JUNIPER

02 – SIMULATION/LAB JUNOS FUNDAMENTAL

- ✓ Konfigurasi Routing Protocol menggunakan Static Route.
- ✓ Uji Konektivitas.

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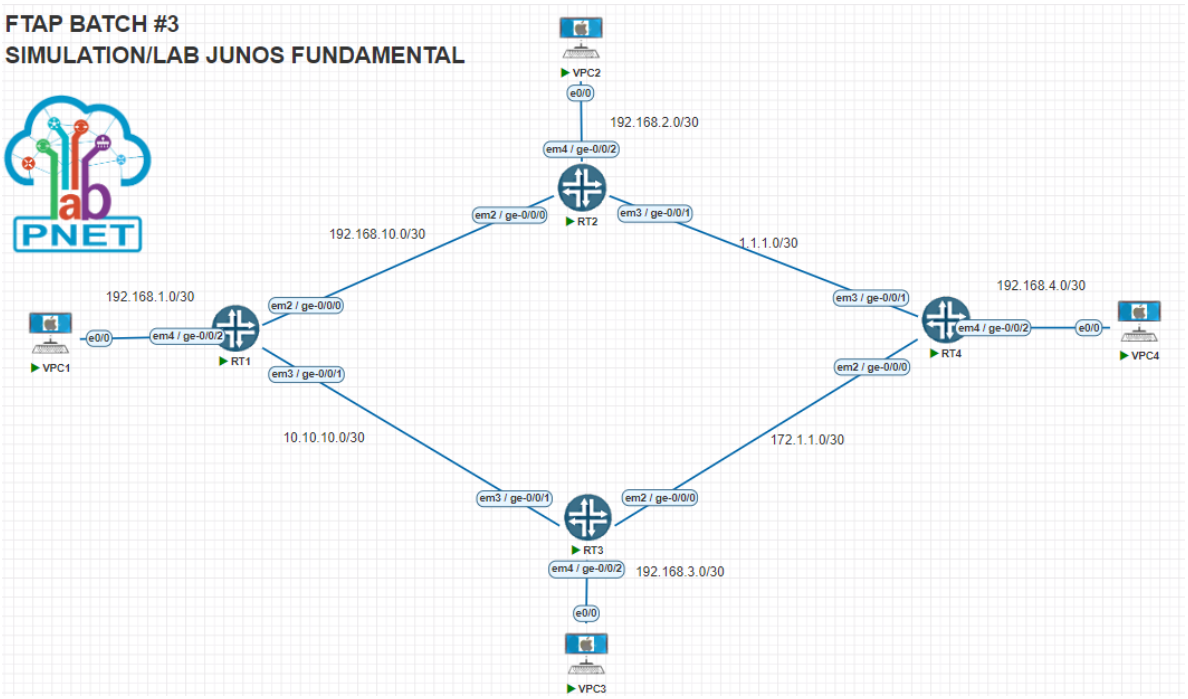
1. Topology



2. Task

- Konfigurasi routing protocol menggunakan static route.

  Konfigurasi ini dilakukan untuk memungkinkan komunikasi antara beberapa segmen yang berbeda dengan menggunakan static route, sehingga router 1 dapat berkomunikasi dengan router lainnya. Berbeda dengan task sebelumnya (task 1) yang hanya fokus pada pengujian koneksi point-to-point antar router tanpa melibatkan pertukaran informasi routing.

  #Configure R1

```
edit routing-options static
set route 192.168.2.0/30 next-hop 192.168.10.2
set route 1.1.1.0/30 next-hop 192.168.10.2
set route 192.168.1.0/30 next-hop 192.168.10.2
set route 192.168.3.0/30 next-hop 10.10.10.2
```

```
routing-options {
    static {
        route 192.168.2.0/30 next-hop 192.168.10.2;
        route 1.1.1.0/30 next-hop 192.168.10.2;
        route 192.168.4.0/30 next-hop 192.168.10.2;
        route 192.168.3.0/30 next-hop 10.10.10.2;
    }
```

#Configure R2

```
edit routing-options static
set route 192.168.1.0/30 next-hop 192.168.10.1
set route 10.10.10.0/30 next-hop 192.168.10.1
set route 192.168.3.0/30 next-hop 192.168.10.1
set route 192.168.4.0/30 next-hop 1.1.1.2
```

```
routing-options {
    static {
        route 192.168.1.0/30 next-hop 192.168.10.1;
        route 10.10.10.0/30 next-hop 192.168.10.1;
        route 192.168.3.0/30 next-hop 192.168.10.1;
        route 192.168.4.0/30 next-hop 1.1.1.2;
    }
```

#Configure R3

```
edit routing-options static
set route 192.168.1.0/30 next-hop 10.10.10.1
set route 192.168.10.0/30 next-hop 10.10.10.1
set route 192.168.2.0/30 next-hop 10.10.10.1
set route 192.168.4.0/30 next-hop 172.1.1.2
```

```
routing-options {
    static {
        route 192.168.1.0/30 next-hop 10.10.10.1;
        route 192.168.10.0/30 next-hop 10.10.10.1;
        route 192.168.2.0/30 next-hop 10.10.10.1;
        route 192.168.4.0/30 next-hop 172.1.1.2;
    }
```

#Configure R4

```
edit routing-options static
set route 192.168.2.0/30 next-hop 1.1.1.1
set route 192.168.10.0/30 next-hop 1.1.1.1
set route 192.168.1.0/30 next-hop 1.1.1.1
set route 192.168.3.0/30 next-hop 172.1.1.1
```

```
routing-options {
    static {
        route 192.168.2.0/30 next-hop 1.1.1.1;
        route 192.168.10.0/30 next-hop 1.1.1.1;
        route 192.168.1.0/30 next-hop 1.1.1.1;
        route 192.168.3.0/30 next-hop 172.1.1.1;
    }
```

3. Pengujian Konektivitas

Pengujian ini dilakukan untuk memastikan konektivitas berhasil antara Router 1 dengan router lainnya yang telah dikonfigurasi dengan routing static. Jadi, pengujian ini akan mengecek apakah R1 dapat terhubung dengan R2, R3, dan R4 melalui jalur yang telah ditentukan dalam konfigurasi routing static (dan sebaliknya).

- **R1 to R2**

```
root@RT1> ping 192.168.10.2
PING 192.168.10.2 (192.168.10.2): 56 data bytes
64 bytes from 192.168.10.2: icmp_seq=0 ttl=64 time=4.777 ms
64 bytes from 192.168.10.2: icmp_seq=1 ttl=64 time=38.476 ms
64 bytes from 192.168.10.2: icmp_seq=2 ttl=64 time=2.354 ms
64 bytes from 192.168.10.2: icmp_seq=3 ttl=64 time=1.782 ms
64 bytes from 192.168.10.2: icmp_seq=4 ttl=64 time=1.956 ms
^C
--- 192.168.10.2 ping statistics ---
5 packets transmitted, 5 packets received, 0% packet loss
round-trip min/avg/max/stddev = 1.782/9.869/38.476/14.344 ms
```

- **R1 to R3**

```
root@RT1> ping 10.10.10.2
PING 10.10.10.2 (10.10.10.2): 56 data bytes
64 bytes from 10.10.10.2: icmp_seq=0 ttl=64 time=4.415 ms
64 bytes from 10.10.10.2: icmp_seq=1 ttl=64 time=69.166 ms
64 bytes from 10.10.10.2: icmp_seq=2 ttl=64 time=1.800 ms
64 bytes from 10.10.10.2: icmp_seq=3 ttl=64 time=2.372 ms
64 bytes from 10.10.10.2: icmp_seq=4 ttl=64 time=2.677 ms
^C
--- 10.10.10.2 ping statistics ---
5 packets transmitted, 5 packets received, 0% packet loss
round-trip min/avg/max/stddev = 1.800/16.086/69.166/26.554 ms
```

- **R1 to R4**

```
root@RT1> ping 1.1.1.2
PING 1.1.1.2 (1.1.1.2): 56 data bytes
64 bytes from 1.1.1.2: icmp_seq=0 ttl=63 time=12.546 ms
64 bytes from 1.1.1.2: icmp_seq=1 ttl=63 time=4.008 ms
64 bytes from 1.1.1.2: icmp_seq=2 ttl=63 time=44.069 ms
64 bytes from 1.1.1.2: icmp_seq=3 ttl=63 time=3.536 ms
64 bytes from 1.1.1.2: icmp_seq=4 ttl=63 time=4.138 ms
^C
--- 1.1.1.2 ping statistics ---
5 packets transmitted, 5 packets received, 0% packet loss
round-trip min/avg/max/stddev = 3.536/13.659/44.069/15.571 ms
```

- **R2 to R1**

```
root@RT2> ping 192.168.10.1
PING 192.168.10.1 (192.168.10.1): 56 data bytes
64 bytes from 192.168.10.1: icmp_seq=0 ttl=64 time=2.674 ms
64 bytes from 192.168.10.1: icmp_seq=1 ttl=64 time=3.206 ms
64 bytes from 192.168.10.1: icmp_seq=2 ttl=64 time=1.561 ms
64 bytes from 192.168.10.1: icmp_seq=3 ttl=64 time=3.847 ms
64 bytes from 192.168.10.1: icmp_seq=4 ttl=64 time=2.341 ms
^C
--- 192.168.10.1 ping statistics ---
5 packets transmitted, 5 packets received, 0% packet loss
round-trip min/avg/max/stddev = 1.561/2.726/3.847/0.774 ms
```

- **R2 to R3**

```
root@RT2> ping 10.10.10.2
PING 10.10.10.2 (10.10.10.2): 56 data bytes
64 bytes from 10.10.10.2: icmp_seq=0 ttl=63 time=11.530 ms
64 bytes from 10.10.10.2: icmp_seq=1 ttl=63 time=8.438 ms
64 bytes from 10.10.10.2: icmp_seq=2 ttl=63 time=5.560 ms
64 bytes from 10.10.10.2: icmp_seq=3 ttl=63 time=3.854 ms
64 bytes from 10.10.10.2: icmp_seq=4 ttl=63 time=4.769 ms
^C
--- 10.10.10.2 ping statistics ---
5 packets transmitted, 5 packets received, 0% packet loss
round-trip min/avg/max/stddev = 3.854/6.830/11.530/2.807 ms
```

- **R2 to R4**

```
root@RT2> ping 1.1.1.2
PING 1.1.1.2 (1.1.1.2): 56 data bytes
64 bytes from 1.1.1.2: icmp_seq=0 ttl=64 time=3.902 ms
64 bytes from 1.1.1.2: icmp_seq=1 ttl=64 time=1.959 ms
64 bytes from 1.1.1.2: icmp_seq=2 ttl=64 time=2.664 ms
64 bytes from 1.1.1.2: icmp_seq=3 ttl=64 time=2.534 ms
64 bytes from 1.1.1.2: icmp_seq=4 ttl=64 time=2.180 ms
^C
--- 1.1.1.2 ping statistics ---
5 packets transmitted, 5 packets received, 0% packet loss
round-trip min/avg/max/stddev = 1.959/2.648/3.902/0.675 ms
```

- **R3 to R1**

```
root@RT3> ping 10.10.10.1
PING 10.10.10.1 (10.10.10.1): 56 data bytes
64 bytes from 10.10.10.1: icmp_seq=0 ttl=64 time=7.552 ms
64 bytes from 10.10.10.1: icmp_seq=1 ttl=64 time=3.357 ms
64 bytes from 10.10.10.1: icmp_seq=2 ttl=64 time=4.778 ms
64 bytes from 10.10.10.1: icmp_seq=3 ttl=64 time=3.491 ms
64 bytes from 10.10.10.1: icmp_seq=4 ttl=64 time=5.051 ms
^C
--- 10.10.10.1 ping statistics ---
5 packets transmitted, 5 packets received, 0% packet loss
round-trip min/avg/max/stddev = 3.357/4.846/7.552/1.511 ms
```

- **R3 to R2**

```
root@RT3> ping 192.168.10.2
PING 192.168.10.2 (192.168.10.2): 56 data bytes
64 bytes from 192.168.10.2: icmp_seq=0 ttl=63 time=9.246 ms
64 bytes from 192.168.10.2: icmp_seq=1 ttl=63 time=9.144 ms
64 bytes from 192.168.10.2: icmp_seq=2 ttl=63 time=7.251 ms
64 bytes from 192.168.10.2: icmp_seq=3 ttl=63 time=6.150 ms
64 bytes from 192.168.10.2: icmp_seq=4 ttl=63 time=9.314 ms
^C
--- 192.168.10.2 ping statistics ---
5 packets transmitted, 5 packets received, 0% packet loss
round-trip min/avg/max/stddev = 6.150/8.221/9.314/1.291 ms
```

- **R3 to R4**

```
root@RT3> ping 172.1.1.2
PING 172.1.1.2 (172.1.1.2): 56 data bytes
64 bytes from 172.1.1.2: icmp_seq=0 ttl=64 time=9.825 ms
64 bytes from 172.1.1.2: icmp_seq=1 ttl=64 time=5.753 ms
64 bytes from 172.1.1.2: icmp_seq=2 ttl=64 time=3.777 ms
64 bytes from 172.1.1.2: icmp_seq=3 ttl=64 time=5.163 ms
64 bytes from 172.1.1.2: icmp_seq=4 ttl=64 time=3.734 ms
^C
--- 172.1.1.2 ping statistics ---
5 packets transmitted, 5 packets received, 0% packet loss
round-trip min/avg/max/stddev = 3.734/5.650/9.825/2.230 ms
```

- **R4 to R1**

```
root@RT4> ping 192.168.10.1
PING 192.168.10.1 (192.168.10.1): 56 data bytes
64 bytes from 192.168.10.1: icmp_seq=0 ttl=63 time=11.683 ms
64 bytes from 192.168.10.1: icmp_seq=1 ttl=63 time=9.331 ms
64 bytes from 192.168.10.1: icmp_seq=2 ttl=63 time=11.374 ms
64 bytes from 192.168.10.1: icmp_seq=3 ttl=63 time=6.404 ms
64 bytes from 192.168.10.1: icmp_seq=4 ttl=63 time=7.793 ms
^C
--- 192.168.10.1 ping statistics ---
5 packets transmitted, 5 packets received, 0% packet loss
round-trip min/avg/max/stddev = 6.404/9.317/11.683/2.032 ms
```

- **R4 to R2**

```
root@RT4> ping 1.1.1.1
PING 1.1.1.1 (1.1.1.1): 56 data bytes
64 bytes from 1.1.1.1: icmp_seq=0 ttl=64 time=98.526 ms
64 bytes from 1.1.1.1: icmp_seq=1 ttl=64 time=12.627 ms
64 bytes from 1.1.1.1: icmp_seq=2 ttl=64 time=4.141 ms
64 bytes from 1.1.1.1: icmp_seq=3 ttl=64 time=6.214 ms
64 bytes from 1.1.1.1: icmp_seq=4 ttl=64 time=4.975 ms
^C
--- 1.1.1.1 ping statistics ---
5 packets transmitted, 5 packets received, 0% packet loss
round-trip min/avg/max/stddev = 4.141/25.297/98.526/36.736 ms
```

- **R4 to R3**

```
root@RT4> ping 172.1.1.1
PING 172.1.1.1 (172.1.1.1): 56 data bytes
64 bytes from 172.1.1.1: icmp_seq=0 ttl=64 time=5.424 ms
64 bytes from 172.1.1.1: icmp_seq=1 ttl=64 time=8.406 ms
64 bytes from 172.1.1.1: icmp_seq=2 ttl=64 time=4.404 ms
64 bytes from 172.1.1.1: icmp_seq=3 ttl=64 time=5.598 ms
64 bytes from 172.1.1.1: icmp_seq=4 ttl=64 time=4.868 ms
^C
--- 172.1.1.1 ping statistics ---
5 packets transmitted, 5 packets received, 0% packet loss
round-trip min/avg/max/stddev = 4.404/5.740/8.406/1.398 ms
```

4. **Pengujian Jalur Path/Hop**

Pengujian ini dilakukan untuk mengidentifikasi atau mencari tahu jalur yang dilalui oleh paket dari satu titik ke titik lain.

- **VPC1 to VPC2**

```
VPC1>traceroute 192.168.2.2
Type escape sequence to abort.
Tracing the route to 192.168.2.2
VRF info: (vrf in name/id, vrf out name/id)
  1 192.168.1.1 4 msec 3 msec 1 msec
  2 192.168.10.2 46 msec 13 msec 3 msec
  3 192.168.2.2 6 msec 7 msec *
```

- **VPC1 to VPC3**

```
VPC1>traceroute 192.168.3.2
Type escape sequence to abort.
Tracing the route to 192.168.3.2
VRF info: (vrf in name/id, vrf out name/id)
  1 192.168.1.1 16 msec 3 msec 2 msec
  2 10.10.10.2 17 msec 5 msec 8 msec
  3 192.168.3.2 10 msec 6 msec *
```

- **VPC1 to VPC4**

```
VPC1>traceroute 192.168.4.2
Type escape sequence to abort.
Tracing the route to 192.168.4.2
VRF info: (vrf in name/id, vrf out name/id)
  1 192.168.1.1 3 msec 3 msec 1 msec
  2 192.168.10.2 6 msec 7 msec 3 msec
  3 1.1.1.2 15 msec 9 msec 5 msec
  4 192.168.4.2 8 msec 9 msec *
```

- **VPC2 to VPC1**

```
VPC2>traceroute 192.168.1.2
Type escape sequence to abort.
Tracing the route to 192.168.1.2
VRF info: (vrf in name/id, vrf out name/id)
  1 192.168.2.1 3 msec 2 msec 2 msec
  2 192.168.10.1 6 msec 5 msec 4 msec
  3 192.168.1.2 5 msec 8 msec *
```

- **VPC2 to VPC3**

```
VPC2>traceroute 192.168.3.2
Type escape sequence to abort.
Tracing the route to 192.168.3.2
VRF info: (vrf in name/id, vrf out name/id)
  1 192.168.2.1 3 msec 3 msec 2 msec
  2 192.168.10.1 8 msec 170 msec 4 msec
  3 10.10.10.2 7 msec 7 msec 9 msec
  4 192.168.3.2 7 msec 8 msec *
```

- **VPC2 to VPC4**

```
VPC2>traceroute 192.168.4.2
Type escape sequence to abort.
Tracing the route to 192.168.4.2
VRF info: (vrf in name/id, vrf out name/id)
  1 192.168.2.1 4 msec 3 msec 1 msec
  2 1.1.1.2 7 msec 8 msec 5 msec
  3 192.168.4.2 6 msec 6 msec *
```

- **VPC3 to VPC1**

```
VPC3>traceroute 192.168.1.2
Type escape sequence to abort.
Tracing the route to 192.168.1.2
VRF info: (vrf in name/id, vrf out name/id)
  1 192.168.3.1 7 msec 8 msec 3 msec
  2 10.10.10.1 4 msec 5 msec 4 msec
  3 192.168.1.2 5 msec 8 msec *
```

- **VPC3 to VPC2**

```
VPC3>traceroute 192.168.2.2
Type escape sequence to abort.
Tracing the route to 192.168.2.2
VRF info: (vrf in name/id, vrf out name/id)
  1 192.168.3.1 3 msec 3 msec 2 msec
  2 10.10.10.1 8 msec 4 msec 3 msec
  3 192.168.10.2 9 msec 6 msec 5 msec
  4 192.168.2.2 8 msec 14 msec *
```

- **VPC3 to VPC4**

```
VPC3>traceroute 192.168.4.2
Type escape sequence to abort.
Tracing the route to 192.168.4.2
VRF info: (vrf in name/id, vrf out name/id)
  1 192.168.3.1 3 msec 3 msec 1 msec
  2 172.1.1.2 10 msec 5 msec 3 msec
  3 192.168.4.2 4 msec 10 msec *
```

- **VPC4 to VPC1**

```
VPC4>traceroute 192.168.1.2
Type escape sequence to abort.
Tracing the route to 192.168.1.2
VRF info: (vrf in name/id, vrf out name/id)
  1 192.168.4.1 3 msec 2 msec 1 msec
  2 1.1.1.1 7 msec 6 msec 3 msec
  3 192.168.10.1 7 msec 7 msec 5 msec
  4 192.168.1.2 7 msec 9 msec *
```

- **VPC4 to VPC2**

```
VPC4>traceroute 192.168.2.2
Type escape sequence to abort.
Tracing the route to 192.168.2.2
VRF info: (vrf in name/id, vrf out name/id)
  1 192.168.4.1 2 msec 3 msec 2 msec
  2 1.1.1.1 4 msec 10 msec 11 msec
  3 192.168.2.2 4 msec 6 msec *
```

- **VPC4 to VPC3**

```
VPC4>traceroute 192.168.3.2
Type escape sequence to abort.
Tracing the route to 192.168.3.2
VRF info: (vrf in name/id, vrf out name/id)
  1 192.168.4.1 4 msec 2 msec 2 msec
  2 172.1.1.1 10 msec 8 msec 7 msec
  3 192.168.3.2 6 msec 6 msec *
```

5. Pengujian Akses Remote Telnet to VPC

Pengujian Telnet dilakukan untuk memastikan apakah dapat mengakses VPC lain secara remote atau jarak jauh dari perangkat VPC. Pada pengujian ini, dilakukan dengan menggunakan 2 user:

1. Super-user memiliki hak akses penuh ke sistem, termasuk mengubah konfigurasi.
2. Operator memiliki hak akses yang lebih terbatas (tidak bisa melakukan konfigurasi), tetapi masih memiliki kemampuan untuk menjalankan beberapa perintah.

- **VPC1 to VPC2**

```
VPC1>telnet 192.168.2.2
Trying 192.168.2.2 ... Open


User Access Verification

Username: ftap.annisa
Password:
VPC2#configure
Configuring from terminal, memory, or network [terminal]?
Enter configuration commands, one per line.  End with CNTL/Z.
VPC2(config)#
```

```
VPC1>telnet 192.168.2.2
Trying 192.168.2.2 ... Open

User Access Verification

Username: mentor.dito
Password:
VPC2#configure
Translating "configure"...domain server (255.255.255.255)
```

- **VPC1 to VPC3**

```
VPC1>telnet 192.168.3.2
Trying 192.168.3.2 ... Open

User Access Verification

Username: ftap.annisa
Password:
VPC3#configure
Configuring from terminal, memory, or network [terminal]?
Enter configuration commands, one per line.  End with CNTL/Z.
VPC3(config)#
```

```
VPC1>telnet 192.168.3.2
Trying 192.168.3.2 ... Open

User Access Verification

Username: mentor.dito
Password:
VPC3#configure
Translating "configure"...domain server (255.255.255.255)
```

- **VPC1 to VPC4**

```
VPC1>telnet 192.168.4.2
Trying 192.168.4.2 ... Open


User Access Verification

Username: ftap.annisa
Password:
VPC4#configure
Configuring from terminal, memory, or network [terminal]?
Enter configuration commands, one per line.  End with CNTL/Z.
VPC4(config)#
```

```
VPC1>telnet 192.168.4.2
Trying 192.168.4.2 ... Open

User Access Verification

Username: mentor.dito
Password:
VPC4#configure
Translating "configure"...domain server (255.255.255.255)
```

- **VPC2 to VPC1**

```
VPC2>telnet 192.168.1.2
Trying 192.168.1.2 ... Open


User Access Verification

Username: ftap.annisa
Password:
VPC1#configure
Configuring from terminal, memory, or network [terminal]?
Enter configuration commands, one per line.  End with CNTL/Z.
VPC1(config)#
```

```
VPC2>telnet 192.168.1.2
Trying 192.168.1.2 ... Open

User Access Verification

Username: mentor.dito
Password:
VPC1#configure
Translating "configure"...domain server (255.255.255.255)
```

- **VPC2 to VPC3**

```
VPC2>telnet 192.168.3.2
Trying 192.168.3.2 ... Open

User Access Verification

Username: ftap.annisa
Password:
VPC3#configure
Configuring from terminal, memory, or network [terminal]?
Enter configuration commands, one per line.  End with CNTL/Z.
VPC3(config)#
```

```
VPC2>telnet 192.168.3.2
Trying 192.168.3.2 ... Open

User Access Verification

Username: mentor.dito
Password:
VPC3#configure
Translating "configure"...domain server (255.255.255.255)
```

- **VPC2 to VPC4**

```
VPC2>telnet 192.168.4.2
Trying 192.168.4.2 ... Open

User Access Verification

Username: ftap.annisa
Password:
VPC4#configure
Configuring from terminal, memory, or network [terminal]?
Enter configuration commands, one per line.  End with CNTL/Z.
VPC4(config)#
```

```
VPC2>telnet 192.168.4.2
Trying 192.168.4.2 ... Open

User Access Verification

Username: mentor.dito
Password:
VPC4#configure
Translating "configure"...domain server (255.255.255.255)
```

- **VPC3 to VPC1**

```
VPC3>telnet 192.168.1.2
Trying 192.168.1.2 ... Open

User Access Verification

Username: ftap.annisa
Password:
VPC1#configure
Configuring from terminal, memory, or network [terminal]?
Enter configuration commands, one per line.  End with CNTL/Z.
VPC1(config)#
```

```
VPC3>telnet 192.168.1.2
Trying 192.168.1.2 ... Open

User Access Verification

Username: mentor.dito
Password:
VPC1#configure
Translating "configure"...domain server (255.255.255.255)
```

- **VPC3 to VPC2**

```
VPC3>telnet 192.168.2.2
Trying 192.168.2.2 ... Open

User Access Verification

Username: ftap.annisa
Password:
VPC2#configure
Configuring from terminal, memory, or network [terminal]?
Enter configuration commands, one per line.  End with CNTL/Z.
VPC2(config)#
```

```
VPC3>telnet 192.168.2.2
Trying 192.168.2.2 ... Open

User Access Verification

Username: mentor.dito
Password:
VPC2#configure
Translating "configure"...domain server (255.255.255.255)
```

- **VPC3 to VPC4**

```
VPC3>telnet 192.168.4.2
Trying 192.168.4.2 ... Open


User Access Verification

Username: ftap.annisa
Password:
VPC4#configure
Configuring from terminal, memory, or network [terminal]?
Enter configuration commands, one per line.  End with CNTL/Z.
VPC4(config)#
```

```
VPC3>telnet 192.168.4.2
Trying 192.168.4.2 ... Open

User Access Verification

Username: mentor.dito
Password:
VPC4#configure
Translating "configure"...domain server (255.255.255.255)
```

- **VPC4 to VPC1**

```
VPC4>telnet 192.168.1.2
Trying 192.168.1.2 ... Open

User Access Verification

Username: ftap.annisa
Password:
VPC1#configure
Configuring from terminal, memory, or network [terminal]?
Enter configuration commands, one per line.  End with CNTL/Z.
VPC1(config)#
```

```
VPC4>telnet 192.168.1.2
Trying 192.168.1.2 ... Open

User Access Verification

Username: mentor.dito
Password:
VPC1#configure
Translating "configure"...domain server (255.255.255.255)
```

- **VPC4 to VPC2**

```
VPC4>telnet 192.168.2.2
Trying 192.168.2.2 ... Open

User Access Verification

Username: ftap.annisa
Password:
VPC2#configure
Configuring from terminal, memory, or network [terminal]?
Enter configuration commands, one per line.  End with CNTL/Z.
VPC2(config)#
```

```
VPC4>telnet 192.168.2.2
Trying 192.168.2.2 ... Open

User Access Verification

Username: mentor.dito
Password:
VPC2#configure
Translating "configure"...domain server (255.255.255.255)
```

- **VPC4 to VPC3**

```
VPC4>telnet 192.168.3.2
Trying 192.168.3.2 ... Open

User Access Verification

Username: ftap.annisa
Password:
VPC3#configure
Configuring from terminal, memory, or network [terminal]?
Enter configuration commands, one per line.  End with CNTL/Z.
VPC3(config)#
```

```
VPC4>telnet 192.168.3.2
Trying 192.168.3.2 ... Open

User Access Verification

Username: mentor.dito
Password:
VPC3#configure
Translating "configure"...domain server (255.255.255.255)
```

6. Pengujian Akses Remote Telnet to Router

Pengujian Telnet dilakukan untuk memastikan apakah dapat mengakses router secara remote atau jarak jauh dari perangkat VPC. Pada pengujian ini, dilakukan dengan menggunakan 2 user:

1. Super-user memiliki hak akses penuh ke sistem, termasuk mengubah konfigurasi.
2. Operator memiliki hak akses yang lebih terbatas (tidak bisa melakukan konfigurasi), tetapi masih memiliki kemampuan untuk menjalankan beberapa perintah.

- **VPC1 to R2**

```
VPC1>telnet 192.168.10.2
Trying 192.168.10.2 ... Open

RT2 (ttyp0)

login: ftap.annisa
Password:

--- JUNOS 14.1R4.8 built 2015-01-28 03:38:12 UTC
ftap.annisa@RT2> configure
Entering configuration mode
```

```
VPC1>telnet 192.168.10.2
Trying 192.168.10.2 ... Open

RT2 (ttyp0)

login: mentor.dito
Password:

--- JUNOS 14.1R4.8 built 2015-01-28 03:38:12 UTC
mentor.dito@RT2> configure
                 ^
unknown command.
```

- **VPC1 to R3**

```
VPC1>telnet 10.10.10.2
Trying 10.10.10.2 ... Open

RT3 (ttyp0)

login: ftap.annisa
Password:

--- JUNOS 14.1R4.8 built 2015-01-28 03:38:12 UTC
ftap.annisa@RT3> configure
Entering configuration mode

[edit]
ftap.annisa@RT3#
```

```
VPC1>telnet 10.10.10.2
Trying 10.10.10.2 ... Open

RT3 (ttyp0)

login: mentor.dito
Password:

--- JUNOS 14.1R4.8 built 2015-01-28 03:38:12 UTC
mentor.dito@RT3> configure
                 ^
unknown command.
```

- **VPC1 to R4**

```
VPC1>telnet 1.1.1.2
Trying 1.1.1.2 ... Open

RT4 (ttyp0)

login: ftap.annisa
Password:

--- JUNOS 14.1R4.8 built 2015-01-28 03:38:12 UTC
ftap.annisa@RT4> configure
Entering configuration mode

[edit]
ftap.annisa@RT4#
```

```
VPC1>telnet 1.1.1.2
Trying 1.1.1.2 ... Open

RT4 (ttyp0)

login: mentor.dito
Password:

--- JUNOS 14.1R4.8 built 2015-01-28 03:38:12 UTC
mentor.dito@RT4> configure
                 ^
unknown command.
```

- **VPC2 to R1**

```
VPC2>telnet 192.168.10.1
Trying 192.168.10.1 ... Open

RT1 (ttyp0)

login: ftap.annisa
Password:

--- JUNOS 14.1R4.8 built 2015-01-28 03:38:12 UTC
ftap.annisa@RT1> configure
Entering configuration mode

[edit]
ftap.annisa@RT1#
```

```
VPC2>telnet 192.168.10.1
Trying 192.168.10.1 ... Open

RT1 (ttyp0)

login: mentor.dito
Password:

--- JUNOS 14.1R4.8 built 2015-01-28 03:38:12 UTC
mentor.dito@RT1> configure
                 ^
unknown command.
```

- **VPC2 to R3**

```
VPC2>telnet 10.10.10.2
Trying 10.10.10.2 ... Open

RT3 (ttyp0)

login: ftap.annisa
Password:

--- JUNOS 14.1R4.8 built 2015-01-28 03:38:12 UTC
ftap.annisa@RT3> configure
Entering configuration mode

[edit]
ftap.annisa@RT3#
```

```
VPC2>telnet 10.10.10.2
Trying 10.10.10.2 ... Open

RT3 (ttyp0)

login: mentor.dito
Password:

--- JUNOS 14.1R4.8 built 2015-01-28 03:38:12 UTC
mentor.dito@RT3> configure
                 ^
unknown command.
```

- **VPC2 to R4**

```
VPC2>telnet 1.1.1.2
Trying 1.1.1.2 ... Open

RT4 (ttypl)

login: ftap.annisa
Password:

--- JUNOS 14.1R4.8 built 2015-01-28 03:38:12 UTC
ftap.annisa@RT4> configure
Entering configuration mode

[edit]
ftap.annisa@RT4#
```

```
VPC2>telnet 1.1.1.2
Trying 1.1.1.2 ... Open

RT4 (ttyp1)

login: mentor.dito
Password:

--- JUNOS 14.1R4.8 built 2015-01-28 03:38:12 UTC
mentor.dito@RT4> configure
                 ^
unknown command.
```

- **VPC3 to R1**

```
VPC3>telnet 10.10.10.1
Trying 10.10.10.1 ... Open

RT1 (ttyp0)

login: ftap.annisa
Password:

--- JUNOS 14.1R4.8 built 2015-01-28 03:38:12 UTC
ftap.annisa@RT1> configure
Entering configuration mode

[edit]
ftap.annisa@RT1#
```

```
VPC3>telnet 10.10.10.1
Trying 10.10.10.1 ... Open

RT1 (ttyp0)

login: mentor.dito
Password:

--- JUNOS 14.1R4.8 built 2015-01-28 03:38:12 UTC
mentor.dito@RT1> configure
                 ^
unknown command.
```

- **VPC3 to R2**

```
VPC3>telnet 192.168.10.2
Trying 192.168.10.2 ... Open

RT2 (ttyp0)

login: ftap.annisa
Password:

--- JUNOS 14.1R4.8 built 2015-01-28 03:38:12 UTC
ftap.annisa@RT2> configure
Entering configuration mode

[edit]
ftap.annisa@RT2#
```

```
VPC3>telnet 192.168.10.2
Trying 192.168.10.2 ... Open

RT2 (ttyp0)

login: mentor.dito
Password:

--- JUNOS 14.1R4.8 built 2015-01-28 03:38:12 UTC
mentor.dito@RT2> configure
                 ^
unknown command.
```

- **VPC3 to R4**

```
VPC3>telnet 172.1.1.2
Trying 172.1.1.2 ... Open

RT4 (ttyp2)

login: ftap.annisa
Password:

--- JUNOS 14.1R4.8 built 2015-01-28 03:38:12 UTC
ftap.annisa@RT4> configure
Entering configuration mode

[edit]
ftap.annisa@RT4#
```

```
VPC3>telnet 172.1.1.2
Trying 172.1.1.2 ... Open

RT4 (ttyp2)

login: mentor.dito
Password:

--- JUNOS 14.1R4.8 built 2015-01-28 03:38:12 UTC
mentor.dito@RT4> configure
                 ^
unknown command.
```

- **VPC4 to R1**

```
VPC4>telnet 192.168.10.1
Trying 192.168.10.1 ... Open

RT1 (ttyp0)

login: ftap.annisa
Password:

--- JUNOS 14.1R4.8 built 2015-01-28 03:38:12 UTC
ftap.annisa@RT1> configure
Entering configuration mode

[edit]
ftap.annisa@RT1#
```

```
VPC4>telnet 192.168.10.1
Trying 192.168.10.1 ... Open

RT1 (ttyp0)

login: mentor.dito
Password:

--- JUNOS 14.1R4.8 built 2015-01-28 03:38:12 UTC
mentor.dito@RT1> configure
                 ^
unknown command.
```

- **VPC4 to R2**

```
VPC4>telnet 1.1.1.1
Trying 1.1.1.1 ... Open

RT2 (ttyp0)

login: ftap.annisa
Password:

--- JUNOS 14.1R4.8 built 2015-01-28 03:38:12 UTC
ftap.annisa@RT2> configure
Entering configuration mode
```

```
VPC4>telnet 1.1.1.1
Trying 1.1.1.1 ... Open

RT2 (ttyp0)

login: mentor.dito
Password:

--- JUNOS 14.1R4.8 built 2015-01-28 03:38:12 UTC
mentor.dito@RT2> configure
                 ^
unknown command.
```

- **VPC4 to R3**

```
VPC4>telnet 172.1.1.1
Trying 172.1.1.1 ... Open

RT3 (ttyp0)

login: ftap.annisa
Password:

--- JUNOS 14.1R4.8 built 2015-01-28 03:38:12 UTC
ftap.annisa@RT3> configure
Entering configuration mode

[edit]
ftap.annisa@RT3#
```

```
VPC4>telnet 172.1.1.1
Trying 172.1.1.1 ... Open

RT3 (ttyp0)

login: mentor.dito
Password:

--- JUNOS 14.1R4.8 built 2015-01-28 03:38:12 UTC
mentor.dito@RT3> configure
                 ^
unknown command.
```

7. Show Route

Perintah ini digunakan untuk menampilkan informasi pada perangkat jaringan seperti router, sehingga memungkinkan untuk memverifikasi konfigurasi rute.

- **R1**

```
root@RT1> show route

inet.0: 10 destinations, 10 routes (10 active, 0 holddown, 0 hidden)
+ = Active Route, - = Last Active, * = Both

1.1.1.0/30         *[Static/5] 04:21:55
                    > to 192.168.10.2 via ge-0/0/0.0
10.10.10.0/30      *[Direct/0] 1d 15:10:07
                    > via ge-0/0/1.0
10.10.10.1/32      *[Local/0] 1d 15:10:07
                      Local via ge-0/0/1.0
192.168.1.0/30     *[Direct/0] 1d 15:10:07
                    > via ge-0/0/2.0
192.168.1.1/32     *[Local/0] 1d 15:10:07
                      Local via ge-0/0/2.0
192.168.2.0/30     *[Static/5] 04:21:55
                    > to 192.168.10.2 via ge-0/0/0.0
192.168.3.0/30     *[Static/5] 04:21:55
                    > to 10.10.10.2 via ge-0/0/1.0
192.168.4.0/30     *[Static/5] 04:21:55
                    > to 192.168.10.2 via ge-0/0/0.0
192.168.10.0/30    *[Direct/0] 1d 15:10:07
                    > via ge-0/0/0.0
192.168.10.1/32    *[Local/0] 1d 15:10:07
                      Local via ge-0/0/0.0
```

- **R2**

```
root@RT1> show route

inet.0: 10 destinations, 10 routes (10 active, 0 holddown, 0 hidden)
+ = Active Route, - = Last Active, * = Both

1.1.1.0/30          *[Static/5] 04:23:26
                     > to 192.168.10.2 via ge-0/0/0.0
10.10.10.0/30       *[Direct/0] 1d 15:11:38
                     > via ge-0/0/1.0
10.10.10.1/32       *[Local/0] 1d 15:11:38
                       Local via ge-0/0/1.0
192.168.1.0/30      *[Direct/0] 1d 15:11:38
                     > via ge-0/0/2.0
192.168.1.1/32      *[Local/0] 1d 15:11:38
                       Local via ge-0/0/2.0
192.168.2.0/30      *[Static/5] 04:23:26
                     > to 192.168.10.2 via ge-0/0/0.0
192.168.3.0/30      *[Static/5] 04:23:26
                     > to 10.10.10.2 via ge-0/0/1.0
192.168.4.0/30      *[Static/5] 04:23:26
                     > to 192.168.10.2 via ge-0/0/0.0
192.168.10.0/30     *[Direct/0] 1d 15:11:38
                     > via ge-0/0/0.0
192.168.10.1/32     *[Local/0] 1d 15:11:38
                       Local via ge-0/0/0.0
```

- **R3**

```
root@RT3> show route

inet.0: 10 destinations, 10 routes (10 active, 0 holddown, 0 hidden)
+ = Active Route, - = Last Active, * = Both

10.10.10.0/30       *[Direct/0] 3d 00:58:56
                     > via ge-0/0/1.0
10.10.10.2/32       *[Local/0] 3d 00:58:56
                       Local via ge-0/0/1.0
172.1.1.0/30        *[Direct/0] 3d 04:19:33
                     > via ge-0/0/0.0
172.1.1.1/32        *[Local/0] 3d 04:19:33
                       Local via ge-0/0/0.0
192.168.1.0/30      *[Static/5] 08:56:02
                     > to 10.10.10.1 via ge-0/0/1.0
192.168.2.0/30      *[Static/5] 08:56:02
                     > to 10.10.10.1 via ge-0/0/1.0
192.168.3.0/30      *[Direct/0] 3d 04:19:33
                     > via ge-0/0/2.0
192.168.3.1/32      *[Local/0] 3d 04:19:33
                       Local via ge-0/0/2.0
192.168.4.0/30      *[Static/5] 08:56:02
                     > to 172.1.1.2 via ge-0/0/0.0
192.168.10.0/30     *[Static/5] 08:56:02
                     > to 10.10.10.1 via ge-0/0/1.0
```

- **R4**

```
root@RT4> show route

inet.0: 10 destinations, 10 routes (10 active, 0 holddown, 0 hidden)
+ = Active Route, - = Last Active, * = Both

1.1.1.0/30          *[Direct/0] 3d 00:57:49
                     > via ge-0/0/1.0
1.1.1.2/32          *[Local/0] 3d 00:57:49
                       Local via ge-0/0/1.0
172.1.1.0/30        *[Direct/0] 3d 03:45:58
                     > via ge-0/0/0.0
172.1.1.2/32        *[Local/0] 3d 03:45:58
                       Local via ge-0/0/0.0
192.168.1.0/30      *[Static/5] 08:55:51
                     > to 1.1.1.1 via ge-0/0/1.0
192.168.2.0/30      *[Static/5] 08:55:51
                     > to 1.1.1.1 via ge-0/0/1.0
192.168.3.0/30      *[Static/5] 08:55:51
                     > to 172.1.1.1 via ge-0/0/0.0
192.168.4.0/30      *[Direct/0] 3d 06:24:37
                     > via ge-0/0/2.0
192.168.4.1/32      *[Local/0] 3d 06:24:37
                       Local via ge-0/0/2.0
192.168.10.0/30     *[Static/5] 08:55:51
                     > to 1.1.1.1 via ge-0/0/1.0
```