



Crankk official guide for onboarding a Nebra Rock Pi gateway

- 1) Flash the SD card with the CrankkOS image
- 2) Local Dashboard setup
- 3) User Dashboard setup



Onboarding a Nebra Rock Pi gateway can take some time and require some technical skills, but don't worry, we're here to guide you through every step. So grab yourself a cup of coffee and let's get started!

Here are a few things you might need for this guide:
a screwdriver, an SD card and an SD card reader/adaptor:



1) Flash the SD card with the CrankkOS image

1. Get yourself an SD card.

We recommend using at least a 32GB SD card.

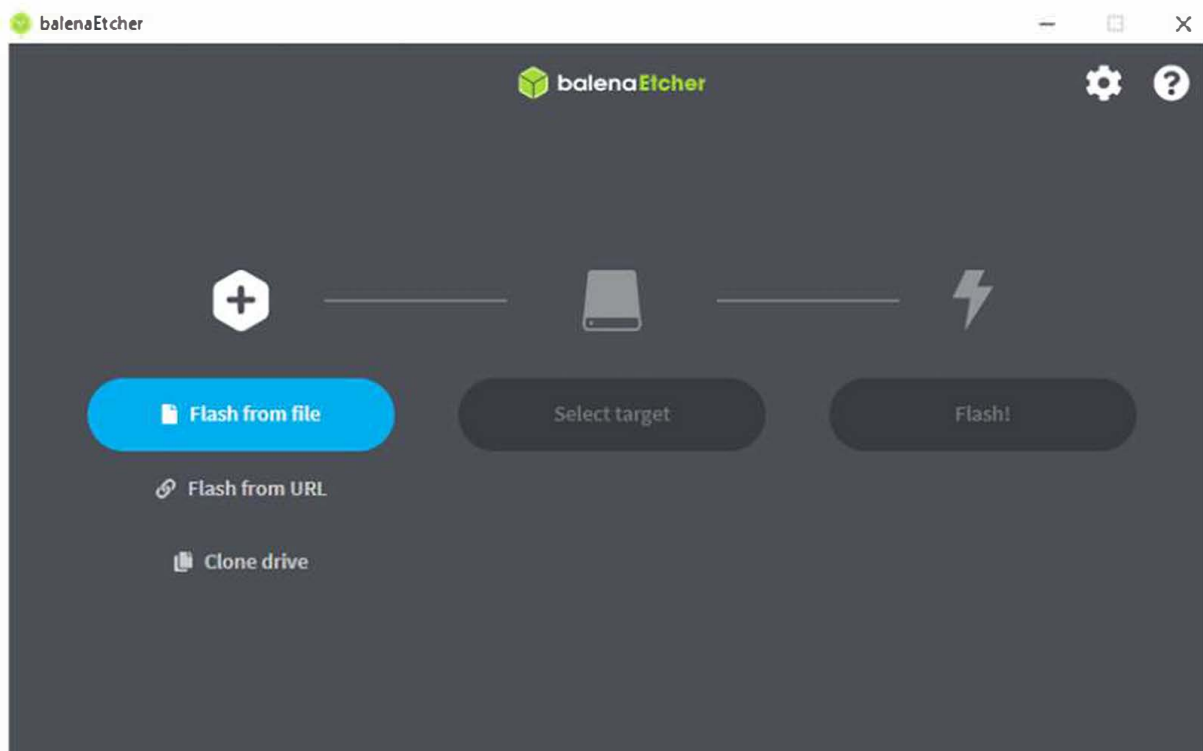
2. Insert the SD card into an SD card reader/adapter on your PC.

A message **Format Disk** might appear on your screen. You don't need to format the card, as the **balenaEtcher** will take care of it.

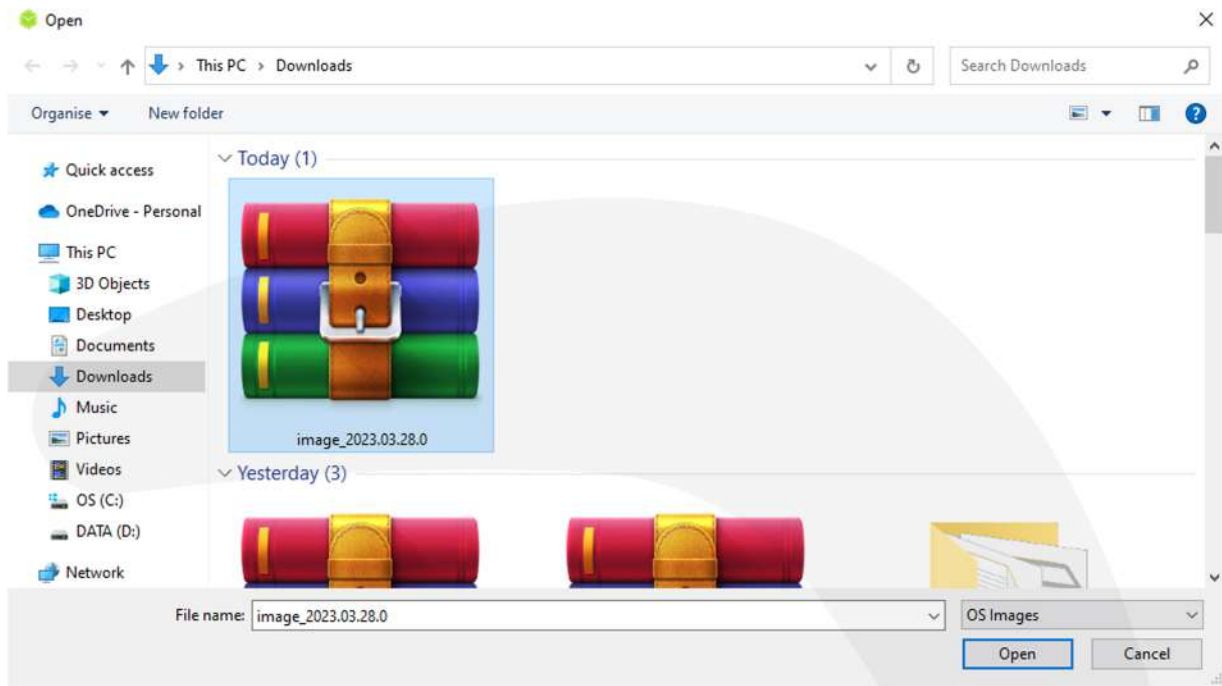
3. Download the CrankkOS image and balenaEtcher.

Follow **this link** to download the official **CrankkOS IMG**. And **this one** to download the **balenaEtcher** software, which is needed to flash the image to the SD card.

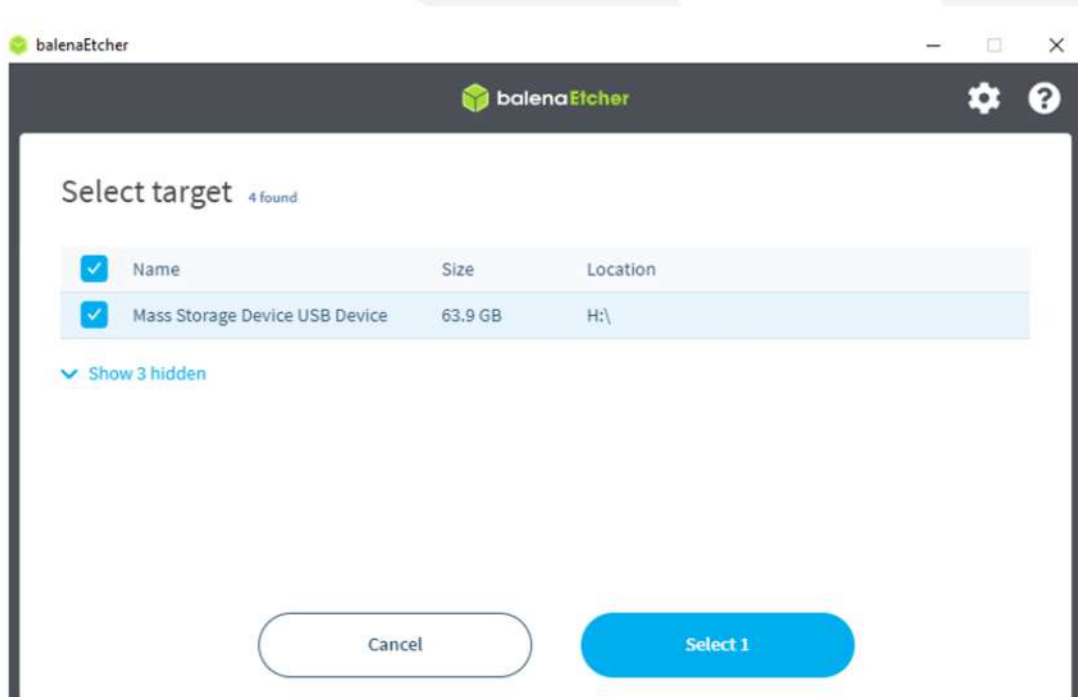
4. Install balenaEtcher and flash the SD card.



Use the **Flash from file** option and select the CrankkOS image file you have downloaded. You don't need to unzip the file, just select it as is.



Okay, next pick your **SD card** > **Select** > **Flash**



The flashing process can vary, but usually takes about 20-30 minutes.

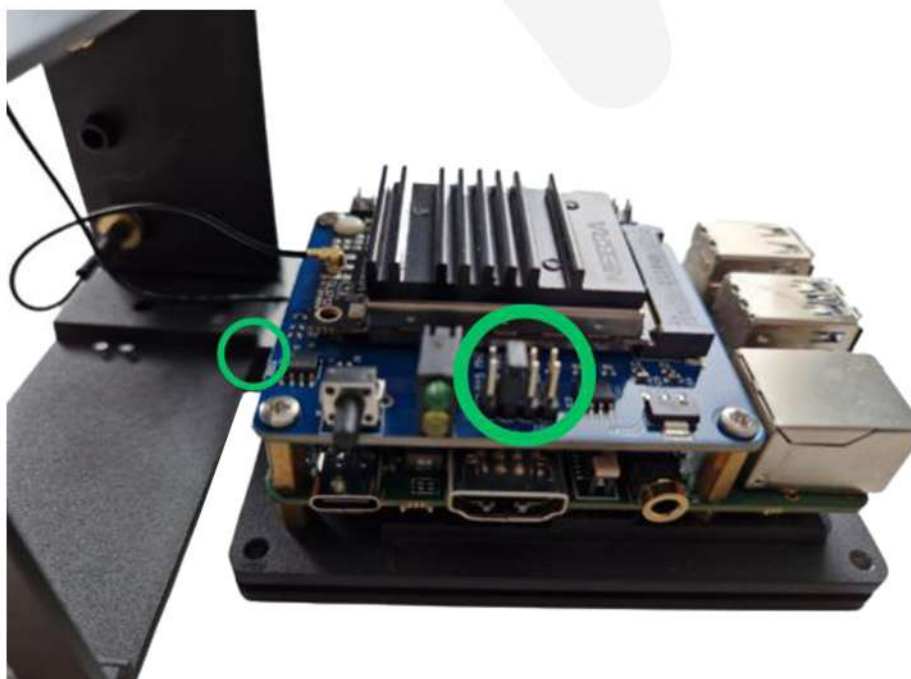
5. Unscrew the bolts of your Nebra Rock Pi and remove the lids on both sides.

Please don't remove the LoRa antenna.



6. Insert the SD card into the board and switch the pins in the position as shown in the screenshot.

The location of the pins and SD card is marked in green.



The SD card slot is located on the opposite side of the USB, at the bottom of the board.

Insert the SD card with the pins facing up towards the main board.

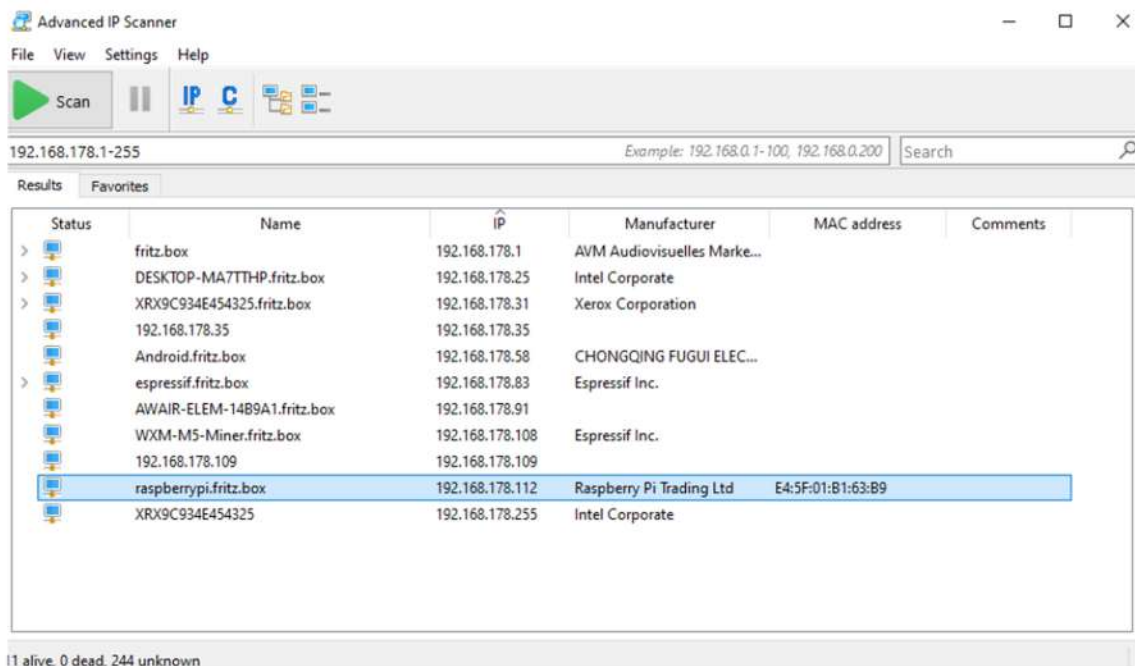
Once the process is completed, connect the gateway via an Ethernet LAN cable to your local network and power it on. Please wait a few minutes for the gateway to boot up and then return to your PC.

7. Connect to the Nebra Rock Pi via SSH.

Follow [this link](#) to download **PuTTY** (an SSH and telnet client) and install it.

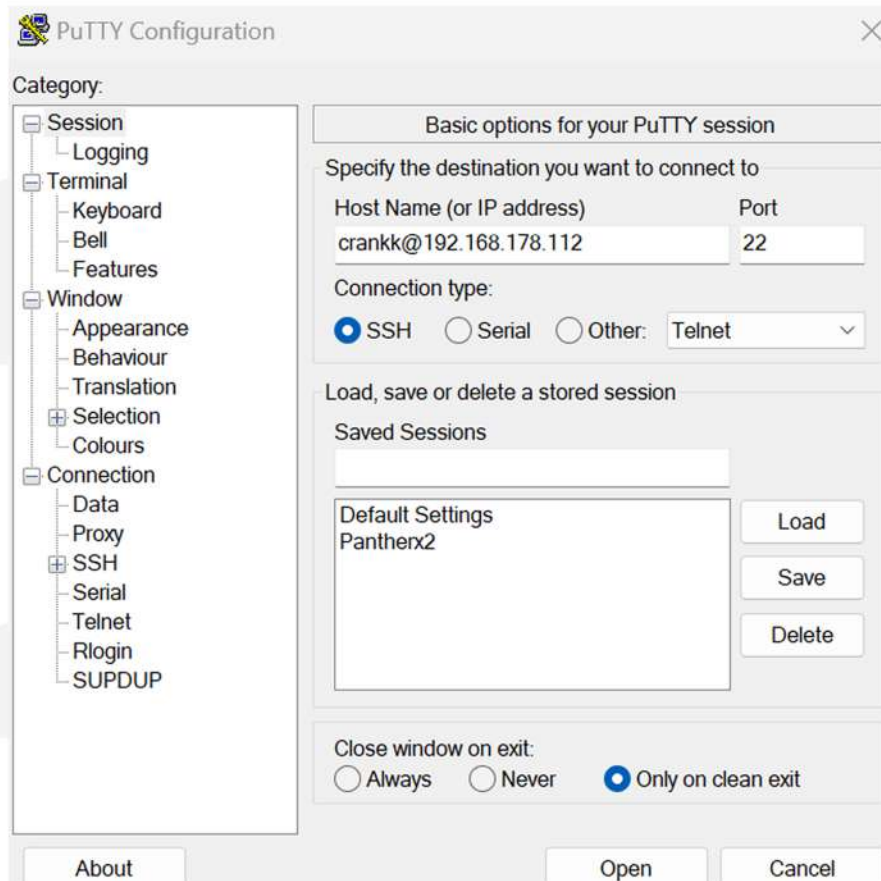
Now check your router to find the **gateway IP address**.

If you are unsure how to do this, you can use free tools like **Advanced IP Scanner** to help you out. Check the **MAC address** of your gateway to find the correct IP address.



Open **PuTTY** and enter the following credentials as shown in the screenshot:

- Host Name: **crankk@yourGatewayIP**
- Port: **22**



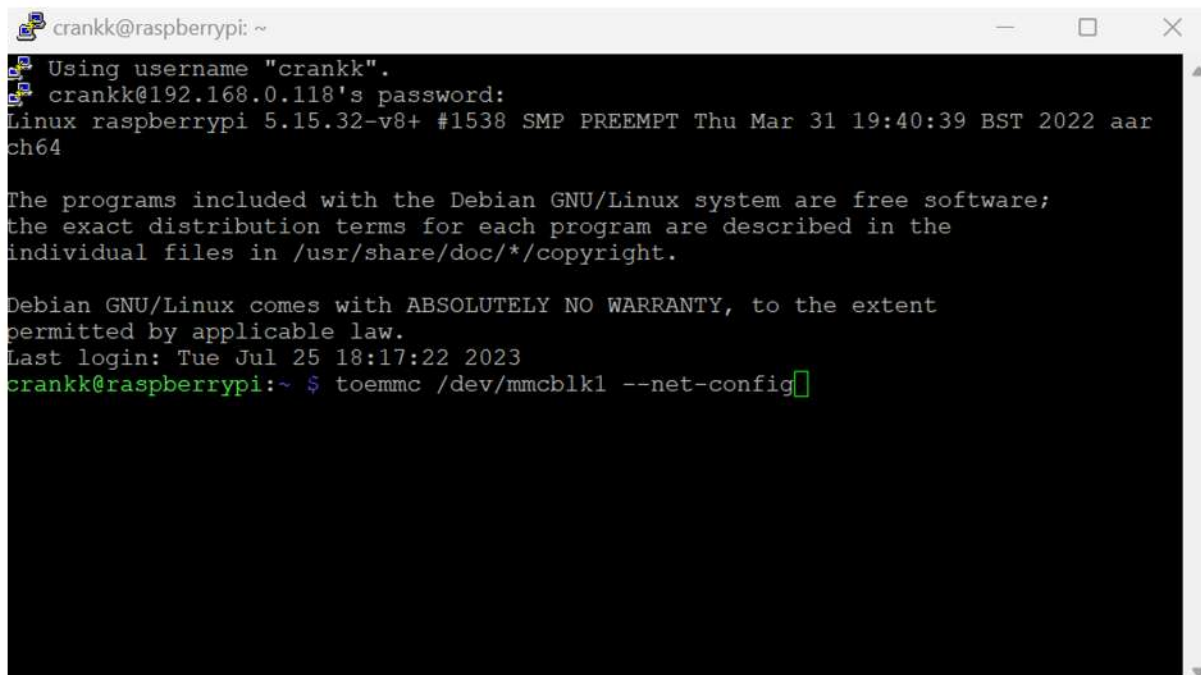
If you get a pop-up window, press **Accept/Yes**.

Password: **B@tch0n3**

8. Copy the image to the internal eMMC module.

This can be done by running the following command:

toemmc /dev/mmcblk1 --net-config

A terminal window titled 'crankk@raspberrypi: ~' showing the system boot process. It displays the login prompt for user 'crankk' at IP '192.168.0.118', the system version 'Linux raspberrypi 5.15.32-v8+ #1538 SMP PREEMPT Thu Mar 31 19:40:39 BST 2022 aarch64', and the Debian GNU/Linux license notice. The user has successfully logged in and is at the prompt 'crankk@raspberrypi:~ \$'. The command 'toemmc /dev/mmcblk1 --net-config' is being entered.

```
crankk@raspberrypi: ~  
Using username "crankk".  
crankk@192.168.0.118's password:  
Linux raspberrypi 5.15.32-v8+ #1538 SMP PREEMPT Thu Mar 31 19:40:39 BST 2022 aar  
ch64  
  
The programs included with the Debian GNU/Linux system are free software;  
the exact distribution terms for each program are described in the  
individual files in /usr/share/doc/*/copyright.  
  
Debian GNU/Linux comes with ABSOLUTELY NO WARRANTY, to the extent  
permitted by applicable law.  
Last login: Tue Jul 25 18:17:22 2023  
crankk@raspberrypi:~ $ toemmc /dev/mmcblk1 --net-config
```

Once done, please power off your gateway by typing the following command:

poweroff

Please wait a few minutes until it turns off completely.

9. Remove the SD card, reassemble the gateway and power it back on (use a LAN cable connection).

2) Local Dashboard setup

10. Log in to the Local Dashboard.

We have automated the process and you do **NOT** need to download the **Crankk Installer** anymore.

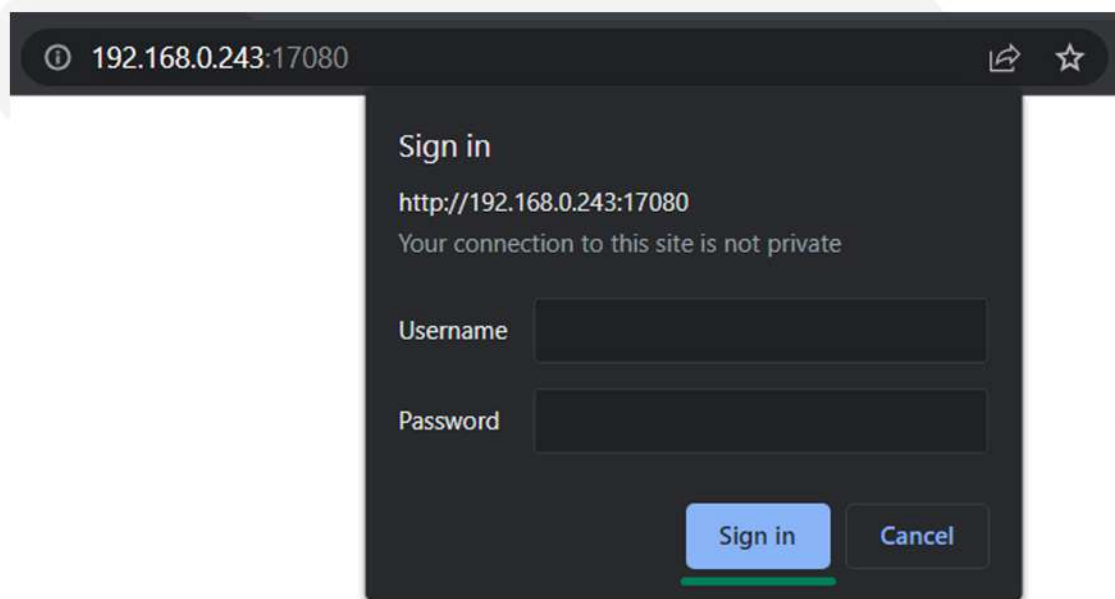
Instead, just log in to the **Local Dashboard**.

If you have any VPN enabled on your PC, please turn it off.

Check your gateway IP address again with an IP Scanner, because it might be different this time.

Once you have the LAN IP address of your gateway, open a new browser tab from a PC on the same network and paste the IP followed by **:17080**
http://192.168.0.243:17080

When logging in for the first time, you do not need to enter any credentials, just press **Sign in**.



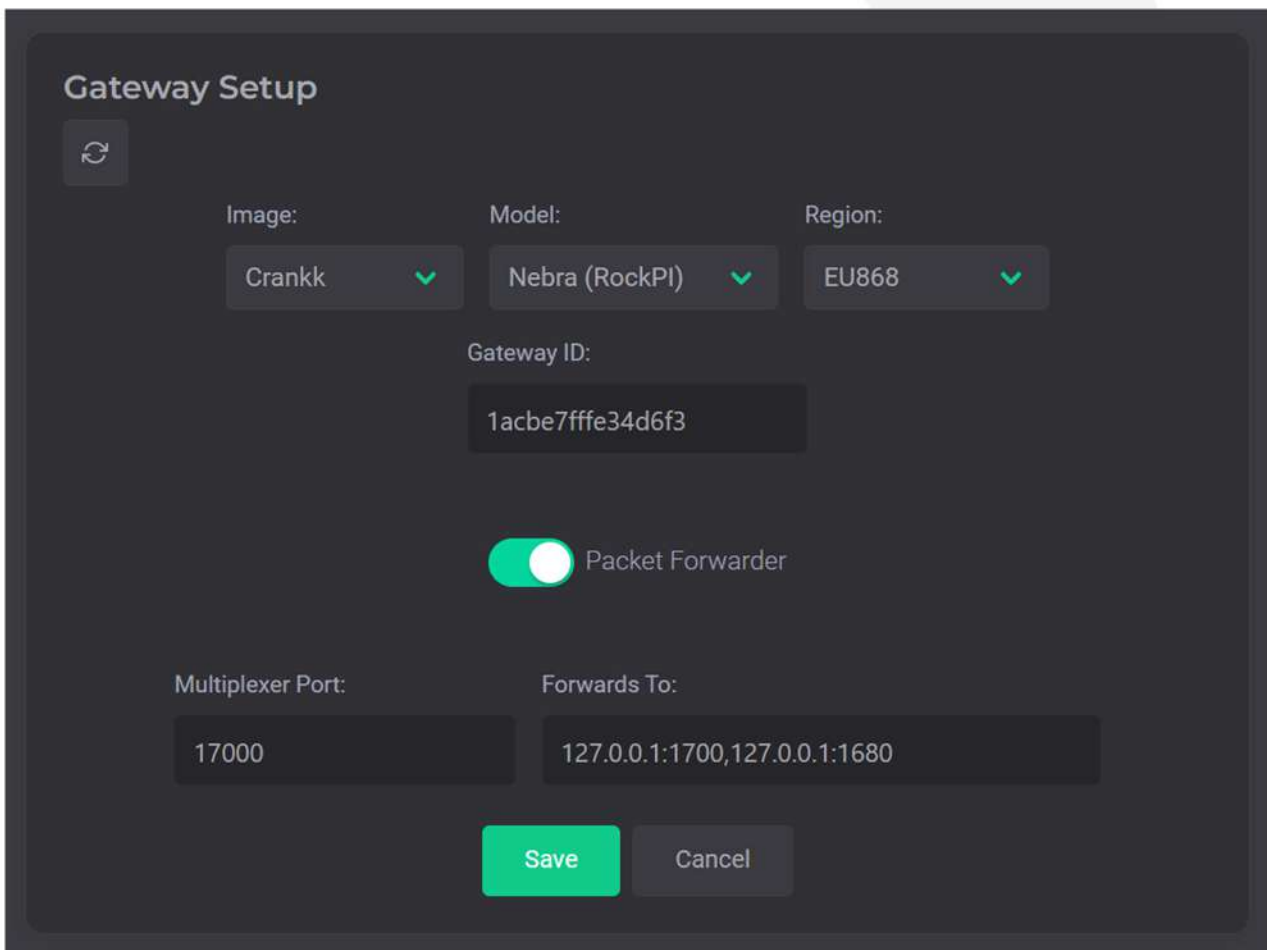
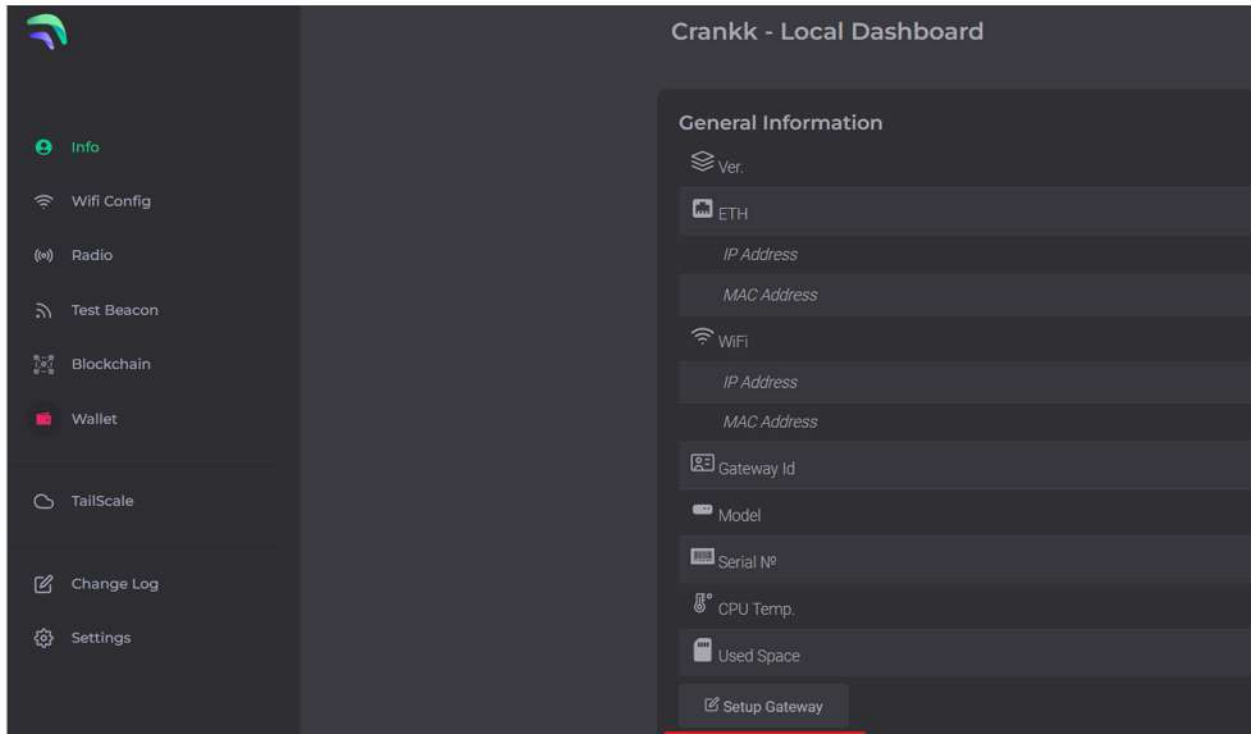
After setting up your gateway, next time you can log in with the following credentials:

- Username: **admin**
- Password: **the last 6 symbols of the gateway's MAC address (e.g. B163B9)**

Please note that you can change the password in the **Settings** tab.

11. Set up the gateway.

Go to the **Info** tab > **Setup Gateway**



Copy your **Gateway ID**, as we will need it later.

Select **Crankk** as **Image**, **Nebra (RockPi)** as **Model** and pick your **Region*** (EU868 / AU915 / US915).

Turn on the **Packet Forwarder**.

If you are currently mining or planning to mine Helium, leave the **Forwards to** box unchanged as shown in the screenshot.

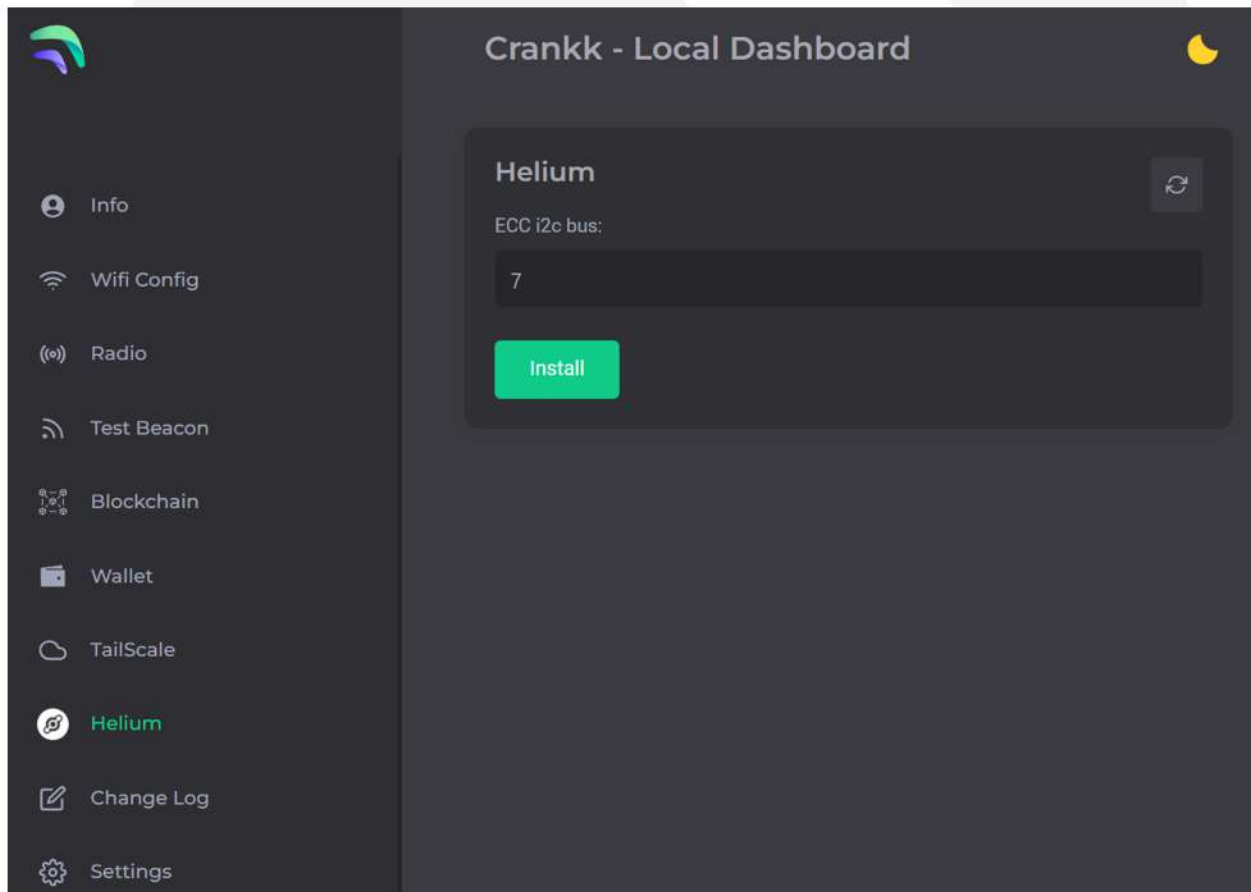
If you don't wish to mine Helium, leave only **127.0.0.1:1700**

Hit **Save**.

Your gateway will restart automatically. Please wait a few minutes while it loads.

12. Double mining.

If you want to participate in Double mining, you can install Helium from here:

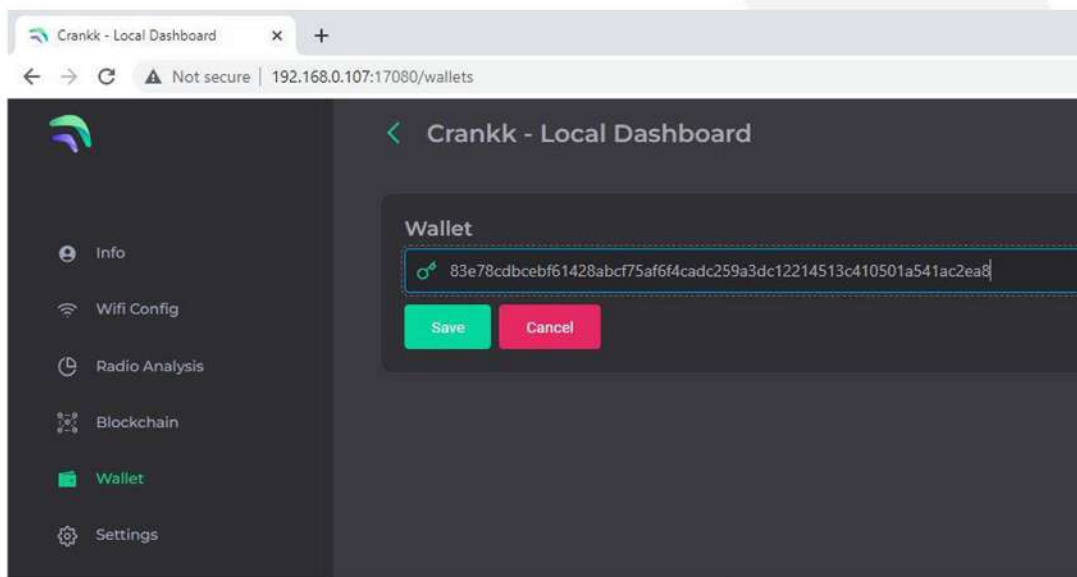


13. Import your secret key.

Hint: If you don't have your secret key saved, you can go to the **User Dashboard** > **Wallets** > find the correct wallet > use the three dots to reveal the secret key.

Navigate to the **Wallet** section in the **Local Dashboard** and enter your **secret key**, keeping the following in mind:

- Please ensure that you copy and paste the **secret key** exactly as it is, without any spaces or other symbols
- Please double-check that it is the correct **secret key** and that it does not belong to another gateway
- Please also note that your **secret key** is different from your **wallet address/public key** starting with k:



Hit **Save**.

If you have entered the correct secret key, then you will see your **k: wallet address** displayed in the **Wallet** field.

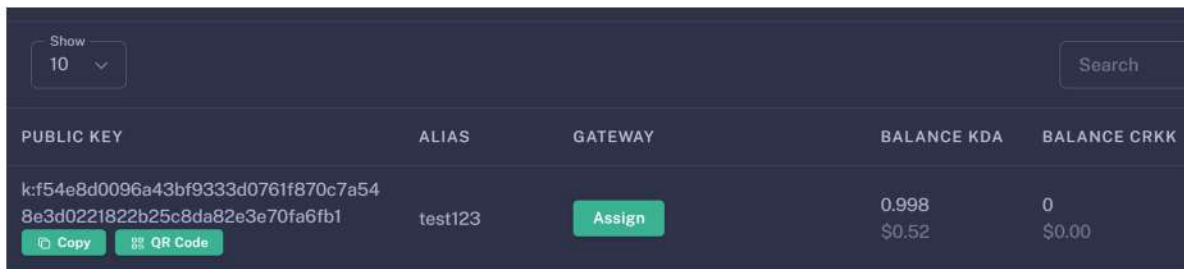
3) User Dashboard setup

14. Assign your gateway ID to a wallet in the User Dashboard.

Log in to the **User Dashboard**.

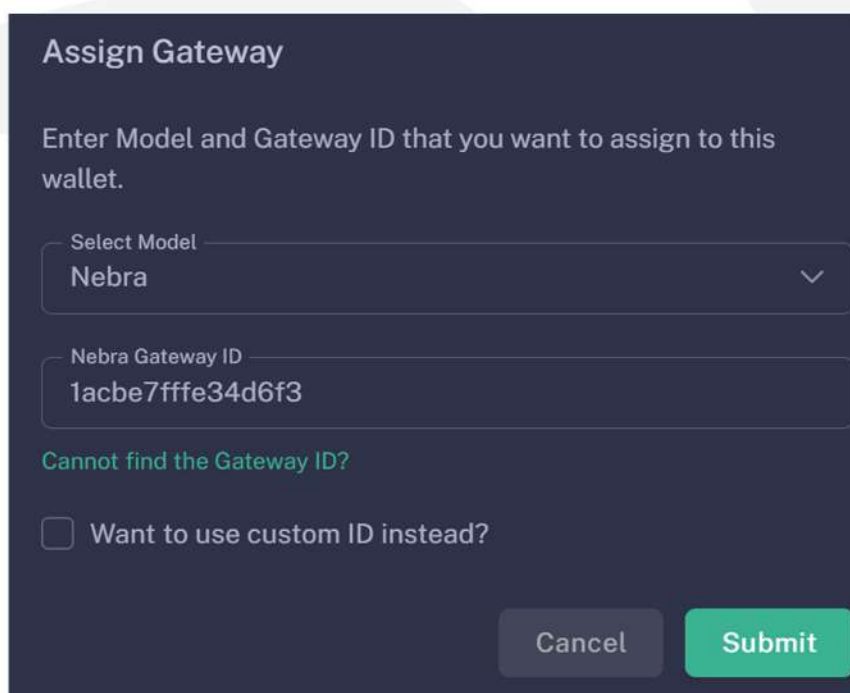
Navigate to the **Wallets** section and select the wallet that you want to use for your software license activation.

Assign your gateway ID to the chosen wallet by clicking on the **Assign** button. If you don't see such a button, it means you haven't purchased a software license for this wallet.



PUBLIC KEY	ALIAS	GATEWAY	BALANCE KDA	BALANCE CRKK
k:f54e8d0096a43bf9333d0761f870c7a54 8e3d0221822b25c8da82e3e70fa6fb1	test123	Assign	0.998	0
Copy QR Code			\$0.52	\$0.00

Select your gateway **Model**, copy and paste your **Gateway ID** (please double-check that it is correct) and hit the **Submit** button.



Assign Gateway

Enter Model and Gateway ID that you want to assign to this wallet.

Select Model
Nebra

Nebra Gateway ID
1acbe7ffe34d6f3

[Cannot find the Gateway ID?](#)

Want to use custom ID instead?

[Cancel](#) [Submit](#)

Please wait a few minutes to allow the changes to sync to the blockchain.

Congratulations! You have successfully onboarded your Nebra Rock Pi gateway on Crankk!

** Crankk currently supports the following frequencies: EU868 MHz, AU915 MHz and US915 MHz. It is essential to ensure that any hardware purchased from a third-party company for use with Crankk operates on the correct frequency for your region of residence. Crankk Inc. assumes no responsibility for any issues arising from the use of hardware with an incorrect frequency. It is the responsibility of the user to select the appropriate frequency for their region of residence.*

Please note that any modifications, updates or restrictions made by the gateway manufacturer that may impact the performance or functionality of the gateway on the Crankk network are beyond the control and responsibility of Crankk Inc. Users are advised to check compatibility and seek assistance from the gateway manufacturer for any gateway-related issues.