Tutorial Load Balancing With Fail Over menggunakan Mikrotik 2.9.6
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Pengantar

Sesuaikan skenario dengan yang anda hadapi. Baca dahulu dengan teliti. Diasumsikan server Mikrotik memiliki 3 (tiga) buah interfaces (NIC) dan dalam kondisi fresh install.

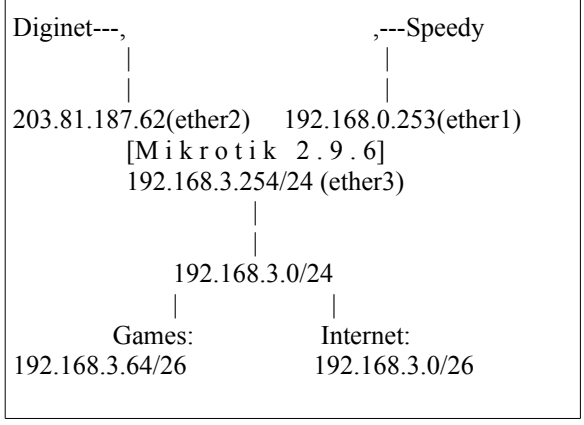
Skenario:

1. ISP Telkom-Speedy (ADSL)
   IP Router ADSL(LAN): 192.168.0.254
   IP DNS1: 202.134.0.155
   IP DNS2: 202.134.2.5

2. ISP Diginet (Wireless)
   IP: 203.81.187.62
   IP Gateway: 203.81.187.62
   IP DNS1: 203.81.185.12
   IP DNS2: 203.81.185.13

Jumlah Komputer Internet: 50 pc -->
Network: 192.168.3.0/26 (Ip Address: 192.168.3.1 - 192.168.3.63 Netmask: 255.255.255.192)
Jumlah Komputer Games: 50 pc -->
Network: 192.168.3.64/26 (Ip Address: 192.168.3.65 - 192.168.3.128 Netmask: 255.255.255.192)

Skema Network:



Langkah-langkah:

1. Beri nama Interfaces Ether1-3 di [Interfaces]

Command:

```
/interface set ether1 name=Telkom
/interface set ether2 name=Diginet
/interface set ether3 name=Local
```

```
admin@BlueSky.Net] > interface print
Flags: X - disabled, D - dynamic, R - running
 #    NAME                TYPE          RX-RATE    TX-RATE    MTU
 0  R Telkom              ether           0          0         1500
 1  R Diginet             ether           0          0         1500
 2  R Local               ether           0          0         1500
```

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2. Beri IP Address untuk masing-masing ethernet. [Ip - Interfaces]

Command:

```
/ip address add address=192.168.0.253/24 interface=Telkom
/ip address add address=203.81.187.62/24 interface=Diginet    <--- karena gak tahu netmasknya brp..
/ip address add address=192.168.3.0/24 interface=Local

[admin@BlueSky.Net] > ip address print
Flags: X - disabled, I - invalid, D - dynamic
 #   ADDRESS            NETWORK         BROADCAST       INTERFACE
 0   192.168.0.253/24   192.168.0.0     192.168.0.255   Telkom
 1   192.168.3.254/24   192.168.3.0     192.168.3.255   Local
 2   203.81.187.62/24   203.81.187.0    203.81.187.255  Diginet
```

3. Buat rule di [IP – Firewall - Mangle]:

- chain=prerouting src-address=192.168.3.0/26 action=mark-routing new-routing-mark=Internet
  "untuk menandai paket yang berasal dari 192.168.3.0/26 dengan nama=Internet"
- chain=prerouting src-address=192.168.3.64/26 action=mark-routing new-routing-mark=Games
  "untuk menandai paket yang berasal dari 192.168.3.64/26 dengan nama=Games"

Command:

```
/ip firewall mangle add chain=prerouting src-address=192.168.3.0/26 \
 action=mark-routing new-routing-mark=Internet
 /ip firewall mangle add chain=prerouting src-address=192.168.3.64/26 \
 action=mark-routing new-routing-mark=Games

[admin@BlueSky.Net] ip firewall mangle> print
Flags: X - disabled, I - invalid, D - dynamic
 0   chain=prerouting src-address=192.168.3.0/26 action=mark-routing
     new-routing-mark=Internet passthrough=yes

 1   chain=prerouting src-address=192.168.3.64/26 action=mark-routing
     new-routing-mark=Games passthrough=yes
```

4. Set Gateway untuk masing-masing network. [IP - Route]

Command:

```
/ip route add gateway=192.168.0.254 dst-address=0.0.0.0/0 routing-mark=Internet
 /ip route add gateway=203.81.187.1 dst-address=0.0.0.0/0 routing-mark=Games

[admin@BlueSky.Net] > ip route print
Flags: X - disabled, A - active, D - dynamic,
C - connect, S - static, r - rip, b - bgp, o - ospf
 #     DST-ADDRESS       PREFSRC        G GATEWAY        DIS INTE...
 0 ADC 192.168.0.0/24    192.168.0.253                   Telkom
 1 ADC 192.168.3.0/24    192.168.3.254                   Local
 2 ADC 203.81.187.0/24   203.81.187.62                   Diginet
 3 A S 0.0.0.0/0                    r 192.168.0.254      Telkom
 4 A S 0.0.0.0/0                    r 203.81.187.1       Diginet
```

5. Buat rule nat-masquerade untuk network 192.168.3.0/24 [IP - Firewall - Nat]

Command:

```
/ip firewall nat add chain=srcnat src-address=192.168.3.0/24 action=masquerade

[admin@BlueSky.Net] > ip firewall nat print
Flags: X - disabled, I - invalid, D - dynamic
 0   ;;; Masquerade Network 192.168.3.0/24
     chain=srcnat src-address=192.168.3.0/24 action=masquerade
```

6. Buat script untuk melakukan cek gw dengan tools netwatch:

command

```
/system script add name=check-gw source={
:local R1
:local R2
:if ([/tool netwatch get R1 status]=up) do={:set R1 192.168.0.254}
:if ([/tool netwatch get R2 status]=up) do={:set R2 203.81.187.1}
 /ip route set [/ip route find dst-address=0.0.0.0/0] \
gateway=($R1 . , . $R2)
}
/tool netwatch add comment=R1 host=192.168.0.254 interval=5s up-script=check-gw \
down-script=check-gw
/tool netwatch add comment=R2 host=203.81.187.1 interval=5s up-script=check-gw \
down-script=check-gw
```

Setting di Mikrotik sudah selesai.

Berikutnya, isikan IP address untuk tiap client Internet dengan IP Address mulai dari: 192.168.3.1 sampai 192.168.3.63. Gunakan Netmask 255.255.255.192 agar workgroup terpisah dengan Games.
Jangan lupa berikan IP DNS Telkom di network-properties client Internet sesuai skenario di atas (202.134.0.155 dan 202.134.2.5).
Gateway diarahkan ke: 192.168.3.254.

Untuk Client Games isikan IP Address mulai dari: 192.168.3.65 sampai dengan 192.168.3.128.
Gunakan juga Netmask 255.255.255.192 jika menginginkan workgroup yang terpisah dengan Client untuk Internet.
Berikan IP DNS Diginet (203.81.185.12 dan 203.81.185.13) di network-propertiesnya.
Gateway diisikan dengan 192.168.3.254.

Selamat mencoba...

Bogor, 22 Juli 2006
Husam Suhaemi