

MANJARO LINUX 0.8.9

USER GUIDE

THE MANJARO DOCUMENTATION TEAM

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Acknowledgements

The awesome community on forum.manjaro.org and [#manjaro](https://t.me/manjaro)

A note about Manjaro and Arch

Manjaro is based on another distribution called Arch Linux. As such, it is also able to draw software packages from the community-maintained Arch User Repository (AUR). However, please note that Manjaro is not Arch, and any enquiries about the Manjaro operating system should be directed towards the Manjaro forums and Internet Relay Chat (IRC) channels alone. For example, although Ubuntu is derived from Debian - and therefore shares some similarities with its parent - there are still substantial differences between these operating systems and how they work. Such is the case with Manjaro, which is far from just being an “easy to install” or “pre-configured” Arch operating system. Here are some of the key differences between the Manjaro and Arch operating systems:

- Manjaro is developed independently from Arch, and by a completely different team.
- Manjaro is designed to be accessible to newcomers, while Arch is aimed at experienced users.
- Manjaro draws software from its own independent repositories. These repositories also contain software packages not provided by Arch.
- Manjaro provides its own distribution-specific tools such as the Manjaro Hardware Detection (MHWD) utility, and the Manjaro Settings Manager (MSM).
- Manjaro has numerous subtle differences in how it works when compared to Arch.

To reiterate, although Manjaro is indeed an Arch-derivative, it is not Arch!

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Introduction

About Manjaro

Manjaro is a user-friendly **GNU/Linux** distribution based on the independently developed **Arch Linux**. Within the Linux community, Arch itself is renowned for being an exceptionally fast, powerful, and lightweight distribution that provides access to the very latest cutting-edge software. However, Arch is also traditionally aimed at more experienced or technically-minded users. As such, it is generally considered to be beyond the reach of many, especially those who lack the technical expertise (or persistence) required to use it.

Developed in Austria, France, and Germany, Manjaro aims to provide all of the benefits of Arch Linux combined with a focus on user-friendliness and accessibility. Available in both 32- and 64-bit versions, Manjaro is suitable for newcomers as well as experienced Linux users. For newcomers, a user-friendly installer is provided, and the system itself is designed to work fully “straight out of the box” with features including:

- Pre-installed desktop environments
- Pre-installed graphical applications to easily install software and update your system
- Pre-installed codecs to play multimedia files, and
- Pre-installed access to the latest games

Features

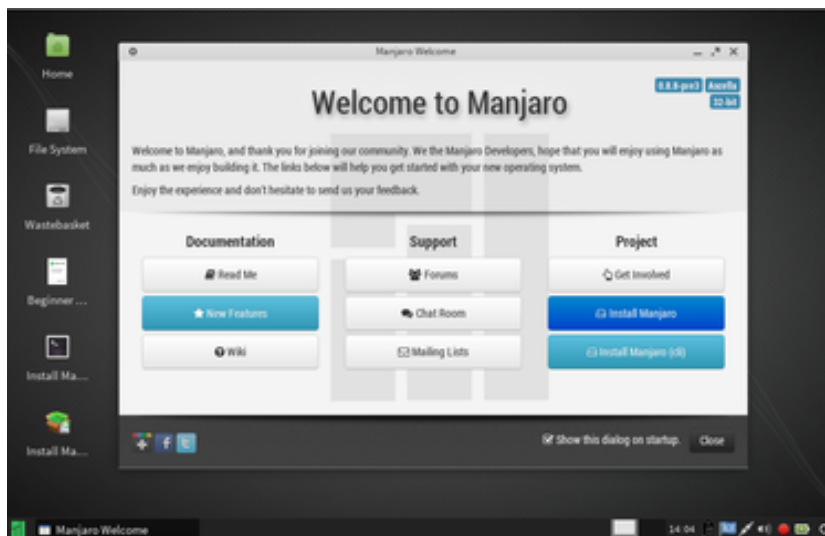
Manjaro shares many of the same features as Arch, including:

- Speed, power, and efficiency
- Access to the very latest cutting- and bleeding-edge software
- A “rolling release” development model that provides the most up-to-date system possible without the need to regularly install a new operating system release

- Access to the Arch User Repositories, and
- The versatility to be shaped and moulded in every respect to suit personal taste and preference.

However, Manjaro boasts a few extra features of its own, including:

- A simplified, user-friendly installation process
- Automatic detection of your computer's hardware (e.g. graphics cards)
- Automatic installation of the necessary software (e.g. graphics drivers) for your system
- Dedicated software repositories that deliver fully tested and stable software packages, and
- Support for the easy installation and use of multiple kernels



1: Welcome to Manjaro!

Downloading Manjaro

32- and 64-bit versions of Manjaro are available for download as ISO disc image. ISO images available for 32-bit systems will end in **i686.iso** and images for 64-bit systems will end in **x86_64.iso**. A 64-bit operating system won't run on a 32-bit system, and although a 32-bit operating system will run on a 64-bit system it won't be able to make full use of its resources. Try to make sure that you download the appropriate ISO image for your system!

Manjaro editions

There are two editions of Manjaro available for download:

The Full edition This edition of Manjaro comes complete with a pre-installed desktop environment. In the case of the XFCE edition, it will also come with a selection of popular software applications. This would be the most appropriate choice for those who wish to try out Manjaro on a Live-CD without having to install it first. An ISO image for a full edition of Manjaro will list the pre-installed desktop environment in its name. For example, an ISO image beginning with **manjaro-xfce** will have the XFCE desktop environment pre-installed.

The NET edition This edition of Manjaro provides only a base installation, stripped of all but the most basic pre-installed software. Starting from the command line, this is suitable for more experienced users who may wish to build their own Manjaro systems from the ground up. An ISO image for a NET edition will always begin with **manjaro-net**.

When you purchase retail software it generally comes on a disc, whether a CD or a DVD. A 'Live-CD' has a version of the operating system that will run without needing to be installed. This is a feature of most GNU/Linux and BSD-based operating systems.

Downloading an ISO disc image

Each stable release and test-build of Manjaro has its own particular download location which will contain all the available 32- and 64-bit versions for both the full and NET editions. Each location will also contain the relevant checksum files which can be used to check the

integrity of your downloaded ISO file (i.e. to ensure that it has not been corrupted during download). A guide to doing this included in the following section.

Stable Releases of Manjaro are intended to be used by the general public. As such, this will be the appropriate choice for the majority of users. Each of the stable releases - starting from 0.8.0 - can be downloaded from the Stable Release section of the Sourceforge website.¹

¹ <http://sourceforge.net/projects/manjarolinux/files/release/>

Test Builds of Manjaro are intended to be used only by developers and testers in order to identify any bugs or issues to be addressed as development continues towards the next stable release. **These are not suitable - or intended - for use as a main operating system by the general public.** However, should you wish to try out a test build (preferably in a virtual machine), each current release can be downloaded from the from the Test Build section of the Sourceforge website.²

² <http://sourceforge.net/projects/manjarodev/files/testbuild/>

Checking a downloaded ISO disc image for errors

Before burning your downloaded ISO image (or using it as a virtual disc in Virtualbox), we strongly recommend that you first check that it hasn't been corrupted. The potential result of not doing so, especially if you want to install Manjaro as your main operating system, should be obvious. In the best case, the installation will fail. In the worst case a corrupted image will result in a corrupted installation.

To verify the integrity of the ISO image you must first download the appropriate checksum file from the same Sourceforge location as your chosen ISO image. The file **manjaro-0.8.9-sha1sum.txt** contains checksum hashes for all the available ISO files and will have content similar to this:

```
fd99f9328103007b3a04d4a1a826e81769288ae4 manjaro-kde-0.8.8-i686.iso
2b997a76ef23d1ef0a3a819a2ed8bef1f2e9a1b5 manjaro-kde-0.8.8-x86_64.iso
18b7df6f12c2b9d2b35b7716e89d71b91b873805 manjaro-net-0.8.8-i686.iso
80fc756226625d7b23ef909135fca32714d795d2 manjaro-net-0.8.8-x86_64.iso
b2fc1a5107e70f4cea2981ed941df5fc249a11ea manjaro-openbox-0.8.8-i686.iso
b91b8a8d3133342f4cfdb1ba09c28ec20c8492e1 manjaro-openbox-0.8.8-x86_64.iso
590750cc76d11efb47a153f1fcfcd4b6689f055e manjaro-xfce-0.8.8-i686.iso
1b8fcf0d24972f3881c2a331fd202cb0842866aa manjaro-xfce-0.8.8-x86_64.iso
```

MD5 and SHA-1

You may have seen there are two checksum files. One ends -sha1sum.txt, the other ends -md5sum.txt. MD5 and SHA are two types of hashing algorithms; the 'sha' part of the checksum file name stands for **Secure Hash Algorithm**. These algorithms are used to generate a hash code unique to the ISO image file. The checksum file itself is just a text document that contains hash codes that should match the code generated by the MD5 or SHA-1 algorithm. Copies of the file can be checked to make sure they are exactly the same - if the file is changed in any way, either intentionally or by corruption, the code generated will be different.

Whilst MD5 is commonly used, SHA-1 is newer and more secure and is beginning to replace MD5. For the purpose of checking the integrity of the downloaded file MD5 is “good enough” but SHA-1 is a better solution. The checking process is the same for both algorithms. We recommend you use SHA-1. For more about hashing algorithms Wikipedia has lots of information.³

³ https://en.wikipedia.org/wiki/Secure_Hash_Algorithm

If the code generated from the ISO file matches that contained in the checksum file, then the ISO is fine. If the two codes don’t match then it means that the ISO file has changed in some way, most likely due to being corrupted. You can think of it like someone using a password to identify who they are: if they provide the wrong password, then something is probably wrong.

From this point on we’ll assume you are using the file **manjaro-0.8.9-sha1sum.txt**.

Checking in Linux

Automatic verification

The program `sha1sum` can automatically compare the checksum of the ISO file you downloaded against the value in the text file. The process is very straightforward, but the end result might look a little worrying!

For this example, I first open a terminal and change to the directory where I downloaded the ISO file and checksum file. I use the command `ls` to check which files are present:

```
jonathon@box:~$ cd download
jonathon@box:~/download$ ls
manjaro-0.8.9-sha1sum.txt  manjaro-xfce-0.8.9-x86_64.iso
```

As you can see I have downloaded the 64-bit XFCE edition. Next, I run the `sha1sum` program to check against the values in the checksum file:

```
jonathon@box:~/download$ sha1sum -c manjaro-0.8.9-sha1sum.txt
```

The next set of lines show the result of the checks. While the first few lines look worrying this is to be expected - the program can’t check ISO files that aren’t there! The second to last line is the important one. It shows that `sha1sum` has successfully verified the ISO file I downloaded against the checksum value in the file.

```
sha1sum: manjaro-kde-0.8.9-i686.iso: No such file or directory
```

Test builds have a slightly different arrangement. Instead of a single file with all checksums, each ISO file has its own associated checksum file. If you’re running the test build I’m sure you can work it out!

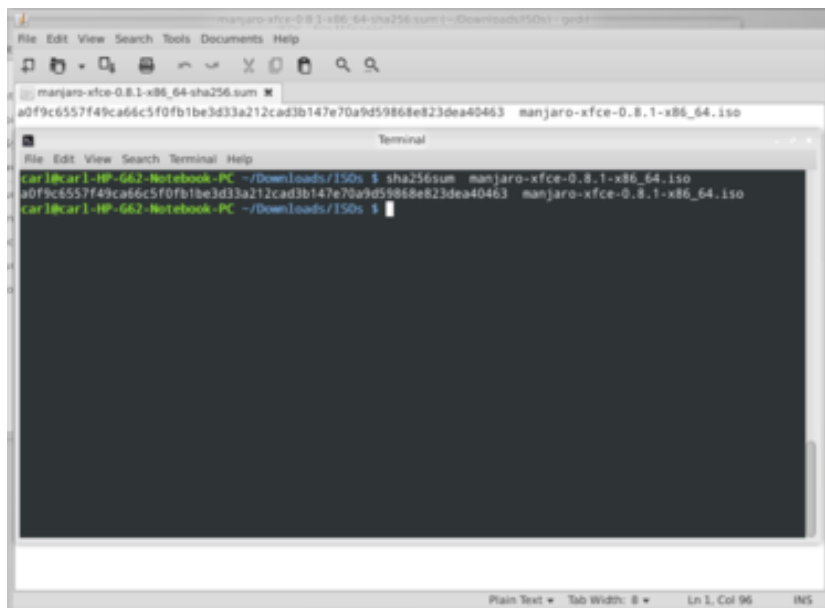
```

manjaro-kde-0.8.9-i686.iso: FAILED open or read
shasum: manjaro-kde-0.8.9-x86_64.iso: No such file or directory
manjaro-kde-0.8.9-x86_64.iso: FAILED open or read
shasum: manjaro-net-0.8.9-i686.iso: No such file or directory
manjaro-net-0.8.9-i686.iso: FAILED open or read
shasum: manjaro-net-0.8.9-x86_64.iso: No such file or directory
manjaro-net-0.8.9-x86_64.iso: FAILED open or read
shasum: manjaro-openbox-0.8.9-i686.iso: No such file or directory
manjaro-openbox-0.8.9-i686.iso: FAILED open or read
shasum: manjaro-openbox-0.8.9-x86_64.iso: No such file or directory
manjaro-openbox-0.8.9-x86_64.iso: FAILED open or read
shasum: manjaro-xfce-0.8.9-i686.iso: No such file or directory
manjaro-xfce-0.8.9-i686.iso: FAILED open or read
shasum: manjaro-xfce-0.8.9-x86_64.iso: OK
shasum: WARNING: 7 listed files could not be read

```

Manual verification

To manually check the integrity of your downloaded file, first open the downloaded **manjaro-0.8.9-shasum.txt** checksum file using a text editor such as Gedit. Once the checksum file has been opened, and the codes are visible, open up your terminal and change to the directory where your downloaded ISO is stored.



1: Verifying the checksum displayed in gedit against the output of sha256sum

For example, if your ISO image file is located in a directory named **download**, you would first change to that directory:

```
jonathon@box:~$ cd download
```

Then you can generate an SHA-1 hash code for the ISO image using:

```
jonathon@box:~/download$ sha1sum manjaro-xfce-0.8.9-x86_64.iso
```

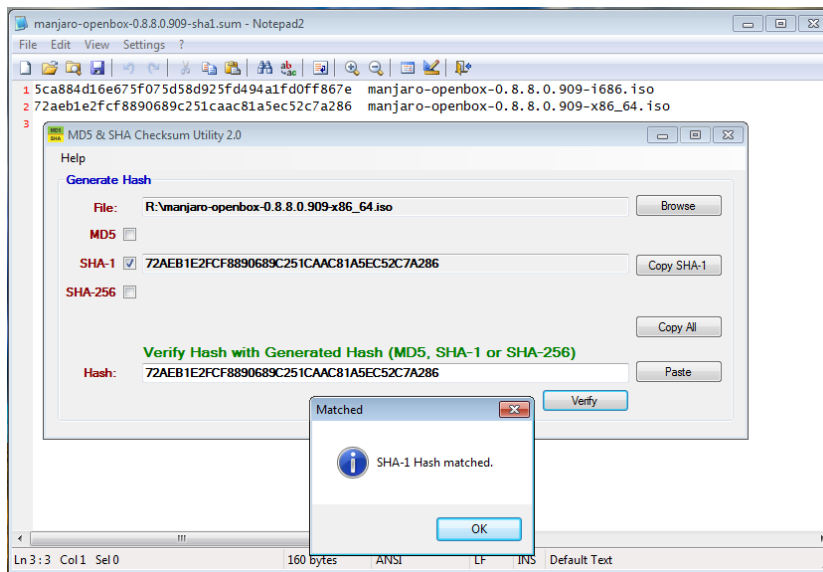
This command generates a hash code for the 64-bit Manjaro XFCE 0.8.9 ISO image which can then be manually compared to the code contained in the checksum file.

Checking in Microsoft Windows

Unlike Linux, Microsoft Windows does not have any suitable built-in tools so you will need to download and install a checksum utility application. A web search will turn up several examples of free software, or you can look on the **Download.com** website.⁴ Another free checksum utility which has positive reviews is **Raymond's MD5 & SHA Checksum Utility**.⁵ This is the program we will use in the following example.

⁴ <http://download.cnet.com/>

⁵ <http://raylin.wordpress.com/downloads/md5-sha-1-checksum-utility/>



2: Verifying the checksum in Microsoft Windows using Raymond's MD5 & SHA Checksum Utility.

Once you have downloaded the checksum utility, the checking process is very straightforward. Simply **Browse** to the downloaded ISO file, select it, and click **Open**. The program will then calculate the checksums for the ISO file. To verify the checksum is correct, open the **manjaro-0.8.9-sha1sum.txt** in a text editor such as Notepad, copy the checksum for the ISO file you have downloaded, and paste it into the verification box. Then click **Verify**. If there are no problems with the ISO file the program will inform you that the hash matched.

To speed up the process it's probably a good idea to deselect the hashes you are not verifying.

Burning an ISO disc image

An ISO disc image is not a copy-and-paste duplication of files: it's a bit-for-bit copy of the raw data that makes up the files and folders of that disc. This is why just copying an ISO file to a disc (or USB flashdrive) to begin installing won't work: you'll need to use a disc burning or image writing application to translate that raw data into the files and folders.

Once converted, the files can be used to run Manjaro in Live-CD mode without having to install it to your system, and/or install Manjaro on your system. It's important to note Manjaro will not have full functionality when run in Live-CD mode. For example, you will not be able to save any changes to the system, install updates or add new applications.

Due to the amount of software included on the full edition ISO images you may need to use a DVD instead of a CD. Check the following table as a guide if you're not sure:

Edition	Filename	Size	Media
KDE	manjaro-kde-0.8.9-i686.iso	1.3GB	DVD
	manjaro-kde-0.8.9-x86_64.iso	1.4GB	
Openbox	manjaro-openbox-0.8.9-i686.iso	690MB	CD
	manjaro-openbox-0.8.9-x86_64.iso	660MB	
XFCE	manjaro-xfce-0.8.9-i686.iso	735MB	DVD
	manjaro-xfce-0.8.9-x86_64.iso	700MB	CD
NET	manjaro-net-0.8.9-i686.iso	440MB	CD
	manjaro-net-0.8.9-x86_64.iso	590MB	

Many people routinely use a DVD rather than a CD even for the smallest ISO files. Not only is a DVD faster to burn but they allow higher data access rates so the Live-CD loads faster and the installation completes sooner.

However, with the increasing capacity and decreasing cost of USB flash media this presents an even more attractive method than the traditional burning process; it is far faster and more flexible than using optical media. Both CD/DVD burning and USB flash media installation methods are covered in this guide.

There is an exception to this rule. If you intend on installing Manjaro in a virtual machine environment using Oracle's Virtualbox, then there will be no need to burn the image as Virtualbox will be able to read from the ISO file directly as a virtual disc.

Table 1: Manjaro Edition ISO file sizes

If your system will boot from a USB device, and you have one of sufficient capacity that you can erase, we recommend the use of a USB flash drive over traditional CD/DVD media.

Burning to a CD/DVD in Linux

If not already installed, several different software burning applications should be available for installation from your distribution's Software Center / Software Manager / Package Manager / repositories. Popular burners include **XFBurn**, **K3b**, and **Brasero**. Which one you choose is entirely down to personal choice, though your operating system will usually install one suitable for your desktop environment. To simplify things a little, the following steps for burning your downloaded Manjaro ISO use Brasero.

XFCE environments tend to include XFBurn. KDE environments tend to include K3b. GNOME environments tend to include Brasero.

Burning using Brasero

1. Insert a blank CD/DVD.
2. Start the **Brasero** software burner.
3. Click the **Burn Image - Burn an existing CD/DVD image to disc** button to open the **Image Burning Setup** window.
4. Click the button beneath the title **Select a disc image to write to** to open up your file manager. Locate and double-click the downloaded ISO file to load it. Upon automatically returning to the **Image Burning Setup** window, note that the ISO file is now listed as the disc image to write.
5. The blank CD/DVD you inserted should be automatically listed underneath the title **Select a disc to write to**. If not, click the button to select it manually.
6. Click the **properties** button to open the properties window, and then click the button beneath the title **Burning Speed**. We strongly recommend you select the slowest speed available. Once selected, click the Close button.
7. Click the **Burn** button to start the burning process. If necessary, follow any on-screen instructions provided.

It's a good idea to use rewriteable disc (e.g. CD-RW or DVD-RW). Although slightly more expensive individually than a write-once disc you can reuse the disc again and again, for example when the next version of Manjaro is released!

We strongly recommend you select the slowest speed available when burning to disc in order to minimise the possibility of corruption during the burning process.

It's also a good idea to avoid using any applications which make intensive use of system resources while burning, and in particular avoid heavy disc access. If the burner software can't read the ISO file quickly enough the burning process can be interrupted.

Burning to a CD/DVD in Microsoft Windows

Newer versions of Microsoft Windows (Windows 7 and later) include an ISO image burner. If you do not have a newer version of Microsoft Windows you will need to download one of the many free disc burning software utilities.

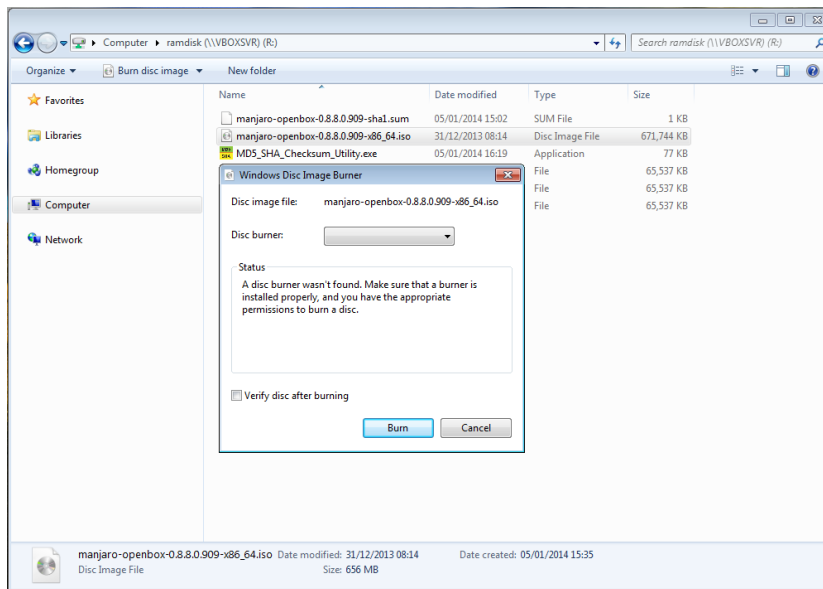
Burning using Windows Disc Image Burner

Selecting the ISO file and clicking on **Burn disc image**, or simply double-clicking on the file itself, will start the **Windows Disc Image**

Burner program. This makes the process of burning to a disc very straightforward:

1. Insert a blank CD/DVD into your disc drive.
2. Start **Windows Disc Image Burner**.
3. Click **Burn**.

For more information about this program see: <http://windows.microsoft.com/en-gb/windows7/burn-a-cd-or-dvd-from-an-iso-file>



1: Windows Disc Image Burner in Microsoft Windows 7

Burning using a third-party application

For versions of Microsoft Windows earlier than Windows 7 (e.g. Windows XP) you will need to download and install third-party disc burning software. There are many free examples available that will be found by a web search, but here are some of the most popular:

Name	Website	Video tutorial
Imgburn	http://imgburn.com/	http://www.youtube.com/watch?v=XihCQgmeGV4
CDBurnerXP	http://cdburnerxp.se/en/	http://www.youtube.com/watch?v=LxYkFdwn1qI
InfraRecorder	http://infrecorder.org/	

The burning process for each of these applications is similar, with small differences in user interface. The websites listed above will provide information about features and screenshots of the applications themselves. For a little more information about each of these applications, an overview of each is available in the **CD/DVD Burning Article** on the TechSupportAlert website.⁶ Alternative burning software may also be found on the Download.com website,⁷ although

Table 2: Third-party disc burning software for Microsoft Windows

⁶ <http://www.techsupportalert.com/best-free-cd-dvd-burning-software.htm>

⁷ <http://download.cnet.com/>

you will have to filter the search results to view only free applications. It will also be worthwhile to take the time to read any reviews provided for your choice(s).

Writing to a USB flash drive in Linux

To take advantage of the faster access times and much quieter nature of a USB flash drive, there are a number of methods of writing the ISO file. The easiest is to use **ImageWriter**.

ImageWriter should be available for installation from your distribution's Software Center / Software Manager / Package Manager / repositories. Once Imagewriter has been downloaded and installed, ensure that your USB flash drive is plugged in before starting the application.

The process of using ImageWriter is very straightforward:

1. Click on the centre icon.
2. Navigate to where you downloaded the ISO image file, and select it.
3. Ensure that your USB flash drive has been selected from the drop-down menu.
4. Click on the **Write** button.
5. Once it has finished, reboot your system, making sure to select the USB flash drive as the boot device.

Writing to a USB flash drive in Microsoft Windows

We recommend you use **ImageWriter For Windows**, which is a free application designed to write disc images to USB flash drives as well as Compact Flash (CF) and Secure Digital (SD) cards. Once Imagewriter has been downloaded and installed, ensure that your USB flash drive is plugged in before starting it.

If you find that ImageWriter is unable to start, you might have to download Microsoft's .NET 2.0 Runtime Framework. This is needed by some software programs though it is normally already installed on your Windows PC.

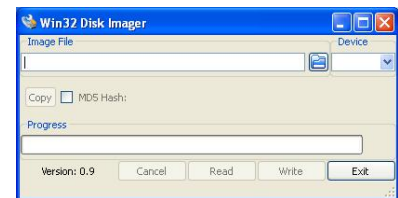
In addition, if an error message is displayed upon starting the process on Windows Vista and later, you might need to open ImageWriter by first right-clicking on the icon, and then selecting the **Run as Administrator** option.

For more detailed information about the software it's worth reading the website, though the process is very straightforward:



2: ImageWriter

https://en.opensuse.org/SDB:Live_USB_stick



3: Windows ImageWriter

<http://sourceforge.net/projects/win32diskimager/>

Make sure that Windows Explorer is closed before attempting to write the ISO image, otherwise it may block access to the USB flash drive. If this happens the following error message will be displayed: **system.componentModel.Win32Exception: Access is denied.**

1. Click the select button (folder icon).
2. Navigate to and select the Manjaro ISO image.
3. Select your USB flash drive from the **Device** menu.
4. Click the **Write** button.
5. Once it has finished, reboot your system, making sure to select the USB flash drive as the boot device.

If for some reason the writing process is unsuccessful the Image-Writer authors recommend that you use a partitioning tool to re-format the USB flash drive as a RAW partition type, then try again. Unfortunately this process is outside the scope of this guide.

Re-partitioning your USB stick as a RAW data type will result in all data present being destroyed, and will render it unusable for other purposes until reformatted back to its original partition type

Booting the Live environment

Booting the Live environment, whether from CD/DVD or USB flash drive, will give you an overview of the Manjaro Linux environment and let you test how well it will run on your machine. This is very useful to check before committing to install a new operating system!

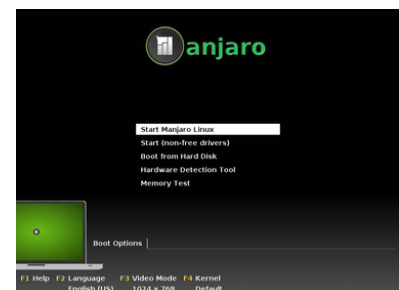
For best results you should be connected to the Internet. If you have a wired Ethernet connection, and plug in before booting the Live environment, Manjaro will automatically set up a connection. If you have a wireless (Wi-Fi) connection you can set up the wireless network once you have reached the Manjaro desktop.

The method of selecting the boot device varies considerably across machines. You may need to hold one key, for example <Esc>, , or <F10>, to select the boot device. Or, you may need to set the option in your BIOS. If you're not sure, your machine's user guide will have detail of the method you need, alternatively a web search will also quickly turn up the answer.

The boot menu

When you boot from your installation media (CD/DVD or USB flash drive) you should be presented with the Manjaro boot screen. This screen provides several options to help get the best experience from the Live environment.

It is possible at this stage to set your preferred language and keyboard layout before using Manjaro. This means that you will be able to use and install Manjaro in your native language straight away.

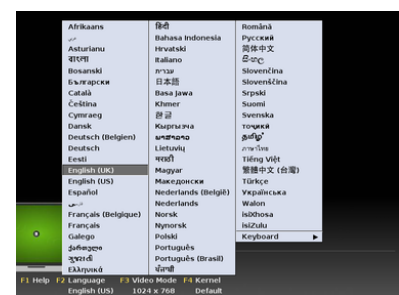


1: Boot menu

Setting your language and keyboard layout

First, set your preferred language by pressing the <F2> key. The options available can be highlighted for selection by using the arrow keys on your keyboard. In this instance, English (UK) has been highlighted for the user.

Once selected, press <Enter> to confirm and to be taken back to the boot menu.



2: Language selection

Selecting the language will also set a keyboard layout appropriate to that language, for example it will select QWERTY for English and AZERTY for French. If this doesn't match your layout, or perhaps you have a US layout but speak German, press <F2> again, but this time select **Keyboard**. Pick the language that matches your keyboard layout, and press <Enter> to confirm and return to the boot menu.

Choosing the drivers

There are two main sets of drivers that can be used by Manjaro: **Free** and **non-Free**. The differences are not minor, and your choice can depend on your computer hardware.

Free drivers are open-source, like Manjaro itself, written and updated by a large community. For older hardware and that with Intel-based integrated graphics, this is the best choice.

Non-Free drivers are closed-source, written and updated only by the hardware manufacturers. This is generally the best choice for newer hardware with AMD or Nvidia dedicated graphics. At the time of writing, **non-Free** drivers are the best choice for Nvidia graphics and AMD graphics newer than the 8000-series. For older AMD and Nvidia hardware the **Free** drivers work very well. For AMD graphics older than the HD5000-series **Free** drivers are the best choice.

To start Manjaro with **Free** drivers, choose **Start Manjaro Linux** from the boot menu.

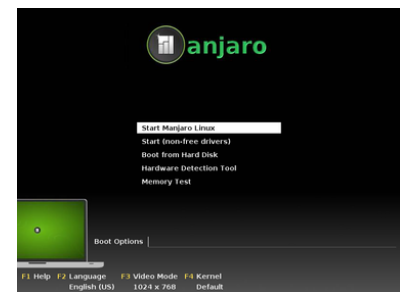
To start Manjaro with **non-Free** drivers, choose **Start (non-free drivers)** from the boot menu.

Welcome to Manjaro

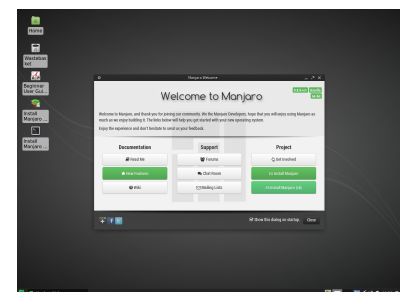
Once you select Start, Manjaro will boot up. You may see a lot of scrolling text - don't worry, this shows the system is working! After a little while, assuming your hardware is compatible, you will be presented with a Live desktop environment and a nice friendly welcome screen.

The welcome screen gives some links to common tasks, documentation (like the thing you're reading now!) and the support channels. There are also links to the installation programs. Don't worry if you close the welcome screen: you can load it again, and all the links are also present elsewhere in the menus.

If in doubt, choose **Free** drivers. If you want to play games, choose **non-Free** drivers.



3: Start Manjaro Linux



4: Welcome to Manjaro!

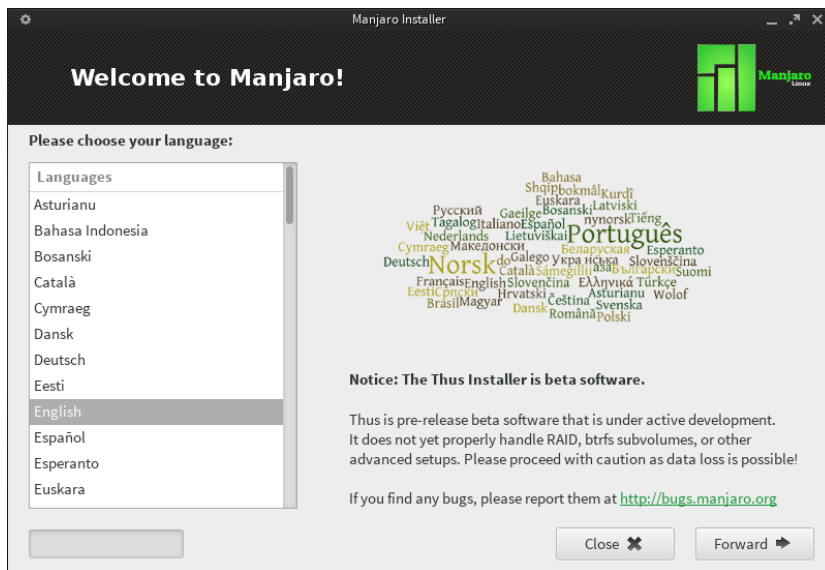
Using the graphical automatic installer

This guide is intended for those with limited technical knowledge and experience. With these steps it won't be necessary to manually partition your computer's hard disc or to manually edit any configuration files. However, the overall flexibility of the process is not as great as the advanced installation process.

Where possible, make sure you are connected to the internet before booting from your installation media into the Live environment. If you have a hard-wired connection via an ethernet cable, then Manjaro will automatically connect to the internet without you having to do anything. Otherwise, once you have booted into Manjaro's desktop, you will need to select and then connect to your wireless network.

For a constantly-updated version, check out the wiki:

User guide: http://wiki.manjaro.org/index.php?title=Graphical_Installation_Guide_for_Beginners_0.8.9

Choose your language

1: If you selected your preferred language before booting then it should already be selected for you.

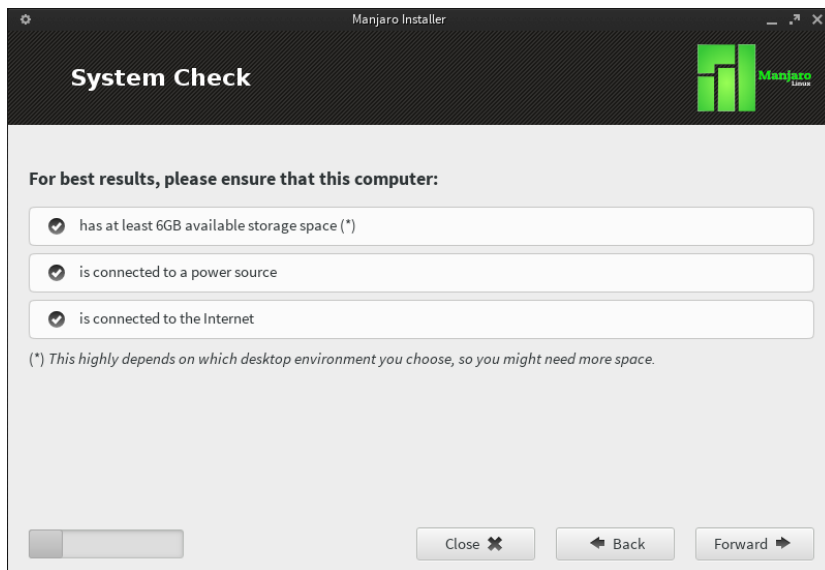
Once selected, click **Forward** to proceed to the next step.

Choose your location

2: The locations available to choose will depend upon the language you selected in the previous step.

Once selected, click **Forward** to proceed to the next step.

Check the minimum requirements



3: Your computer will automatically be checked to make sure that Manjaro can safely be installed. This will include checking that enough storage space is available.

Once satisfied that your system meets the minimum requirements necessary, click **Forward** to proceed to the next step.

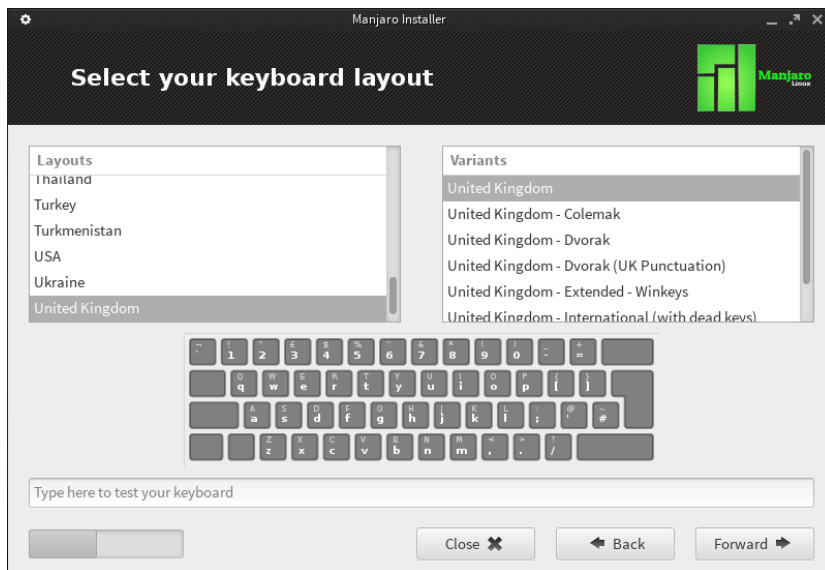
Although the absolute minimum allowed is 6 Gigabytes, at least 15 Gigabytes of free space is recommended.

While it's not necessary to have an active internet connection to install Manjaro it's highly recommended.

Set your timezone

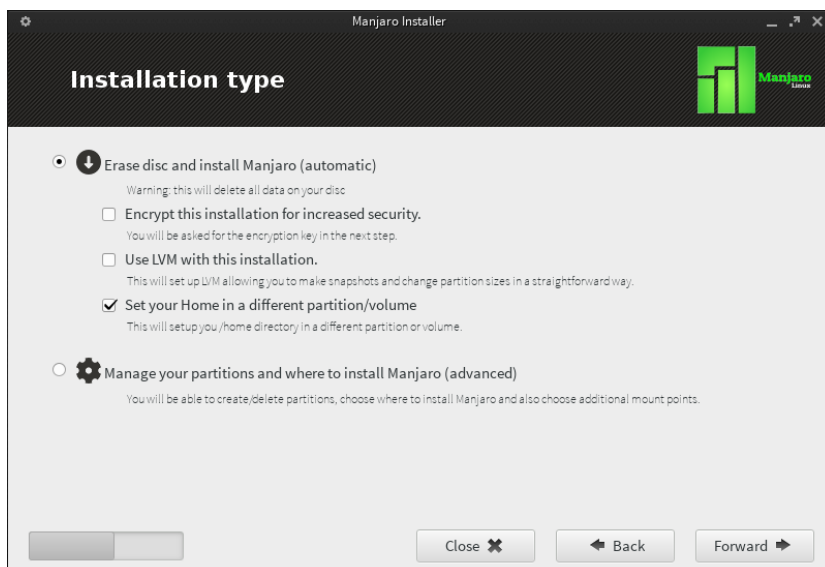


4: To set your timezone, either click on the map or pick from the menus. **Zone** is the continent you live on. **Region** is the city closest to where you live. We recommend keeping **Network Time Protocol** synchronisation enabled so your clock will never be wrong! This relies on an active internet connection, however.

Choose your keyboard layout

5: Just because you live in a certain location that doesn't mean you have to use the keyboard layout native to it. This screen allows you to choose your keyboard layout and variant such as 'Dvorak' or one with 'dead keys' for extended punctuation. To choose your desired layout simply click first on a **Layout**, then on a **Variant**. Variants shown will depend on the layout chosen.

Once satisfied that these details are correct, click **Forward** to proceed to the next step.

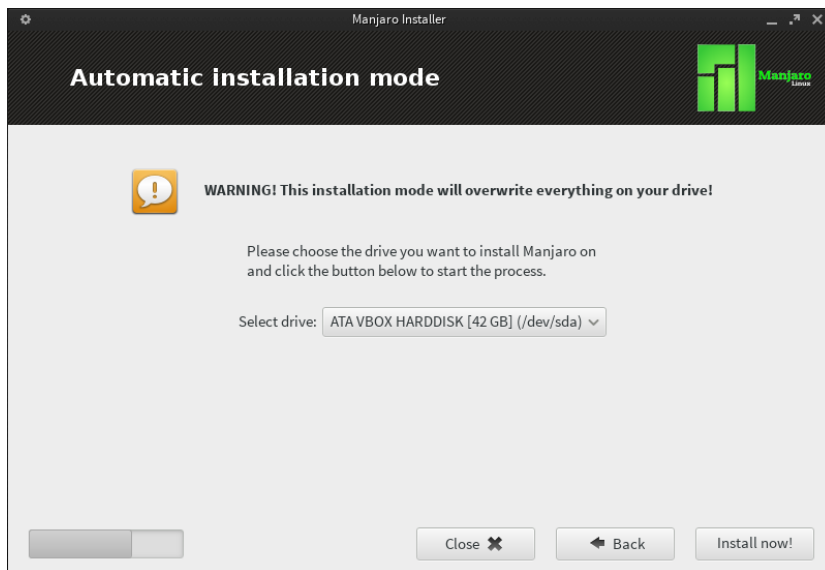
Set the installation type

6: To proceed with the 'automatic' (and very easy) installation method make sure that the **Erase disc and install Manjaro (automatic)** option has been selected. **Be aware that this will wipe the disc you choose in the next step and erase all its data.**

Once complete, click **Forward** to proceed to the next step.

It is generally recommended that you **Set your Home in a different partition/volume**. This keeps your documents separate from the operating system files.

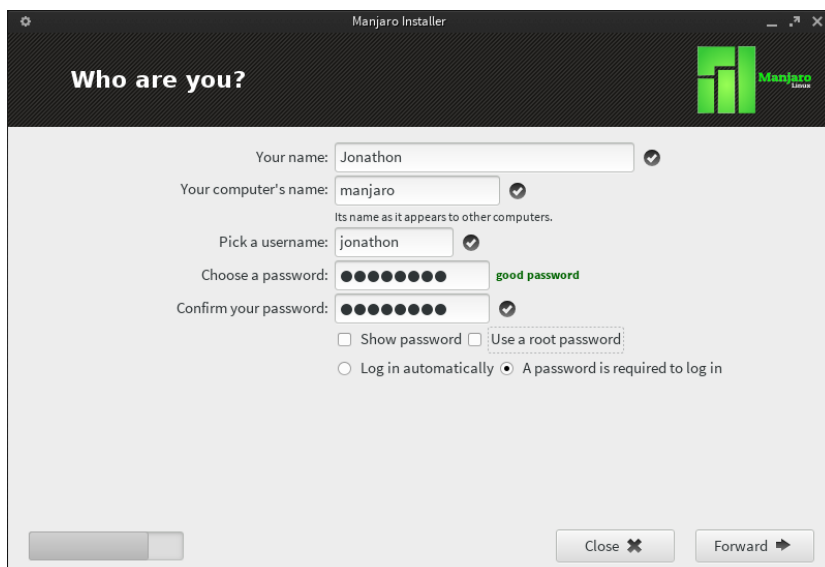
Choose your disk



7: If you have more than one hard drive on your computer, then you will need to decide which one to wipe so you can install Manjaro.

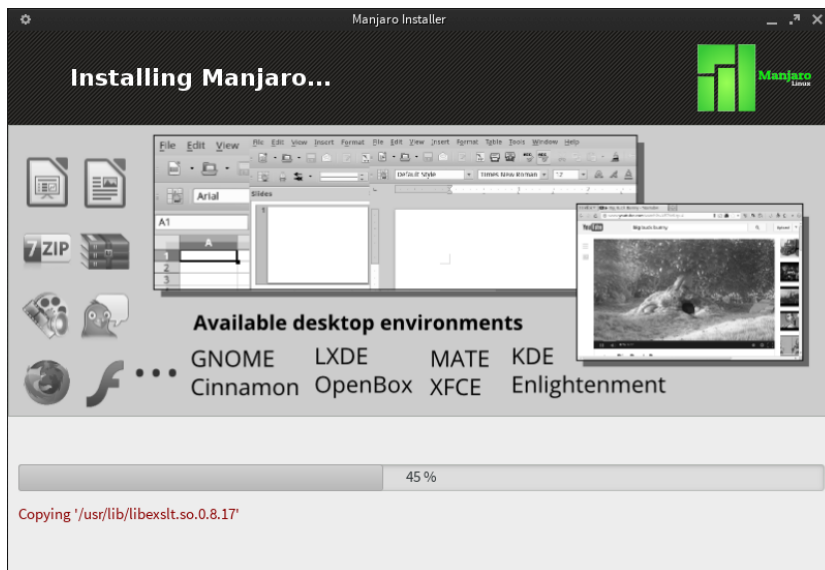
Once selected, click **Install Now!** to proceed to the next step.

Add your user account

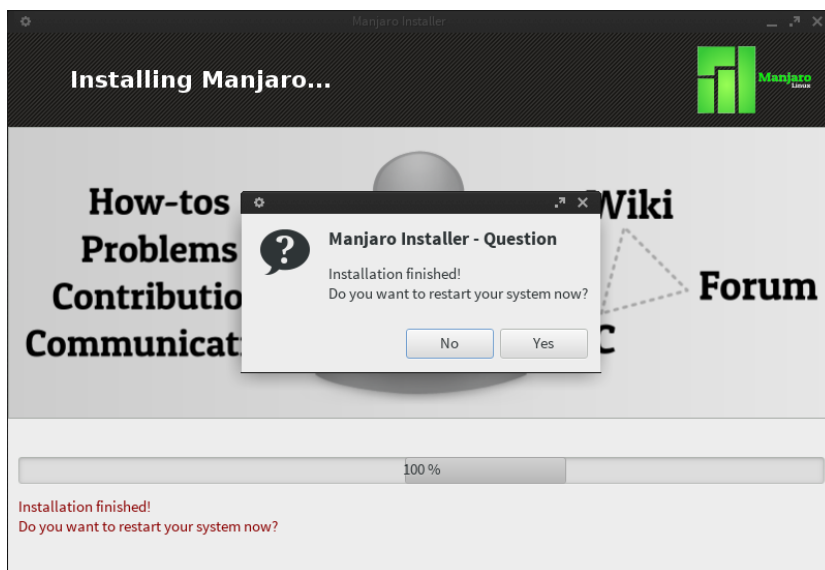


8: Now it's time to personalise your installation! Enter your real name, a name for your computer (just enter 'manjaro' if you can't think of one), and your username. Your username will be the name of your personal account in Manjaro. You will also need to enter your intended password twice. Remember that the use of upper and lower case letters matters (e.g. 'abc123' is not the same as 'ABC123').

All done! Once satisfied that these details are correct, click **Forward** to view the installation process.

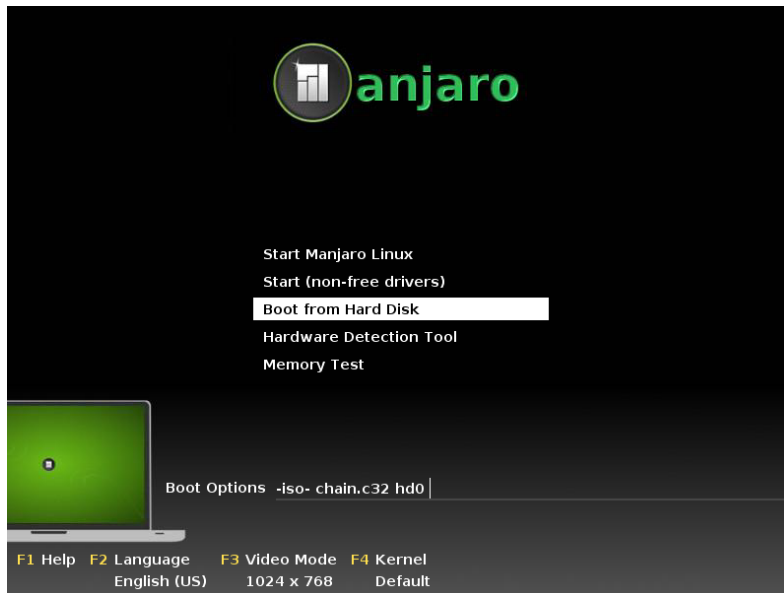
Installation...

9: The automatic installation process is well underway. While you wait for it to complete, useful information about Manjaro and its community will be displayed.

...complete!

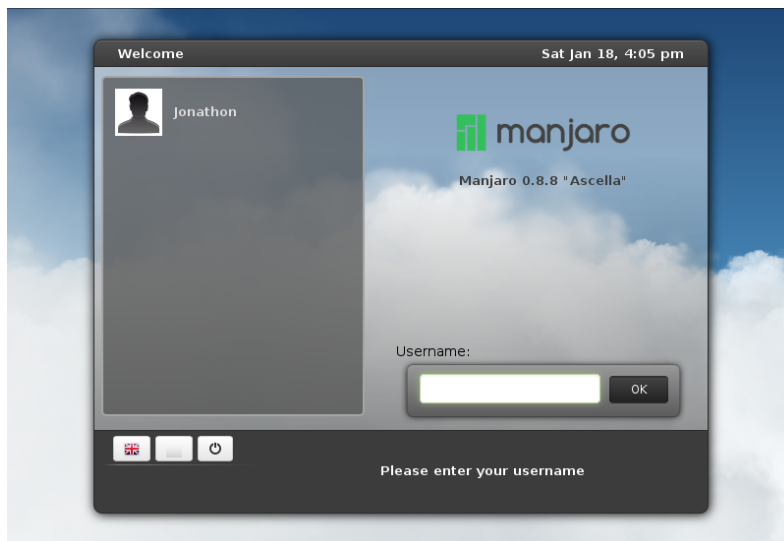
10: Once the installation has finished you will be asked if you want to restart your system. Select **Yes** to reboot immediately, or **No** to close the installer and continue using the Manjaro Live environment.

Boot your new operating system



11: When you reboot, if you accidentally boot from the Live CD or USB drive you used to install Manjaro, you can choose **Boot from Hard Disk** and press **<Enter>**.

Log in



12: Once Manjaro has booted enter your username and password and enjoy your fresh Manjaro system!
If you like it, you might consider joining the Manjaro community on its forums or IRC channel. We look forward to meeting you!

Using the graphical installer - experienced users

This guide is intended for those with sufficient technical knowledge to manually create their own partitions. As such, this guide focuses on providing an example of how to use the 'Advanced' installation method in general, rather than outlining the entire installation process, or listing all the popular partition schemes that may be used.

This guide also assumes you have read the Automatic installation guide steps 1-5 as these are exactly the same.

Where possible, make sure you are connected to the internet before booting from your installation media into the Live environment. If you have a hard-wired connection via an ethernet cable, then Manjaro will automatically connect to the internet without you having to do anything. Otherwise, once you have booted into Manjaro's desktop, you will need to select and then connect to your wireless network.

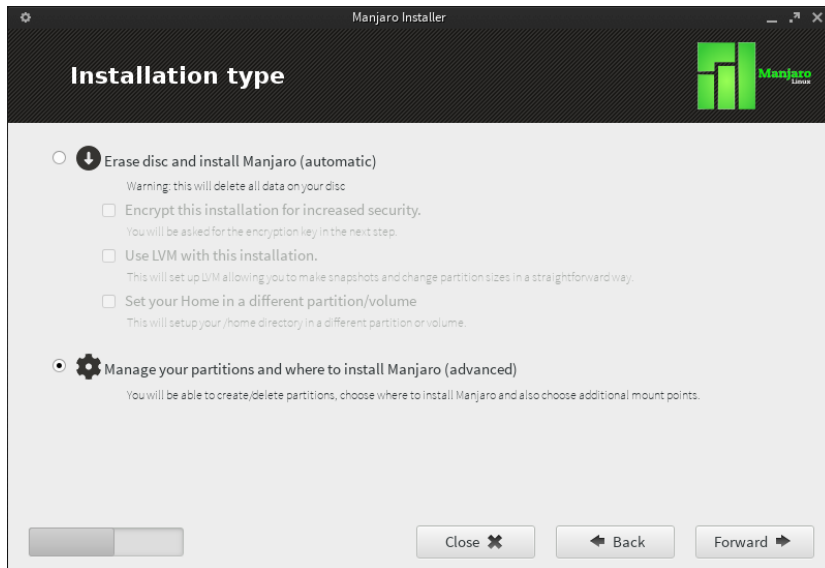
For a constantly-updated version of this guide, check out the wiki page:

User guide: http://wiki.manjaro.org/index.php?title=Graphical_Installation_Guide_for_Experienced_Users_0.8.9

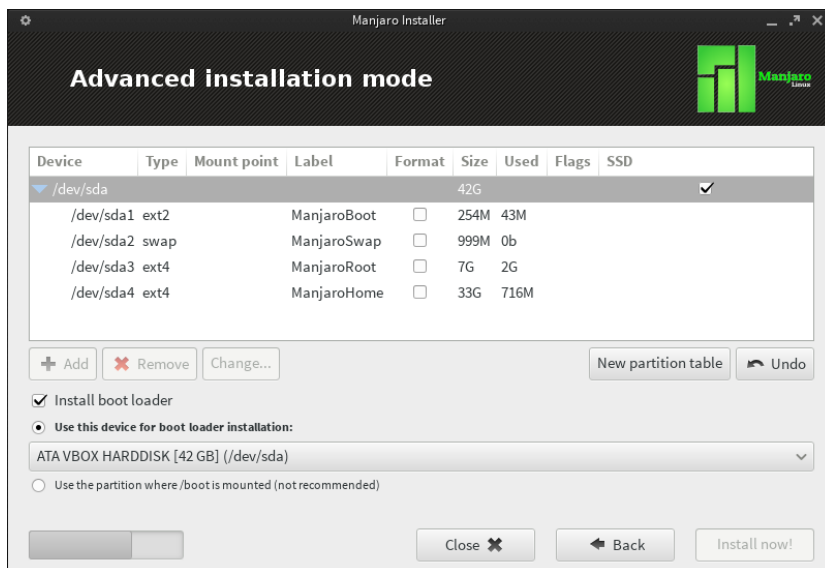
For a refresher on partitioning your disk, check out the wiki pages on partitioning and partitioning scenarios:

Partitioning: http://wiki.manjaro.org/index.php?title=Partitioning_Overview_and_Existing_Partition_Tables

Partitioning scenarios: http://wiki.manjaro.org/index.php?title=Cfdisk_Basic_Partitioning_Scenarios

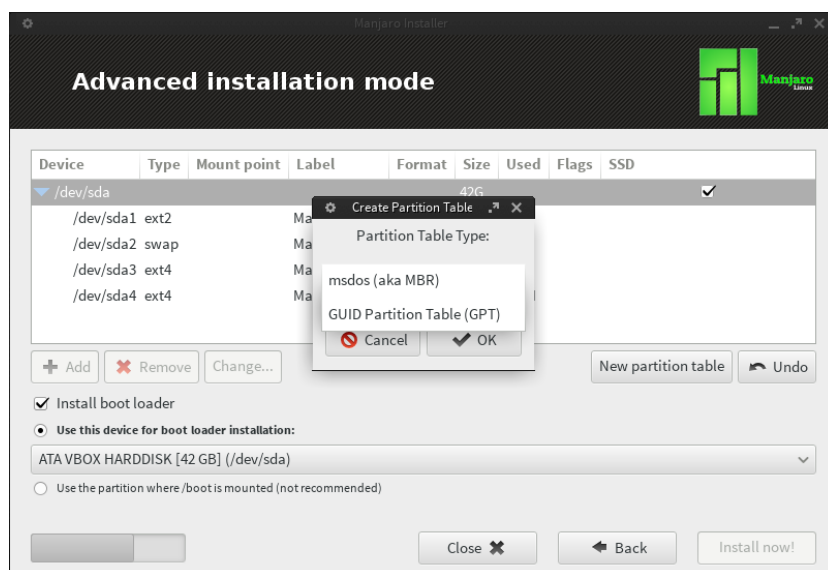
Start the advanced installation method

1: When you reach the sixth step of the installation process, select **Manage your partitions and where to install Manjaro (advanced)** and then click **Forward** to proceed.

Choose your disk

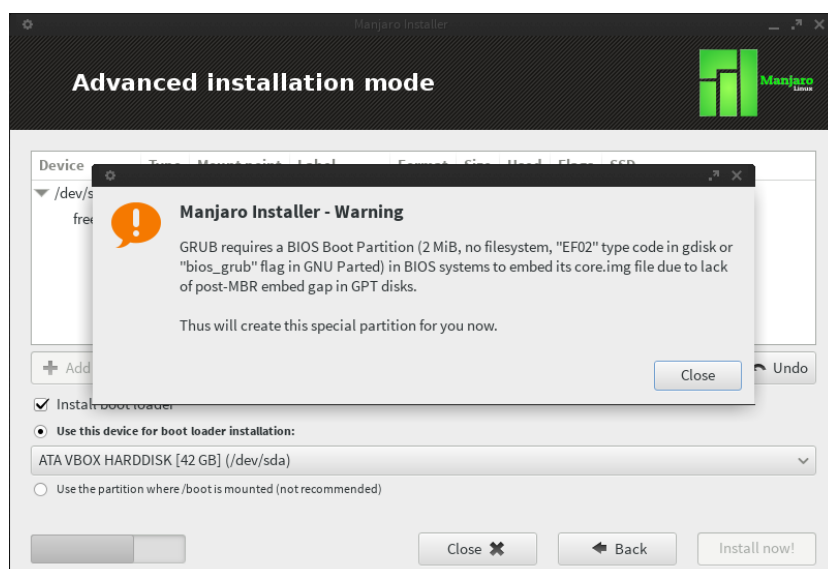
2: If you have more than one hard drive on your computer select the one you want to partition. This example already has a partition layout, but we're going to start fresh by clicking **New partition table**.

Create a partition table

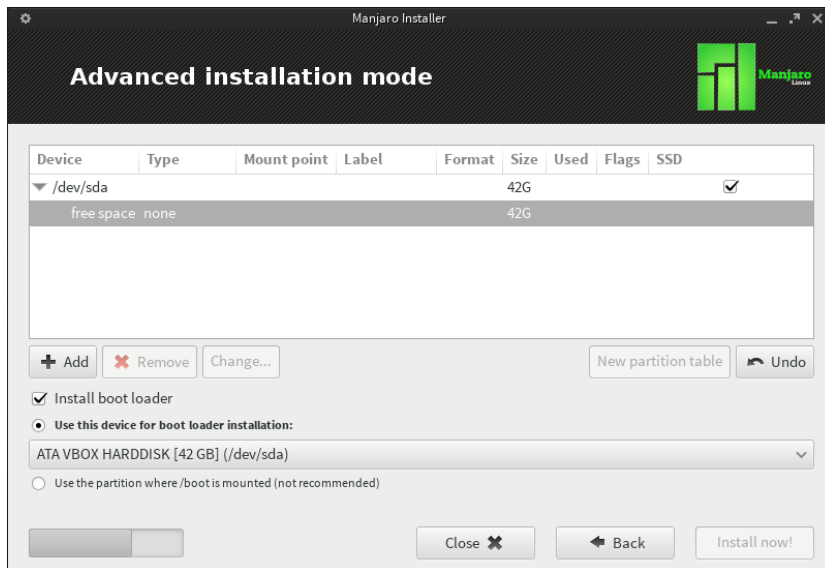


3: The partition table type you chose will normally depend on your system. Non-EFI systems are normally best with MBR, whereas EFI systems should use GPT. Once you're happy, click **OK** to create the partition table.

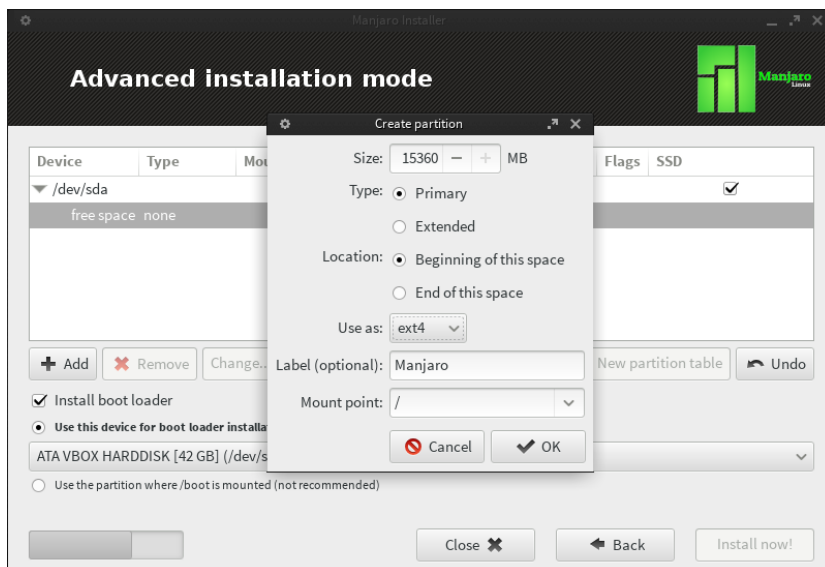
GPT on a non-EFI system



4: You will get a warning if you create a GPT partition table on a non-EFI system. You can still proceed if you want, but be aware of the extra partition. Don't delete it!

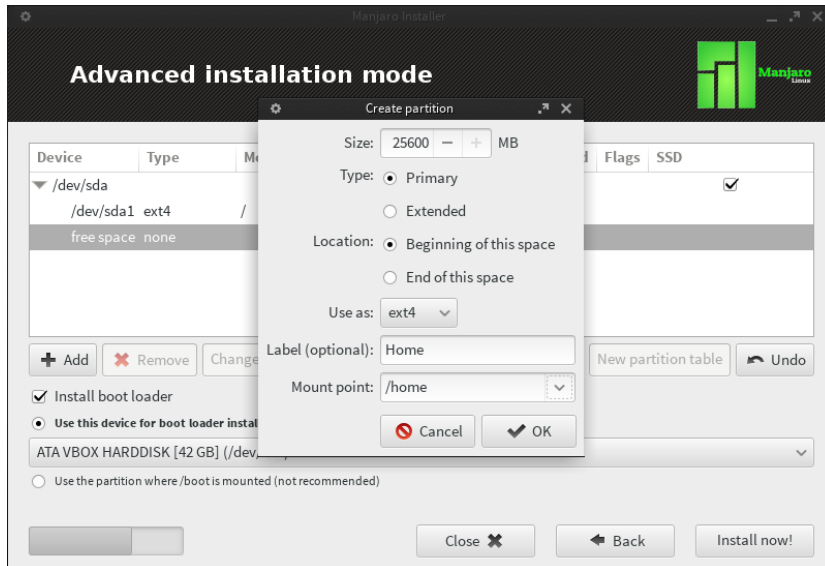
A two-partition scenario

5: In this scenario we will cover the most common partition layout. Root and Boot files will be in a single partition and Home in a second partition to keep documents separate from system files. We'll add an optional swap partition in the remaining space. As there are only three partitions total, each can be Primary partitions. With the free space highlighted, we'll click **+Add** to create the first partition.

Partition 1: Root and Boot

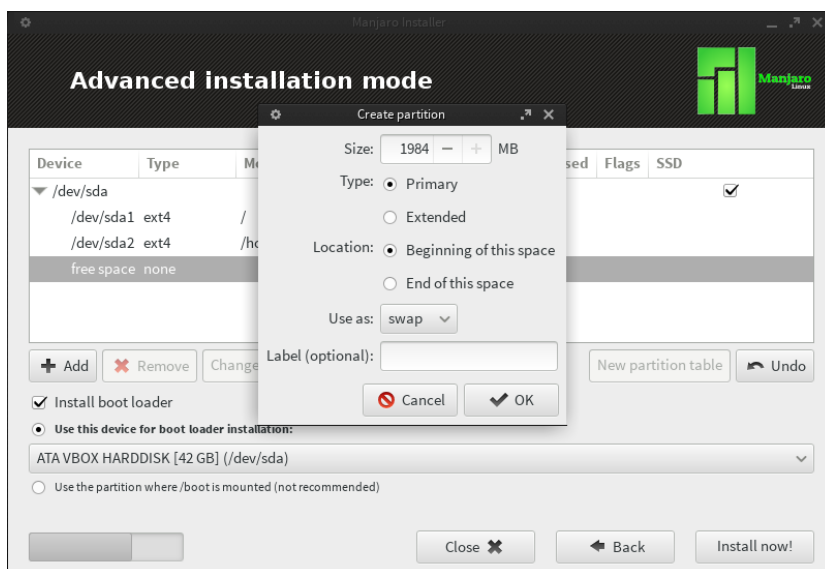
6: The first partition will contain the system and boot files (**/** and **/boot**). As such, we must allocate enough space for all system programs. 20GB is generally sufficient, but with the 40GB disc in this machine we've reduced this to 15GB. We have selected EXT4 as the filesystem and made sure to set the mountpoint to **/** (root).

Partition 2: Home

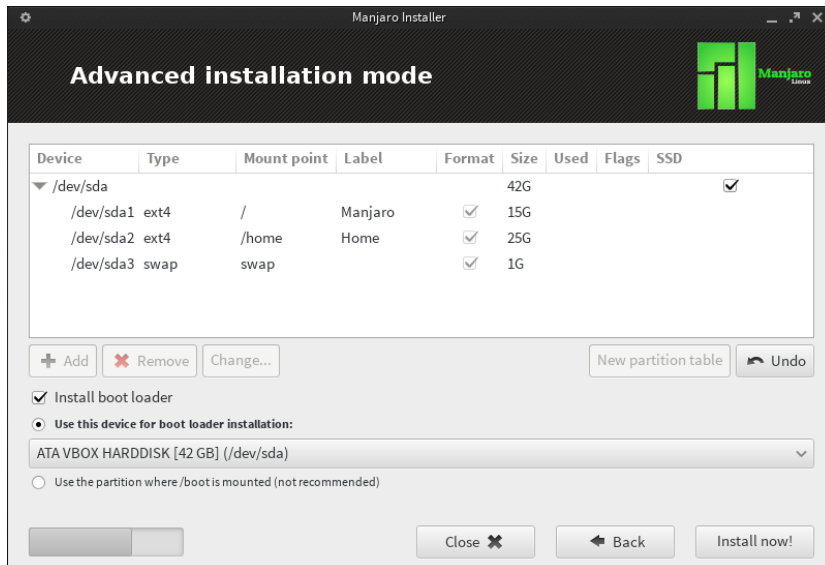


7: We've added a second partition to hold our user documents. It's set to be 25GB in size, with the EXT4 filesystem, and the mountpoint is set to **/home** (Home).

Swap partition

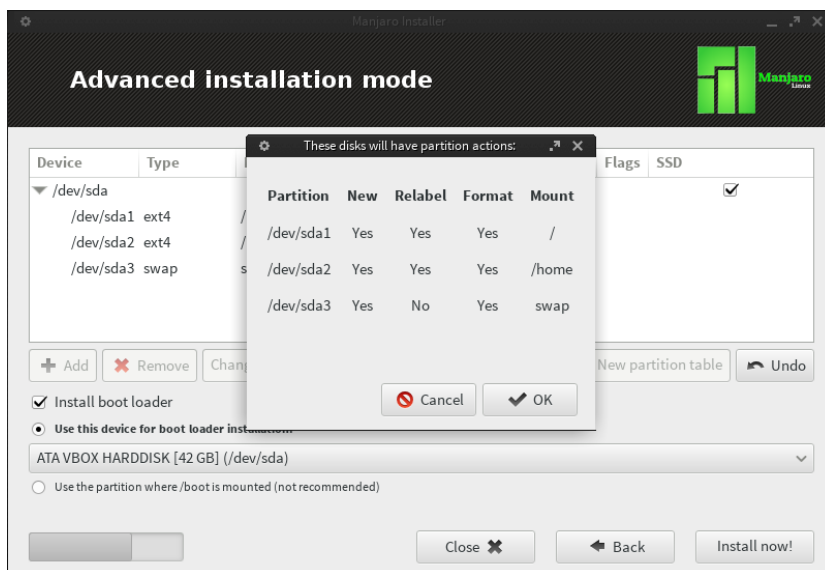


8: Finally, we've added a swap partition. This will act as extra (very, very slow) RAM if we run out. It's not really suitable as anything other than a last resort but can sometimes make the difference between losing work and quitting cleanly. This is set to take the remainder of the free space, about 2GB.

Finalising the partitions

9: The partition layout is ready, but before continuing it's worth checking over. You can change and adapt the layout freely at this point as nothing has been written to disc.

Once you are happy, click **Install now!** to proceed.

Verify partitioning actions

10: As a final check, the installer will ask you to verify that you want to write the partition layout to disc. If you want to go back and make a change, click **Cancel**. Otherwise to continue to install Manjaro, click **OK**. The rest of the process is the same as for the Automatic installer, so we're done here!



MANJARO LINUX