

## How to set up your Bitcoin 2 Staking Raspberry Pi Step-by-Step Guide

This guide assumes you want to use your Raspberry Pi as a 24/7 staking device instead of your computer.

If you want to install the Bitcoin 2 Core Wallet on an existing Raspbian OS, you can jump directly to the **Chapter 2**. And if you want to reinstall the Bitcoin 2 Wallet that isn't a problem, your existing wallet.dat will be restored.

#### **Prerequisites :**

- Raspberry Pi
- 16Gb microSD Card (or higher)
- 1Gb USB flashdrive (or higher)
- MicroSD Card Reader

#### 1. Installation of Raspbian

On your computer, download "NOOBS Offline and network install" available **here**.



Extract, copy and paste the content of the ZIP archive on your microSD card freshly formated in FAT32 with your OS Explorer or the application **SD Memory Card Formatter**.

👝   🗹 📙 🖛		Manage	USB Drive (E:)				- 0	×
File Home Sha	are V	iew Drive Tools						~ 🕐
Pin to Quick Copy Pasta access Clipboa	Cur Co e Pas	t py path Move to *	Copy to Organize	New folder New	Properti	Edit € Ø Ø Ø Ø Ø Ø Ø Ø Ø Ø Ø Ø Ø	Select all Select not Invert select Select	ne ection
$\leftarrow \rightarrow \checkmark \uparrow = $	USB Drive	e (E:)			√ Č	Search USB D	rive (E:)	م
✓	*	Name defaults	^	Date modifie 6/10/2019 12 6/20/2019 6:	ed 18 PM 39 PM	Type File folder File folder	Size	
🖶 Download	*	overlays		6/10/2019 10	:50 AM	File folder		
🔮 Documents	*	bcm2708-rpi-b.	dtb	6/10/2019 12	:18 PM	DTB File		23 KB
Pictures	*	📄 bcm2708-rpi-b-	plus.dtb	6/10/2019 12	:18 PM	DTB File		23 KB
🗸 🔲 This PC		bcm2708-rpi-cr	n.dtb	6/10/2019 12	:18 PM	DTB File		23 KB
> 1 3D Objects		bcm2708-rpi-ze	ro.dtb	6/10/2019 12	:18 PM	DTB File		23 KB
> Deckton		bcm2708-rpi-ze	ro-w.dtb	6/10/2019 12	:18 PM	DTB File		24 KB
		bcm2709-rpi-2-	b.dtb	6/10/2019 12	:18 PM	DTB File		24 KB
> Documents		bcm2710-rpi-3-	b.dtb	6/10/2019 12	:18 PM	DTB File		26 KB
> 🕂 Download		bcm2710-rpi-3-	b-plus.dtb	6/10/2019 12	:18 PM	DTB File		26 KB
> 🎝 Music		bcm2/10-rpi-cr	n3.dtb	6/10/2019 12	:18 PM	DTB File		25 KB
> 📰 Pictures		bcm2/11-rpi-4-	b.dtb	6/10/2019 12	:18 PM	DIBFile		39 KB
> 🛃 Videos				6/10/2019 12	10 PIVI	BIN FILE		1 KB
> 🏪 Système (C:)			README	6/10/2019 12	18 DM	Text Document		3 KB
🚔 Local Disk (D:)		recover4 elf		6/10/2019 12	-18 PM	FLE File	7	243 KB
> 👝 USB Drive (E:)		recovery.cmdlin	ie	6/10/2019 12	:18 PM	CMDLINE File		1 KB
		recovery.elf	-	6/10/2019 12	:18 PM	ELF File	6	68 KB
USB Drive (E:)		recovery		6/10/2019 12	:18 PM	Disc Image File	2,9	49 KB
> defaults		recovery.rfs		6/10/2019 12	:18 PM	RFS File	27,9	04 KB
> os		RECOVERY_FILE	S_DO_NOT_EDIT	6/10/2019 12	:18 PM	File		0 KB
overlays		recovery7		6/10/2019 12	:18 PM	Disc Image File	3,1	08 KB
🗸 🔿 Network		recovery7l		6/10/2019 12	:18 PM	Disc Image File	3,3	43 KB
	VO V	📄 riscos-boot.bin		6/10/2019 12	:18 PM	BIN File		10 KB
25 items								



When finished, eject your USB Drive properly.

Insert the MicroSD card into the Raspberry Pi.

Plug in a HDMI monitor, a keyboard, a mouse and your network ethernet cable (Internet is mandatory to start the installation)

Power on the Raspberry Pi.

On the NOOBS assistant screen, check **"Raspbian Full (RECOMMENDED)" 1** 

Choose your "**Language**" **2** and "**Keyboard**" **3**, then click on "**Install**" **4** and **Yes 5**.

4	NOOBS v3.1 - Built: Jun 10 2019	
Install (i)	Edit config (e) Wifi networks (w) Online help (h) Exit (Esc)	
	Raspbian Full [RECOMMENDED] A port of Debian with desktop and recommended applications	
	Confirm	
	Warning: this will install the selected Operating System(s). All existing data on the drive will be overwritten, including any OSes that are already installed.	
	Data Partition Adds an empty 512MB ext4 format partition to the partition layout.	
Disk space	e	
Needed: Available	4524 MB e: 13601 MB	
	2 Language (I): English (US) Keyboard (9): us V	



When the Operating System is installed, click "**OK**" to reboot.



After the start-up, **follow the assistant** and set up a few things, press **"Next"** to get started :

Welcome to Raspberry Pi	-		×
<b>K</b>			
Welcome to the Raspberry Pi Desktop!			
Before you start using it, there are a few things to set up.			
Press 'Next' to get started.			
Cancel	Ne	xt	

- Set Country : choose Country, Language, etc...
- **Change Password :** enter new password, it's a very important step
- Set Up Screen : check the option if you plan to use a monitor and if you see black border
- **Select WiFi Network** : if you prefer WLAN support you can activate it and unplugged your ethernet cable
- Update Software : press "Skip" to avoid, it will be done later in the script with better options.
- Setup Complete : Restart



### 2. Installation of the Bitcoin 2 Core

Launch the **console** with the 3rd shortcut on the top.



Enter this three commands, or copy and paste them one by one if you opened the PDF guide on your Raspberry Pi :

```
wget https://bitc2.org/raspi_install
chmod +x raspi_install
./raspi_install
```

When the script will be launched, it will take a few times to download updates, programs and snapshot of the Blockchain, depending on your internet connection, be prepared for that.

The script will execute these tasks :

- Update and upgrade the Raspbian Operating System
- Install UFW and configure the firewall (rules for SSH opened if needed but service not started)
- Download, install and configure Bitcoin 2 Core Wallet (recovering wallet.dat file if it exists)
- Download a Blockchain snapshot to accelerate the synchronization of the Bitcoin 2 Core Wallet
- Create Bitcoin 2 Core desktop shortcut
- Start VNC service
- Increase SWAP size to 2Gb
- Force 1080p HD resolution (to disconnect HDMI monitor)
- Disable splash screens, screen saver and auto login



Note your IP address displayed **on the last screen of the script** before the prompt to reboot. It will be necessary for the VNC connection from your computer.

	YC	UR BITCOIN	2 CORE	WALLET	IS ABOU	т то в	E READY		
/!\	Your IP ad	dress will	be man	datory	to start	VNC f	rom your	computer	/!\
LAN	IP ADDRESS	: 192.168	.1.120						
Aft Tak Lau Wai And	er the rebo e remote co nch the Bit t until the enjoy your	ot, you wi ntrol from coin 2 Cor end of th Bitcoin 2	ll be a your c e Walle e synch Stakin	ble to n omputer t deskto ronizat: g Raspbo	unplug H with VN op short ion erry Pi	DMI, k C View cut !	eyboard er	and mouse	

Or if you forget it, you can look it up with the command : hostname -I

pi@raspl	berrypi:~	\$ hostname	- I
192.168	1.120		

**N.B**: If you have an old installation with a .bitcoin2 directory, just answer **yes** when it will be asked to overwrite the folder and back up your wallet.dat. If you say **no**, the script will be stopped and you will have to manually remove the .bitcoin2 folder and back up your wallet.dat if needed.

```
CONFIGURING BITCOIN 2 CORE WALLET

/// A previous installation of Bitcoin 2 has been detected ///

Do you want to overwrite the .bitcoin2 directory ?

Anyway your wallet.dat will be restored.

Please answer YES or NO, then press ENTER

yes
```



#### 3. Take remote control with VNC

Download and install VNC Viewer



When the installation is finished, start VNC Viewer, enter your IP address known previously, then press Enter.

VNC Viewer File View Help	-		×
VNC CONNECT 192.168.1.120	1	Sign in	· •
There are no computers in your address book at present.			
Sign in to your RealVNC account to automatically discover team computers	i.		
Alternatively, enter the VNC Server IP address or hostname in the Search bar to conne	ct direc	tly.	

On the first connection, you will have a window like this one. Just click **"Continue"** and authenticate yourself entering your username **pi** and your password.

V2 Identity Check	(	×
	X VNC Server identity check failed	
VNC Server's id	entity has changed since you last connected to it.	
VNC Server:	192.168.1.120::5900 (TCP)	
New catchphras	<u>a:</u>	
New signature:		
lt may not be sai do.	e to connect. You won't be warned about this again if yo	u
	Continue Cancel	



#### 4. Start the Bitcoin 2 Core Wallet

Once you are on the Raspberry Pi the desktop, launch the **"Bitcoin 2 Core"** shortcut, and choose **"Execute"** 



You can avoid this window in the file manager preferences : **"Edition"** ▶ **"Preferences"** ▶ Check **"Don't ask options on launch executable"** ▶ **"Close"** 

The loading can take a few minutes until you see the Wallet **Overview**, then you will have to wait until the end of the synchronization : blue icon on the bottom right **BTC2 B**  $\bigcirc$  **N** 





#### 5. Secure your Bitcoin 2 Core Wallet

When synchronization will be finished, to avoid an unknown access to your Raspberry Pi and a transfer of your BTC2, you will need to encrypt your wallet.

Go to **"Settings"** ► **"Encrypt Wallet...**"

Choose a password you know well because if you lose it, you won't be able to recover it. When you are ready, click "Ok" then "Yes".

	Confirm wallet encryption	~ ^ ×
?>	Warning: If you encrypt your wallet and lose your passph will <b>LOSE ALL OF YOUR BTC2</b> !	nrase, you
	Are you sure you wish to encrypt your wallet?	
	<u>C</u> ancel	<u>Y</u> es

Encryption can take a few minutes, please wait, then click **"OK"** to finish the process and stop the Bitcoin 2 Core Wallet.





# Once the shutting down is complete, you should make a backup of your new encrypted wallet.

Plug in your USB flashdrive. At the **"Removable medium is inserted"** popup, click **"OK"** to open it with the File Manager.

Open the file manager to show the hidden folders and files : "View" ▶ check "Show Hidden"



Go to the the **/home/pi/.bitcoin2/** folder, then copy and paste the **wallet.dat** file on your USB flashdrive.

There is an important last step to secure your wallet but you have to be sure the staking will be working first.

You will find this step at the end of this guide.



### 6. Start Staking

Start the Bitcoin 2 Core Wallet and check your public address : **"File" ▶ "Receiving addresses..." ▶ Click on the address then "Copy"** 

	Rece	iving	addresses	•	^	×
These are your E new receiving ac	Bitcoin2 addresses for r Idress for each transac	receivi tion.	ng payments. It is recommended to	) use	a	
	Label	•	Address			
staking_key			1iFPQoNCvPZarjS73VNbdty4c2F3M	l8nX/	4	٦
💠 <u>N</u> ew	<u>∎ с</u> ору		<u>Export</u>	C <u>l</u> os	e	

Send BTC2 to your new address from a computer, or an exchange, etc... You can paste the address through VNC.

Wait at least 1 hour and 42 minutes to get all the 101 confirmations required to get mature BTC2 and start staking.

When it's ok, close properly your Bitcoin 2 Core Wallet : **"File"** ► **"Exit"** then restart it.

Unlock your Wallet **to start staking in secure mode** : Go to **"Settings" ▶ "Unlock Wallet..."** enter your password and check the secure option for staking only, then nobody can transfer BTC2 in this mode.





After a few seconds, the wallet should start staking, and the up arrow on the bottom right will become green : BTC2 6 @ M 🗸

Try to often verify the staking status by connecting to your Raspberry Pi. In case of a power outage, you could have to relaunch the Bitcoin 2 Core Wallet and reenter your password to enable staking.

**NB**: If you have mint coins from rewards waiting for the 101 confirmations, it is normal for staking to deactivate because the coins are immature to stake with. So if you have only one stake-able input, and that input creates a block, then until it matures, you're not staking.

#### The last important step is to delete the old backups

Do it only when you are sure that everything is working, and you know your password for sure.

To avoid having an old unencrypted wallet.dat used : Go to the /**home/pi/.bitcoin2/backups** folder and delete all the files inside that folder.

If you have any questions or issues let us know in the **#\_\_\_\_support** channel on Discord.



