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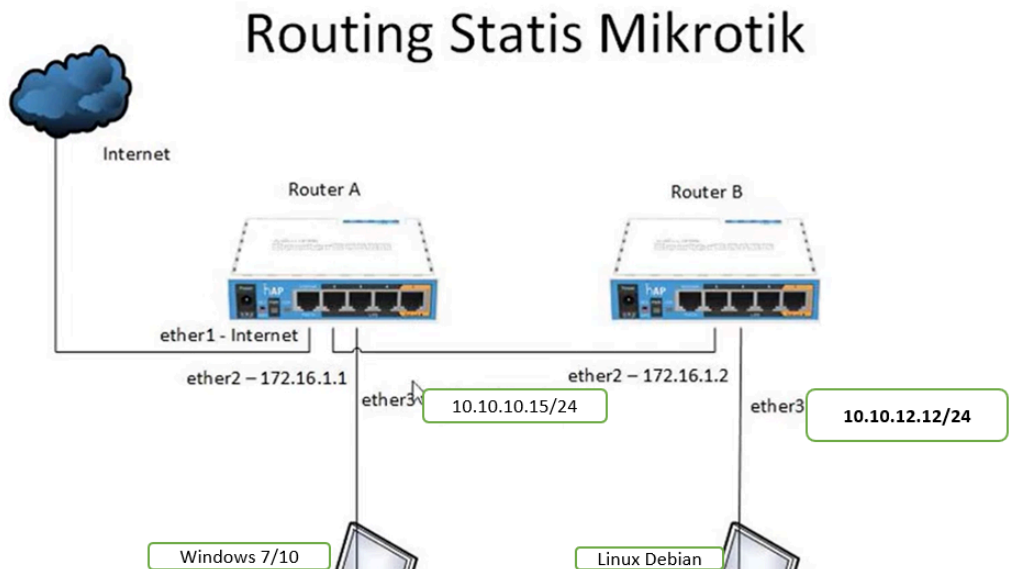

SOAL KONFIGURASI SERVER

NILAI

Nama : ……..

Nis : ……..

Kelas : ……..

Kebutuhan :

- Laptop / PC
- ISO Mikrotik
- ISO Debian 11/12
- Internet
- Lancard
- Windows 7/11
- Aplikasi Vm-Ware 17

Topologi

Buatlah skema konfigurasi Server seperti pada tampilan Topologi diatas, dan pastikan semua service baik pada Mikrotik dan Debian nya dapat berjalan dengan baik dan pastikan semua menggunakan virtual OS mikrotik dan Win7

Keterangan :

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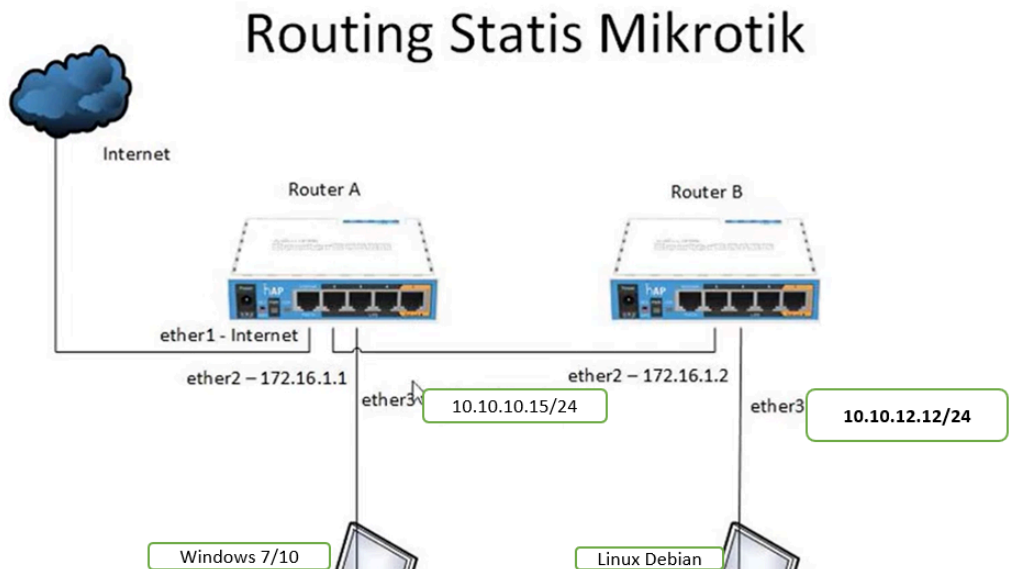

1. Router -1 -ether1 = dhcp client dari internet
   -ether2 = 172.16.1.1/30
   -ether3 = 10.10.10.15/24

2. Router 2 -ether 2 = 172.16.1.2/30

   - ether3 = 10.10.12.1/24

3. Client Laptop A = IP DHCP Server dari Router-1 OS Windows 7

4. Client Laptop B = IP DHCP Server Router-2 OS Debian

Setting routing static pada kedua router tersebut, agar kedua Client pada laptop A dan B bisa salling terhubung dan terkoneksi ke internet.

Langkah I.

Pada router-1

Panggil router 1 menggunakan Winbox, setting dhcp Client dan pastikan ether1 sudah bound tanda sebagai termoneksi ke internet

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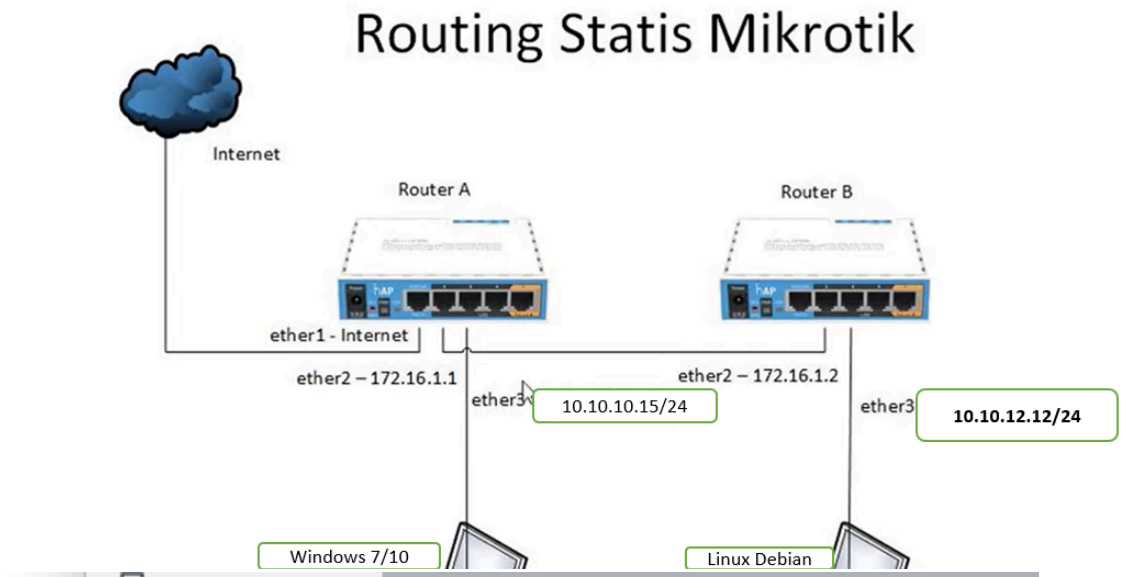

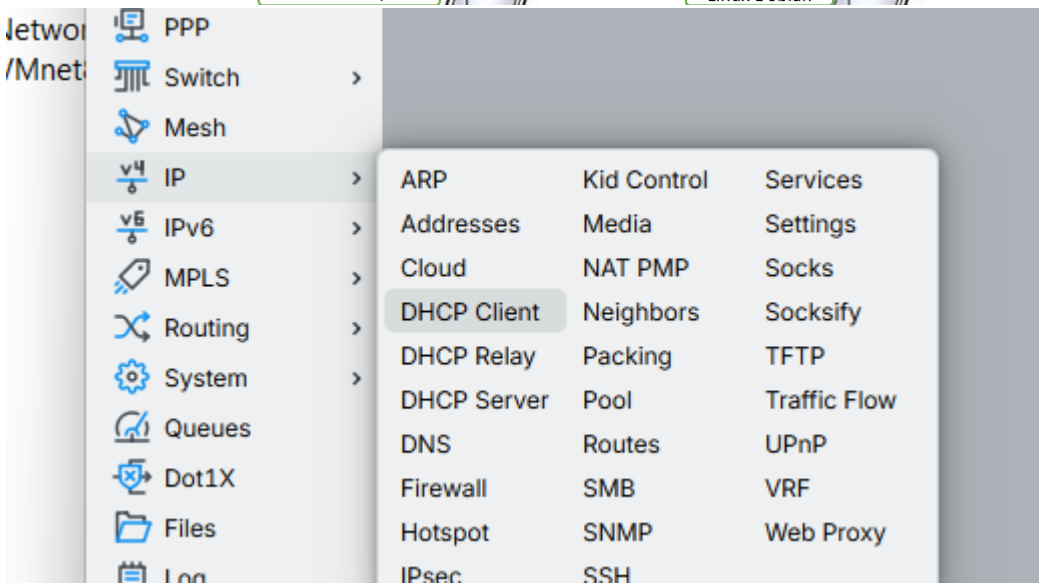

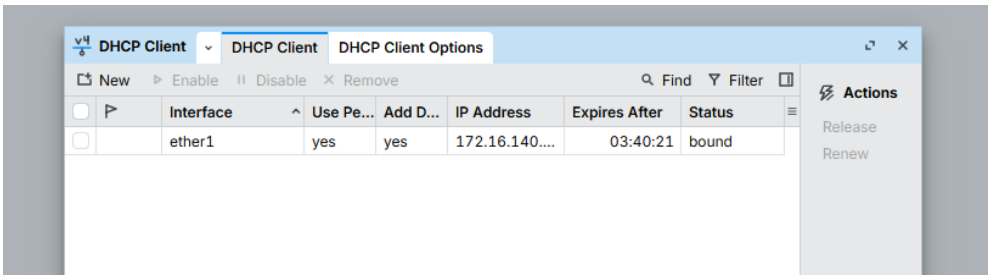

2. Setting DNS dan Firewall agar internet data dikirim ke Client

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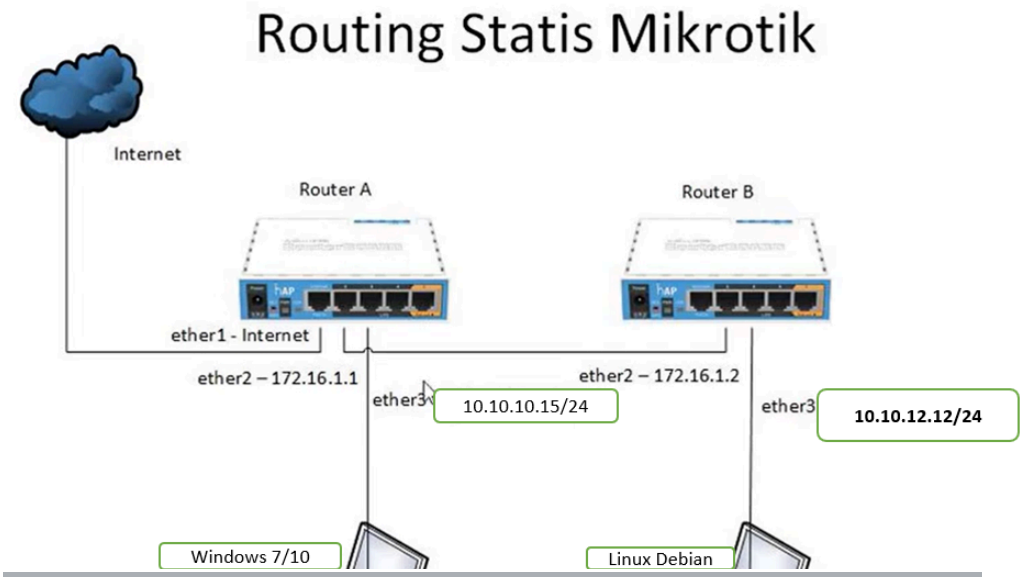

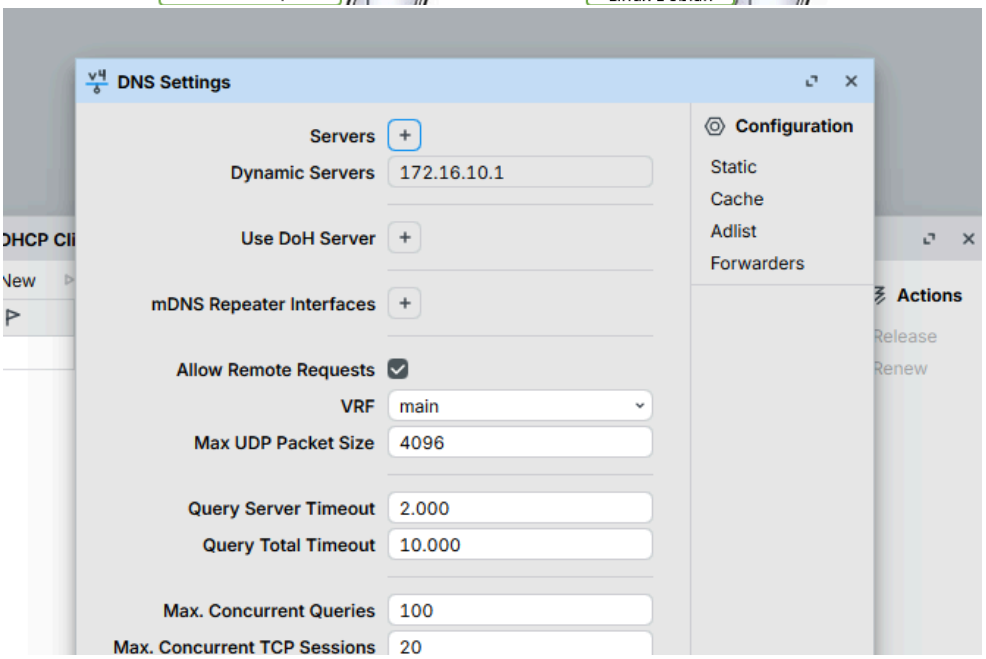

Pada DNS pastikan Allow remote request di ceklis

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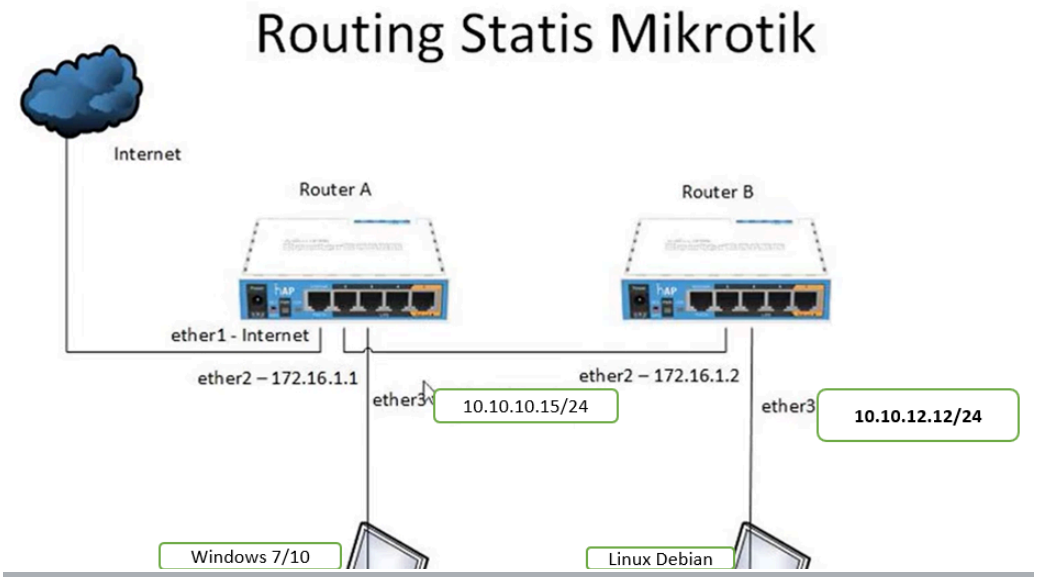

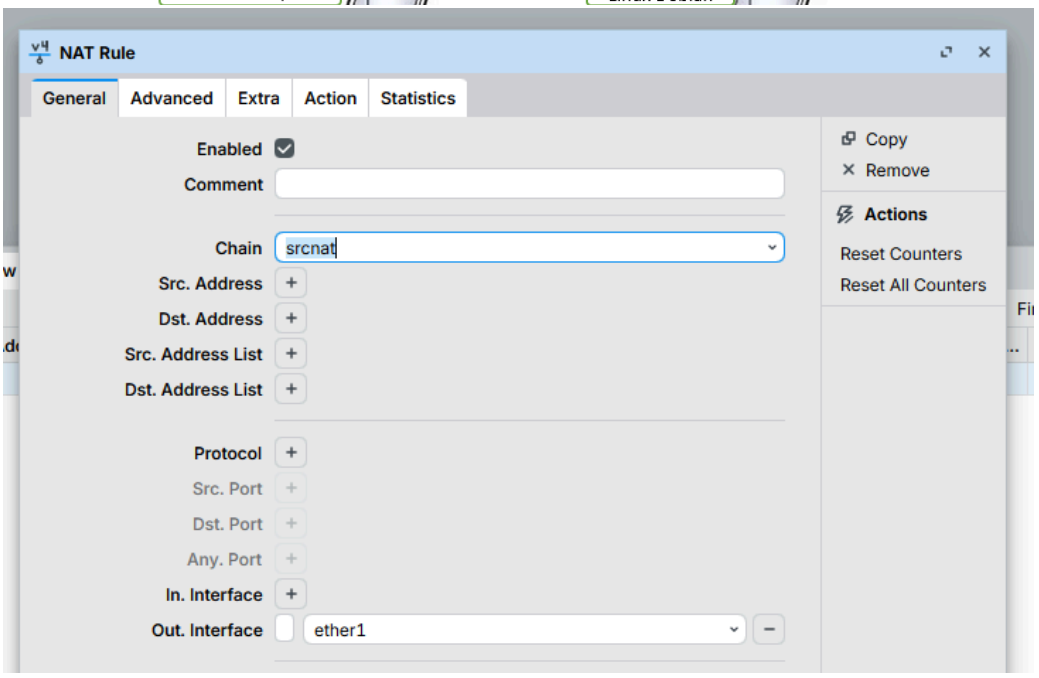

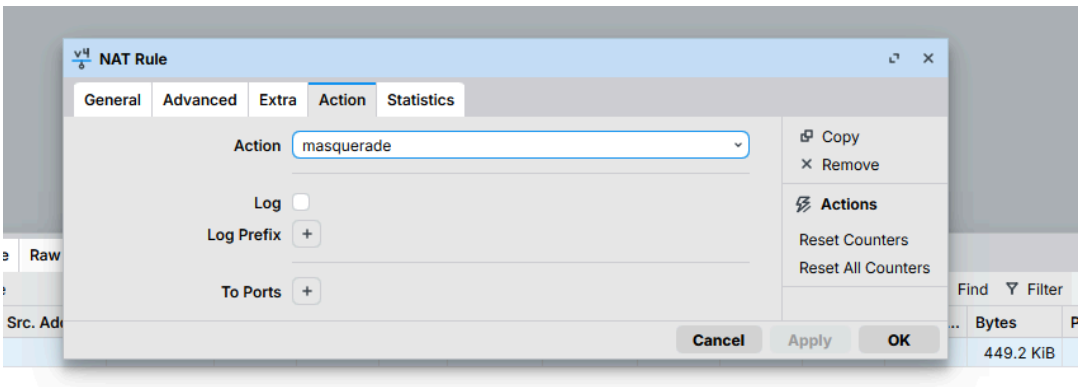

3. Berikan Ip Address pada Port ether 2 dan port ether3 sesuai topologi di atas

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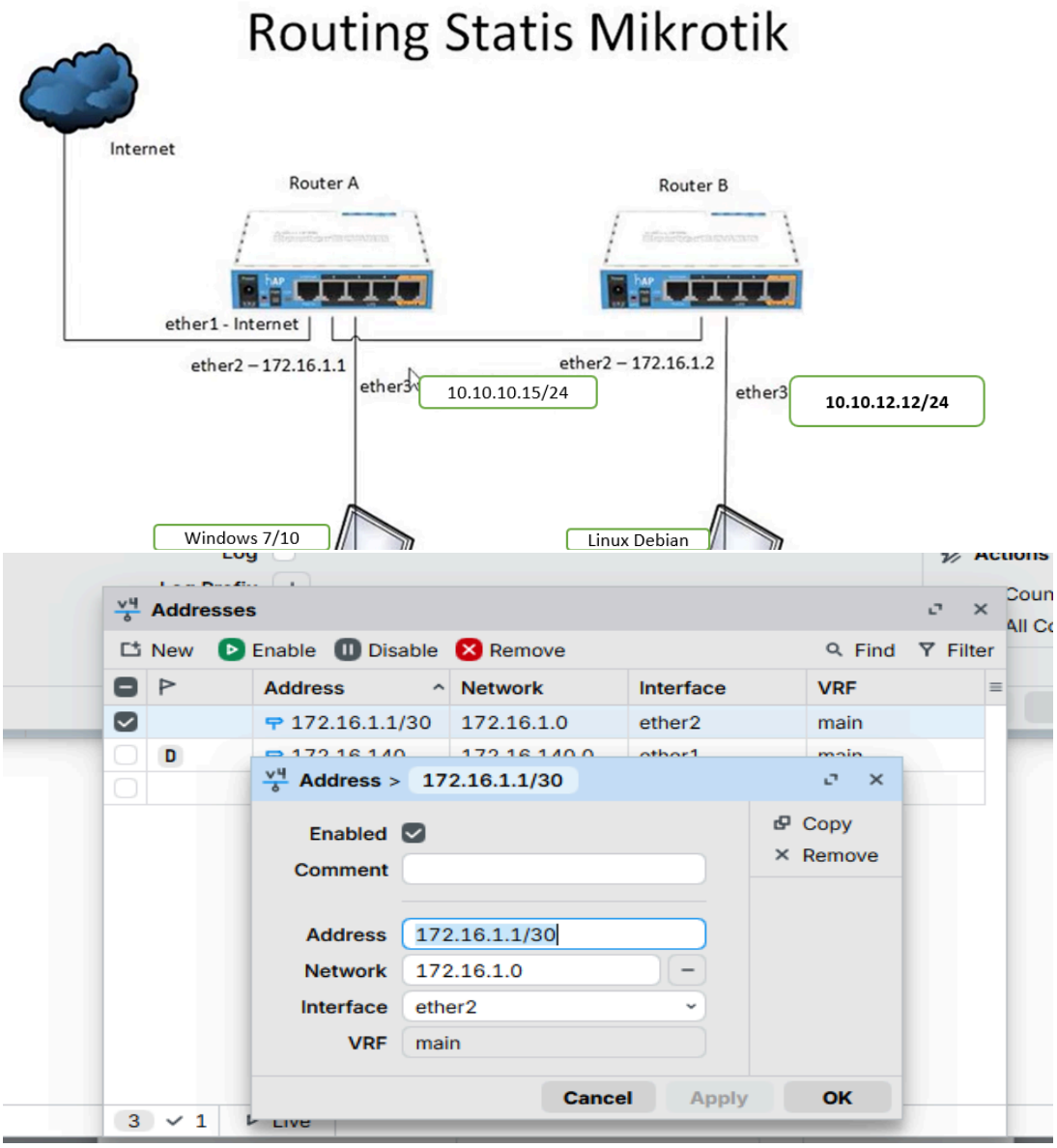

Port 3

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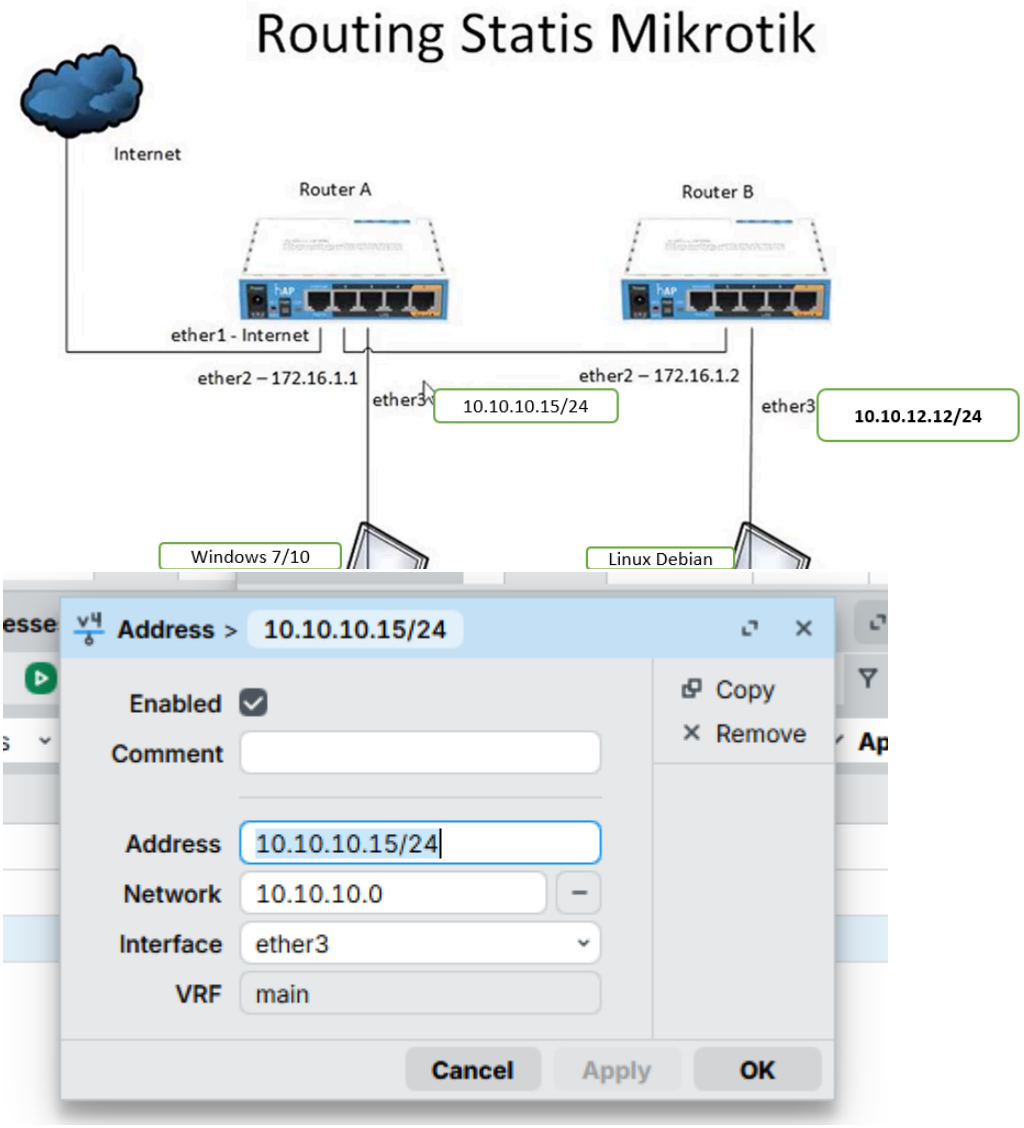
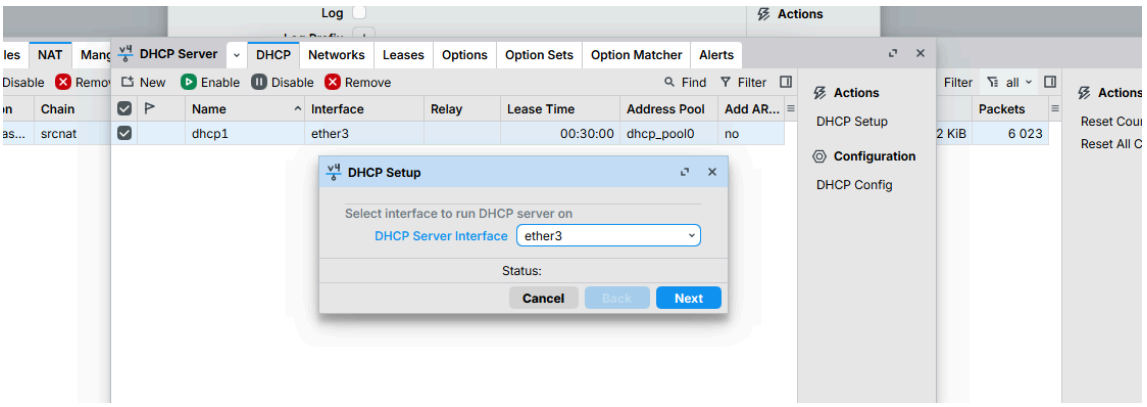


Sesuai Topologi diatas untuk client Laptop A mendapat ip dhcp dr router 1, maka setting dhcp server pada port 3



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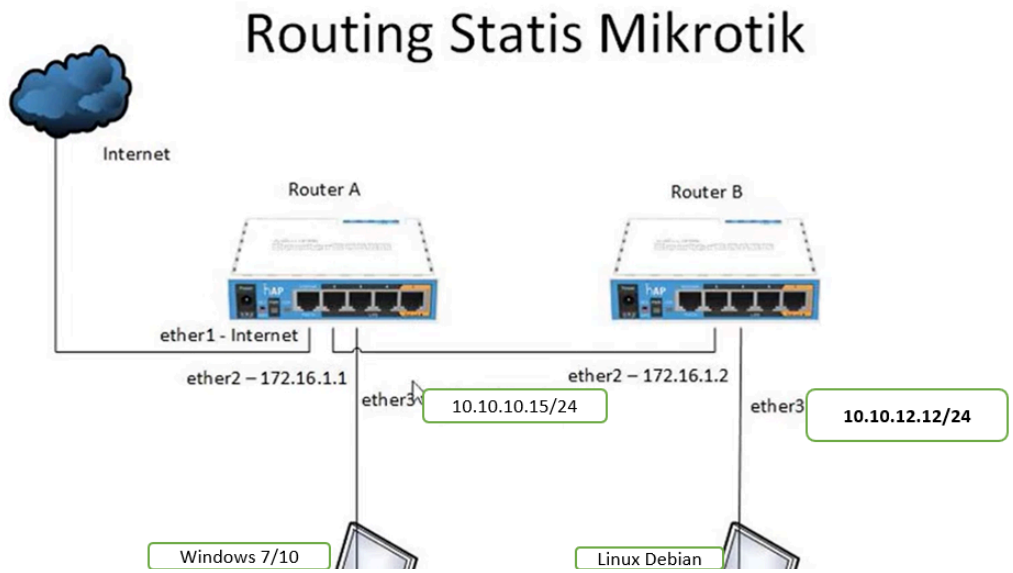
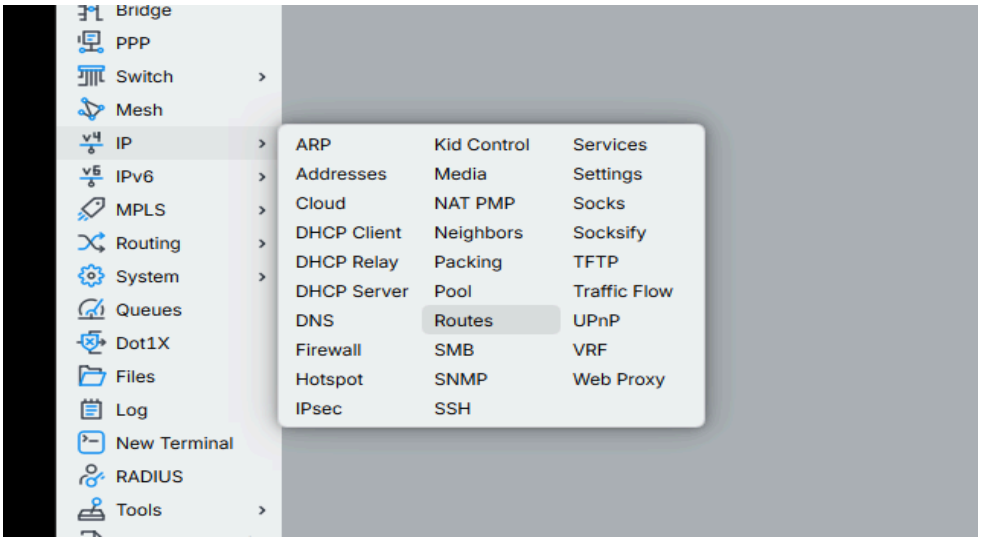


Di Next samapai selesai dan nanti bisa di cek di sisi client Laptop A harus mendapatkan IP Dhcp dari Router 1 port ethernet3

4. Setting Routers pada Router 1 Port 2 , agar router2 dapat dikenali



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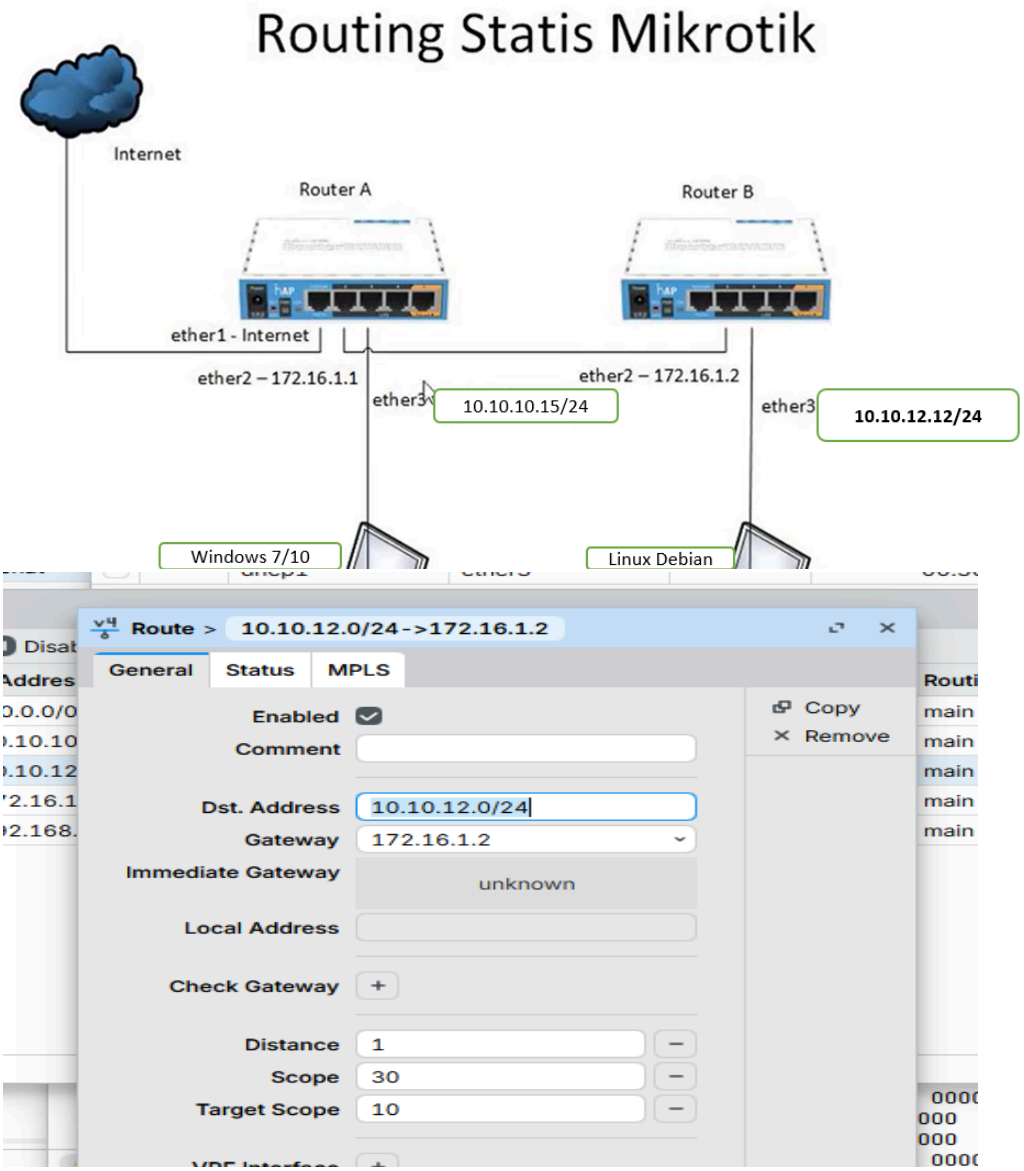

Dst Address diisi dengan Ip Network 10.10.12.0 segment ip Client Laptop B
Dan Gateway disi Ip Address dari Router 2 pada port 2 yaitu 172.16.1.2

Langkah II.

Setingan Router 2

1. Berikan Ip address pada Port 2 dan port 3

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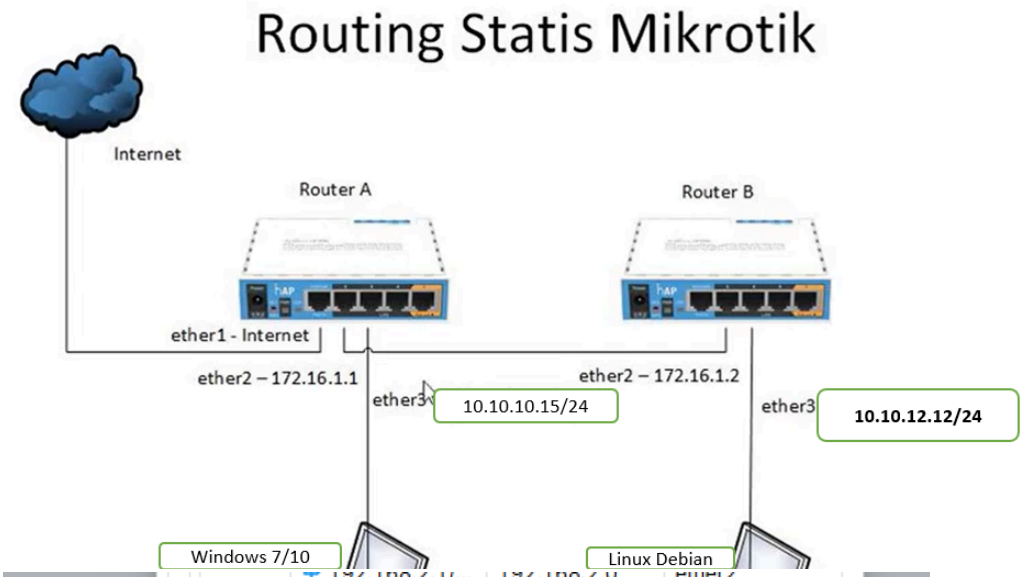

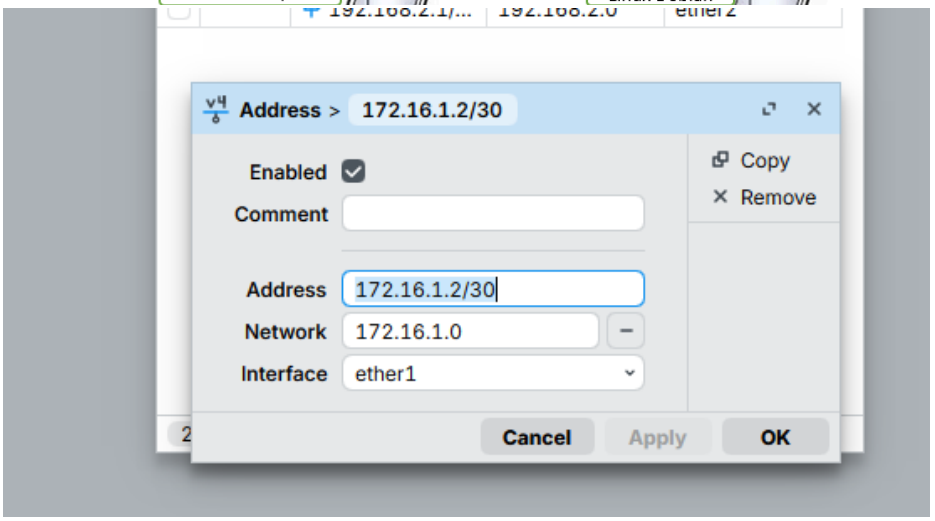

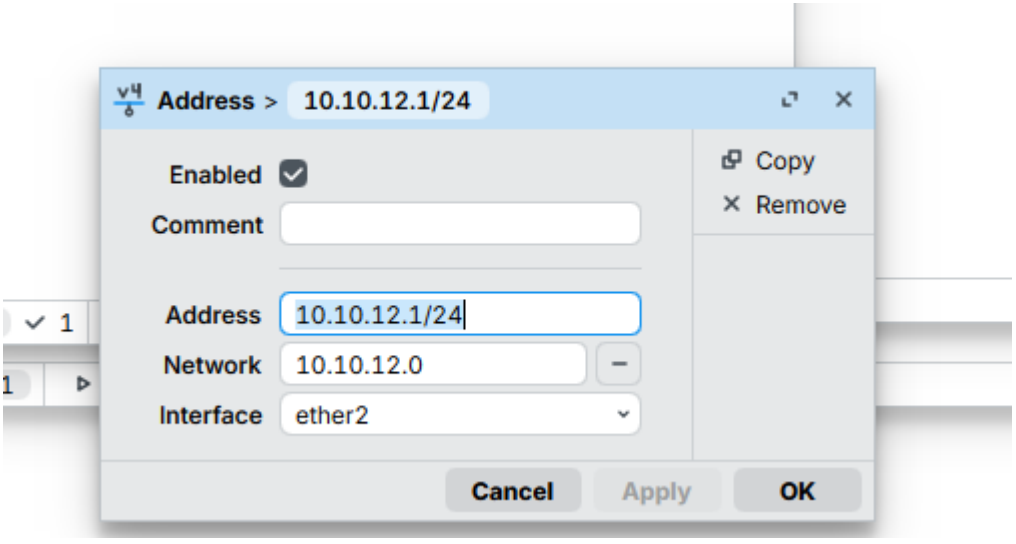

2. Seting DNS pastikan Allow remote request sudah di ceklis

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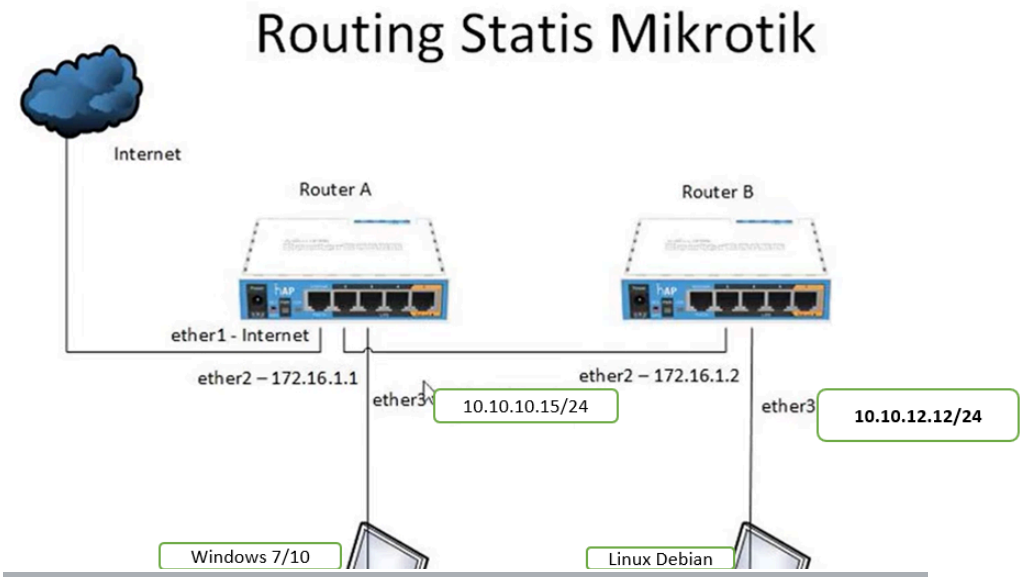

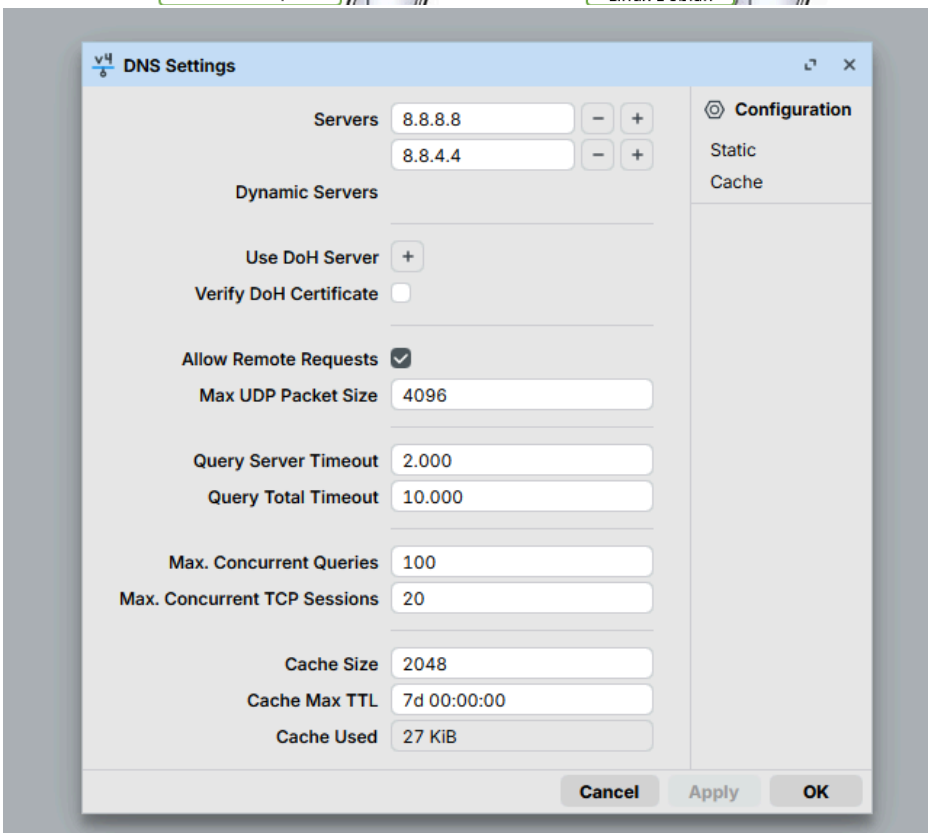

Untuk Firewall General

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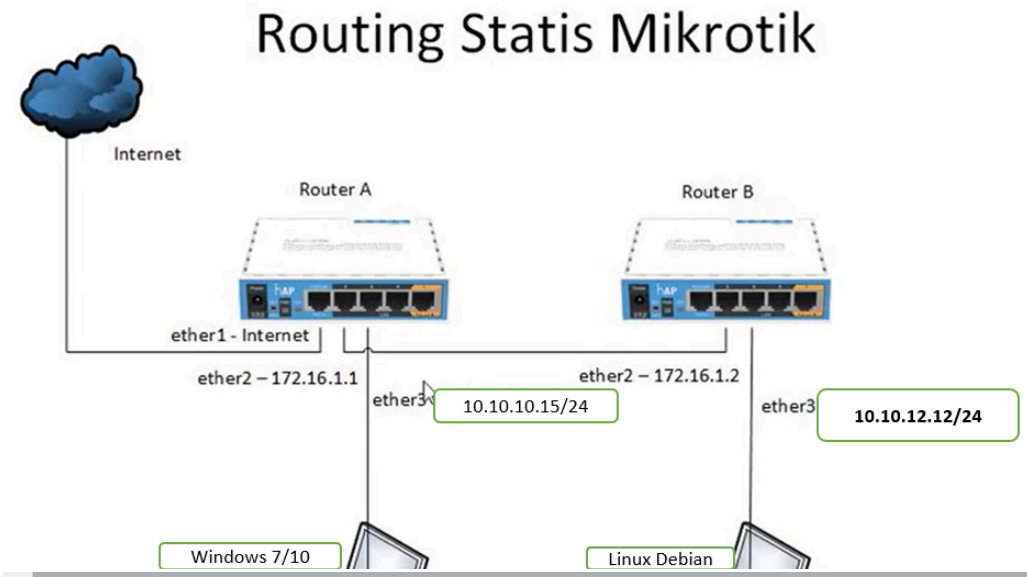

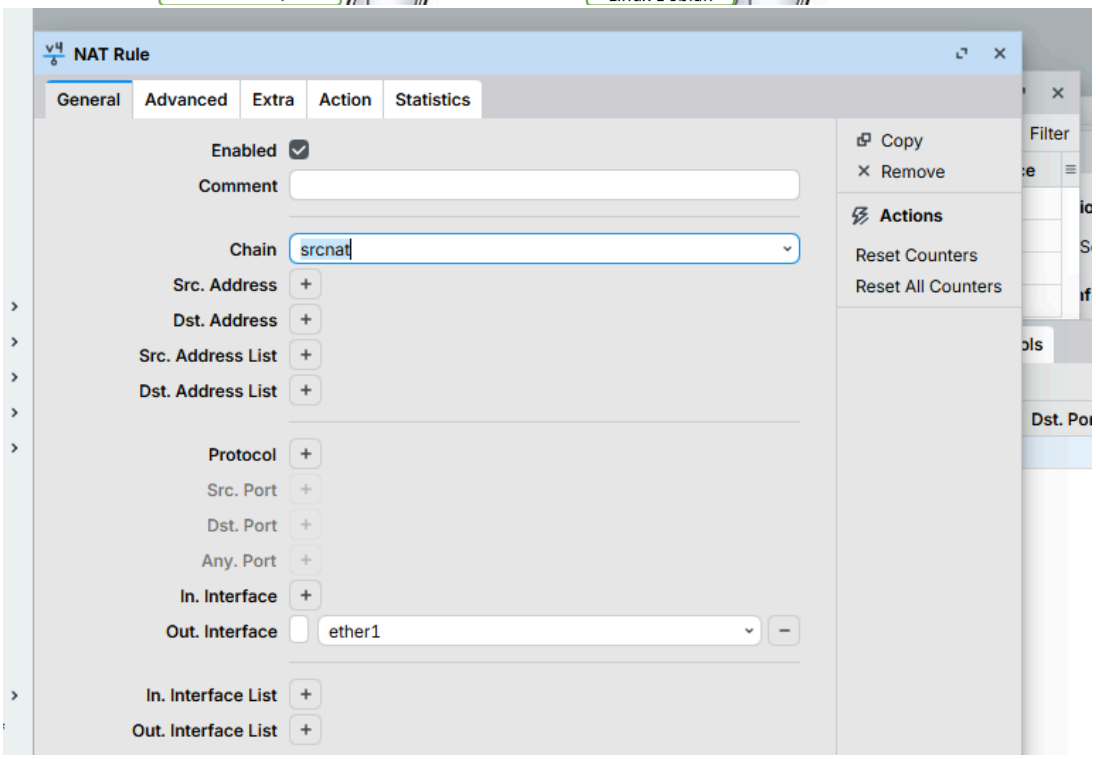

Untuk Actionjuga sama sudah pilih masquerade

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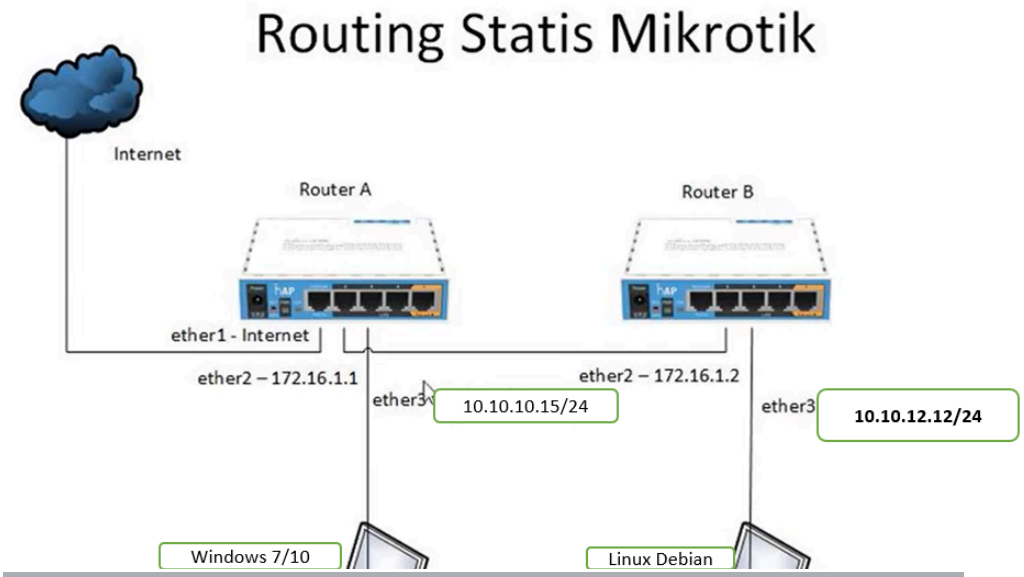
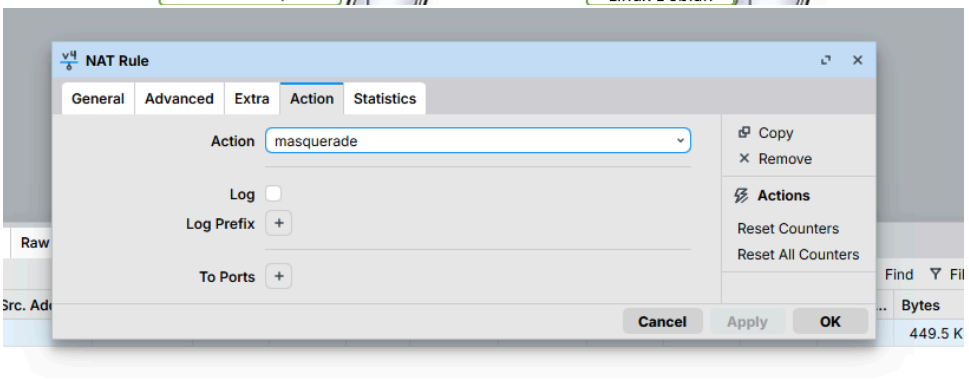
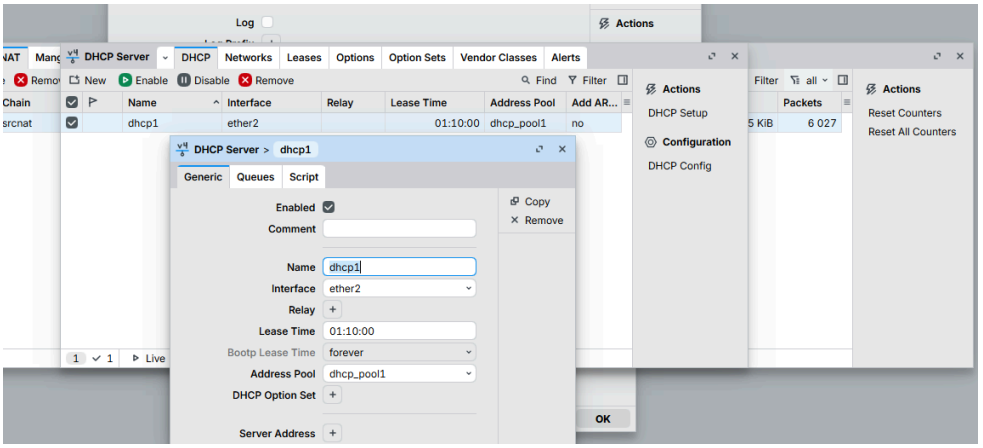




3. Seting dhcp server pada port2



4. Seting routing

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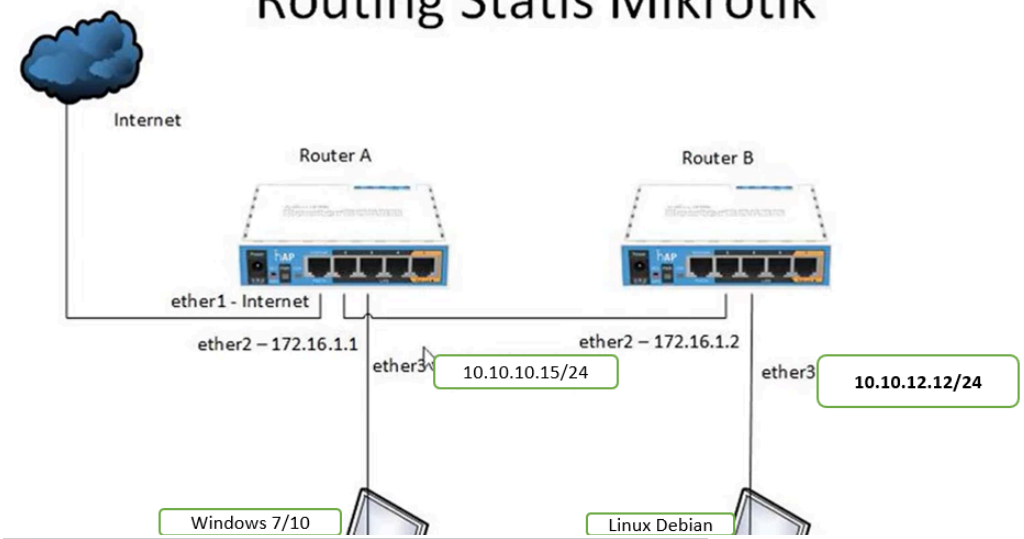
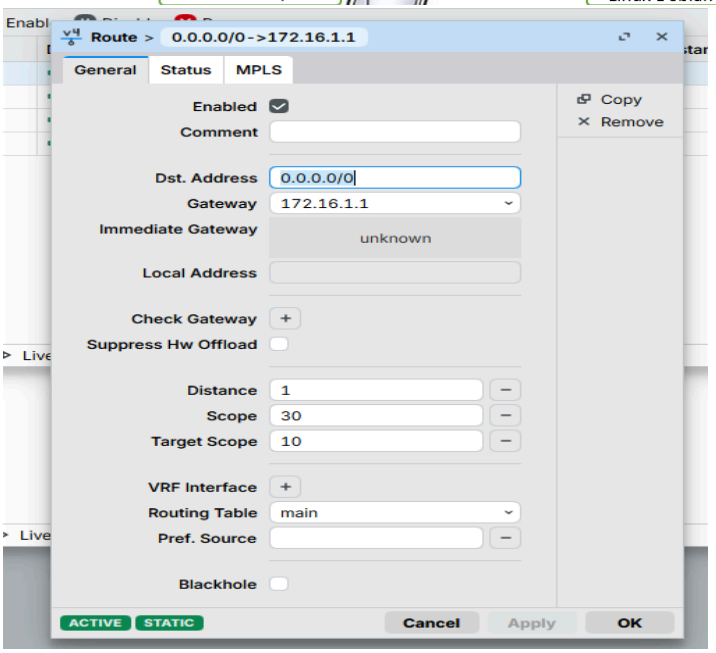
Routing Statis Mikrotik





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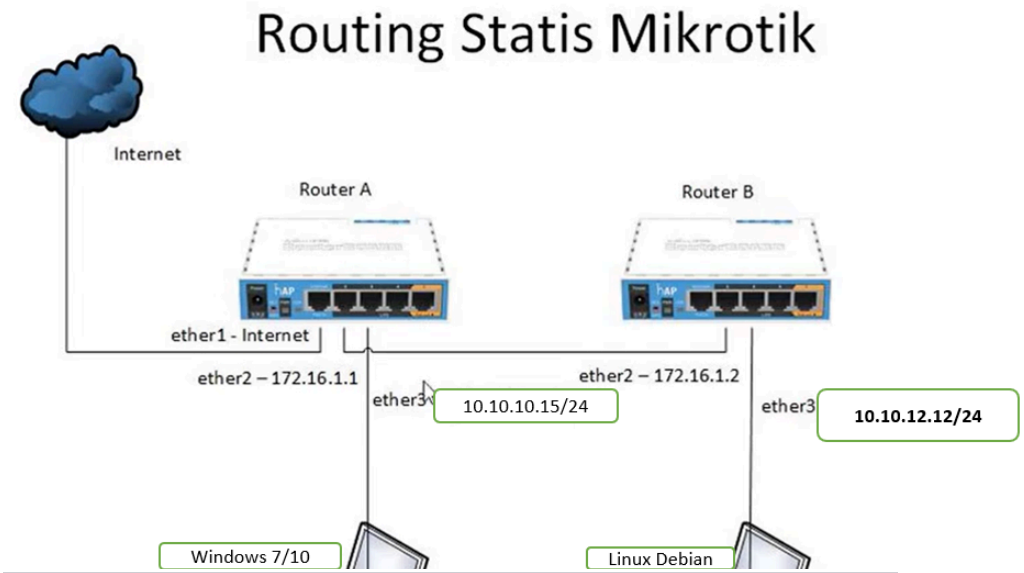
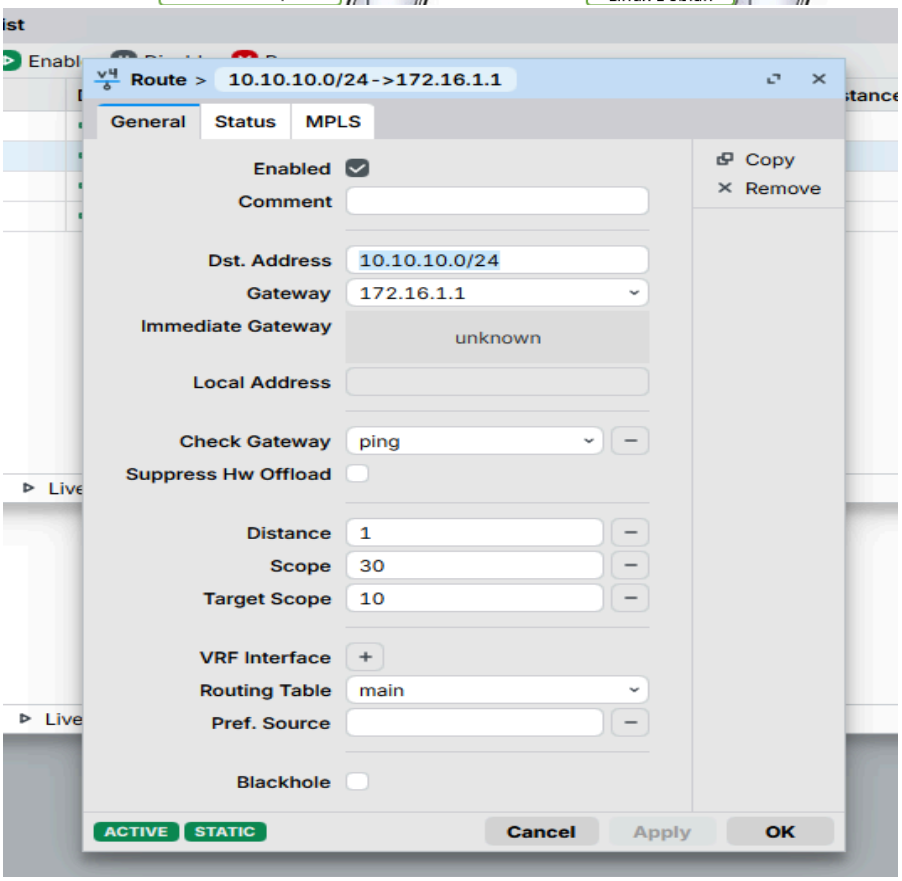
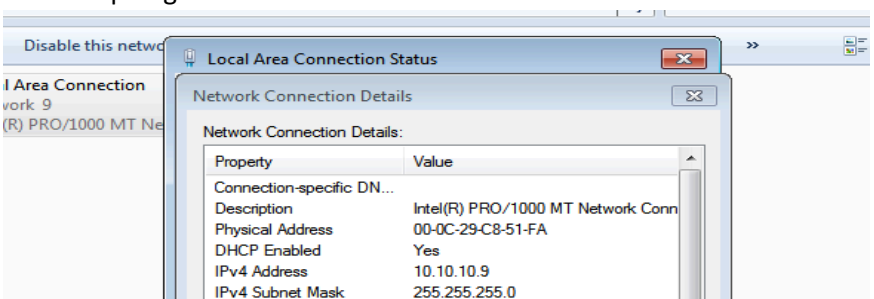




Langkah III

Pada Sisi Client Laptop A, pastikan laptop A mendapatkan Ip Address dari Router 1 Sesuai topologi diatas



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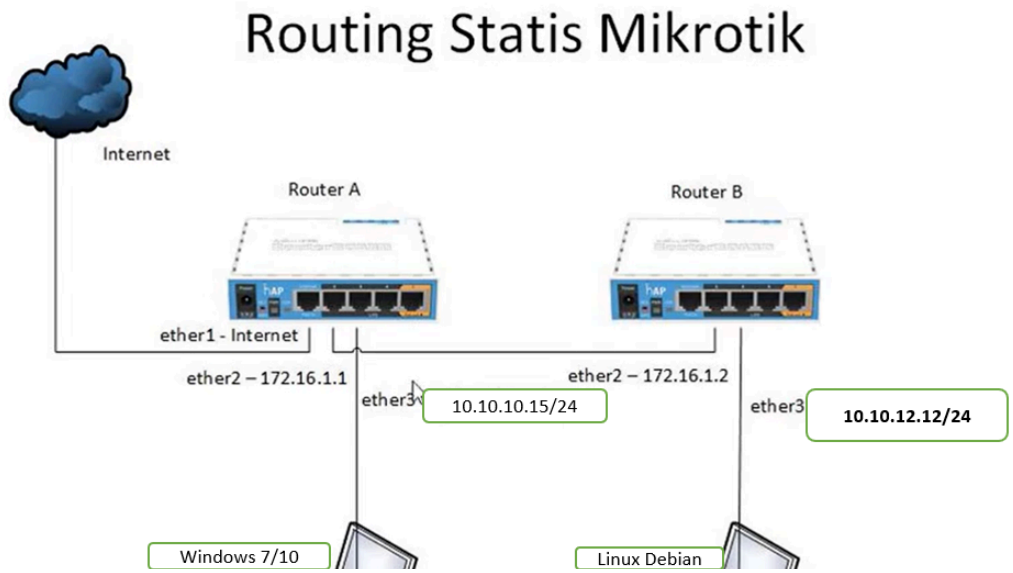
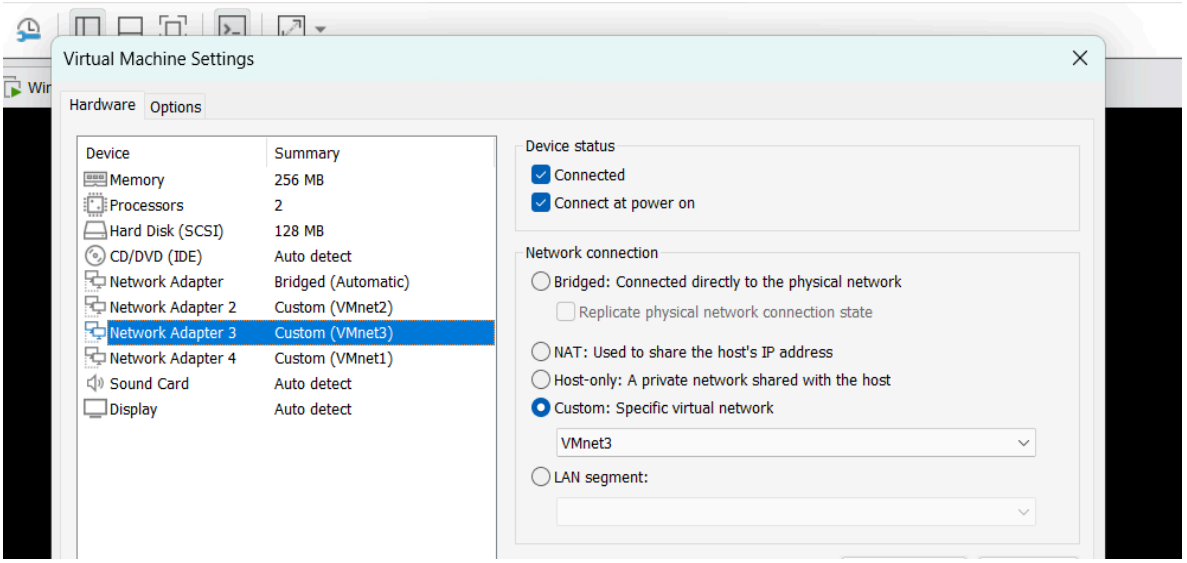


Agar Client Laptop A mendpat Ip addres dari router 1, pastikan network yang dipakai antara Router 1 port 3 dan network pada Client Win7 harus sama



Pada router 1 Port 3 menggunakan Costume Vmnet 3

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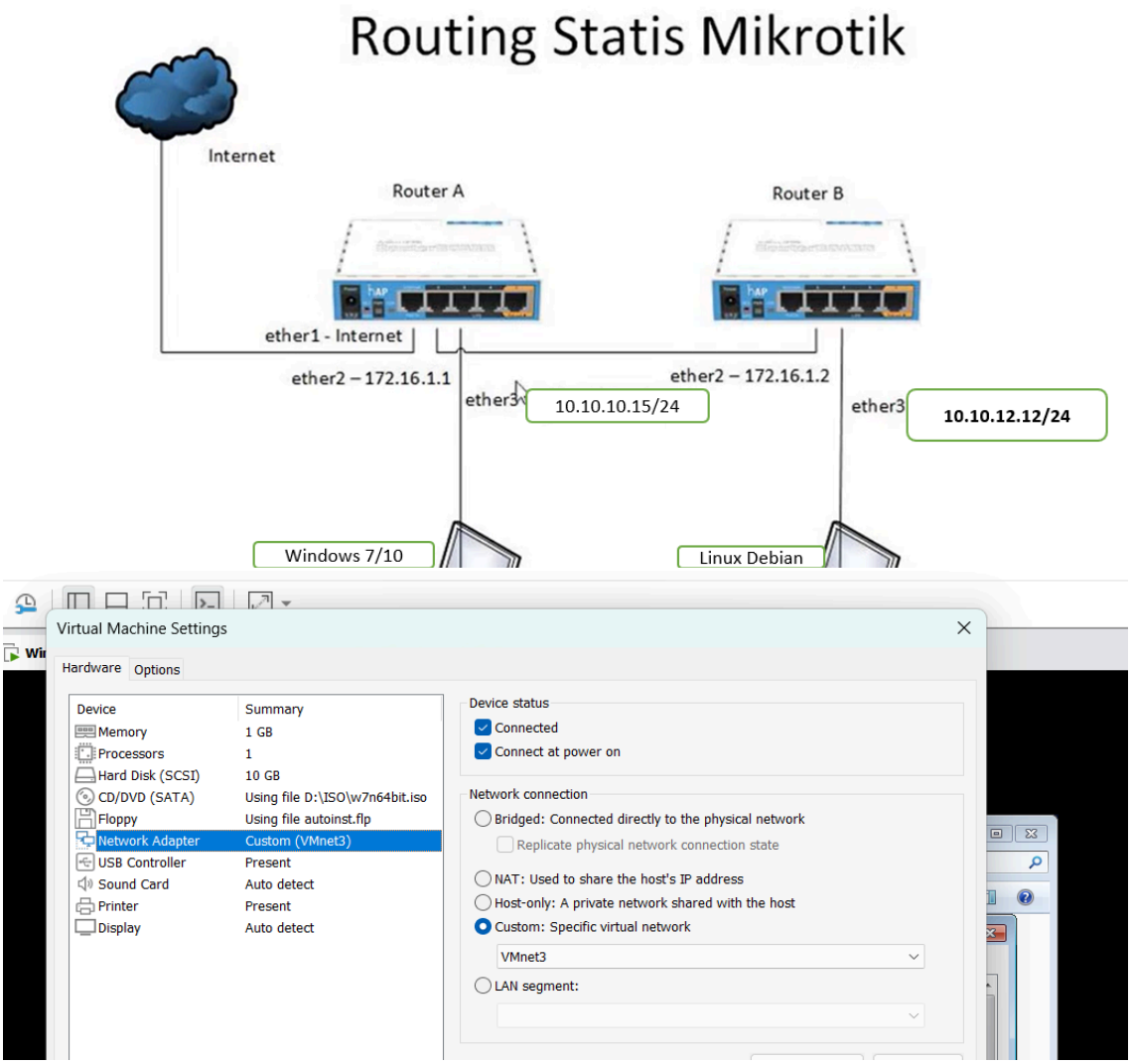

Pada sisi client Laptop A juga harus sama menggunakan Costum Vmnet3

Langkah IV

Pada Sisi Client Laptop B pastikan laptop B mendapatkan Ip Address dari Router 2 Sesuai topologi diatas

```
       valid_lft forever preferred_lft forever
2: ens33: <BROADCAST,MULTICAST,UP,LOWER_UP> mtu 1500 qdisc fq_codel state UP gro
up default qlen 1000
    link/ether 00:0c:29:64:c5:ca brd ff:ff:ff:ff:ff:ff
    altname enp2s1
    inet 10.10.12.254/24 brd 10.10.12.255 scope global dynamic ens33
       valid_lft 378sec preferred_lft 378sec
    inet6 fe80::20c:29ff:fe64:c5ca/64 scope link
       valid_lft forever preferred_lft forever
3: ens37: <NO-CARRIER,BROADCAST,MULTICAST,UP> mtu 1500 qdisc fq_codel state DOWN
```

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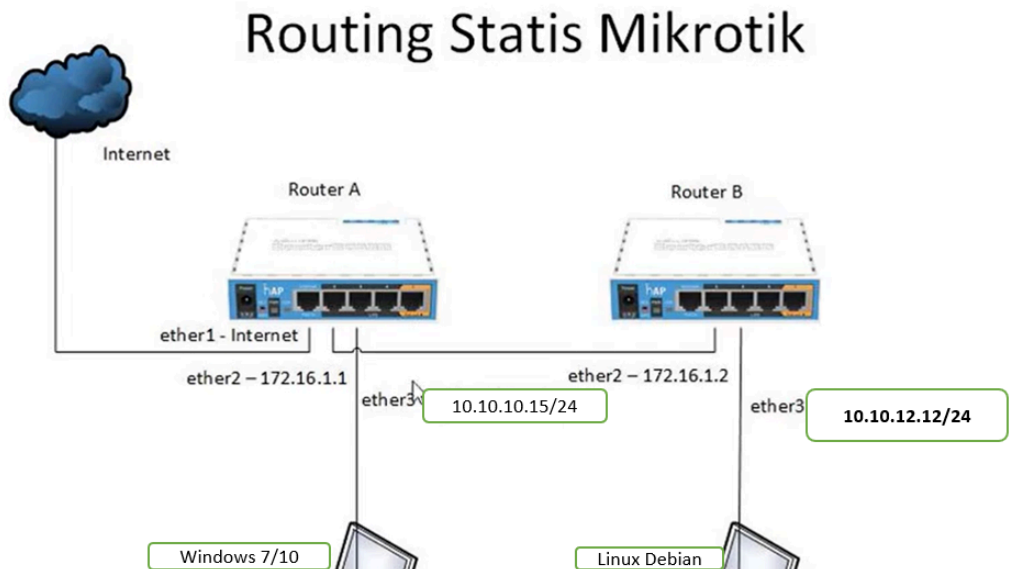
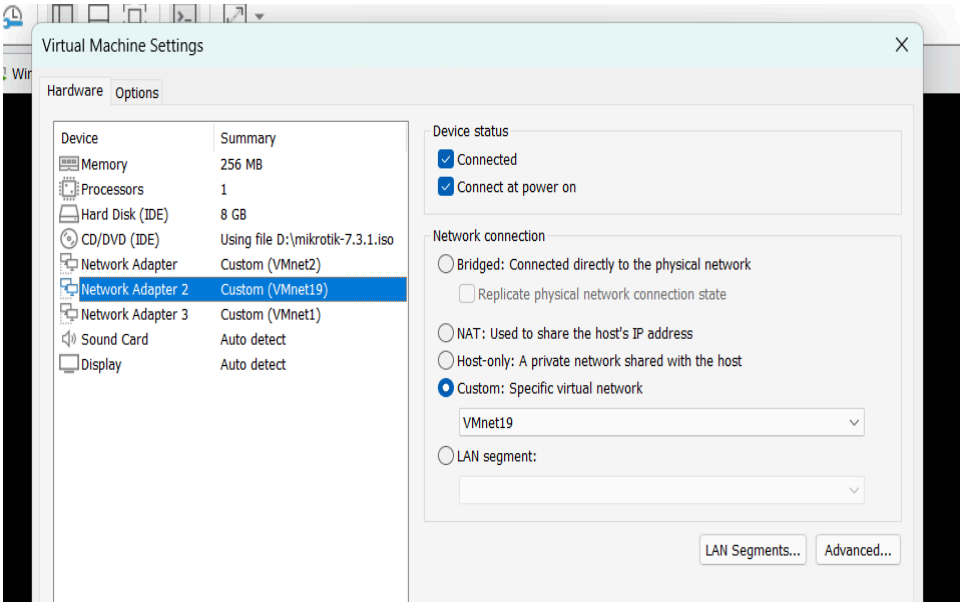


Ip yang didapat dari Router B pada Laptop B Adalah **10.10.12.254**
Agar Client Laptop B mendpat Ip addres dari router 2, pastikan network yang dipakai antara Router 1 port 2 dan network pada Client Debian harus sama



Pada router 2 yang menuju pada Client Laptop B menggunakan Network Adafter Costum Vmnet19

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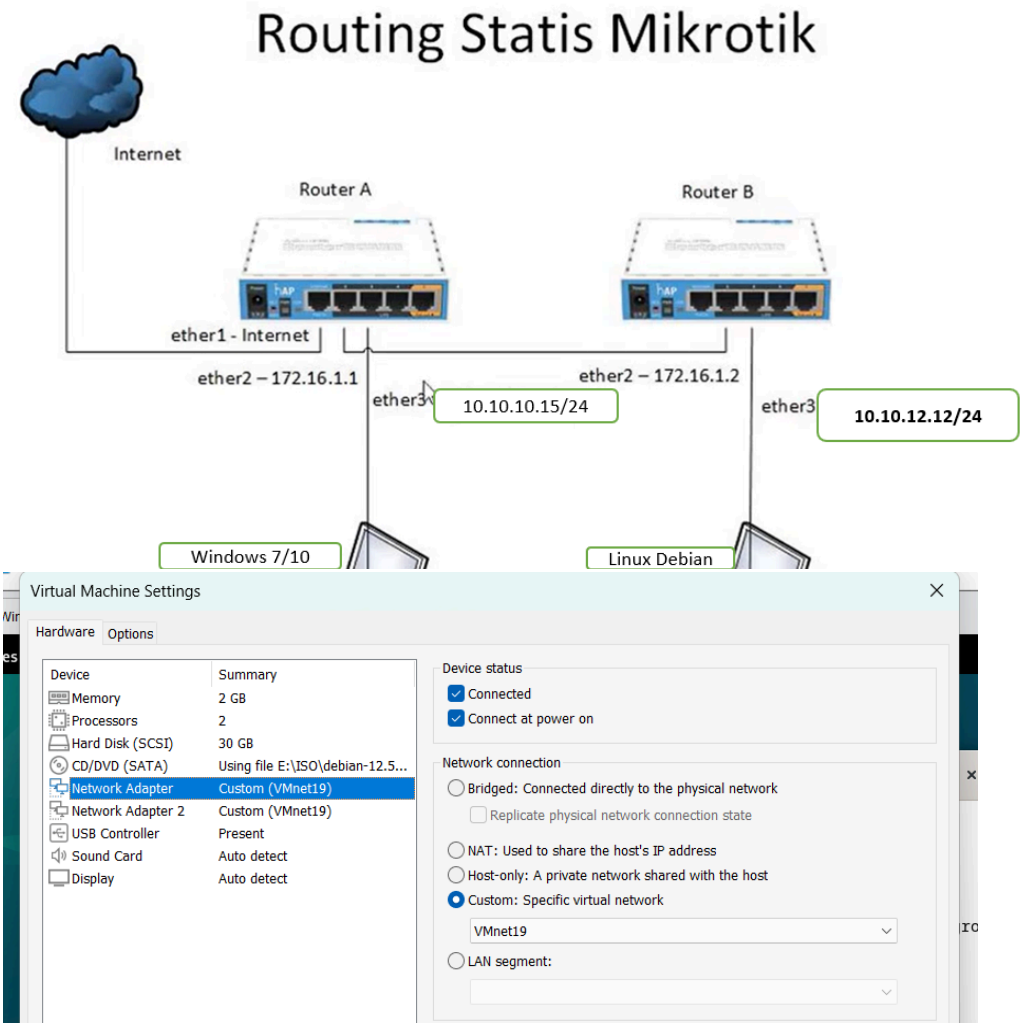

Setingan Network Adafter ada Client Debian Laptop B

Pengujian

Test melaui CMD atau terminal dengan melakukan Ping dari Client Laptop B ke Ip Laptop A atau sebaliknya

```
       valid_lft forever preferred_lft forever
root@debian:/home/alan# ping 10.10.10.9
PING 10.10.10.9 (10.10.10.9) 56(84) bytes of data.
64 bytes from 10.10.10.9: icmp_seq=1 ttl=126 time=2.13 ms
64 bytes from 10.10.10.9: icmp_seq=2 ttl=126 time=2.12 ms
64 bytes from 10.10.10.9: icmp_seq=3 ttl=126 time=2.90 ms
^C
```

Test laptop B ke koneksi internet

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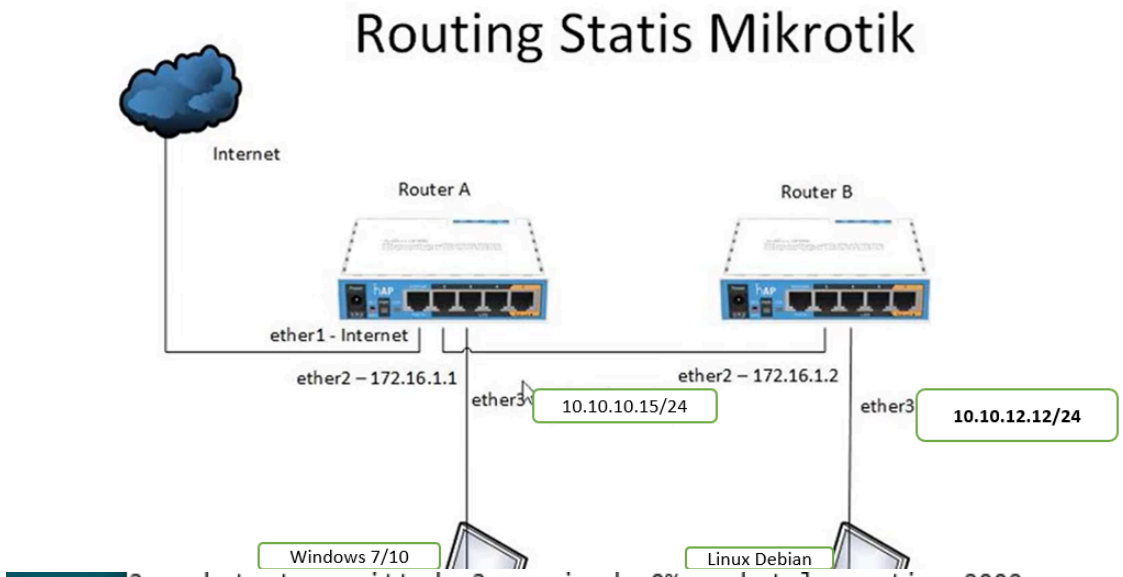


```
3 packets transmitted, 3 received, 0% packet loss, time 2002ms
rtt min/avg/max/mdev = 2.120/2.383/2.900/0.365 ms
root@debian:/home/alan# ping 8.8.8.8
PING 8.8.8.8 (8.8.8.8) 56(84) bytes of data.
64 bytes from 8.8.8.8: icmp_seq=1 ttl=113 time=5.45 ms
64 bytes from 8.8.8.8: icmp_seq=2 ttl=113 time=8.46 ms
64 bytes from 8.8.8.8: icmp_seq=3 ttl=113 time=5.91 ms
^C
```

Test dari laptop A ke Laptop B

```
^C
C:\Users\tkjwi>ping 10.10.12.254

Pinging 10.10.12.254 with 32 bytes of data:
Reply from 10.10.12.254: bytes=32 time=2ms TTL=62
Reply from 10.10.12.254: bytes=32 time=2ms TTL=62
Reply from 10.10.12.254: bytes=32 time=4ms TTL=62
Reply from 10.10.12.254: bytes=32 time=1ms TTL=62

Ping statistics for 10.10.12.254:
```

Ping ke Internet

```
C:\Users\tkjwi>ping 8.8.8.8

Pinging 8.8.8.8 with 32 bytes of data:
Reply from 8.8.8.8: bytes=32 time=5ms TTL=114
Reply from 8.8.8.8: bytes=32 time=4ms TTL=114
Reply from 8.8.8.8: bytes=32 time=5ms TTL=114
Reply from 8.8.8.8: bytes=32 time=4ms TTL=114

Ping statistics for 8.8.8.8:
```

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Routing Statis Mikrotik