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Winbox

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5.1 Troubleshooting

Summary

A active Winbox lacks monitor for Linux and macOS is now available on the MikroTik RouterOS page!

Winbox is a small utility that allows the administration of MikroTik RouterOS using a fast and simple GUI. It is a native Win32 Winbox may be run by an user **Admin** and **Read (RO)** using Wine. All Winbox interface functions are as close as possible to running the console functions. Winbox communicates with RouterOS using a proprietary protocol that operates over TCP (port 8291) and can also be encrypted. Winbox can be portable from the Winbox, the MAC address change on an Ipv4 box.

Front Winbox v3, is the following security features are used:

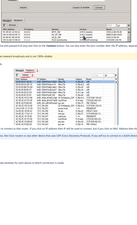
- Winbox now is open-sourced with a standard database architecture, issued by 100 Winbox (Win.TP).
- Winbox now is open-sourced with a standard database architecture, issued by 100 Winbox (Win.TP).
- Both sides verify that the other side knows the password but does not transmit it in the clear or in a reversible form.
- Winbox uses MD5 (RC4) MD5 hash as an encryption algorithm (requires Winbox v3.0rc1 or later).

Starting Winbox

Winbox is also a part of the standard tools like the MAC-Telnet protocol page. Winbox runs on a downloaded, double-click on it, and the Winbox loader window will pop up. There are two Winbox loader modes: simple which is enabled by default and advanced.

Simple mode

When you open Winbox loader for the first time simple mode appears and be used.



To connect to the router enter the IP or MAC address of the router, specify the username and password and click connect or Enter. You can also enter the port number after the IP address, separating them with a colon, like this: 192.168.88.1:8999. The port can be changed in the RouterOS **services** menu.

! It is recommended to use IP address parameter, MAC parameter **should** be used only if your network does not use TCP/IP protocol.

You can also use neighbor discovery to list available routers on the **Neighbors** tab.

From the list of discovered routers, you can click on the IP or MAC address column to connect to the router. If the router has both IP and MAC address set for each router, you can enter the MAC address into the MAC address field and click connect to the router.

! Neighbor discovery will show devices that are not compatible with MNDP, like Cisco routers or any other device that uses CDP (Cisco Discovery Protocol). If you will try to connect to a Cisco device, then the connection will be established through a wrong protocol.

Buttons/Check-boxes and Other Fields

- **Connect To** - Router's IP address or MAC address
- **Connect To RoMON** - Connect to a RoMON router
- **Password** - Specified login of the router's user entered in the **Managed** list
- **Save Password** - If unchecked, the password is not saved in the list
- **Secure Mode** - Enables a secure session connection, Winbox uses new encryption for each device to which connection is made.
- **Keep Password** - If unchecked, the password is not saved in the list
- **Password** - password used for authentication
- **Port** - Port number used for connection (if password is not used in the list

Menu Items

- **File**
  - **New** - Create a new managed routers list or a saved list location
  - **Open** - Open a saved managed routers list file
  - **Save As** - Save current managed router list to file
  - **Import** - Import list from a file
- **Tools**
  - **Advanced Mode** - Enables/Disables advanced mode view
  - **Terminal** - Opens terminal window
  - **Ping** - Opens Ping window
  - **Neighbor Discovery** - Change what columns should be shown
  - **Clear cache** - Clear Winbox cache
  - **Change Address** - Change address for Winbox loader

Advanced mode

Additional Winbox loader parameters are enabled when **advanced mode** is switched with Tools → Advanced Mode.

Buttons/Check-boxes and Other Fields

- **Add** - Add new router
- **Browse** - Browse the directory for a router-specific session
- **Keep Password** - If unchecked, the password is not saved in the list
- **Secure Mode** - Enables a secure session connection, Winbox uses new encryption for each device to which connection is made.
- **Address Acquisition** - Select mode which is used by the Winbox to obtain communication and router.

- **Simple** - Select router session
- **Discover** - Discover routers in the same network
- **Group** - Group routers which have similar configuration
- **Static Identity** - Select Identity type from the available device list

! Winbox4 mode is not recognized, but is not still the loaded with another Winbox. **If** the mouse password, is not set for it!

Command Line

It is possible to use the command line to connect to, user and password parameters automatically:

```
winbox.exe [<address:port> [<user> [<password>]]]
```

For example (with no password):

```
winbox.exe 10.0.101.1 admin ""
```

Will connect to router "10.0.101.1" with user "admin" without a password.

It is possible to use the command line to pass connect to, user, and password parameters automatically to connect to the router through RoMON. In this case, RoMON ingore must be saved on the Managed routers list or Winbox would locate the user and password for this device:

```
winbox.exe /romon [<address:port> [<user> [<password>]]]
```

For example (with no password):

```
winbox.exe /romon 10.0.101.1 00:0C:42:05:CE:3D admin ""
```

Will connect to router 10.0.101.1 with MAC address 00:0C:42:05:CE:3D, via RoMON agent and user "admin" without a password.

IPv6 connectivity

Winbox supports IPv6 connectivity. To connect to the router's IPv6 address, it must be placed in square brackets like quote and or add dissident when connecting to the IPv6 server. Example:

[ADMIN]

When connecting to the the full local address interface make must be entered after the %.

[FE80:5F5F:5A:0:0:5EFE:C0A8:6401%12]

Port number is set after the square bracket when it is necessary to connect Winbox to the router's IP address.

[FE80:5F5F:5A:0:0:5EFE:C0A8:6401%12]:8291

Winbox neighbor discovery is capable of discovering IPv6 enabled routers. There are also one-time for each IPv6 enabled router, use entry is sent IPv6 address and another one with IPv6 link-local address. You can easily choose which one you want to connect to.

Run Winbox on macOS

Starting with macOS 10.15 Catalina, Apple has removed support for 32bit applications, meaning it is no longer possible to use regular Wine and regular Winbox in this OS. Wine has made available a Wine version for macOS, and Winbox has released a special WineBundle version.

To run Winbox4 in the following steps are required:

1. Install latest Wine from the Wine macOS build page (select 32-bit/64-bit and make sure you have downloaded the WineBundle.tar.xz) inside from the Winbox download page.
2. Launch **Winbox64.exe** with "open file with" > **Wine.app**.

Run Winbox on Linux

It is possible to run Winbox on Linux by using Wine emulation software. Make sure that the **32-bit** version of Wine is installed, otherwise, you may see distortions.

Interface Overview

Winbox interface has been designed to be intuitive for most of the users. The interface consists of:

- The main toolbar at the top where users can add various side items, like IPv6, and memory usage.
- The work area in the middle where all the windows are opened. The first thing is displayed when you log in is the Winbox interface, from the **IP/Arp** menu and all its sub-menus will not be displayed.
- Work area - an area where all menus windows are opened.

The title bar shows information to identify with which router Winbox session is connected, and the version of Winbox is displayed in the following format:

```
[username@RouterName] > IP or MAC] - [RouterOS] - Winbox [OPEN resizable] on [OS model] ([platform])
```

From the screen shown we can see that **krzysztof** is logged into router with IP/MAC address **[fe80:4dfa:ff:fe00:0a00]**, Router is **CCR in Krzysztof, Ltd**, currently installed RouterOS version is **v6.36rc6**, RouterBoard is **CCR1016-12S-1S+** and platform is **x86**.

- **user** - user name
- **IP/MAC** - router's IP address
- **RouterOS** - installed version
- **Winbox** - version of Winbox
- **OPEN** - Winbox is opened
- **resizable** - window can be resized
- **on [OS model]** - on which device Winbox is running
- **([platform])** - platform Winbox is running

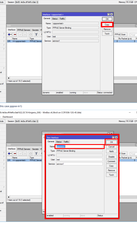
Many Winbox tools make work entering performed access tools (→ the entry).

Do the right side is loaded:

- an indicator that shows whether the Winbox session uses encryption
- a button that opens the Winbox Settings window
- Custom info fields that can be added by the user by right-clicking on the toolbar and picking available info fields from the list

Work Area and Child Windows

Winbox fully as an MDI interface meaning that all tools configuration (child) windows are attached to the main panel Winbox window and is closed in the work area.



Child windows can not be dragged out of the working area. Below is the above example shows how the **interface** window is dragged out of the visible working area and only horizontal scroll bar appeared at the bottom. If any windows is outside visible work area double-click the window and it should automatically relocate to the center.

Child window menu bar

Each child window has its own toolbar. Most of the windows have the same set of toolbar buttons.

- **Add** - add a new item to the list
- **Remove** - remove the selected item from the list
- **Enable** - enable selected item (same as the double-command from console)
- **Disable** - disable selected item (same as the double-command from console)
- **Comment** - add or edit a comment
- **Sort** - allows to sort out items depending on some parameters. Read more →

Above all windows have a quick search input field on the right side of the toolbar. Also [Ctrl+F] will open the search field.

Below are the on the right side next to the quick find input field there is a drop-down box. On the currently opened list of found windows, the drop-down box allows to quickly sort out items by routing tables. For example, if the **main** is selected, drop-only routes from the main routing table will be displayed.

Sorting out displayed items

Almost every window has a **Sort** button. When clicking on the button several options appear as illustrated in the screenshot below:

The example shows how to quickly filter out routes that are in the 10.0.0.0/8 range.

1. Press **Sort** button
2. Choose **Custom** mode from the first drop-down box
3. Choose **Address** from the second drop-down box (they filter will check if IP address exists in a range of the specified network)
4. Choose **10.0.0.0/8** from the third drop-down box (or simply type in "10.0.0.0/8")
5. Check/uncheck box to add or remove another filter to the rules
6. Press **Apply** to apply the filter

As you can see from the screenshot Winbox tool not only routes that are within the 10.0.0.0/8 range.

Comparison operators illustrate in the environment may be different for each window. For example "IP Neat" window has only two ip and ip **/24**. Other windows may have operations such as "is not", "contains", "contains not".

Below are some examples of how to use the comparison operators in order to create a filter for troubleshooting or other purposes:

- set the filter to see interfaces in the example above,
- prevent broadcast to add another filter rule to the stack,
- set the **Action** to **Drop** in the **Firewall** tool,
- press the **Filter** button to apply the rules.

You can also remove and remove filters from the stack by pressing the **[x]** button.

Customizing list of displayed columns

By default, Winbox shows the most commonly used parameters. However sometimes it is needed to set other parameters, for example, "MTU" or "MAC" or other. **ALT** and click to "reorder" it saves are selected property.

- Right-click on the column header to open the menu with the list of available columns
- Click on the item and toggle them on the right side of the column menu or add / remove them from the list
- Point popped up menu move to **Show Columns** (**!**) and from the sub-menu select the desired columns to use (also click on **ALT-A-Click-S**).

Changes made to window layout are saved each time when Winbox is opened the same column order and size are applied.

Detail mode

It is also possible to switch **Detail mode**. In this mode all parameters are displayed in columns, the first column is the parameter name, the second column is the parameter's value.

To enable detail mode right-mouse click on the item list and from the popup menu pick **Detail mode**.

Category view

It is possible to list items by categories. In this mode, all items will be grouped alphabetically or by available categories. For example, rules may be categorized alphabetically if sorted by name. Items can also be categorized by type like in the screenshot below.

To enable Category view, right-mouse click on the item list and from the popup menu pick **Show Categories**.

Drag & Drop

It is possible to select and download files to/from the router using Winbox drag & drop functionality. You can also download files by pressing the right-mouse button on it and selecting "Download".

! Drag & drop works if Winbox is running on Linux using wine6. Drag and drop between two Winbox windows may fail.

Traffic monitoring

Winbox can be used as a tool to monitor the traffic of every interface, queue, or firewall rule or element. The more elements you choose, the more traffic will be displayed.

Item copy

The Winbox item copy is not a copy as text in Winbox. In this example, we will use the COPY button to make a [Quick] PPPoE server interface into a basic interface.

The image shows us the initial setup, as you see ether2 is a basic IP server interface.

Double-Click on the interface and click on COPY.

A new interface window will appear, a new name will be created automatically for the new copied item.

After the Ovpn-in name entry this interface will be Static:

Transferring Settings

- Managed router's table - to the file menu, see Save As and Open functions to save the managed router list to file and open it up again on a new workstation.
- Router session's profile - at the Tools menu, see Export and Import functions to save existing sessions to file and import them again on a new workstation.

Winbox Keyboard Shortcuts

Shortcut	Description
Ctrl + F	Find
F5	Refresh
Ctrl + N	Add or add a comment
Ctrl + X, Space	Enable or disable selected item
Ctrl + X, Enter	Enable or disable selected item
Ctrl + I	Zoom in Winbox
Ctrl + -	Zoom out Winbox
Tab	Choose next control
Tab + Shift	Choose previous control
Space	Select focused control
Esc + Esc	Close window
Alt + Enter	Open properties window
Ins + Add	Focus user window
Delete	Add new entry into list
Delete	Delete entry from list

Troubleshooting

Troubleshooting

Winbox cannot connect to the router's IP address. Winbox do not show up in the Neighbors list

Make sure that the Winbox firewall is set to allow Winbox connections through Private and/or Public network interfaces in the Windows firewall. If set to Managed in Control Panel\System and Security\Windows Defender Firewall\Allowed applications or disable the Windows firewall.

Winbox cannot connect to the router's IP address. Winbox do not show up in the Neighbors list

I can't find my device in Winbox Find Neighbors list or MAC connection fails with 'ERROR could not connect to 00:0C:42:05:CE:3D'

Most of the network devices will not install RF driver unless you have device by an IP configuration. So if the configuration or you have device.

Sometimes the device will be discovered but on a long. So MAC connection will fail with "ERROR could not connect to 00:0C:42:05:CE:3D"

! Winbox MAC-SERVER connection requires VPN client up to 7000, will significantly. Other values can perform poorly. Size of connectivity can occur

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