

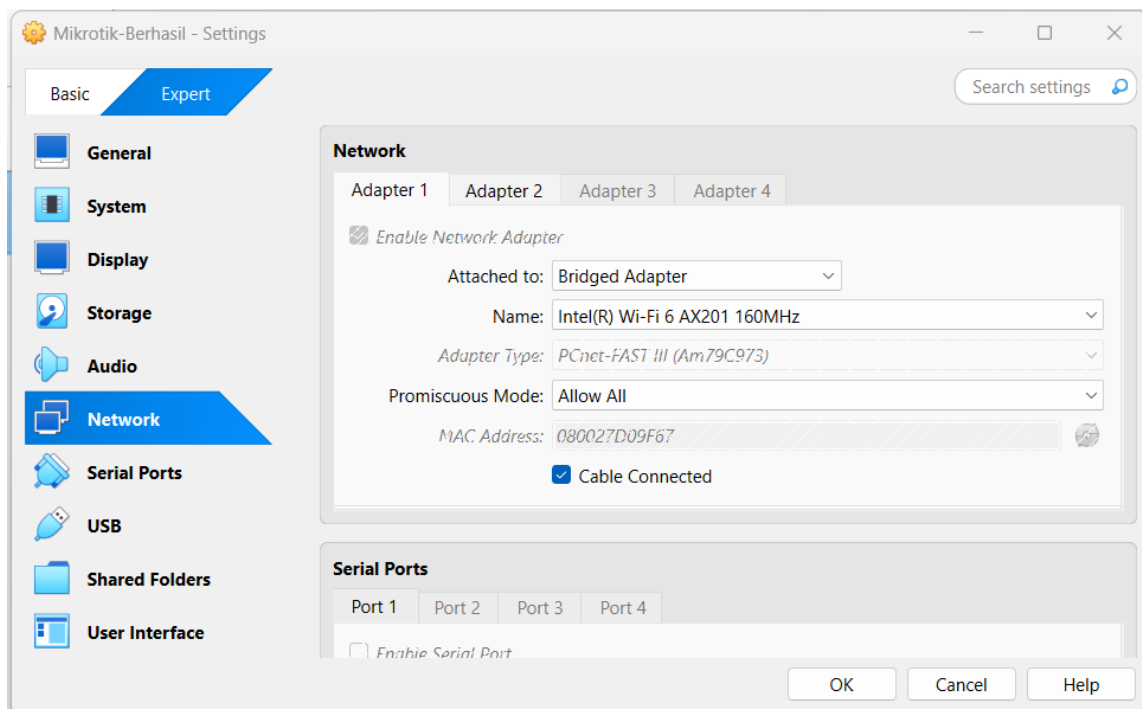
PRAKTIKUM MIKROTIK MENGGUNAKAN WINBOX GUI (NON-CLI) Modul Konversi dari CLI ke Winbox GUI

Alat yang Wajib di install

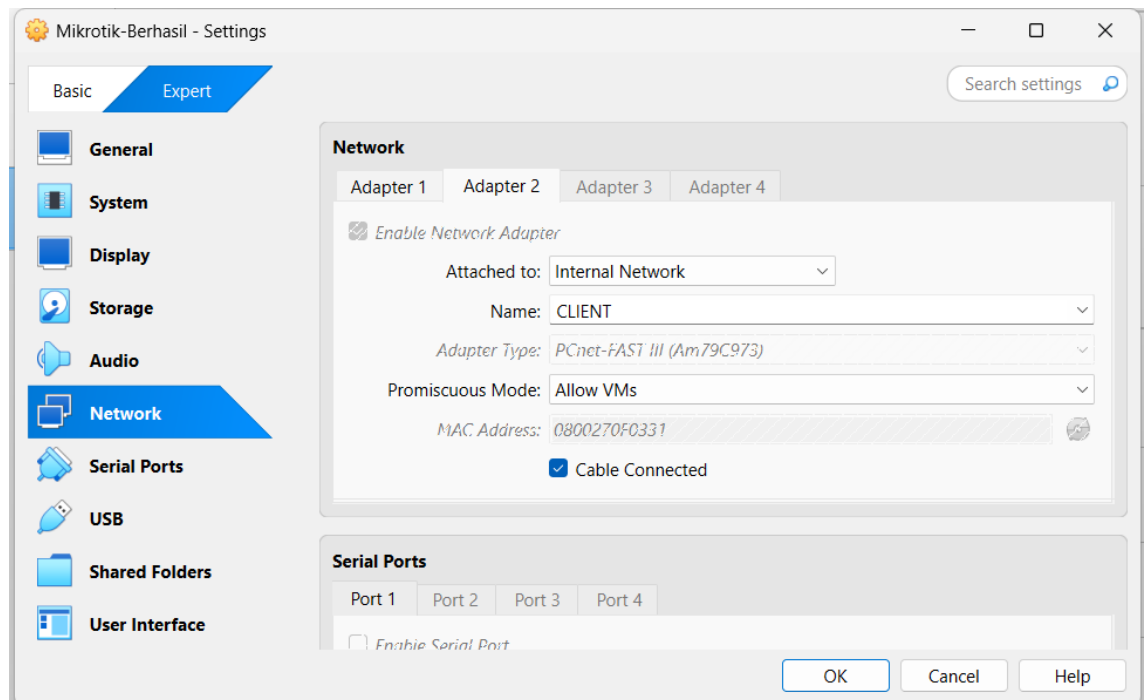
1. Winbox
2. Mikrotik Iso versi di atas 6.x
3. Windows 10 Virtual mesin (Virtual Box)

Setting Awalan untuk Network nya

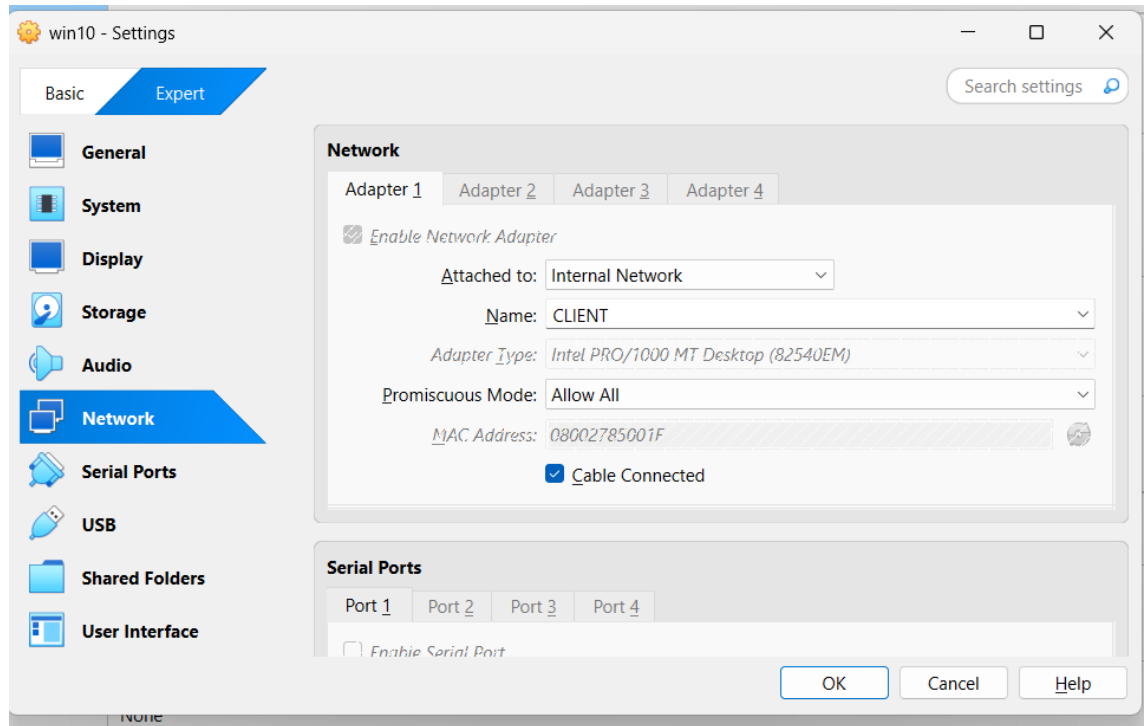
1. Lihat Gambar aja, ini untuk adapter 1 sesuaikan saja yaa



2. Ini untuk adapter 2 lihat aja boy

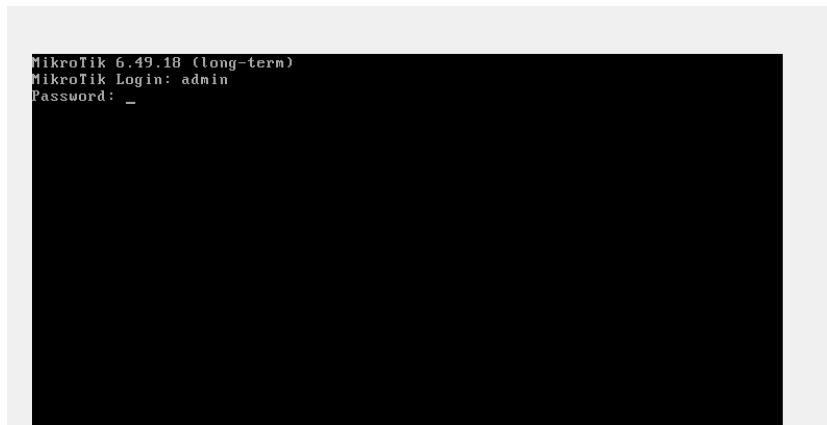


3. Ini untuk windows 10 nya, windows 10 nya harus ada di virtualbox yaa adik adik



INSTALASI MIKROTIK DI VIRTUALBOX (ISO)

1. Buka VirtualBox dan buat mesin baru.
2. Pilih ISO MikroTik RouterOS pada bagian Storage > Optical Drive.
3. Alokasikan RAM minimal 128 MB dan harddisk minimal 512 MB.
4. Jalankan VM dan instal semua paket saat proses instalasi.
5. Setelah reboot, login dengan:
 - Username: admin
 - Password: ()
6. Lihat gambar dibawah ini aja



7. Kalau tampilan jadi kayak dibawah ini Ctrl+c aja biar gak ada buat password, tapi saran nya pake password

```
rent installation "software ID": 7TMI-M02L
lease press "Enter" to continue?

IP address 192.168.88.1/24 is on ether1
ether1 is enabled

-----
You can type "v" to see the exact commands that are used to add and remove
this default configuration, or you can view them later with
'/system default-configuration print' command.
To remove this default configuration type "r" or hit any other key to continue.
If you are connected using the above IP and you remove it, you will be disconnec
ted.

Confirming configuration
jun/18/2025 22:46:48 system,error,critical login failure for user admin via loca
l

Change your password
new password> _
```

8. Kalau udh itu dah buka winbox jangan di close yang ini bahaya datang nanti
9. Kalau muncul kayak dibawah jangan panik, sesuai kan aja sama waktu kalian aktifkan mikrotiknya focus di Uptime yaaa, nah itu punya kalian berarti

File Tools

Connect To: [fe80::a00:27ff:fed0:9f67%4]

Login: admin

Password:

Add/Set

Managed Neighbors

Refresh

MAC Address	IP Address	Identity	Version	Board	Uptime
08:00:27:D0:9F:67	fe80::a00:27ff:fed0:9f67	MikroTik	6.49.18 (lo...	x86	00:03:30
08:00:27:B7:B9:C3	fe80::a00:27ff:feb7:b9c3	walis	6.33	x86	01:35:59
08:00:27:D0:9F:67	192.168.88.1	MikroTik	6.49.18 (lo...	x86	00:03:30
08:00:27:B7:B9:C3	172.16.100.10	walis	6.33	x86	01:35:59

10. kalau kalian buat password masukin pw, tapi kalau enggak lanjut aja boy

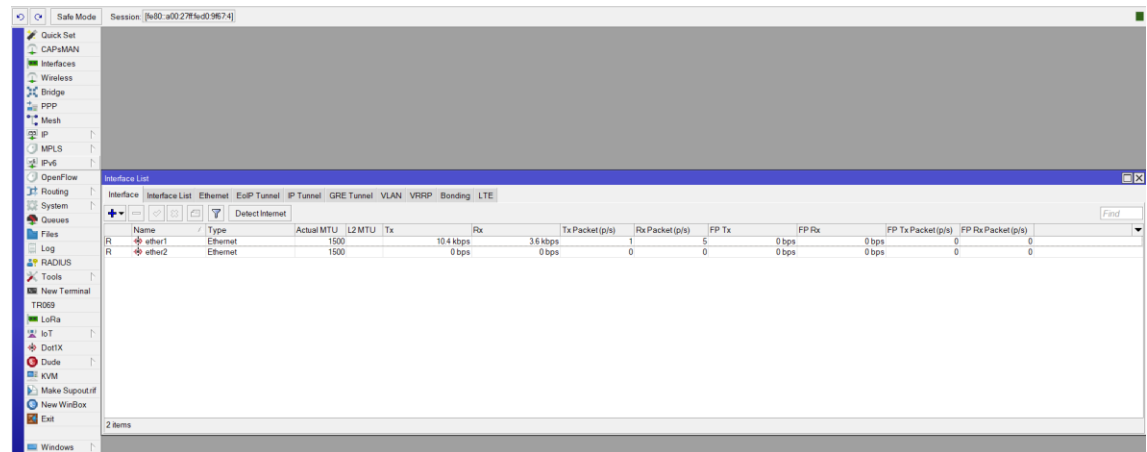
KONFIGURASI DASAR MIKROTIK SEBAGAI GATEWAY

1. Rename Interface

Buka Winbox > Interfaces.

Rename ether1 menjadi Public, ether2 menjadi Client.

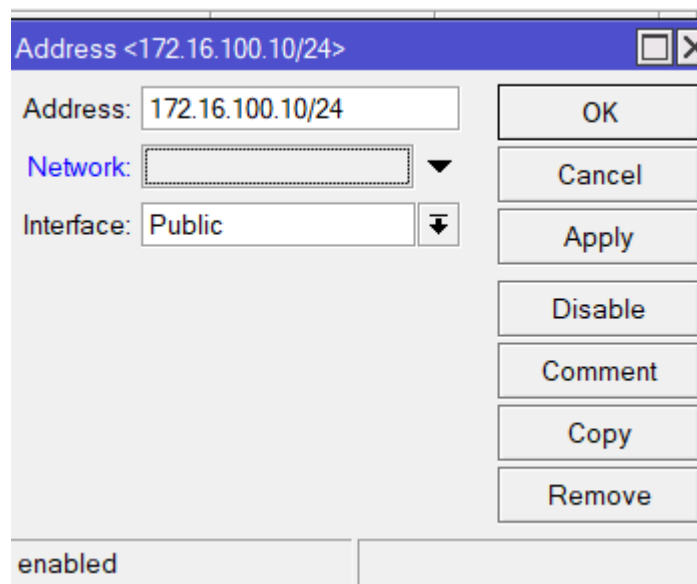
Cari aja itu di winbox pasti ada tampilannya gini nanti



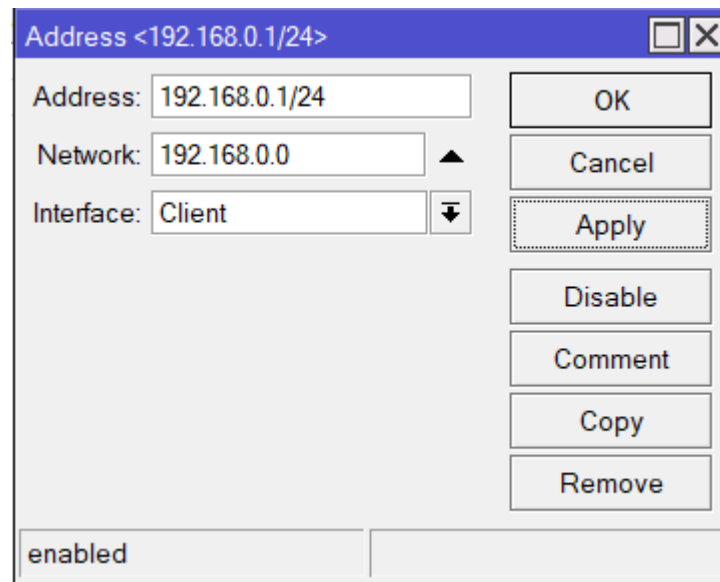
2. Set IP Address

o IP > Addresses > +:

- Address: 172.16.100.10/24, Interface: Public



- Address: 192.168.0.1/24, Interface: Client

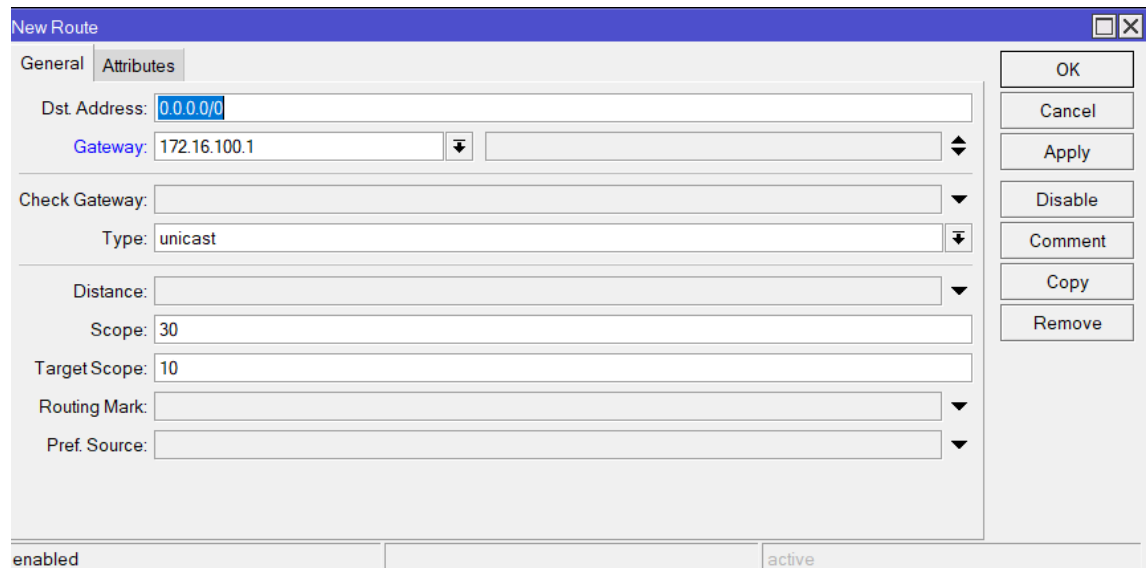


A dialog box titled "Address <192.168.0.1/24>". It contains three input fields: "Address:" with the value "192.168.0.1/24", "Network:" with the value "192.168.0.0", and "Interface:" with the value "Client". To the right of these fields is a vertical stack of buttons: "OK", "Cancel", "Apply" (highlighted with a dashed border), "Disable", "Comment", "Copy", and "Remove". At the bottom left, there is a checkbox labeled "enabled" which is checked.

3. Set Default Route (Gateway)

IP > Routes > +:

Dst. Address: 0.0.0.0/0, Gateway: 172.16.100.1



A dialog box titled "New Route". It has two tabs: "General" (selected) and "Attributes". The "General" tab contains several fields: "Dst. Address:" with the value "0.0.0.0/0", "Gateway:" with the value "172.16.100.1", "Check Gateway:" (empty), "Type:" with the value "unicast", "Distance:" (empty), "Scope:" with the value "30", "Target Scope:" with the value "10", "Routing Mark:" (empty), and "Pref. Source:" (empty). To the right of these fields is a vertical stack of buttons: "OK", "Cancel", "Apply", "Disable", "Comment", "Copy", and "Remove". At the bottom left, there is a checkbox labeled "enabled" which is checked. At the bottom right, there is a checkbox labeled "active" which is checked.

4. Konfigurasi DNS

IP > DNS:

- DNS Server: 202.249.24.33, 202.249.24.34
- Centang "Allow Remote Requests"

DNS Settings

Servers: 202.249.24.33
202.249.24.34

Dynamic Servers:

Use DoH Server: ▼

☐ Verify DoH Certificate

☒ Allow Remote Requests

Max UDP Packet Size: 4096

Query Server Timeout: 2.000 s

Query Total Timeout: 10.000 s

Max. Concurrent Queries: 100

Max. Concurrent TCP Sessions: 20

Cache Size: 2048 KiB

Cache Max TTL: 7d 00:00:00

Cache Used: 25 KiB

OK
Cancel
Apply
Static
Cache

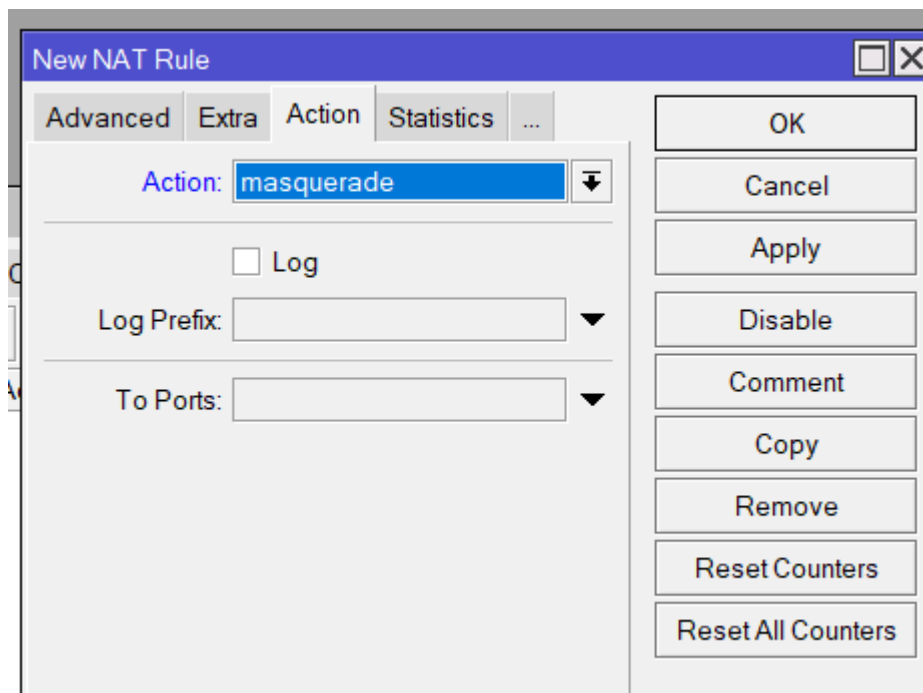
5. NAT (Masquerade)

IP > Firewall > NAT > +:

Chain: srcnat, Out Interface:Public, Action: masquerade

The screenshot shows the 'New NAT Rule' dialog box with the following configuration:

- General Tab:**
 - Chain: srcnat
 - Src. Address: (empty)
 - Dst. Address: (empty)
 - Protocol: (empty)
 - Src. Port: (empty)
 - Dst. Port: (empty)
 - Any. Port: (empty)
 - In. Interface: (empty)
 - Out. Interface: ☐ Public
 - In. Interface List: (empty)
 - Out. Interface List: (empty)
 - Packet Mark: (empty)
 - Connection Mark: (empty)
 - Routing Mark: (empty)
 - Routing Table: (empty)
 - Connection Type: (empty)
- Enabled:** ☒
- Buttons:** OK, Cancel, Apply, Disable, Comment, Copy, Remove, Reset Counters, Reset All Counters

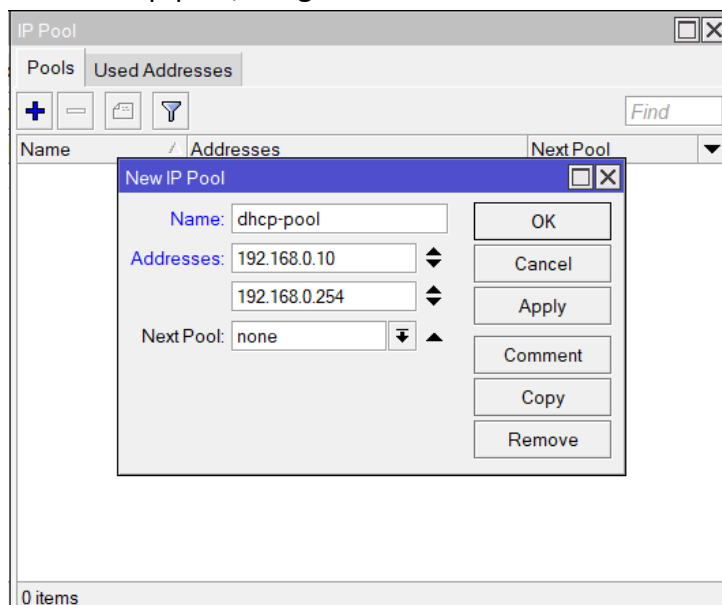


DHCP SERVER (OTOMATIS IP UNTUK CLIENT)

IP Pool

6. IP > Pool > +:

Name: dhcp-pool, Ranges: 192.168.0.10-192.168.0.254



7. DHCP Network

IP > DHCP Server > Networks > +:

Address: 192.168.0.0/24, Gateway: 192.168.0.1

New DHCP Network

Address: 192.168.0.0/24

Gateway: 192.168.0.1

Netmask:

☐ No DNS

DNS Servers:

Domain:

WINS Servers:

NTP Servers:

CAPS Managers:

Next Server:

Boot File Name:

DHCP Options:

DHCP Option Set:

OK

Cancel

Apply

Comment

Copy

Remove

8. DHCP Server

IP > DHCP Server > DHCP > +:

Interface: Client, Address Pool: dhcp-pool

The screenshot shows a configuration window titled "DHCP Server <dhcp>". It has three tabs: "Generic", "Queues", and "Script", with "Generic" currently selected. The window contains various configuration fields and checkboxes. On the right side, there is a vertical stack of buttons: "OK", "Cancel", "Apply", "Disable", "Copy", and "Remove". At the bottom left, there is a status indicator showing "enabled".

Field	Value
Name	dhcp
Interface	Client
Relay	
Lease Time	00:10:00
Bootp Lease Time	forever
Address Pool	dhcp-pool
DHCP Option Set	
Src. Address	
Delay Threshold	
Authoritative	yes
Bootp Support	static
Client MAC Limit	
Use RADIUS	no
Always Broadcast	<input type="checkbox"/>
Add ARP For Leases	<input type="checkbox"/>
Use Framed As Classless	<input checked="" type="checkbox"/>
Conflict Detection	<input checked="" type="checkbox"/>

enabled

TRANSPARENT PROXY SERVER

1. Aktifkan Web Proxy

IP > Web Proxy:

Enable: Yes

Port: 8080

Cache Admin: support@tkj.net

Max Cache Size: unlimited

Web Proxy Settings

General Status Lookups Inserts Refreshes

☒ Enabled

Src. Address:

Port: 8080

☐ Anonymous

Parent Proxy:

Parent Proxy Port:

Cache Administrator: support@tkj.net

Max. Cache Size: unlimited KiB

Max Cache Object Size: 2048 KiB

☒ Cache On Disk

Max. Client Connections: 600

Max. Server Connections: 600

Max Fresh Time: 3d 00:00:00

☐ Serialize Connections

☐ Always From Cache

Cache Hit DSCP (TOS): 4

Cache Path: web-proxy

stopped

OK

Cancel

Apply

Clear Cache

Reset HTML

Access

Cache

Direct

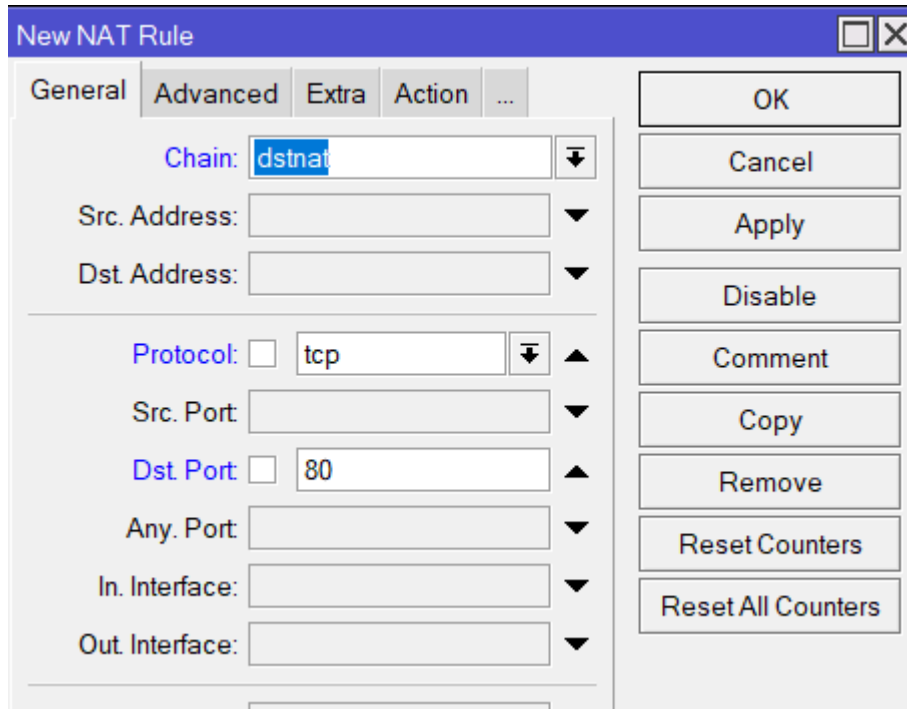
Connections

Cache Contents

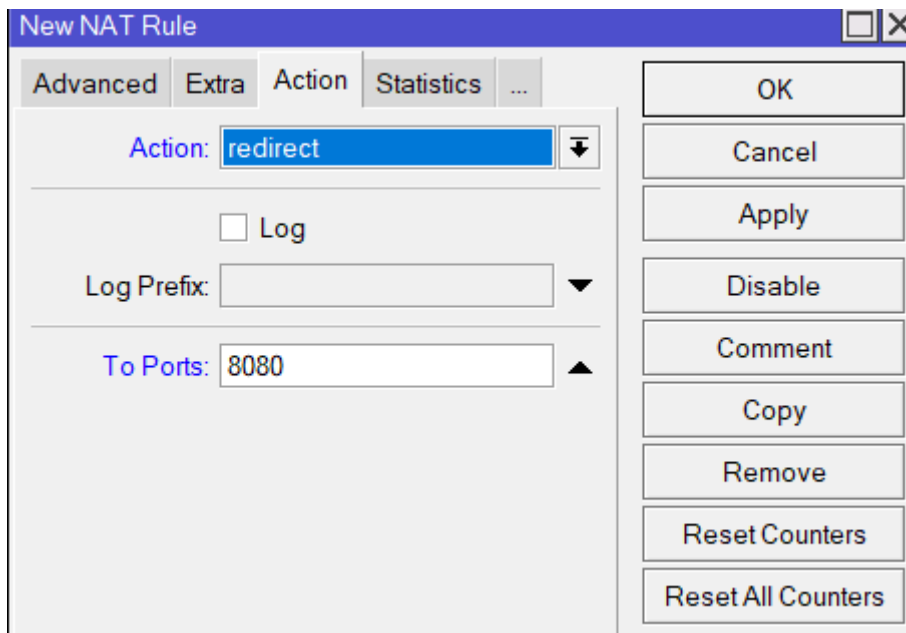
9. Redirect Port HTTP ke Proxy

IP > Firewall > NAT > +:

Chain: dstnat, Protocol: tcp, Dst Port: 80, Action: redirect, To Ports: 8080



The 'New NAT Rule' dialog box is shown with the 'General' tab selected. The 'Chain' dropdown is set to 'dstnat'. The 'Protocol' dropdown is set to 'tcp'. The 'Dst Port' is set to '80'. The 'Action' dropdown is set to 'redirect'. The 'To Ports' field is set to '8080'. The 'Log' checkbox is unchecked. The 'Log Prefix' field is empty. The 'In. Interface' and 'Out. Interface' fields are empty. The 'Src. Address' and 'Dst. Address' fields are empty. The 'Any. Port' field is empty. The 'Reset All Counters' button is visible.

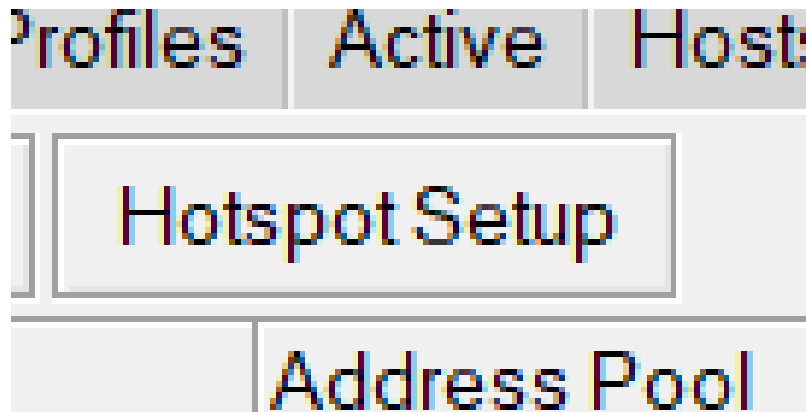


The 'New NAT Rule' dialog box is shown with the 'Action' tab selected. The 'Action' dropdown is set to 'redirect'. The 'Log' checkbox is unchecked. The 'Log Prefix' field is empty. The 'To Ports' field is set to '8080'. The 'Reset All Counters' button is visible.

HOTSPOT SERVER

1. IP > Hotspot > Setup

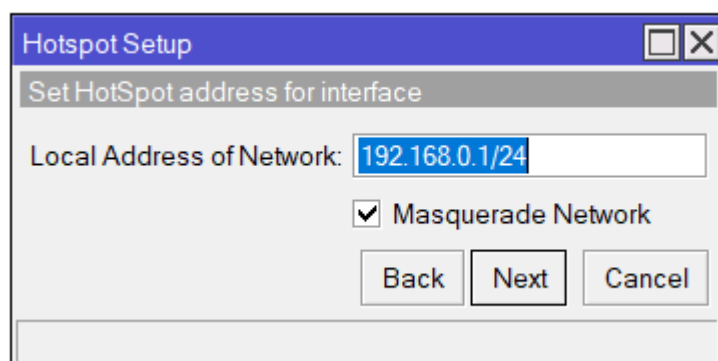
Langsung aja klik ini



Interface: Client

Address: 192.168.0.0/24

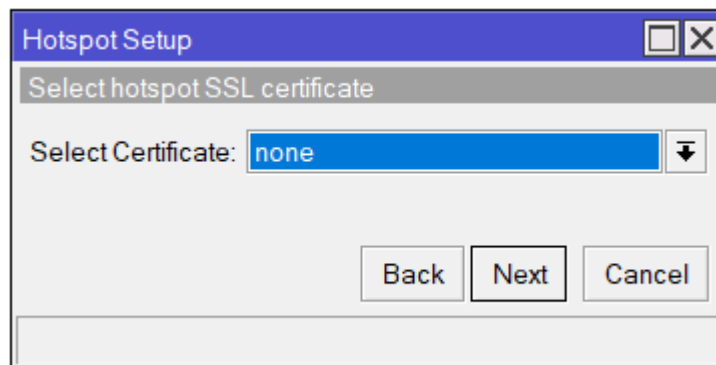
Masquerade Network: Yes



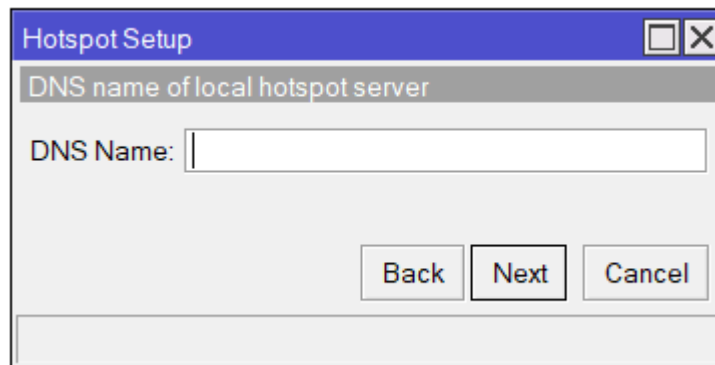
Address Pool: 192.168.0.10-192.168.0.254

DNS Server: 202.174.129.13, 202.174.158.10

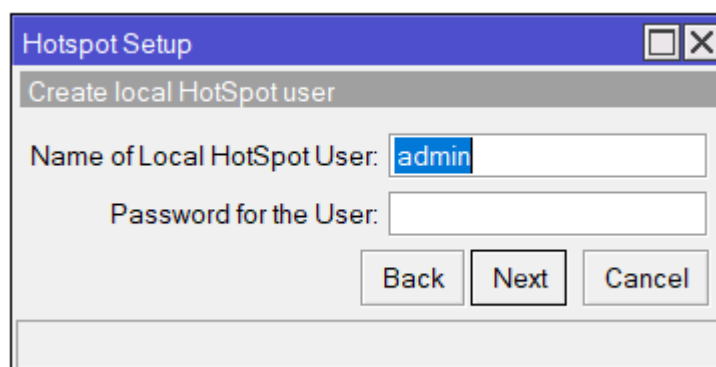
Muncul gini pilih none aja yaa



Nah kalau udh sampe sini itu bebas nama nya kalian mau dengan kunci .net .id .com pokonya gitulah atau domain lain terserah kalian



Kalau untuk yang ini bebas juga boleh tanpa pw



Ini untuk menambahkan user1 atau lebih cara nya gini

IP > Hotspot > User Profiles > +:

New Hotspot User Profile

General | Queue | Scripts

Name: user

Address Pool: none

Session Timeout:

Idle Timeout: none

Keepalive Timeout: 00:02:00

Status Autorefresh: 00:01:00

Shared Users: 1

Rate Limit (rx/tx):

☒ Add MAC Cookie

MAC Cookie Timeout: 3d 00:00:00

Address List:

Incoming Filter:

Outgoing Filter:

Incoming Packet Mark:

Outgoing Packet Mark:

Open Status Page: always

☐ Transparent Proxy

OK
Cancel
Apply
Copy
Remove

IP > Hotspot > Users > +:

Hotspot User <2023903430060>

General Limits Statistics

Server: all

Name: 2023903430060

Password:

Address:

MAC Address:

Profile: user

Routes:

Email:

OK

Cancel

Apply

Disable

Comment

Copy

Remove

Reset Counters

Reset All Counters

enabled

Ini opsional semuanya

MANAJEMEN BANDWIDTH (SIMPLE QUEUE)

1. Queues > Simple Queues > +:

Queue List

New Simple Queue

General Advanced Statistics Traffic Total Total Statistics

Name: user

Target: 192.168.0.0/24

Dst:

Target Upload Target Download

Max Limit: 512k 2M bits/s

Burst

Burst Limit: unlimited unlimited bits/s

Burst Threshold: unlimited unlimited bits/s

Burst Time: 0 0 s

Time

enabled

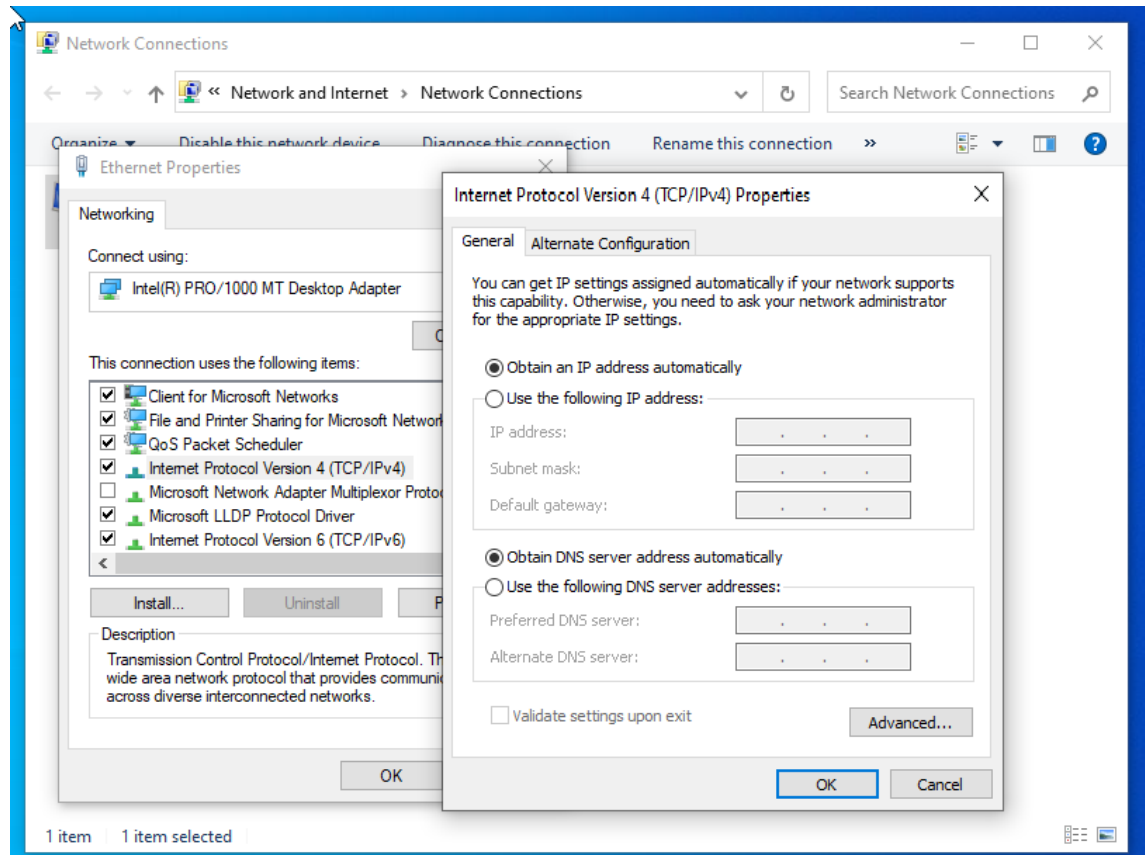
OK Cancel Apply Disable Comment Copy Remove Reset Counters Reset All Counters Torch

1 item 0 B queued 0 packets queued

Kalau udh sampe sini baru di coba tess bisa gak hotspot nya

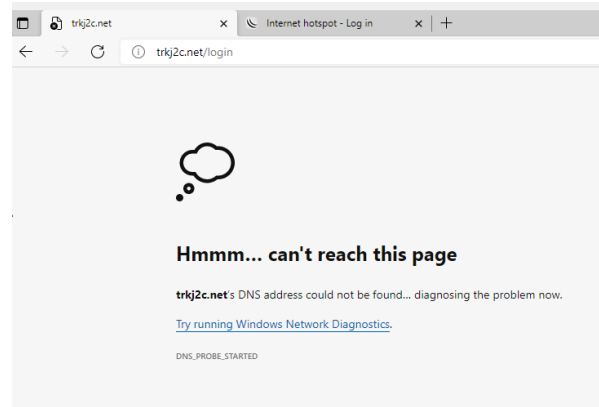
Ini Contoh Pengujiannya

1. **Buka Windows 10 atau berapa lah yang ada di virtualbox kalian itu**
2. **Udh? Lanjut masuk aja, terus jangan lupa yang pertama tadi udh di konfigurasi belum ? cek lagi aja**
3. **Kalau udh lanjut ni**

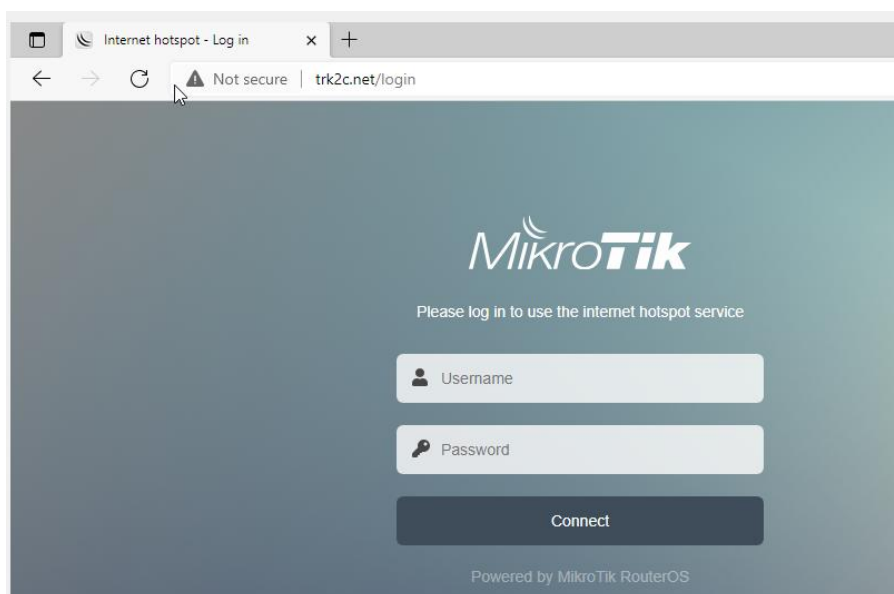


4. **Usahkan itu udh dhcp**
5. **Masuk gitu tinggal windows+r terus ketik ncpa.cpl nah enter nanti klik kanan pilih internet Protocol version 4 (TCP/IPv4) nah itu klik aja**
6. **Masuk Browser, browser apa ajalah terserah,**

7. Kalau misalkan kalian gak bisa tampil login menggunakan url hotspot kalian buat itu kayak misalnya trkj2c.net



8. Pake ip aja coba
9. Dari mana ip nya? Nah itu tadi yang kita setting di client hotspot coba cek lagi ? ada gak 192.168.0.1 nah itu sebagai network nya jadi masuk aja pake ip itu otomatis tampil login gini dia



10. Dah login aja sesuai settingan kalian yoow.

11. Dah tes ping cmd, tes dulu ping ke ip public tadi kalian set 172.16.100.10 muncul gini nanti

```
C:\Windows\system32\cmd.exe
Microsoft Windows [Version 10.0.19045.2965]
(c) Microsoft Corporation. All rights reserved.

C:\Users\Win>ping 172.16.100.10

Pinging 172.16.100.10 with 32 bytes of data:
Reply from 172.16.100.10: bytes=32 time<1ms TTL=64
Reply from 172.16.100.10: bytes=32 time<1ms TTL=64
Reply from 172.16.100.10: bytes=32 time<1ms TTL=64
Reply from 172.16.100.10: bytes=32 time<1ms TTL=64

Ping statistics for 172.16.100.10:
    Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),
    Approximate round trip times in milli-seconds:
        Minimum = 0ms, Maximum = 0ms, Average = 0ms

C:\Users\Win>
```

Done yaaa

12. Ping Ke Router atau Network sekarang 192.168.0.1

```
C:\Users\Win>ping 192.168.0.1

Pinging 192.168.0.1 with 32 bytes of data:
Reply from 192.168.0.1: bytes=32 time<1ms TTL=64
Reply from 192.168.0.1: bytes=32 time<1ms TTL=64
Reply from 192.168.0.1: bytes=32 time<1ms TTL=64
Reply from 192.168.0.1: bytes=32 time<1ms TTL=64

Ping statistics for 192.168.0.1:
    Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),
    Approximate round trip times in milli-seconds:
        Minimum = 0ms, Maximum = 0ms, Average = 0ms

C:\Users\Win>
```