

How to install Balance Bot on Raspberry PI 3B

Introduction

The application Balance Bot of hodlerhacks.com, according to the documentation at the time of this writing (<https://hodlerhacks.com/balance-bot/>) can be installed locally on Windows and MAC computers and on Linux machines in the cloud.

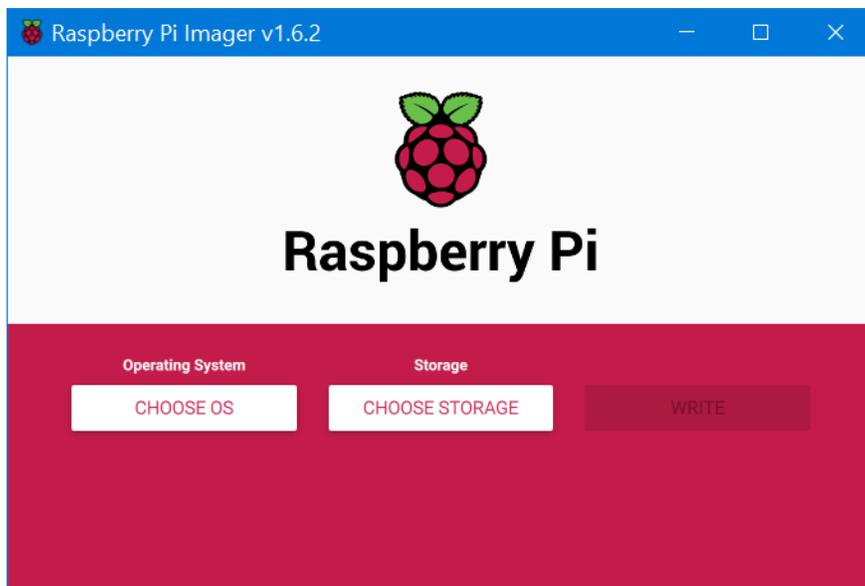
When I learned about this application I did install it on Windows first, then on a local Linux (Ubuntu 20.04) machine as well. Both installations were okay and the Bot could be configured with my personal preferences.

Afterwards my goal was to install Balance Bot on a Raspberry PI which I still had from previous small projects. After all, the Rasperry PI operating system is based on a well-known Linux distribution (Debian) and is very cheap in energy consumption.

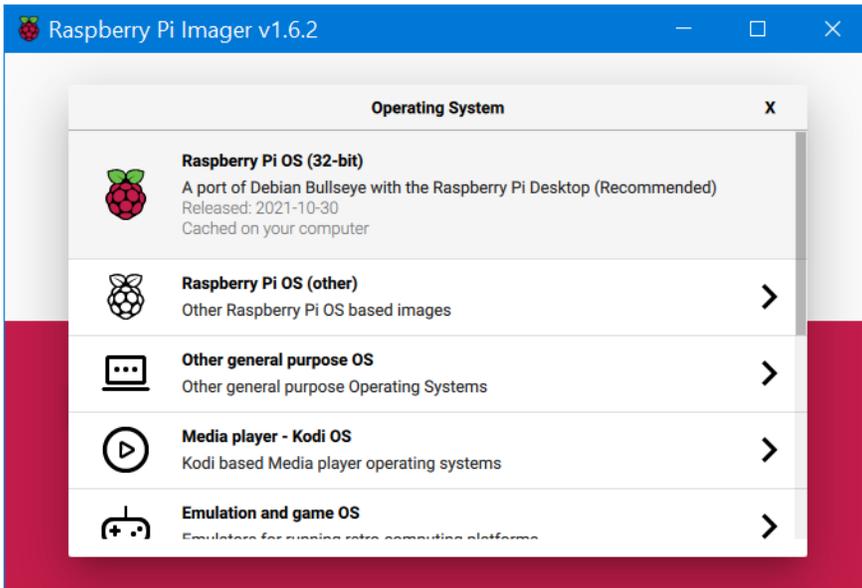
It took a while to figure this out but after some failures it succeeded. Here's my step by step guide for you. I take it for granted that some basic knowledge about Linux/Raspberry PI is present.

Step One

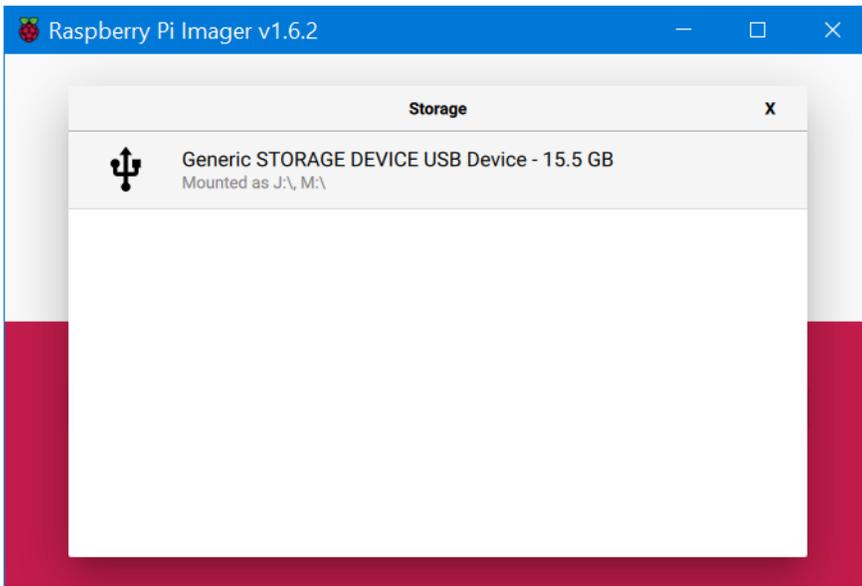
Put a new image of the Raspberry PI OS (32 bit) on a micro SD card using the Raspberry PI Imager application. For more information see: <https://www.raspberrypi.com/software/>



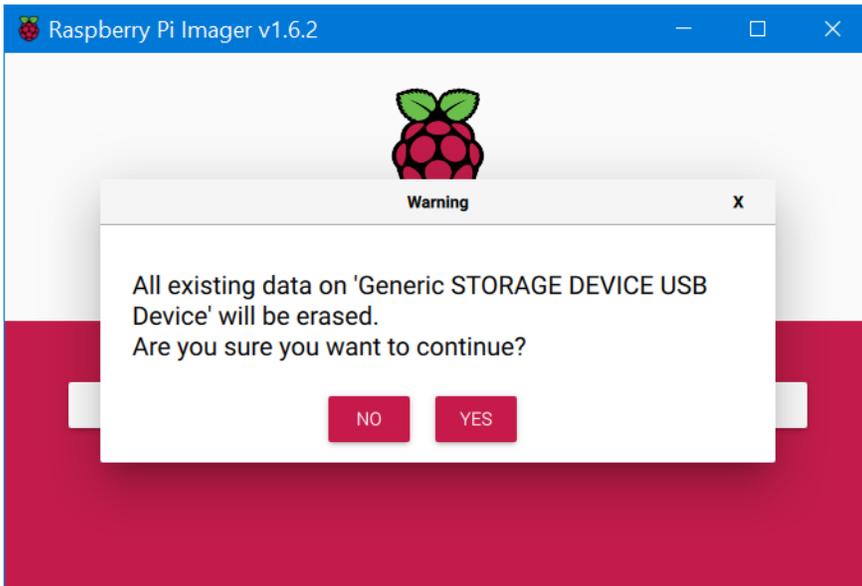
Choose OS.



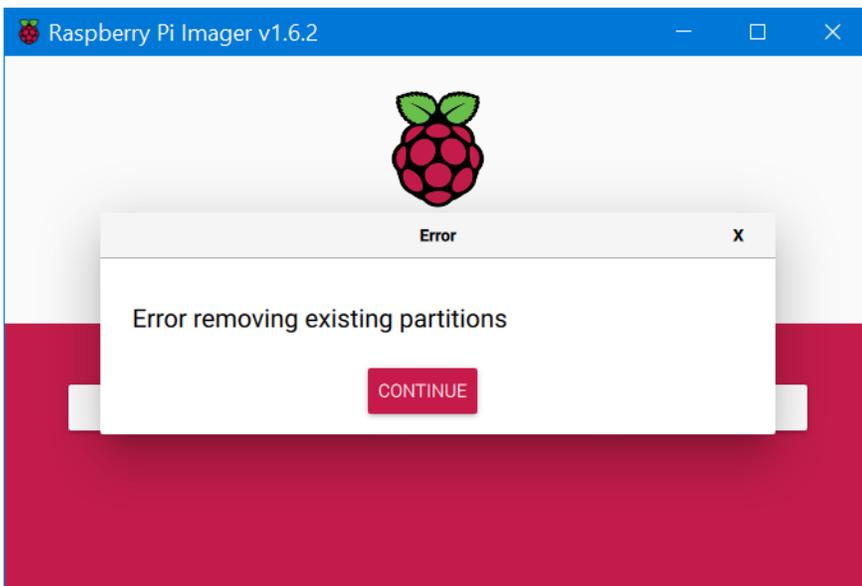
Select Raspberry PI OS (32 bit) Debian Bullseye. Then use the Choose Storage button.



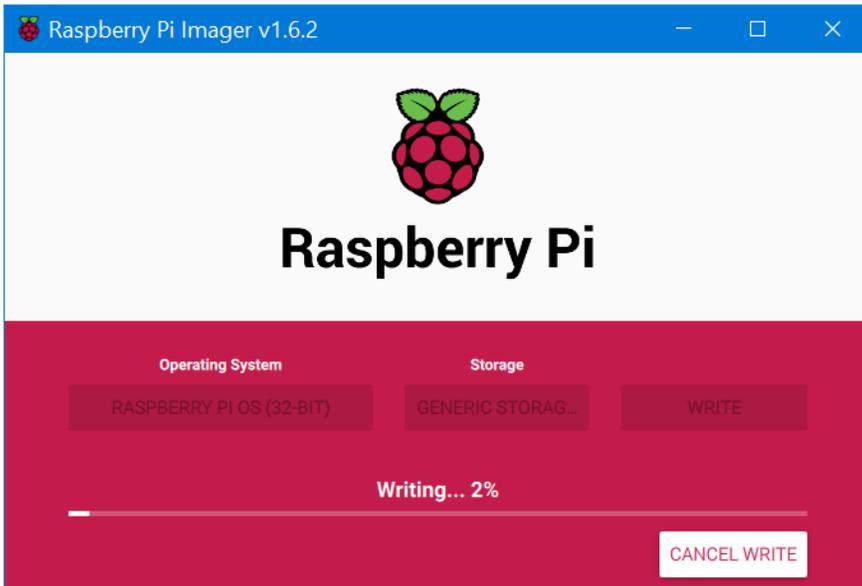
Click if okay.



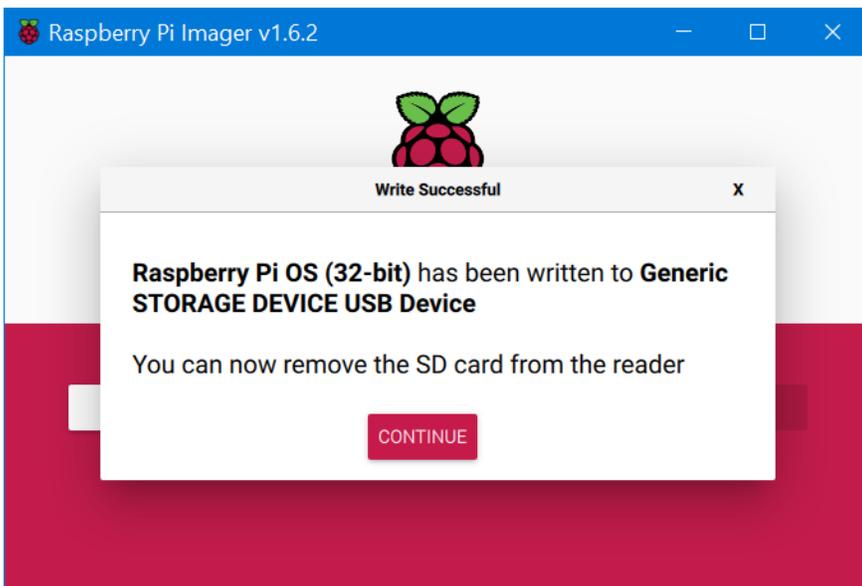
Double check before clicking Yes.



In case of this error Continue and click Write and Yes again.



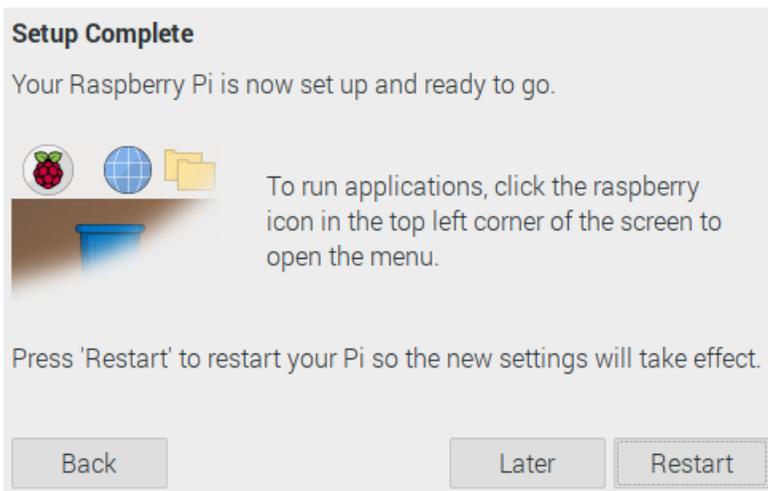
Writing....



Continue and Close.

Step Two

Put the micro SD card in your Raspberry PI and power it up. A basic setup is needed. Specify your Country, Language and Time Zone as appropriate. And oh yes, a password as well. In my case I skipped the Wifi network setup because I prefer to use cabled Ethernet connections when possible. Then the PI needs an hour or so to update itself.



Restart.

Step Three

The Javascript application run-time environment node.js is needed because the Balance Bot is based on it. However, out of the box Raspbian OS does not have it.

```
File Edit Tabs Help
pi@bb:~ $ node --version
bash: node: command not found
pi@bb:~ $ npm --version
bash: npm: command not found
pi@bb:~ $
```

Node.js could be installed with an `sudo apt install` command but that version is too old. So here is how we proceed: Open a terminal and type this command, or copy and paste it from this document.

```
curl -sL https://deb.nodesource.com/setup_17.x | sudo -E bash -
```

```
File Edit Tabs Help
pi@bb:~ $ curl -sL https://deb.nodesource.com/setup_17.x | sudo -E bash -
```

This procedure does not take long and does nothing more than adding the url `deb.nodesource.com` to the package repository list after which the well-known apt install command can be used.

```
File Edit Tabs Help
source.com/node_17.x bullseye main' >> /etc/apt/sources.list.d/nodesource.list
## Running `apt-get update` for you...
+ apt-get update
Hit:1 http://archive.raspberrypi.org/debian bullseye InRelease
Hit:2 http://raspbian.raspberrypi.org/raspbian bullseye InRelease
Get:3 https://deb.nodesource.com/node_17.x bullseye InRelease [4,586 B]
Get:4 https://deb.nodesource.com/node_17.x bullseye/main armhf Packages [779 B]
Fetched 5,365 B in 2s (3,173 B/s)
Reading package lists... Done

## Run `sudo apt-get install -y nodejs` to install Node.js 17.x and npm
## You may also need development tools to build native addons:
    sudo apt-get install gcc g++ make
## To install the Yarn package manager, run:
    curl -sL https://dl.yarnpkg.com/debian/pubkey.gpg | gpg --dearmor | sudo tee
e /usr/share/keyrings/yarnkey.gpg >/dev/null
    echo "deb [signed-by=/usr/share/keyrings/yarnkey.gpg] https://dl.yarnpkg.co
m/debian stable main" | sudo tee /etc/apt/sources.list.d/yarn.list
    sudo apt-get update && sudo apt-get install yarn

pi@bb:~ $
```

```
sudo apt install -y nodejs
```

```
File Edit Tabs Help
pi@bb:~ $ sudo apt install -y nodejs
```

This does not take very long either.

```
File Edit Tabs Help
pi@bb:~ $ sudo apt install -y nodejs
Reading package lists... Done
Building dependency tree... Done
Reading state information... Done
The following package was automatically installed and is no longer required:
  libfuse2
Use 'sudo apt autoremove' to remove it.
The following NEW packages will be installed:
  nodejs
0 upgraded, 1 newly installed, 0 to remove and 3 not upgraded.
Need to get 23.8 MB of archives.
After this operation, 173 MB of additional disk space will be used.
Get:1 https://deb.nodesource.com/node_17.x bullseye/main armhf nodejs armhf 17.3
.0-deb-1nodesource1 [23.8 MB]
Fetched 23.8 MB in 3s (7,312 kB/s)
Selecting previously unselected package nodejs.
(Reading database ... 99566 files and directories currently installed.)
Preparing to unpack ../nodejs_17.3.0-deb-1nodesource1_armhf.deb ...
Unpacking nodejs (17.3.0-deb-1nodesource1) ...
Setting up nodejs (17.3.0-deb-1nodesource1) ...
Processing triggers for man-db (2.9.4-2) ...
pi@bb:~ $
```

Check the result with the commands: `node -v` and `npm -v`

```
File Edit Tabs Help
pi@bb:~ $ node -v
v17.3.0
pi@bb:~ $ npm -v
8.3.0
pi@bb:~ $
```

Node and the Node Package Manager (npm) have been installed now.

Step Four

The application Balance Bot is the next to be installed. A few steps are needed to accomplish this. First we download the installation script:

```
wget -P /tmp -L https://raw.githubusercontent.com/hodlerhacks/balance-bot-ubuntu-script/master/bb\_install.sh
```

```
File Edit Tabs Help
pi@bb:~ $ wget -P /tmp -L https://raw.githubusercontent.com/hodlerhacks/balance-bot-ubuntu-script/master/bb_install.sh
```

And after a few seconds...

```
File Edit Tabs Help
pi@bb:~ $ wget -P /tmp -L https://raw.githubusercontent.com/hodlerhacks/balance-
bot-ubuntu-script/master/bb_install.sh
--2021-12-18 18:51:08-- https://raw.githubusercontent.com/hodlerhacks/balance-b
ot-ubuntu-script/master/bb_install.sh
Resolving raw.githubusercontent.com (raw.githubusercontent.com)... 185.199.111.1
33, 185.199.108.133, 185.199.110.133, ...
Connecting to raw.githubusercontent.com (raw.githubusercontent.com)|185.199.111.
133|:443... connected.
HTTP request sent, awaiting response... 200 OK
Length: 6325 (6.2K) [text/plain]
Saving to: '/tmp/bb_install.sh'

bb_install.sh      100%[=====>]   6.18K  --.-KB/s   in 0.001s

2021-12-18 18:51:08 (6.77 MB/s) - '/tmp/bb_install.sh' saved [6325/6325]

pi@bb:~ $
```

Now we continue with: `sudo bash /tmp/bb_install.sh`

```
File Edit Tabs Help
pi@bb:~ $ sudo bash /tmp/bb_install.sh
```

The Balance Bot installer/maintenance menu shows:

```
File Edit Tabs Help
-----
                Balance Bot Installer
                v2.2.0
-----

 1 - Install Balance Bot
 2 - Update Balance Bot
 3 - Re-install Balance Bot

s - Stop Balance Bot
r - Restart Balance Bot

u - Update this installer
i - Re-install this installer

0 - Exit

-----

Enter selection: █
```

Press 1 to start the installer. This time the procedure takes a lot longer. At some points during this process you can see warnings like the one below:

```
File Edit Tabs Help
Building dependency tree... Done
Reading state information... Done
nodejs is already the newest version (17.3.0-deb-1nodesource1).
The following package was automatically installed and is no longer required:
  libfuse2
Use 'sudo apt autoremove' to remove it.
0 upgraded, 0 newly installed, 0 to remove and 3 not upgraded.
Reading package lists... Done
Building dependency tree... Done
Reading state information... Done
Some packages could not be installed. This may mean that you have
requested an impossible situation or if you are using the unstable
distribution that some required packages have not yet been created
or been moved out of Incoming.
The following information may help to resolve the situation:

The following packages have unmet dependencies:
 libnode72 : Conflicts: nodejs-legacy
 nodejs    : Conflicts: npm
E: Unable to correct problems, you have held broken packages.
npm WARN deprecated uuid@3.4.0: Please upgrade to version 7 or higher. Older v
ersions may use Math.random() in certain circumstances, which is known to be pro
blematic. See https://v8.dev/blog/math-random for details.
reify:dayjs: timing reifyNode:node_modules/pm2 Completed
```

However, I did not stop here and in the end it didn't seem to matter. After a lot of installing the menu shows up again:

```
File Edit Tabs Help
-----
Balance Bot Installer
v2.2.0
-----

1 - Install Balance Bot
2 - Update Balance Bot
3 - Re-install Balance Bot

s - Stop Balance Bot
r - Restart Balance Bot

u - Update this installer
i - Re-install this installer

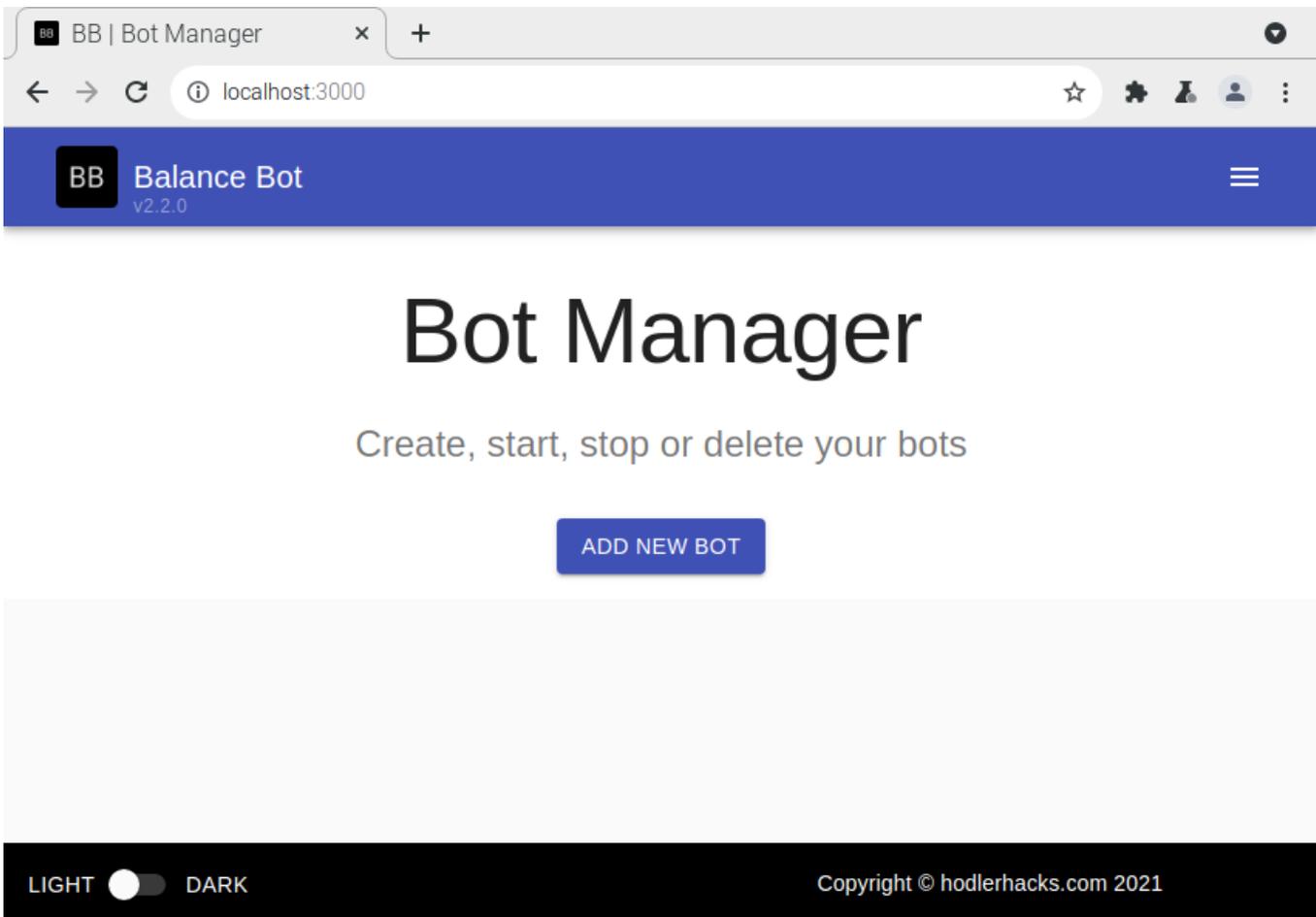
0 - Exit
-----

Enter selection: █
```

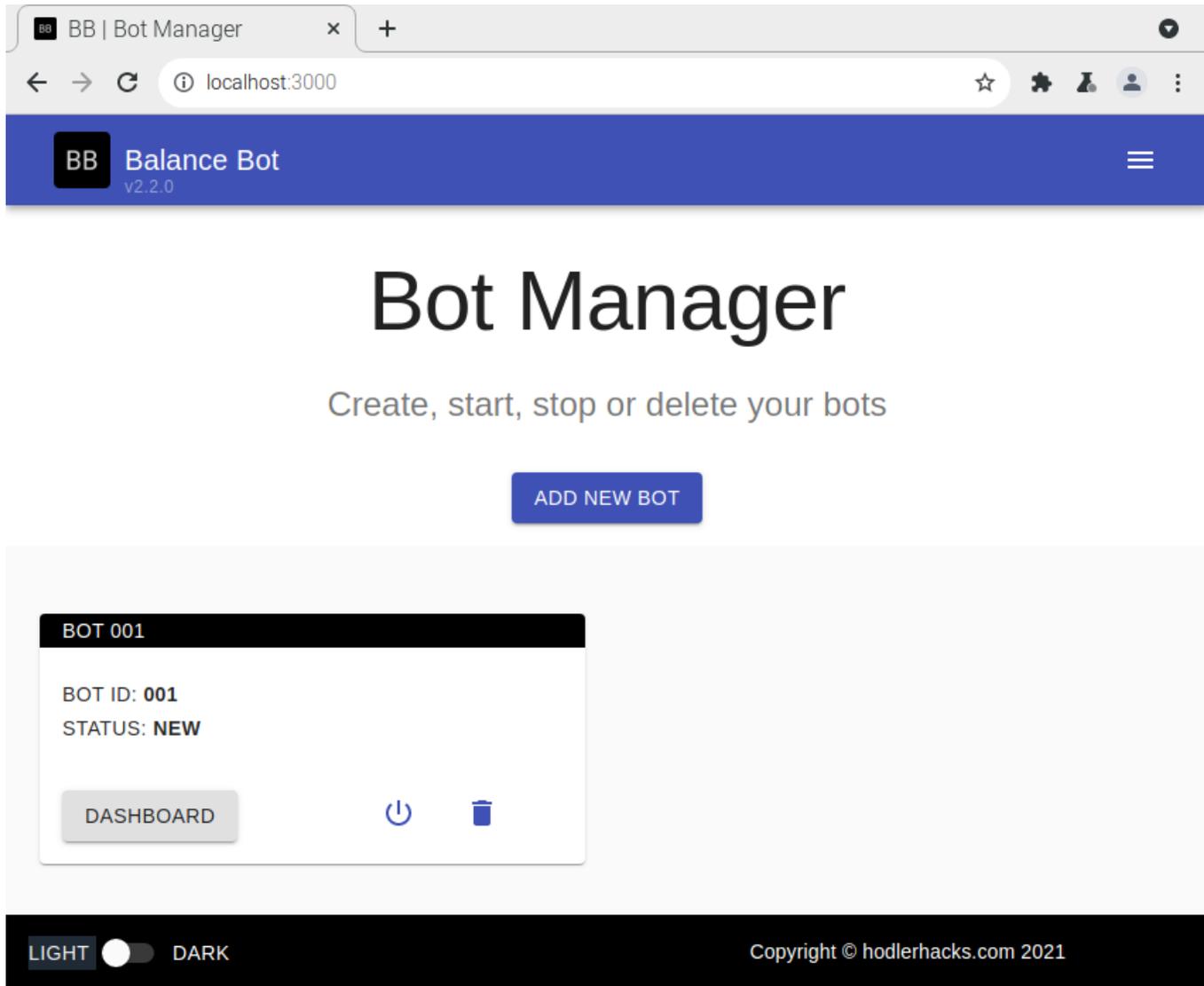
Press 0.

Step Five:

Open the chromium browser and specify <http://localhost:3000>



Click Add New Bot



Click the Start button first and after a while you can click the Dashboard button. The installation of the Balance Bot has completed and the configuration can be done from here on. See further: <https://hodlerhacks.com/balance-bot/configuration/>

Have fun balancing!