



# **Modul Setting Mikrotik dan Implementasi Load Balancing Menggunakan 2 ISP (Internet Service Provider)**

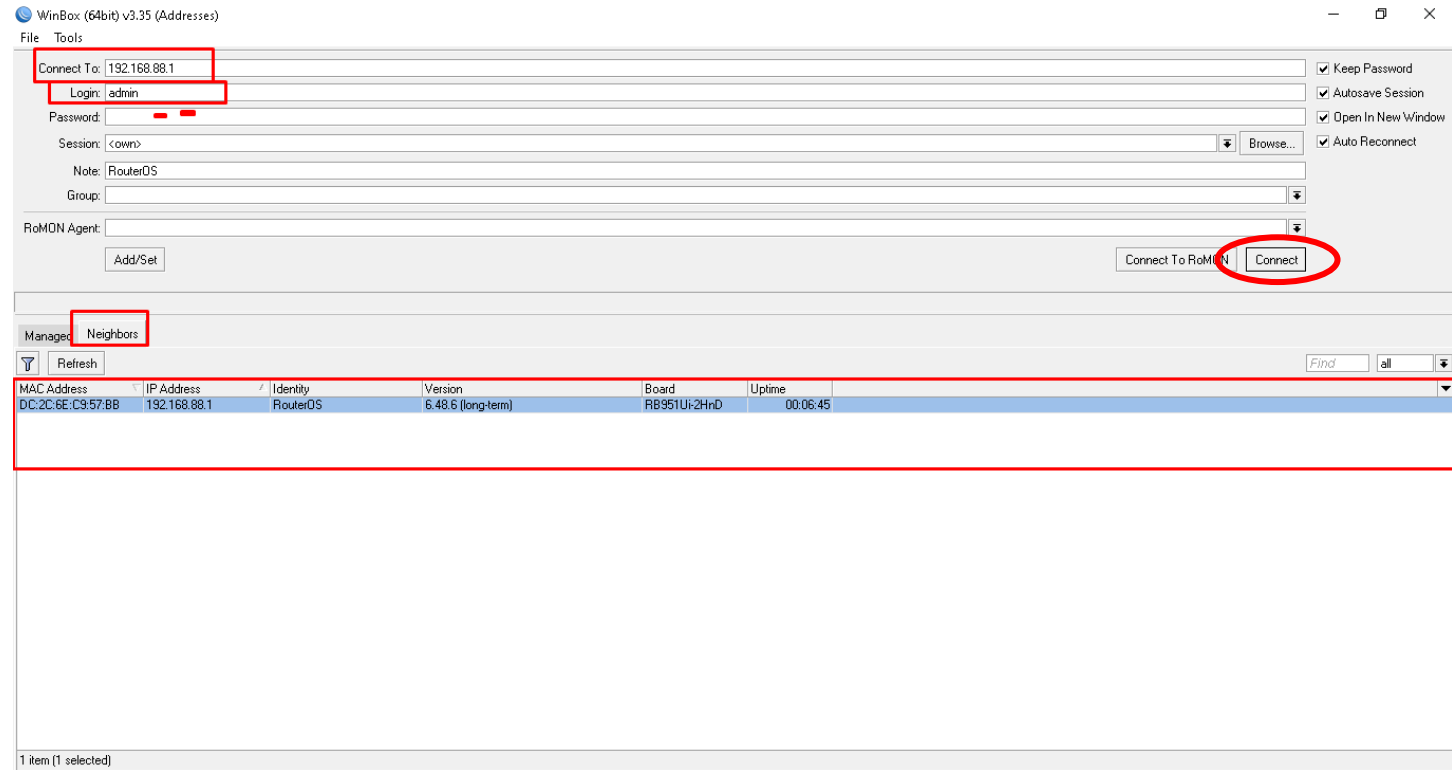
# Setting Mikrotik

Reset Mikrotik

User Name : admin

Password :.....(kosong)

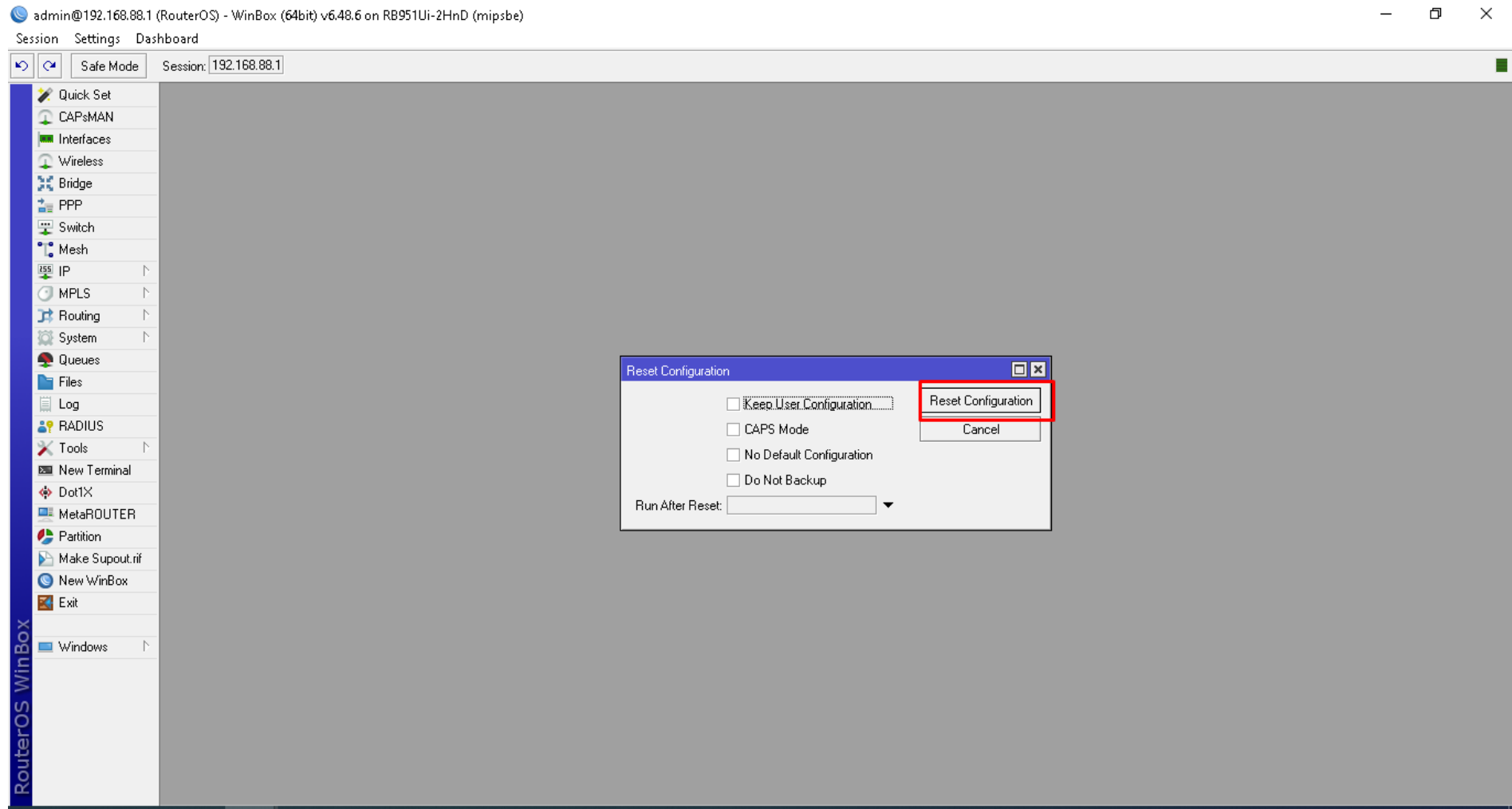
**Pilih Connect**



# Pilih **SYSTEM** kemudian **RESET CONFIGURATION**



# RESET CONFIGURATION



# Beri Nama Interface

Ether1 (Input Internet)  
Ether 2 (Output Internet 1)

The screenshot shows the Mikrotik WinBox interface for configuring a network interface. The 'Interface List' table is visible, and a configuration dialog for 'Interface <ether1>' is open. The dialog shows the name 'ether1 (Input Internet)' and other interface parameters.

Interface	Type	Actual MTU	L2 MTU	Tx	Rx	Tx Packet (p/s)	Rx Packet (p/s)	FP Tx	FP Rx	FP Tx Packet (p/s)	FP Rx Packet (p/s)
R ether1	Ethernet	1500	1598								
R ether2	Ethernet	1500	1598								
R ether3	Ethernet	1500	1598								
R ether4	Ethernet	1500	1598								
R ether5	Ethernet	1500	1598								
X wlan1	Wireless (Atheros AR9...	1500	1600								

**Interface <ether1> Configuration:**

- Name: ether1 (Input Internet)
- Type: Ethernet
- MTU: 1500
- Actual MTU: 1500
- L2 MTU: 1598
- Max L2 MTU: 2028
- MAC Address: DC:2C:6E:C9:57:BA
- ARP: enabled
- ARP Timeout: [dropdown]

Status: enabled, running, slave, link ok

# Hasil penggantian Nama Ether 1 dan Ether 2

admin@DC:2C:6E:C9:57:BB (RouterOS) - WinBox (64bit) v6.48.6 on RB951Ui-2HnD (mipsbe)

Session Settings Dashboard

Safe Mode Session: DC:2C:6E:C9:57:BB

Interface List

Interface Interface List Ethernet EoIP Tunnel IP Tunnel GRE Tunnel VLAN VRRP Bonding LTE

+ - [check] [x] [lock] [filter] Detect Internet Find

Name	Type	Actual MTU	L2 MTU	Tx	Rx	Tx Packet (p/s)	Rx Packet (p/s)	FP Tx	FP Rx	FP Tx Pa
R ether1 (Input Internet)	Ethernet	1500	1598	0 bps	14.3 kbps	0	16	0 bps	13.8 kbps	
R ether2 (Output Internet 1)	Ethernet	1500	1598	76.8 kbps	6.7 kbps	11	11	76.4 kbps	6.4 kbps	
ether3	Ethernet	1500	1598	0 bps	0 bps	0	0	0 bps	0 bps	
ether4	Ethernet	1500	1598	0 bps	0 bps	0	0	0 bps	0 bps	
ether5	Ethernet	1500	1598	0 bps	0 bps	0	0	0 bps	0 bps	
wlan1	Wireless (Atheros AR9	1500	1500	0 bps	0 bps	0	0	0 bps	0 bps	

RouterOS WinBox

6 items (1 selected)

Supaya mikrotik dapat ip otomatis dari perangkat lainnya atau asal sumber internet(modem).

The screenshot shows the Mikrotik WinBox interface with the following elements:

- Left Sidebar:** A tree view of system settings. The 'IP' folder is expanded, and 'DHCP Client' is highlighted with a red box.
- Main Window:** The 'DHCP Client' configuration window is open. The 'DHCP Client' tab is selected, and the '+' icon in the toolbar is highlighted with a red box.
- Configuration Dialog:** The 'New DHCP Client' dialog is open. The 'Interface' dropdown menu is set to 'ether1 (Input Internet)' and is highlighted with a red box. The 'OK' button is also highlighted with a red box.
- Advanced Tab:** The 'Advanced' tab is active, showing options for 'Use Peer DNS' and 'Use Peer NTP', both of which are checked. The 'Add Default Route' is set to 'yes'.
- Status:** At the bottom of the dialog, the status is shown as 'enabled' and 'Status: stopped'.



Berhasil dapat ip otomatis dari perangkat lainnya atau asal sumber internet (modem).



admin@DC:2C:6E:C9:57:BB (RouterOS) - WinBox (64bit) v6.48.6 on RB951Ui-2HnD (mipsbe)

Session Settings Dashboard

Safe Mode Session: DC:2C:6E:C9:57:BB

**DHCP Client** DHCP Client Options

Release Renew

Interface	Use P...	Add D...	IP Address	Expires After	Status
ether1 (Input Internet)	yes	yes	192.168.7.28/24	00:09:51	bound

1 item





# Setting Firewall - Nat - Masquerade supaya ip lokal mendapatkan akses internet.

The screenshot shows the Mikrotik WinBox interface. The left sidebar contains a tree view of system settings, with 'IP' and 'Firewall' highlighted in red. The main window displays the 'Firewall' configuration page, with the 'NAT' tab selected. A red box highlights the '+' icon in the top-left corner of the NAT configuration table, indicating the option to add a new NAT rule. The table below is currently empty, showing 0 items.

#	Action	Chain	Src. Address	Dst. Address	Proto...	Src. Port	Dst. Port	In. Inter...	Out. Int...	In. Inter...	Out. Int...	Src. Ad...	Dst. Ad...	Bytes	Packets
0 items															

# Masquerade

admin@DC:2C:6E:C9:57:BB (RouterOS) - WinBox (64bit) v6.48.6 on RB951Ui-2HnD (mipsbe)

Session Settings Dashboard

Safe Mode Session: DC:2C:6E:C9:57:BB

RouterOS WinBox

Quick Set  
CAPsMAN  
Interfaces  
Wireless  
Bridge  
PPP  
Switch  
Mesh  
IP  
MPLS  
Routing  
System  
Queues  
Files  
Log  
RADIUS  
Tools  
New Terminal  
Dot1X  
MetaROUTER  
Partition  
Make Supout.tif  
New WinBox  
Exit  
Windows

Firewall

Filter Rules NAT Mangle Raw Service Ports Connections Address Lists Layer7 Protocols

+ - [check] [x] [filter] [reset] [reset all]

#	Action	Chain	Src. Address	Dst. Address	Proto...	Src. Port	Dst. Port	In. Inter...	Out. Int...	In. Inter...	Out. Int...	St...
0 items												

New NAT Rule

Advanced Extra Action Statistics ...

Action: masquerade

Log

Log Prefix: [dropdown]

To Ports: [dropdown]

enabled

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

# Beri Ip Address otomatis ether 2(Ouput Internet1)/ DHCP Server, dari sisi pengguna dapat ip address otomatis.

The screenshot displays the Mikrotik WinBox interface for RouterOS. The left sidebar shows the navigation menu with 'IP' and 'Addresses' highlighted. The main window is divided into two panes: 'Address List' and 'New Address'.

**Address List:** A table showing one entry:

Address	Network	Interface
192.168.7.28/...	192.168.7.0	ether1 (Input Int...

**New Address:** A dialog box for adding a new address. The 'Address' field is set to '192.168.100.1/24' and the 'Interface' is set to 'ether2(Output Internet 1)'. The 'OK' button is highlighted.

# Hasil setting DHCP Server Ether 2 untuk Ip Address Otomatis

The screenshot shows the Mikrotik WinBox interface. The left sidebar contains a menu with categories like Quick Set, CAPsMAN, Interfaces, Wireless, Bridge, PPP, Switch, Mesh, IP, MPLS, Routing, System, Queues, Files, Log, RADIUS, Tools, New Terminal, Dot1X, MetaROUTER, Partition, Make Supout.tif, New WinBox, Exit, and Windows. The main window displays the 'Address List' configuration page. At the top, there are navigation buttons (back, forward, home, refresh, search) and a 'Find' input field. Below this is a table with columns for Address, Network, and Interface. Two entries are listed: 192.168.7.28/24 on ether1 (Input Internet) and 192.168.100.1/24 on ether2 (Output Internet 1). The second entry is highlighted with a red border. At the bottom of the window, it says '2 items'.

Address	Network	Interface
192.168.7.28/24	192.168.7.0	ether1 (Input Internet)
192.168.100.1/24	192.168.100.0	ether2 (Output Internet 1)

Kemudian Pilih Ip-DHCP Server-DHCP-DHCP Setup kemudian pilih ether2 yang akan dijadikan pengalamanan Ip Address Otomatis dari sisi pengguna.

The screenshot shows the Mikrotik WinBox interface for configuring a DHCP Server. The main window is titled "DHCP Server" and has several tabs: "DHCP", "Networks", "Leases", "Options", "Option Sets", "Vendor Classes", and "Alerts". The "DHCP" tab is active, and the "DHCP Setup" sub-tab is selected. A table with columns "Name", "Interface", "Relay", "Lease Time", "Address Pool", and "Add AR..." is visible. A sidebar menu on the left shows the "IP" menu expanded, with "DHCP Server" highlighted. A "DHCP Setup" dialog box is open on the right, prompting the user to "Select interface to run DHCP server on". The "DHCP Server Interface" dropdown menu is set to "ether2(Output Internet 1)", and the "Next" button is highlighted.

# Hasil akhir DHCP Server di Ether 2

admin@DC:2C:6E:C9:57:BB (RouterOS) - WinBox (64bit) v6.48.6 on RB951Ui-2HnD (mipsbe)

Session Settings Dashboard

Safe Mode Session: DC:2C:6E:C9:57:BB

### DHCP Server

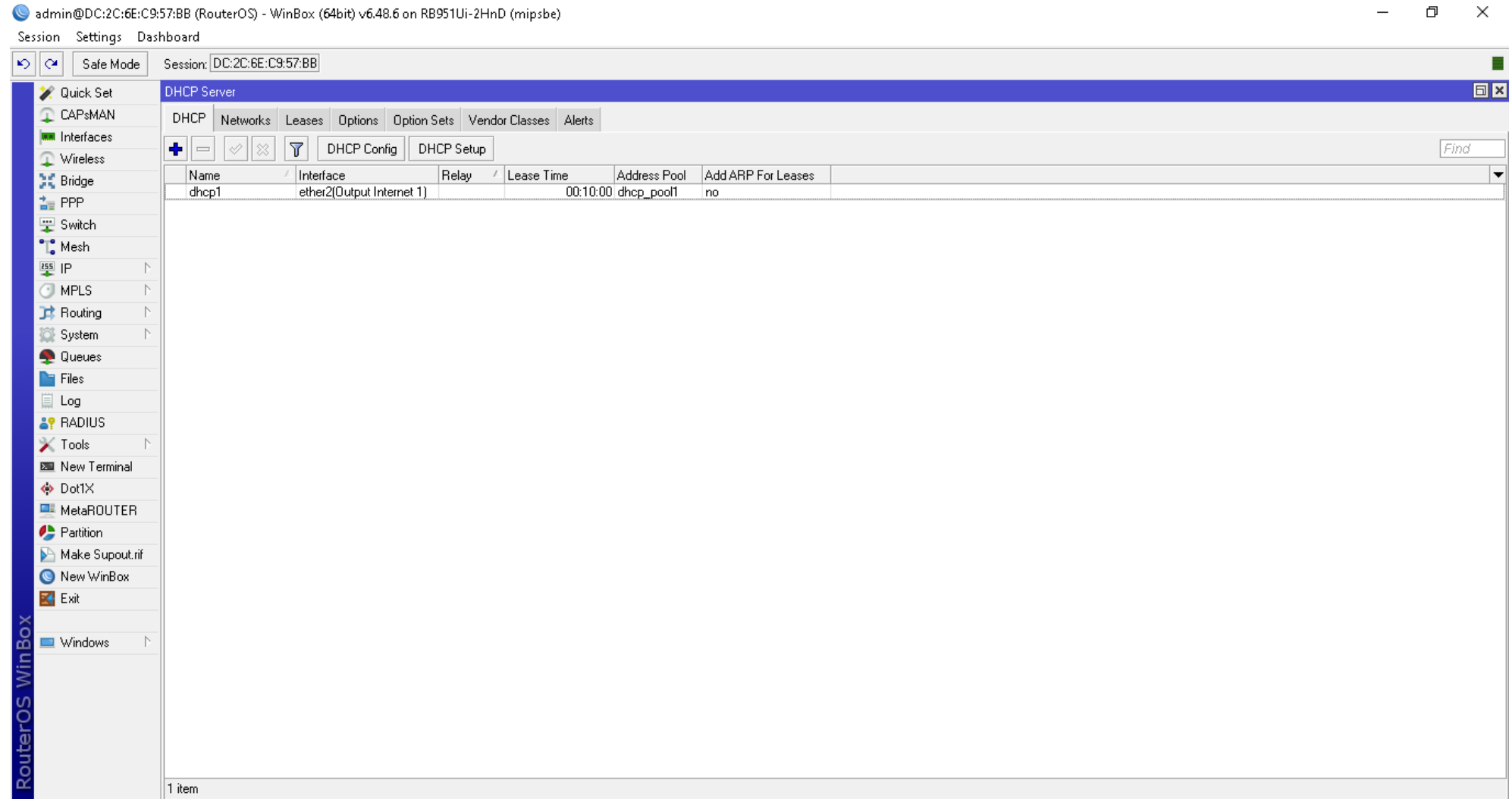
DHCP Networks Leases Options Option Sets Vendor Classes Alerts

+ - ✓ ✕ 🔍 DHCP Config DHCP Setup Find

Name	Interface	Relay	Lease Time	Address Pool	Add ARP For Leases
dhcp1	ether2(Output Internet 1)		00:10:00	dhcp_pool1	no

1 item

RouterOS WinBox



# Klik 2 kali pada ether 2, kemudian dicentang Always Broadcast dan Add Arp For Leases.

admin@DC:2C:6E:C9:57:BB (RouterOS) - WinBox (64bit) v6.48.6 on RB951Ui-2HnD (mipsbe)

Session Settings Dashboard

Safe Mode Session: DC:2C:6E:C9:57:BB

Quick Set  
CAPsMAN  
Interfaces  
Wireless  
Bridge  
PPP  
Switch  
Mesh  
IP  
MPLS  
Routing  
System  
Queues  
Files  
Log  
RADIUS  
Tools  
New Terminal  
Dot1X  
MetaROUTER  
Partition  
Make Supout.nif  
New WinBox  
Exit  
Windows

DHCP Server

Name	Interface	Relay	Lease Time	Address Pool	Add ARP For Leases
dhcp1	ether2(Output Internet 1)		00:10:00	dhcp_pool1	no

DHCP Server <dhcp1>

Generic Queues Script

Name: dhcp1  
Interface: ether2(Output Internet 1)  
Relay:  
Lease Time: 00:10:00  
Bootp Lease Time: forever  
Address Pool: dhcp\_pool1  
DHCP Option Set:  
Src. Address:  
Delay Threshold:  
Authoritative: yes  
Bootp Support: static  
Client MAC Limit:  
Use RADIUS: no

Always Broadcast  
 Add ARP For Leases  
 Use Framed As Classless  
 Conflict Detection

enabled

1 item (1 selected)

# Reboot mikrotik atau restart. Pilih System-Reboot.





# Dari sisi klien atau pengguna sudah berhasil

The screenshot displays the Windows Network Connections control panel. The 'Ethernet' connection is highlighted with a red box. A 'Network Connection Details' dialog box is open, showing the configuration for the selected Ethernet network. The 'IPv4 Address' section is also highlighted with a red box, indicating successful configuration.

**Network Connection Details:**

Property	Value
Connection-specific DN...	
Description	Realtek PCIe FE Family Controller
Physical Address	E0-DB-55-90-1C-8F
DHCP Enabled	Yes
IPv4 Address	192.168.100.254
IPv4 Subnet Mask	255.255.255.0
Lease Obtained	Jumat, 14 Oktober 2022 09.50.35
Lease Expires	Jumat, 14 Oktober 2022 10.01.43
IPv4 Default Gateway	192.168.100.1
IPv4 DHCP Server	192.168.100.1
IPv4 DNS Server	
IPv4 WINS Server	
NetBIOS over Tcpi...	Yes
Link-local IPv6 Address	fe80::cd2f:abaa:f820:5c3c%3
IPv6 Default Gateway	
IPv6 DNS Servers	fec0:0:0:ffff::1%1 fec0:0:0:ffff::2%1



# Dari sisi klien atau pengguna sudah berhasil. Kita tes **tracert google.com**.

C:\WINDOWS\system32\cmd.exe - tracert google.com

```
C:\Users\>tracert google.com
```

```
Tracing route to google.com [142.251.12.100]  
over a maximum of 30 hops:
```

```
  1  <1 ms    <1 ms    <1 ms    192.168.100.1  
  2  <1 ms    <1 ms    <1 ms    192.168.7.1  
  3  *        12 ms   *        ip-103-83-6-241.moratelindo.net.id [103.122.33.241]  
  4  13 ms   13 ms   13 ms   ip-103-83-6-161.moratelindo.net.id [103.83.6.161]  
  5  25 ms   25 ms   25 ms   ip-103-83-6-18.moratelindo.net.id [103.83.6.18]  
  6  *        27 ms   27 ms   74.125.118.220  
  7  28 ms   25 ms   25 ms   108.170.254.225  
  8  27 ms   27 ms   37 ms   108.170.254.227  
  9  *        28 ms   *        216.239.35.174  
 10  26 ms   26 ms   26 ms   209.85.250.37  
 11  25 ms   26 ms   28 ms   142.251.52.243  
 12  *        *        *        Request timed out.  
 13  *        *        *        Request timed out.  
 14  *        *        *        Request timed out.  
 15  *        *        *        Request timed out.  
 16  *        *        *        Request timed out.  
 17  _
```

# Setting Ip Gateway ISP I

Pilih Menu di Mikrotik IP >> Address

Isi Address 192.168.18.2/24

Network 192.168.18.0.1

Interface ether1 (Isp 1)

admin@E4:8D:8C:AC:16:32 (MikroTik) - WinBox (64bit) v6.49.10 on RB951Ui-2HnD (mipsbe)

Session Settings Dashboard

Safe Mode Session: E4:8D:8C:AC:16:32

Address List

Address	Network	Interface
192.168.18.2/24	192.168.18.0	ether1 (isp 1)
192.168.18.3/24	192.168.18.0	ether2 (isp 2)
192.168.18.23/24	192.168.18.0	ether1 (isp 1)
192.168.100.1/24	192.168.100.0	ether3 (lokal)

4 items (1 selected)

Address <192.168.18.2/24>

Address: 192.168.18.2/24

Network: 192.168.18.0

Interface: ether1 (isp 1)

OK

Cancel

Apply

Enable

Comment

Copy

Remove

disabled

# Setting Ip Gateway ISP 2

Pilih Menu di Mikrotik IP >> Address

Isi Address 192.168.18.3/24

Network 192.168.18.0.1

Interface ether2 (Isp 2)

The screenshot shows the Mikrotik WinBox interface. The 'Address List' window is open, displaying a table of IP addresses. The entry for '192.168.18.3/24' is selected, and its configuration dialog is shown. The dialog fields are: Address: 192.168.18.3/24, Network: 192.168.18.0, and Interface: ether2 (isp 2). The 'disabled' checkbox is checked.

Address	Network	Interface
192.168.18.2/24	192.168.18.0	ether1 (isp 1)
192.168.18.3/24	192.168.18.0	ether2 (isp 2)
192.168.18.25/24	192.168.18.0	ether1 (isp 1)
192.168.100.1/24	192.168.100.0	ether3 (lokal)

# Setting NAT untuk ISP 1 dan ISP 2

Pilih Menu di Mikrotik IP >> Firewall >> NAT

The screenshot shows the Mikrotik WinBox interface. The left sidebar contains a tree view of system menus. The 'IP' menu is highlighted with a red box. A sub-menu is open, showing 'Firewall' highlighted with a red box. The main window displays the 'Firewall' configuration page, with the 'NAT' tab selected and highlighted with a red box. The 'Filter Rules' tab is also visible. The main content area shows a table of NAT rules.

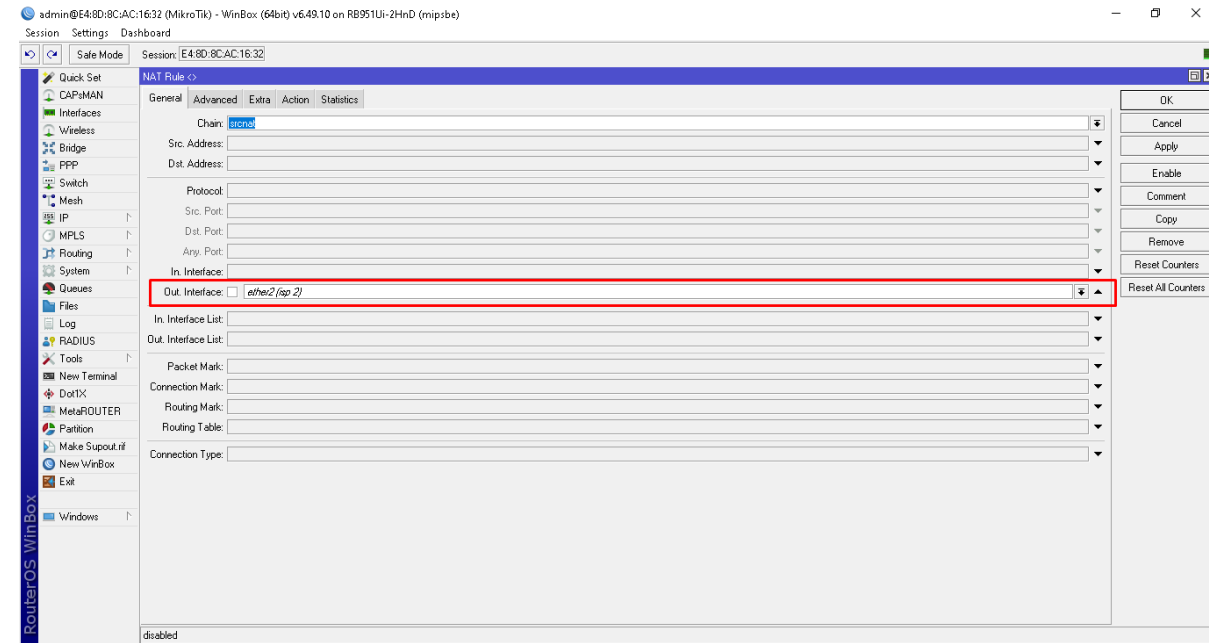
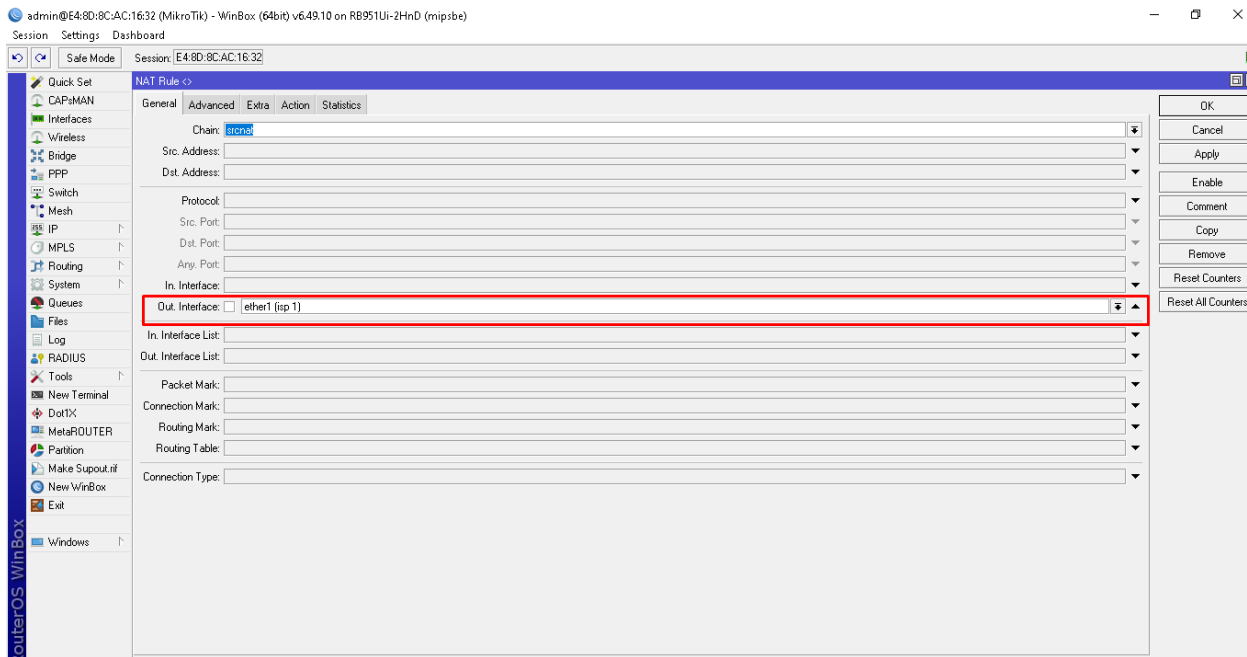
#	Action	Chain	Src. Address	Dst. Address	Proto...	Src. Port	Dst. Port	In. Inter...	Out. Int...	In. Inter...	Out. Int...	Src. Ad...	Dst. Ad...	Bytes	Packets
0	mas...	srcnat												3819.6 KiB	9 443
1								ether1 (...)						0 B	0
								ether2 (...)						0 B	0

# Setting NAT untuk ISP 1 dan ISP 2

Pilih Menu di Mikrotik IP >> Firewall >> NAT >> Tekan Tanda +  
Isikan Out Interface untuk ether 1 (Isp 1)  
untuk ether 2 (Isp 2)

ether 1 (Isp 1)

ether 2 (Isp 2)



# Setting Mangle

Pilih Menu di Mikrotik IP >> Firewall >> Mangle >> Klik Tanda +

The screenshot shows the Mikrotik WinBox interface. The left sidebar contains a menu with 'IP' highlighted in red. A dropdown menu is open from 'IP', with 'Firewall' highlighted in red. The main window displays the 'Firewall' configuration page, with the 'Mangle' tab selected and highlighted in red. The 'Mangle' tab shows a table of existing mangle rules. The table has columns for #, Action, Chain, Src. Address, Proto..., Src. Port, Dst. Port, In. Interface, Out. Int..., In. Inter..., Out. Int..., Src. Ad..., Dst. Ad..., Bytes, and Packets. The table contains four rows of data, each representing a mangle rule. The first row is for 'isp 1' with action 'mark connection' and chain 'prerouting'. The second row is for 'isp 2' with action 'mark connection' and chain 'prerouting'. The third row is for 'isp 3' with action 'mark connection' and chain 'prerouting'. The fourth row is for 'isp 4' with action 'mark connection' and chain 'prerouting'. All rules have 'In. Interface' set to 'ether3 (lokal)' and 'Bytes' and 'Packets' set to '0 B' and '0' respectively.

#	Action	Chain	Src. Address	Proto...	Src. Port	Dst. Port	In. Interface	Out. Int...	In. Inter...	Out. Int...	Src. Ad...	Dst. Ad...	Bytes	Packets
isp 1	mark connection	prerouting					ether3 (lokal)						0 B	0
isp 2	mark connection	prerouting					ether3 (lokal)						0 B	0
isp 3	mark connection	prerouting					ether3 (lokal)						0 B	0
isp 4	mark connection	prerouting					ether3 (lokal)						0 B	0



# Mangle ISP I (Mark Connection)

Mangle Rule <>

General Advanced Extra Action Statistics

Chain: **ipsecrouting**

Src. Address: \_\_\_\_\_

Dst. Address: \_\_\_\_\_

Protocol: \_\_\_\_\_

Src. Port: \_\_\_\_\_

Dst. Port: \_\_\_\_\_

Any. Port: \_\_\_\_\_

In. Interface: **ether3 (lokal)**

Out. Interface: \_\_\_\_\_

In. Interface List: \_\_\_\_\_

Out. Interface List: \_\_\_\_\_

Packet Mark: \_\_\_\_\_

Connection Mark: \_\_\_\_\_

Routing Mark: \_\_\_\_\_

Routing Table: \_\_\_\_\_

Connection Type: \_\_\_\_\_

Connection State: \_\_\_\_\_

Connection NAT State: \_\_\_\_\_

disabled

Mangle Rule <>

General **Advanced** Extra Action Statistics

Src. Address List: \_\_\_\_\_

Dst. Address List: \_\_\_\_\_

Layer7 Protocol: \_\_\_\_\_

Content: \_\_\_\_\_

Connection Bytes: \_\_\_\_\_

Connection Rate: \_\_\_\_\_

Per Connection Classifier: **src address and port** : 2 / 0

Src. MAC Address: \_\_\_\_\_

Out. Bridge Port: \_\_\_\_\_

In. Bridge Port: \_\_\_\_\_

In. Bridge Port List: \_\_\_\_\_

Out. Bridge Port List: \_\_\_\_\_

IPsec Policy: \_\_\_\_\_

TLS Host: \_\_\_\_\_

Ingress Priority: \_\_\_\_\_

Priority: \_\_\_\_\_

DSCP (TOS): \_\_\_\_\_

TCP MSS: \_\_\_\_\_

Packet Size: \_\_\_\_\_

Random: \_\_\_\_\_

▼ TCP Flags

▼ ICMP Options

IPv4 Options: \_\_\_\_\_

disabled

Mangle Rule <>

General Advanced Extra **Action** Statistics

Action: **mark connection**

Log

Log Prefix: \_\_\_\_\_

New Connection Mark: **isp1**

Passthrough

disabled

# Mangle ISP 2 (Mark Connection)

Mangle Rule <>

General Advanced Extra Action Statistics

Chain: **iprerouting**

Src. Address:   
Dst. Address:   
Protocol:   
Src. Port:   
Dst. Port:   
Any. Port:   
In. Interface:  ether3 (local)   
Out. Interface:   
In. Interface List:   
Out. Interface List:   
Packet Mark:   
Connection Mark:   
Routing Mark:   
Routing Table:   
Connection Type:   
Connection State:   
Connection NAT State:

OK  
Cancel  
Apply  
Enable  
Comment  
Copy  
Remove  
Reset Counters  
Reset All Counters

Mangle Rule <>

General Advanced Extra Action Statistics

Src. Address List:   
Dst. Address List:   
Layer7 Protocol:   
Content:   
Connection Bytes:   
Connection Rate:   
Per Connection Classifier:  src address and port / 2 / 1   
Src. MAC Address:   
Out. Bridge Port:   
In. Bridge Port:   
In. Bridge Port List:   
Out. Bridge Port List:   
IPsec Policy:   
TLS Host:   
Ingress Priority:   
Priority:   
DSCP (TOS):   
TCP MSS:   
Packet Size:   
Random:   
TCP Flags:   
ICMP Options:   
IPv4 Options:

OK  
Cancel  
Apply  
Enable  
Comment  
Copy  
Remove  
Reset Counters  
Reset All Counters

Mangle Rule <>

General Advanced Extra Action Statistics

Action: **inark connection**

Log  
Log Prefix:   
New Connection Mark: **isp 2**  
 Passthrough

OK  
Cancel  
Apply  
Enable  
Comment  
Copy  
Remove  
Reset Counters  
Reset All Counters

disabled

# Mangle ISP I (Mark Routing)

Mangle Rule <>

General Advanced Extra Action Statistics

Chain: prerouting

Src. Address:

Dst. Address:

Protocol:

Src. Port:

Dst. Port:

Any. Port:

In. Interface:  ether3 (local)

Out. Interface:

In. Interface List:

Out. Interface List:

Packet Mark:

Connection Mark:  Isp 1

Routing Mark:

Routing Table:

Connection Type:

Connection State:

Connection NAT State:

OK  
Cancel  
Apply  
Enable  
Comment  
Copy  
Remove  
Reset Counters  
Reset All Counters

Mangle Rule <>

General Advanced Extra Action Statistics

Action: mark routing

Log

Log Prefix:

New Routing Mark: Ke Isp 1

Passthrough

OK  
Cancel  
Apply  
Enable  
Comment  
Copy  
Remove  
Reset Counters  
Reset All Counters

disabled

# Mangle ISP 2 (Mark Routing)

Mangle Rule <

General Advanced Extra Action Statistics

Chain: prerouting

Src. Address:

Dst. Address:

Protocol:

Src. Port:

Dst. Port:

Any. Port:

In. Interface:  ether3 (lokal)

Out. Interface:

In. Interface List:

Out. Interface List:

Packet Mark:

Connection Mark:  Isp 2

Routing Mark:

Routing Table:

Connection Type:

Connection State:

Connection NAT State:

Buttons: OK, Cancel, Apply, Enable, Comment, Copy, Remove, Reset Counters, Reset All Counters

Mangle Rule <

General Advanced Extra Action Statistics

Action: mark routing

Log

Log Prefix:

New Routing Mark:  Ke Isp 2

Passthrough

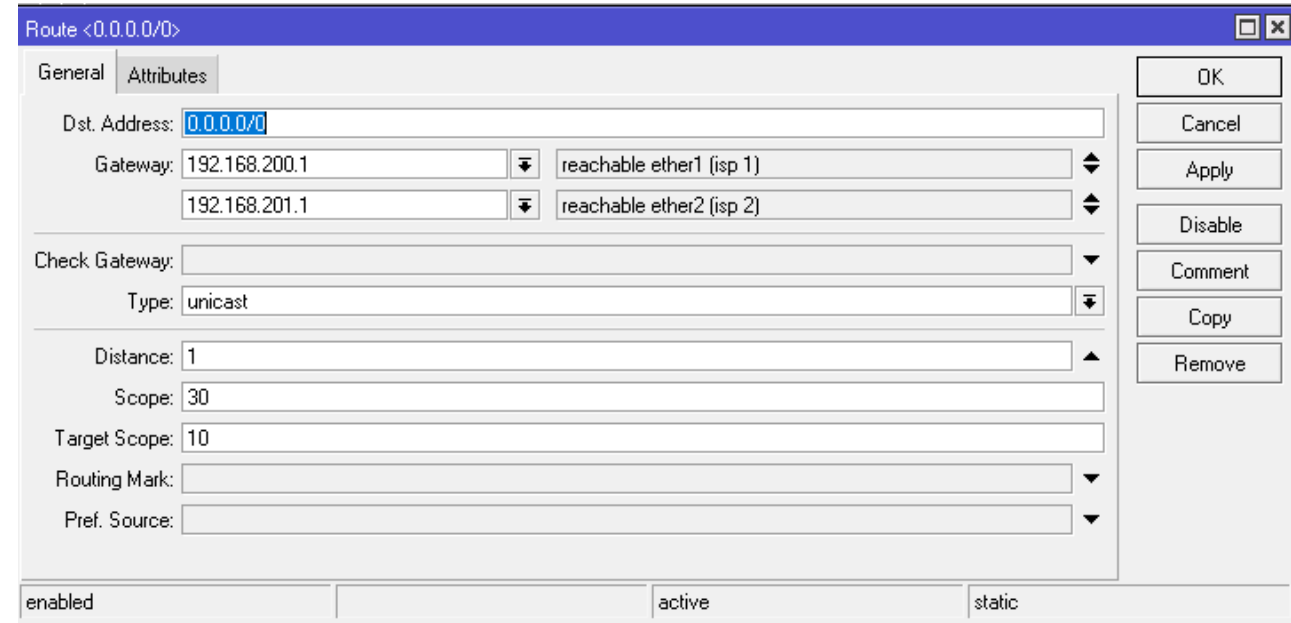
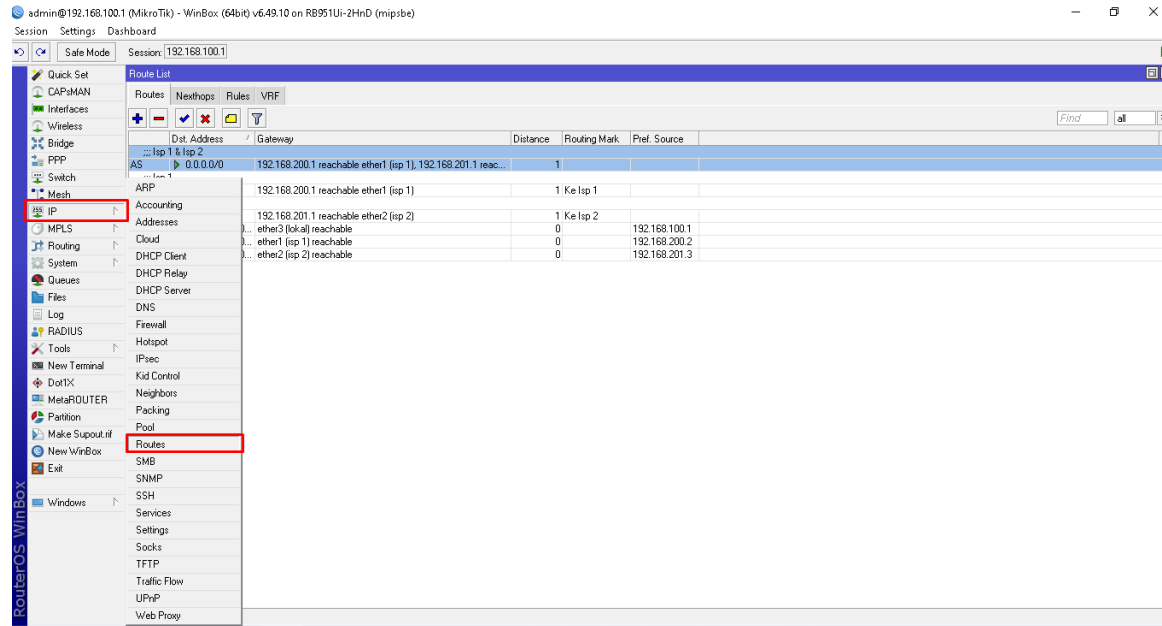
Buttons: OK, Cancel, Apply, Enable, Comment, Copy, Remove, Reset Counters, Reset All Counters

disabled



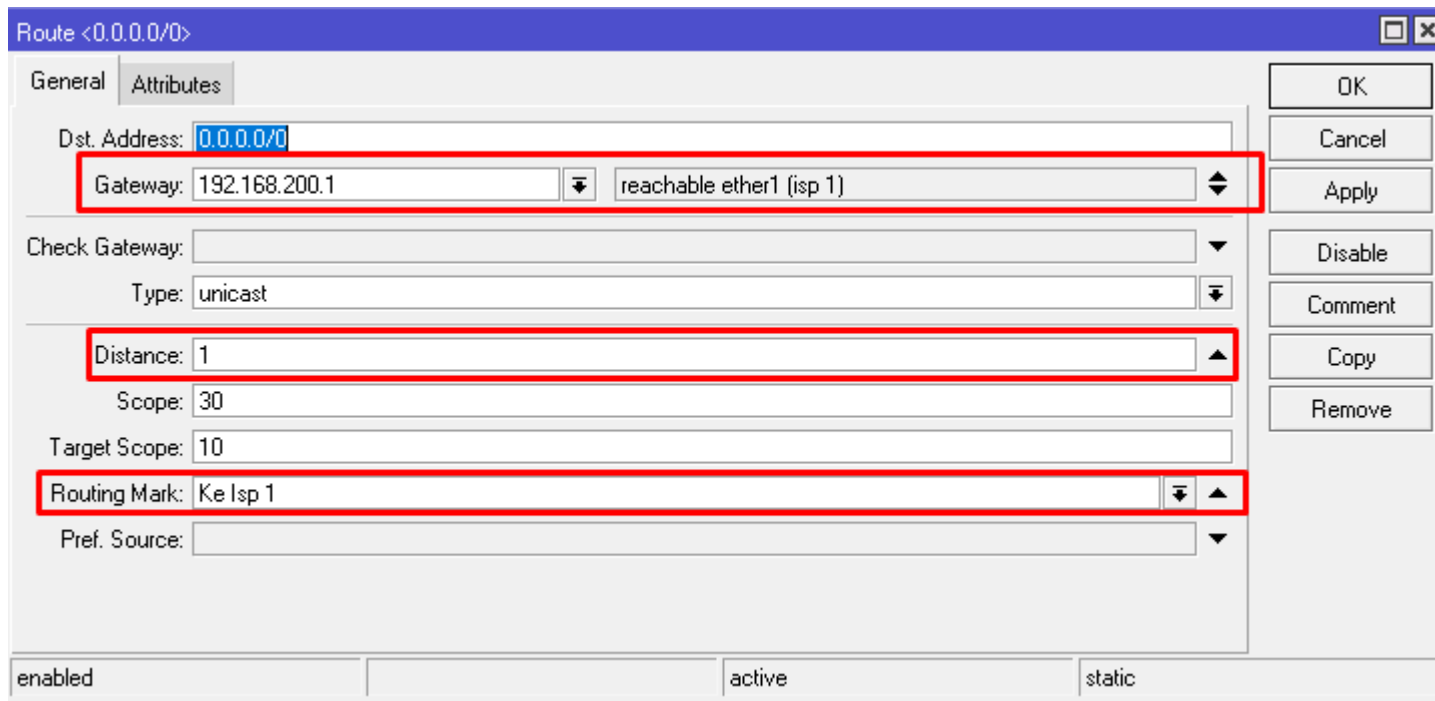
# Routing Gateway ISP 1 dan ISP 2

Pilih Menu di Mikrotik IP >> Routes >> Klik Tanda +  
Isikan Gateway masing – masing ISP 1 dan ISP 2.



# Pisahkan Gateway ISP I

- Pilih Menu di Mikrotik IP >> Routes >> Klik Tanda +
- Isikan Gateway
- Isikan Distance 1
- Isikan Routing Mark ISP 1



The screenshot shows the Mikrotik WinBox interface for configuring a static route. The window title is "Route <0.0.0.0/0>". The "General" tab is selected. The "Dst. Address" field is set to "0.0.0.0/0". The "Gateway" field is set to "192.168.200.1" and the "Reachable" field is set to "ether1 (isp 1)". The "Distance" field is set to "1". The "Routing Mark" field is set to "Ke Isp 1". The "Type" is set to "unicast". The "Scope" is set to "30" and the "Target Scope" is set to "10". The "Pref. Source" field is empty. The "enabled" checkbox is checked, and the "active" checkbox is also checked. The "static" radio button is selected. The "OK", "Cancel", "Apply", "Disable", "Comment", "Copy", and "Remove" buttons are visible on the right side of the window.

enabled	active	static
---------	--------	--------

# Pisahkan Gateway ISP 2

- Pilih Menu di Mikrotik IP >> Routes >> Klik Tanda +
- Isikan Gateway
- Isikan Distance 1
- Isikan Routing Mark ISP 2

Route <0.0.0.0/0>

General Attributes

Dst. Address: 0.0.0.0/0

Gateway: 192.168.201.1 reachable ether2 (isp 2)

Check Gateway:

Type: unicast

Distance: 1

Scope: 30

Target Scope: 10

Routing Mark: Ke Isp 2

Pref. Source:

enabled active static

OK  
Cancel  
Apply  
Disable  
Comment  
Copy  
Remove

# Hasil Speed Tes untuk Load Balancing 2 ISP (Internet Service Provider)

admin@192.168.100.1 (MikroTik) - WinBox (64bit) v6.49.10 on RB951Ui-2HnD (mipsbe)

Session Settings Dashboard

Safe Mode Session: 192.168.100.1

- Quick Set
- CAPsMAN
- Interfaces
- Wireless
- Bridge
- PPP
- Switch
- Mesh
- IP
- MPLS
- Routing
- System
- Queues
- Files
- Log
- RADIUS
- Tools
- New Terminal
- Dot1X
- MetaROUTER
- Partition
- Make Supout.tif
- New WinBox
- Exit
- Windows

## Interface List

Interface	Interface List	Ethernet	EoIP Tunnel	IP Tunnel	GRE Tunnel	VLAN	VRRP	Bonding	LTE								
Name	Type	Actual MTU	L2 MTU	Tx	Rx	Tx Packet (p/s)	Rx Packet (p/s)	FP Tx	FP Rx	FP Tx Packet (p/s)	FP Rx Pk						
R ether1 (isp 1)	Ethernet	1500	1598	2.8 Mbps	25.5 Mbps	1 507	2 228	4.1 Mbps	24.3 Mbps	1 603							
R ether2 (isp 2)	Ethernet	1500	1598	796.5 kbps	25.8 Mbps	1 505	2 131	740.7 kbps	25.2 Mbps	1 487							
R ether3 (lokal)	Ethernet	1500	1598	51.3 Mbps	3.7 Mbps	4 359	3 020	49.6 Mbps	4.9 Mbps	4 260							
ether4	Ethernet	1500	1598	0 bps	0 bps	0	0	0 bps	0 bps	0							
ether5	Ethernet	1500	1598	0 bps	0 bps	0	0	0 bps	0 bps	0							
wlan1	Wireless (Atheros AR9...	1500	1600	0 bps	0 bps	0	0	0 bps	0 bps	0							

6 items



# Hasil Speed Tes untuk Load Balancing 2 ISP (Internet Service Provider)

admin@192.168.100.1 (MikroTik) - WinBox (64bit) v6.49.10 on RB951Ui-2HnD (mipsbe)

Session Settings Dashboard

Safe Mode Session: 192.168.100.1

Interface List																
Interface																
Interface List Ethernet EoIP Tunnel IP Tunnel GRE Tunnel VLAN VRRP Bonding LTE																
Detect Internet																
Find																
	Name	Type	Actual MTU	L2 MTU	Tx	Rx	Tx Packet (p/s)	Rx Packet (p/s)	FP Tx	FP Rx	FP Tx Packet (p/s)	FP Rx Pk				
R	ether1 (isp 1)	Ethernet	1500	1598	363.6 kbps	13.2 Mbps	654	1 099	323.7 kbps	12.4 Mbps	617					
R	ether2 (isp 2)	Ethernet	1500	1598	1846.1 kbps	64.7 Mbps	3 502	5 345	1734.1 kbps	63.9 Mbps	3 505					
R	ether3 (lokal)	Ethernet	1500	1598	77.5 Mbps	2.2 Mbps	6 409	4 189	76.5 Mbps	2.0 Mbps	6 336					
	ether4	Ethernet	1500	1598	0 bps	0 bps	0	0	0 bps	0 bps	0					
	ether5	Ethernet	1500	1598	0 bps	0 bps	0	0	0 bps	0 bps	0					
	wlan1	Wireless (Atheros AR9...	1500	1600	0 bps	0 bps	0	0	0 bps	0 bps	0					

6 items

# Hasil Speed Tes untuk Load Balancing 2 ISP (Internet Service Provider)

admin@192.168.100.1 (MikroTik) - WinBox (64bit) v6.49.10 on RB951Ui-2HnD (mipsbe)

Session Settings Dashboard

Safe Mode Session: 192.168.100.1

Interface List													
Interface													
Interface List													
Ethernet													
EoIP Tunnel													
IP Tunnel													
GRE Tunnel													
VLAN													
VRRP													
Bonding													
LTE													
Detect Internet													
Find													
	Name	Type	Actual MTU	L2 MTU	Tx	Rx	Tx Packet (p/s)	Rx Packet (p/s)	FP Tx	FP Rx	FP Tx Packet (p/s)	FP Rx Pa	
R	ether1 (isp 1)	Ethernet	1500	1598	634.4 kbps	23.2 Mbps	1 212	1 922	616.3 kbps	24.4 Mbps	1 257		
R	ether2 (isp 2)	Ethernet	1500	1598	1215.9 kbps	43.9 Mbps	2 313	3 625	1151.9 kbps	45.0 Mbps	2 342		
R	ether3 (lokal)	Ethernet	1500	1598	67.2 Mbps	1853.6 kbps	5 552	3 530	69.4 Mbps	1771.4 kbps	5 753		
	ether4	Ethernet	1500	1598	0 bps	0 bps	0	0	0 bps	0 bps	0		
	ether5	Ethernet	1500	1598	0 bps	0 bps	0	0	0 bps	0 bps	0		
	wlan1	Wireless (Atheros AR9...	1500	1600	0 bps	0 bps	0	0	0 bps	0 bps	0		

6 items