Instructions for Installation and Initial Setup of GEOBOX on Raspberry Pi 4 Model B 4-8 GB RAM

Our Group: https://t.me/ge0box

Technical Support: https://t.me/geobox_sup

Table of Contents:

Abbreviations:

- **RPi**: Raspberry Pi 4 Model B 4-8 GB RAM
- **GBX**: GEOBOX Software (serves as both the user interface and the software on RPi, and is also the general name for the entire hardware-software complex)
- **WG**: VPN type WireGuard
- **OVPN**: VPN type OpenVPN
- **MIDX**: MIDDLEBOX (virtual machine in RPi)
- **INTX**: INTERNETBOX (virtual machine in RPi)
- **HBX**: HOSTBOX (physical host operating system in RPi)
- **OS**: Operating System
- **SW**: Software
- **VM**: Virtual Machine
- **SD**: microSD card for RPi
- **ZT**: VPN type Zerotier

Equipment List:

- Raspberry Pi 4 Model B board, 4 or 8 GB RAM
- Case, heat sinks, fans for the processor and RPi chips
- Power supply, 5 volts, 3+ amps, USB Type-C
- SD memory card, 32+ GB memory, class v30+
- Optionally, USB LTE modem in HiLink mode
- Optionally, WiFi USB adapter with support for monitor/inject mode

---

Licensing, Installation, Getting Started:

Request GBX images in Telegram.
Install the GBX image on a microSD card using RPi Imager.
Connect the internet to the RPi via cable or through a USB modem.
Connect to the default Wi-Fi network and use the management software to access GBX.
Send the serial number and diagnostics from the installed GBX on RPi to Telegram - https://t.me/geobox_sup with a request for a wallet for payment in USDT or BTC.
Send the transaction hash to https://t.me/geobox_sup and request the product activation key.
After we confirm the payment, we will send you the product activation key.
Activation and use.

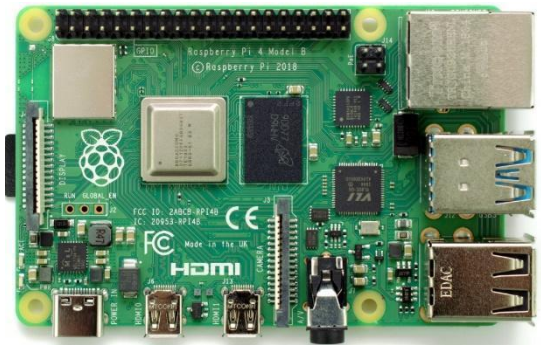
Important: After applying any settings in GBX, wait for the operations to complete. The completion of the operation is confirmed in the log by an entry ending with FINISH. Some of them take up to 2 minutes. Raspberry Pi is not a super powerful computer; several VMs are deployed in it, so don't rush!

Preparation for GEOBOX Software Installation

To operate GEOBOX, we will need:

Raspberry Pi 4 Model B, 4 or 8 GB RAM:

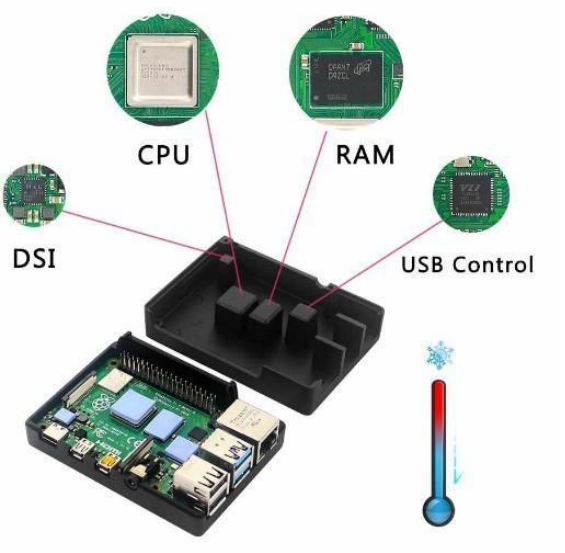
For the correct operation of GBX, a Raspberry Pi (RPi) board with at least 4 GB of RAM is required. We recommend choosing an RPi with 8 GB of RAM for faster performance of GBX and to have additional capacity for future updates.



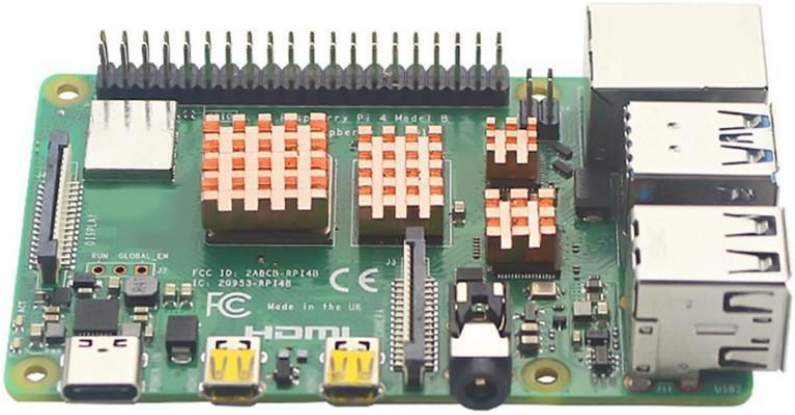
Case and Heat Sink for RPi Processor:

We strongly advise against using the board without a heat sink, as the RPi tends to get very hot during operation, especially when generating a Wi-Fi environment.
It is possible to use a heat sink without a case, but to prevent debris from getting in and to avoid short-circuiting the exposed parts of the board, we recommend using a case.
Closed aluminum cases with internal heat dissipation from the chips and cooling fins have proven to be effective. In such cases, a thermal pad must be used between the chips and the case; it will not work without it.
Some cases come with additional fans. For closed cases, we recommend removing the paint from the surface of the heat sink where it contacts the thermal pad to improve thermal conductivity.

Perfect:



Minimum (not recommended):



a. Power Supply, 5 volts, 3+ amps, USB Type-C:

For stable operation of the Raspberry Pi (RPi) with optional USB devices, a power supply with a capacity of at least 3 amps is required. In extreme cases, it is possible to run GBX with a lower power supply or through a USB 3+ port from an external device such as a power bank. However, under heavy load, the RPi may spontaneously reboot or fail to start at all.

Perfect:

b. microSD Memory Card, 32+ GB Memory, Class v30+:

For RPi, an SD card with a speed class of no less than V30 is suitable. We do not guarantee the correct operation of GBX after installation on an SD card with lower read/write speeds. We also advise against choosing cheap SD cards or cards from unknown brands, as there is a high risk of breakage or file damage during operation.

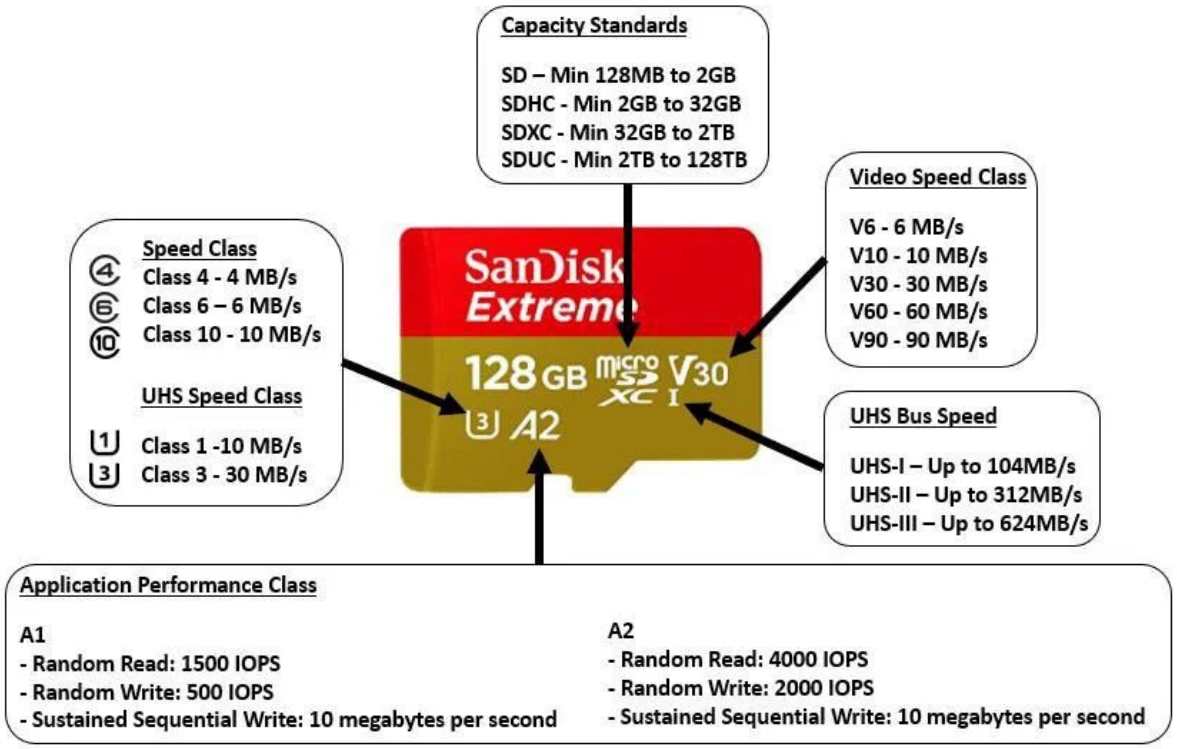
We recommend:

perfect:

minimum:

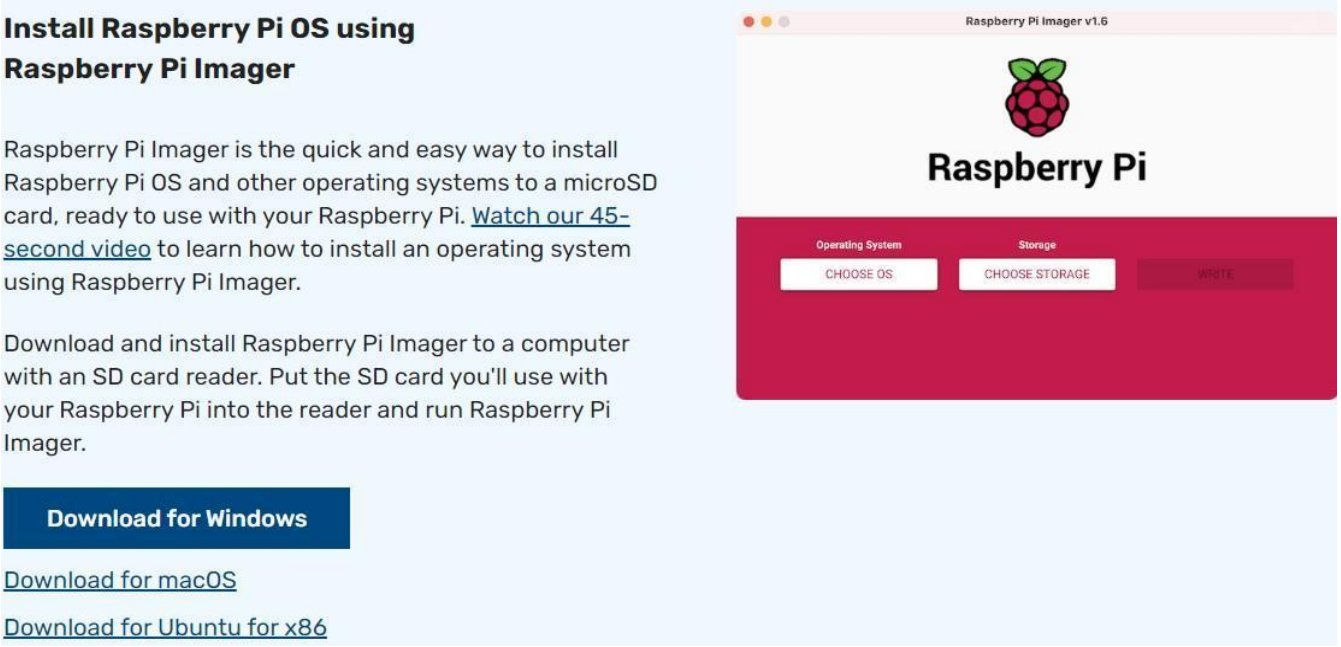
not working option:

The higher the speed class, the better. We minimally recommend a microSD card of 32GB with a speed class of V30.



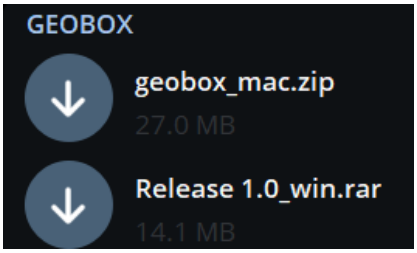
c. Preparing the MicroSD Card and Software:

Before installing the GBX image on the SD card, it is necessary to format it using the software provided by the Raspberry Pi developer. You can download the program from the official Raspberry Pi website.
https://www.raspberrypi.com/software/



Obtain the GEOBOX Software Image: You will need a computer that can connect to Wi-Fi and has the GEOBOX software image installed. To get the most recent versions of the required software, please make a request in our Telegram group: https://t.me/geobox_sup. As of the creation of this instruction, the archive should look as follows:

Management Software: Additionally, you will need management software, which will be necessary later on for connecting to the RPi and configuring the GBX settings.



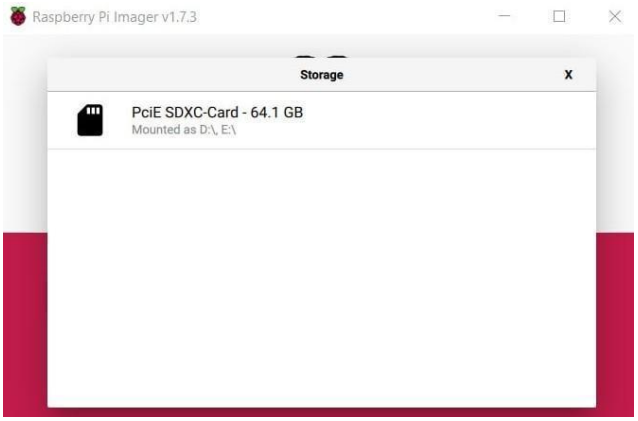
1. Formatting and Installing the Image on MicroSD

Insert the SD Card: Place the SD card into the computer using an SD card reader.
Unpack the Archive: Extract the archive that you downloaded from Telegram.
Launch RPi Imager: Start the RPi Imager program.

Press  and select SD card.

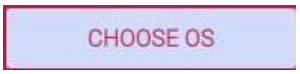
If the SD Card Is Not Listed

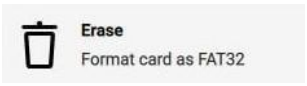
Check the Card Reader: Ensure that everything is correctly inserted. Make sure that the flash drive is fully inserted and check the contacts of both the card reader and the SD card for any dirt or debris.
Check for Potential Issues: If the SD card still does not appear, there might be a problem with the port for the card reader, with the system, or with the SD card itself.
Note on RPi Software: The RPi software should always detect a functioning SD card, regardless of its format.



Furthermore, by selecting the SD card, you can see that  changed

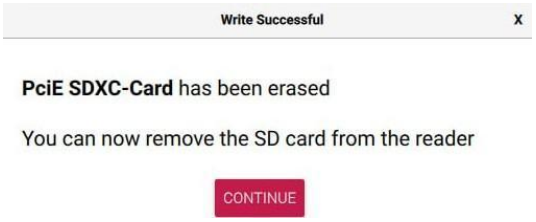
to  The SD card is selected, and we need to format it

To begin the formatting - 

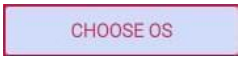
At the bottom, select - 

start - 

if formatting successful:



end - 



At the bottom press - 

, Find our unpacked GEOBOX software image and select it 

, accept 

and wait for the image to be installed on the SD card.

The installation process can take up to 15 minutes, depending on the speed class and quality of the SD card.

After Successful Installation:

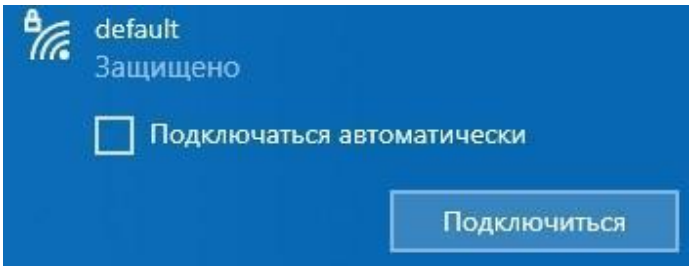
Insert the SD Card into RPi: Once the installation is successfully completed, safely eject the SD card from your computer and insert it into the Raspberry Pi (RPi) device.
Proceed to the Next Step: Now, move on to section 3 of the instructions or the next relevant step in the setup process.

2. Working with GEOBOX Software.

disconnect Internet Cables and Wi-Fi: On the devices that you are going to use to connect to the RPi via GEOBOX, make sure to disconnect all internet cables and Wi-Fi networks that provide internet to your devices. The connection to the RPi is possible only via Wi-Fi.

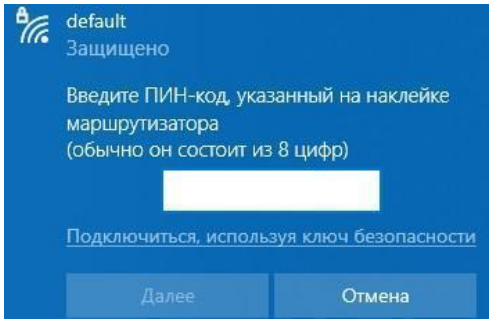
a. **Connect the Power to RPi**: Plug in the RPi and wait for approximately 5 minutes for it to boot up.

b. **Connect to the Wi-Fi Network**: Once the RPi has booted, a Wi-Fi network named "Default" should appear in the list of available Wi-Fi networks on your device:



The password for the "Default" Wi-Fi network is: 1234567890

If you encounter such a window when connecting to the Default network while entering the password:

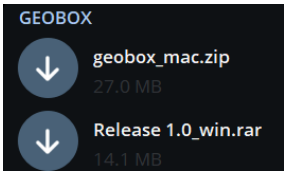


In this case, you should press. - 

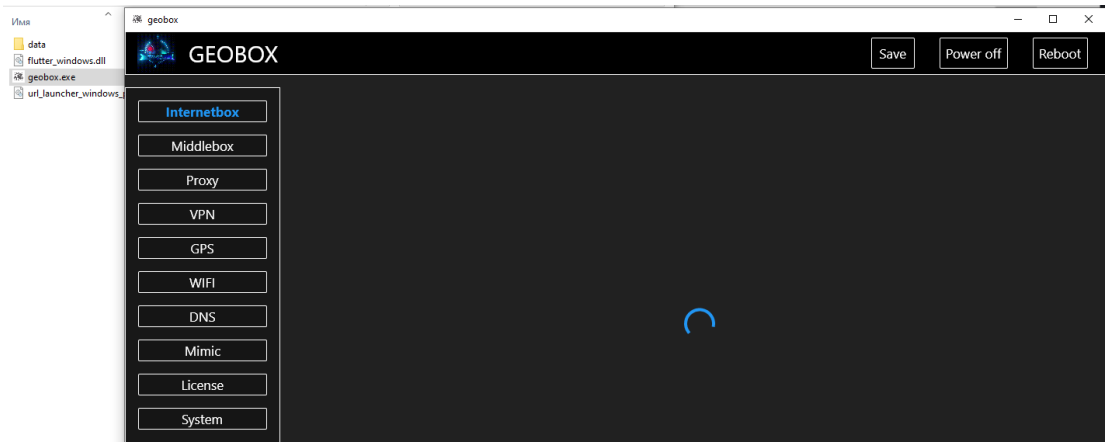
Afterwards, you can enter the password 1234567890 and connect to the Default network

There's no need to rush and open GBX; make sure that the Default network is connected first!

c. Unpack the previously downloaded archive with the GEOBOX management program from Telegram

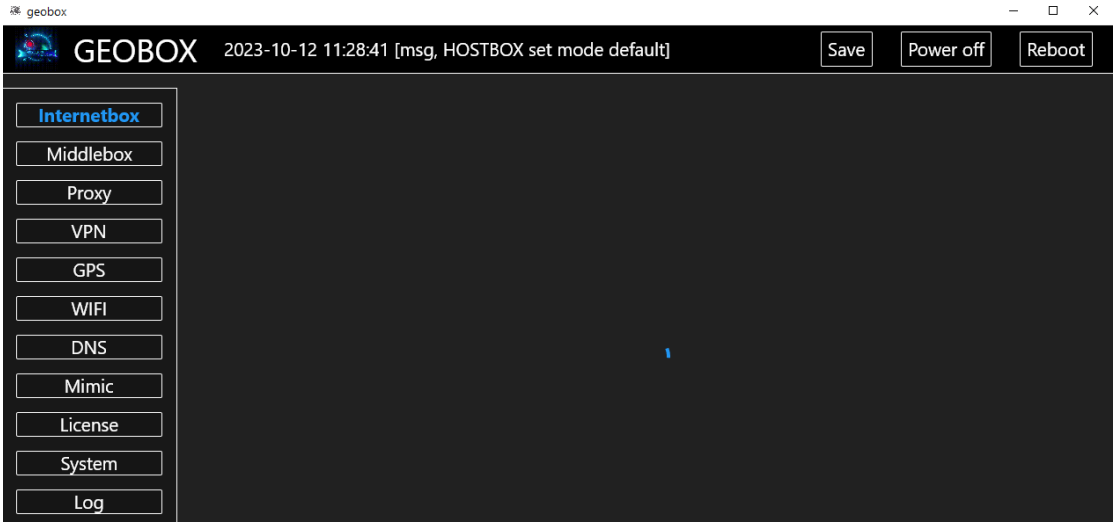


d. If GBX fails to locate the RPi within ten seconds and the loading icon continuously spins as shown in the figure below,



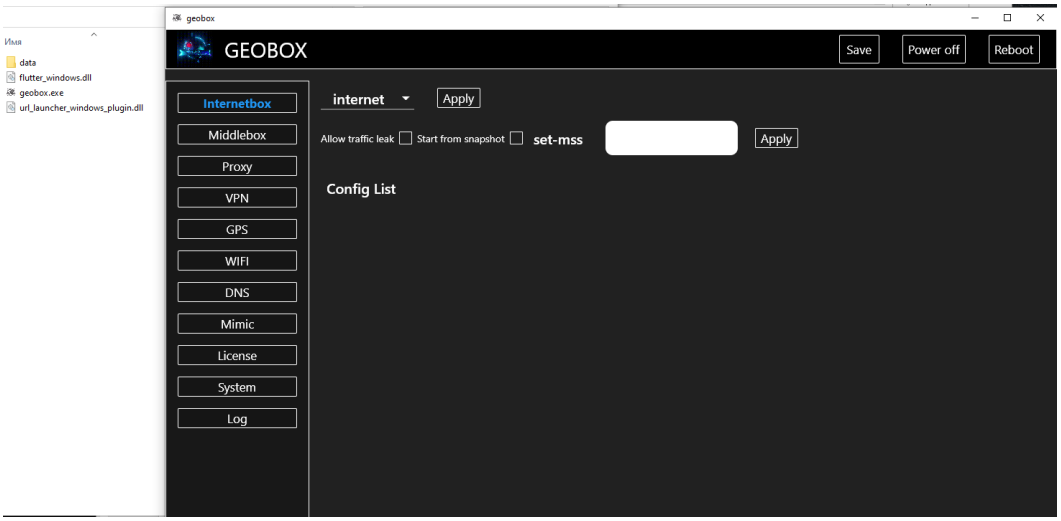
you should check if the default Wi-Fi network is connected and restart the GBX management program.

You can recognize that the GBX management program has connected to the RPi by the appearance of various log entries in the upper part of the program window, as shown in the figure below:



In the event that restarting GBX doesn't resolve the issue, check if the Default network is connected. If the Default network is not available, please reboot the RPi. The problem may also be related to insufficient power for the RPi. If none of the above steps work, please contact the tech support chat at https://t.me/geobox_sup for the sake of saving your time and nerves.

When GBX has found and connected to the RPi, you will see the possible settings in GBX as shown in the photo below.



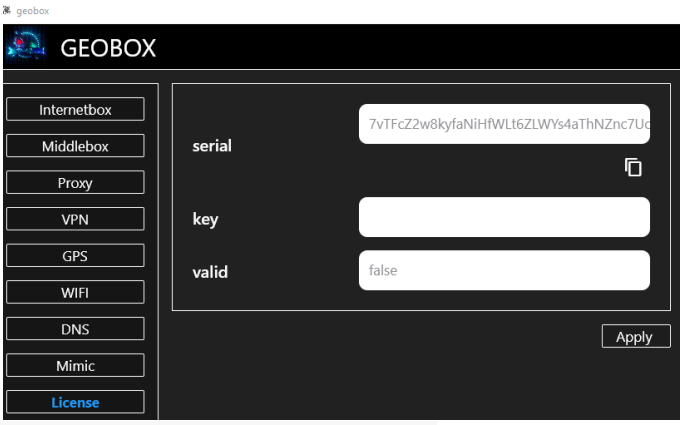
Next, to get started, you need to activate the license to unlock GEOBOX features.

An inactive version of GBX will disconnect the RPi after 10-15 minutes, but the indicators on the RPi will still be lit as if it's operational. Additionally, in the inactive version, most of the functionality will not work. Attempting to use various features, except for entering the license and diagnostics with log extraction, will result in the RPi shutting down.

The remedy is to power cycle the RPi by turning it off and then on again.

3. Activation of GEOBOX

a. In GBX, go to the 'License' tab and copy the serial from there into the chat at https://t.me/geobox_sup, where you received the GBX system image and GBX management program. In the same chat, request a wallet for payment of the license.



In my case, the serial looks like this:

sT72ZOm5T0MktnBFxGyi9hyO1cLzGS32rwxtrXihpoZWg7HBucWznlfT8cCKQ4EGkwBS3sEUhZcYFuIMEpbpsZXe07VjQpL tNnXFDyuh4x55TqYV48I9O7tekchE30AVSF7B7WwjiWVoi72LDtVGZwwxTbpF3u1qQQiE4G23c5c3159

b. Go to the 'Log' tab, then press the button Diagnostic, Wait for 5 seconds and upload the text file to the tech support chat https://t.me/geobox_sup.

c. After payment, we will send you the product activation key, which you will need to insert into the field: key , press Apply.

RPi going to reboot.

d. After rebooting, you need to reconnect to the Default network and check if the license has been activated. If activation is successful, the 'false' field will change to 'true'

valid false false

valid true true.

Activation was successful. Now you can use all GEOBOX features."

The license key is permanently tied to a specific RPi, unless the system is reinstalled. After reinstalling GBX to a new version or the same version, you will need to reactivate GBX with the same key.

The key is only valid for the RPi for which it was generated based on the serial number of the RPi provided by you.https://t.me/geobox_sup**!!**

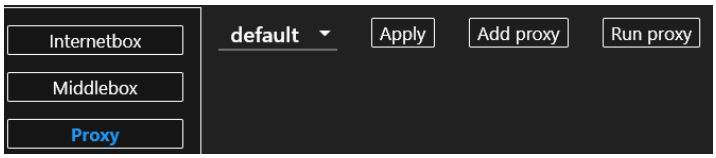
4. Connecting RPi to the Internet

You can provide internet to RPi only through an Ethernet cable or a USB modem (3G/4G, with CdcEthernet network card emulation). Simultaneous internet connection through both cable and USB modem is not possible; you need to have one or the other enabled for operation.

To connect to RPi with the ability to configure and use GBX functionality, you can do so only through Wi-Fi in the Default network. RPi receives network parameters, including IP address, via DHCP, whether you provide internet through a cable or a USB modem.

Direct internet connection

In the PROXY tab, upon the initial launch, the Default connection type will always be selected. Internet access is restricted.

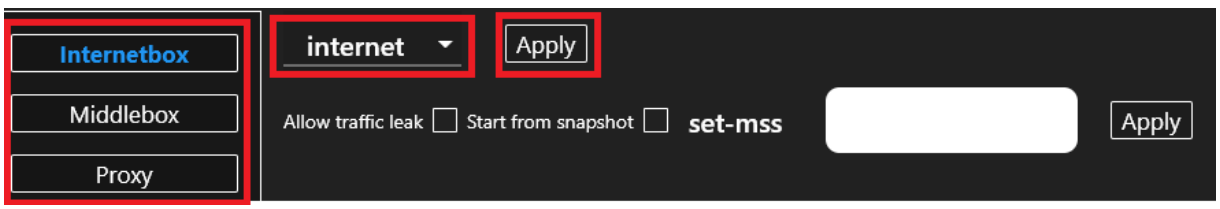


To directly connect the internet in the Default Wi-Fi network, you need to choose the 'internet' type in the INTX, MIDX, and PROXY tabs.

In the INTX and MIDX tabs, by default, the 'internet' option is selected if you haven't made any changes.

In the PROXY tab, select the 'internet' option, click 'apply,' and wait for about a minute until you see the log entry 'FINISH SET MODE INTERNET.'

If there is no log entry indicating the completion of the operation, please check your connection to the Default network. If the network was disconnected, reconnect, and reopen the GBX management program



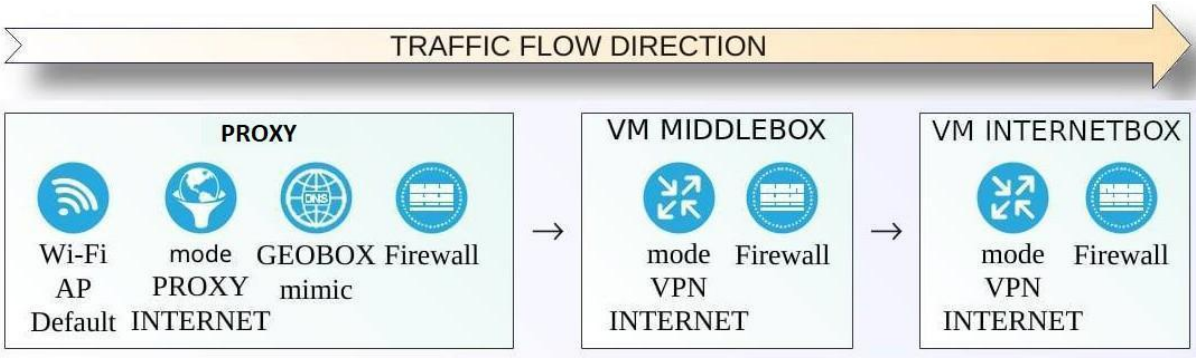
GEOBOX FUNCTIONS

Don't forget that when making any changes to settings, you should click 'apply' Apply once and wait for the settings to be applied, indicated by the log entry with 'FINISH'!

If you don't wait for the ongoing operation to finish, you can disrupt the system's functioning, and in the best case, you might have to reboot the RPi, while in the worst case, you might need to reinstall the GBX OS.

When finishing work with GBX, remember to turn off the RPi using the button Power off and wait for about a minute for a complete shutdown. Do not disconnect the cable when powering off! Otherwise, virtual machines may terminate improperly, and in the best case, you may need to reboot the RPi, while in the worst case, you may need to reinstall the GBX OS.

Traffic flow direction:



The Wi-Fi network 'default' distributed by RPi is first subjected to settings from the PROXY tab. After that, traffic passes through the VM Middlebox, applying the settings chosen there. Then it goes through the VM Internetbox with the applied settings.

Consequently, if you have a proxy server set up in PROXY, and any variations are applied in MIDX and INTX, then the parameters of that proxy server will be visible on the internet.

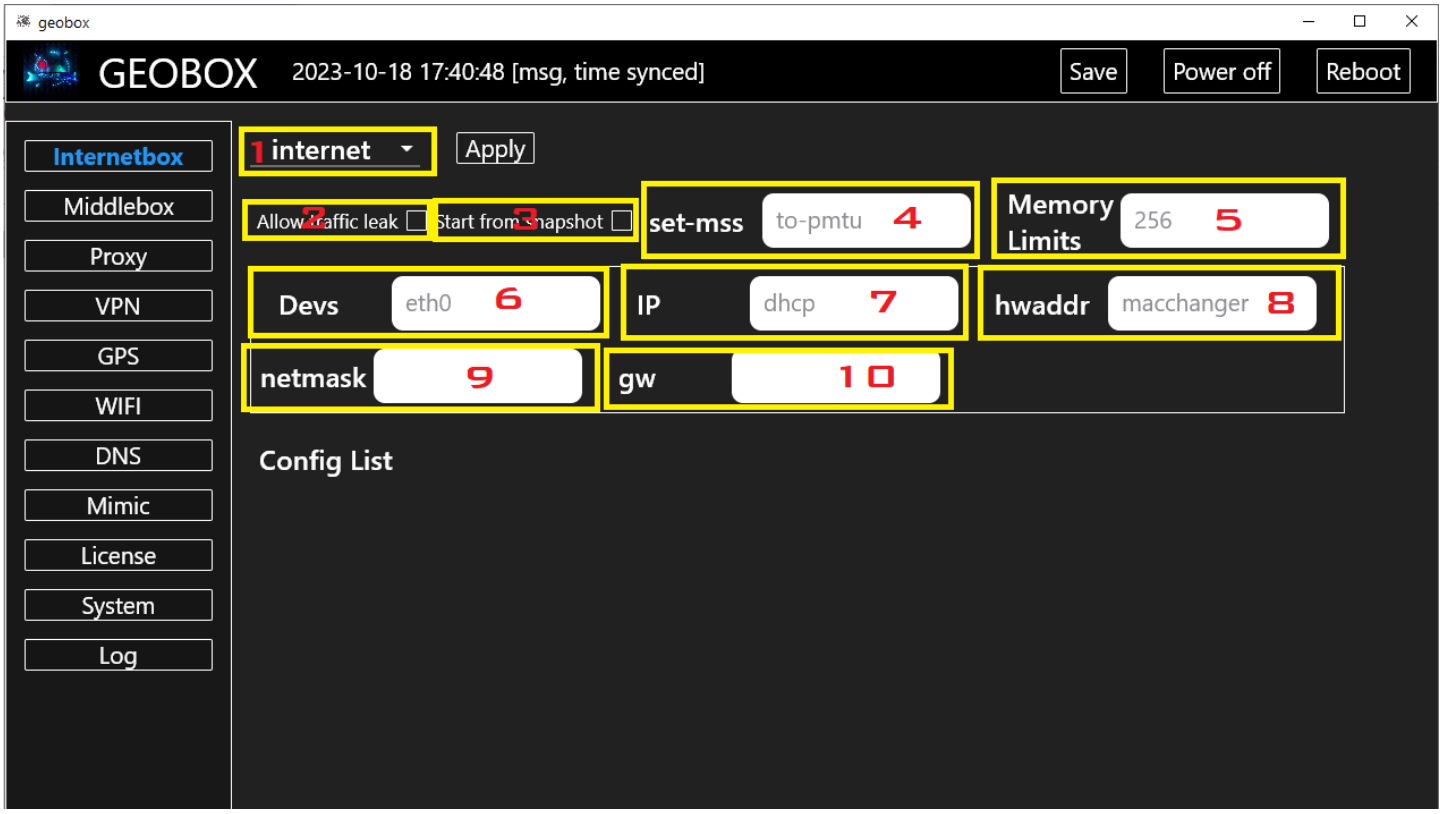
If you have the 'internet' option selected in PROXY, and VPNs are connected in MIDX and INTX, then the parameters of the VM Middlebox will be visible on the internet.

If you have the 'internet' option selected in PROXY, 'internet' selected in MIDX, and a VPN connected in INTX, then the parameters of the VM Internetbox will be visible on the internet.

This traffic filtering concept allows you to bypass various VPN and IP address blocks.

1. INTERNETBOX TAB

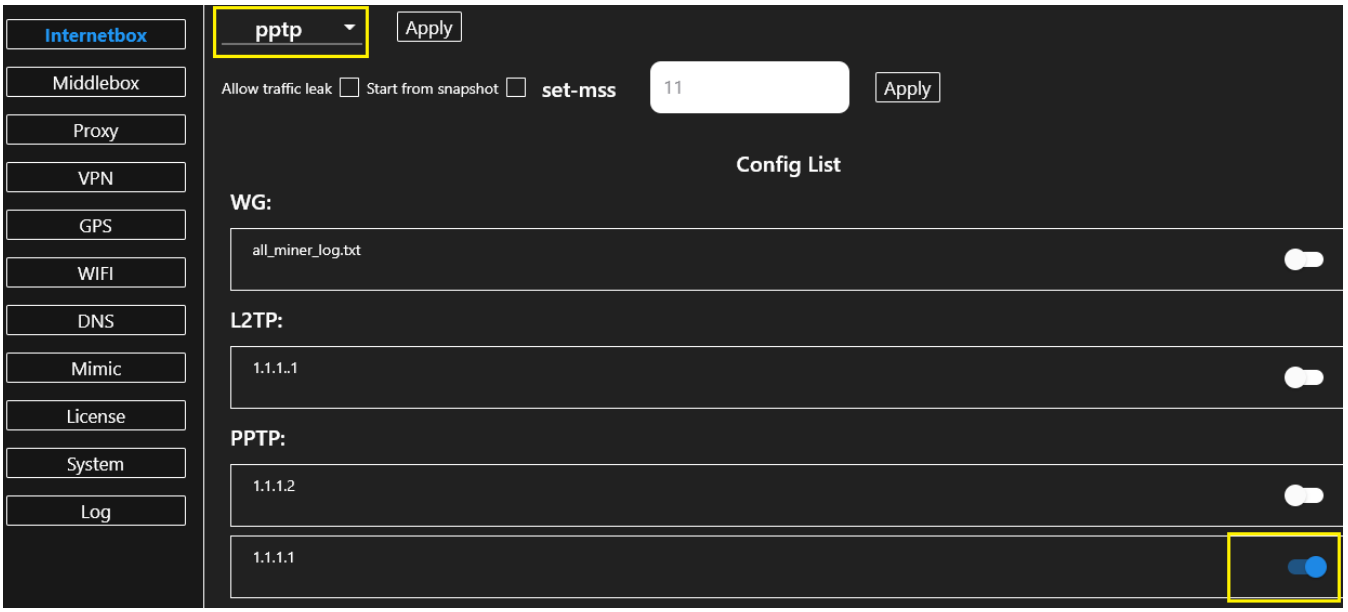
In the 'internetbox' tab, there are ten blocks with settings.



In block '1,' you can choose different types of VPN and internet connections. When selecting any of the options, you should click 'apply' once and wait for approximately 60 seconds for the settings to take effect. During this application process, you should avoid performing any other operations, as it can lead to GBX freezing. In such cases, you might have to reboot the RPi or even reinstall GBX.

The confirmation of applying the selected setting will be the appearance of a log entry with the message 'FINISH SET MODE.'

The currently supported VPN types include L2TP, PPTP, L2TP-IPsec, Wireguard, SSTP, Zerotier, and OpenVPN. To choose any of these VPN connection types, you need to create a VPN profile in the 'VPN' tab. In this tab, you can create multiple profiles of the same VPN type with different parameters. To select the desired profile, in the 'internetbox' tab, in block '1,' choose the type of VPN you want and toggle the switch as shown in the figure below:



Then click 'apply' once and wait for approximately 60 seconds for the settings to take effect, confirming with 'FINISH.'

In containers, only one active VPN profile can be used. After changing the VPN profile by toggling the switch, don't forget to click 'apply' once and wait for approximately 60 seconds for the settings to take effect, confirming with 'FINISH.

You cannot connect the same VPN profile simultaneously in the MIDX and INTX containers!

In block '2,' you can disable the feature that stops traffic transmission to the internet in case the VPN server disconnects. For example, if you have VPNs connected in both MIDX and INTX, and you don't mind if one of them drops, you can enable this feature. You can also enable it if you are not concerned about revealing your real data.

By default, traffic will not go to the internet if the connection to the VPN you applied is lost.

In block '3,' you can enable the function of reinstalling the virtual machine of the internetbox block every time you connect to the VPN server. This is necessary if you do not use a proxy and want various parameters of the virtual machine to be recreated before each VPN connection. When using this function, the connection time to the VPN significantly increases, up to five minutes.

In block '4,' you can set the value of the packet's MSS (Maximum Segment Size).

In block '5,' you can set the amount of allocated RAM for the VM Internetbox. You can check the available amount of RAM in the 'System' tab by clicking the 'Check Sys Info' button.

In block '6,' you can set the name of the physical network interface of the RPi, which will be visible on the internet. It supports input of only numbers and English alphabet letters, without any symbols.

In block '7,' you can set the IP address manually. By default, the RPi obtains data from the provider via DHCP automatically.

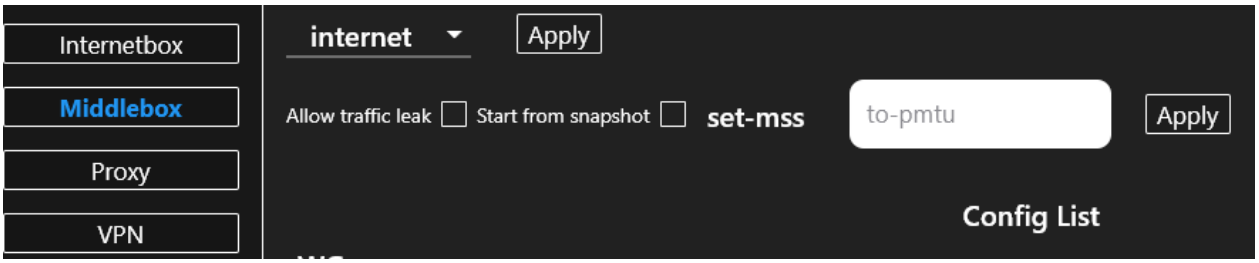
In block '8,' you can set the MAC address of the physical network interface of the RPi, which will be visible on the internet. Input is only possible in the format 00:00:56:00:00:00.

In block '9,' you can set the subnet mask.

In block '10,' you can set the default gateway.

2. MIDDLEBOX TAB

The capabilities of the Middlebox blocks 1-4 are identical to the capabilities of the Internetbox.



The MIDDLEBOX is added to enable the creation of a VPN tunnel inside a VPN tunnel, raised within the Internetbox.

You cannot connect the same VPN profile simultaneously in the MIDX and INTX containers!

3. Proxy tab

You can only use one proxy server at a time!

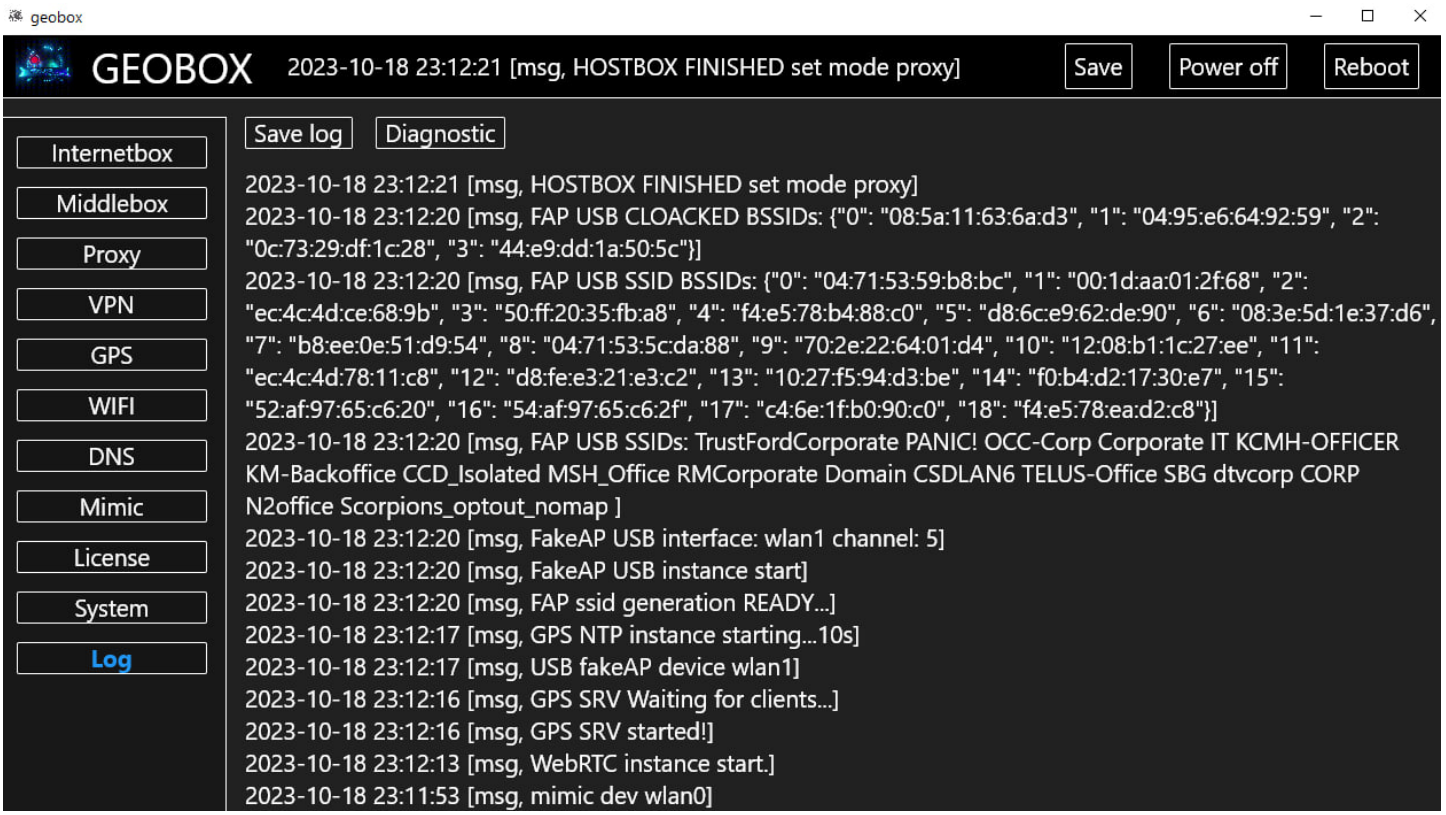
In Proxy, you can add proxy server data that will be used to provide DNS, GPS, and Wi-Fi MAC address information in the Default network. It's also possible to generate Wi-Fi environment based on the geolocation of the proxy server, but for this, you need to additionally connect a Wi-Fi adapter to the RPi with monitor/inject mode support, for example. NetGear WNA1100, TP-LINK TL-WN722N (ver V1), AWUS036NHA, DEXP WFA-152 etc.

To generate networks on different channels, we recommend the NetGear WNA1100 adapter in the amount of 2 pieces

Due to the vast variety of Wi-Fi adapters, in addition to the ones we mentioned earlier, you can try to find a compatible one on your own. You can look up chipsets by the name of Wi-Fi adapters here: https://deviwiki.com/wiki/List_of_Wireless_Adapters_That_Support_Monitor_Mode_and_Packet_Injection.

Next, if the adapter has a chipset that supports monitor/inject mode, you can try generating the environment. We recommend choosing adapters from places where you can exchange them or claim warranty in case of any issues.

If the environment is successfully created, you can see log entries like the following:



Micro and mini-sized adapters tend to heat up significantly, so we do not recommend encasing them in anything or disassembling them and attaching them to heated parts with heat sinks. We also do not recommend choosing overly powerful models. Ideally, you should opt for an adapter with good cooling and not excessive power. In the current version of GBX, there are enough adapters operating at 2.4GHz, preferably with tried-and-true chipsets such as Atheros AR9271.

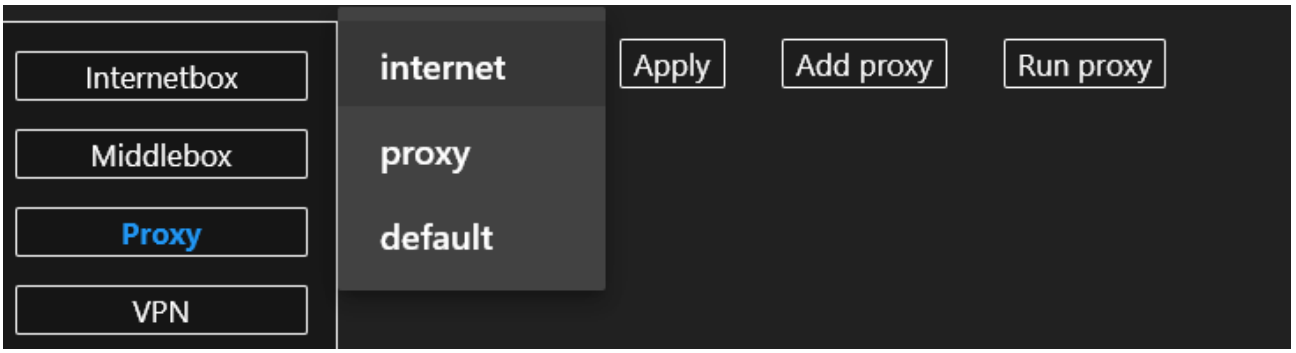
Good optoin:

NetGear WNA1100

An acceptable option:

DEXP WFA-152

In Proxy tab, there are three modes of operation: internet, proxy, and default.



a. The 'internet' option allows you to have direct internet access without applying any GBX settings. It functions like a regular out-of-the-box home router.

b. The 'default' option completely blocks internet access through RPi, regardless of your settings in INTX and MIDX. This is necessary so that your data does not go to the internet in case of the first connection to RPi

c. The 'proxy' option allows you to select one proxy server from the list of proxy servers you have created. To add a proxy, you need to click 'add proxy,' and a field will appear where you can enter the proxy server's information:

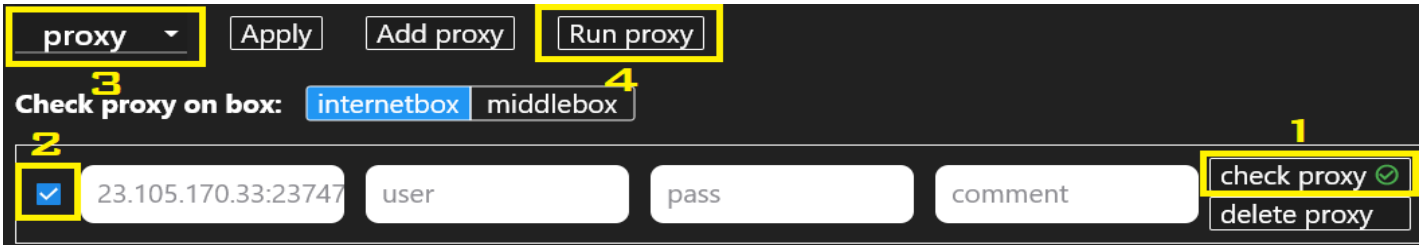
d. Before enabling the proxy server, it's necessary to check its functionality by clicking: check proxy.

If the proxy server is not functioning, you will see: check proxy.

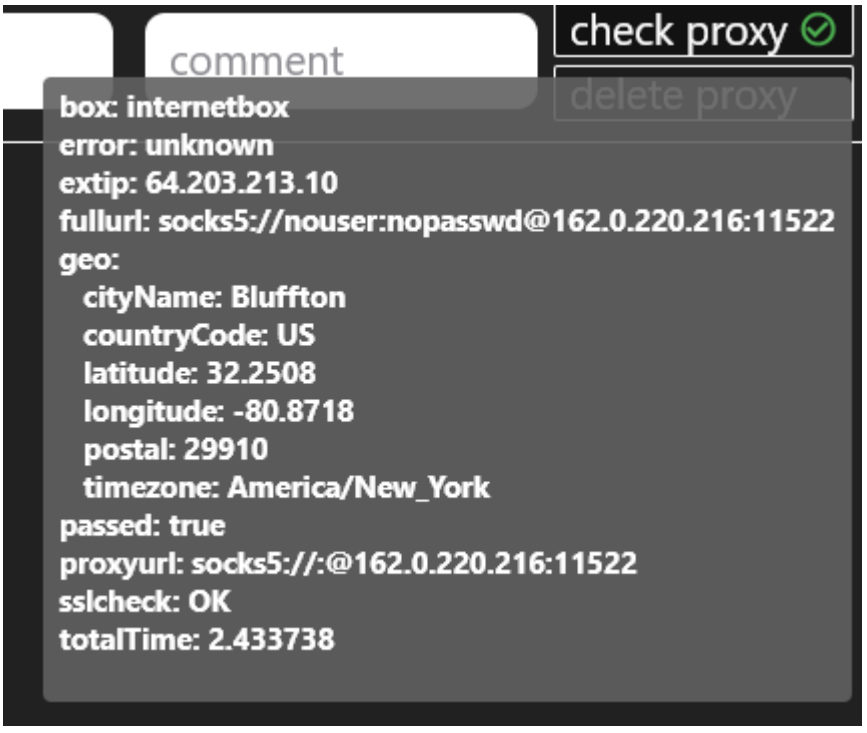
A functioning server will look like this: check proxy.

Now you need to check the box for the proxy, select the 'proxy' option, and click Run proxy and wait for the settings to be applied, which can take from 60 to 120 seconds. **Make sure to wait for 'FINISH SET MODE PROXY' in the log.**

After starting the proxy, it's important to check the connection to the Wi-Fi Default network. You can verify the information received from the proxy server and our databases in the Mimic, System, or any online services



You can hover your mouse over the green circle as shown in the photo below to view information about the proxy.

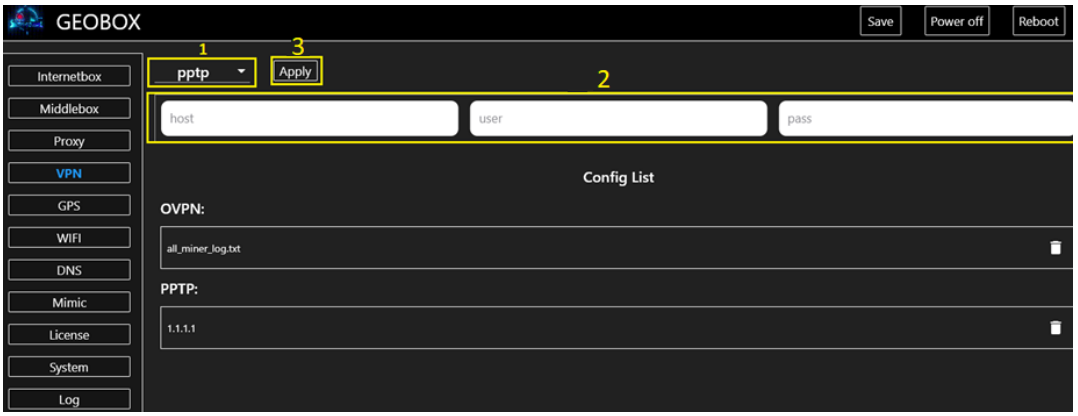


Or you can find more detailed information in the Mimic tab. The Mimic tab may not fetch data instantly; it typically takes around five minutes to retrieve the information.

4. VPN TAB

As of the current version, GBX supports several VPN protocols, namely L2TP, PPTP, L2TP+IPsec, Wireguard, SSTP, Zerotier, and OpenVPN. Ready configurations for Wireguard (WG) and OpenVPN (OVPN) are checked by GBX's built-in analyzer, and certain potentially dangerous commands supported by the client are blocked upon request from the server. More detailed information about such commands will be provided in the F.A.Q.

To add a VPN profile, simply choose the desired VPN type from the menu, enter the server and account information, click 'apply,' and now you can select this VPN type and profile in the Middlebox or Internetbox containers. If you clicked 'apply' and the profile didn't appear, switch to any other tab and return to the VPN tab without waiting.

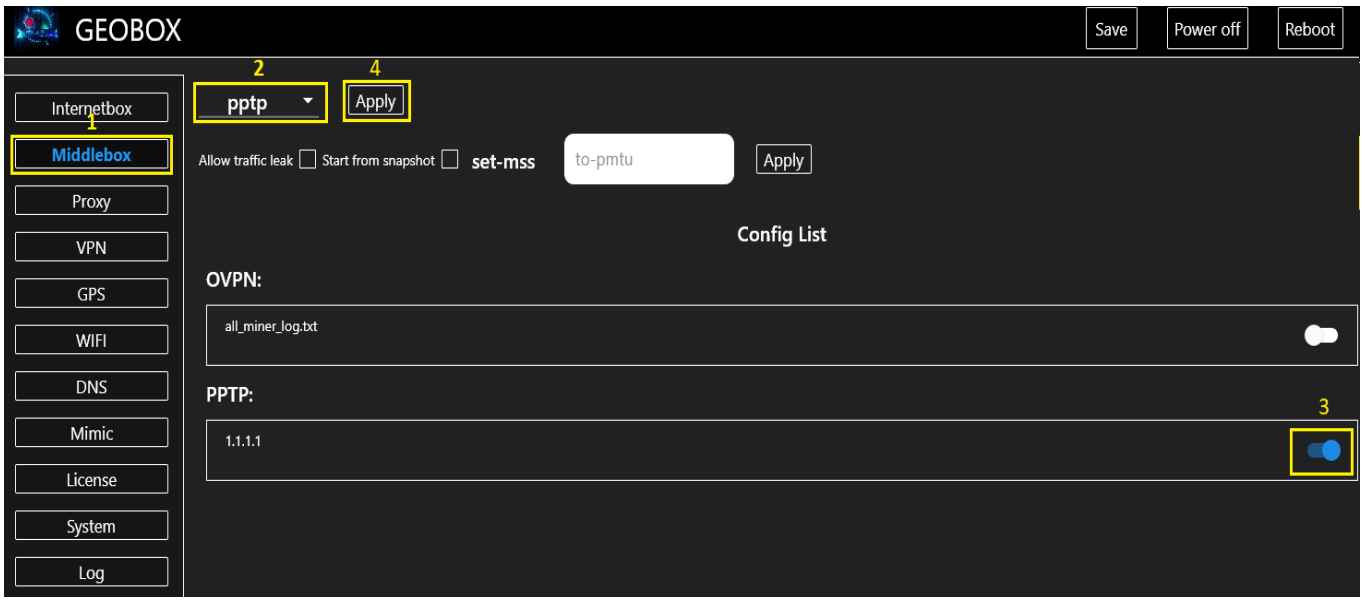


5. VPN connection

You cannot connect the same VPN profile simultaneously in the MIDX and INTX containers. You cannot enable the switch for a VPN configuration that does not match the selected VPN type. During the application of settings, until the 'FINISH SET MODE YOUR VPN' entry appears in the log, you cannot perform any actions that require button presses. You can only navigate to the log tab and wait for the VPN connection process to finish.

To create a single VPN tunnel, you need to perform the following actions in the MIDX container and wait for the settings to be applied

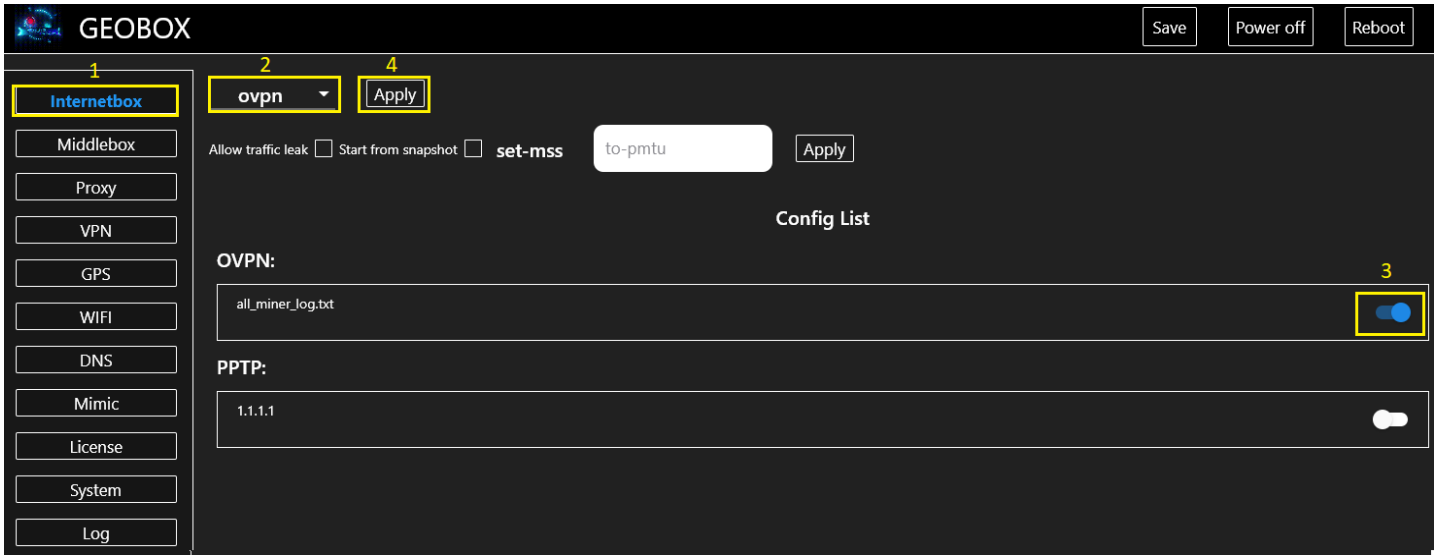
1. Go to the MIDX tab.
2. Choose the VPN type.
3. Enable the switch for the desired VPN configuration and wait a few seconds.
4. Apply the settings and wait for 1-2 minutes until the connection is established and the log displays the message **FINISH SET MODE YOUR VPN.**



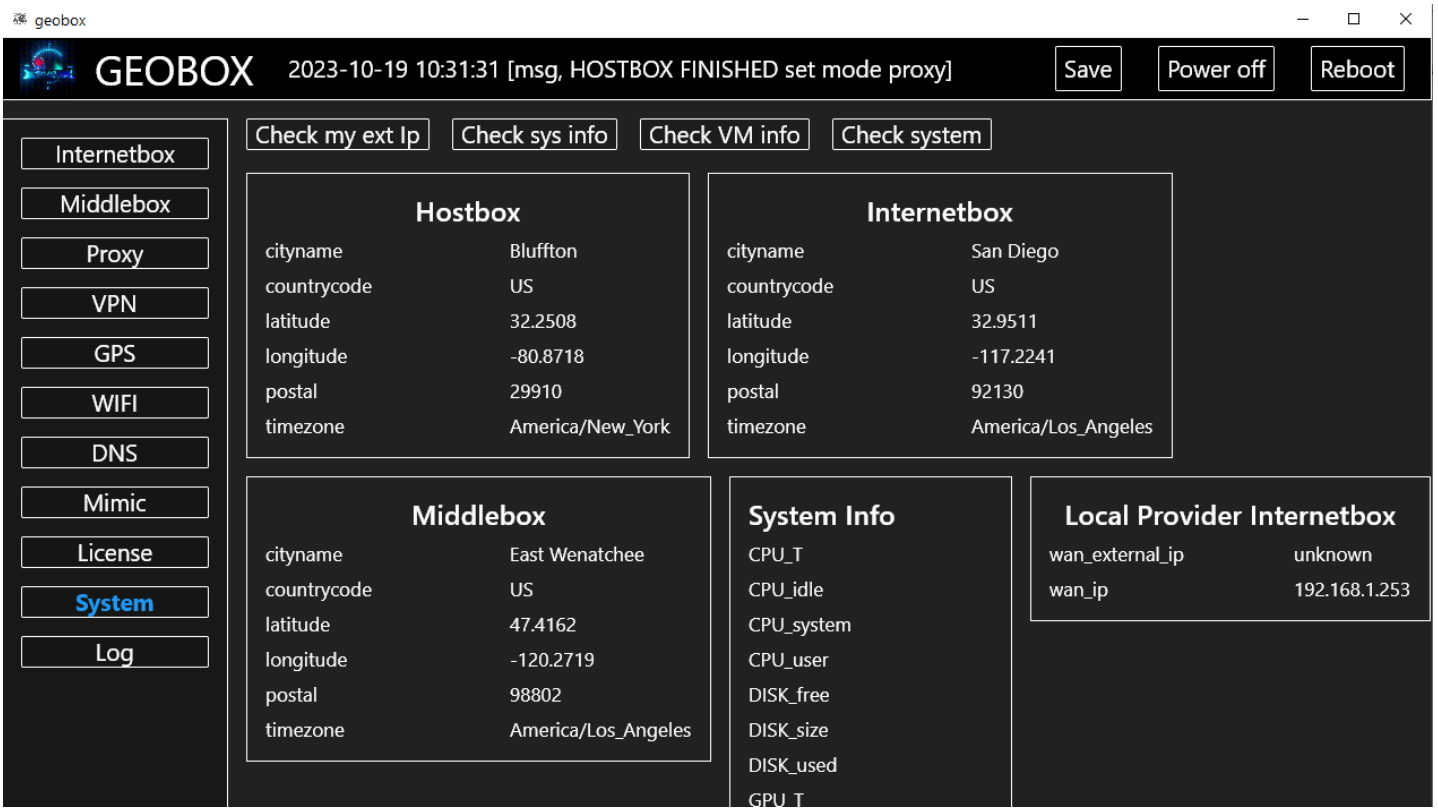
To create a VPN tunnel through a VPN tunnel, you need to go to the INTX container and perform the following actions and wait for the settings to be applied.

1. Go to the INTX tab.
2. Choose the VPN type.
3. Enable the switch for the desired VPN configuration and wait a few seconds.

4. Apply the settings and wait for 1-2 minutes until the connection is established and the log displays the message **FINISH SET MODE YOUR VPN.**

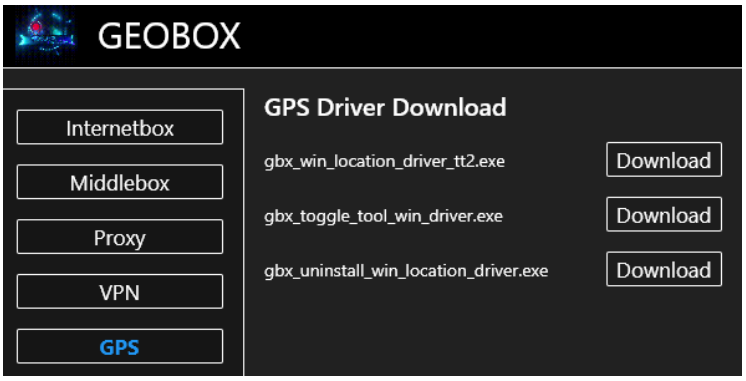


You can check the VPN connection and view IP address information in the System tab by clicking Check my ext Ip .



5 GPS TAB

In the GPS tab, there are three files for Windows systems.



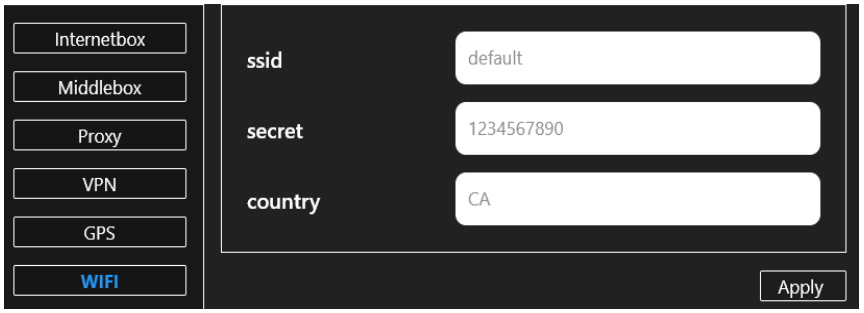
gbx_win_location_driver_tt2.exe These are installation files for a GPS emulator for Windows. After installing the driver on a Windows device without a GPS receiver, the device will receive coordinates from the proxy server you select.

gbx_toggle_tool_win_driver.exe This file restarts the GPS driver in case it hangs. You can view information about GPS data from the proxy server and the spoofed data in the Mimic tab.

gbx_uninstall_win_location_driver.exe This file is for uninstalling the GPS driver.

6 WI-FI TAB

In the WI-FI tab, you can change the parameters of the Default network, such as changing the network name, password, and selecting your location for frequencies.



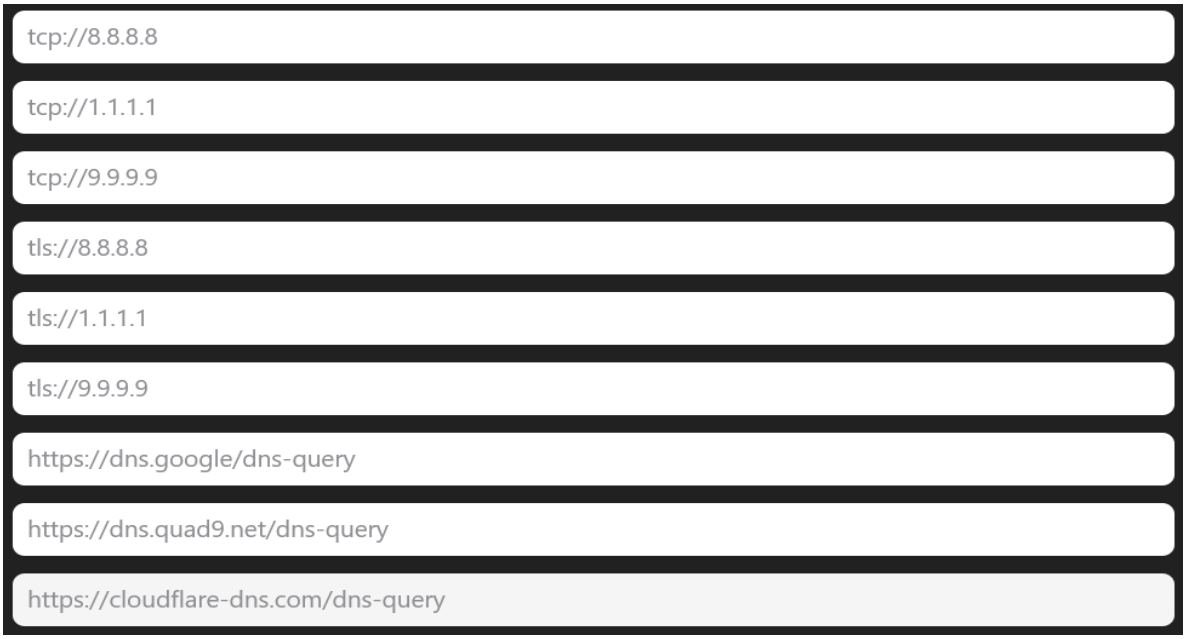
Here, you can set the Wi-Fi network name that will replace the Default network. When changing the name of the standard Wi-Fi network on RPi, you must also enter a new password that is at least 8 characters long.

Here, you can set a new password for this network.

Here, you set the identifier for your location so that RPi broadcasts Wi-Fi using frequencies allowed in your region. **If you're not sure about this, leave the field empty!**

7 DNS TAB

By default, GEOBOX automatically selects DNS servers based on the geolocation of the raised proxy or VPN. Three public DNS services are selected as DNS servers: Google, Cloudflare, and Quad9. Various DNS data transmission protocols are supported.



Manual DNS Configuration for Proxy or VPN

If you need to manually configure DNS settings for a proxy or VPN, you can do so in the DNS tab. This tab contains two main sections: Internet and Proxy, each catering to different configurations.

Internet Section

- **Purpose**: Manages DNS settings for VPNs connected via the INTX and MIDX tabs.
- **Sub-sections**:
  - **Bootstrap**: Handles information transmission without encryption when connecting to DNS servers. It is utilized as a last resort, prioritizing encrypted DNS channels specified in the Upstream sub-section first.
  - **Fallback**: Determines the sequence for DNS server selection. If the first DNS server listed in Upstream (and subsequently in Bootstrap) is unavailable, the system will switch to the second DNS server listed in Fallback.
  - **Upstream**: Manages the selection of encrypted DNS channels across various protocols.

Proxy Section

- **Purpose**: Manages manual DNS settings for the proxy.
- **Sub-sections**: Bootstrap, Fallback, and Upstream (functioning similarly to the Internet

section).

Configuration Guidelines:

- DNS settings are identical for both VPN and proxy. Thus, a single, comprehensive example will be demonstrated.
- In the Bootstrap, Fallback, and Upstream sub-sections under the Internet section:
  - Remove any duplicate lines if present.
  - Replace the public DNS with your own, ensuring to retain port 53 at the end of the entry where applicable.

By following these guidelines, you can efficiently manage and customize your DNS settings for both VPN and proxy connections within the GEOBOX software.

The DNS IP address is not always the same as the proxy or configuration IP address, and if you don't understand this, you don't need to change anything!

At the very bottom, click on 'Apply.' After applying the DNS settings, you need to restart the DNS services. To do this, in the 'Proxy' tab, click 'Apply' if you don't have a proxy server. If you have a proxy server, then click Run proxy. And be sure to wait for the operation to finish in the log with the message [msg, HOSTBOX FINISHED set mode proxy].

You can also configure various parameters:

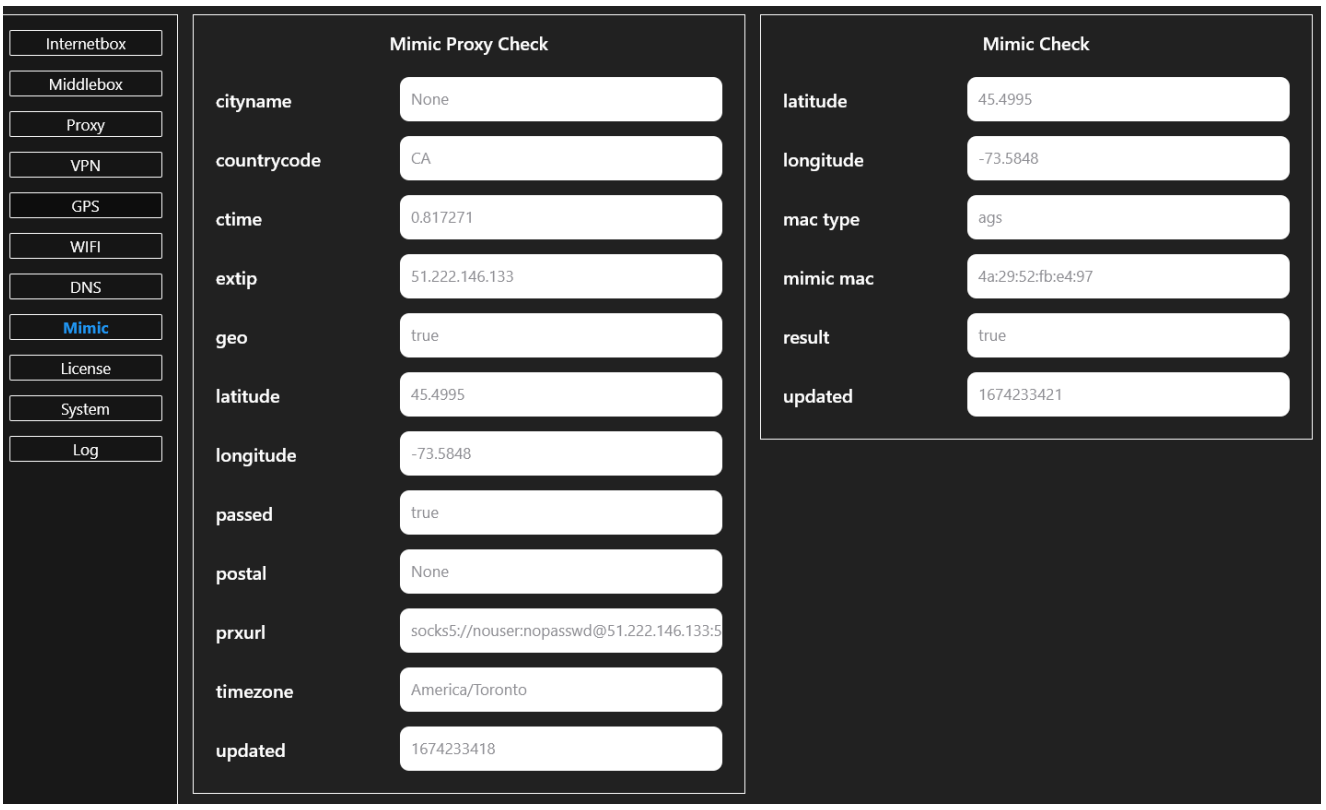
1. Using multiple DNS servers simultaneously. If not selected, only the first address in the list will be used.
2. Storing DNS cache for faster link navigation. The cache is stored either until RPi's power is

restarted or until the VM is reinstalled with the checkbox enabled. Start from snapshot ☐

3. Scanning all specified DNS servers and selecting the fastest one. If the checkbox is not selected, it will choose the first responding DNS server.
4. Disabling IPv6 DNS addresses.

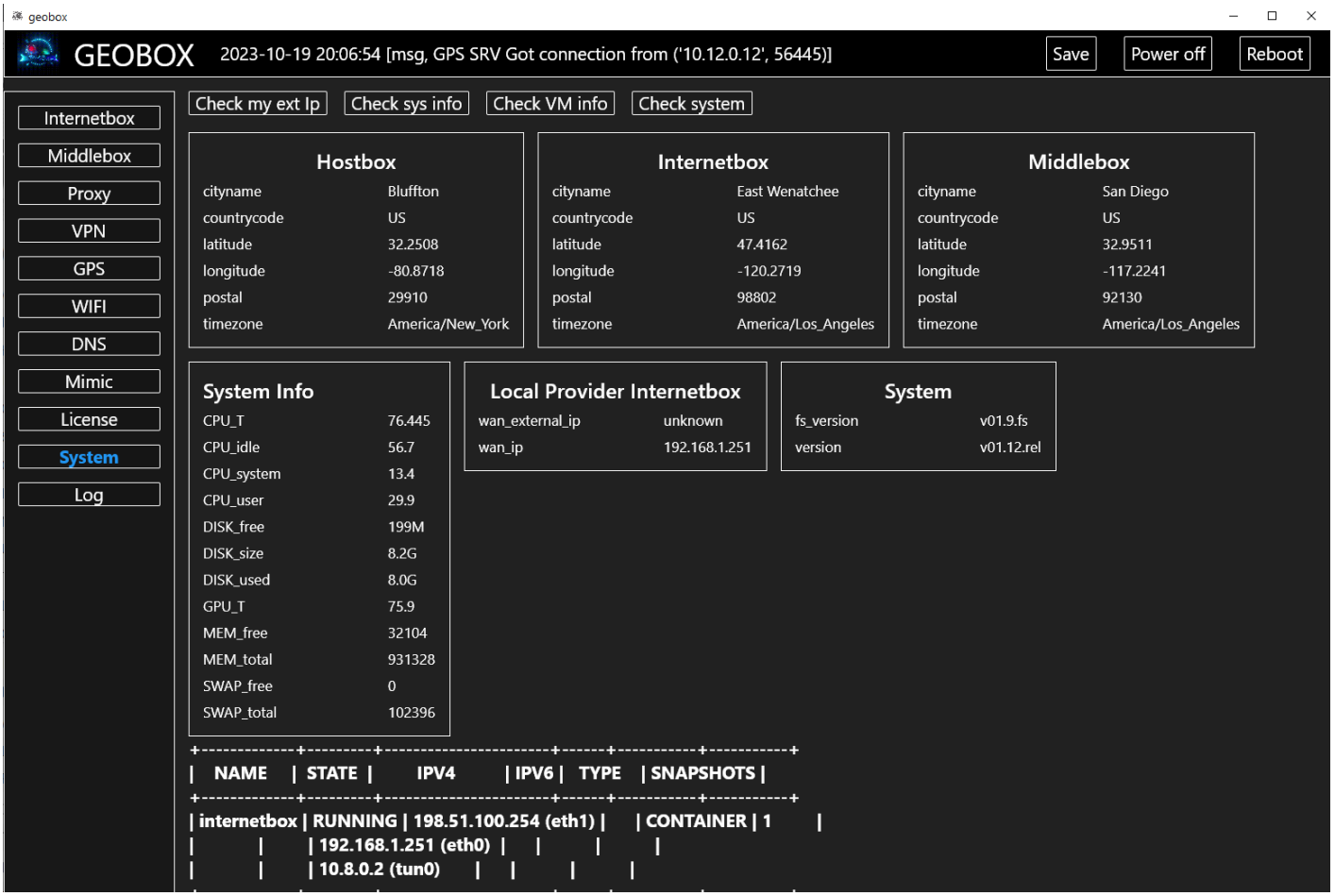
8 Mimic TAB

- In the "Mimic" tab, in the block **Mimic Proxy Check**," you can view the data received from the proxy server you have chosen.
- In the block **Mimic Check**," you can see the substituted data that the remote side sees when making requests.



9. System tab

In the "System" tab, you can view information about IP addresses, the GBX version, geolocation, and system data for your RPi.



A. Hostbox, also known as 'Proxy,' displays data received from the selected proxy server.

B. Internetbox displays data from the connected VPN server in the 'Internetbox' tab.

C. Middlebox displays data from the connected VPN server in the 'Middlebox' tab.

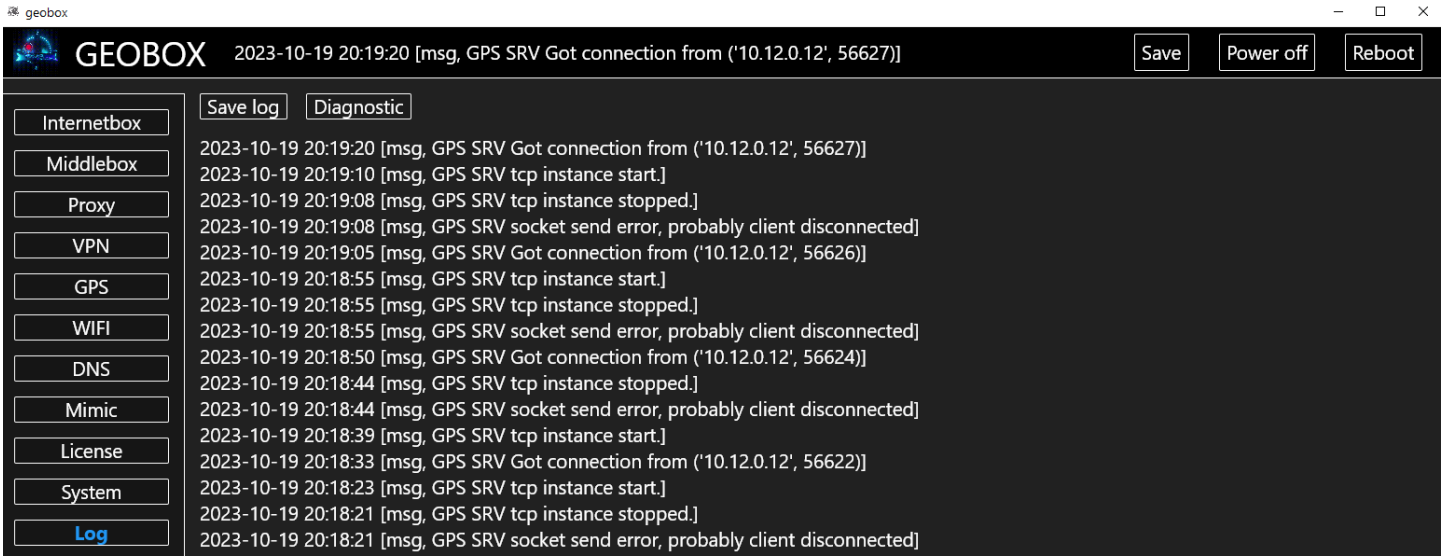
D. Local Provider Internetbox shows LAN and WAN IP addresses of the RPi. The LAN address is obtained via DHCP from the device through which RPi should receive internet. The WAN IP address is the one that will be visible on the internet.

E. System Info block provides system data about the processor, memory, and other sensor data from the RPi.

F. System block displays information about the GBX version

10 Log tab

In the Log tab, you can find system events in GBX that occur when performing any user actions. These logs are used for diagnostics and debugging. If you encounter any issues that you cannot resolve on your own, you can save the logs to a file and send them to us at https://t.me/geobox_sup.



When you press the button Diagnostic you can view various information about RPi, SD, and GBX.

When you press the button Save log you can export the full log in a text file from the beginning of GBX operation. The log is saved until RPi is rebooted or until the button Save is pressed.

11 Zerotier configuration

Here are the steps to set up Zerotier:

1. Update the system:
   ```
   sudo apt update
   ```
2. Install necessary packages:
   ```
   sudo apt install mc curl git net-tools snapd
   ```
3. Install Zerotier using Snap:
   ```
   sudo snap install zerotier
   ```
4. Join the Zerotier network by providing your network ID:
   ```
   zerotier-cli join "NETWORK_ID"
   ```
   Replace `"NETWORK_ID"` with your actual Zerotier network ID. You should see a message like "200 join OK" if successful. Example: `zerotier-cli join 9e1948db63e498bc`.

5. Access the Zerotier controller website and authorize your virtual machine.

6. Check the names of the Zerotier and physical interfaces:
   ```
   ifconfig
   ```
   In your case, Zerotier might be something like `ztiv5kyq67`, and the physical interface is `eth0`.

7. Edit the firewall configuration file:
   ```
   mcedit /etc/ufw/sysctl.conf
   ```
   Remove the `#` symbol at the beginning of the line `net/ipv4/ip_forward=1` to enable IP forwarding. Save and exit.

8. Enable the firewall features:
   ```
   ufw allow ssh  # Allow SSH access
   ufw enable     # Activate the firewall
   ufw status verbose  # Check the firewall status
```

```
```
9. Set the default firewall policies:
```
ufw default deny incoming
ufw default allow outgoing
ufw default allow routed
```
10. Allow incoming traffic from the Zerotier network to your virtual machine's interface:
```
ufw allow in on "YOUR_ZEROTIER_INTERFACE" to any
```
Replace `"YOUR_ZEROTIER_INTERFACE"` with the Zerotier interface you found earlier using `ifconfig`. Example: `ufw allow in on ztiv5kyq67 to any`.

11. Edit the `before.rules` file:
```
mcedit /etc/ufw/before.rules
```
Insert the following lines before the `*filter:` block:
```
*nat
:POSTROUTING ACCEPT [0:0]
#local
-A POSTROUTING -s 192.168.191.0/24 -o eth0 -j MASQUERADE
COMMIT
```
Replace `192.168.191.0/24` with your local network in the Zerotier controller, and `eth0` with your virtual machine's external interface. Save the file.

12. Restart UFW:
```
ufw disable
ufw enable
```
13. Test Zerotier:
```
zerotier-cli listnetworks
```
14. Wait for the settings to apply to your Raspberry Pi, and then confirm the connection in the Zerotier controller.

Now, you can use the Zerotier channel to bypass VPN restrictions in your middlebox. For more detailed instructions, you can refer to a video tutorial provided in the Telegram link.

12 F.A.Q

HARD RESET

1) Find pin 39,40
2) Close contacts , green led start blinking
3) Wait 10 seconds , red led start blinking
4) You have about 20 seconds , open contacts before red stop blinking
5) Wait while device resetting