

PRAKTIKUM MIKROTIK MENGGUNAKAN WINBOX GUI (NON-CLI)

Modul Konversi dari CLI ke Winbox GUI

A. 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: kosong
-

B. KONFIGURASI DASAR MIKROTIK SEBAGAI GATEWAY

1. **Rename Interface**
 - Buka Winbox > Interfaces.
 - Rename ether1 menjadi WAN, ether2 menjadi LAN.
 2. **Set IP Address**
 - IP > Addresses > +:
 - Address: 172.16.100.10/24, Interface: WAN
 - Address: 192.168.0.1/24, Interface: LAN
 3. **Set Default Route (Gateway)**
 - IP > Routes > +:
 - Dst. Address: 0.0.0.0/0, Gateway: 172.16.100.1
 4. **Konfigurasi DNS**
 - IP > DNS:
 - DNS Server: 202.249.24.33, 202.249.24.34
 - Centang "Allow Remote Requests"
 5. **NAT (Masquerade)**
 - IP > Firewall > NAT > +:
 - Chain: srcnat, Out Interface: WAN, Action: masquerade
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C. DHCP SERVER (OTOMATIS IP UNTUK CLIENT)

1. IP Pool

- IP > Pool > +:
 - Name: dhcp-pool, Ranges: 192.168.0.10-192.168.0.254

2. DHCP Network

- IP > DHCP Server > Networks > +:
 - Address: 192.168.0.0/24, Gateway: 192.168.0.1

3. DHCP Server

- IP > DHCP Server > DHCP > +:
 - Interface: LAN, Address Pool: dhcp-pool
 - Aktifkan DHCP server dari tab DHCP
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D. TRANSPARENT PROXY SERVER

1. Aktifkan Web Proxy

- IP > Web Proxy:
 - Enable: Yes
 - Port: 8080
 - Hostname: tkj.net
 - Cache Admin: support@tkj.net
 - Transparent Proxy: Yes
 - Max Cache Size: unlimited

2. Redirect Port HTTP ke Proxy

- IP > Firewall > NAT > +:
 - Chain: dstnat, Protocol: tcp, Dst Port: 80, Action: redirect, To Ports: 8080
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E. HOTSPOT SERVER

1. IP > Hotspot > Setup

- Interface: LAN
- 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
- Hotspot User: admin, Password: 12345

2. Hotspot Profile

- IP > Hotspot > Server Profiles
 - DNS Name: tkj.net
 - Login Method: HTTP CHAP
 - Enable Transparent Proxy: Yes

3. User Profile dan User

- IP > Hotspot > User Profiles > +:
 - Name: Staff, Shared-Users: 1
- IP > Hotspot > Users > +:
 - Name: user1, Password: user1, Profile: Staff

F. MANAJEMEN BANDWIDTH (SIMPLE QUEUE)

1. Queues > Simple Queues > +:
 - Name: trafikshaping
 - Target: 192.168.0.0/24
 - Max Limit: 256k/192k (download/upload)
2. Tambahkan queue individu:
 - Name: andi
 - Target: 192.168.0.12
 - Parent: trafikshaping
 - Max Limit: 25k/10k

G. HTB DAN QUEUE TREE

1. Mangle untuk Packet Mark

- IP > Firewall > Mangle > +:
 - Chain: forward, Src. Address: 192.168.0.12, Action: mark-packet
 - New Packet Mark: andi-mark

2. Queue Tree

- Queues > Queue Tree > +:

- Name: HTB-andi
 - Parent: ether1
 - Packet Mark: andi-mark
 - Limit At: 64k, Max Limit: 256k
 - Priority: 1
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H. RED (Random Early Detection)

1. Queue Type

- Queues > Queue Types > +:
 - Name: RED-TYPE
 - Type: RED
 - avg-packet: 1000, burst: 2000, limit: 3000
 - min-threshold: 1000, max-threshold: 2500

2. Gunakan di Queue Tree

- Tambahkan Queue Tree dengan Queue Type: RED-TYPE
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I. GRAPHING MONITORING

1. Tools > Graphing > Settings:
 - Store Every: 5 minutes
 2. Tab Interface Rules > +:
 - Interface: all, Allow Address: 0.0.0.0/0
 3. Tab Queue Rules > +:
 - Simple Queue: trafikshaping, andi
 4. Buka browser: <http://192.168.0.1/graphs>
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SELESAI

Semua konfigurasi dilakukan dengan GUI Winbox tanpa CLI, namun tetap setara dengan isi Modul Mikrotik berbasis CLI.

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- IP > DHCP Server > Networks > +:
 - Address: 192.168.0.0/24, Gateway: 192.168.0.1

3. DHCP Server

- IP > DHCP Server > DHCP > +:
 - Interface: LAN, Address Pool: dhcp-pool
 - Aktifkan DHCP server dari tab DHCP
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- DNS Server: 202.174.129.13, 202.174.158.10
- Hotspot User: admin, Password: 12345

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- IP > Hotspot > Server Profiles
 - DNS Name: tkj.net
 - Login Method: HTTP CHAP
 - Enable Transparent Proxy: Yes

3. User Profile dan User

- IP > Hotspot > User Profiles > +:
 - Name: Staff, Shared-Users: 1
- IP > Hotspot > Users > +:
 - Name: user1, Password: user1, Profile: Staff

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2. Queue Tree
 - Queues > Queue Tree > +:
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 - Parent: ether1
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- Limit At: 64k, Max Limit: 256k
 - Priority: 1
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