

Nama : Rizky Amanda Nindia Putri

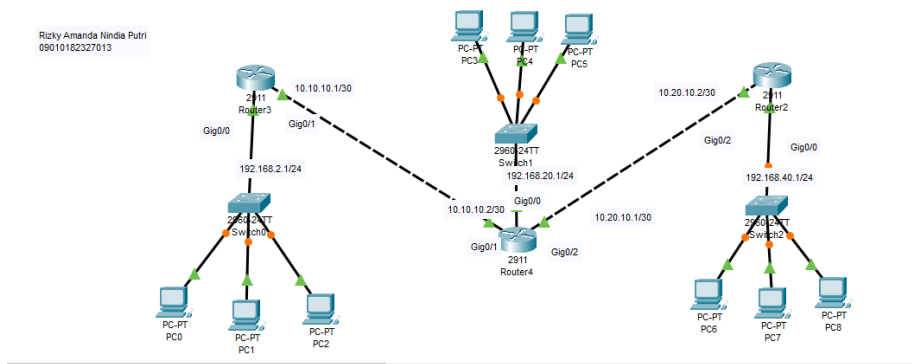
Nim : 09010182327013

Kelas : MI3A

MK : Prak. Jarkom

LAPORAN PRATIKUM JARKOM DYNAMIC ROUTING

TOPOLOGI



ROUTER 1

```
9010182327013_R1>enable
9010182327013_R1#show ip route
Codes: L - local, C - connected, S - static, 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

10.0.0.0/8 is variably subnetted, 3 subnets, 2 masks
  10.10.10.0/30 is directly connected, GigabitEthernet0/1
  10.10.10.1/32 is directly connected, GigabitEthernet0/1
  10.20.10.0/30 [1/0] via 10.10.10.2
192.168.2.0/24 is variably subnetted, 2 subnets, 2 masks
  192.168.2.0/24 is directly connected, GigabitEthernet0/0
  192.168.2.1/32 is directly connected, GigabitEthernet0/0
  192.168.20.0/24 [1/0] via 10.10.10.2
  192.168.40.0/24 [1/0] via 10.20.10.2

9010182327013_R1#
```

ROUTER 2

```
09010182327013_R2>enable
09010182327013_R2#show ip route
Codes: L - local, C - connected, S - static, 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

    10.0.0.0/8 is variably subnetted, 4 subnets, 2 masks
C       10.10.10.0/30 is directly connected, GigabitEthernet0/1
L       10.10.10.2/32 is directly connected, GigabitEthernet0/1
C       10.20.10.0/30 is directly connected, GigabitEthernet0/2
L       10.20.10.1/32 is directly connected, GigabitEthernet0/2
S       192.168.2.0/24 [1/0] via 10.10.10.1
        192.168.20.0/24 is variably subnetted, 2 subnets, 2 masks
C       192.168.20.0/24 is directly connected, GigabitEthernet0/0
L       192.168.20.1/32 is directly connected, GigabitEthernet0/0
S       192.168.40.0/24 [1/0] via 10.20.10.2
```

ROUTER 3

```
09010182327013_R3>enable
09010182327013_R3#show ip route
Codes: L - local, C - connected, S - static, 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

    10.0.0.0/8 is variably subnetted, 3 subnets, 2 masks
S       10.10.10.0/30 [1/0] via 10.20.10.1
C       10.20.10.0/30 is directly connected, GigabitEthernet0/2
L       10.20.10.2/32 is directly connected, GigabitEthernet0/2
S       192.168.2.0/24 [1/0] via 10.20.10.1
S       192.168.20.0/24 [1/0] via 10.20.10.1
        192.168.40.0/24 is variably subnetted, 2 subnets, 2 masks
C       192.168.40.0/24 is directly connected, GigabitEthernet0/0
L       192.168.40.1/32 is directly connected, GigabitEthernet0/0
```

TES KONEKSI ICMP

NO	SUMBER	TUJUAN	HASIL	
			YA	TIDAK
1	PC1	PC2	YA	
		PC3	YA	
		PC4	YA	
		PC5	YA	
		PC6	YA	
		PC7	YA	
		PC8	YA	
		PC9	YA	

2	PC4	PC1	YA	
		PC2	YA	
		PC3	YA	
		PC5	YA	
		PC6	YA	
		PC7	YA	
		PC8	YA	
		PC9	YA	

3	PC7	PC1	YA	
		PC2	YA	
		PC3	YA	
		PC4	YA	
		PC5	YA	
		PC6	YA	
		PC8	YA	
		PC9	YA	

SCREENSHOT TES PING CMD PADA PC

PC1 -> PC5 DAN PC1 -> PC7

```
C:\>ping 192.168.20.2

Pinging 192.168.20.2 with 32 bytes of data:

Request timed out.
Reply from 192.168.20.2: bytes=32 time=14ms TTL=126
Reply from 192.168.20.2: bytes=32 time=10ms TTL=126
Reply from 192.168.20.2: bytes=32 time=1ms TTL=126

Ping statistics for 192.168.20.2:
    Packets: Sent = 4, Received = 3, Lost = 1 (25% loss),
    Approximate round trip times in milli-seconds:
        Minimum = 1ms, Maximum = 14ms, Average = 8ms

C:\>ping 192.168.40.2

Pinging 192.168.40.2 with 32 bytes of data:

Reply from 192.168.40.2: bytes=32 time<1ms TTL=125
Reply from 192.168.40.2: bytes=32 time=11ms TTL=125
Reply from 192.168.40.2: bytes=32 time=1ms TTL=125
Reply from 192.168.40.2: bytes=32 time=28ms TTL=125

Ping statistics for 192.168.40.2:
    Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),
    Approximate round trip times in milli-seconds:
        Minimum = 0ms, Maximum = 28ms, Average = 10ms
```

PC4 ->PC2 DAN PC4 -> PC8

```
Cisco Packet Tracer PC Command Line 1.0
C:\>ping 192.168.2.3

Pinging 192.168.2.3 with 32 bytes of data:

Request timed out.
Reply from 192.168.2.3: bytes=32 time<1ms TTL=126
Reply from 192.168.2.3: bytes=32 time=10ms TTL=126
Reply from 192.168.2.3: bytes=32 time=10ms TTL=126

Ping statistics for 192.168.2.3:
    Packets: Sent = 4, Received = 3, Lost = 1 (25% loss),
    Approximate round trip times in milli-seconds:
        Minimum = 0ms, Maximum = 10ms, Average = 6ms

C:\>ping 192.168.40.3

Pinging 192.168.40.3 with 32 bytes of data:

Request timed out.
Reply from 192.168.40.3: bytes=32 time=13ms TTL=126
Reply from 192.168.40.3: bytes=32 time<1ms TTL=126
Reply from 192.168.40.3: bytes=32 time<1ms TTL=126

Ping statistics for 192.168.40.3:
    Packets: Sent = 4, Received = 3, Lost = 1 (25% loss),
    Approximate round trip times in milli-seconds:
        Minimum = 0ms, Maximum = 13ms, Average = 4ms

C:\>
```

PC7 -> PC3 DAN PC7 -> PC9

```
Cisco Packet Tracer PC Command Line 1.0
C:\>ping 192.168.2.4

Pinging 192.168.2.4 with 32 bytes of data:

Reply from 192.168.2.4: bytes=32 time=11ms TTL=125
Reply from 192.168.2.4: bytes=32 time<1ms TTL=125
Reply from 192.168.2.4: bytes=32 time=14ms TTL=125
Reply from 192.168.2.4: bytes=32 time=11ms TTL=125

Ping statistics for 192.168.2.4:
    Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),
    Approximate round trip times in milli-seconds:
        Minimum = 0ms, Maximum = 14ms, Average = 9ms

C:\>ping 192.168.40.4

Pinging 192.168.40.4 with 32 bytes of data:

Reply from 192.168.40.4: bytes=32 time<1ms TTL=128
Reply from 192.168.40.4: bytes=32 time<1ms TTL=128
Reply from 192.168.40.4: bytes=32 time<1ms TTL=128
Reply from 192.168.40.4: bytes=32 time=1ms TTL=128

Ping statistics for 192.168.40.4:
    Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),
    Approximate round trip times in milli-seconds:
        Minimum = 0ms, Maximum = 1ms, Average = 0ms

C:\>
```

ANALISIS :

- Topologi: Laporan ini menunjukkan adanya tiga router yang diatur untuk melakukan routing dinamis.
- Pengujian Koneksi: Berdasarkan tabel hasil tes ICMP, seluruh pengujian antara berbagai perangkat (PC1 hingga PC9) menunjukkan hasil koneksi yang berhasil (YA). Ini mengindikasikan bahwa konfigurasi routing dinamis pada jaringan berfungsi dengan baik, sehingga setiap PC dapat terhubung satu sama lain tanpa kendala.
- Screenshot Tes Ping: Screenshot ini memperlihatkan keberhasilan pengiriman paket ICMP (ping) antar PC yang berbeda, menunjukkan stabilitas koneksi jaringan.

KESIMPULAN :

Konfigurasi routing dinamis yang digunakan dalam praktik ini berhasil menghubungkan semua perangkat dengan baik. Tidak ada kegagalan koneksi yang tercatat, yang menunjukkan bahwa konfigurasi pada setiap router telah diterapkan dengan benar. Hasil ini juga menegaskan bahwa jaringan memiliki rute yang optimal untuk mendukung komunikasi antar perangkat tanpa adanya masalah konektivitas.