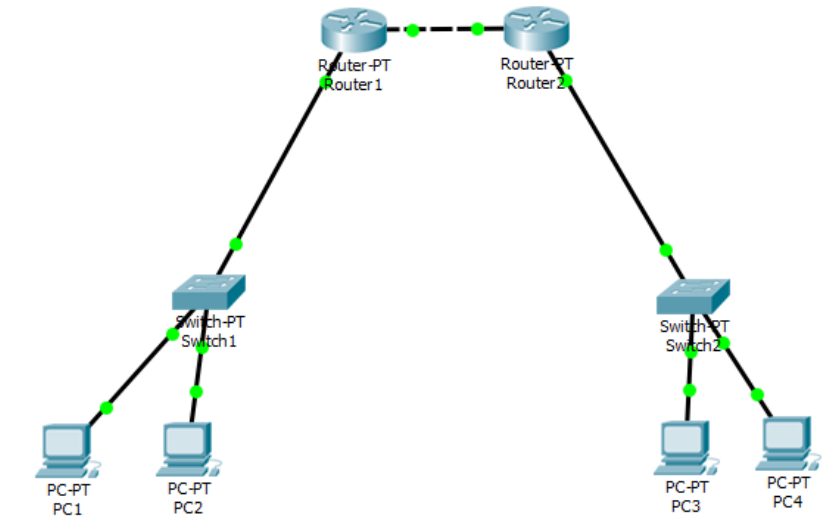
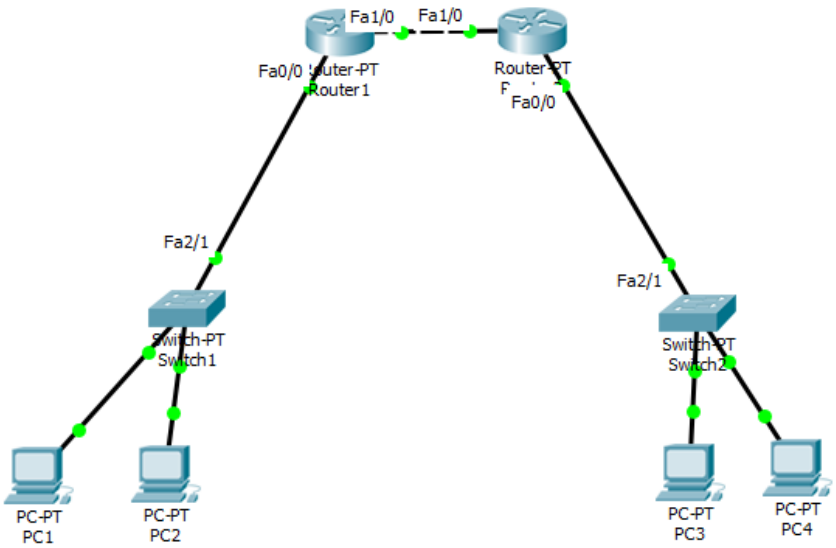
Nama : Bintang Citra Kusumaatmaja
Nim : L200170078
Kelas : B

LAPORAN MODUL PRAKTIKUM JARINGAN KOMPUTER MODUL-8
SETTING DYNAMIC ROUTING & FILTERING

1. Buat Topologi jaringan komputer menggunakan cisco packet tracer seperti dibawah ini dan dengan konfigurasi :





a. **Router 1**
   Fast Ethernet 0/0 : 192.168.110.254
   Fast Ethernet 1/0 : 192.168.10.1

b. **PC 1**
   IP Address : 192.168.110.3
   Gateway : 192.168.110.254 (Router 1)

c. **PC 2**
   IP Address : 192.168.110.4
   Gateway : 192.168.110.254 (Router 1)

d. **Router 2**
   Fast Ethernet 0/0 : 192.168.120.254
   Fast Ethernet 1/0 : 192.168.10.2

e. **PC 3**
   IP Address : 192.168.120.3
   Gateway : 192.168.110.254 (Router 1)

f. **PC 4**
   IP Address : 192.168.120.4
   Gateway : 192.168.110.254 (Router 1)

2. Uji Koneksi antara PC 1 dengan PC 3, pasti akan error karena kita belum melakukan dynamic routing.

```
C:\>ping 192.168.120.3

Pinging 192.168.120.3 with 32 bytes of data:

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

Ping statistics for 192.168.120.3:
    Packets: Sent = 4, Received = 0, Lost = 4 (100% loss),
```

3. Setting dynamic routing dengan mengisikan network FA0/0 dan FA1/0 kepada setiap router masing-masing.

a. **Router 1**

```
Router(config)#router rip
Router(config-router)#
%SYS-5-CONFIG_I: Configured from console by console
network 192.168.110.0
Router(config-router)#network 192.168.10.0
Router(config-router)#
```

b. Router 2

```
Router(config)#router rip
Router(config-router)#network 192.168.120.0
Router(config-router)#network 192.168.10.0
Router(config-router)#
```

4. Kemudian, Test koneksi PING dari PC 1 ke PC 3 Seperti Langkah 2.

a. PC 1 ke PC 3

```
C:\>ping 192.168.120.3

Pinging 192.168.120.3 with 32 bytes of data:

Reply from 192.168.120.3: bytes=32 time=13ms TTL=126
Reply from 192.168.120.3: bytes=32 time=15ms TTL=126
Reply from 192.168.120.3: bytes=32 time=19ms TTL=126
Reply from 192.168.120.3: bytes=32 time=14ms TTL=126

Ping statistics for 192.168.120.3:
    Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),
Approximate round trip times in milli-seconds:
    Minimum = 13ms, Maximum = 19ms, Average = 15ms
```

b. PC 3 ke PC 1

```
C:\>ping 192.168.110.3

Pinging 192.168.110.3 with 32 bytes of data:

Reply from 192.168.110.3: bytes=32 time=14ms TTL=126
Reply from 192.168.110.3: bytes=32 time=13ms TTL=126
Reply from 192.168.110.3: bytes=32 time=12ms TTL=126
Reply from 192.168.110.3: bytes=32 time=11ms TTL=126

Ping statistics for 192.168.110.3:
    Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),
Approximate round trip times in milli-seconds:
    Minimum = 11ms, Maximum = 14ms, Average = 12ms
```

5. Konfigurasi Dynamic Routing Berhasil, Kemudian kita coba lakukan filtering. Dengan memberikan hanya 1 host PC 4 dengan Alaman IP 192.168.120.4 agar dapat mengakses ke jaringan 192.168.110.0. Konfigurasi PADA ROUTER 1

```
Router>en
Router#conf
Configuring from terminal, memory, or network [terminal]?
Enter configuration commands, one per line.  End with CNTL/Z.
Router(config)#acc
Router(config)#access-list 20 permit 192.168.120.4 0.0.0.0
Router(config)#exit
Router#
%SYS-5-CONFIG_I: Configured from console by console

Router#conf
Configuring from terminal, memory, or network [terminal]?
Enter configuration commands, one per line.  End with CNTL/Z.
Router(config)#int fa
Router(config)#int fastEthernet 0/0
Router(config-if)#acc
Router(config-if)#ip ac
Router(config-if)#ip access-group 20 out
Router(config-if)#
```

6. Kemudian kita coba PING dari PC 3 ke PC 1/ PC 2. Maka hasilnya akan Destination Host Unreachable. Sedangkan Dari PC 4 ke PC 1/PC 2 Pasti akan Reply Karena di perbolehkan oleh router 1.
   a. PC 3 Ke PC 1

```
C:\>ping 192.168.110.3

Pinging 192.168.110.3 with 32 bytes of data:

Reply from 192.168.10.1: Destination host unreachable.
Reply from 192.168.10.1: Destination host unreachable.
Reply from 192.168.10.1: Destination host unreachable.
Reply from 192.168.10.1: Destination host unreachable.

Ping statistics for 192.168.110.3:
    Packets: Sent = 4, Received = 0, Lost = 4 (100% loss),
```

   b. PC 4 ke PC 1

```
C:\>ping 192.168.110.3

Pinging 192.168.110.3 with 32 bytes of data:

Reply from 192.168.110.3: bytes=32 time=10ms TTL=126
Reply from 192.168.110.3: bytes=32 time=13ms TTL=126
Reply from 192.168.110.3: bytes=32 time=13ms TTL=126
Reply from 192.168.110.3: bytes=32 time=13ms TTL=126

Ping statistics for 192.168.110.3:
    Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),
Approximate round trip times in milli-seconds:
    Minimum = 10ms, Maximum = 13ms, Average = 12ms
```

7. Kita telah Berhasil melakukan Filtering Access pada ROUTER.

KESIMPULAN

Pada Router, dapat dilakukan Dynamic Routing yaitu Routing secara dinamis yang dilakukan oleh router dimana router dapat memilih jalur yang terdekat ketika mengirimkan data ke tujuan. Dan pada Router dapat dilakukan Filtering Access yaitu konfigurasi IP mana saja yang mendapatkan akses ke jaringan ataupun yang tidak.