



The Solution for Managing Wireless Users with MikroTik RouterOS

Presented By Mohammad Javad Sabri

MikroTik MUM Dubai October 17, 2016

About me



- Mr. Mohammad Javad Sabri
- Master of Science Computer engineering
- MikroTik Certified Consultant
- MTCNA, MTCWE, MTCTCE, MTCUME
- www.mjsabri.com
- info@mjsabri.com
- **I Love MikroTik**

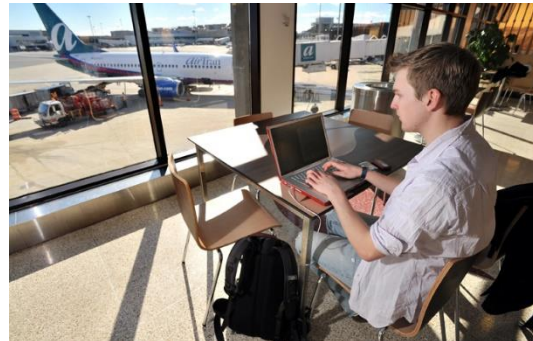
Table of content

- Applications
- What is HotSpot ?
- What is User Manager ?
- Getting start to Configuration Hotspot
- Configuration in User Manager
- Connect To Wireless network and test Solution

Applications



Hotel

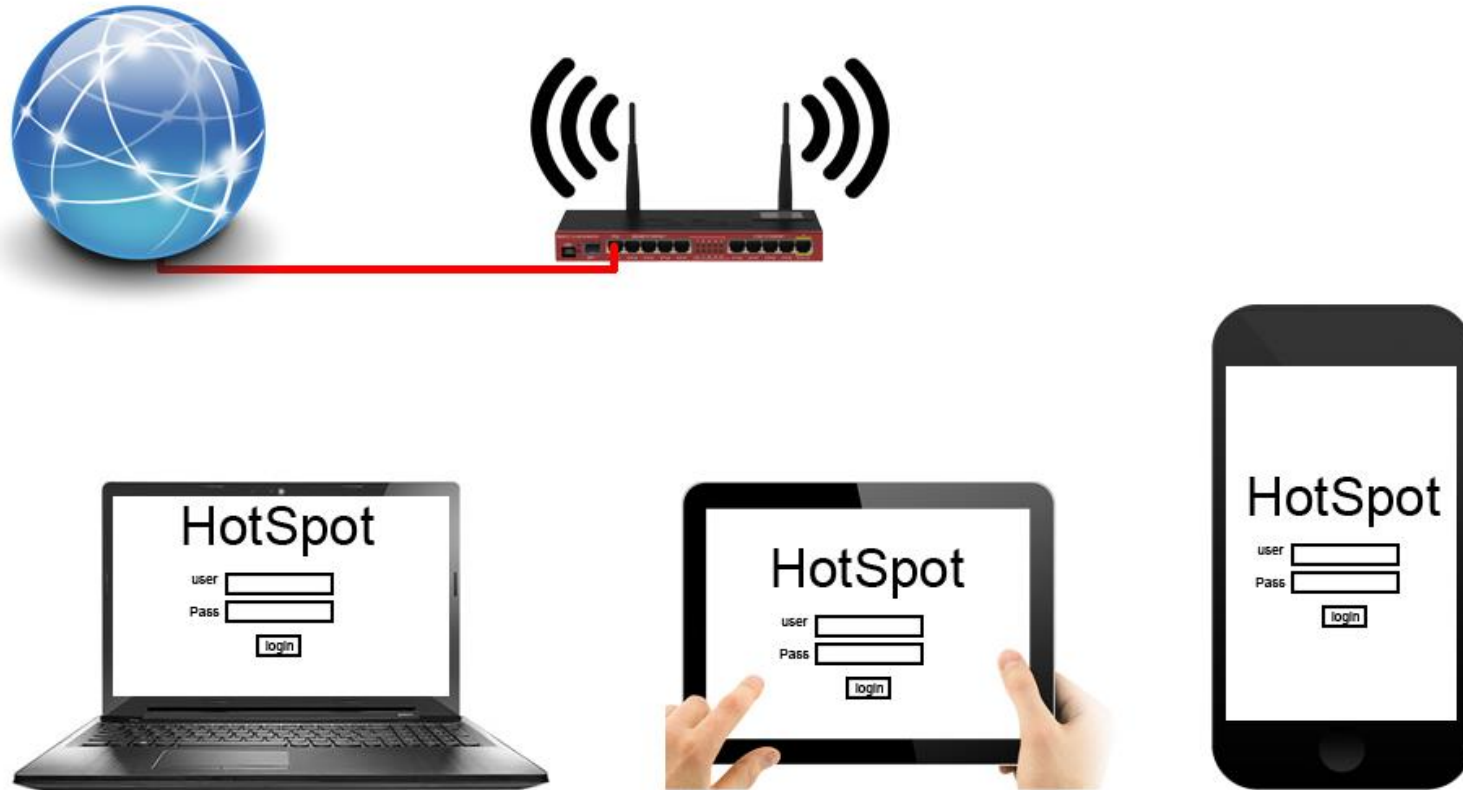


Airport

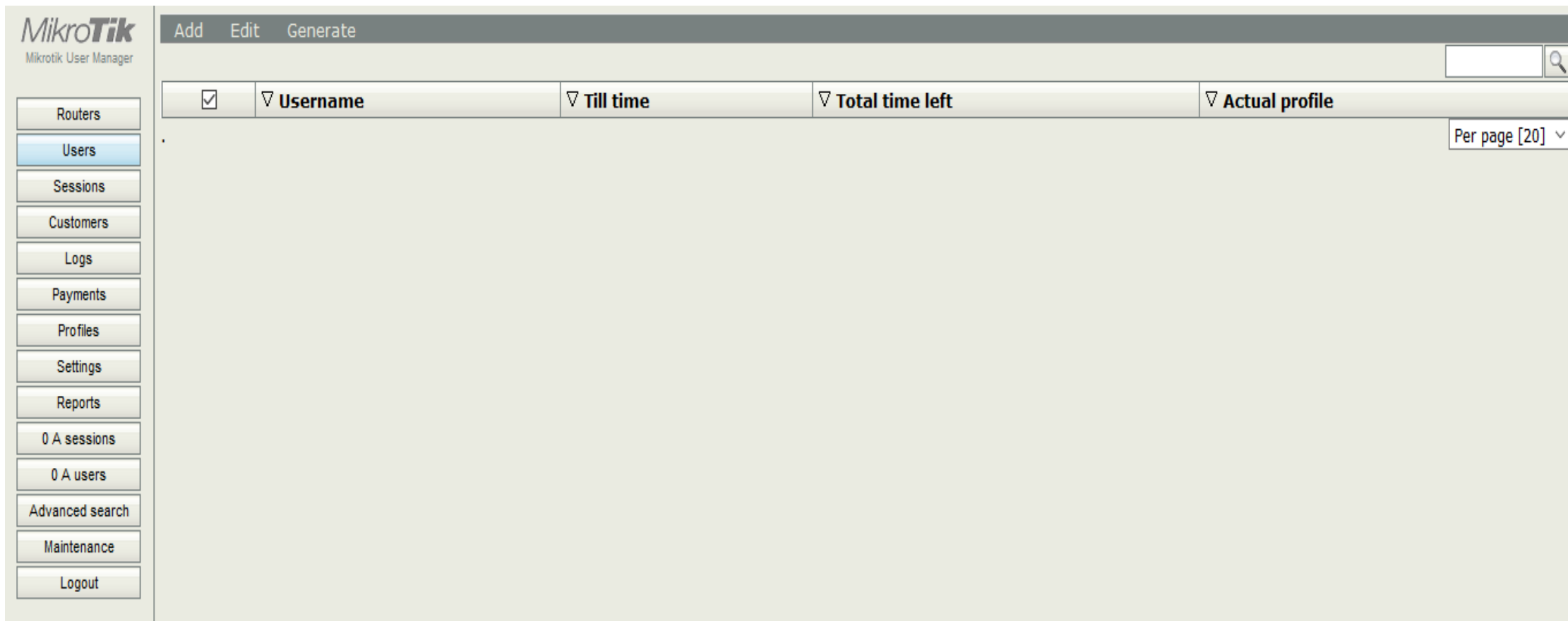


University

What is HotSpot ?



What is User Manager ?

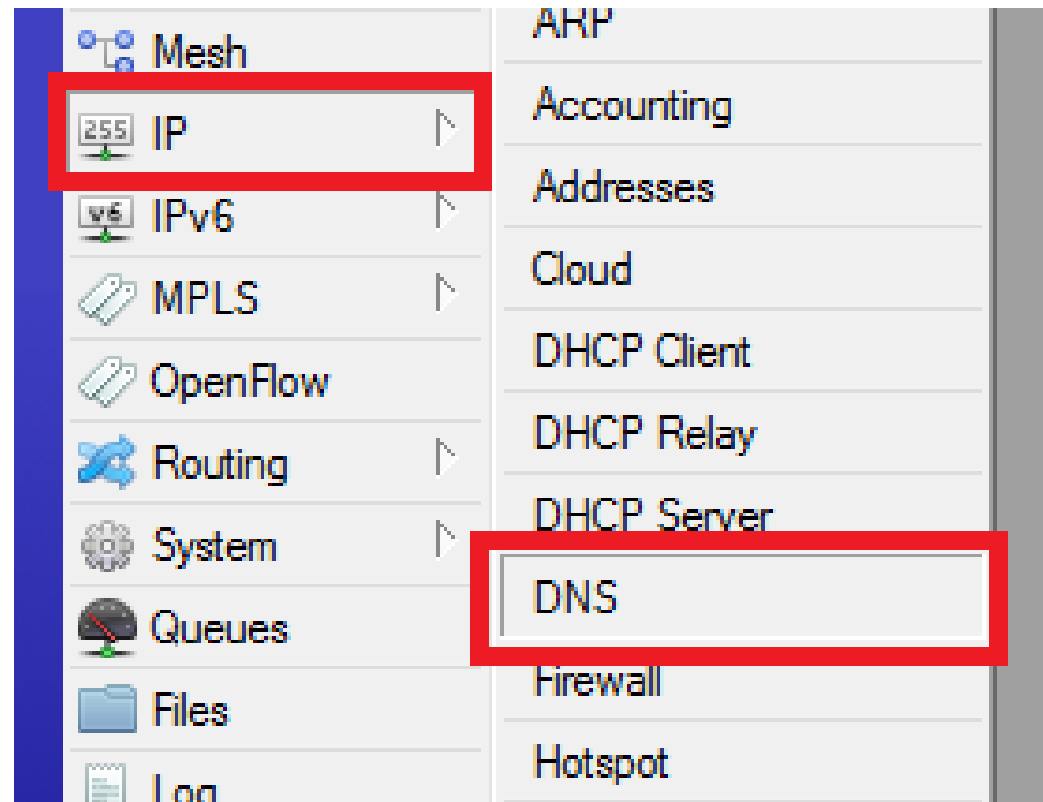


The screenshot displays the MikroTik User Manager web interface. On the left is a sidebar with navigation links: Routers, Users (highlighted), Sessions, Customers, Logs, Payments, Profiles, Settings, Reports, 0 A sessions, 0 A users, Advanced search, Maintenance, and Logout. The main content area has a top bar with 'Add', 'Edit', and 'Generate' buttons. Below this is a search bar and a table with columns: a checkbox, Username, Till time, Total time left, and Actual profile. The table is currently empty. A 'Per page [20]' dropdown is located at the bottom right of the table area.

☒	Username	Till time	Total time left	Actual profile
-------------------------------------	----------	-----------	-----------------	----------------

Getting start to Configuration Hotspot

DNS



DNS

DNS Settings

Servers: 

Dynamic Servers:

☒ Allow Remote Requests

Max UDP Packet Size:

Query Server Timeout: s

Query Total Timeout: s

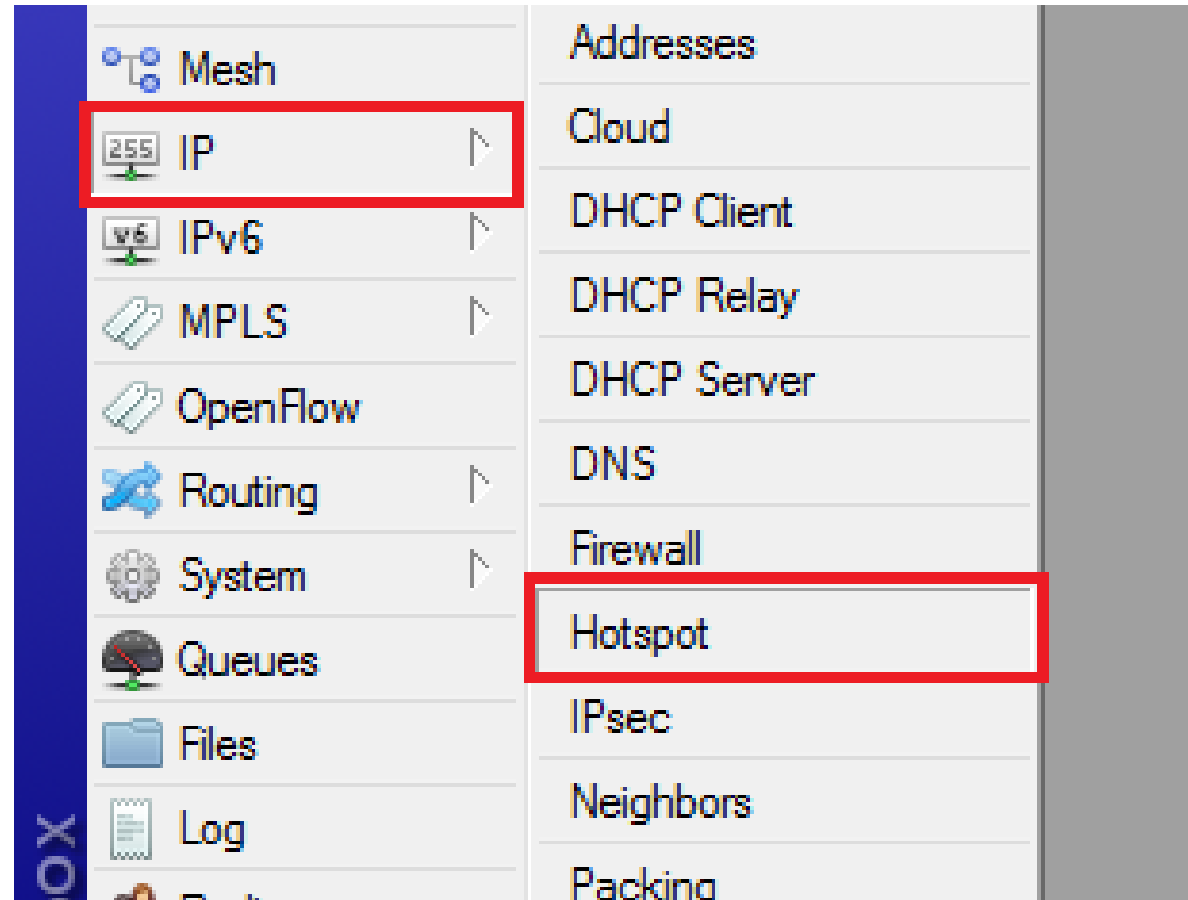
Cache Size: KB

Cache Max TTL:

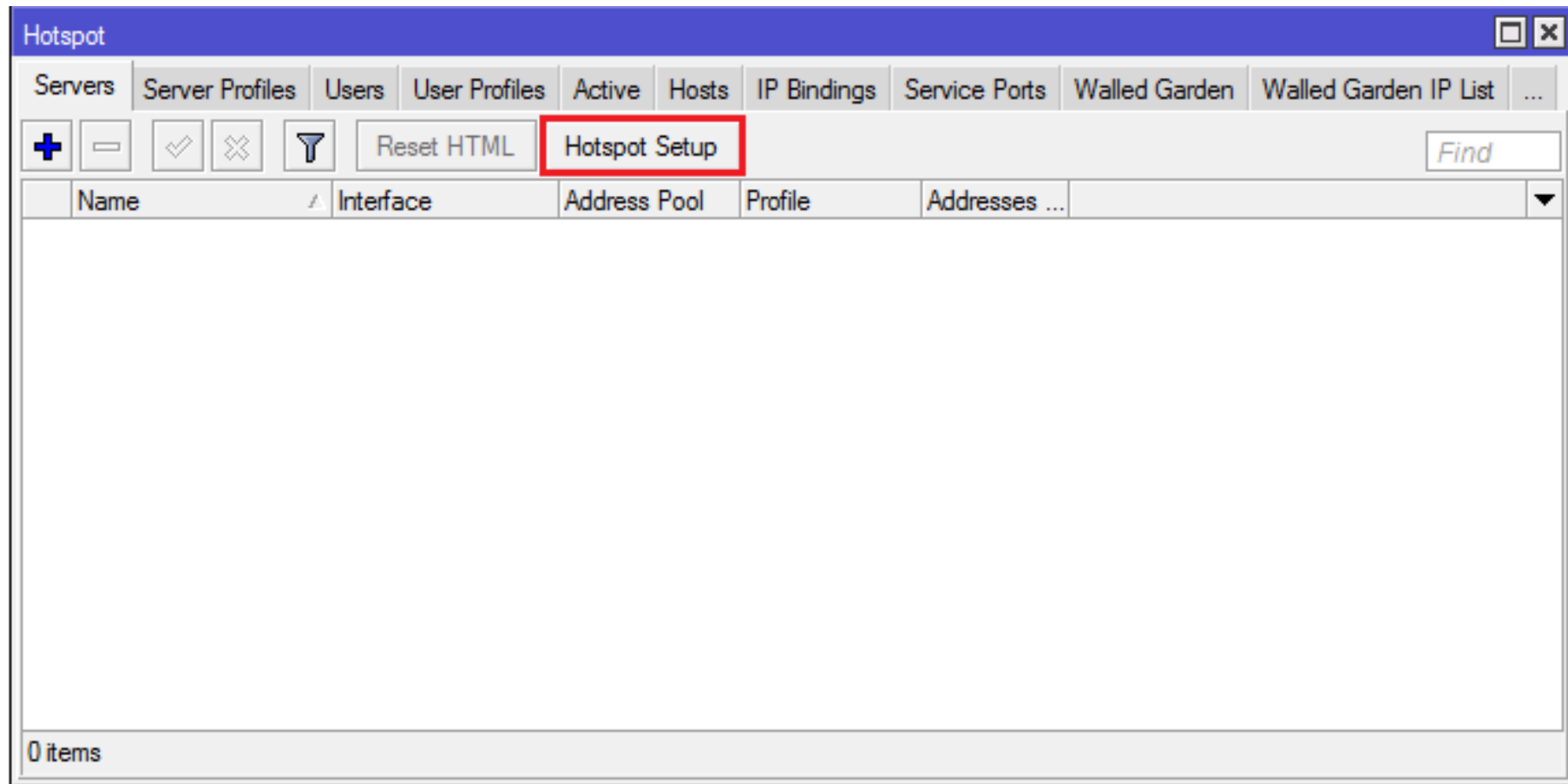
Cache Used:

OK Cancel Apply Static Cache

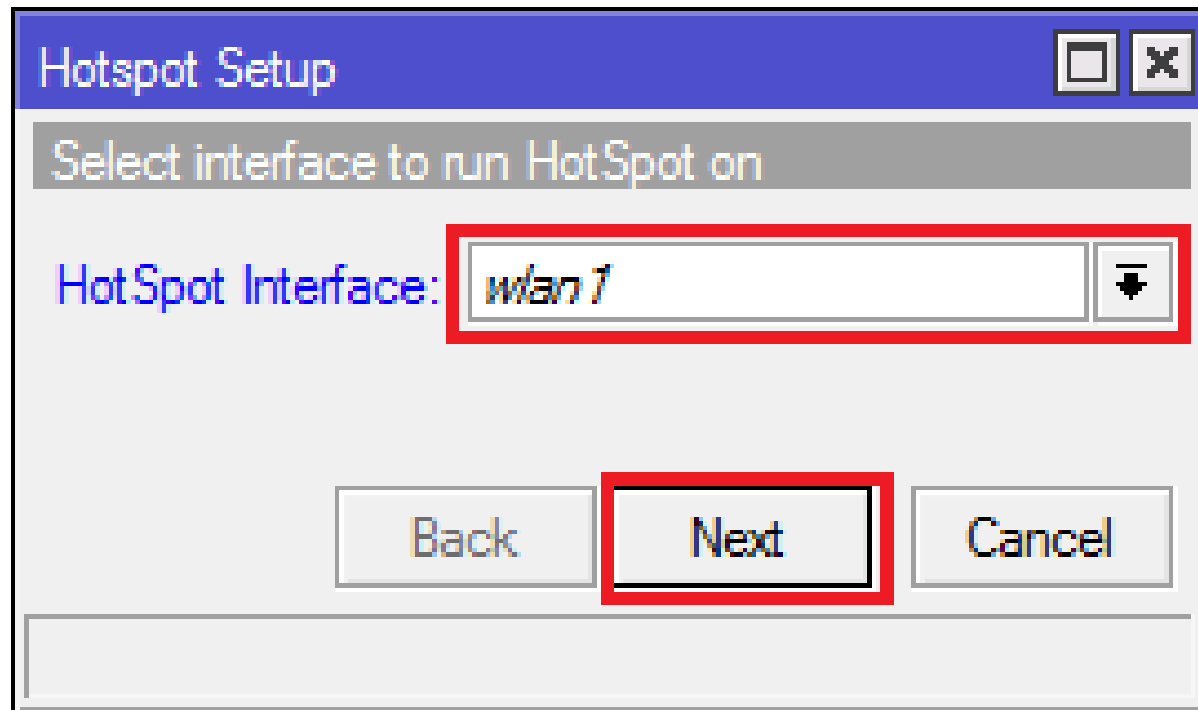
HotSpot setup



HotSpot setup



HotSpot setup



HotSpot setup

Hotspot Setup

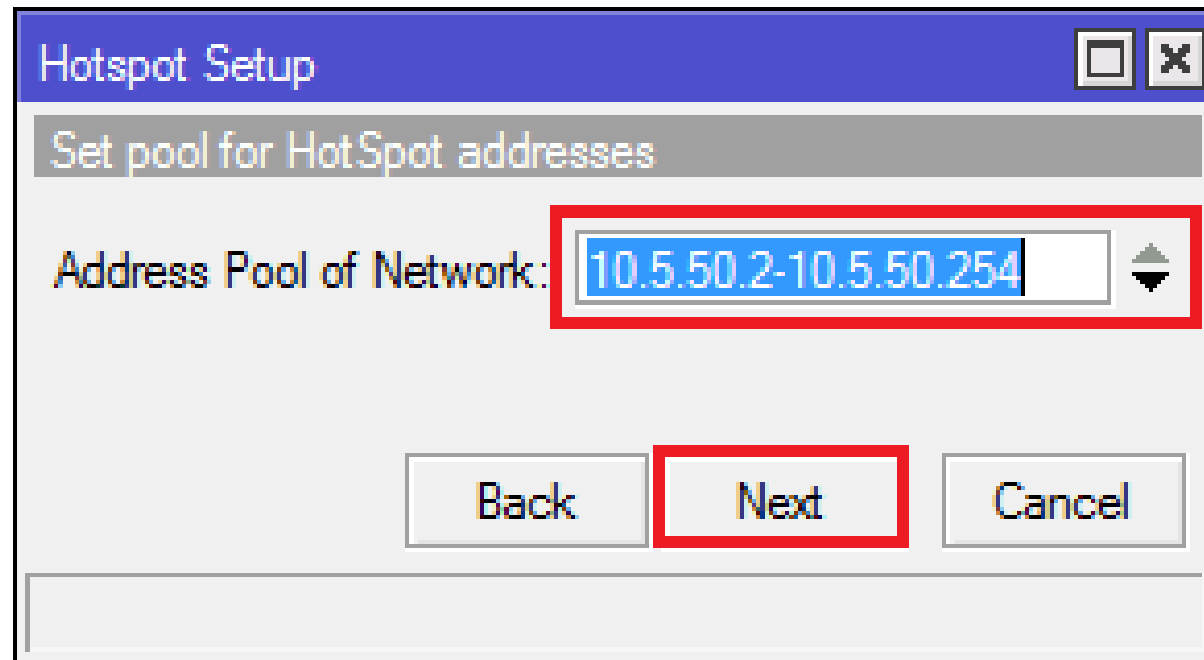
Set HotSpot address for interface

Local Address of Network: 10.5.50.1/24

☒ Masquerade Network

Back Next Cancel

HotSpot setup



The screenshot shows a window titled "Hotspot Setup" with a blue title bar. Below the title bar is a grey bar with the text "Set pool for HotSpot addresses". The main area of the window contains the text "Address Pool of Network:" followed by a text input field containing "10.5.50.2-10.5.50.254". A red rectangle highlights the input field. To the right of the input field is a small downward-pointing arrow icon. At the bottom of the window are three buttons: "Back", "Next", and "Cancel". The "Next" button is highlighted with a red rectangle.

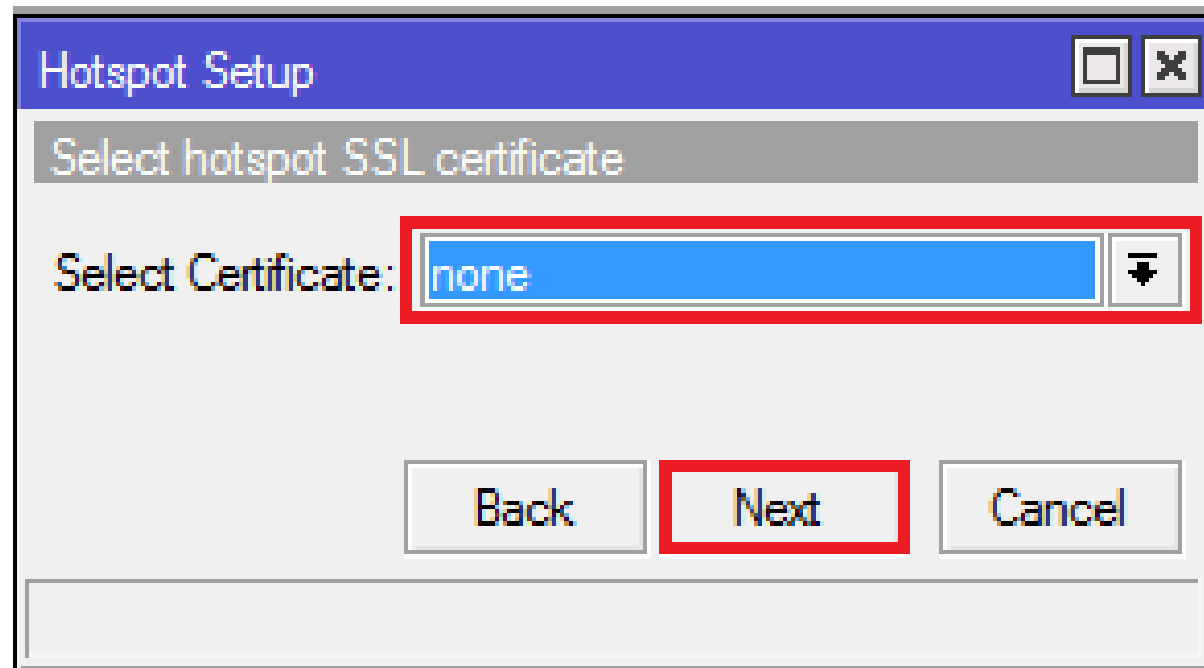
Hotspot Setup

Set pool for HotSpot addresses

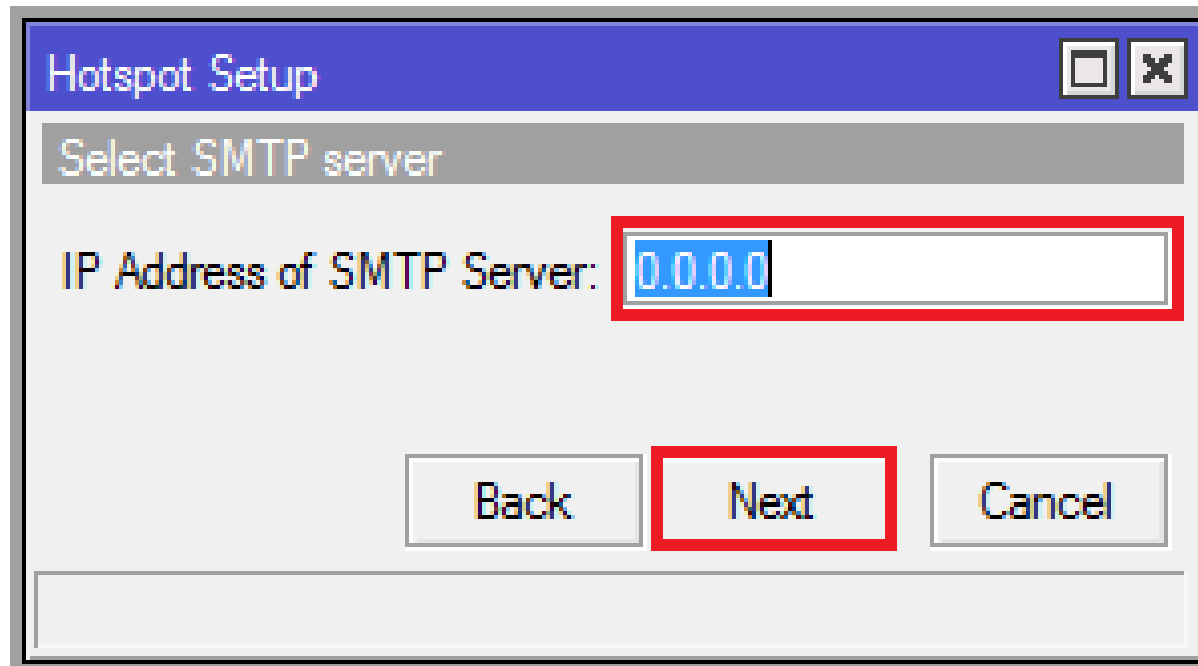
Address Pool of Network: 10.5.50.2-10.5.50.254

Back Next Cancel

HotSpot setup



HotSpot setup



A screenshot of the 'Hotspot Setup' window in MikroTik WinBox. The window has a blue title bar with the text 'Hotspot Setup' and standard window controls. Below the title bar is a grey header area with the text 'Select SMTP server'. The main area is white and contains the label 'IP Address of SMTP Server:' followed by a text input field. The input field contains the text '0.0.0.0' and is highlighted with a red rectangular border. At the bottom of the window are three buttons: 'Back', 'Next', and 'Cancel'. The 'Next' button is also highlighted with a red rectangular border.

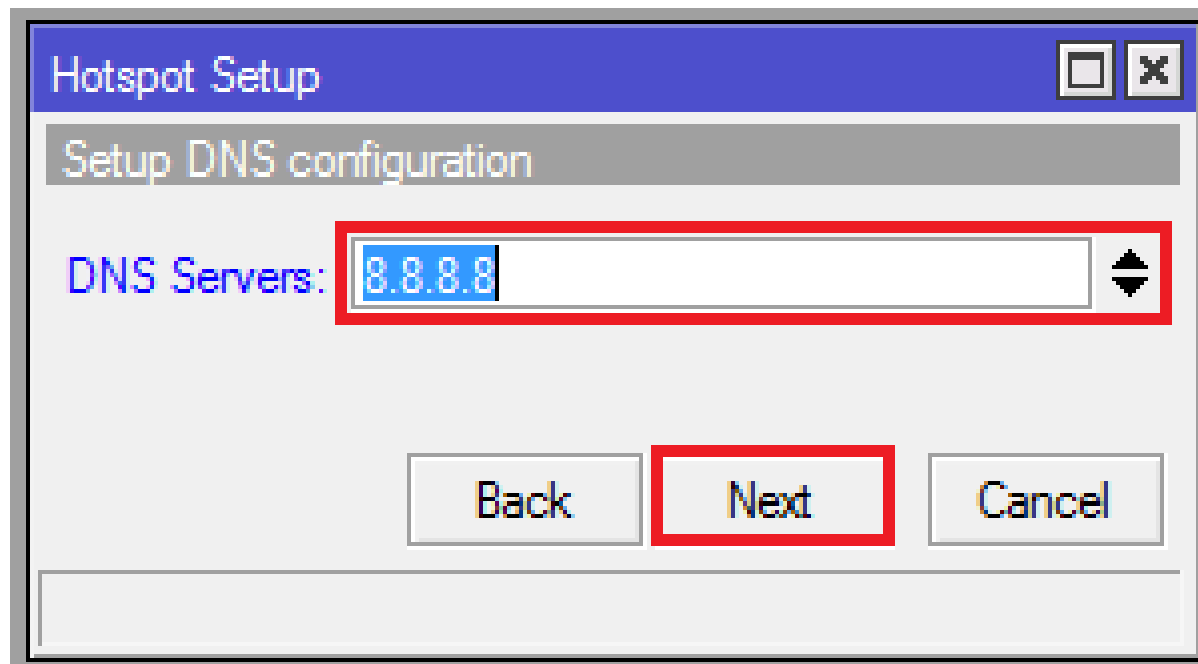
Hotspot Setup

Select SMTP server

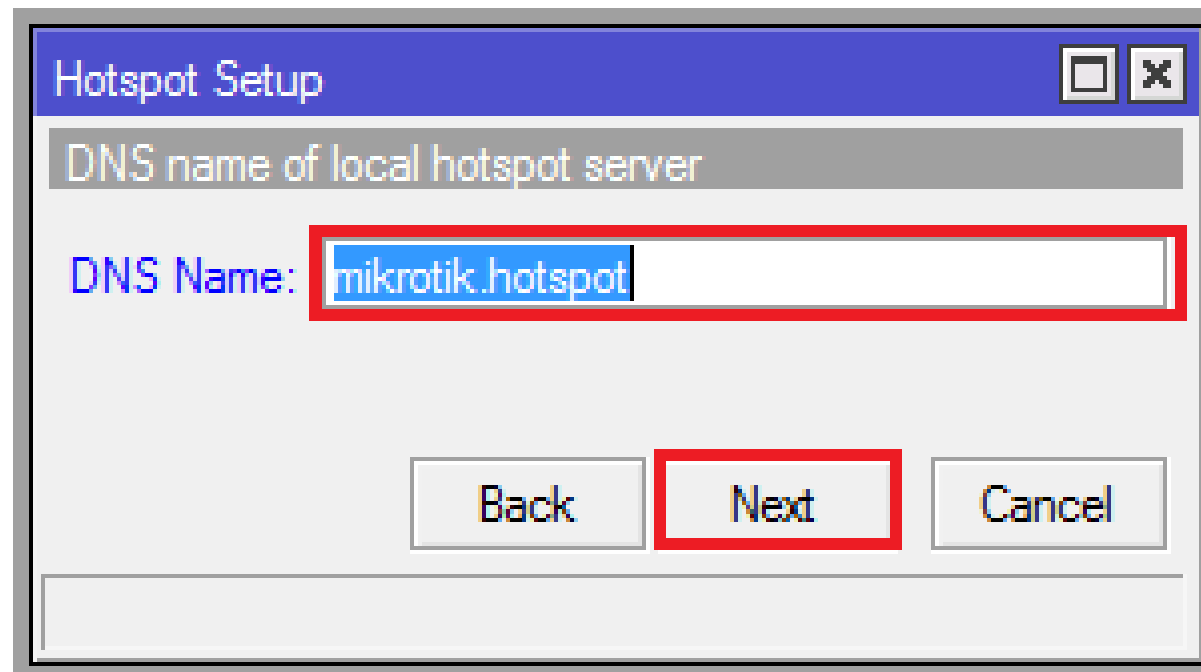
IP Address of SMTP Server: 0.0.0.0

Back Next Cancel

HotSpot setup

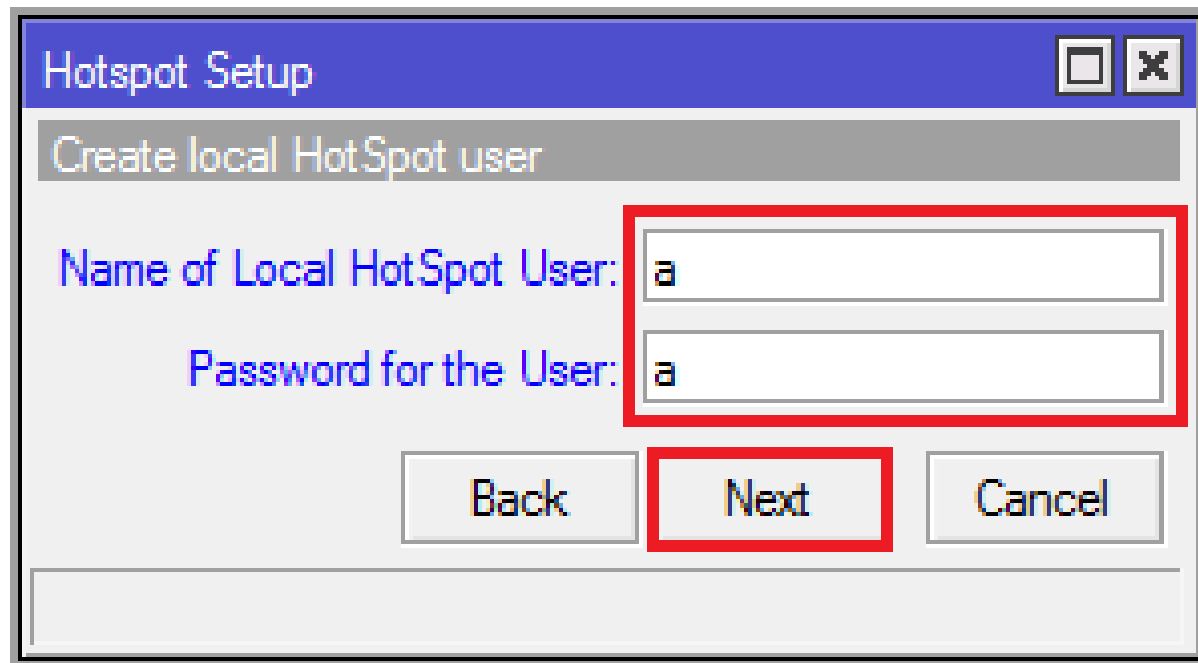


HotSpot setup



The screenshot shows a window titled "Hotspot Setup" with a blue title bar. Below the title bar, there is a greyed-out label "DNS name of local hotspot server". Underneath, the text "DNS Name:" is followed by a text input field containing "mikrotik.hotspot". The input field is highlighted with a red border. At the bottom of the window, there are three buttons: "Back", "Next", and "Cancel". The "Next" button is also highlighted with a red border.

HotSpot setup



Hotspot Setup

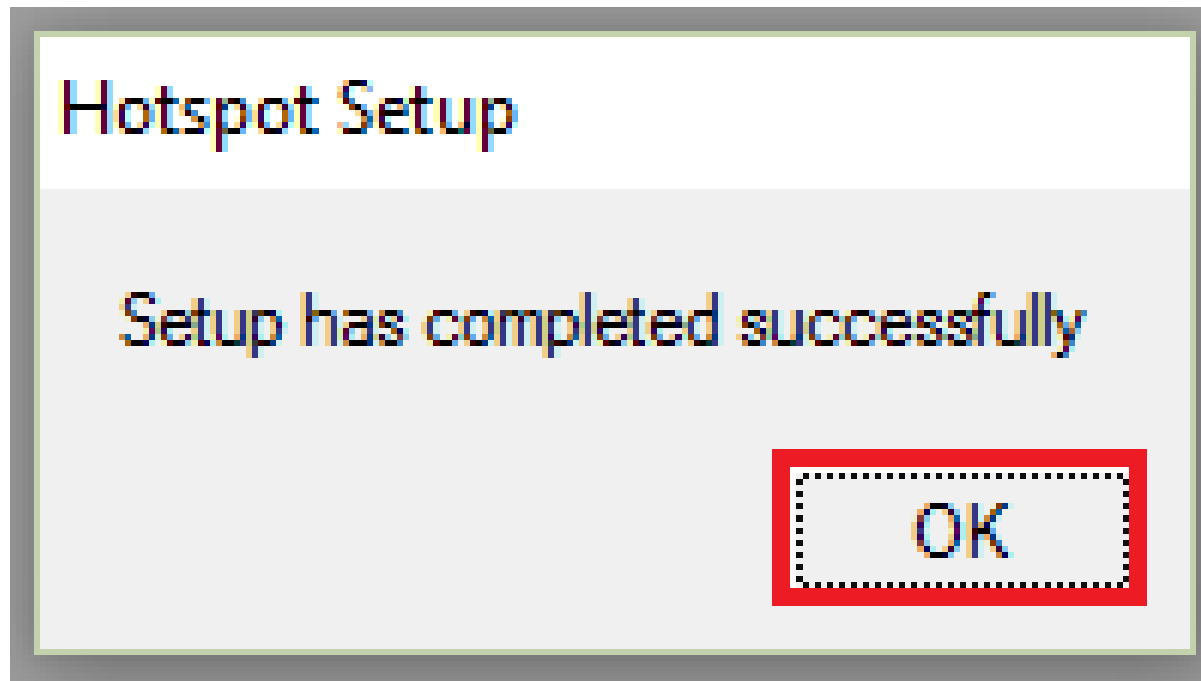
Create local HotSpot user

Name of Local HotSpot User: a

Password for the User: a

Back Next Cancel

HotSpot setup



Login page

Please log on to use the internet hotspot service

login

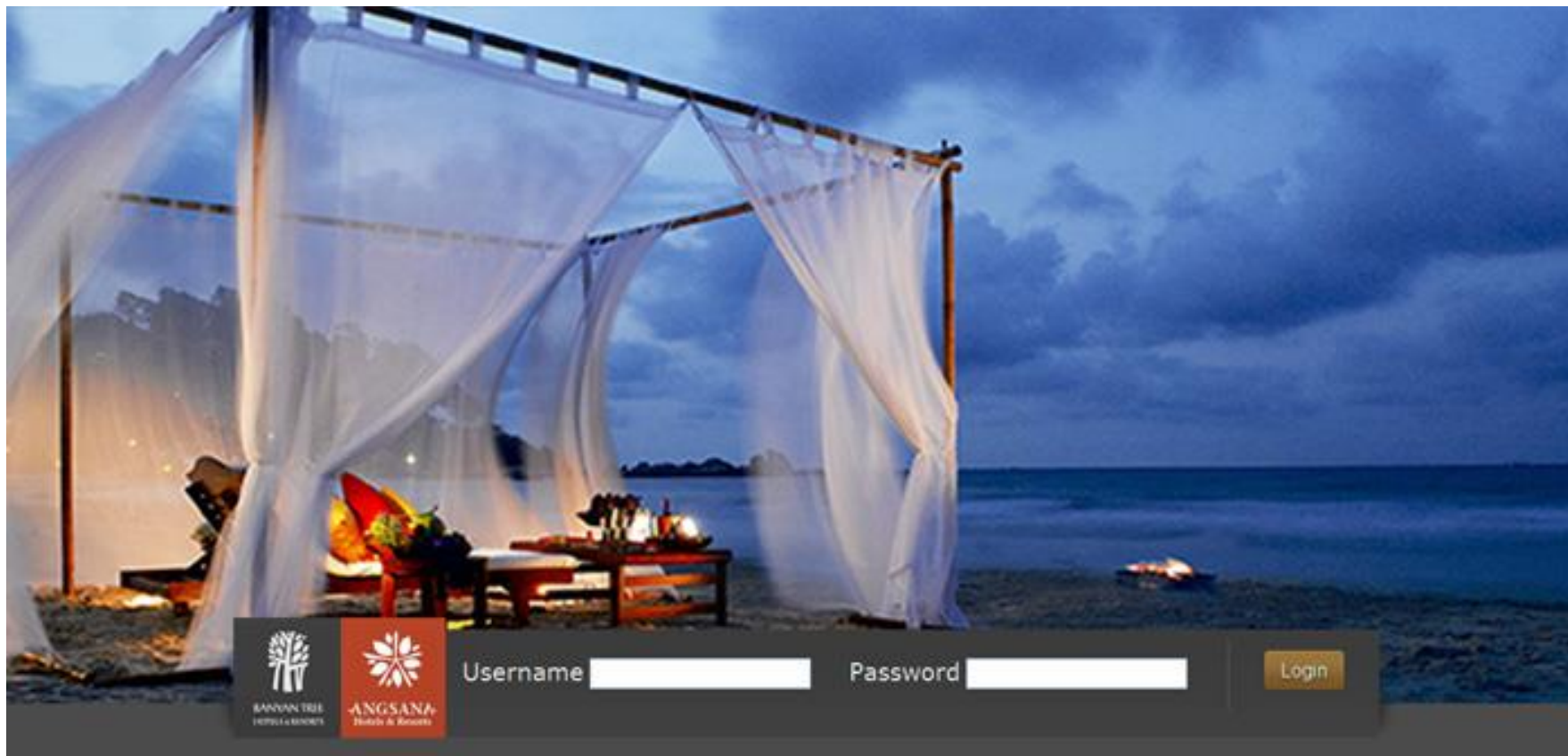
password

HOTSPOT GATEWAY

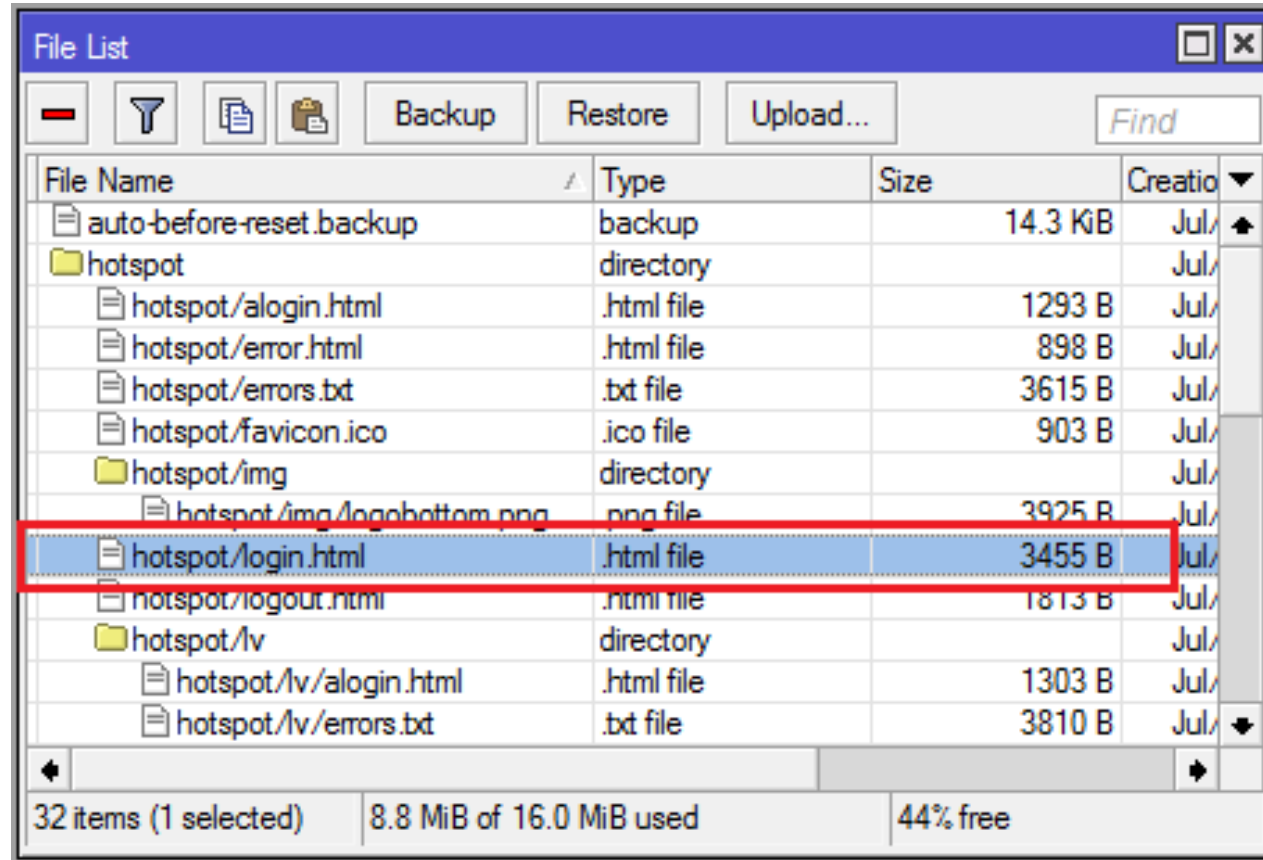
powered by *MikroTik*

Powered by MikroTik RouterOS

Customize page



Customize page



Connect hotspot to user manager

Connect hotspot to user manager

The screenshot shows the MikroTik WinBox interface. On the left sidebar, the 'IP' menu item is highlighted with a red box. In the main menu, the 'Hotspot' option is also highlighted with a red box. The right pane displays the 'Hotspot' configuration page, with the 'Server Profiles' tab selected and highlighted by a red box. Below the tabs, there are buttons for adding (+), removing (-), and filtering (funnel). A table lists the server profiles:

Name	DNS Name	HTML Directory	Rate Limit (rx/tx)
default		hotspot	
hsprof1	mikrotik.hotspot	hotspot	

The row for 'hsprof1' is highlighted with a red box.

Connect hotspot to user manager

The screenshot shows the 'Hotspot Server Profile <hsprof1>' window with the 'RADIUS' tab selected. The 'Use RADIUS' checkbox is checked and highlighted with a red box. Other fields include 'Default Domain', 'Location ID', 'Location Name', 'MAC Format' (set to XX:XX:XX:XX:XX:XX), 'Accounting' (checked), 'Interim Update', and 'NAS Port Type' (set to 19 (wireless-802.11)). The 'OK' button is also highlighted with a red box.

Hotspot Server Profile <hsprof1>

General Login **RADIUS**

☒ Use RADIUS

Default Domain:

Location ID:

Location Name:

MAC Format:

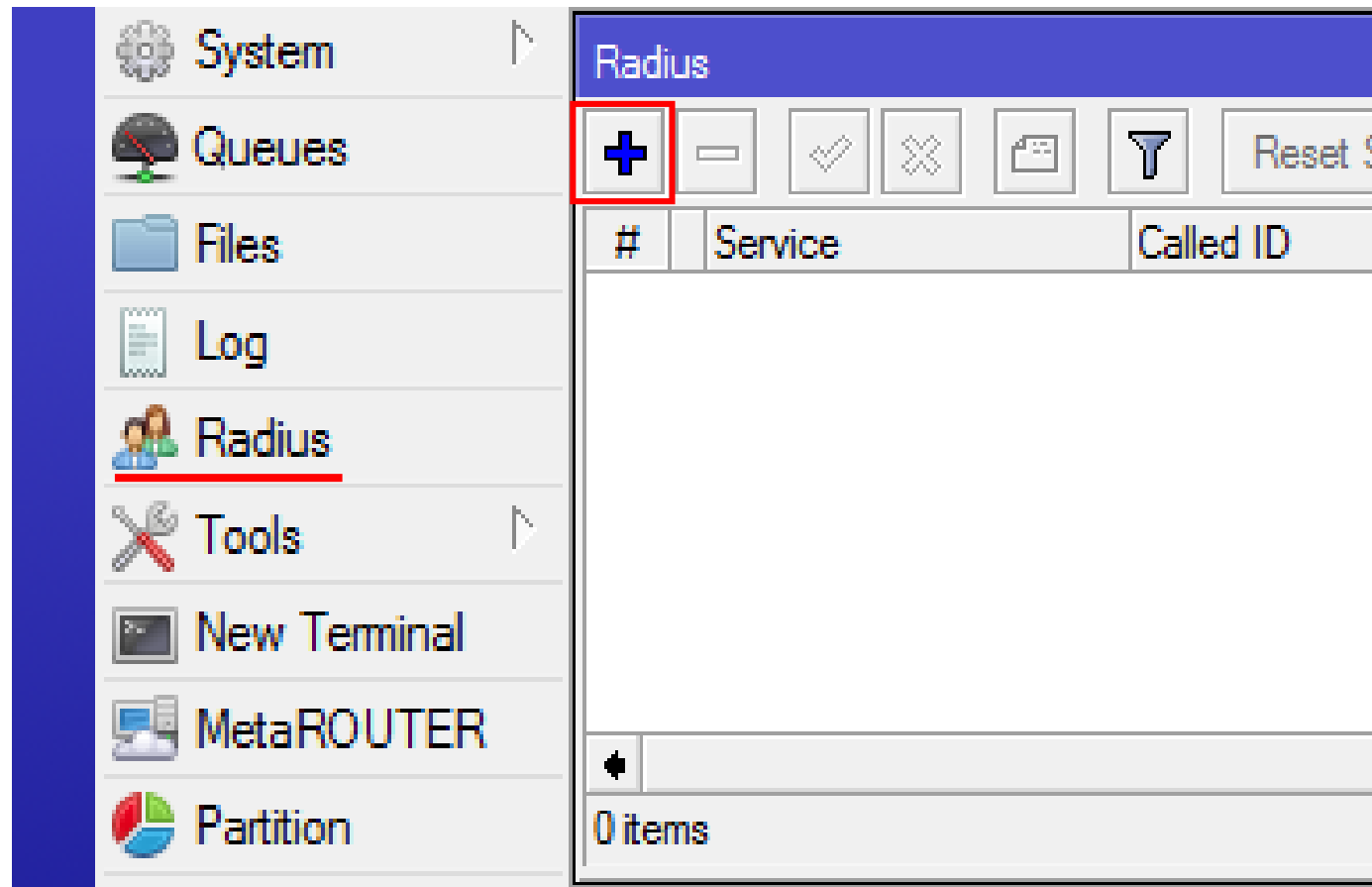
☒ Accounting

Interim Update:

NAS Port Type:

OK Cancel Apply Copy Remove

Connect hotspot to user manager



Connect hotspot to user manager

New Radius Server

General Status

Service: ☐ ppp ☐ login
☒ hotspot ☐ wireless
☐ dhcp

Called ID:

Domain:

Address: 192.168.1.60

Secret: mikrotik

Authentication Port: 1812

Accounting Port: 1813

Timeout: 300 ms

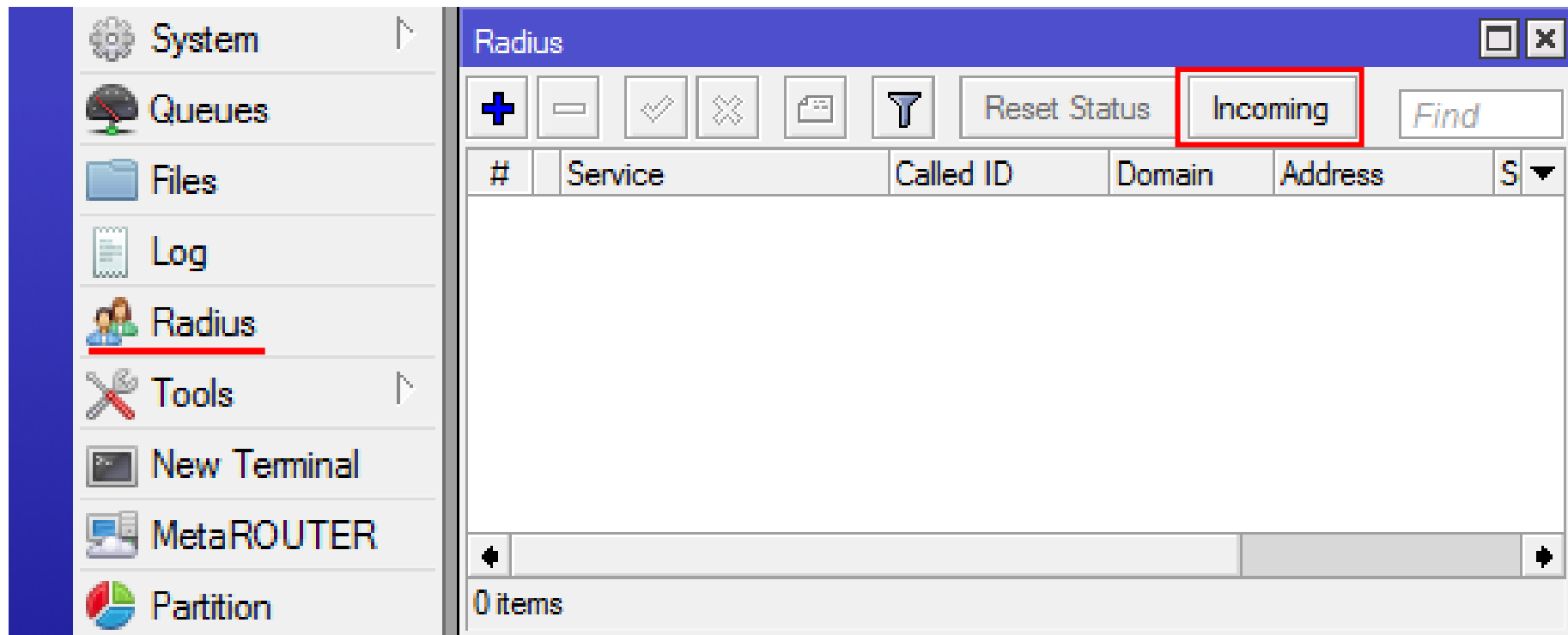
☐ Accounting Backup

Realm:

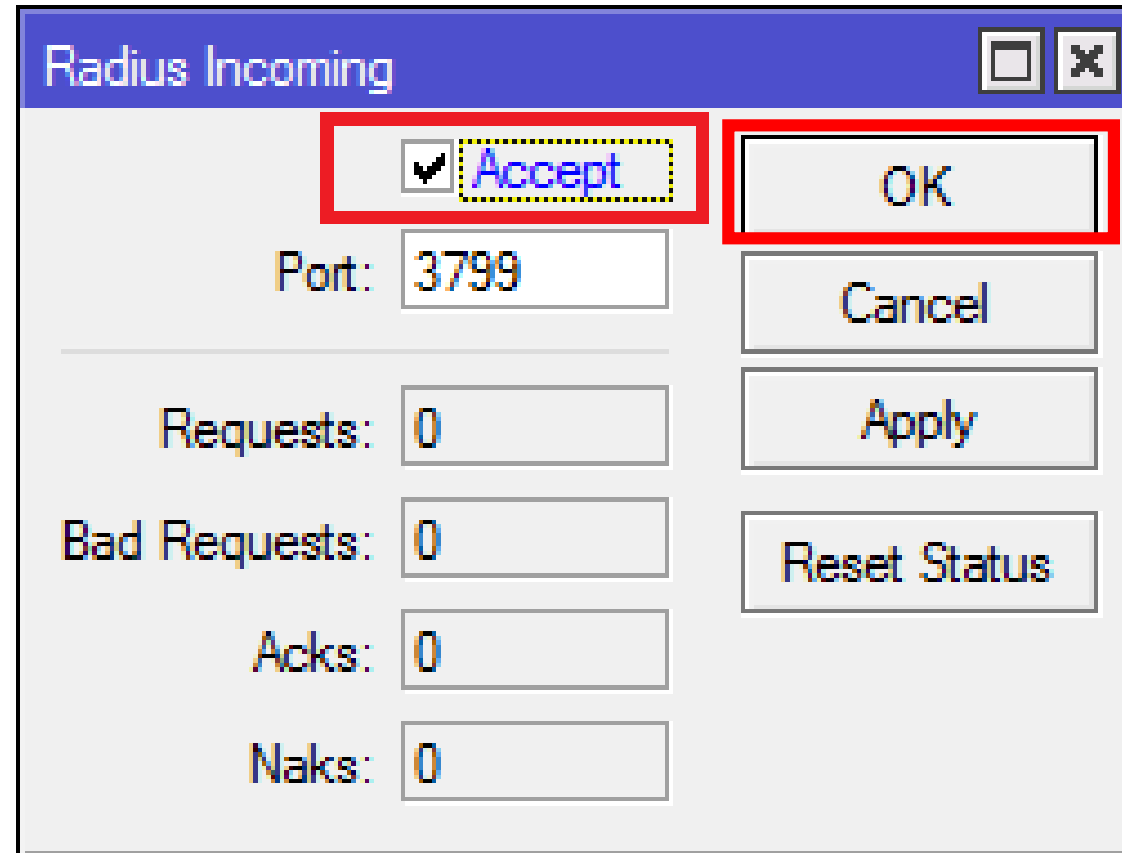
Src. Address:

OK
Cancel
Apply
Disable
Comment
Copy
Remove
Reset Status

Connect user manager to hotspot



Connect user manager to hotspot



The image shows a 'Radius Incoming' configuration window. At the top, there is a blue title bar with the text 'Radius Incoming' and standard window control buttons. Below the title bar, the 'Accept' checkbox is checked and highlighted with a red rectangle. To its right, the 'OK' button is also highlighted with a red rectangle. Below these, the 'Port' is set to 3799. Further down, there are five rows of status counters: 'Requests: 0', 'Bad Requests: 0', 'Acks: 0', and 'Naks: 0'. On the right side of the window, there are three buttons: 'OK', 'Cancel', and 'Apply'. At the bottom right, there is a 'Reset Status' button.

Radius Incoming

☒ Accept

Port: 3799

Requests: 0

Bad Requests: 0

Acks: 0

Naks: 0

OK

Cancel

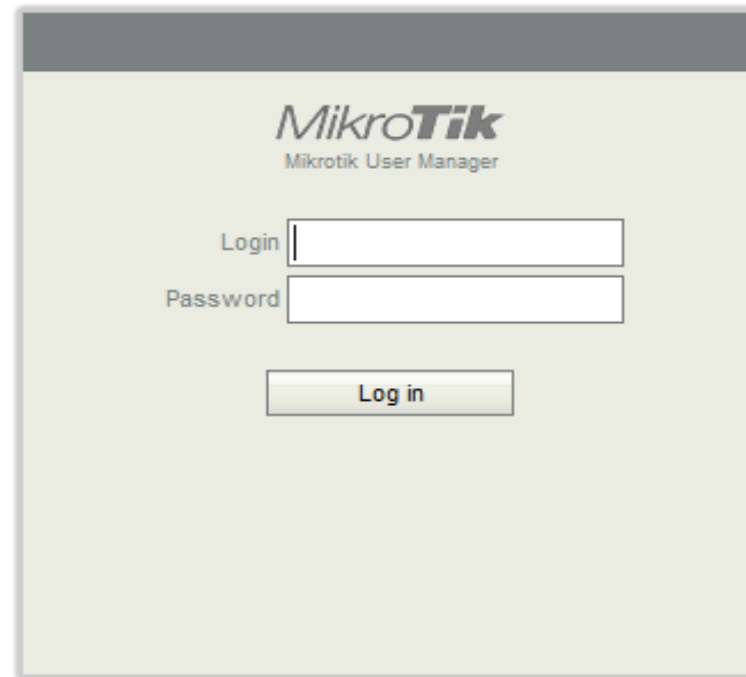
Apply

Reset Status

Getting start to Configuration User Manager

Login to User Manager

1. First go to this address <http://yourrouteraddress/userman>
2. Login to User Manager With user = admin and without password

The image shows a web browser window displaying the MikroTik User Manager login interface. At the top, the MikroTik logo is visible with the text 'MikroTik User Manager' underneath. Below the logo, there are two input fields: one labeled 'Login' and another labeled 'Password'. The 'Login' field is currently empty. Below these fields is a 'Log in' button. The background of the page is a light beige color.

Login to User Manager

MikroTik
Mikrotik User Manager

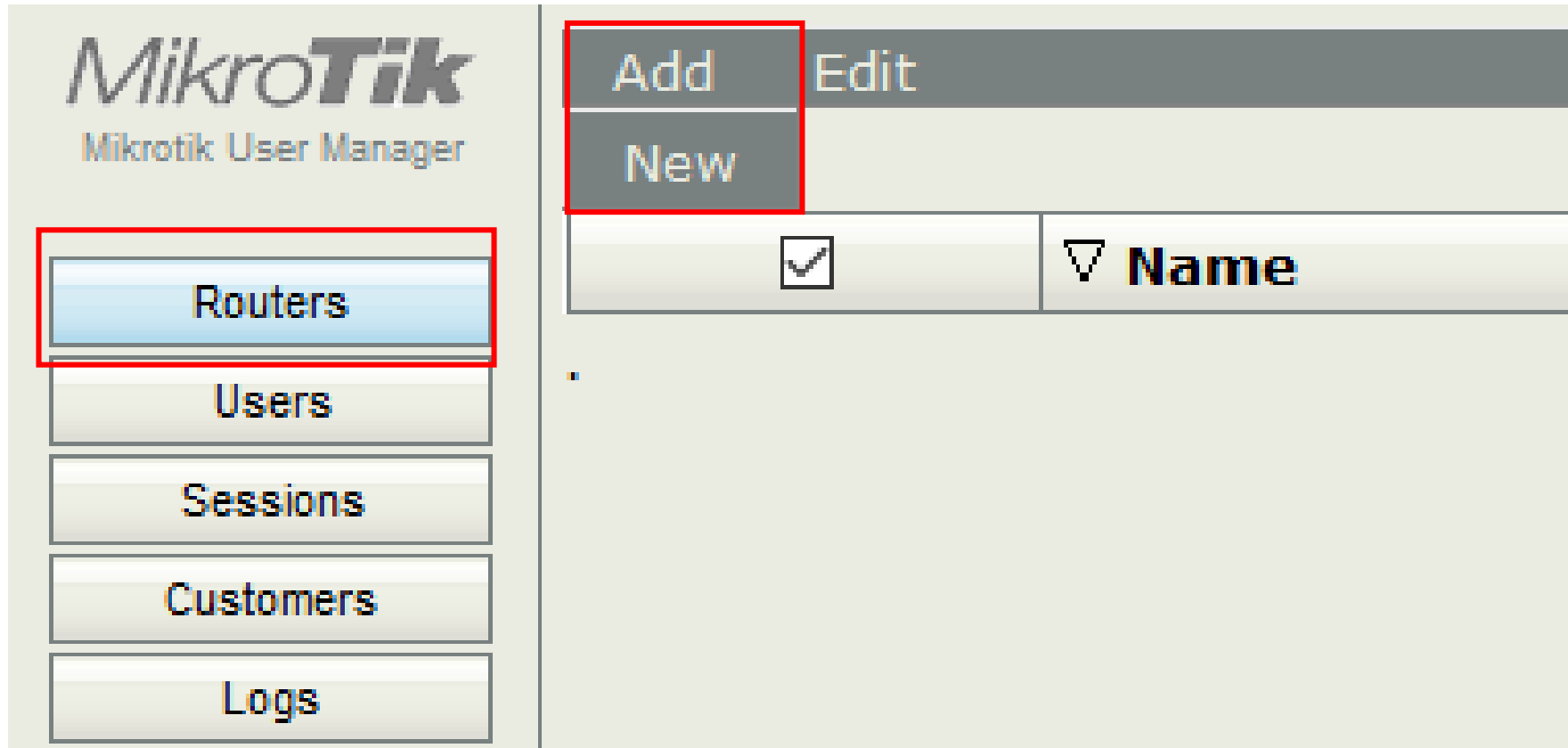
Add Edit Generate

☒	▼ Username	▼ Till time	▼ Total time left	▼ Actual profile
.				

Per page [20] ▼

Routers
Users
Sessions
Customers
Logs
Payments
Profiles
Settings
Reports
0 A sessions
0 A users
Advanced search
Maintenance
Logout

Connect user manager to hotspot



Connect user manager to hotspot

Router details

▼ Main

Name: R1

Owner: admin

IP address: 192.168.1.40

Shared secret: mikrotik

Time zone: Parent time zone

Disabled: ☐

Log events: ☐ Authorization success

☒ Authorization failure

☐ Accounting success

☐ Accounting failure

▲ Radius incoming

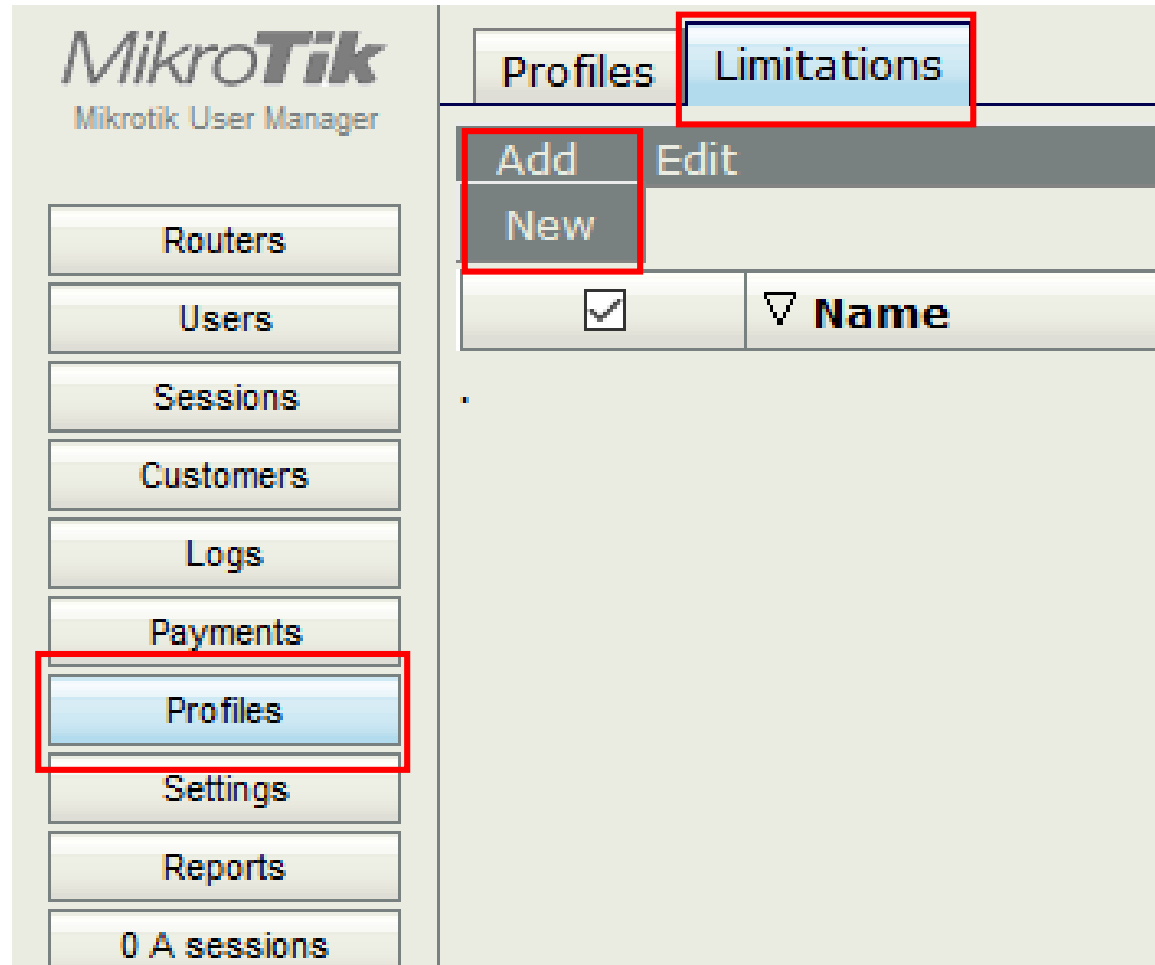
CoA support: ☒

CoA port: 3799

Add

Create Profiles and limitations

Create limitations



Create limitations

Limitation details

▲ Main

Name: 512Kbps-1GB

Owner: admin

▲ Limits

Download: 0B

Upload: 0B

Transfer: 1G

Uptime:

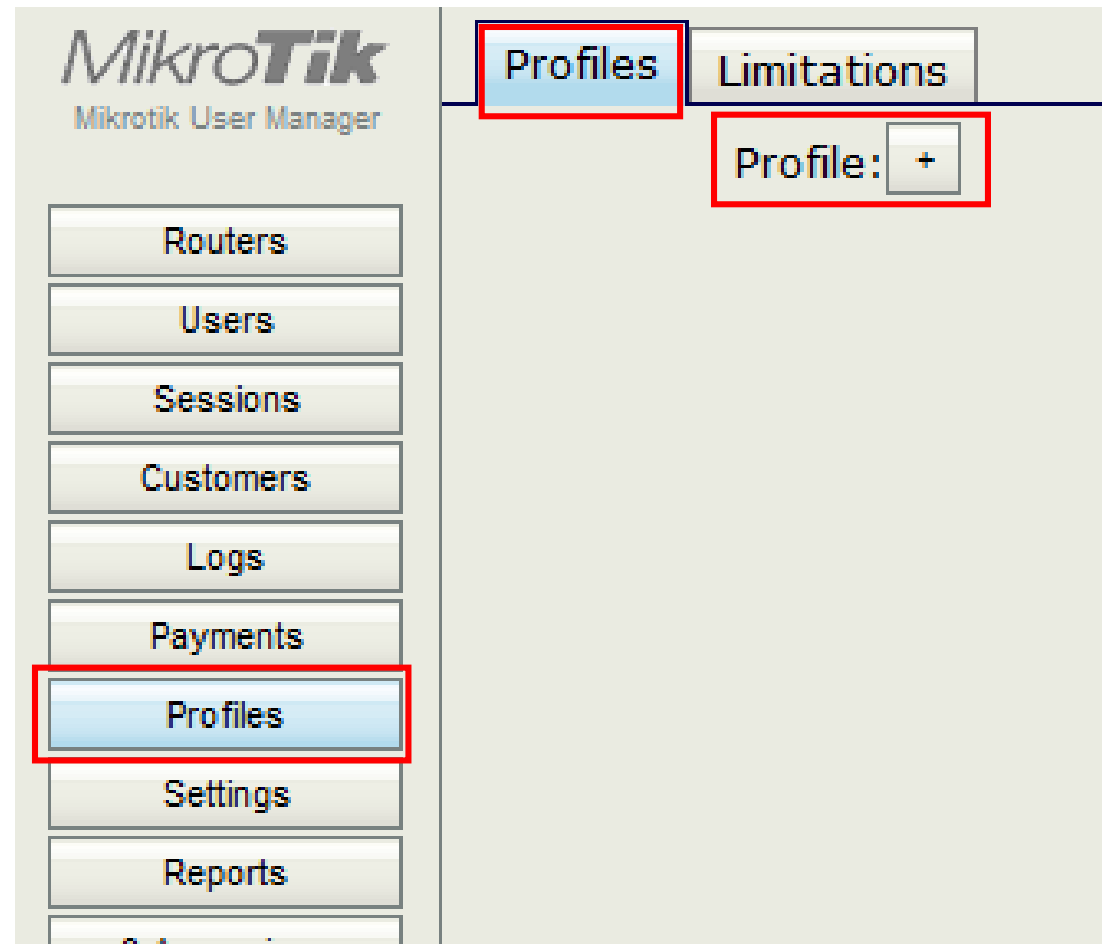
▲ Rate limits

Rate limit: Rx	256K	Tx	512K
Burst rate: Rx	348k	Tx	768k
Burst threshold: Rx	192k	Tx	384k
Burst time: Rx	16	Tx	16
Min rate: Rx	128K	Tx	256K
Priority:	4		

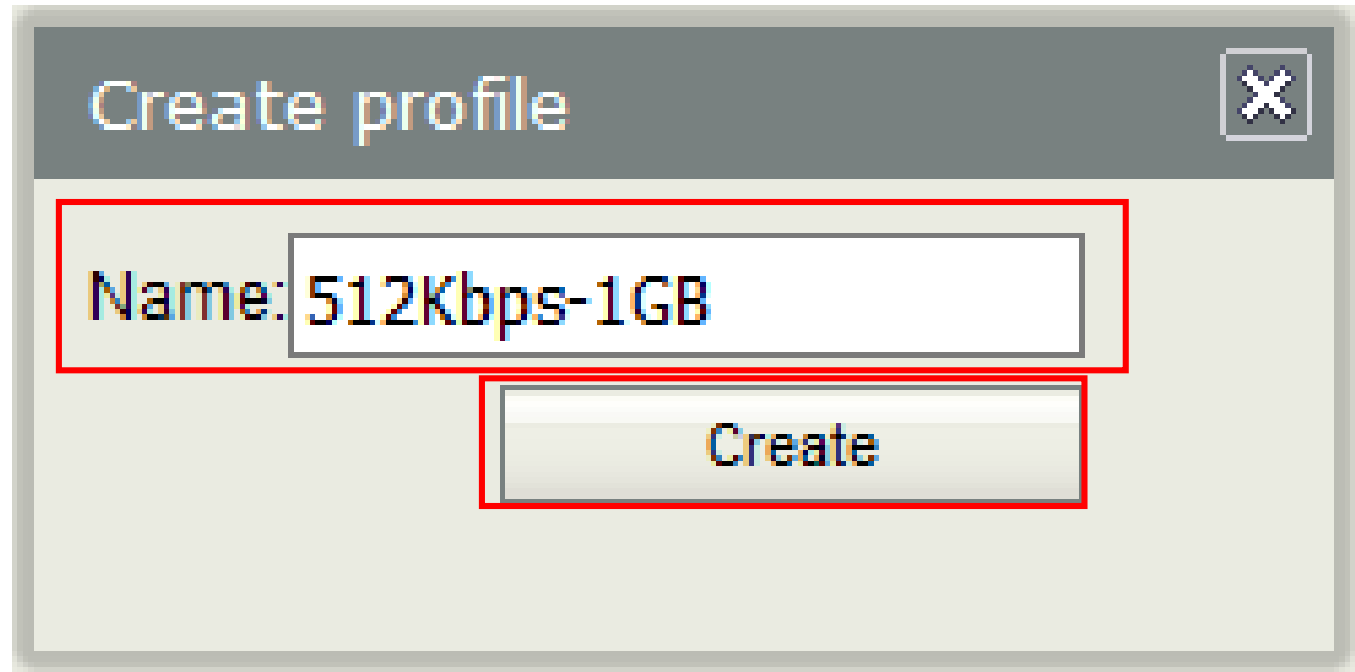
▼ Constraints

Add

Create Profiles



Create Profiles



Create profile

Name: 512Kbps-1GB

Create

Create Profiles

The screenshot shows the MikroTik configuration interface for creating profiles. The 'Profiles' tab is selected. The profile '512Kbps-1GB' is chosen from the dropdown. The 'Name' field is '512Kbps-1GB'. The 'Name for users' field is empty. The 'Owner' is 'admin'. The 'Validity' is '30d', 'Starts' is 'At first logon', 'Price' is '0.00', and 'Shared users' is '1'. The 'Add new limitation' button is highlighted with a red box.

Field	Value
Profile	512Kbps-1GB
Name	512Kbps-1GB
Name for users	
Owner	admin
Validity	30d
Starts	At first logon
Price	0.00
Shared users	1

Buttons: Save profile, Remove profile

Unlimited profile

Add new limitation

Create Profiles

Profile part

▼ Period

Days: ☒ Sunday
☒ Monday
☒ Tuesday
☒ Wednesday
☒ Thursday
☒ Friday
☒ Saturday

Time: 0:00:00 - 23:59:59

▼ Limits

☒ 512Kbps-1GB

New limit Cancel Add

Create Profiles

The screenshot shows the MikroTik WinBox interface for creating a profile. The 'Profiles' tab is selected, and the 'Limitations' sub-tab is also visible. The form contains the following fields:

- Profile: 512Kbps-1GB (dropdown menu)
- Name: 512Kbps-1GB (text field)
- Name for users: (empty text field)
- Owner: admin (text field)
- Validity: 30d (text field)
- Starts: At first logon (dropdown menu)
- Price: 0.00 (text field)
- Shared users: 1 (dropdown menu)

Below the form are two buttons: 'Save profile' (highlighted with a red rectangle) and 'Remove profile'.

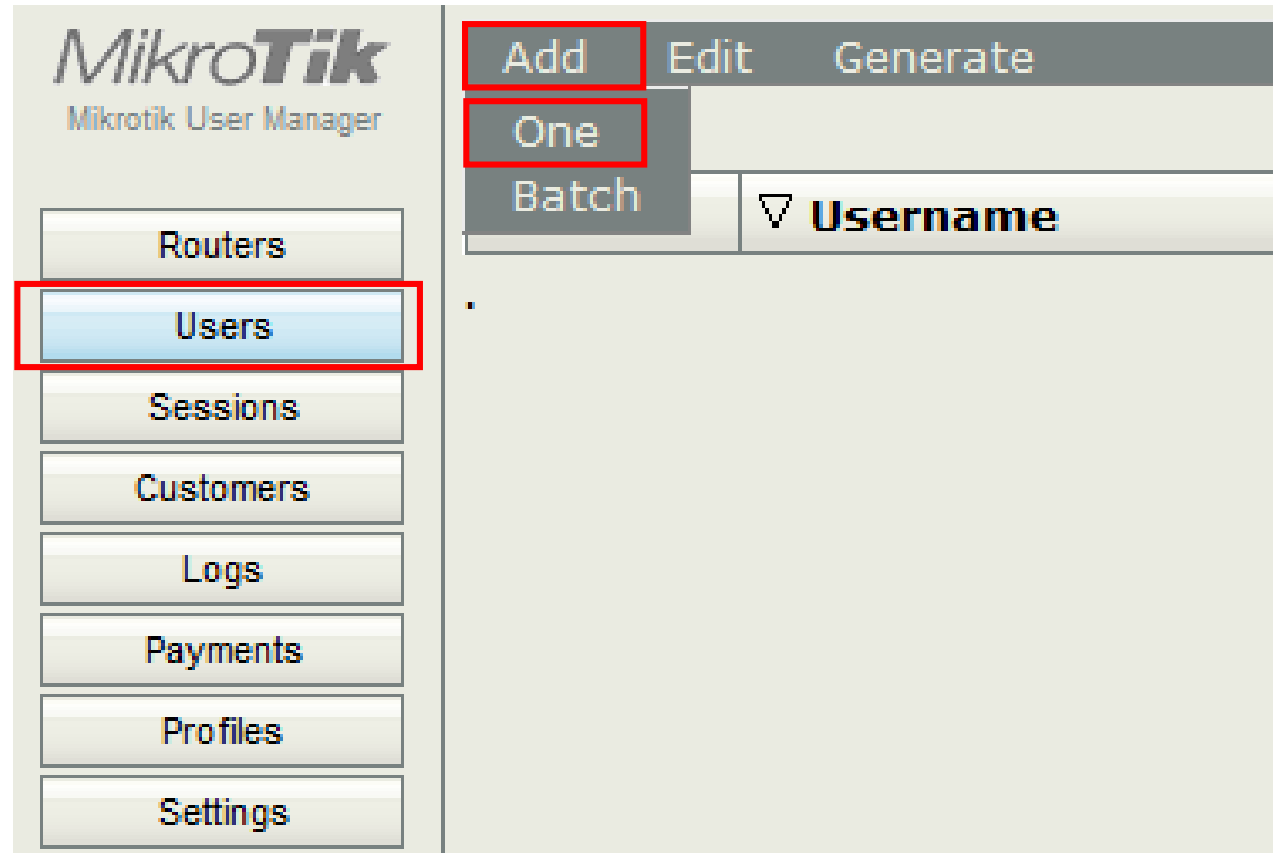
Under the 'Profile limitations' section, there is a table with the following structure:

		Constraints
☐	Active	
☐	Always	Transfer limit: 1024.0 MiB Rate limits: 256K/512K 348K/768K 192K/3

At the bottom of the limitations section are two buttons: 'Add new limitation' and 'Remove selected limitations'.

Create Users in User Manager

Create Users



Create Users

User details

▲ Main

Username: User1

Password: 1234

Disabled: ☐

Owner: admin

▼ Constraints

▼ Wireless

▼ Private information

Assign profile: 512Kbps-1GB

Add

Create Users

MikroTik
Mikrotik User Manager

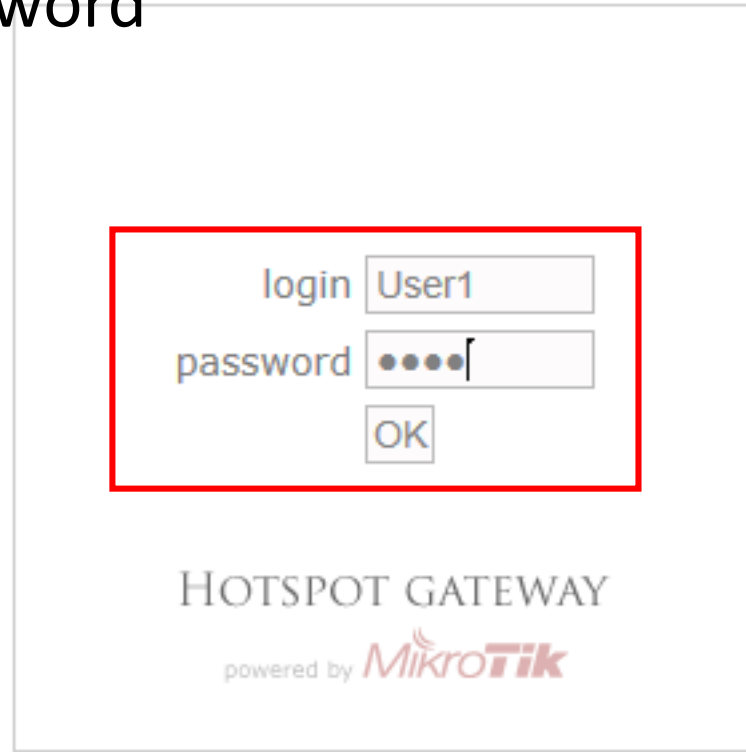
[Add](#) [Edit](#) [Generate](#)

☐	▼ Username	▼ Till time	▼ Total time left
☐	User1	Not set	

[Routers](#)
[Users](#)
[Sessions](#)
[Customers](#)
[Logs](#)
[Payments](#)
[Profiles](#)
[Settings](#)
[Reports](#)
[0 A sessions](#)
[0 A users](#)
[Advanced search](#)
[Maintenance](#)
[Logout](#)

Test Solution

Please Connect to **HotSpot AP2** and Login to Hotspot with **user1** for user and **1234** for password



A screenshot of a Hotspot Gateway login interface. The interface is enclosed in a light gray border. Inside, there is a red rectangular box highlighting the login fields. The fields are labeled 'login' and 'password'. The 'login' field contains the text 'User1'. The 'password' field contains four dots and a cursor. Below the password field is an 'OK' button. Below the red box, the text 'HOTSPOT GATEWAY' is displayed in a large, gray, sans-serif font. Below that, the text 'powered by MikroTik' is displayed in a smaller, gray, sans-serif font, with the MikroTik logo in red.

login User1

password ●●●●

OK

HOTSPOT GATEWAY

powered by MikroTik

Test Solution

Please go to <http://hotspot2.mikrotik/status> for Check status and log off

Welcome User1!

<u>IP address:</u>	<u>10.5.50.254</u>
<u>bytes up/down:</u>	<u>310.4 KiB / 841.6 KiB</u>
<u>connected:</u>	<u>2m12s</u>
status refresh:	1m

log off

References

1. http://wiki.mikrotik.com/wiki/Manual:User_Manager
2. <http://wiki.mikrotik.com/wiki/Manual:IP/Hotspot>
3. http://wiki.mikrotik.com/wiki/User_Manager/Hotspot_Example
4. http://wiki.mikrotik.com/wiki/Manual:RADIUS_Client
5. http://wiki.mikrotik.com/wiki/User_Manager/Users
6. http://wiki.mikrotik.com/wiki/User_Manager/Profiles
7. http://wiki.mikrotik.com/wiki/Manual:Customizing_Hotspot

Thank You