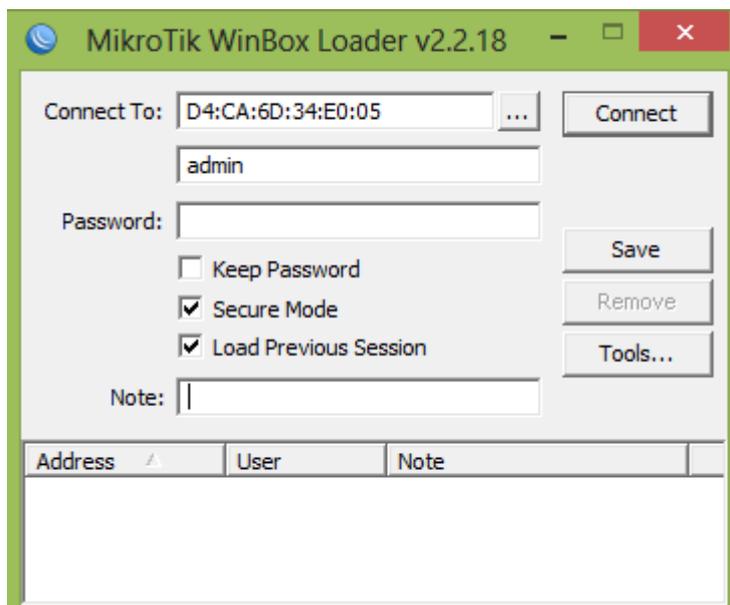


Mikrotik RouterBoard

Modified on: Mon, 1 Jun, 2015 at 1:31 PM

There guides are provided using the Mikrotik Winbox program as an interface with the RouterOS.

The Winbox program can be obtained from the MikroTik website - <http://www.mikrotik.com/download>



Start by logging into your Mikrotik device.

Basic Router Setup

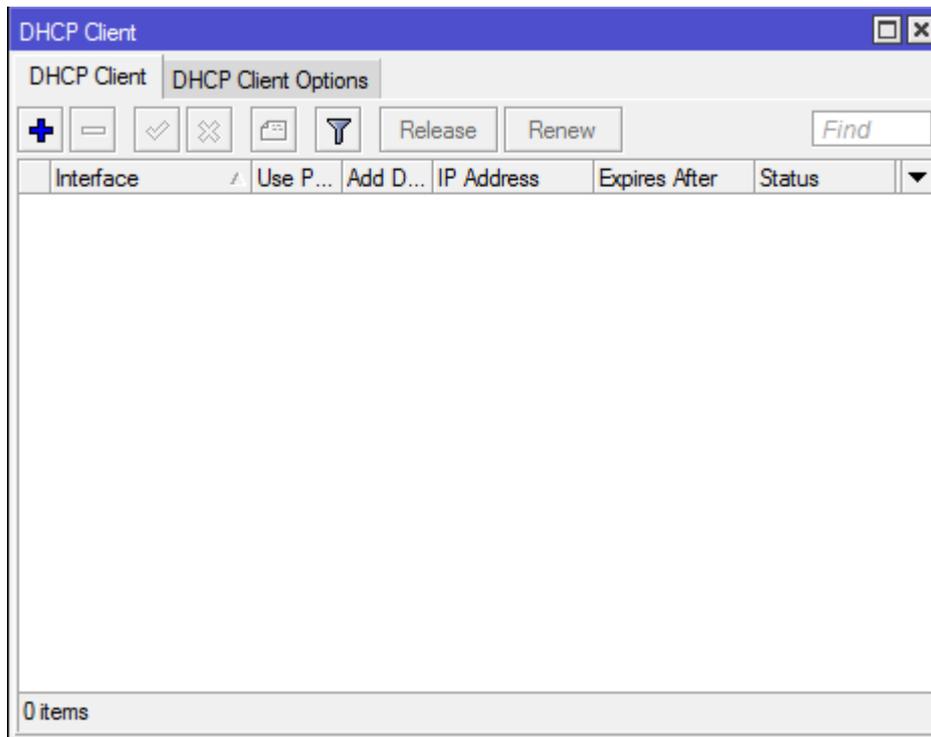
Before you follow the instructions in this guide it's important that you decide which port you will assign the role of WAN, and whether you plan to use the inbuilt WiFi for the hotspot or one of the LAN ports in conjunction with additional APs

WAN

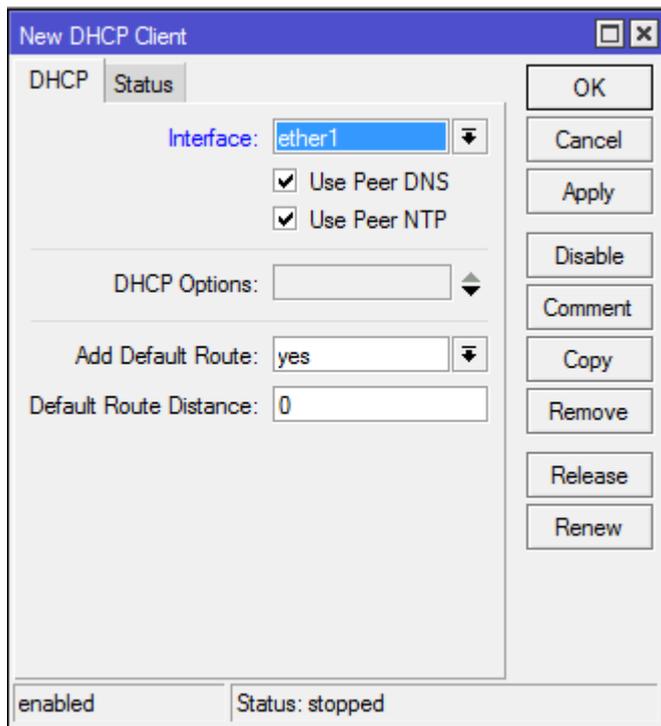
The WAN port is where you connect the MikroTik to your existing router, for our guide we use Ethernet port 1 on the router -

Click on **IP > DHCP Client**

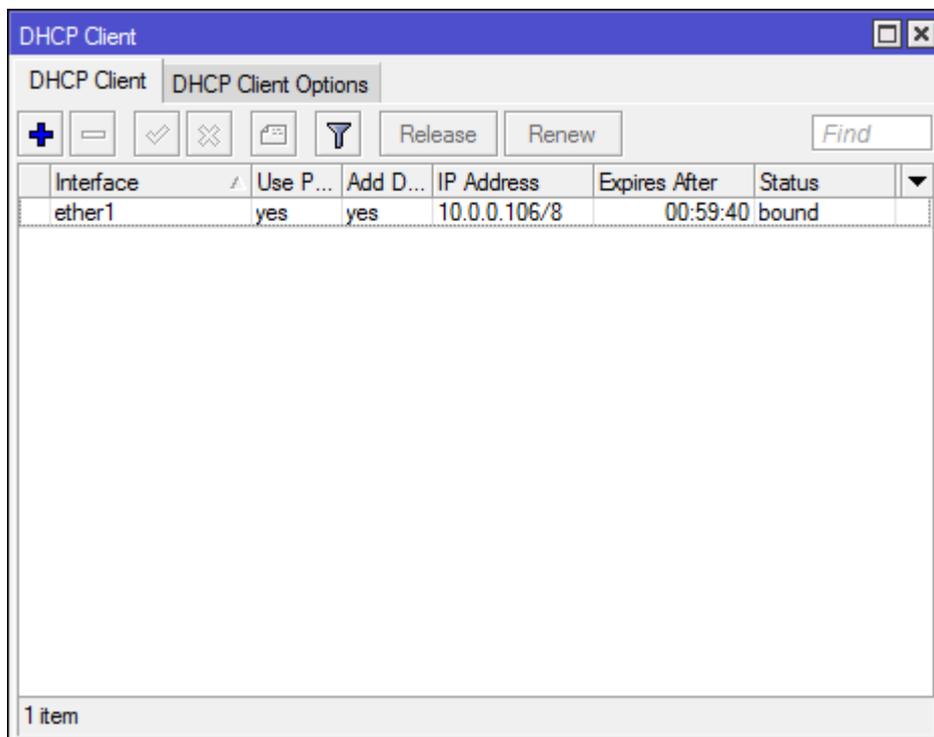
Click on the "+" and enter the below settings:



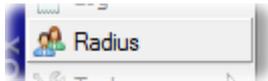
Select the interface you want to be the WAN port.



Click "OK"



Hotspot Setup



Click on **Radius** on the left menu



then in the Radius dialoge box, click on the "+" enter the below settings:

- **Service:** Hotspot
- **Address:** *insert radius_server_ip here*
- **Secret:** *insert radius_secret here*
- **Authentication Port:** 1812
- **Accounting Port:** 1813

Radius Server

General | Status

- Service

ppp login

hotspot wireless

dhcp

Called ID:

Domain:

Address:

Secret:

Authentication Port:

Accounting Port:

Timeout: ms

Accounting Backup

Realm:

Src. Address:

enabled

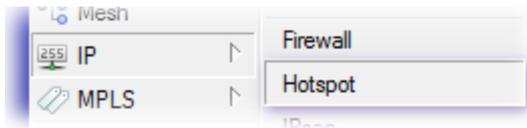
OK
Cancel
Apply
Disable
Comment
Copy
Remove
Reset Status

Press **OK** to Save

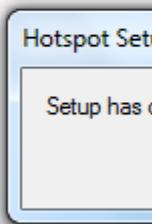
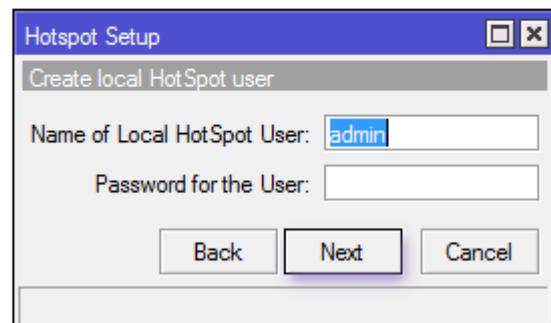
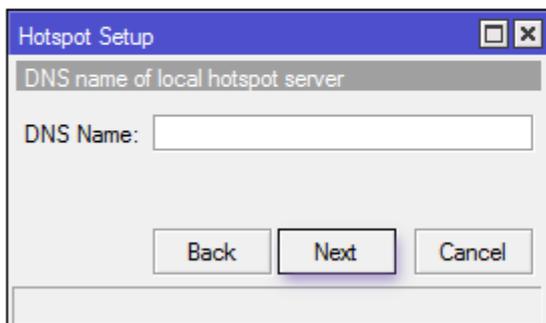
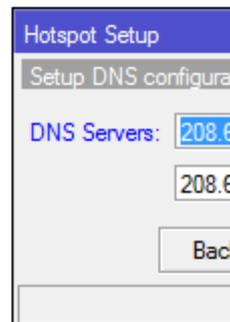
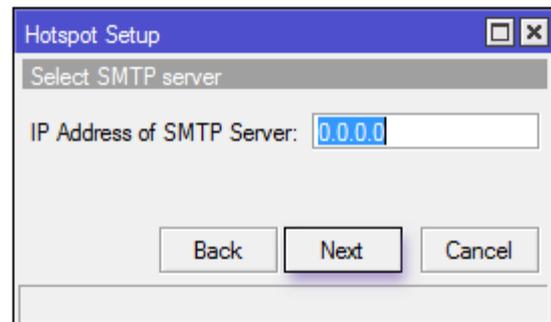
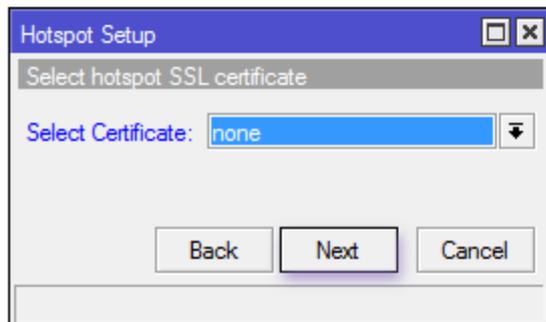
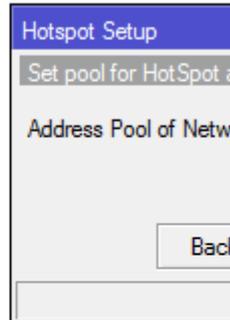
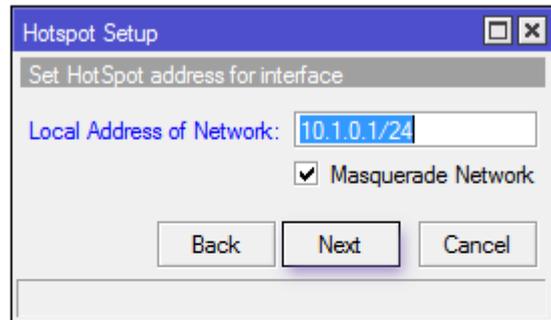
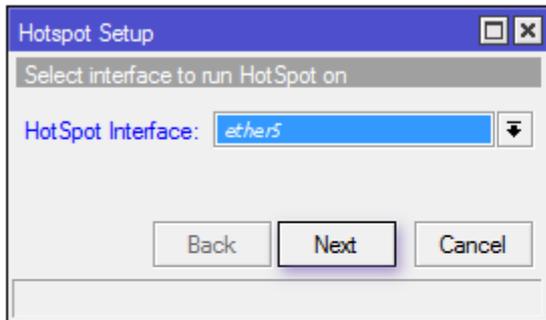
On **Radius** window, click on the "+" again, and enter the following settings:

- **Service:** Hotspot
- **Address:** *insert radius_server2_ip here*
- **Secret:** *insert radius_secret here*
- **Authentication Port:** 1812
- **Accounting Port:** 1813

Press **OK** to Save



Click on **IP > Hotspot** on the left menu and then **Hotspot Setup** to start the Hotspot set up 'wizard' and configure with the below settings:



- **Hotspot Interface:** *This should be the interface your guest users connect through, such as the Wireless/WLAN interface, or an Ethernet port that is connected to an access point or switch. For the remainder of this guide we use Ethernet port 5 as the hotspot interface, please use WLAN interface if you plan to apply this to the Wi-Fi of*

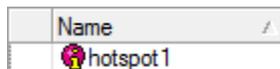
the router.

Click "Next"

- **Local Address of Network:** 10.1.0.1/24
Click "Next"
- **Masquerade Network:** Ticked
Click "Next"
- **Address Pool of Network:** 10.1.0.2-10.1.0.254
Click "Next"
- **Select Certificate:** None
Click "Next"
- **IP Address of SMTP Server:** *leave at default*
Click "Next"
- **DNS Servers:** 208.67.222.222 and 208.67.220.220
Click "Next"
- **DNS Name:** *Leave blank*
Click "Next"

Click "OK" to Complete

In the **Hotspot Window**, on the **Server** tab, double-click the hotspot you've just created to load the **Hotspot Server Window**



Change the **Name** to the MAC address of your Mikrotik as printed on the bottom of the device.

This is the first MAC address on the label. If you cannot find it, go to "Interfaces" on the left menu and then click on "ether1-gateway" and use the MAC listed there.

Note the format of the MAC should be as shown, i.e.: AA-BB-CC-DD-EE-FF (all capitals with hyphens between each two digits)

Hotspot Server <D4-CA-6D-34-E0-03>

Name:

Interface:

Address Pool:

Profile:

Idle Timeout:

Keepalive Timeout:

Addresses Per MAC:

IP of DNS Name:

Proxy Status:

Buttons: OK, Cancel, Apply, Disable, Copy, Remove, Reset HTML

enabled HTTPS

Supplemental WLAN Set up details:

If you chose WLAN for your hotspot during your setup the **Interface** on **Hotspot Server** above will say **WLAN** for your **Interface**. You will now need to enable the SSID you intend to use:

On the left hand menu, click on "**Wireless**" and on the **Wireless Tables** window press the Tick icon to enable the WiFi.

Wireless Tables

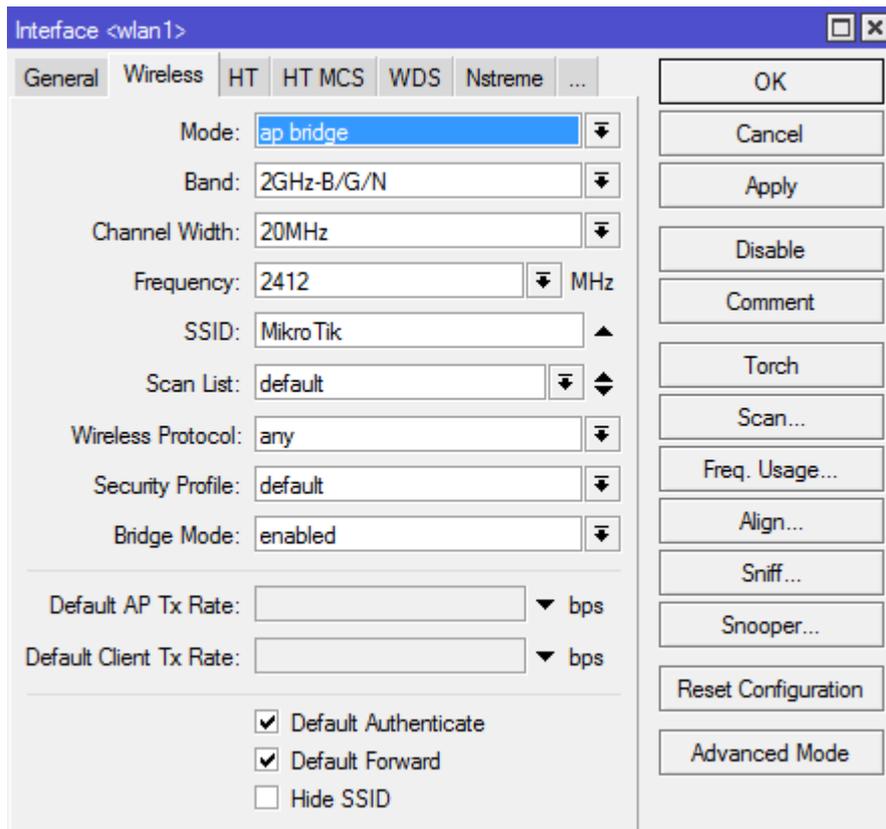
Interfaces | Nstreme Dual | Access List | Registration | Connect List | Security Profiles | Channels

+ - ✓ ✗ 📄 🗑️ Scanner | Freq. Usage | Alignment | Wireless Sniffer | Wireless Snooper

	Name	Type	L2 MTU	Tx	Rx	Tx Packet (p/s)	Rx Packet
R	wlan1	Wireless (Atheros AR9...	2290	10.9 kbps	18.5 kbps	20	

1 item out of 6 (1 selected)

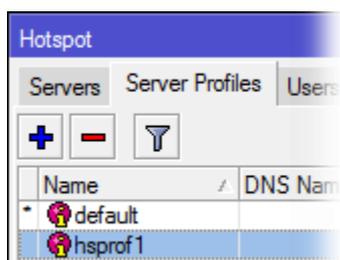
To define the SSID double-click on the **wlan1** entry in this view and click on the **Wireless** tab



Change the SSID field to one of your choosing.

Hotspot Server Profile Settings:

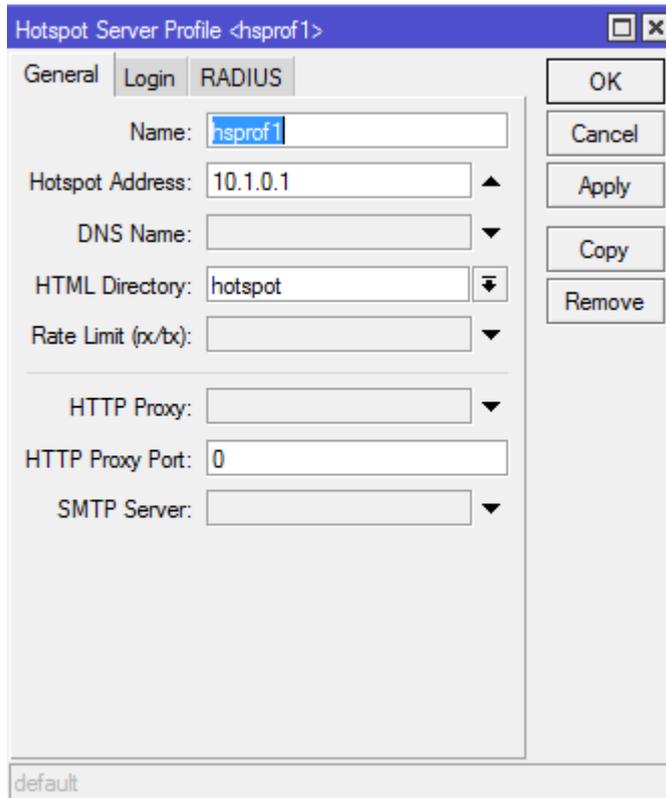
Returning to setting up the **Hotspot** service setup: on the **Hotspot Window**, (IP > Hotspot) click on the **Server Profiles** Tab. and double-click on the newly created Profile



On the **Hotspot Server Profile** dialogue window; set the following:

On the **General** tab:

- **Hotspot Address:** 10.1.0.1



The image shows a screenshot of the 'Hotspot Server Profile' dialog box, specifically the 'General' tab. The dialog box has a title bar with the text 'Hotspot Server Profile <hsprof1>' and standard window controls. The 'General' tab is selected, and the 'RADIUS' tab is also visible. The 'Name' field contains 'hsprof1'. The 'Hotspot Address' field contains '10.1.0.1'. The 'DNS Name' field is empty. The 'HTML Directory' field contains 'hotspot'. The 'Rate Limit (x/tx)' field is empty. The 'HTTP Proxy' field is empty. The 'HTTP Proxy Port' field contains '0'. The 'SMTP Server' field is empty. On the right side of the dialog box, there are buttons for 'OK', 'Cancel', 'Apply', 'Copy', and 'Remove'. At the bottom left of the dialog box, the text 'default' is visible.

On the **Login** tab:

- **HTTP PAP:** Ticked
- **All others:** Unticked

The screenshot shows a window titled "Hotspot Server Profile <hsprof 1>". It has three tabs: "General", "Login", and "RADIUS". The "RADIUS" tab is active. On the right side of the window, there are buttons for "OK", "Cancel", "Apply", "Copy", and "Remove".

Under the "Login By" section, there are several options:

- MAC (highlighted with a dotted border)
- Cookie
- HTTP CHAP
- HTTPS
- HTTP PAP
- Trial
- MAC Cookie

Below these options are several input fields:

- MAC Auth. Password: [text box]
- HTTP Cookie Lifetime: 3d 00:00:00
- SSL Certificate: none [dropdown arrow]
- Split User Domain
- Trial Uptime Limit: 00:30:00
- Trial Uptime Reset: 1d 00:00:00
- Trial User Profile: default [dropdown arrow]

At the bottom left of the window, the text "default" is displayed.

On the **RADIUS** tab:

- **Use RADIUS:** Ticked
- **MAC Format:** XX-XX-XX-XX-XX-XX
- **Accounting:** Ticked
- **Interim Update:** 00:15:00

The image shows a screenshot of a software dialog box titled "Hotspot Server Profile <hsprof 1>". The dialog has three tabs: "General", "Login", and "RADIUS", with "RADIUS" being the active tab. On the right side of the dialog, there are five buttons: "OK", "Cancel", "Apply", "Copy", and "Remove".

Inside the "RADIUS" tab, the following settings are visible:

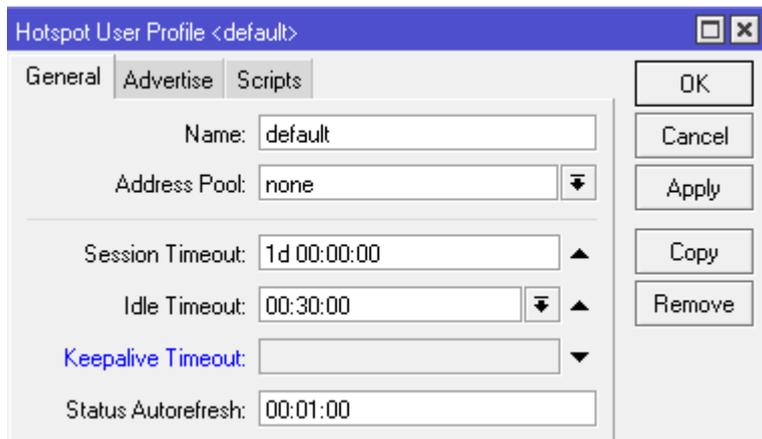
- A checked checkbox labeled "Use RADIUS".
- A "Default Domain:" label followed by an empty text input field.
- A "Location ID:" label followed by an empty text input field.
- A "Location Name:" label followed by an empty text input field.
- A "MAC Format:" label followed by a dropdown menu showing "XX-XX-XX-XX-XX-XX".
- A checked checkbox labeled "Accounting".
- An "Interim Update:" label followed by a text input field containing "00:15:00".
- A "NAS Port Type:" label followed by a dropdown menu showing "19 (wireless-802.11)".

At the bottom left of the dialog, the word "default" is displayed in a small font.

Click "OK" to Save

On the **Hotspot Window** click on **User Profiles** and double click on the default entry. Set the following:

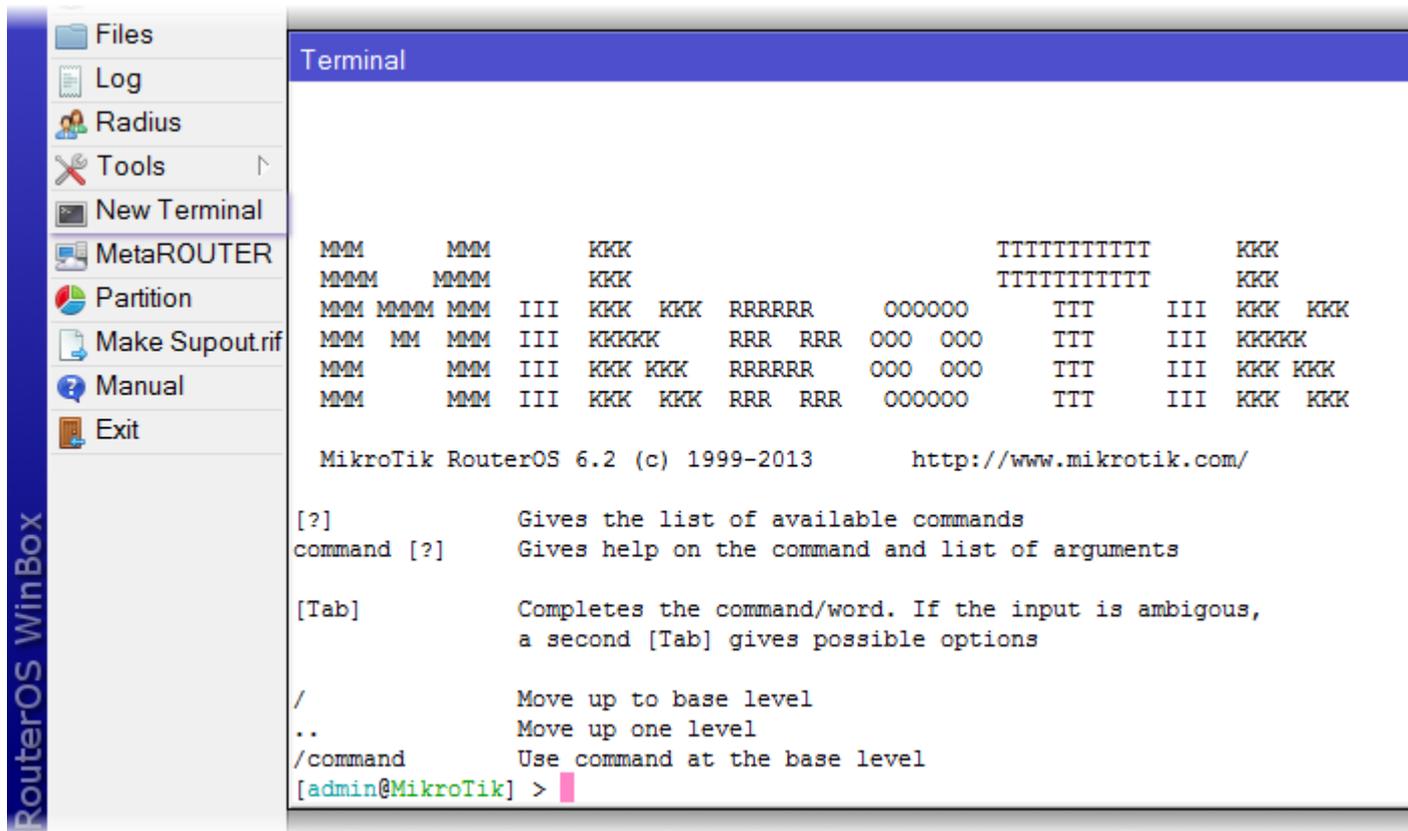
- **Session Timeout:** 24:00:00
- **Idle Timeout:** 00:30:00
- **Keepalive Timeout:** blank (click the up arrow to wipe the value)



Click **"OK"** to Save

Setting Up the Wall Garden:

On the main Winbox interface, click **New Terminal** to open the **Terminal Window**



- **Copy** the following text:

```
/ip hotspot walled-garden
add dst-host=*insert access_domain here*

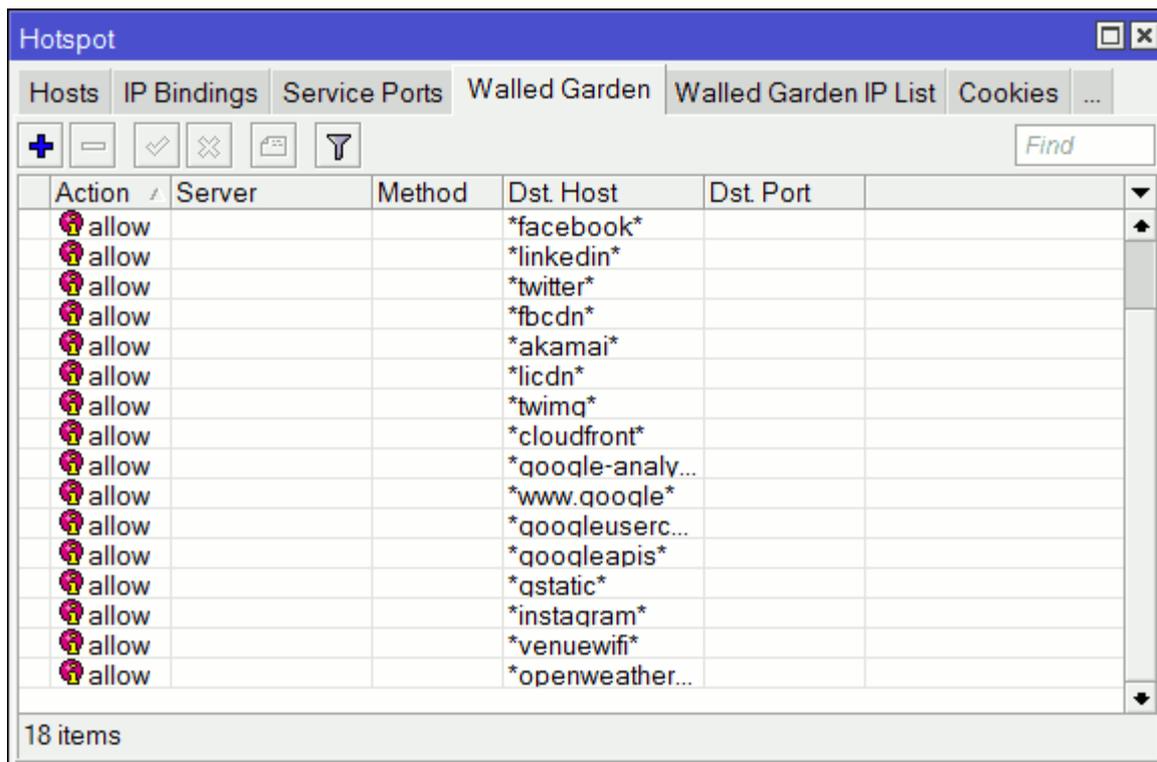
add dst-host=*cloudfront*
add dst-host=*google-analytics*
add dst-host=*www.google*
add dst-host=*venuewifi*
add dst-host=*openweathermap*
```

- and **Paste** this into the **Terminal** Window (press **Control+Shift+Insert** on your keyboard)
- Press **Enter** to run the command.

If you wish to support social network logins, you also need to copy and paste the blocks below for each network you plan to support, in to the terminal window

Facebook	Twitter	LinkedIn	Google	Instagram
<pre> /ip hotspot walled- garden add dst- host=*face book* add dst- host=*fbcd n* add dst- host=*akam ai* </pre>	<pre> /ip hotspot walled- garden add dst- host=*twit ter* add dst- host=*twimg* </pre>	<pre> /ip hotspot walled-garden add dst- host=*link edin* add dst- host=*licdn* </pre>	<pre> /ip hotspot walled- garden add dst- host=*googleuserc ontent* add dst- host=*googleapis* add dst- host=*gstatic* add dst- host=*accounts.google * </pre>	<pre> /ip hotspot walled-garden add dst- host=*insta gram* </pre>

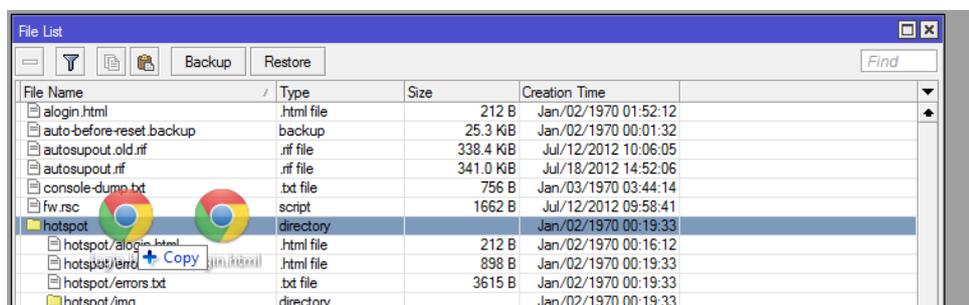
This will create the Walled Garden settings; this can be reviewed from the main Winbox interface, click **IP**, then **Hotspot** and selecting the **Walled Garden** tab:



Creating the Login Journey Parameters:

The final step is to upload two files to the router which handle the redirection to your customised splash page.

- Click on "**Files**" on the left menu.



- Save the two HTML files below
- Drag and drop the two .html files you downloaded in to the "**hotspot**" folder in the **File List** window.

insert mikrotik_files here