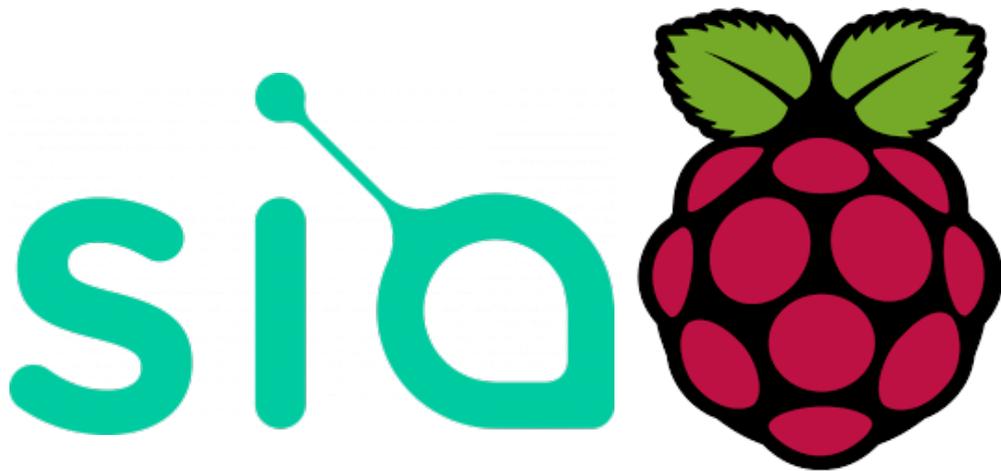# SiaBerry OS

An Operating System for Using Siacoin on Raspberry Pi 3

Quick Start Guide
v 1.2.4

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Prerequisites

Needed hardware and accessories:

- Raspberry Pi 3 plus a high-quality 2.5 A adapter (like: http://amzn.to/2wr6JLu)
- LAN cable
- A compatible 8GB or bigger MicroSD card (like: http://amzn.to/2xvPvJU)
- A laptop/PC with micro/SD card reader
- One or more HDDs or SSDs (like: http://amzn.to/2w0K5IU)

Starting with version 1.2.4 we recommend you to setup Sia directly on the hosting HDD.

Step 1: Getting the OS

Download the image from: **http://www.siaberry.com/downloads/**

Write the image to the MicrosSD card in your laptop or PC:

Linux/Mac OS:

Install xz-utils in Linux or xz package in Mac and do this as root and while the SD card is *unmounted*:

```
 xzcat /path/to/SiaBerryOSv1.2.img.xz > /dev/sdx
```

Replace sdx with the block device for the MicroSD. Remember that is must be the whole device sdx and not a partition like sdx1.

Windows:

Use 7zip (https://netcologne.dl.sourceforge.net/project/sevenzip/7-Zip/17.01/7z1701-extra.7z) or WinRAR to decompress the file and extract the "img" file inside. Once the image is extracted, download Win32DiskImager from the following link or its project page:

https://10gbps-io.dl.sourceforge.net/project/win32diskimager/Archive/win32diskimager-1.0.0-install.exe

and use it according to this howto to write the image onto the MicroSD:

https://lifehacker.com/how-to-clone-your-raspberry-pi-sd-card-for-super-easy-r-1261113524

Put the MicroSD into the Pi; connect it through its Ethernet port to your modem/router and power it on by plugging in the adapter.

Step 2: Preparing for the interaction

Upon the first boot, the OS will prepare itself within 2 to 3 minutes. To be able to work with the OS some steps might be necessary on your laptop/PC.

Windows:

On your laptop or PC, if Windows is installed, download and install Bonjour Print Services from https://support.apple.com/kb/dl999?locale=en_US.

Linux:

If you are on Linux, enable and start Avahi daemon on your Linux box.

Mac OS:

Nothing is needed.

Step 3: Logging into the OS

While your PC or laptop and the Pi are connected to the same home/work network, open Firefox or Google Chrome browser and navigate to http://siaberryos.local. For now, just use Chrome as Firefox has problems. Also, don't forget to exactly type "http://" as chrome might initiate a search instead of directly going to the web-UI address. Finally, you should see the login page.


Log into the OS with "siauser" as the user and "siaberry" as the password.

Step 4: First security measures

To increase security, change "Sia user" to your preferred user name.
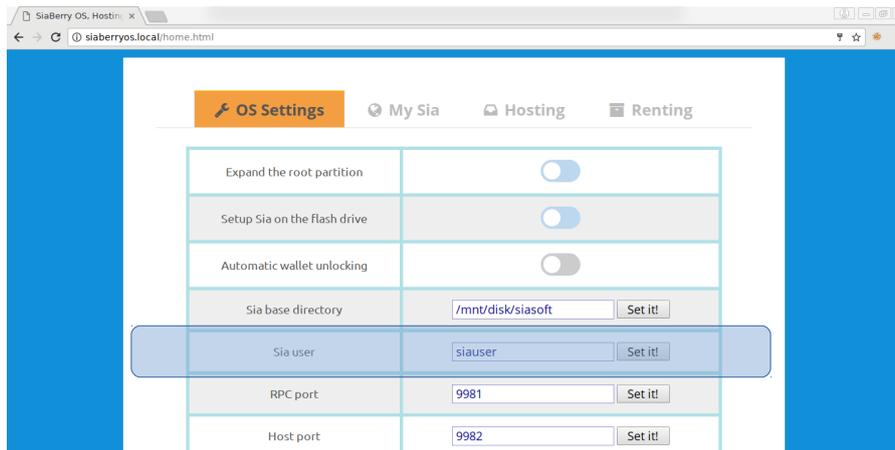
While still logged in, click on "Open WebShell" and log in with "root" as user name and "siaberry" as the password. We are going to change the password to the new user and also the admin. See and follow the directions below.
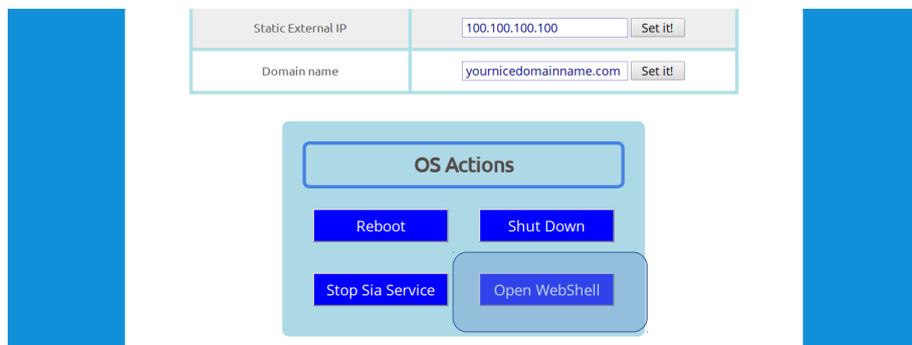
Once you are
logged into the WebShell, change the password for "root" by typing:

```
passwd root
```

It will ask you to set a password for the root – the admin user. The password will not be echoed back to you. Do the same for the user you just created. Remember that the passwords do not have to be the same for root and your user.

```
passwd kete
```

replace "kete" with the one you created earlier. Close the WebShell when you are done.

Note: You can choose any password for the root. However, for your own user only numbers, letters (uppercase or lowercase) and any special characters from *!@#^_ can be used. Also, when the next time you want to log into SiaBerry, your new user name and password will be used, so do not log out until you have completely set a password for your newly created username or you will lock yourself out.

At this point, your device has already acquired a "LAN IP" similar to xxx.xxx.xxx.100. However, if you would like to change it, or if another SiaBerry was going to be added to the same network, you could change it to another valid value to avoid a conflict. For example, if the acquired IP was 192.168.0.100, you could change it to 192.168.0.101. In the next reboot, the new IP will take effect.

Step 5: Setting up Sia

Attach *only one* HDD through the usb ports to the Pi and disconnect any other HDDs/SSDs for now and then turn on "Setup Sia on the flash drive". On the next boot, the OS will format the attached drive and setup Sia on it. Click on "Reboot" to reboot the Pi and start configuring Sia.
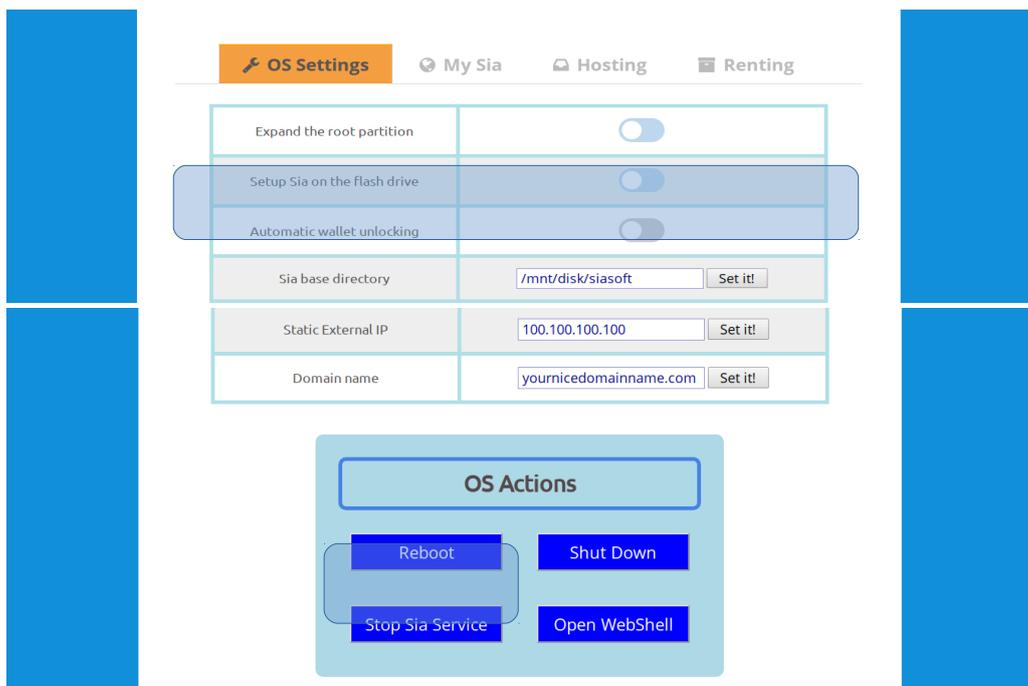
Step 6: Monitoring the setup process

On the next boot, you can monitor the steps of getting Sia software on the attached drive in "My Sia" tab. It will prepare the medium, download consensus.db and verify the blockchain. This step

will take a considerable amount of time up to a whole day depending on how fast your HDD is.
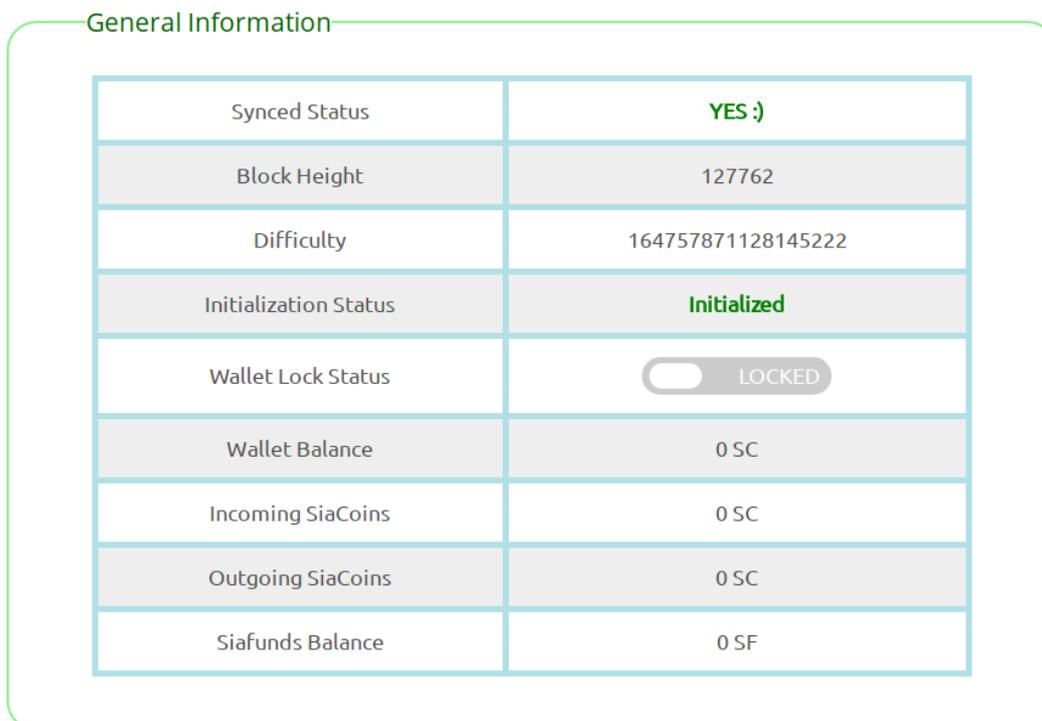
Step 7: Wallet initialization

Having completed the verification, the software will be synced and ready for initializing a wallet. You can initialize the wallet either by an existing seed or a new one. The WebUI will guide you

through setting a password for your wallet. Please note that if you choose to initialize by an existing seed, The software will go to scanning mode which will be reflected in the "General Information" part. You will need to wait until scanning is over.
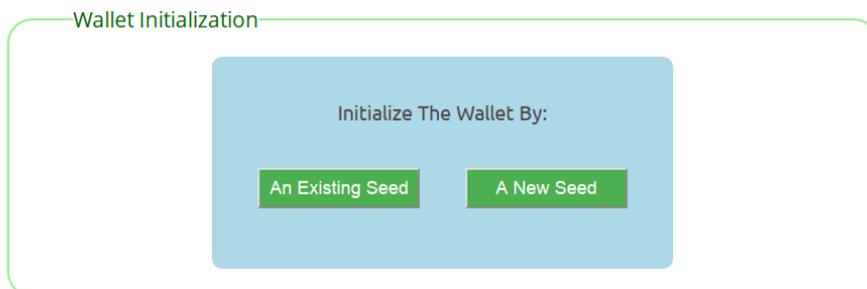
Step 8: The first unlocking

Once the wallet is initialized, you can unlock it and send and receive coins. Click on "Wallet Lock Status" button to enter your wallet password and unlock it. In the first time when you unlock your wallet, scanning mode will be enabled and you should wait until it is finished.

General Information	
Synced Status	YES :)
Block Height	127762
Difficulty	164757871128145222
Initialization Status	Initialized
Wallet Lock Status	LOCKED
Wallet Balance	0 SC
Incoming SiaCoins	0 SC
Outgoing SiaCoins	0 SC
Siafunds Balance	0 SF

Step 9: Deposit into the wallet

Now you have a working wallet ready to do heavier tasks like hosting. Before diving into hosting, you need to send some coins to your new wallet. This is done in "My Sia" tab. The amount will depend on how many TB you are going to offer to the network. If your wallet has already created

an address, then you can select it. Your wallet might not already have any addresses yet; in this case, you will have to generate one for your new shiny wallet.

For receiving, you may reuse an already created address:

Choose one ▼

Or you can generate a new one:

Generate!

Step 10: Configuring the external IP address

If your ISP has given you a static address, set it in the appropriate section in "OS Settings" tab. If you do not have a static internet address, change the external IP type to dynamic and fill in the form.

External IP Type	DYNAMIC
FreeDNS Account	Login: loginname Password: Domain: nice.nicefreedo Set it!

Remember that you need to complete the form and submit it.
Otherwise the IP type will remain static.

In order to make dynamic DNS work, you will have to create an account on http://freedns.afraid.org/ and enter the credentials in this section.

Step 11: Adding host space

Now you are ready to connect more HDDs/SSDs (if you want) and add hosting space from all of them. Remember that the HDDs/SSDs need to be externally powered as the Pi would not have enough current to feed them all. You might use different solutions in this step such as USB3 hubs along with SATA to USB interfaces or directly use hard drives which have builtin hubs like

After you connect your HDDs/SSDs to the Pi, go to the "Hosting" tab, "Host Space Allocation" section.

Depending on what you desire, you might want to format your storage or directly use the available partitions. Once you configure the storage, click on "Allocate Space" and the hosting space will be created, but it will not be set in Sia yet.

To register the storage in Sia, go to "Sia Host Space Configuration" section and register the amount of space in Sia. Once you are happy with the sizes, click on "Set Storage". Please note that the sizes will be shown in GiB and TiB not GB and TB.

The storage setting will be reflected in "Sia Host Information" in the "Hosting" tab. In this part, you can later resize the host space or even remove them (by moving the slider down to 0).

Step 12: Enabling automatic unlocking

If, for any reason, your pi is restarted (as it will do weekly to update itself), your wallet will be locked until you yourself unlock it. This will cause problems with hosting as your wallet must always be unlocked. To remedy this problem, go to "OS Settings" and enable "Automatic wallet unlocking". Once you enter your wallet password, it will make the OS keep the wallet always open on each boot unless you yourself manually lock it and disable automatic unlocking.

Step 13: Configuring the host options

The last step before announcing your host is to set the options in "Sia Host Configuration" part. In this section you should see the host address and some other parameters. Change them if you would like and click on "Apply Settings". Or if you are happy with the default set of options, just make sure that the host address is correctly configured and then click on "Announce" and confirm it.

Note: Do not forget to forward the RPC and Host ports (available in "OS Settings" tab) in your router to the IP of the Pi, or it will say that your host is not connectable!

Congratulations on becoming a member of the hosters community. Happy farming!

Questions? Offers? Suggestions?

Post your question/suggestion/offer or anything related to SiaBerry at https://www.reddit.com/r/SiaBerry/

You may also visit our discord community at https://discordapp.com/invite/sFCT3Ar #siaberry channel and have a conversation with us. We will be happy to hear from you or help. If you would like to contact me directly, please use the email provided on the first page.

This is my SiaCoin address if you feel generous:

e71e44fb6ac3c56b012e1137ced990acd9afd24eaaf83882682ffc959ebd02250f76c3c8f8cc