

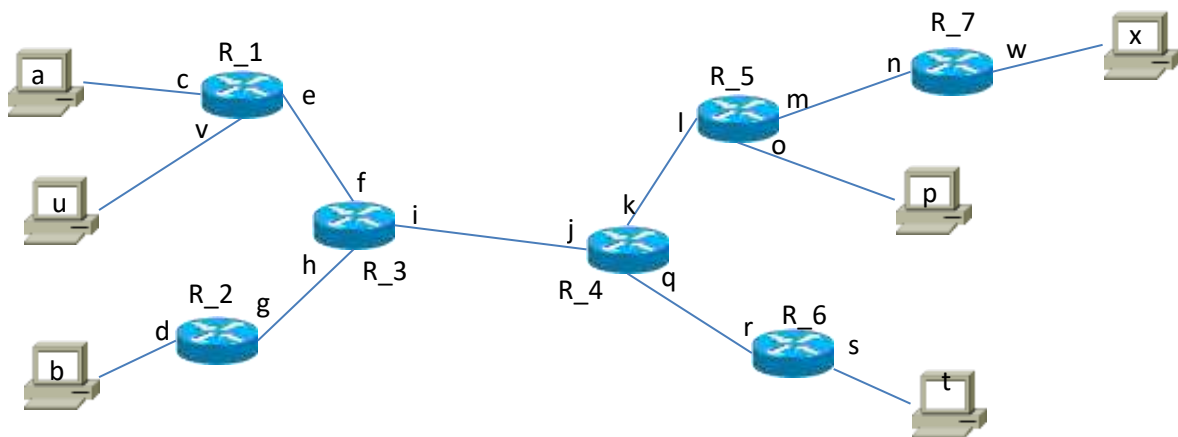
Modul 7 Static Routing 2

Tujuan:

1. Mahasiswa mampu mengkonfigurasi static Route pada router

Percobaan:

Kondisi Awal : Seluruh jaringan pada topologi 1 belum dapat terkoneksi satu dengan yang lain
 Tujuan : Jaringan komputer pada topologi 1 dapat bekerja
 Kerangka : Konfigurasi sesuai dengan hasil Routing table yang dibuat pada modul 6
 Berfikir
 Hasil Akhir : setiap PC dapat saling berkomunikasi



Topologi 1

a	192.168.1.2/24	i	172.16.1.9/30	q	172.16.1.21/30
b	192.168.2.2/24	j	172.16.1.10/30	r	172.16.1.22/30
c	192.168.1.1/24	k	172.16.1.13/30	s	192.168.4.1/24
d	192.168.2.1/24	l	172.16.1.14/30	t	192.168.4.2/24
e	172.16.1.1/30	m	172.16.1.17/30	u	192.168.5.2/24
f	172.16.1.2/30	n	172.16.1.18/30	v	192.168.5.1/24
g	172.16.1.5/30	o	192.168.3.1/24	w	192.168.6.1/24
h	172.16.1.6/30	p	192.168.3.2/24	x	192.168.6.2/24

Tabel 1

Percobaan 1:

1. Uji koneksi:
 - a. Host A ke B, berhasilkah? Berhasil

Fire	Last Status	Source	Destination	Type	Color	Time (sec)	Period
	Successful	A	B	ICMP		0.000	N

```
Packet Tracer PC Command Line 1.0
PC>ping 192.168.2.2

Pinging 192.168.2.2 with 32 bytes of data:

Reply from 192.168.2.2: bytes=32 time=4ms TTL=128
Reply from 192.168.2.2: bytes=32 time=0ms TTL=128
Reply from 192.168.2.2: bytes=32 time=15ms TTL=128
Reply from 192.168.2.2: bytes=32 time=15ms TTL=128

Ping statistics for 192.168.2.2:
    Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),
    Approximate round trip times in milli-seconds:
        Minimum = 0ms, Maximum = 15ms, Average = 8ms
```

- b. Host A ke U, berhasilkah? Berhasil

 Successful A U ICMP  0.000

```
Packet Tracer PC Command Line 1.0
C>ping 192.168.5.2

Pinging 192.168.5.2 with 32 bytes of data:

Reply from 192.168.5.2: bytes=32 time=62ms TTL=127
Reply from 192.168.5.2: bytes=32 time=63ms TTL=127
Reply from 192.168.5.2: bytes=32 time=63ms TTL=127
Reply from 192.168.5.2: bytes=32 time=63ms TTL=127

Ping statistics for 192.168.5.2:
    Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),
    Approximate round trip times in milli-seconds:
        Minimum = 62ms, Maximum = 63ms, Average = 62ms

C>
```

- c. Host A ke T, berhasilkah? Berhasil

 Successful A T ICMP  0.000

```
PC>ping 192.168.4.1

Pinging 192.168.4.1 with 32 bytes of data:

Reply from 192.168.4.1: bytes=32 time=125ms TTL=252
Reply from 192.168.4.1: bytes=32 time=110ms TTL=252
Reply from 192.168.4.1: bytes=32 time=125ms TTL=252
Reply from 192.168.4.1: bytes=32 time=96ms TTL=252

Ping statistics for 192.168.4.1:
    Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),
    Approximate round trip times in milli-seconds:
        Minimum = 96ms, Maximum = 125ms, Average = 114ms
```

- a. Mengapa? Karena ip yang dibutuhkan melakukan routing secara manual agar bisa merouting satu sama lain.

Karena ip yang dibutuhkan melakukan routing secara manual agar bisa merouting satu sama lain.

Nama: Rizky Haris Febryansa
Nim: 152011513035

2. Agar masing-masing jaringan dapat terkoneksi diperlukan adanya informasi routing, kemana sebuah packet dengan tujuan x harus di route. Untuk modul ini kita akan mengkonfigurasi "static route".
 - a. Lihat informasi routing anda:

R_1 #show ip route

```
Codes: C - connected, S - static, I - IGRP, R - RIP, M - mobile, B - BGP
       D - EIGRP, EX - EIGRP external, O - OSPF, IA - OSPF inter area
       N1 - OSPF NSSA external type 1, N2 - OSPF NSSA external type 2
       E1 - OSPF external type 1, E2 - OSPF external type 2, E - EGP
       i - IS-IS, L1 - IS-IS level-1, L2 - IS-IS level-2, ia - IS-IS inter area
       * - candidate default, U - per-user static route, o - ODR
       P - periodic downloaded static route
```

Gateway of last resort is not set

```
C 192.168.1.0/24 is directly connected, FastEthernet0/0
C 192.168.2.0/24 is directly connected, FastEthernet0/1
C 172.16.1.0/30 is directly connected, Ethernet0/1/0
```

R1

```
R_1#show ip route
Codes: C - connected, S - static, I - IGRP, R - RIP, M - mobile, B - BGP
       D - EIGRP, EX - EIGRP external, O - OSPF, IA - OSPF inter area
       N1 - OSPF NSSA external type 1, N2 - OSPF NSSA external type 2
       E1 - OSPF external type 1, E2 - OSPF external type 2, E - EGP
       i - IS-IS, L1 - IS-IS level-1, L2 - IS-IS level-2, ia - IS-IS inter area
       * - candidate default, U - per-user static route, o - ODR
       P - periodic downloaded static route

Gateway of last resort is not set

      172.16.0.0/30 is subnetted, 1 subnets
C       172.16.1.0 is directly connected, Ethernet0/0/0
C 192.168.1.0/24 is directly connected, FastEthernet0/1
S 192.168.2.0/24 [1/0] via 172.16.1.2
C 192.168.5.0/24 is directly connected, FastEthernet0/0
```

R2

```
R_2>show ip route
Codes: C - connected, S - static, I - IGRP, R - RIP, M - mobile, B - BGP
       D - EIGRP, EX - EIGRP external, O - OSPF, IA - OSPF inter area
       N1 - OSPF NSSA external type 1, N2 - OSPF NSSA external type 2
       E1 - OSPF external type 1, E2 - OSPF external type 2, E - EGP
       i - IS-IS, L1 - IS-IS level-1, L2 - IS-IS level-2, ia - IS-IS inter area
       * - candidate default, U - per-user static route, o - ODR
       P - periodic downloaded static route

Gateway of last resort is not set

      172.16.0.0/30 is subnetted, 1 subnets
C       172.16.1.4 is directly connected, FastEthernet0/0
S 192.168.1.0/24 [1/0] via 172.16.1.6
C 192.168.2.0/24 is directly connected, FastEthernet0/1
R_2>
```

R3

Nama: Rizky Haris Febryansa
Nim: 152011513035

```
R_3#show ip route
Codes: C - connected, S - static, I - IGRP, R - RIP, M - mobile, B - BGP
       D - EIGRP, EX - EIGRP external, O - OSPF, IA - OSPF inter area
       N1 - OSPF NSSA external type 1, N2 - OSPF NSSA external type 2
       E1 - OSPF external type 1, E2 - OSPF external type 2, E - EGP
       i - IS-IS, L1 - IS-IS level-1, L2 - IS-IS level-2, ia - IS-IS inter area
       * - candidate default, U - per-user static route, o - ODR
       P - periodic downloaded static route

Gateway of last resort is not set

172.16.0.0/30 is subnetted, 3 subnets
C      172.16.1.0 is directly connected, FastEthernet0/0
C      172.16.1.4 is directly connected, FastEthernet0/1
C      172.16.1.8 is directly connected, Ethernet0/0/0
S      192.168.1.0/24 [1/0] via 172.16.1.1
S      192.168.2.0/24 [1/0] via 172.16.1.5
```

3. Static route dapat menggunakan Gateway **atau** Interface (**PERHATIAN**: berikut hanya sebuah contoh, sesuaikan dengan hasil Routing table buatan anda!):

- o Static Route dengan menggunakan nama Interface. Untuk menuju jaringan 172.16.1.8/30 melalui interface (contoh) Ethernet0/1/0.

```
R_1(config)#ip route 172.16.1.8 255.255.255.252 Ethernet0/1/0
```

ATAU

- o Static Route dengan menggunakan *Gateway*. Untuk menuju jaringan 172.16.1.8/30 *Gateway*-nya adalah 172.16.1.2

```
R_1(config)#ip route 172.16.1.8 255.255.255.252 172.16.1.2
```

4. Lengkapi seluruh Router dengan Routing table yang diperlukan!
5. Percobaan anda berhasil jika pertanyaan pada no 1.a, 1.b dan 1.c jawabannya adalah **YA**.