

# Emmabuntüs

## Debian Edition 4

# Installation guide



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Debian <sup>11</sup> Bullseye

Updated : Jul 14, 2021

# **Emmabuntüs Debian Edition 4**

## **Installation Guide**

First release : Apr-25-2020, updated : Jul 14, 2021

Lead author : Emmabuntüs Collective

The goal of this tutorial is to present the prerequisites, the means and the procedures in order to smoothly install the GNU/Linux Emmabuntüs DE (Debian Edition) 4 distribution, which is designed for the reuse of computers. Thus, you will be able to use your hardware equipment longer, by migrating serenely from Windows to Linux.

# 1 - Introduction

[Emmabuntüs](#) is a [GNU/Linux distribution](#). This project was launched in the year 2011 by the [Emmabuntüs Collective](#). It is a comprehensive work-and-leisure-station ready for immediate use, designed to dramatically simplify the task of refurbishing the used computers given to the Emmaüs and other humanitarian communities, as well as to ease the GNU/Linux discovery by the beginners, and to extend the life of the hardware. This tutorial explains how to install Emmabuntüs Debian Edition 4, which is based on [Debian Bullseye Xfce/LXQt](#). We suggest to the beginners that before performing the migration to a GNU/Linux distribution, they read this [introduction to a Linux migration](#), as well as [the beginner's handbook](#) (aka Debian *without headaches*).

## 2 - Prerequisites

The following prerequisites are mandatory in order to properly initiate the installation :

- The hardware configuration should feature a 2.0 GHz processor, a disk drive with 40 GB of free space and at least 1024 MB of RAM.
- Download the 3.0 GB [ISO image](#) from the web page dedicated to [Downloads](#).
- [Check the MD5SUM](#) of this ISO file.
- Record this ISO file on a DVD, using the “Burn Image” function of your favorite [CD/DVD burning software](#).
- Alternatively, you can transfer this ISO file on a bootable USB key. This is the preferred solution due to its speed during the installation phase. See [Chapter 6](#) for more explanations.
- It is also advisable to run first a [live session](#) in order to verify that there are no hardware compatibility issues (1 GB of RAM is recommended for a live DVD or USB session).

Since version 3, it is possible to easily install Emmabuntüs during a “live mode” session by using the Calamares tool.



For a video presentation of New Features in Emmabuntüs Debian Edition 4, click [here](#).

## 3 - Installation



Before installing any operating system installation on a computer, we strongly suggest that you test it first in a Live Mode session by using the USB key. See [Chapter 6](#) on how to create a bootable Live\_CD USB key.

Insert the Emmabuntüs Debian Edition 4 DVD in the media reader or plug the live-USB in, and then restart your computer.

### 3.1 - Starting up

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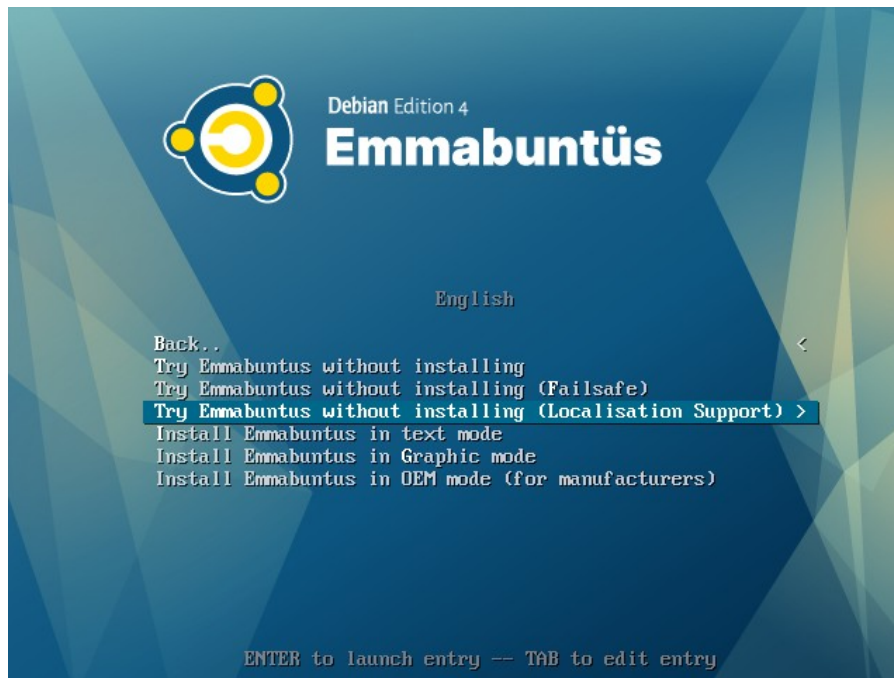
The computer [BIOS](#) must be configured to boot from the DVD or from the USB key. On some computers, pressing the F8, F9 or F12 keys during the boot process will allow you to choose the right device to boot from. For more information, we suggest that you read the pages dedicated to the startup process on the [Debian](#) and [Ubuntu](#) sites.

Select the installation language of your choice by using the navigation arrows :



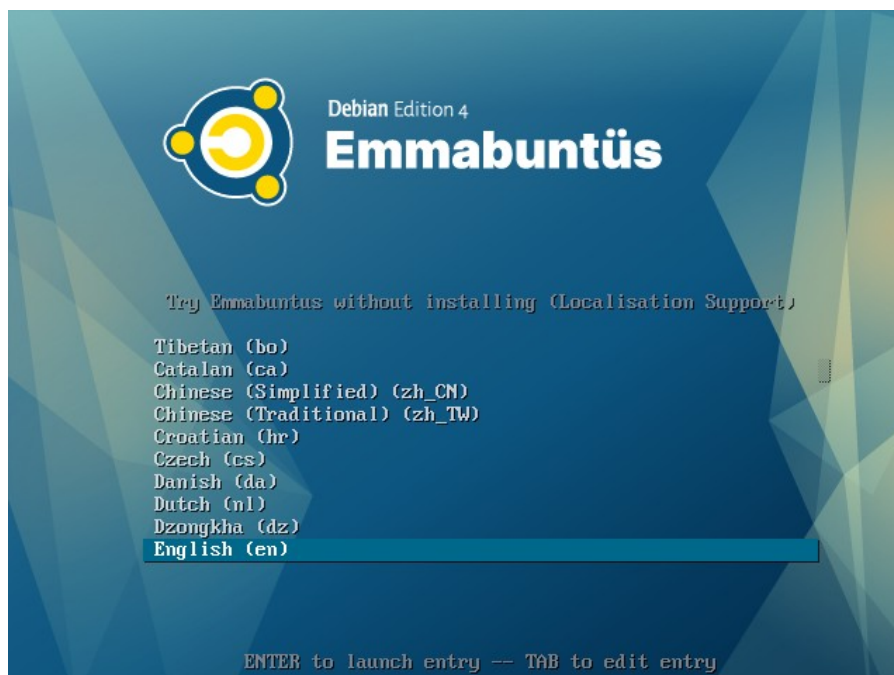


On the next screen, you are given the choice either to try or to directly install Emmabuntüs :



If you like to install it directly the Debian way, you can click on “Install Emmabuntüs in Graphic mode”, and go to the [section 3.3](#)

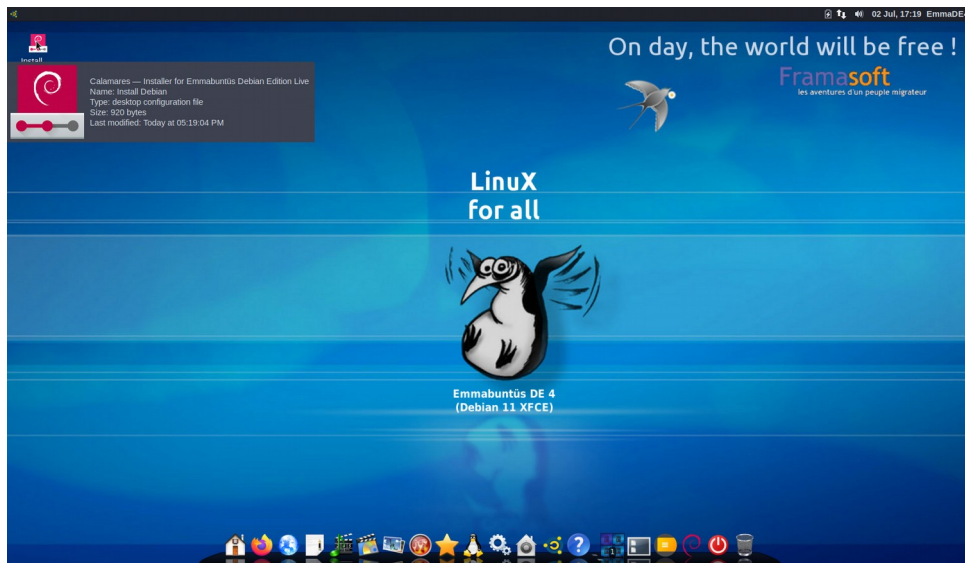
In this section we are going to use the Calamares installation by going through the “Live Session” mode. So we select first the line “Try Emmabuntüs without installing (Localization Support)” which gives us the opportunity to select immediately the installation language.



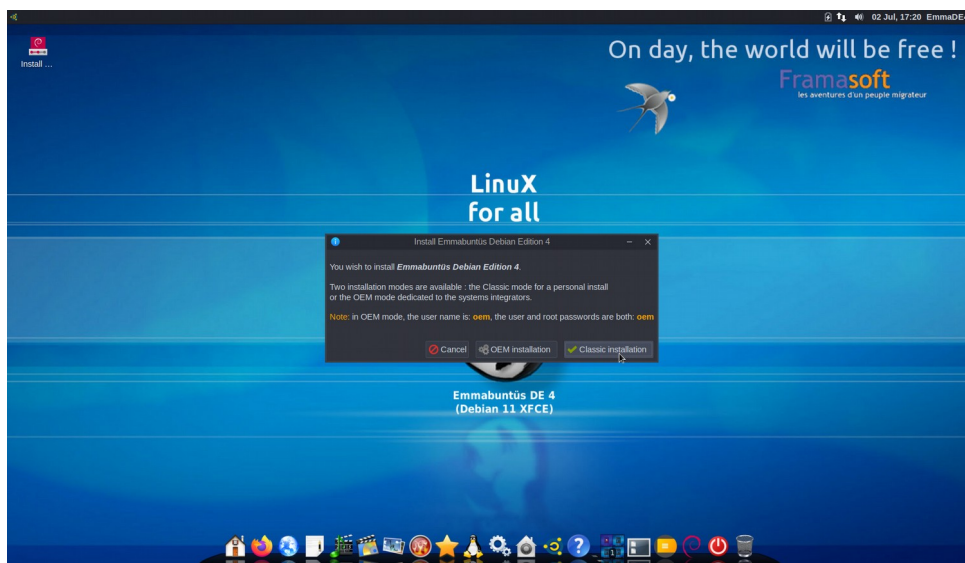
We select the line “English (en)” and then Enter.

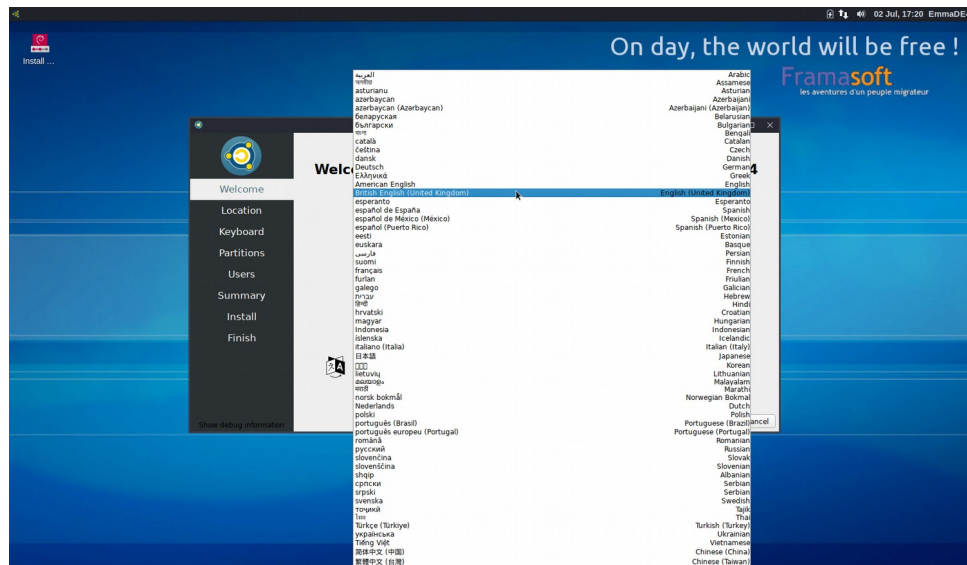
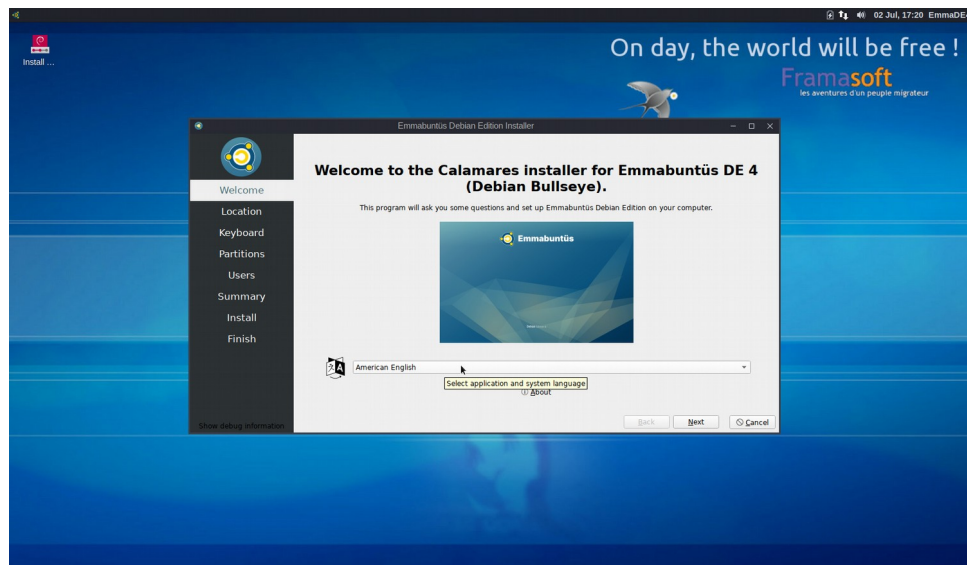
## 3.2 - The Calamares Installer

To launch the Calamares install, please double-click on the Calamares icon located on the Emmabuntüs desktop :

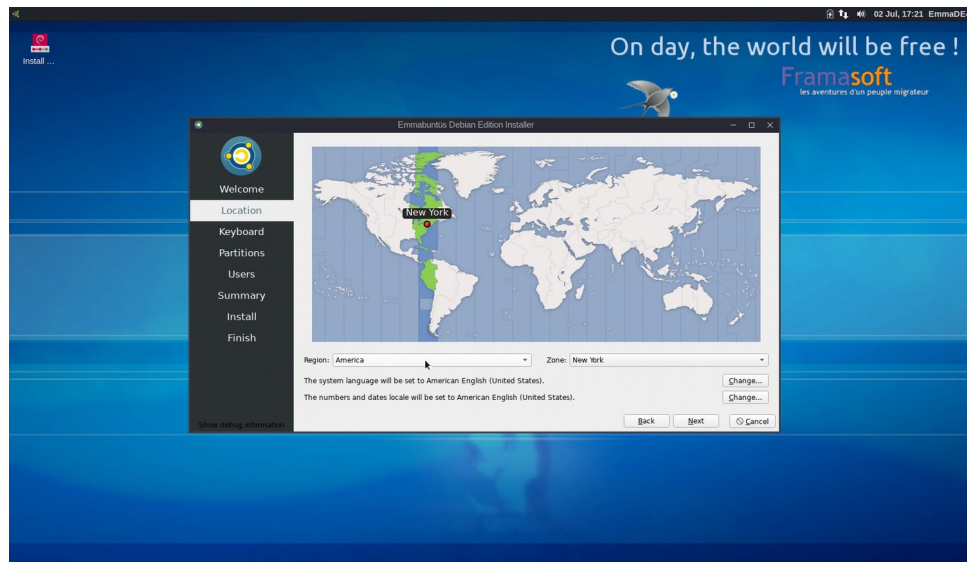


This action opens a window to select the installation mode of Calamares, that is either its classic mode, see the following chapters, or the OEM mode, see the OEM mode installation chapter in the [section 3.2.8](#).



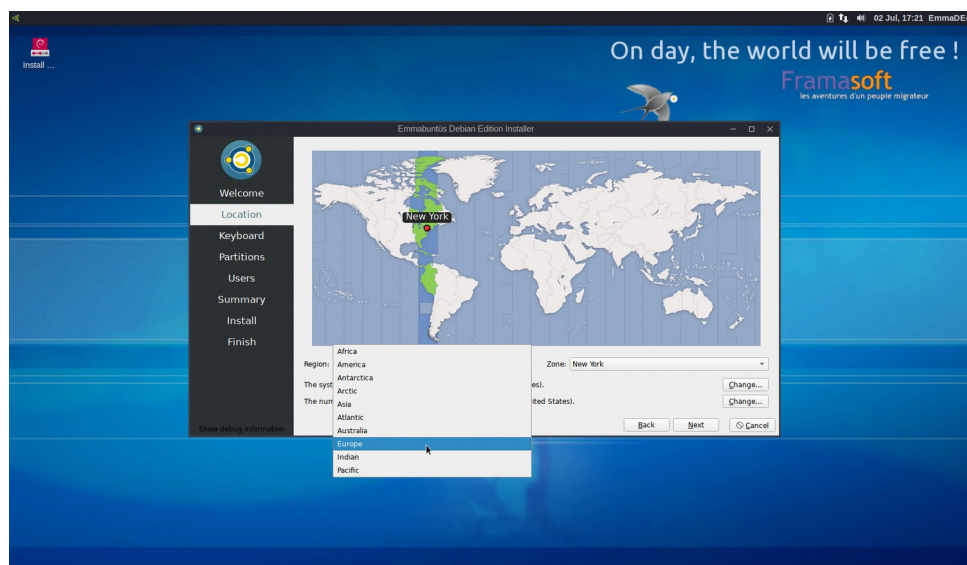


### 3.2.2 - Location setting



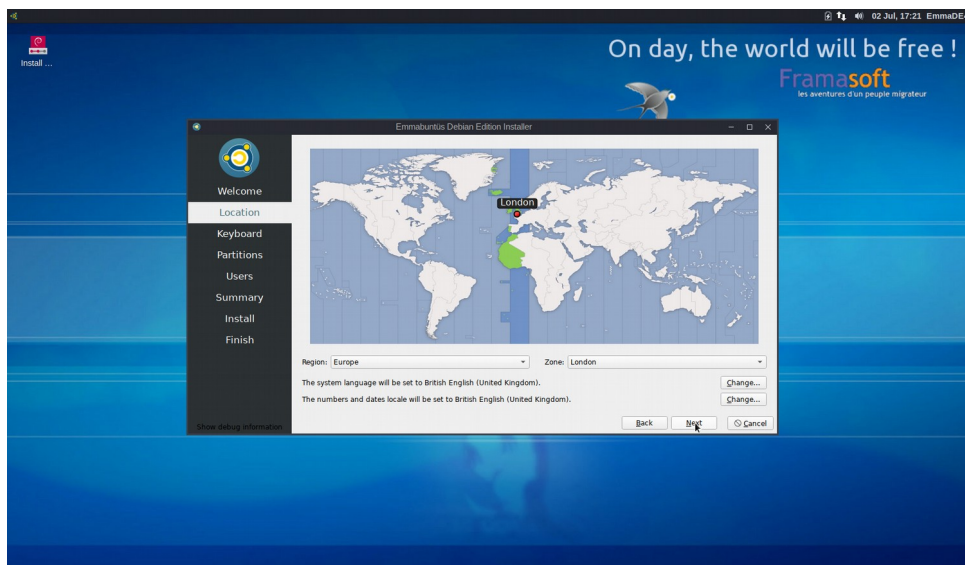
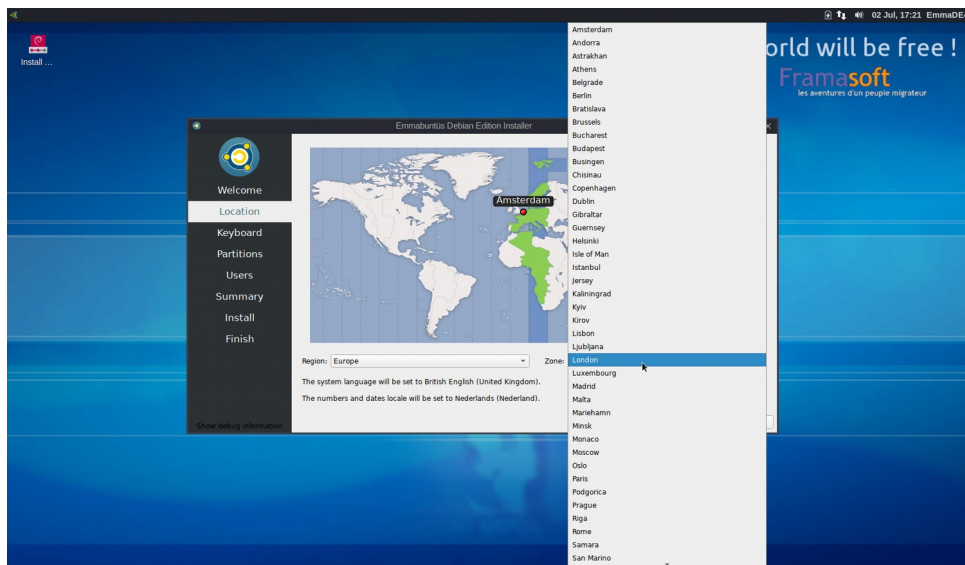
The installer will propose New York, USA, by default.

You can click directly on the map to select your location, or alternatively, by clicking on the drop down arrow we select Europa as Region,



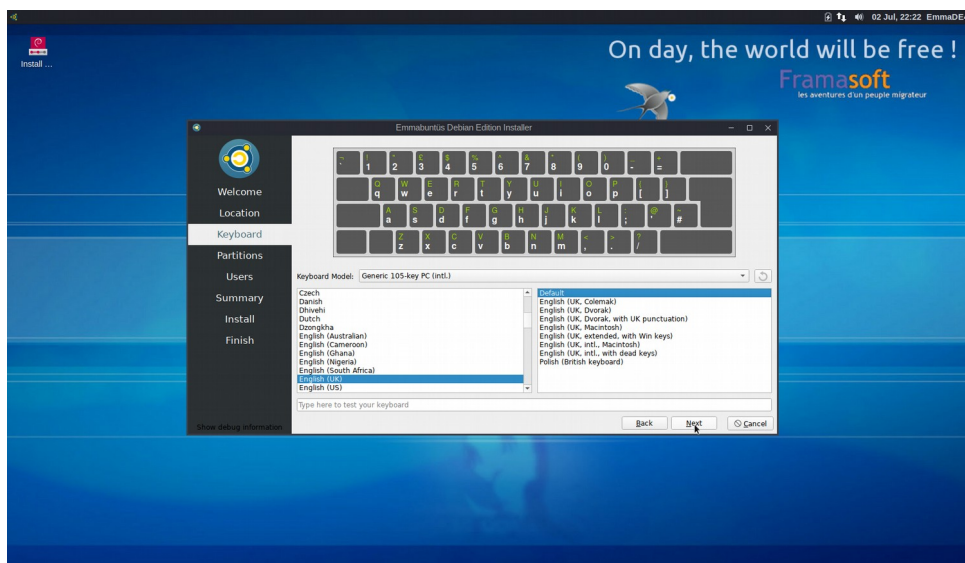
and then London as our Time-Zone :





And when the location is correct, we can click on “Next”.

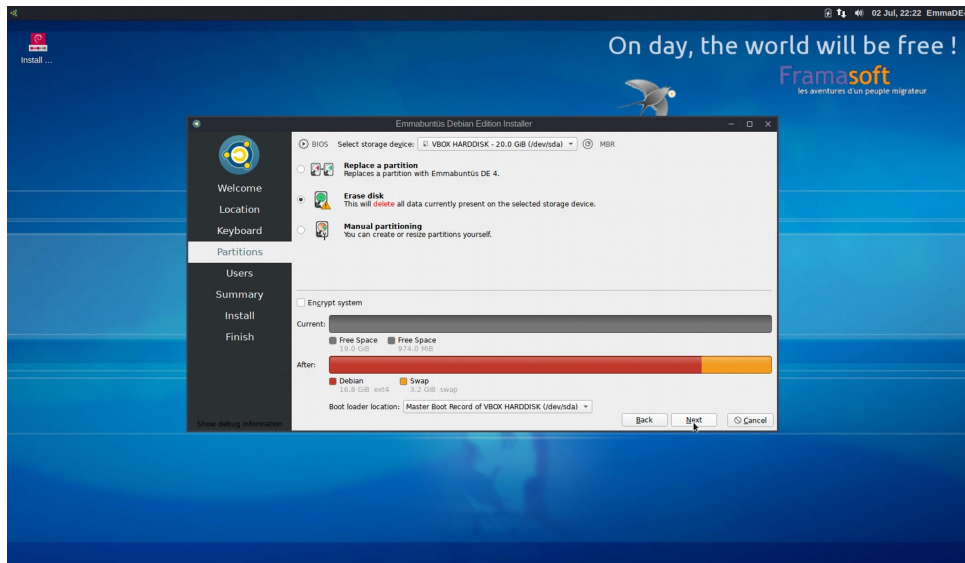
### 3.2.3 - Keyboard setting



We are happy with the Keyboard default here and we can click on Next.

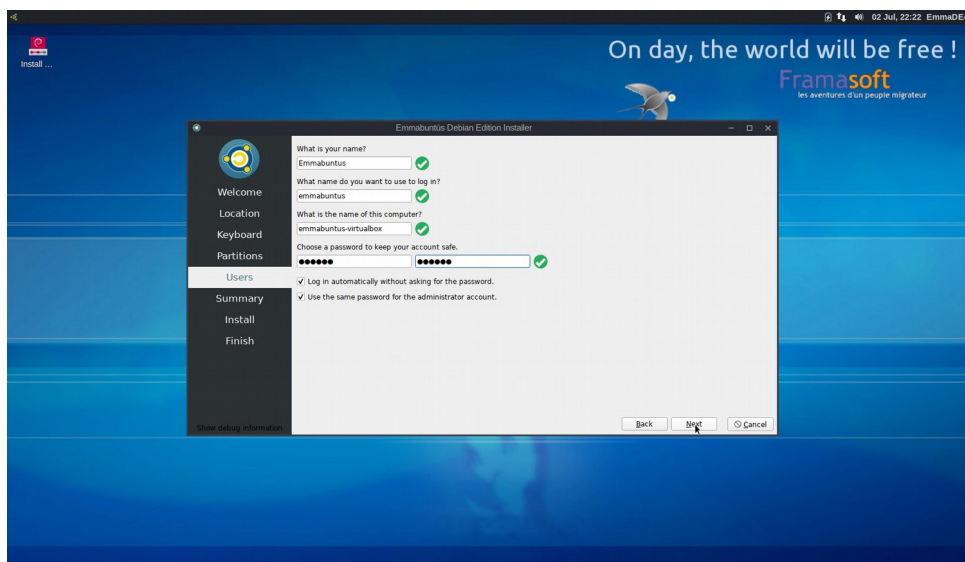
### 3.2.4 - Partitioning

Here we simply select the “Replace Partition”, which will overwrite a previously installed Debian system. Swap unchanged.



If you are a beginner, we strongly suggest that you select the “Erase disk” option, which will use automatically your whole disk capacity.

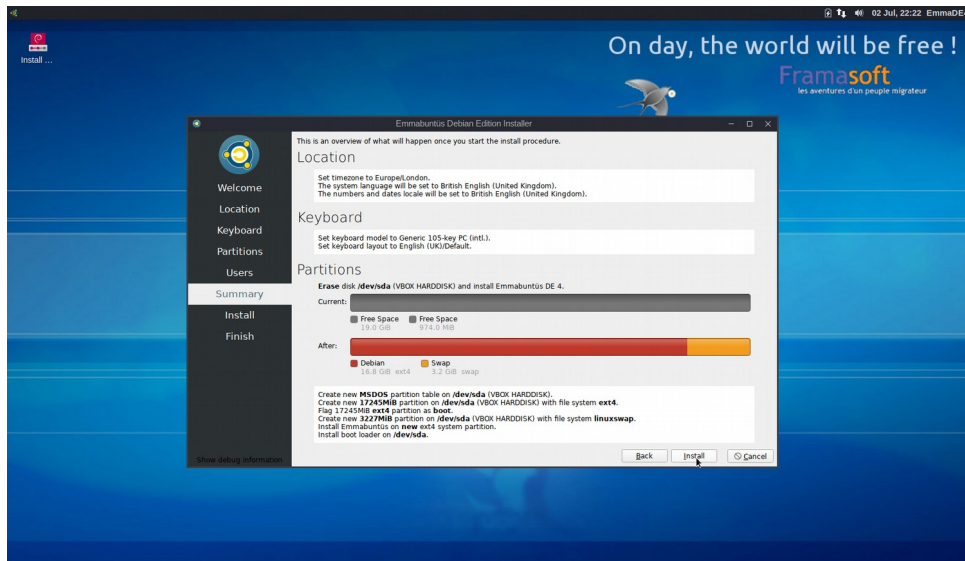
### 3.2.5 - User setting



In the window we enter our name, the login name, the computer name, our password (twice). We can select to login automatically (no password required for login), and to use the same password for all the administrative tasks.

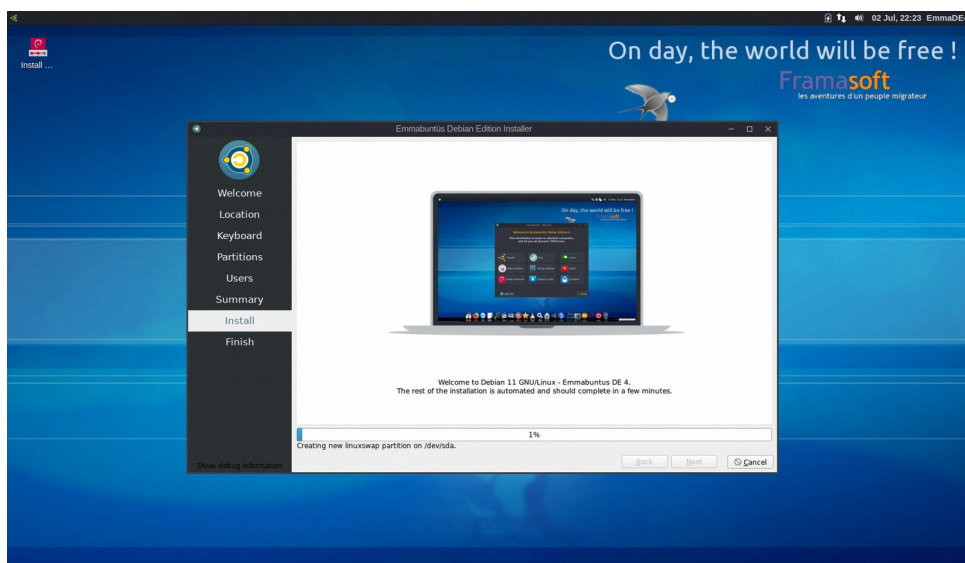
### 3.2.6 - Summary

The next screen is a nice summary of the various settings that will take place during the installation, except if you go back to make of some modification, or click on the Cancel button to abort the operation and return to the live session.

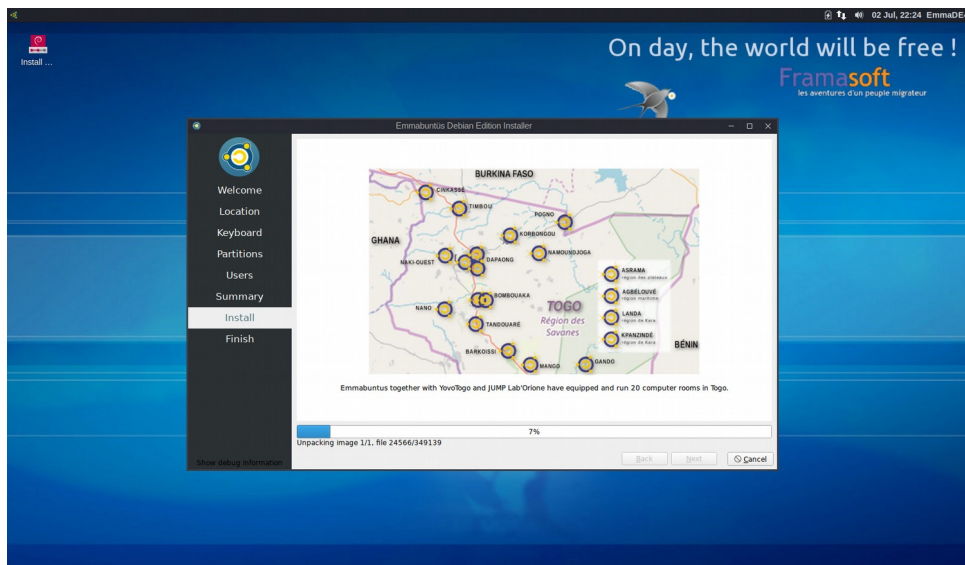


We click on Install.

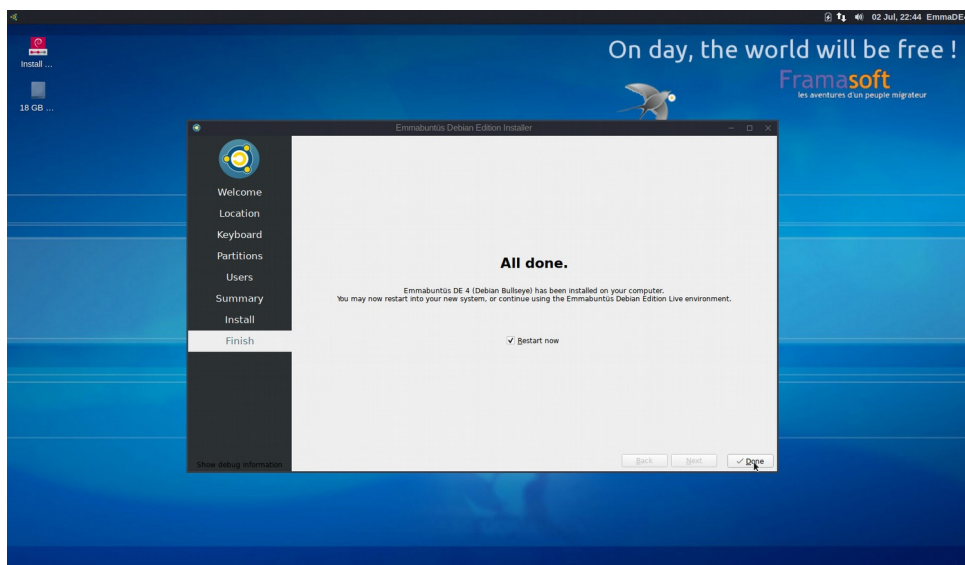
### 3.2.7 - Installation



During the installation, a slideshow informs you about the specific features of Emmabuntüs, as well as the actions of the Emmabuntüs collective, and the friendly associations with which we collaborate.



When the installation is complete, click Finish to restart the computer.



### 3.2.8 - Installation in "OEM" mode

The OEM mode installation allows you to pre-configure a computer, without totally completing its installation, in order to allow the future end-user to customize the system during the first boot, when he/she can select the language, the keyboard mapping, its geographic position, its full name as well as its login name and password.



This installation mode is particular interest in the frame of an "Install Party" or when selling computers to associations or companies refurbishing computer equipment.

The Calamares OEM install, is no other than a classic one, but split in two steps :

- First, Calamares is launched to pre-configure the computer, by performing the disk partitioning, the system installation and the OEM account creation. This step



is like a classic Calamares install, except that the “oem” account is created by default, with the password “oem”.

- Then occurs the computer post-installation, via the OEM account, with, potentially, a system customization, and then, always through the desktop Calamares icon, the finalization of the system configuration to be used by the end user. The new window shown below allows you to copy the customization, done for the OEM account, to the end-user, and to enter the name of your association to identify the hardware.



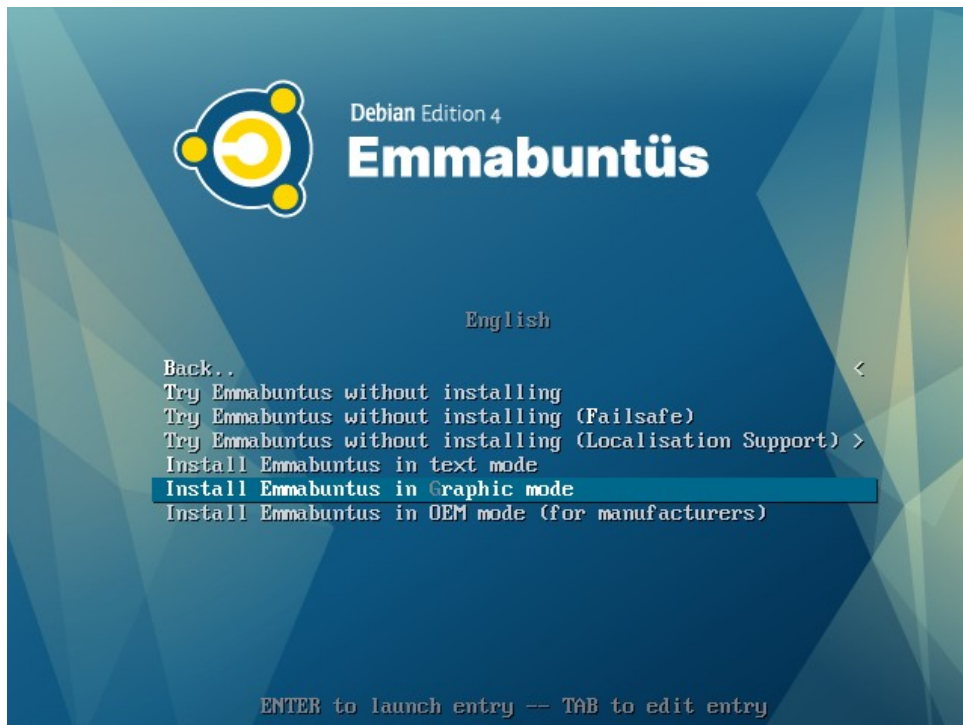
The fact to also copy the OEM post-installation configuration, will bypass this step during the end-user creation. It will directly inherit the entire OEM configuration.

- The installation is completed by the end-user, through the second launch of Calamares in automatic mode, in order for him/her to personalize the system and to define the user login name and password. This part of the installation process behaves like a classic Calamares install, except that there is no disk partitioning to be executed, since it was already done during the first step, and that the system is already installed on the computer.

## 3.3 - Debian Classic Installation

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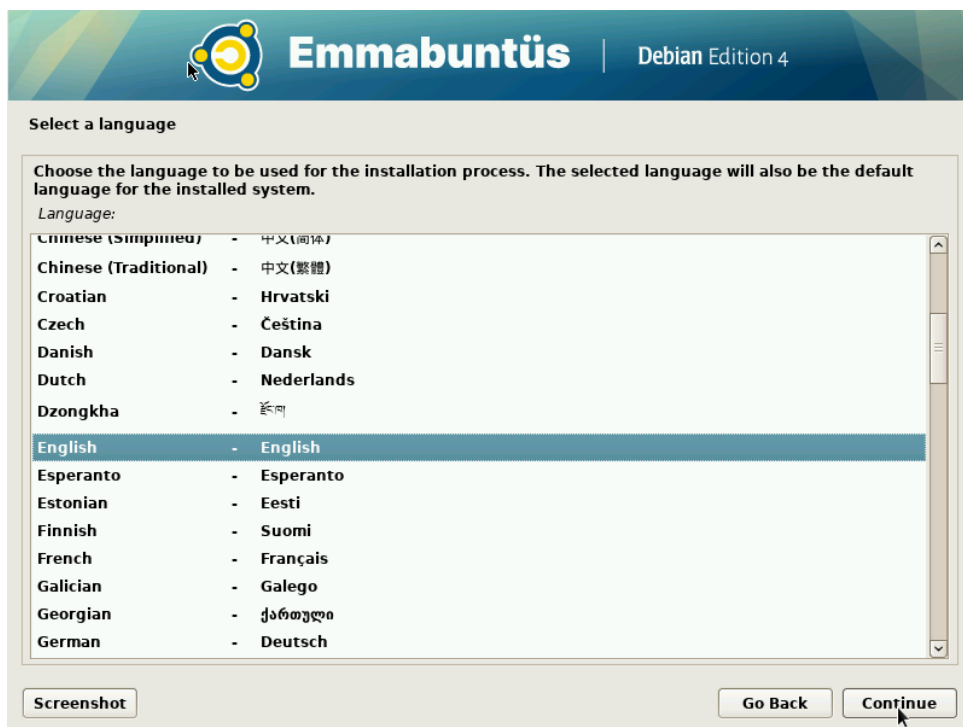
After the boot we selected the “Install Emmabuntüs in Graphic Mode”

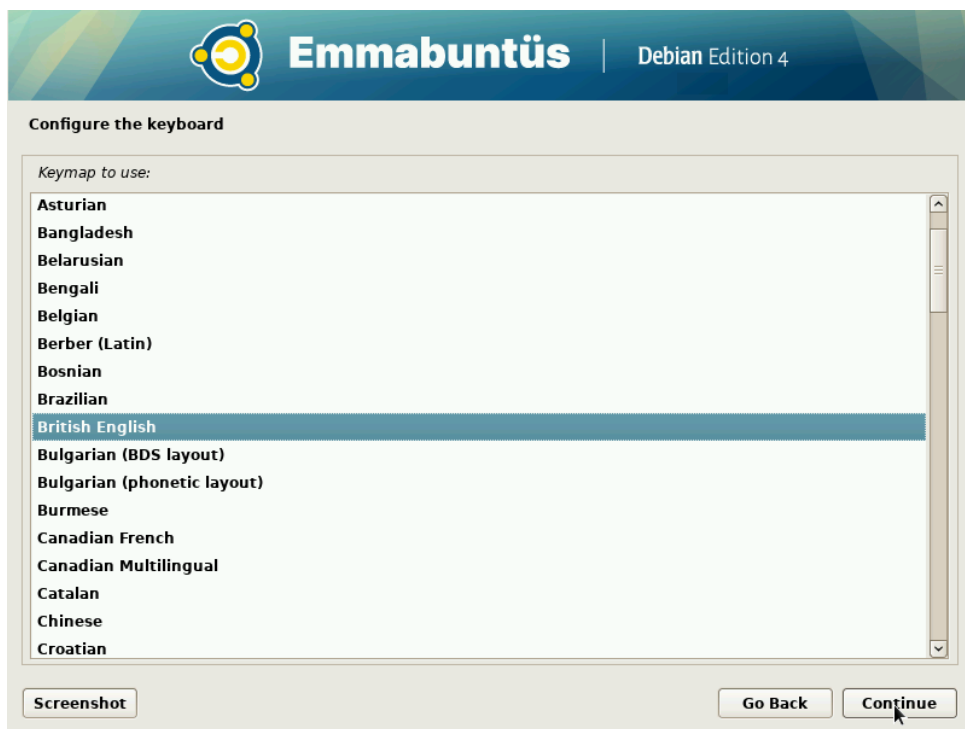
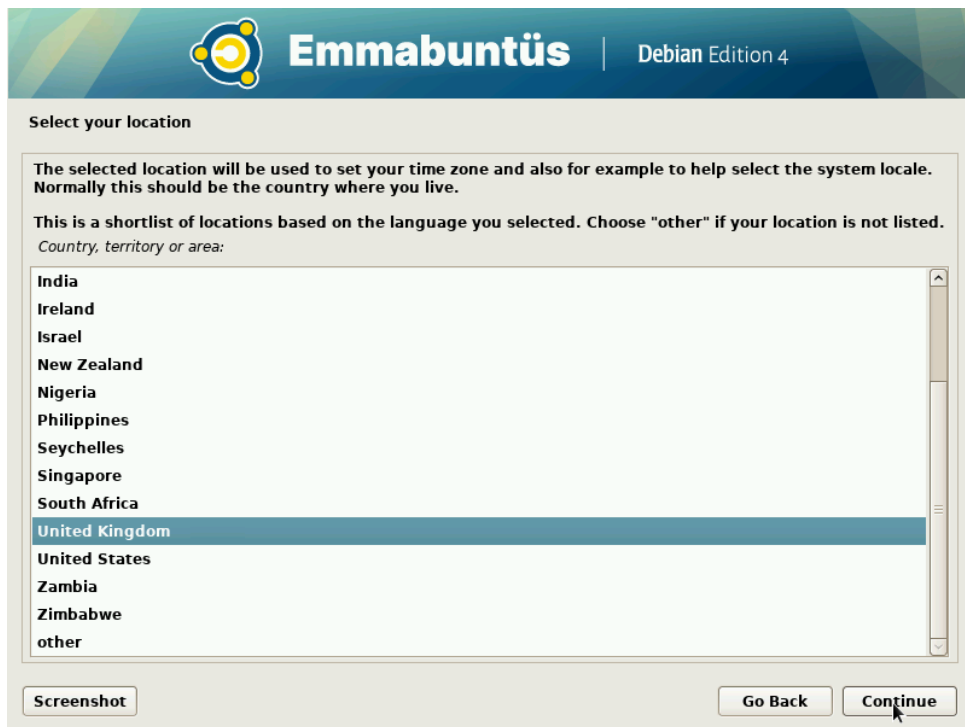


### 3.3.1 - Language selection

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Select the system language, your location and the keyboard configuration :





### 3.3.2 - Network

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The installation program looks at the various hardware components to detect if there is an Internet connection capability. You can also skip the Internet connection step and proceed with the installation without connection. If you are connected with an Ethernet cable, the connection will be automatic, and if you have a WiFi card, you will get the choice of the connection and you will possibly be asked to accept a license. Then you are asked to enter the machine host name (this name will be visible by the other machines on your local network) :




The screenshot shows the 'Emmabuntüs | Debian Edition 4' window. The title bar is blue with the logo and text. Below the title bar, the window is titled 'Configure the network'. Inside, there is a text box with the following text: 'Please enter the hostname for this system. The hostname is a single word that identifies your system to the network. If you don't know what your hostname should be, consult your network administrator. If you are setting up your own home network, you can make something up here.' Below this text, there is a label 'Hostname:' and a text input field containing 'Emma-DE-4'. At the bottom of the window, there are three buttons: 'Screenshot', 'Go Back', and 'Continue'. A mouse cursor is pointing at the 'Continue' button.

### 3.3.3 - Users

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Here you are asked to enter the *root* (administrator) password. If you fill these fields in, the administrative rights will be reserved to this special user *root* (that is, to install a new software or package, run an update, and more generally, execute all the sensitive tasks in the system). You can leave these fields empty, and in that case, the first user you are going to declare just after this screen, will be able to gain the administrative privilege, when necessary, by using the command **sudo** together with its own password.



# Emmabuntüs

Debian Edition 4

## Set up users and passwords

You need to set a password for 'root', the system administrative account. A malicious or unqualified user with root access can have disastrous results, so you should take care to choose a root password that is not easy to guess. It should not be a word found in dictionaries, or a word that could be easily associated with you.

A good password will contain a mixture of letters, numbers and punctuation and should be changed at regular intervals.

The root user should not have an empty password. If you leave this empty, the root account will be disabled and the system's initial user account will be given the power to become root using the "sudo" command.

Note that you will not be able to see the password as you type it.

Root password:

☐ Show Password in Clear

Please enter the same root password again to verify that you have typed it correctly.

Re-enter password to verify:

☐ Show Password in Clear

[Screenshot](#) [Go Back](#) [Continue](#)

The next screen concerns the creation of the first account. Here you could enter your full forename and family name, or whatever suits you :



# Emmabuntüs

Debian Edition 4

## Set up users and passwords

A user account will be created for you to use instead of the root account for non-administrative activities.

Please enter the real name of this user. This information will be used for instance as default origin for emails sent by this user as well as any program which displays or uses the user's real name. Your full name is a reasonable choice.

Full name for the new user:

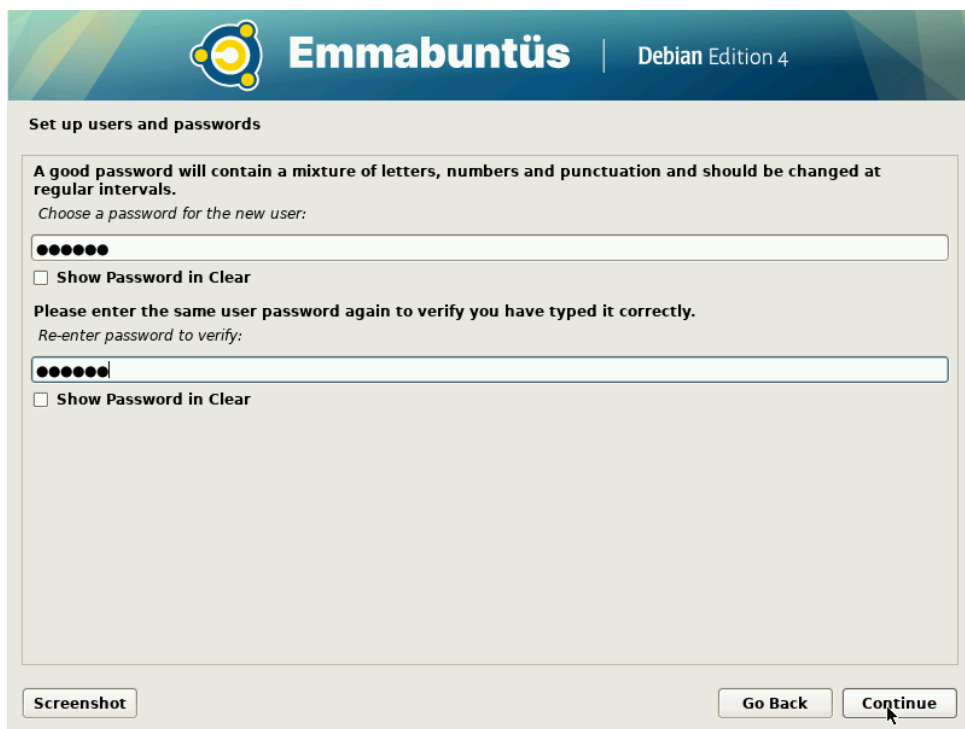
[Screenshot](#) [Go Back](#) [Continue](#)

And now, your user name (or login identification) :



The screenshot shows the 'Set up users and passwords' window of the Emmabuntüs Debian Edition 4 installer. The window has a blue header with the Emmabuntüs logo and the text 'Emmabuntüs | Debian Edition 4'. Below the header, the title 'Set up users and passwords' is displayed. The main content area contains instructions: 'Select a username for the new account. Your first name is a reasonable choice. The username should start with a lower-case letter, which can be followed by any combination of numbers and more lower-case letters.' followed by 'Username for your account:'. A text input field contains the username 'emmabuntüs'. At the bottom of the window, there are three buttons: 'Screenshot', 'Go Back', and 'Continue'. A mouse cursor is pointing at the 'Continue' button.

and then your password (twice, to avoid typing errors) :



The screenshot shows the 'Set up users and passwords' window of the Emmabuntüs Debian Edition 4 installer, specifically the password setup section. The window has a blue header with the Emmabuntüs logo and the text 'Emmabuntüs | Debian Edition 4'. Below the header, the title 'Set up users and passwords' is displayed. The main content area contains instructions: 'A good password will contain a mixture of letters, numbers and punctuation and should be changed at regular intervals.' followed by 'Choose a password for the new user:'. A password input field is shown with masked characters (dots). Below the input field is a checkbox labeled 'Show Password in Clear'. The next instruction is 'Please enter the same user password again to verify you have typed it correctly.' followed by 'Re-enter password to verify:'. A second password input field is shown with masked characters. Below this input field is another checkbox labeled 'Show Password in Clear'. At the bottom of the window, there are three buttons: 'Screenshot', 'Go Back', and 'Continue'. A mouse cursor is pointing at the 'Continue' button.

### 3.3.4 - Configure the clock

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Now, depending on the country you selected at the beginning of the installation process you might be asked to enter the time zone you live in.

As an example, if you selected the United States in the **Location** screen, here after are the time zones you can select :



### 3.3.5 - Partitioning

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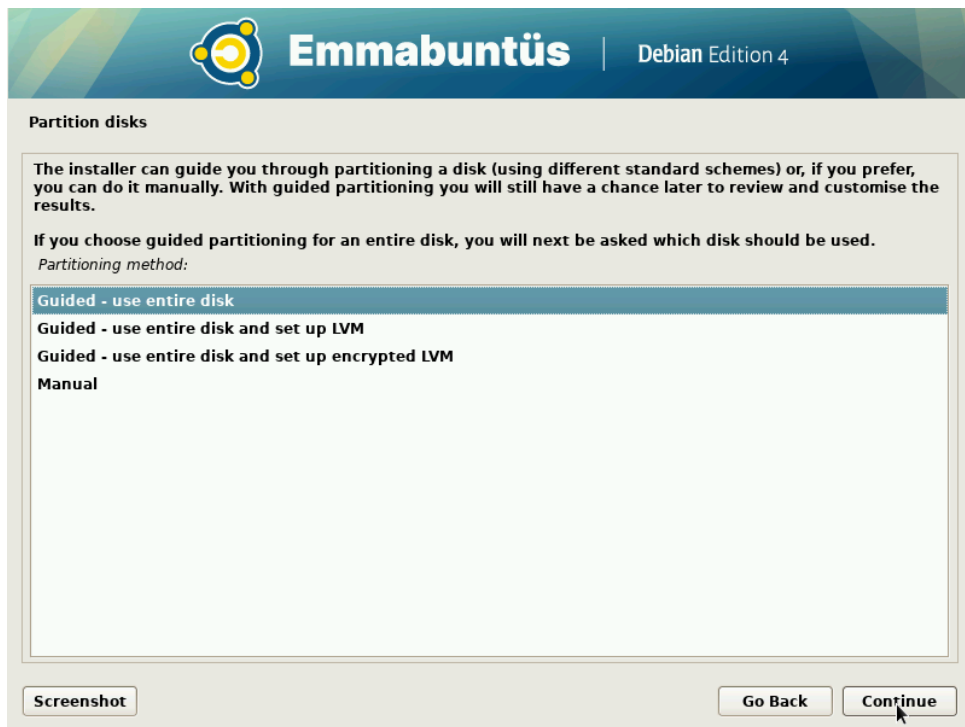
This operation consists in defining and formatting the various partitions of your hard disk(s).



**First and foremost, think about backing up all your important data :** formatting a disk is a hazardous operation, and you might damage your precious data.

Emmabuntüs Debian Edition 4 will offer you only few choices for the partitioning :

- If your disk is empty, or if you want to totally remove the existing system, select the option "Guided – use entire disk"



If you are a beginner, we strongly suggest that you select the “Guided – use entire disk” option, which will use automatically your whole disk capacity.

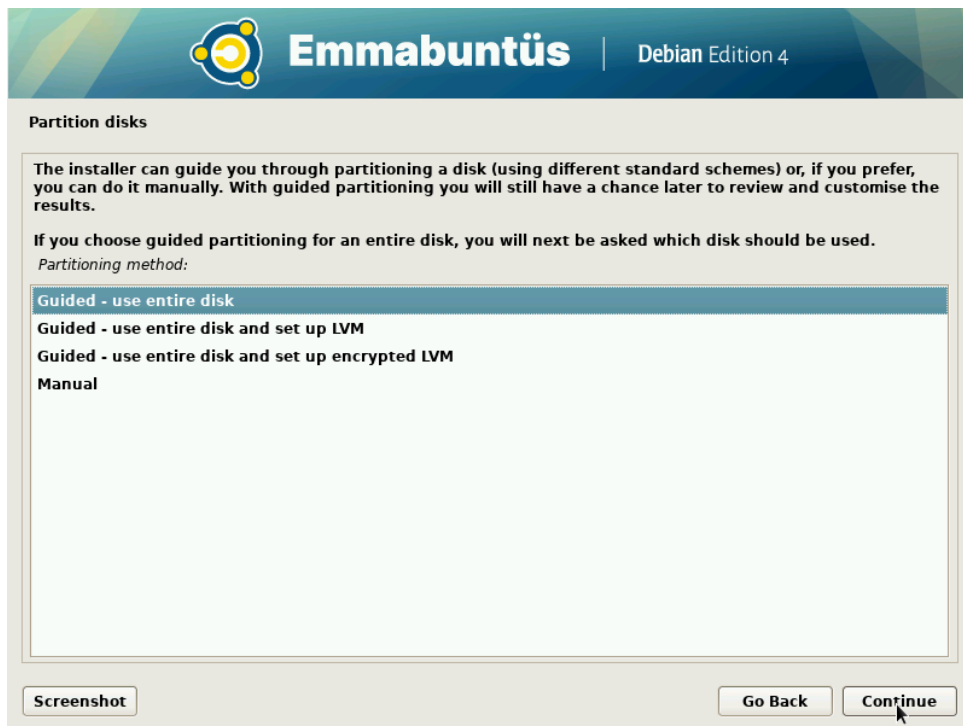
- We also suggest you ignore the next two options concerning the guided partitioning with LVM (encrypted or not). But in case you would like to learn more about it, you can read [A Beginner's Guide To LVM](#).
- On the other hand, if you want to preserve a data partition, or use several operating system coexisting on this machine, select the **Manual** option and follow the procedure presented in the [Manual/Multi-boot chapter](#). But in that case, please take an extreme care to the details of the disk [partitioning](#).



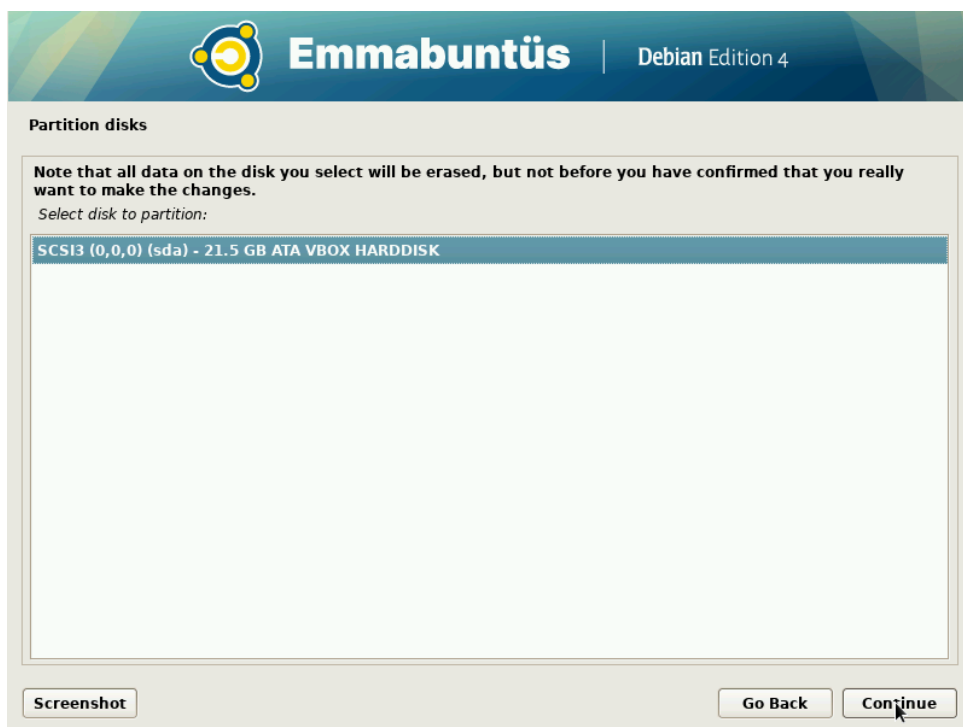
### 3.3.6 - Guided partitioning - single-boot

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Select the “Guided - use entire disk” option :



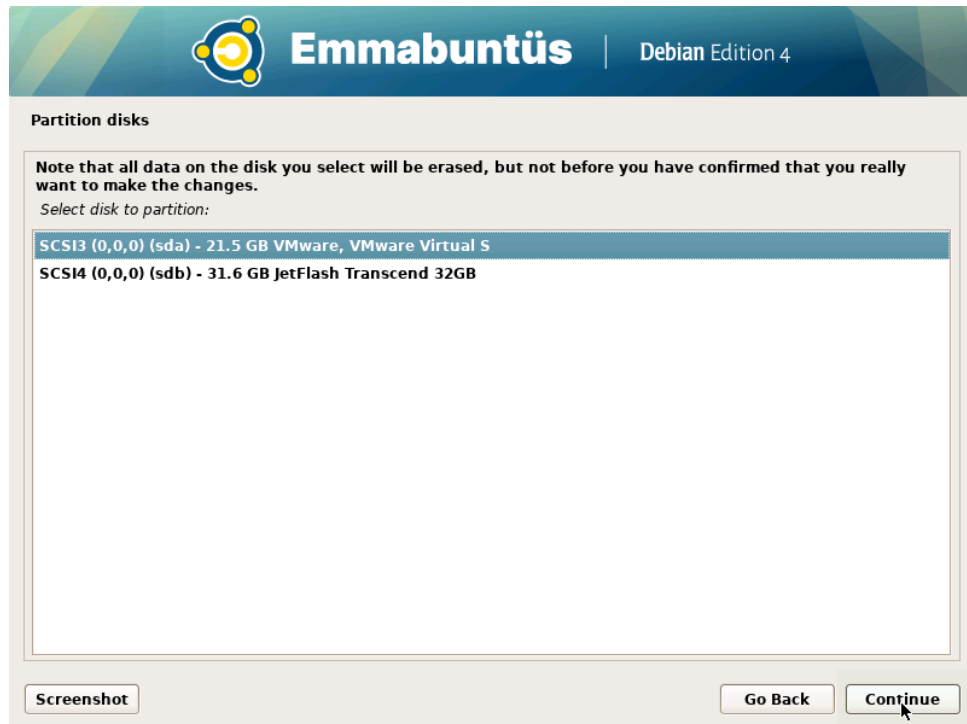
The installer program ask you to choose the hard disk on which the system is going to be installed :



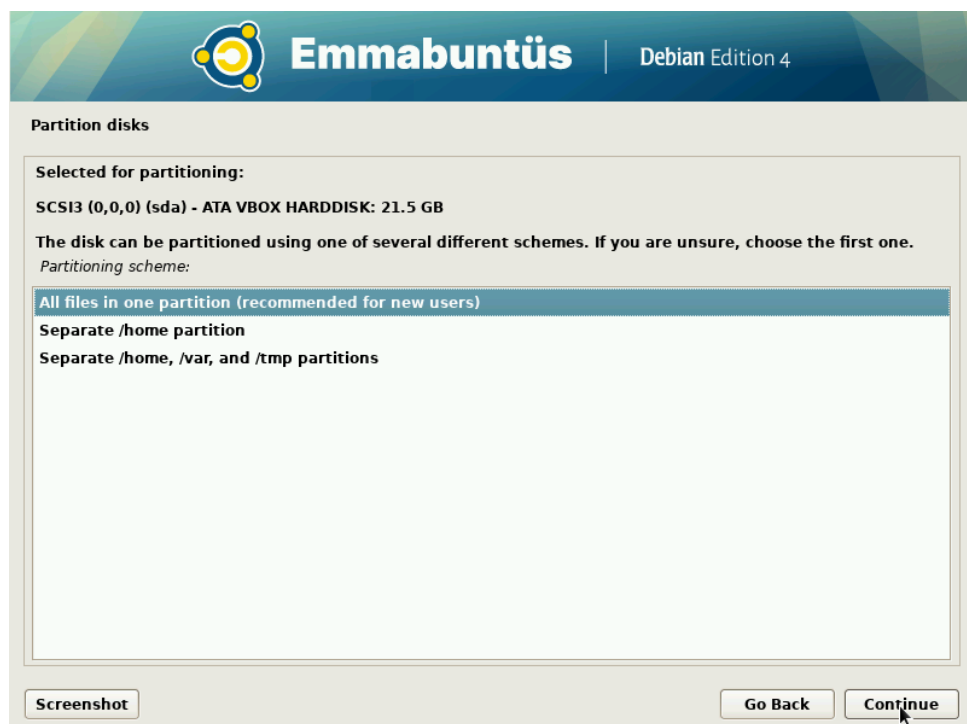


Note that on this snapshot above, there is only one disk displayed . But if you use an USB key, it will be shown as well ! Please make sure you don't select the wrong device (the size of the key should help you to recognize it).

In the example below **sda** is clearly the USB disk from which you are installing the OS and **sdb** the target disk for the system installation :



Select one of the three proposed schemes for this guided partitioning :



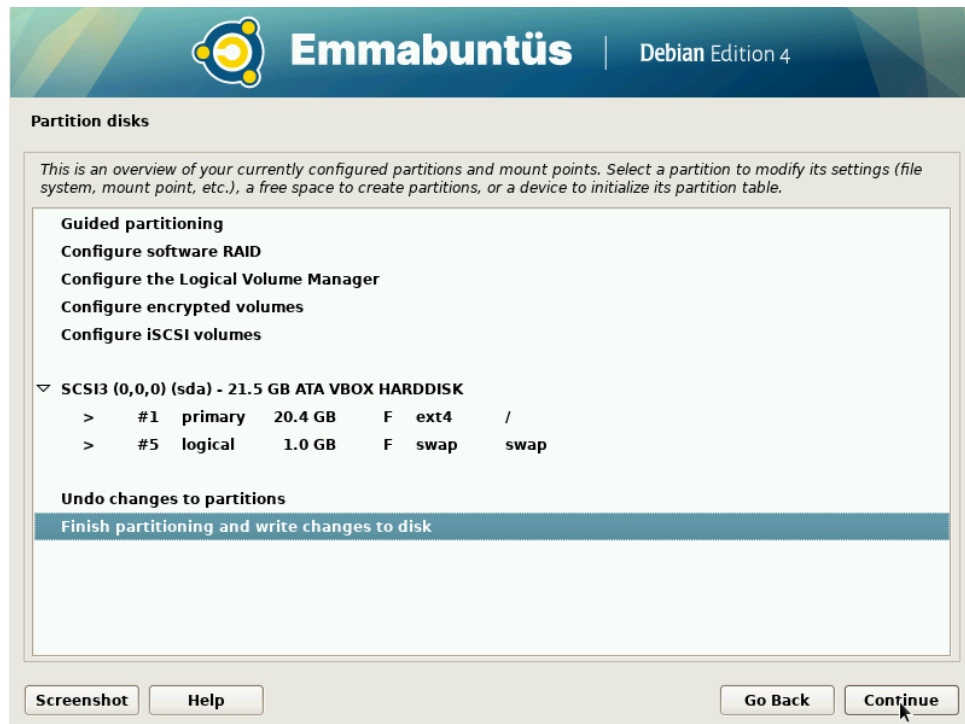


With Emmabuntüs DE 4, regardless of the selected scheme, the guided partitioning allocate 30 GB of disk space to the root partition, in order to make sure that the system will have enough room to be installed.



If you have only 40 GB on your disk, we recommend to use the “All files in one partition” scheme.

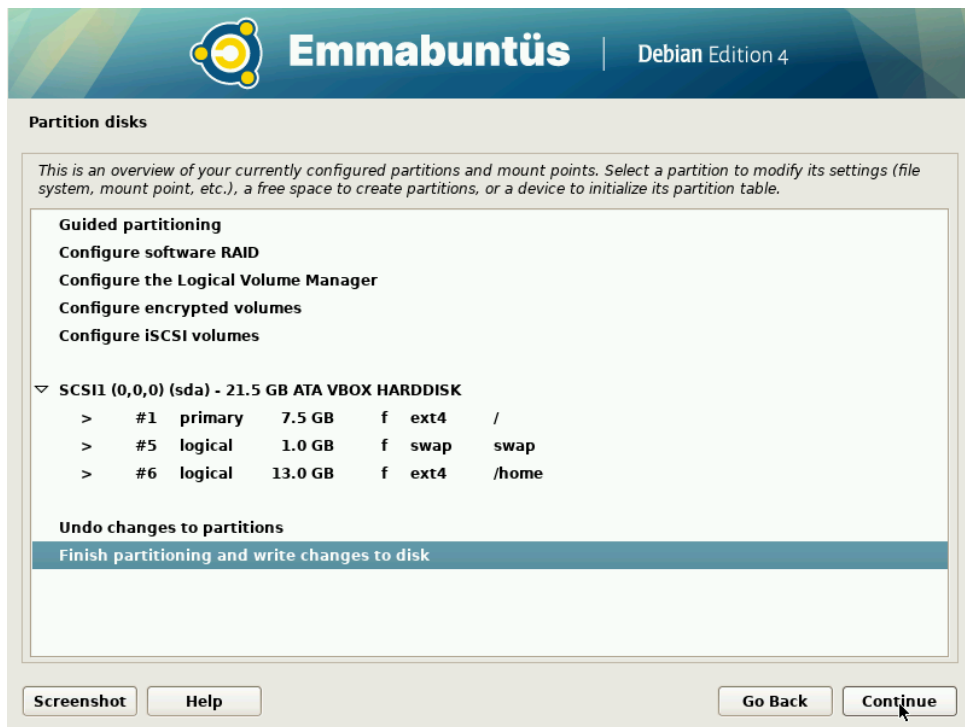
The next window displays the proposed partitioning :



As a matter of fact, Emmabuntüs DE 4 can be installed in a partition as small as 30 GB. But we advise you to rather take 80 GB disks, otherwise you won't get more room for your personal data.



At this point you can cancel this proposed partitioning to try another scheme (see below an example with separated */home* partition). To do so, select the option “Undo changes to partitions”.

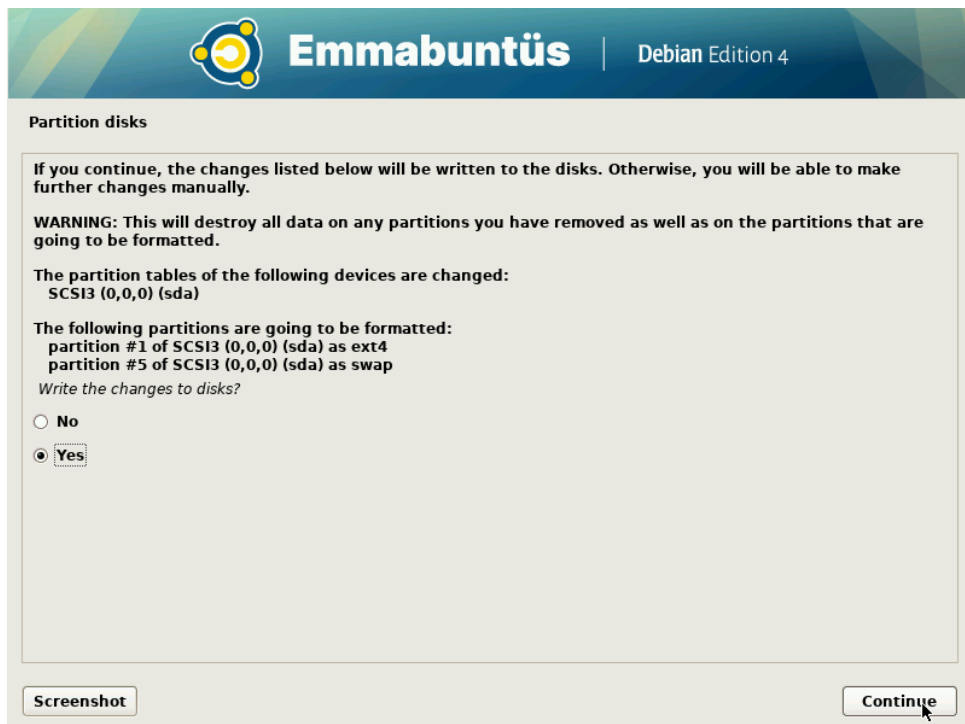


The screen below ask you to confirm that you agree with the planed partitioning, before it is definitely written to the disk.



**After this step, all the data currently on the disk will be erased and lost.**

If you agree with the changes, select “Yes” and click on **Continue** :

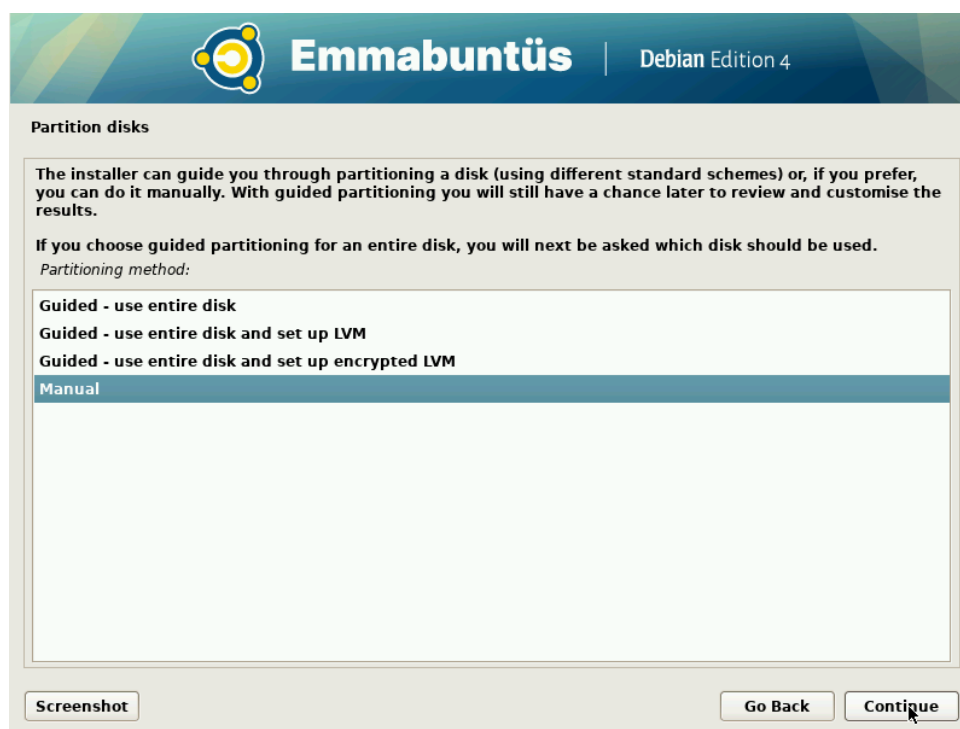


### 3.3.7 - Manual partitioning and multi-boot

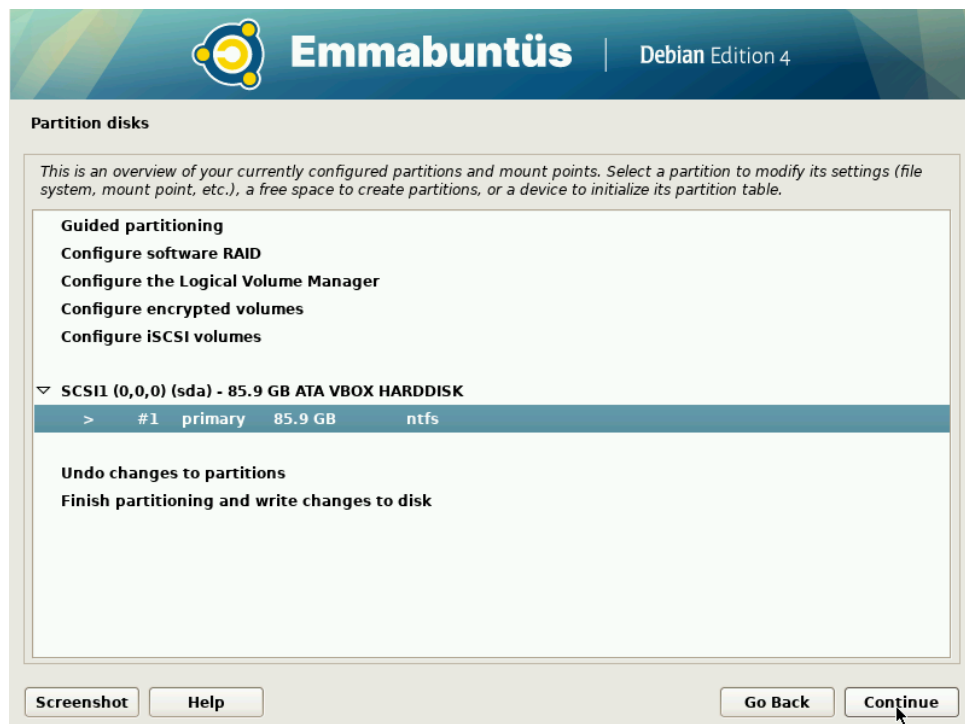


**This procedure is absolutely not recommended for beginners**, it is intended for experienced users who want to have several operating systems coexisting in parallel on their computers. **For the beginners who wants to test several operating systems, we recommend they use a dedicated computer for the alternative OS**, or to use different hard disks, but never test several operating systems on their daily work computer because a terrible cockpit error can occur very quickly :( .

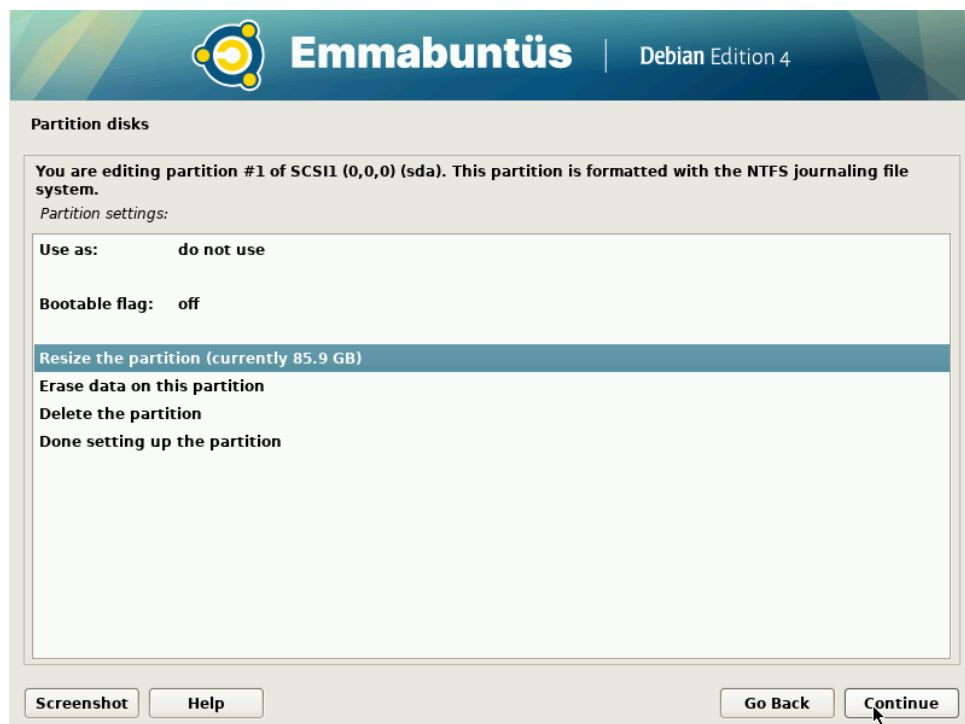
Select the “Manual” option and click on **Continue**



Select the partition on which an existing OS is already installed (here partition 1 on disk sdb) and that we are going to shrink in order to install Emmabuntüs DE next to it. Then click on **Continue** :



Now select the option "Resize the partition (currently ... GB)" and click on **Continue** :



You need to accept the potential pending changes. Tick the “Yes” option and click on **Continue** :



The screenshot shows the 'Partition disks' window in Emmabuntüs. The header bar is blue with the Emmabuntüs logo and 'Debian Edition 4'. The main area has a light beige background. It contains the following text: 'Before you can select a new partition size, any previous changes have to be written to disk.', 'You cannot undo this operation.', 'Please note that the resize operation may take a long time.', and 'Write previous changes to disk and continue?'. There are two radio buttons: 'No' (unselected) and 'Yes' (selected). At the bottom, there are three buttons: 'Screenshot', 'Go Back', and 'Continue'.

Here you enter the new size you want to assign to this partition, then **Continue** :

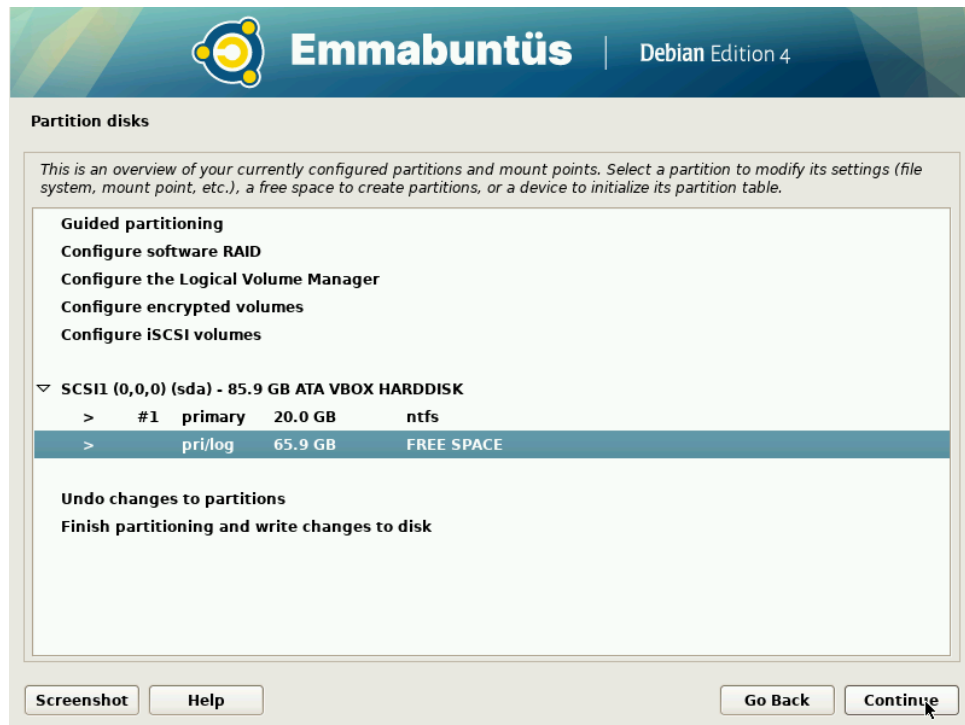


This screenshot shows the same 'Partition disks' window, but now with a text input field for the 'New partition size:'. The input field contains '20 GB'. Above the input field, the text reads: 'The minimum size for this partition is 70.2 MB (or 0%) and its maximum size is 85.9 GB.' and 'Hint: "max" can be used as a shortcut to specify the maximum size, or enter a percentage (e.g. "20%") to use that percentage of the maximum size.' The 'Continue' button at the bottom right is being clicked by a mouse cursor.



In the banner above the size entry field, you can see the minimum size authorized for this partition.

After the first partition resizing, you are back to the overview of the current situation, where you can see that the first partition was reduced according to your input, and consequently, that some room is now available. Select this FREE SPACE line and **Continue** :



We are going to create 2 new partitions in this free space. The first is going to be the **swap area** and the second will be the **system root**.



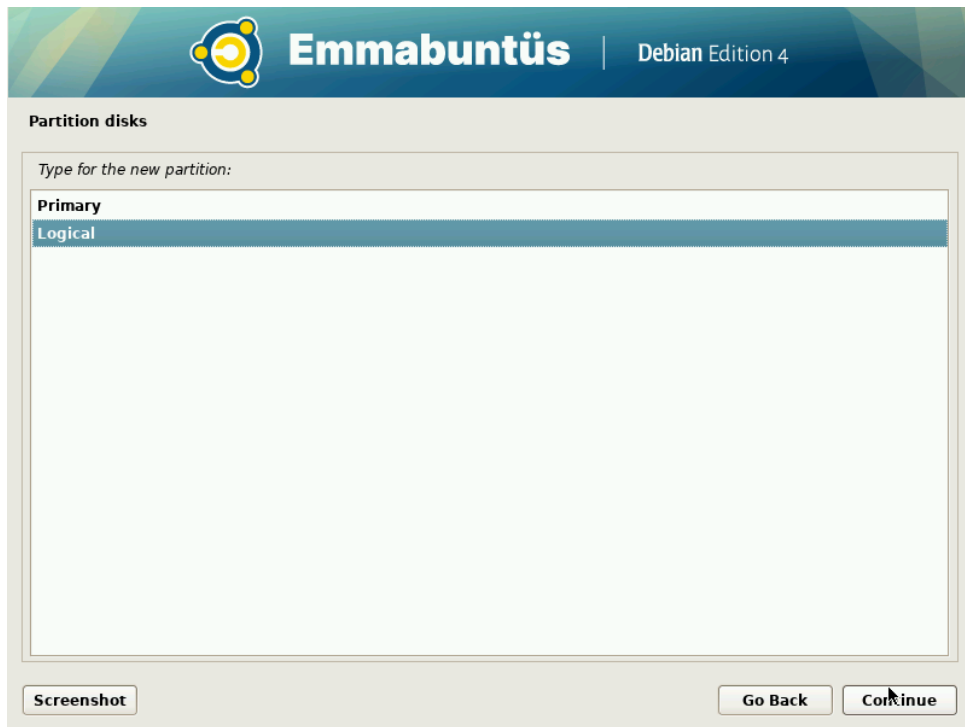
Select the option "Create a new Partition" and **Continue** :



You are first asked to enter the size of this new partition. Here we give 6 GB to the swap area :



And now the type of this partition :

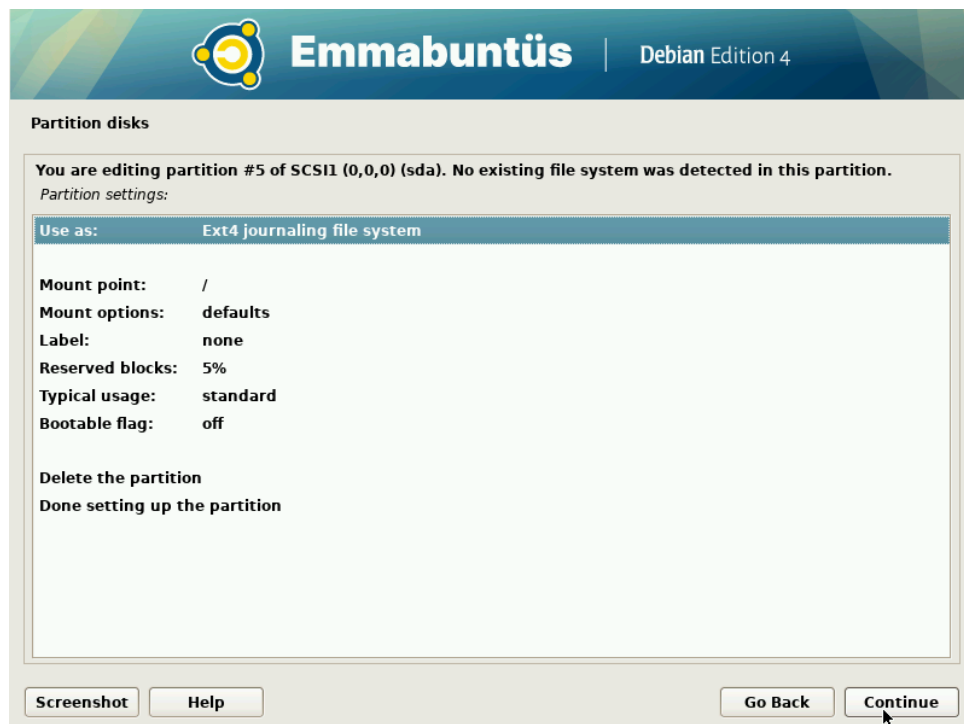


If you are not a partitioning expert, we suggest you use the “Logical” type, which let you avoid the limit of four partitions per hard disk.

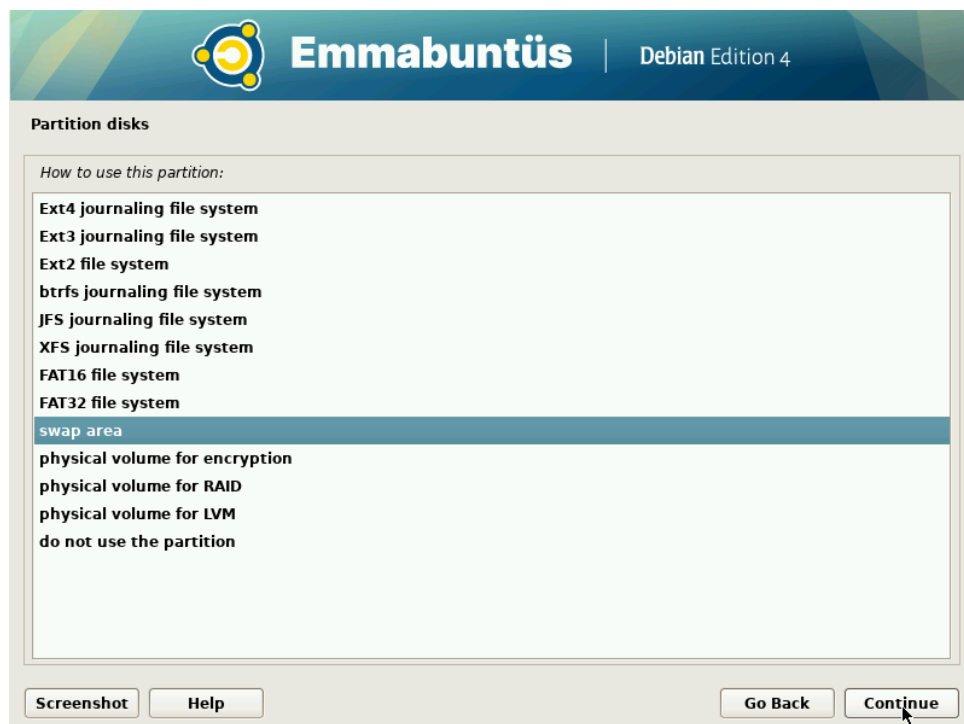
We decide to install the swap area at the beginning of the free space :



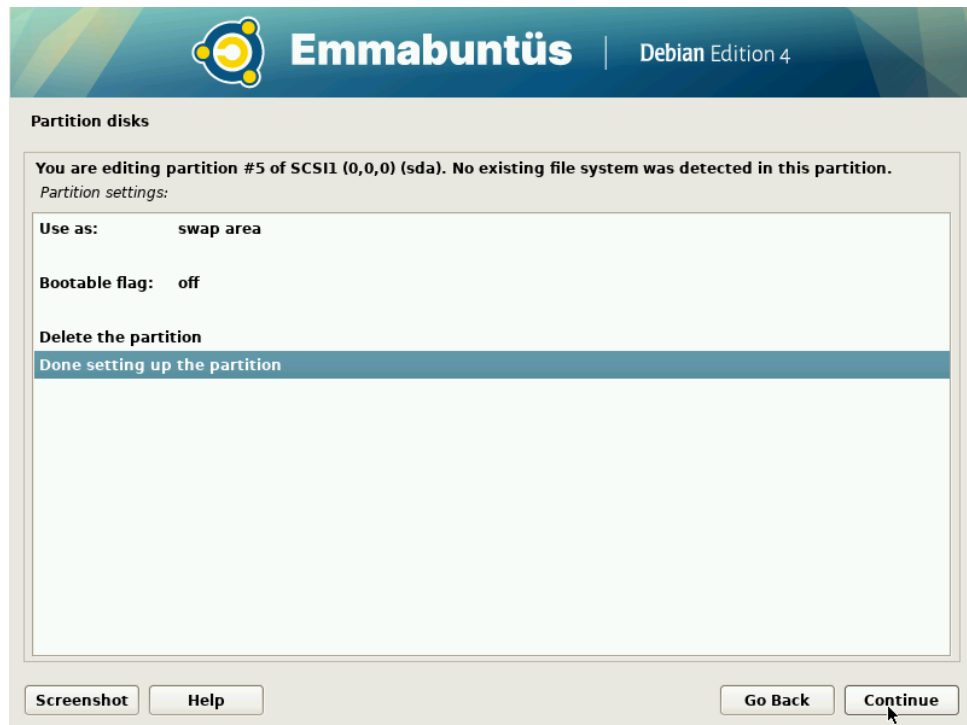
The next screen concerns the settings of the partition and is filled by default with the system root parameters. This is not what we want here : select the option “Use as” and click on **Continue**



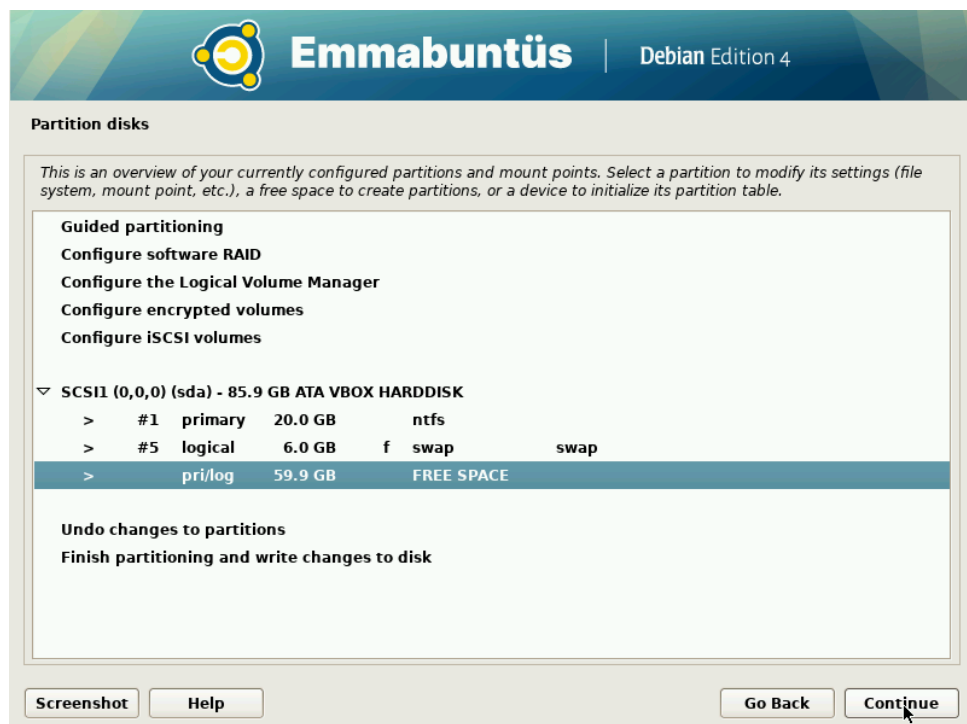
Select the “swap area” option and **Continue** :



We are back the setting screen of this partition. Check if this is what you wanted and then select the option “Done setting up the partition”

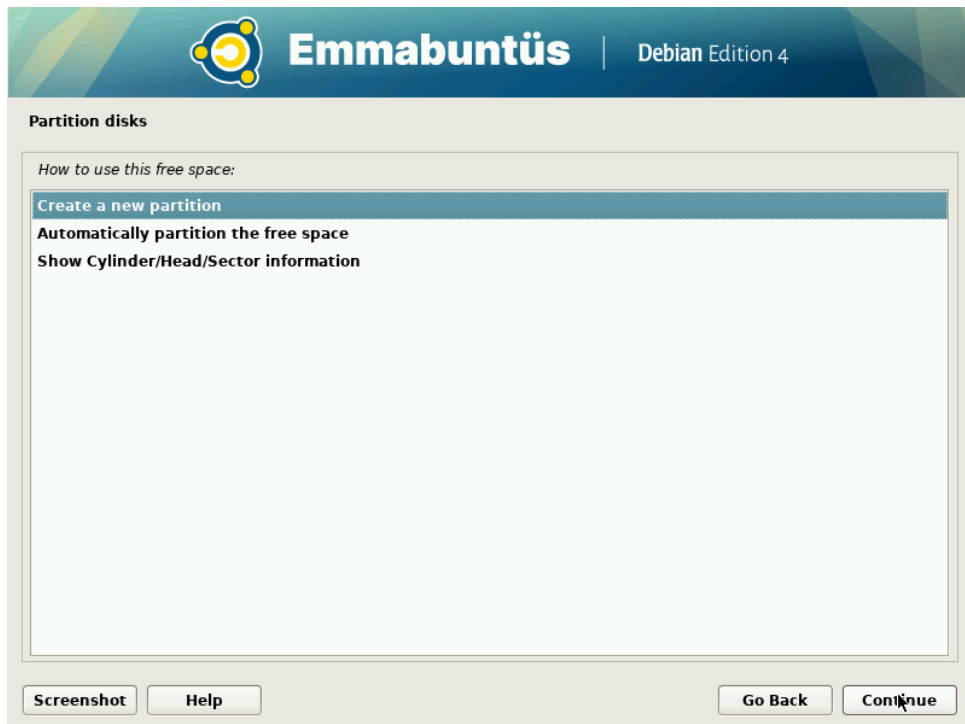


And we are back to the partitions overview screen, displaying the new swap partition :

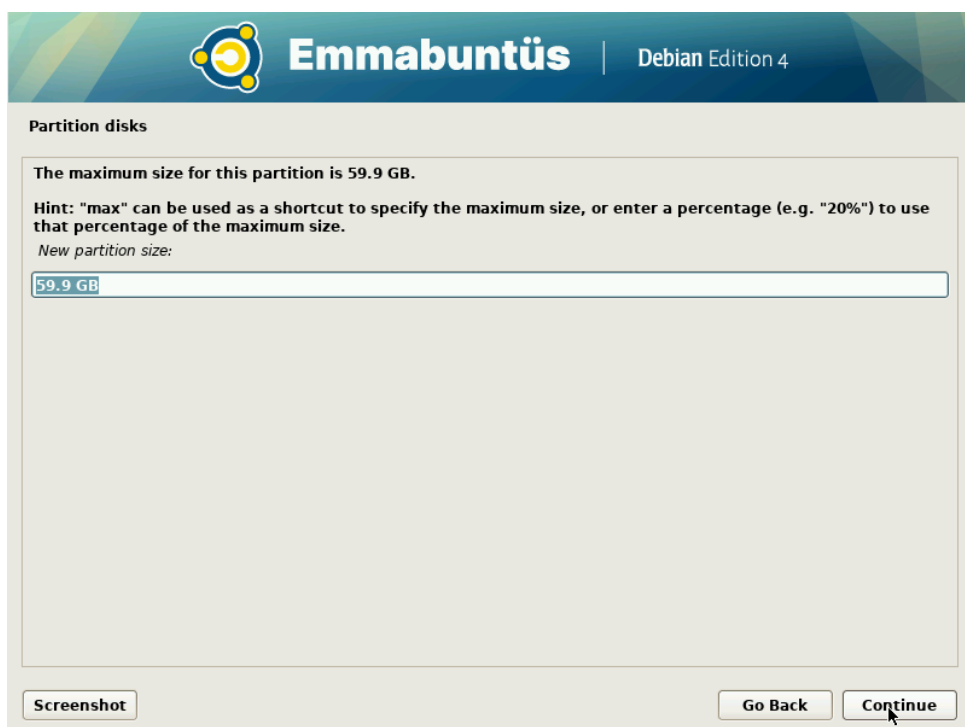


We are going to repeat this operation, but, this time, for the system root.

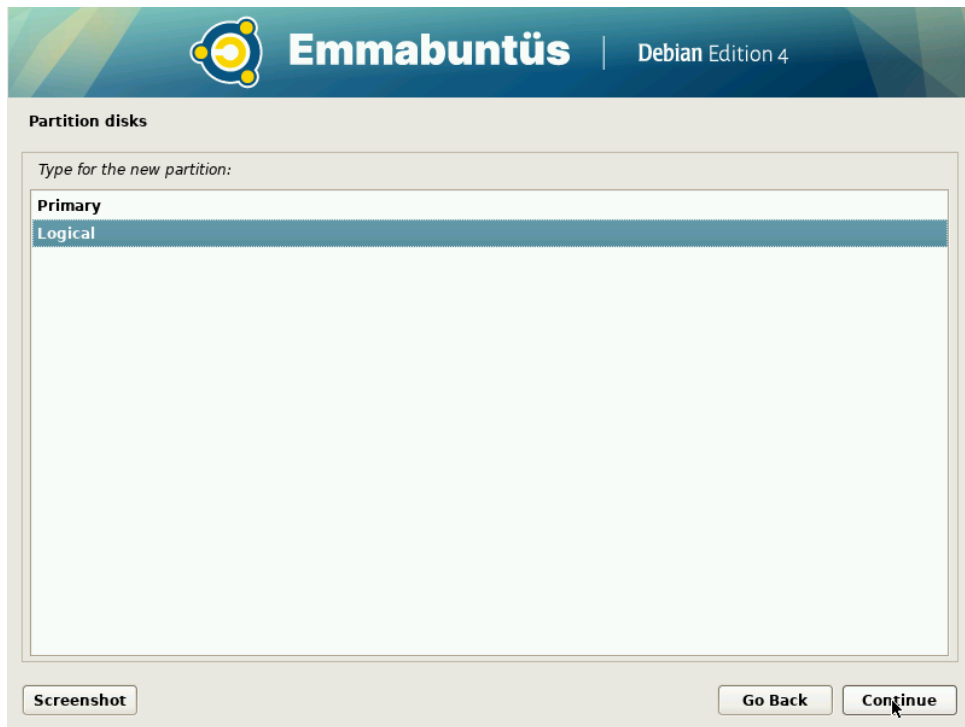
Select again the FREE SPACE line and **Continue**, then choose "Create New Partition" :



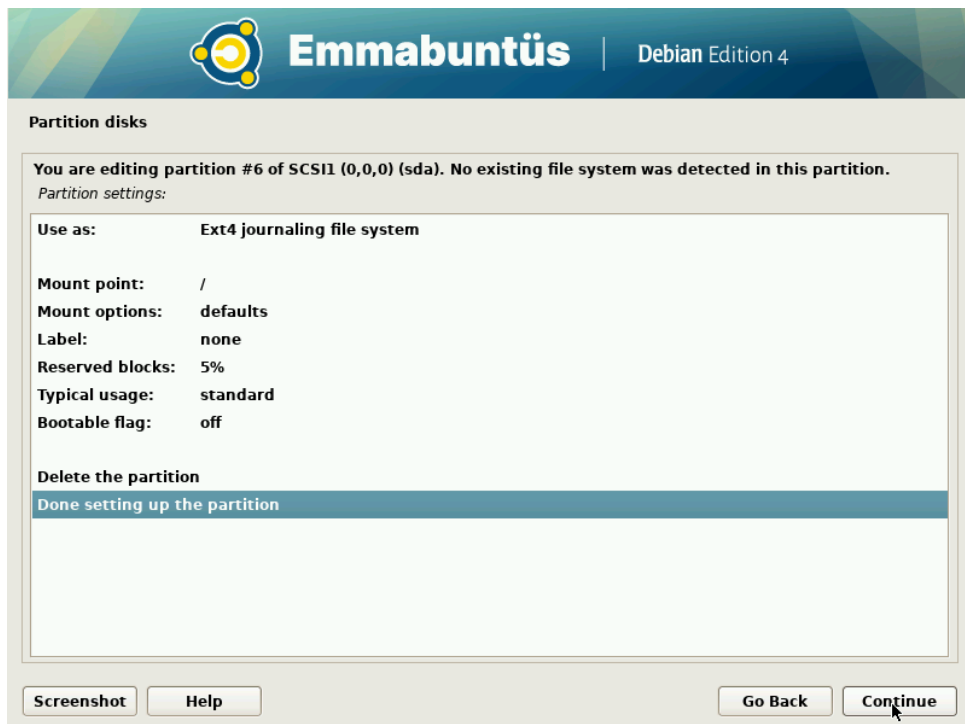
Keep the maximum size (which corresponds to the remaining of the free space) and **Continue** :



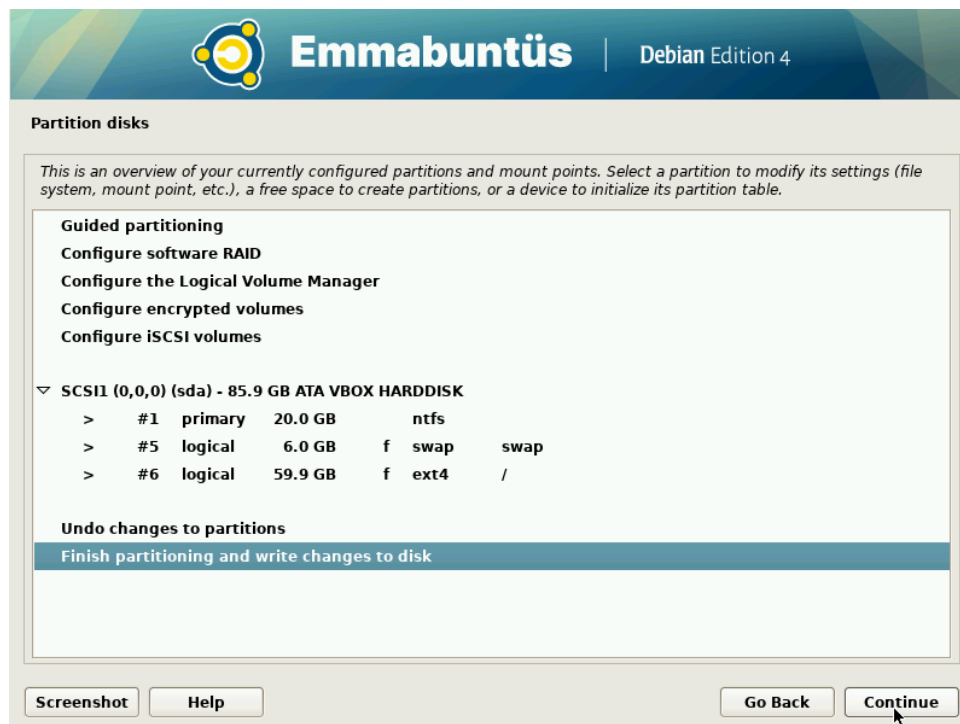
We keep the “Logical” type of the partition :



The next screen concerns the setting of this partition, and this time we can keep the default as displayed : Use as Ext4 file system, format the partition, mount as “/” (the system root) and we can select the option “Done setting up the partition”, and **Continue** :



Finally, we are back to the partitions overview screen, displaying the two new partitions : the swap and the root of the file system (noted “/”). Now we can select the option “Finish partitioning and write changes to disk” and **Continue** :

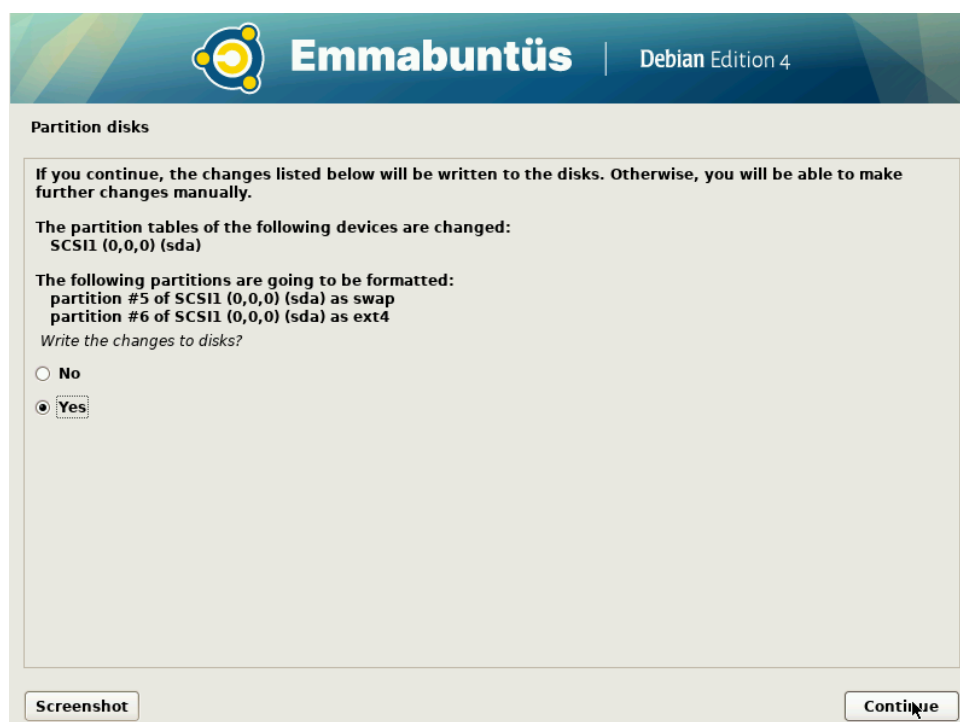


You should review carefully the change list presented on the next screen.



**After this step, the data currently on these partitions are going to be erased and lost.**

If you want to proceed with the installation, click on “Yes” and **Continue** :



Then, the install process creates and formats the new partitions :



### 3.3.8 - System installation

---

If you confirmed the previous step, and after that the new partitioning scheme was written on disk, the system is now being installed on the disk, starting with the data copy :



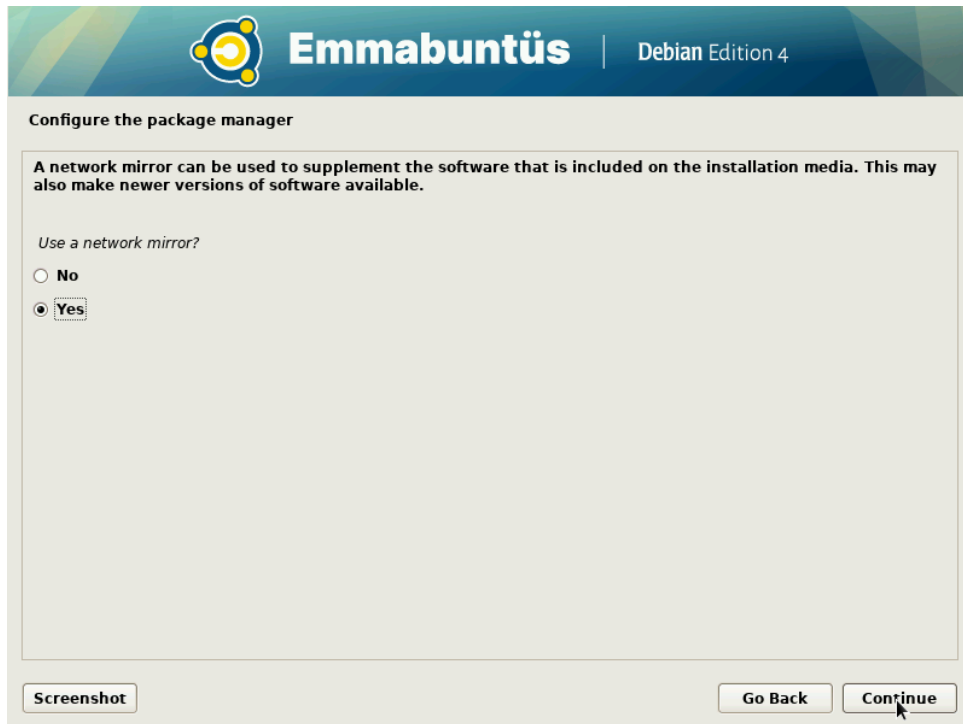
During this installation phase, you don't have to do anything, except, may be, get a well deserved cup of tea or coffee ;).



### 3.3.9 - Configuring the package manager

---

During the final phase of the installation, you are asked if you want to use a mirror to update your system. Click “Yes” and **Continue** :



To improve the speed of the future package updates, you are then asked which country you leave in :



Usually you don't use a HTTP proxy, and you should leave this field empty :



The screenshot shows the 'Configure the package manager' window of the Emmabuntüs Debian Edition 4 installer. The window has a blue header with the Emmabuntüs logo and the text 'Emmabuntüs | Debian Edition 4'. Below the header, the title 'Configure the package manager' is displayed. The main content area contains the following text: 'If you need to use a HTTP proxy to access the outside world, enter the proxy information here. Otherwise, leave this blank.' followed by 'The proxy information should be given in the standard form of "http://[[user][:pass]@]host[:port]/".' and 'HTTP proxy information (blank for none):'. Below this text is a large, empty text input field. At the bottom of the window, there are three buttons: 'Screenshot' on the left, and 'Go Back' and 'Continue' on the right. A mouse cursor is pointing at the 'Continue' button.

The installer continue the package manager configuration by scanning the mirror, and retrieving the different packages :

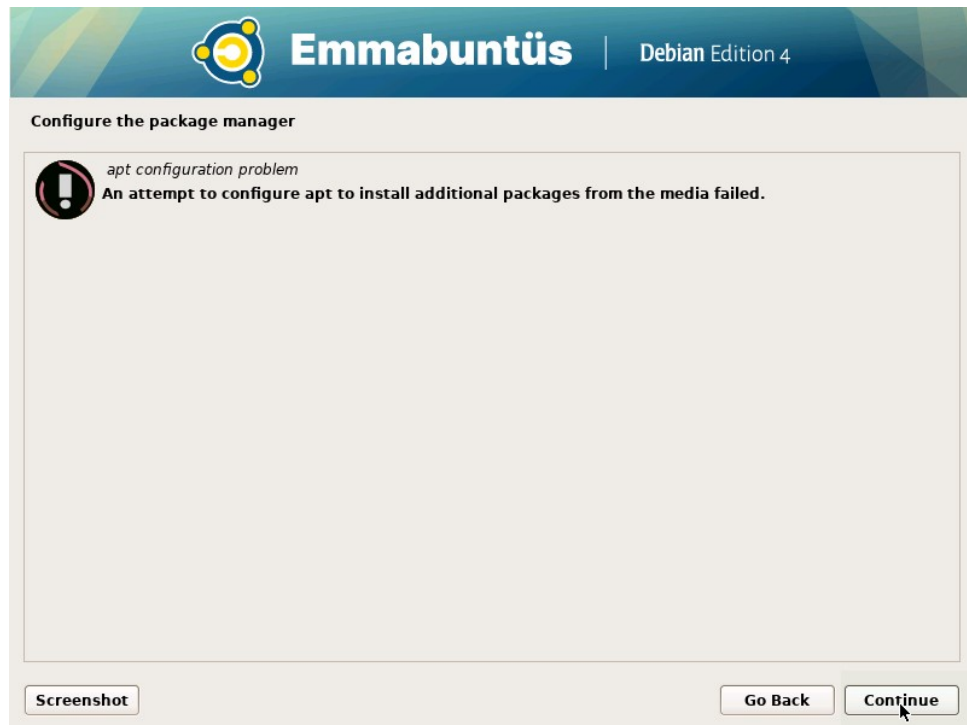


The screenshot shows the same 'Configure the package manager' window, but now it displays a progress bar. The progress bar is partially filled with a blue gradient and has the text 'Configuring apt' centered above it. Below the progress bar, the text 'Retrieving file 28 of 34 (1min 27s remaining)' is shown. At the bottom right of the window, there is a 'Cancel' button.



Depending on the type of media used for the installation and on which computer it is actually performed, you might encounter the information message shown below. It is **NOT** a show stopper, and you can ignore it safely, as explained in the following screens.

Instead of the couple of screens shown above, you might encounter an *apt configuration problem*. Simply click on **Continue** :



And then a message signaling a failure to access the mirror. Just ignore it too :



In all cases, the final phase of the installation continues ...



### 3.3.10 - Installing the GRUB start-up

---

Finally the selection of the GRUB location, which is the hard disk where we just installed the new system. Tick the “Yes” option and **Continue** :

If you just installed your system in *dual-boot* next to another operating system, like it is explained in the [Manual partitioning](#) chapter, you will see that the installer did automatically detect the other OS, and in our example, it found a second Debian OS already there.



We recommend to the beginners to answer “Yes” to this question to let the system install the GRUB on the same disk where you just installed this new Emmabuntüs Debian.

The experienced users can answer “No” to the question, in order to install their GRUB on the partition where they just installed this new Emmabuntüs Debian system. But then, after the reboot, remember to link your GRUB to the main OS, in order to make all the installed OS visible during the system start-up.



You need to select the disk drive where you installed your new Emmabuntüs Debian :



Please be careful not to install the GRUB on the USB key you used to install the system, otherwise you will need to have it plugged in, every time you want to boot your computer ;).



The installer is now finishing :



The clock

### 3.3.11 - The clock

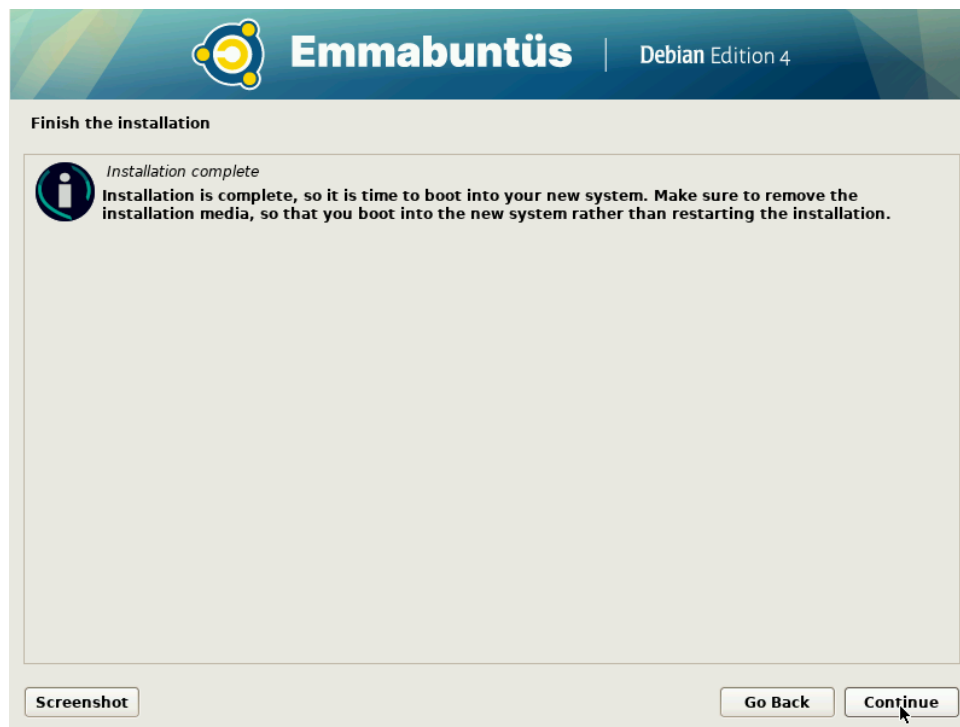
---

Then the clock setting. Say yes to UTC (except if you are installing a dual boot with Windows)

### 3.3.12 - Installation complete

---

Now, it is tie to restart your computer. You should remove the installation media, and **Continue** :

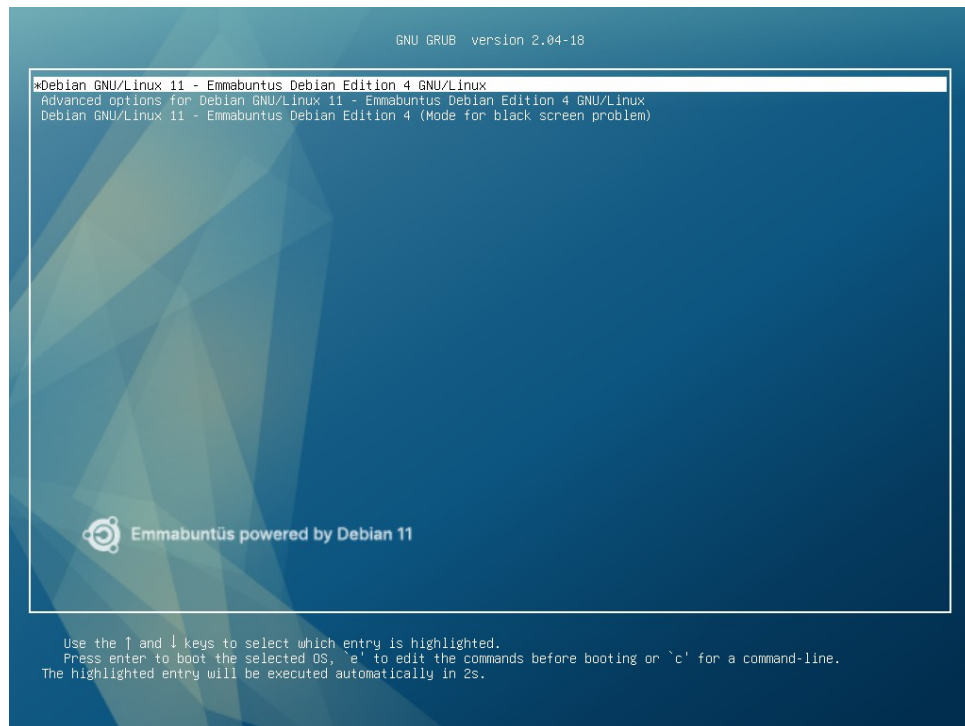


And the system will eventually reboot.

## 4 - Post-installation

At the first reboot the GRUB screen is displayed : you will be able to start the post-installation of Emmabuntüs Debian Edition 4.

### 4.1 - First start-up



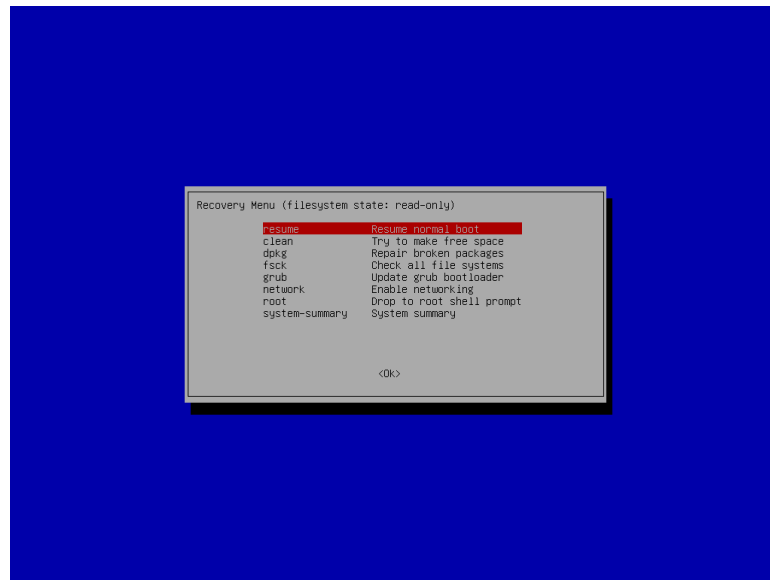
Once the installation is completed, your computer automatically restarts and the new Emmabuntüs Debian GRUB screen is displayed :

You don't need to do anything at this step, except to press the Enter key, otherwise wait 5 seconds before the system start-up by itself. On the other hand, if you select the line "Advanced options for Emmabuntüs ..." you can then enter into the *recovery mode* of the system in order, for example, to unlock it, if some updates were improperly stopped by mistake during their installation.

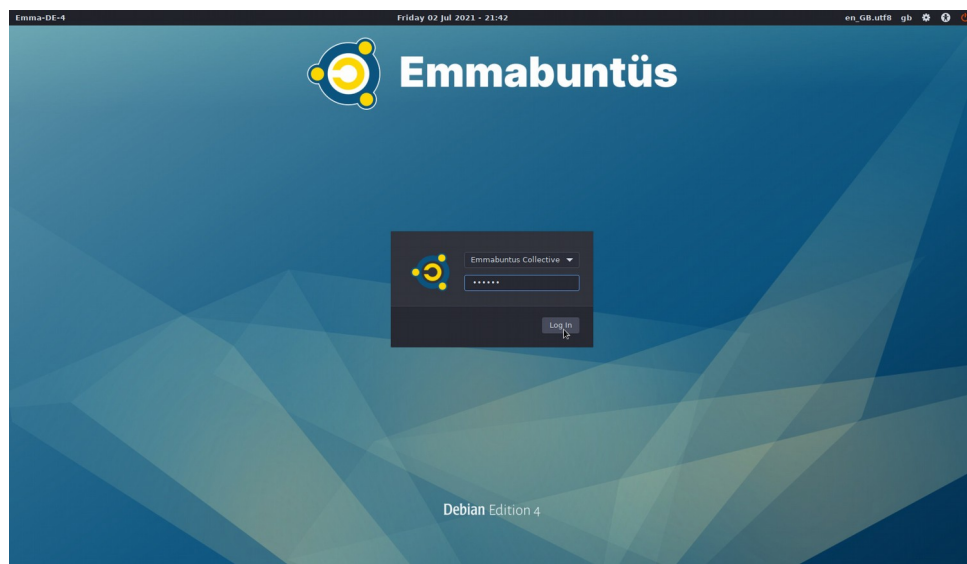


Emmabuntüs DE 4 embeds a new "Friendly Recovery" console, which is more user friendly than the simple command line offered by Debian during the difficult time of a system recovery ...

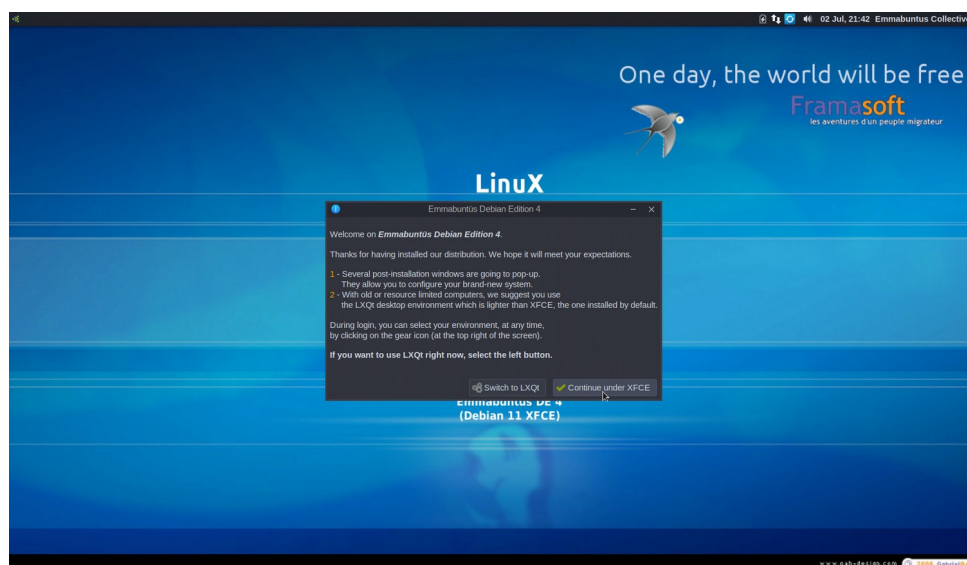




Now, you must enter your login ID and password in the session connection window :



The post-install Welcome window is displayed first :



The new "Home" window in Emmabuntüs Debian Edition 4 offers you either to continue using the [Xfce](#) desktop environment or to switch to the [LXQt](#) desktop environment. For more information on the LXQt environment, see [Chapter 5](#).



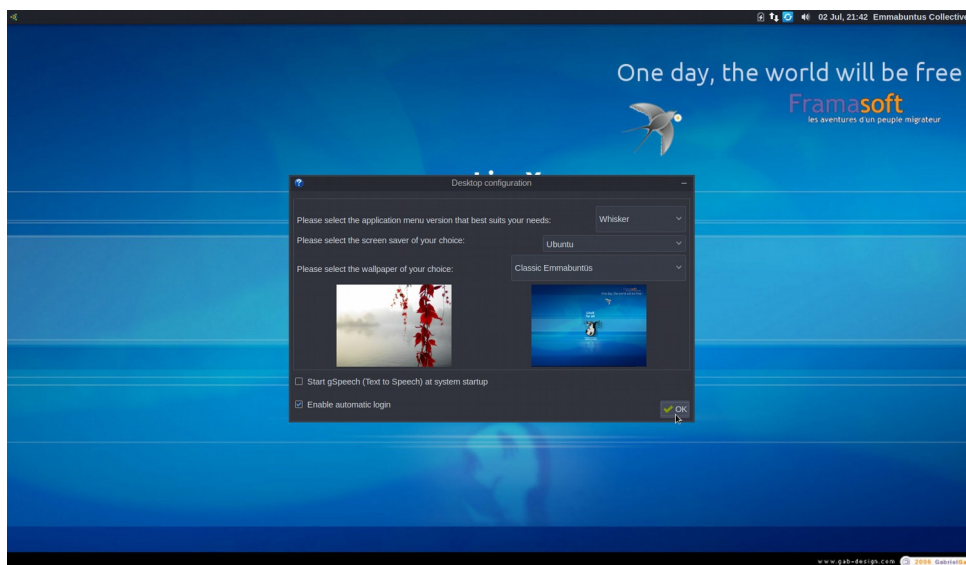
In the rest of this chapter, we continue the “post-installation” under the Xfce desktop environment, but would you decide to switch immediately to LXQt from this home window, rest assured that you will be offered similar “post-installation” windows under this new LXQt environment.

## 4.2 - Desktop configuration

---

This first customization window let you configure your desktop environment. Here you can select :

- your Xfce menu : Classic or [Whisker](#) ;
- the wallpaper image of the desktop ;
- the wallpaper image when in suspend mode ;
- the voice synthesis activation (or not) at start-up ;
- the automatic opening of your login session, or if you prefer to keep it protected by your password.



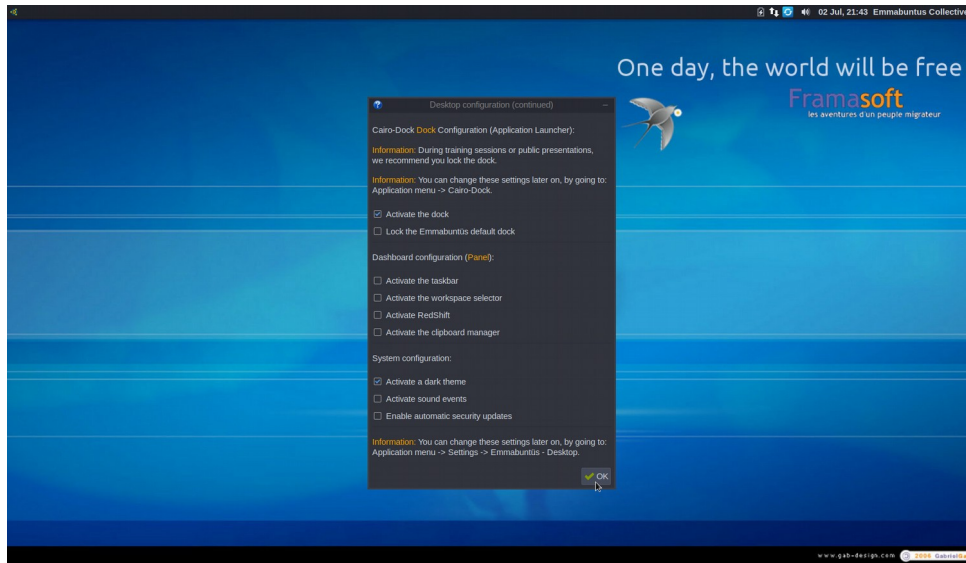
The choice of menu concerns the application launcher at the very left of the top banner (the little mouse icon). You will be able to change this setting later by using the banner manager utility in Xfce.



The voice synthesis used by Emmabuntüs is **NOT** an automatic synthesis. You have to select first the text to be read and click on the read button in the “application” menu at the right of the top banner, if the voice synthesis was activated at start-up, otherwise you need to launch beforehand the gSpeech application.

## 4.3 - Desktop configuration (continued)

You can choose to enable the dock, to lock the default dock, and to enable the task bar, workspace by default at system start-up :



The option locking the dock is very useful in the contexts of teaching to groups of students or doing some public presentation. In these cases we suggest you lock the dock to prevent handling mistakes.



Within Emmabuntüs DE 4, there are other opportunities to manage the dock, like reinitialize it, or protect it against handling errors, see the utilities in the Xfce menu → Cairo-Dock.

These utilities are password protected to prevent unauthorized changes to your configuration.

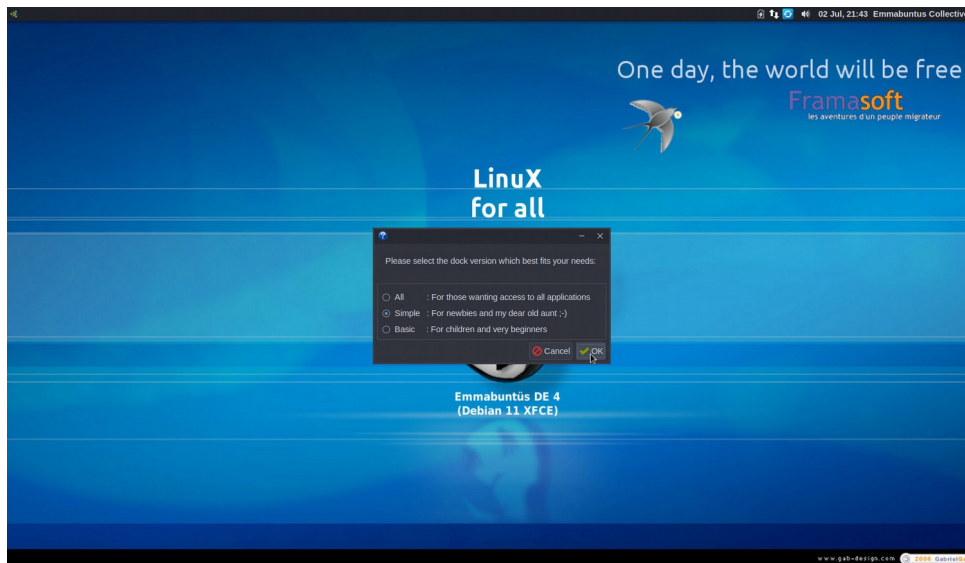
By default the dark theme is selected, but you can go back to the classic light mode by deselecting this option.



*We opted here for the light mode in order to produce clearer images in the reminder of this tutorial.*

Later on, you will be able to change this mode by going to Application Menu → Settings → Emmabuntüs-Desktop.

Hereafter the configuration of the Cairo-Dock, which is the flexible launch bar located at the bottom of your screen. You can pick one of the three types : “**All**”, “**Simple**”, “**Basic**” or even choose **Cancel** if you want to remove the automatic launch of the dock at system start-up.



If you own a rather old computer and you would like to use a desktop lighter than Xfce, you should pick the “**All**” dock type and then retrieve the icon allowing you to switch to the [LXQt](#) desktop.

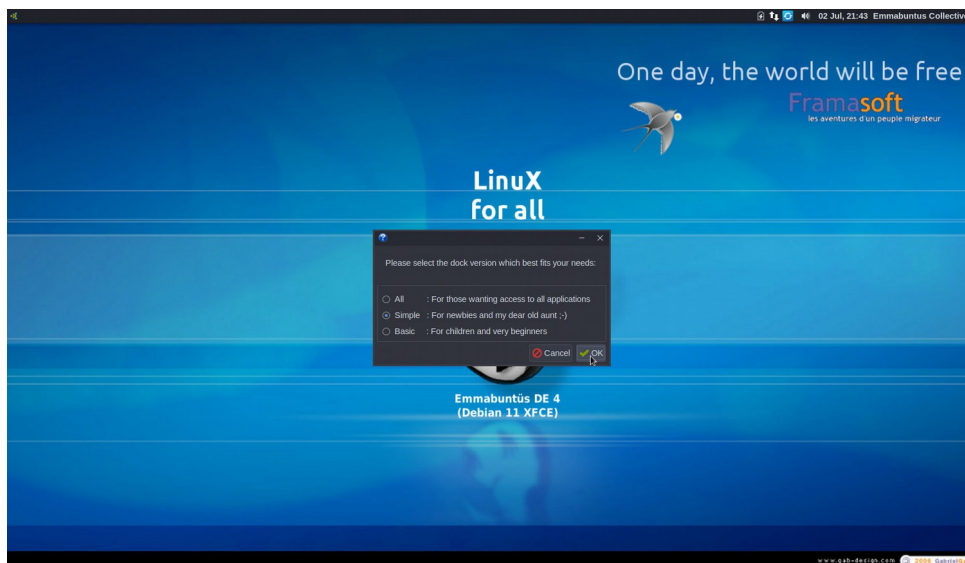


If you hit the **Cancel** button in the Dock type selection window, it will no longer be launched automatically under Emmabuntüs, and you will only have access to the Xfce top banner, which then will include the following areas : a task bar, a desktop selector and an icon to show the desktop (and minimize all open windows).

You will always be able to launch the Cairo-Dock on a case by case basis. To achieve this, go to the Xfce menu → Cairo-Dock → Launch Emmabuntus Dock.

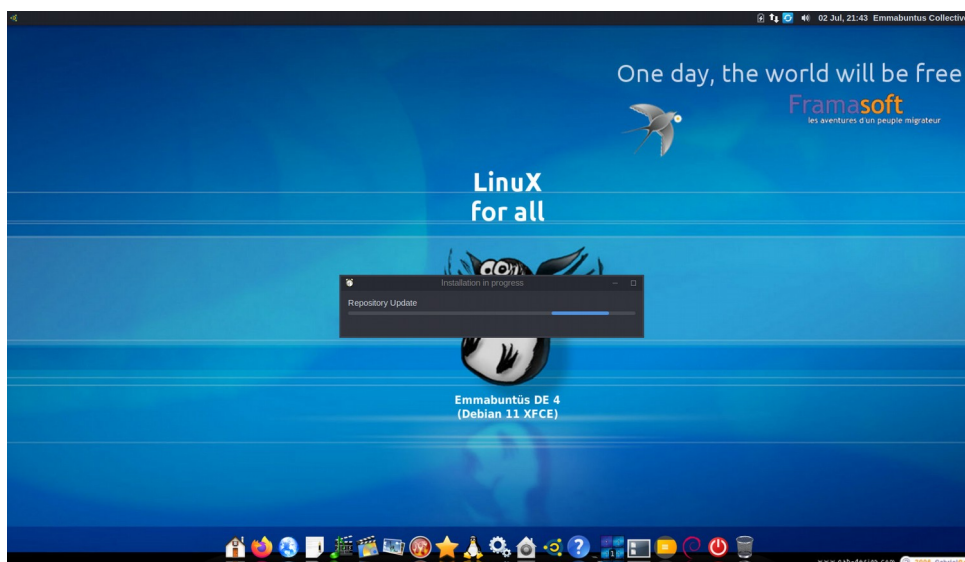
## 4.4 - Non-free software installation

You are given the choice to install, or not, some non-free software like the Microsoft fonts. Just select the components you want to install :



You can refuse to install non-free software, or pick only some of them. You will be able to install them later on from the Maintenance menu in the dock at the bottom of the screen.

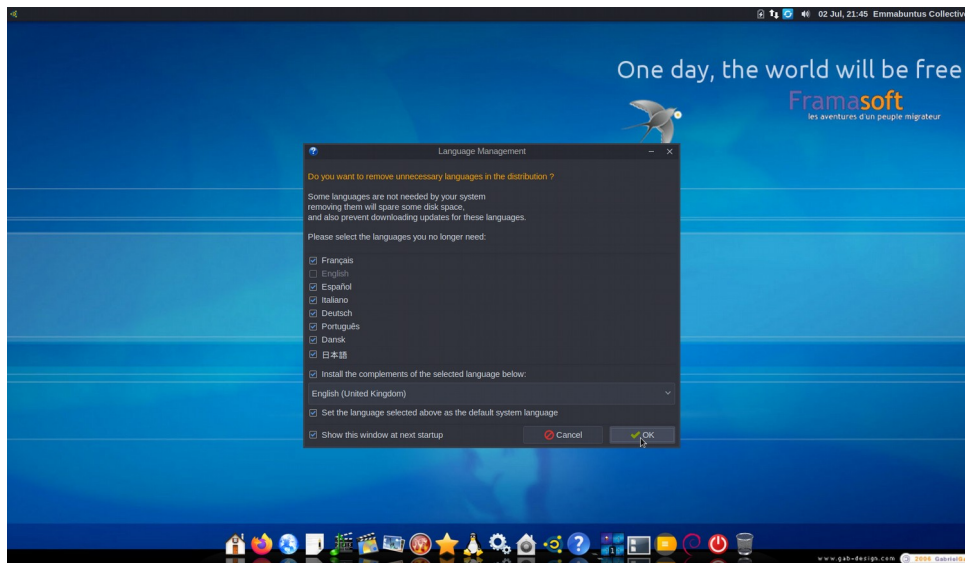
The post-installation software updates the package lists before installing new components :





## 4.5 - Removing unused languages

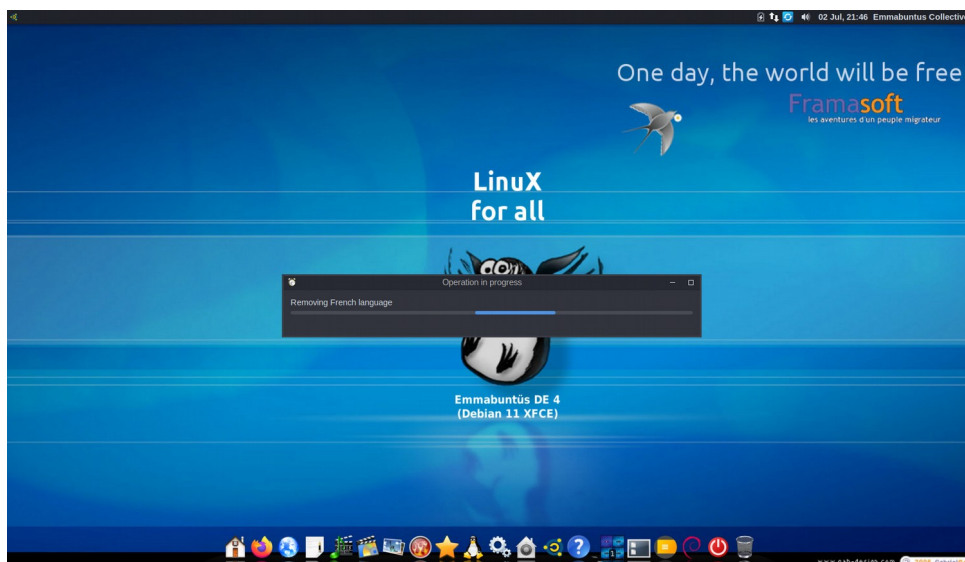
Now you can remove unused languages, after entering your administrative password again :



We strongly recommend you **remove unused languages** in order to decrease the number of future updates, and to also **install the complements of the used language**.

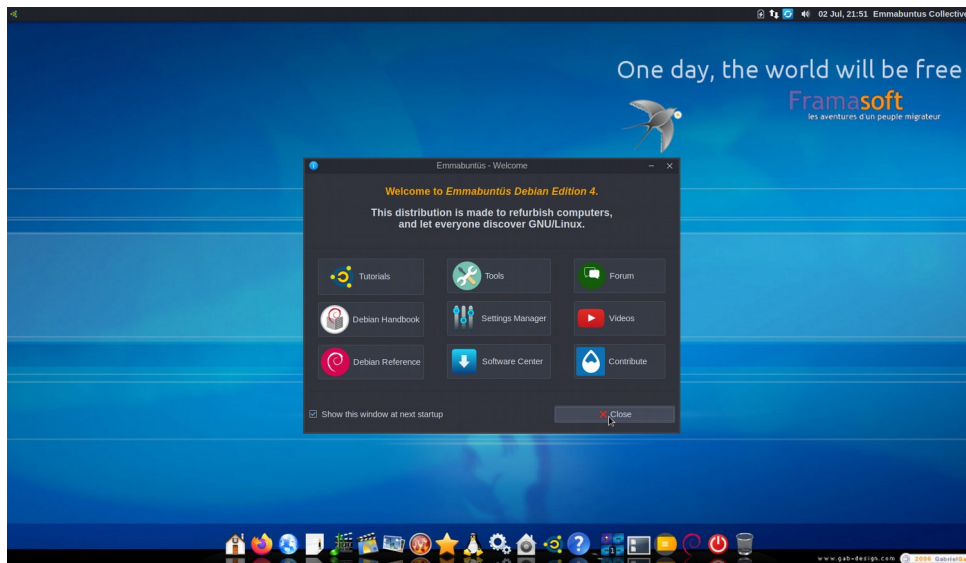
Don't miss this step !

Removing languages :

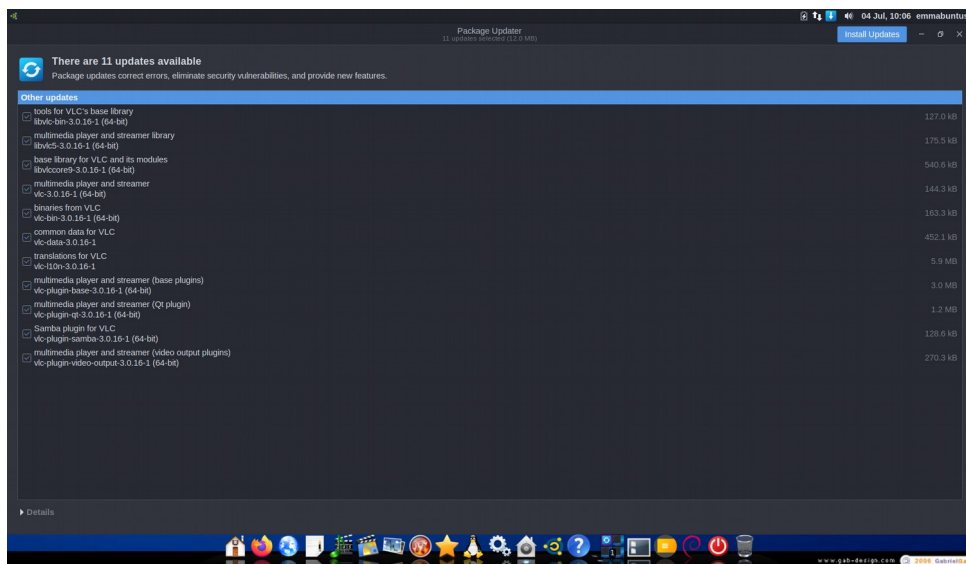


## 4.6 - Installation complete

You can start using Emmabuntüs Debian Edition 4 :



If your computer is connected to the Internet, you should now install the available updates. You will only need to go Dock → Maintenance → Package Updater. A system reboot might then be necessary to make the changes effective.



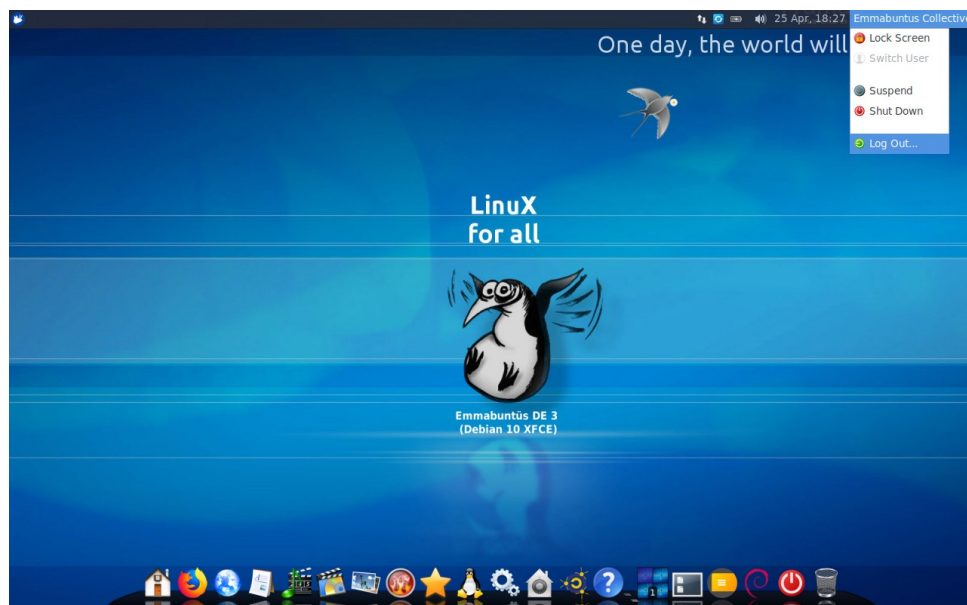


## 5 - Use LXQt session

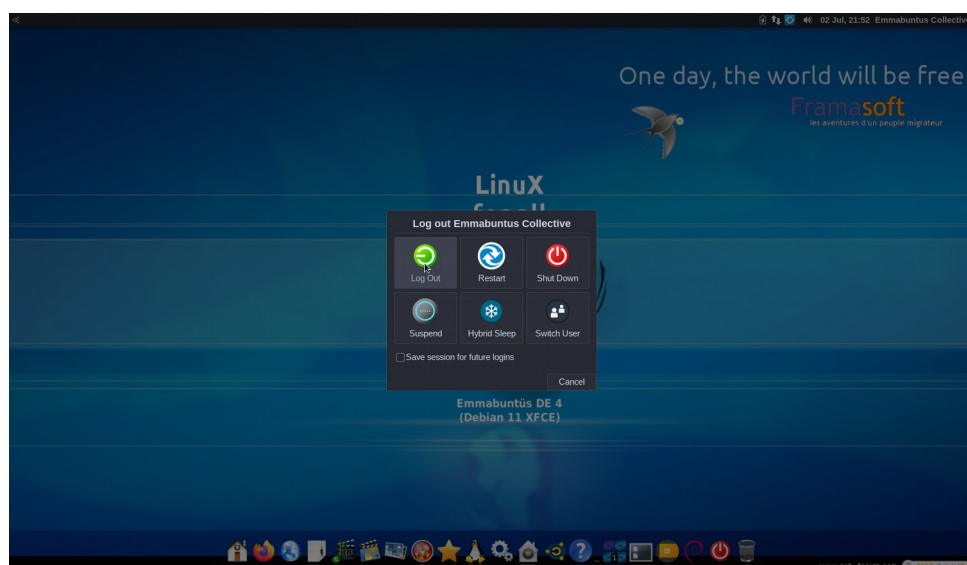
You noticed that the Xfce desktop environment was not reactive enough and using too much RAM with respect to the hardware configuration of your computer. You still have one solution to make your PC more pleasant to use : use the [LXQt](#) desktop environment which is also included in the Emmabuntüs distribution, but be aware that doing so, you are going to lose some of the Xfce features.

### 5.1 - Logout from the Xfce session and login into LXQt

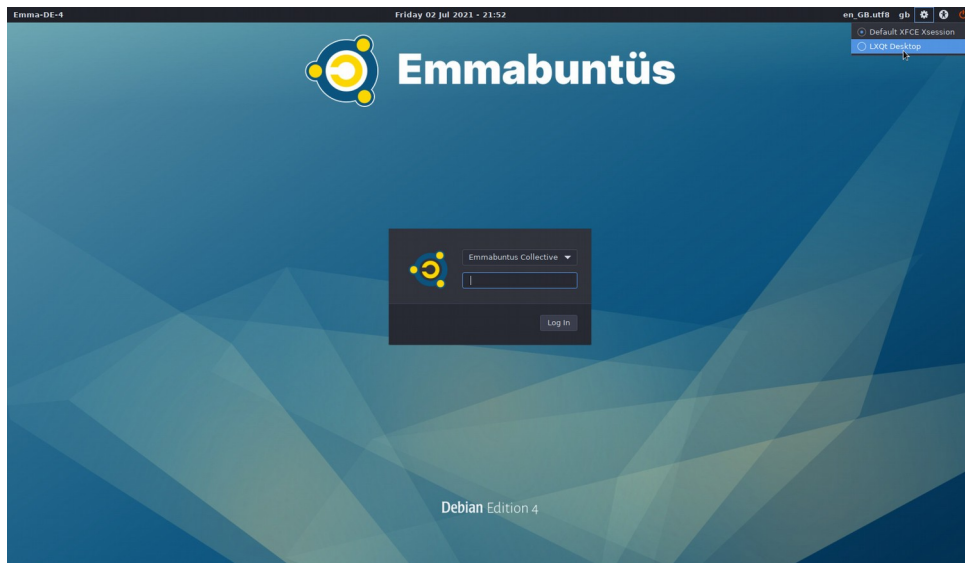
To logout from the current session click first on the right of the top banner and select the **Log Out** action in the drop-down menu :



and confirm in the next window that you really want to log out :



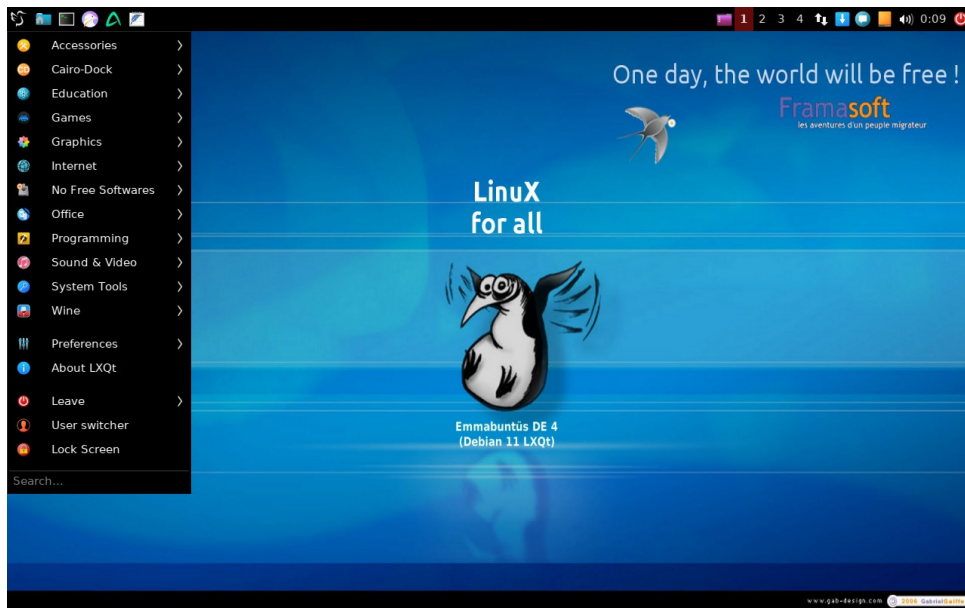
In order to log back in the LXQt environment, you should click first on the little wheel at the right of the top banner and, this time, select LXQt before logging in with your password :



To launch the LXQt desktop environment, click on the right of the top banner as shown in the screen capture above, and select LXQt.



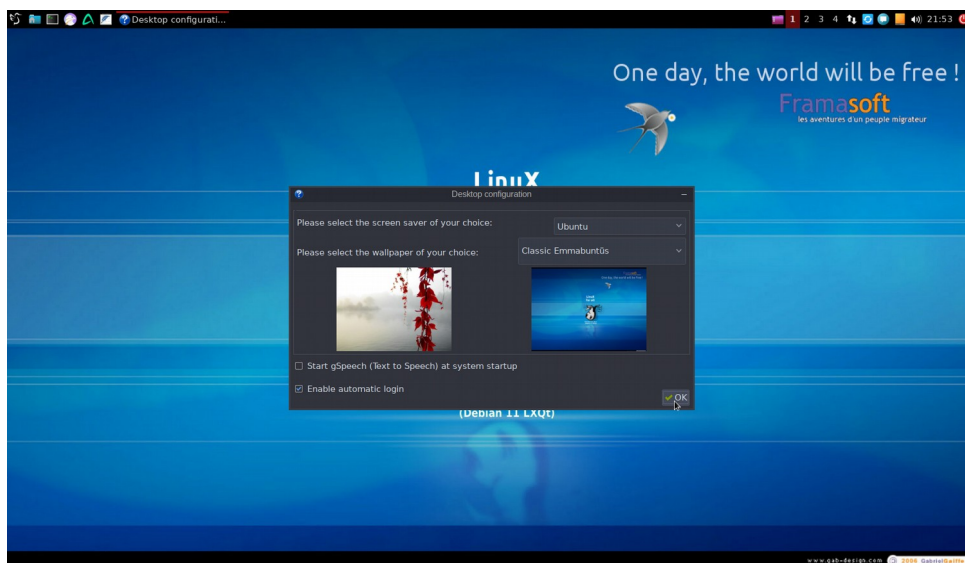
Welcome in new lightweight desktop environment [LXQt](#) :



## 5.2 - First start in LXQt

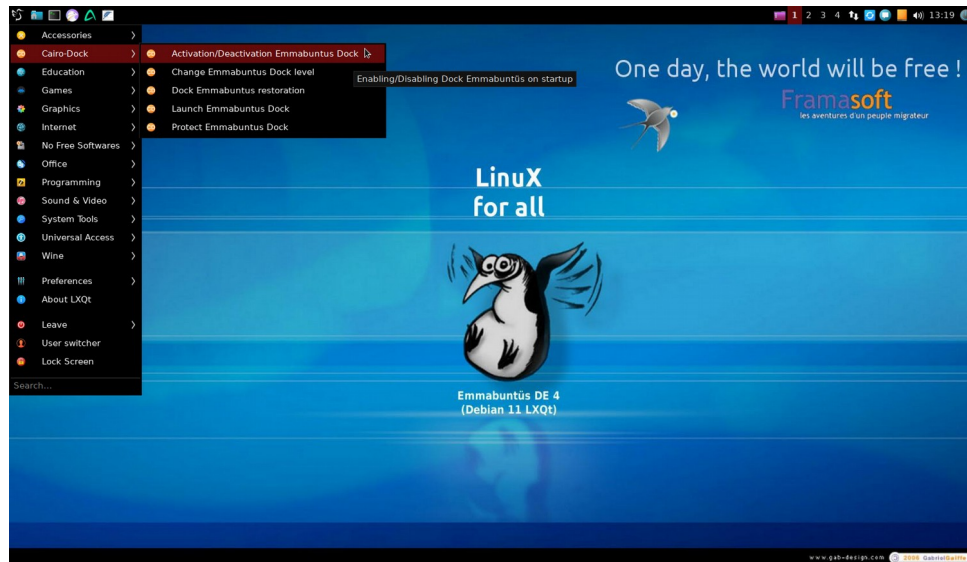
---

When you start using LXQt for the first time, you will be offered a "Post-installation" procedure similar to that described for the Xfce environment, see [section 4.1](#).



## 5.3 - Enabling Dock

You can use the Cairo-dock under LXQt, if the RAM resources of your computer allow it. To do this, select the "Cairo-dock" category, then "Activation / Deactivation Emmabuntüs Dock" :



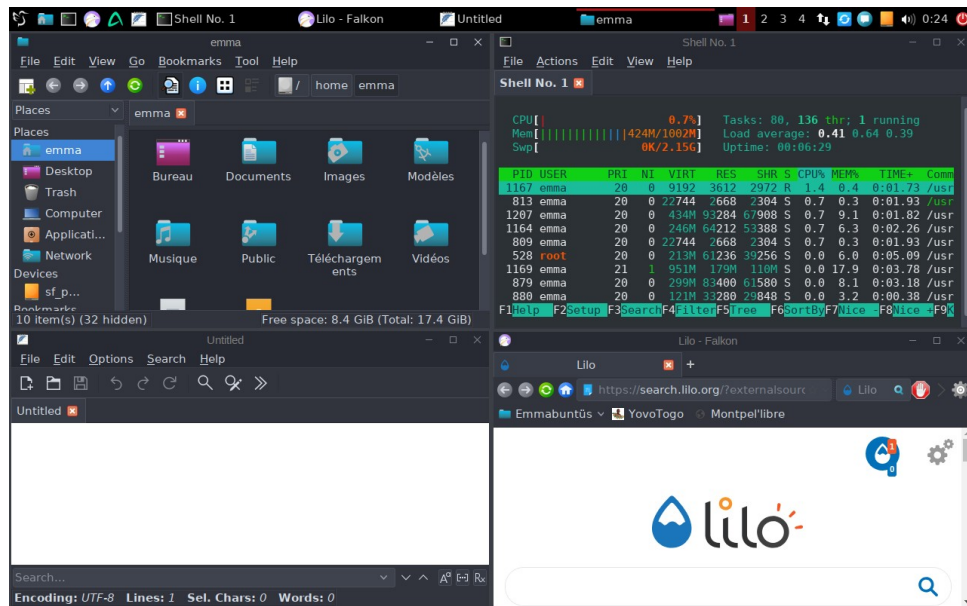
## 5.4 - Memory consumption under LXQt

You can launch the [Htop](#) system utility to find out that the LXQt desktop environment uses only 332 MB after start-up for Emmabuntüs Debian Edition 4 in 32 bits :



And if you run another test by launching all together the [Flakon](#) browser, the [PCManFM-Qt](#) file manager, the [FeatherPad](#) text editor and the [Htop](#) utility itself, you will see that, this time, the memory consumption is 430 MB, which leaves you with 70 MB of free

memory if you only have 512 MB of RAM on your computer, that is why we recommend using a computer with a minimum of 768 MB of RAM.



Using the lightweight LXQt with Emmabuntüs is an optimization method with some drawbacks : you are losing some functionalities present in Xfce, which is an environment a bit heavier but more comprehensive.



## 6 - Creating a “Live-CD” bootable USB key for Emmabuntüs DE

### 6.1 - Creating a bootable USB key on a GNU/Linux system

#### 6.1.1 - Using a terminal

Plug your USB key in the system, then launch a terminal in “root” administrative mode. We are going to identify the USB key by using the command :

```
blkid
```

which gives back a list of this type :

```
/dev/sda1: LABEL="system" UUID="3d378712-1b6e-4f66-b9e8-2a6673c62199" TYPE="ext4"  
/dev/sdb1: UUID="F9B8-E691" TYPE="vfat"
```

Here we can see that our key is identified as **UUID="F9B8-E691"**, is formatted with the “**vfat**” type and contains the partition **sdb1**. Please take good note of this **sdb1** in order not to erase by mistake a partition of your internal hard disk (which here is **sda1**).

The Debian ISO file is located in the *Downloads* folder. We move in there to work with this ISO file :

```
cd /$HOME/Downloads
```

Here we are going to transfer the content of the ISO to the USB key by using the **dd** command. This command uses **the full drive, not just the partition**, so here the output parameter must be **sdb** (not sdb1). Please change the generic “EmmaDE-xx.iso” by the actual name of the ISO to write :

```
sudo dd if=EmmaDE-xx.iso of=/dev/sdb bs=4M && sync
```

The duration of the transfer on your USB key is depending on the size of the ISO and also the transfer rate of your USB port. This operation may last for 10 to 15 minutes without any visible sign of activity on your terminal. But, be patient, the terminal will give the control back to you (that is : displays the next next command prompt) once the transfer is complete.

## 6.1.2 - With MultiSystem

---

**MultiSystem** is a piece of software which enables you to easily create autonomous multi-boot USB keys. This means that you can install several operating systems on the same key, and choose at the system start-up, and through a graphical menu, which [GNU/Linux distribution](#) you want to start, seamlessly, in Live mode.

In order to install MultiSystem on your computer, you must first make sure you have the software repository in your *sources.list*.

- Under Debian ONLY, add the software-properties-common package :

```
sudo apt-get install software-properties-common
```

- Under Ubuntu enable the “universe” repository, if not already there ...

```
sudo add-apt-repository universe
```

- ... and then add the MultiSystem repository :

```
sudo apt-get install software-properties-common
```

- Add the public key :

```
wget -q -O - http://liveusb.info/multisystem/depot/multisystem.asc  
| sudo apt-key add -
```

- Update the sources :

```
sudo apt-get update
```

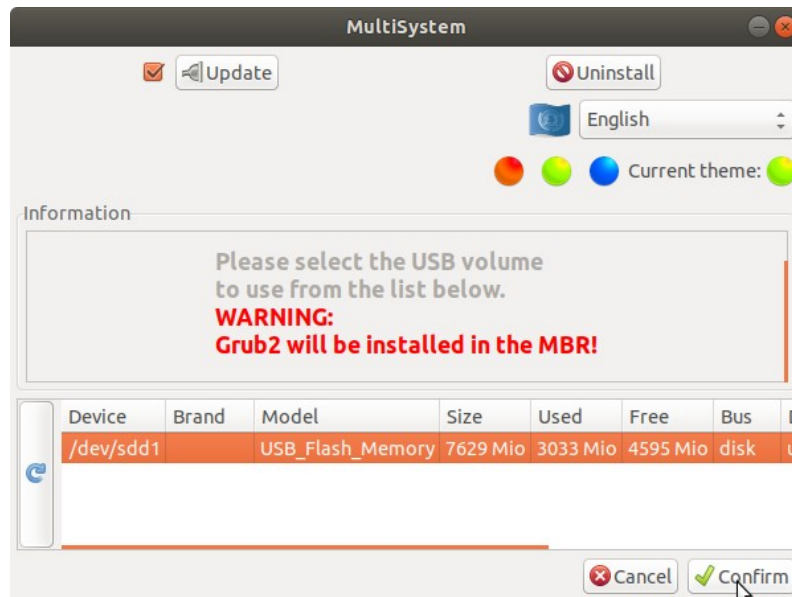
- Finally, install MultiSystem :

```
sudo apt-get install multisystem
```

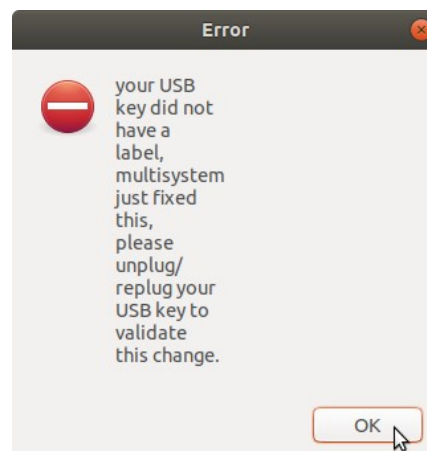
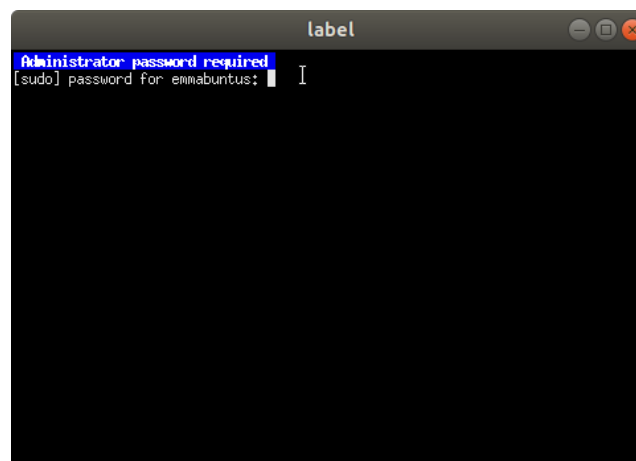
- Debian user only : you might need to add your \$User to the admin group :

```
sudo /usr/sbin/usermod -a -G adm "$SUDO_USER"
```

Now, plug your USB key in the system, and launch the MultiSystem application. The software will find your USB device. You select it and **Confirm** :



If the key does not have a label yet, MultiSystem will create one automatically, after you entered the admin password :



Note of the translator : I don't understand why, on my system, this error message window is displayed with this very strange aspect ratio ?





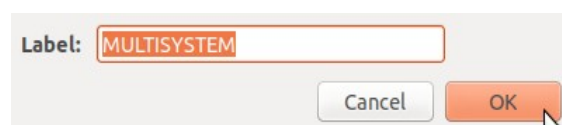
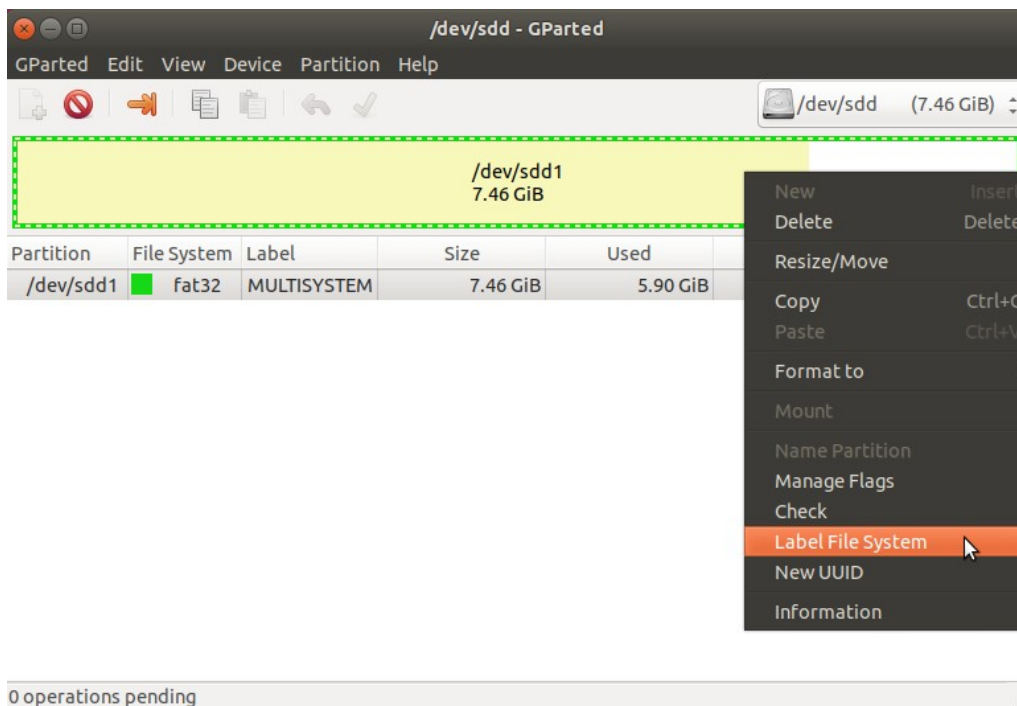
You need to unplug and re-plug your key to make this labeling effective. Then relaunch MultiSystem.

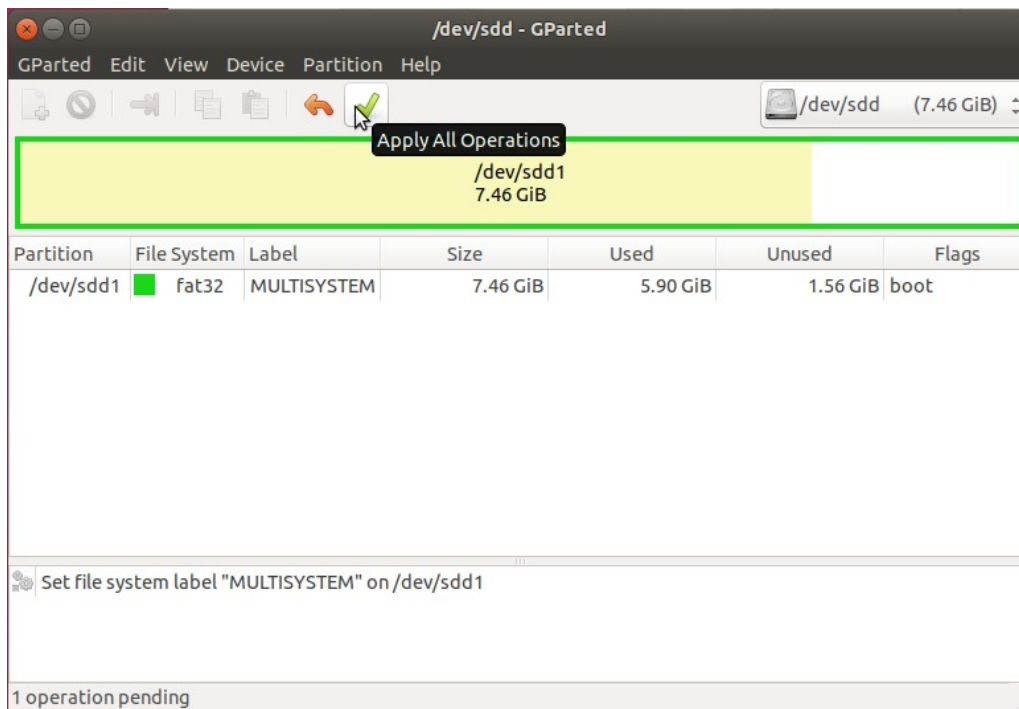


With brand new keys, it is recommended to remove all their existing partitions and to reformat them with the FAT32 type. This is because some factory settings, even in FAT32 format, are not well recognized by MultiSystem.

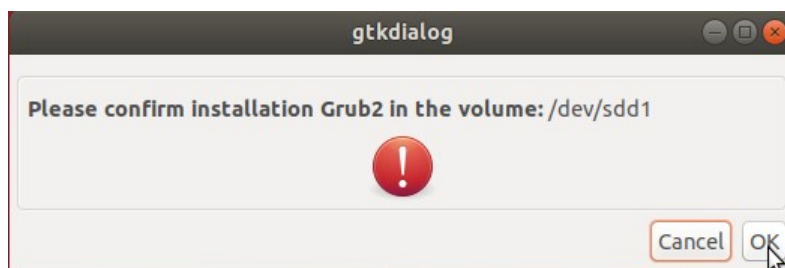


If MultiSystem fails when trying to put a label on the USB key, we suggest to do the operation with GParted, see below the procedure to follow.

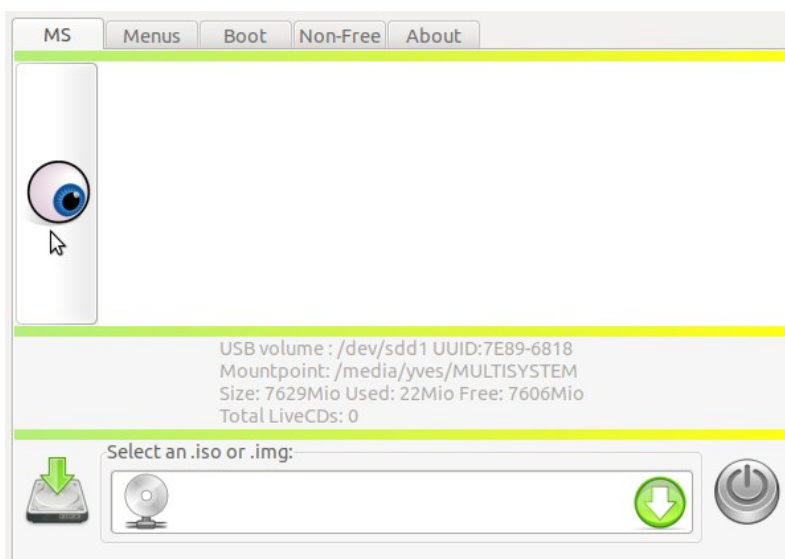




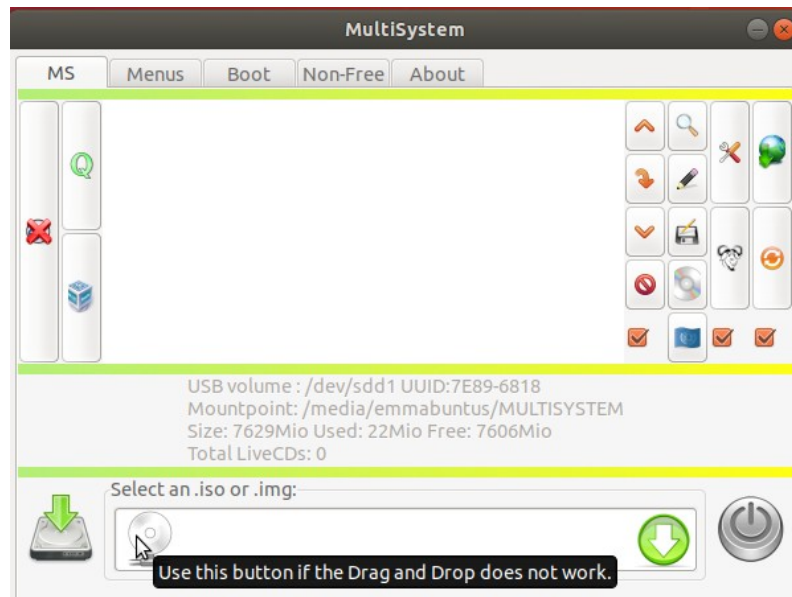
Make sure then that the key is mounted again, for example by opening it in the system file manager, and re-launch MultiSystem which, in turns, will install the GRUB2 start-up program on the key.



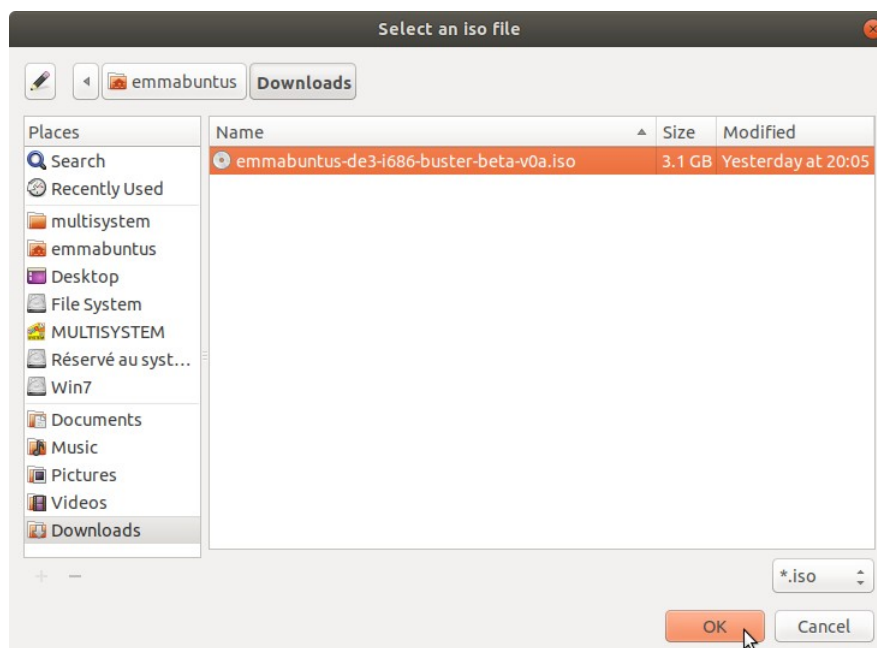
The MultiSystem windows is open, and you can click on the big eye in the left pane to have access to several other parameters.



You can add several utilities like the Plop Boot Manager which allows the creation of a boot CD on a USB key, when this parameter is not present in the computer BIOS, the SuperGrub2 disk which allows to retrieve a Grub start-up, or the Memtest utility to verify the RAM integrity.

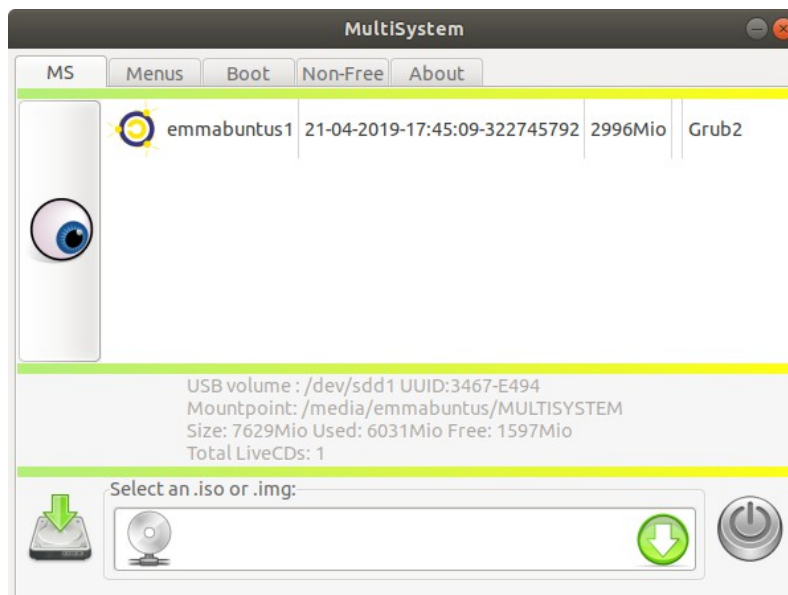


To install a distribution on the key, you can either drag and drop the ISO file in the dedicated field at the bottom of the window, or use the disk icon to navigate inside the file system and select the right file.



You will be asked to enter your admin password, and then the ISO image will be expanded on the key, and finally, GRUB2 is updated on the key.

```
MultiSystem
fileselect:
function name:addvtemulti
option1:
option2:
option3:addvtemulti
add 1
fileselect:
function name:addvtemulti
option1:addvtemulti
option2:
option3:1
Administrator password required
[sudo] password for emmabuntus:
```



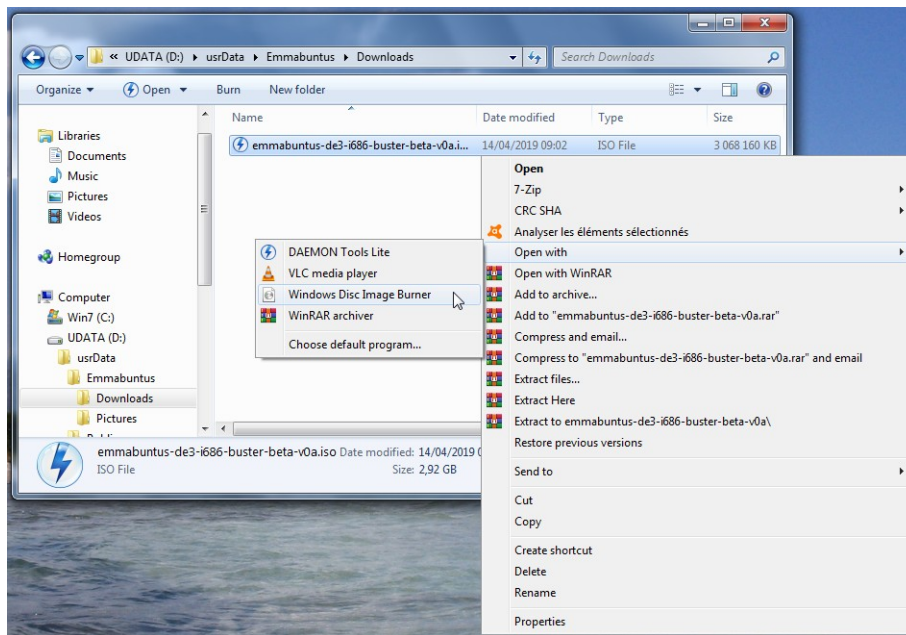
You have now your live\_USB ! You can reboot your system, but think first to [change the boot order in BIOS](#) in order to boot from your USB key.

## 6.2 - Create a bootable USB key on a Windows™ PC

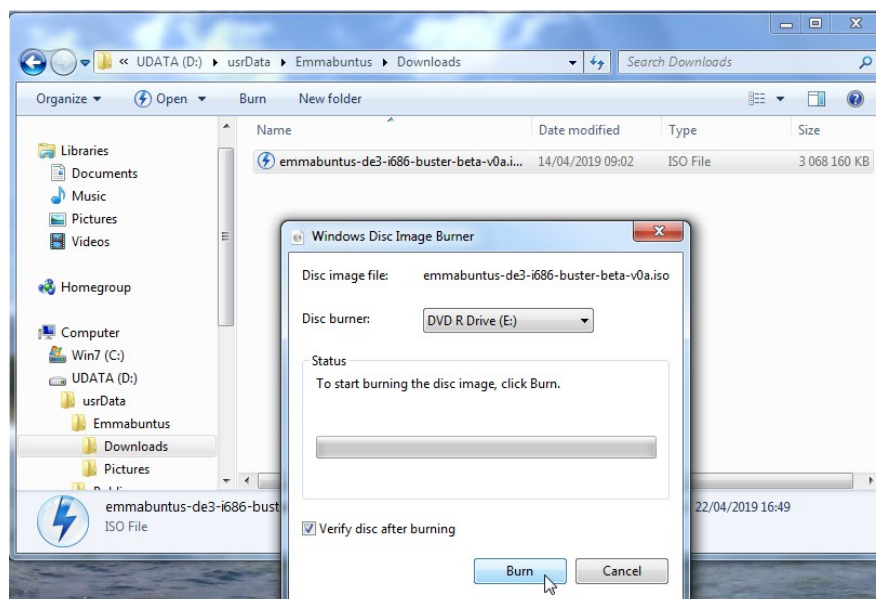
### 6.2.1 - Using MultiSystem

To use MultiSystem on a computer running a Windows™ system, you must first boot from an Emmabuntüs DVD.

You can burn the Emmabuntüs Debian Edition ISO file on a DVD with a right click on the file, then take the option “Open with” in the contextual menu, and then pick the “Windows disk image burner”

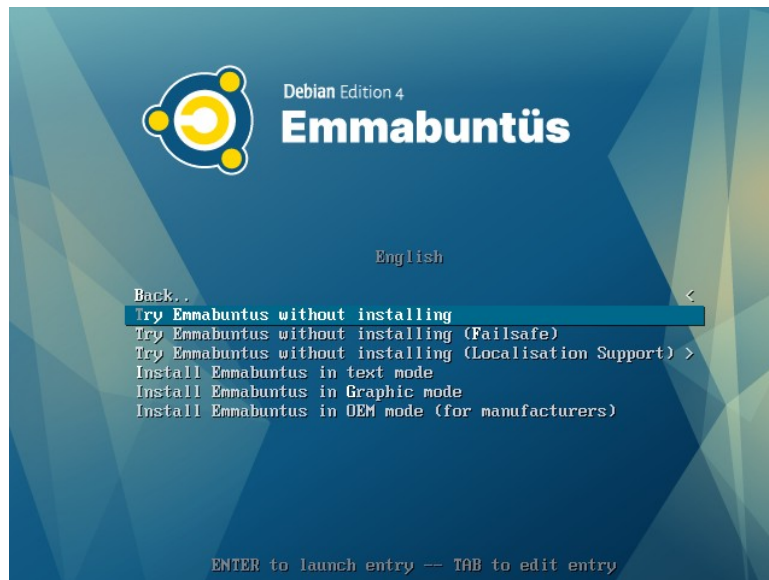


You just have to verify that the DVD drive is OK, and click on burn :

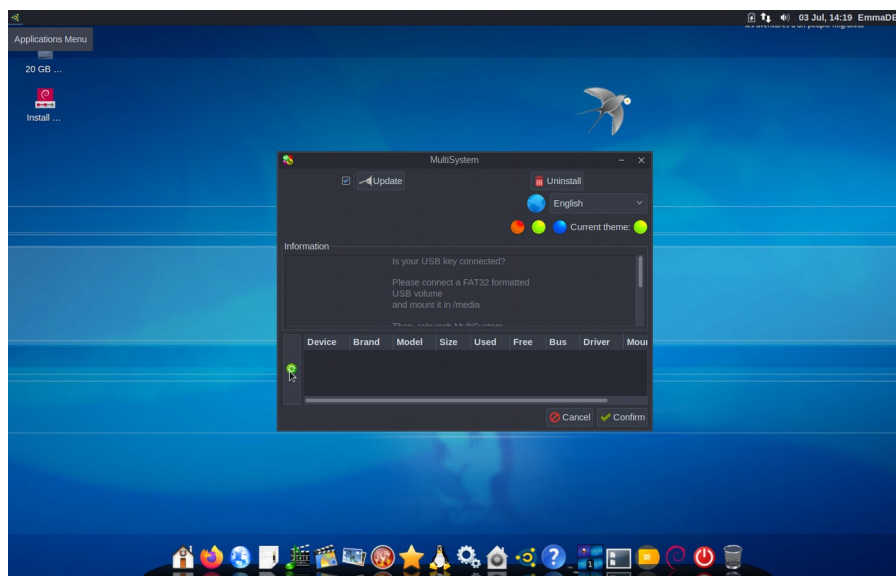


Once your DVD is burnt, you can restart the computer with the [boot from CD-DVD](#) option set.

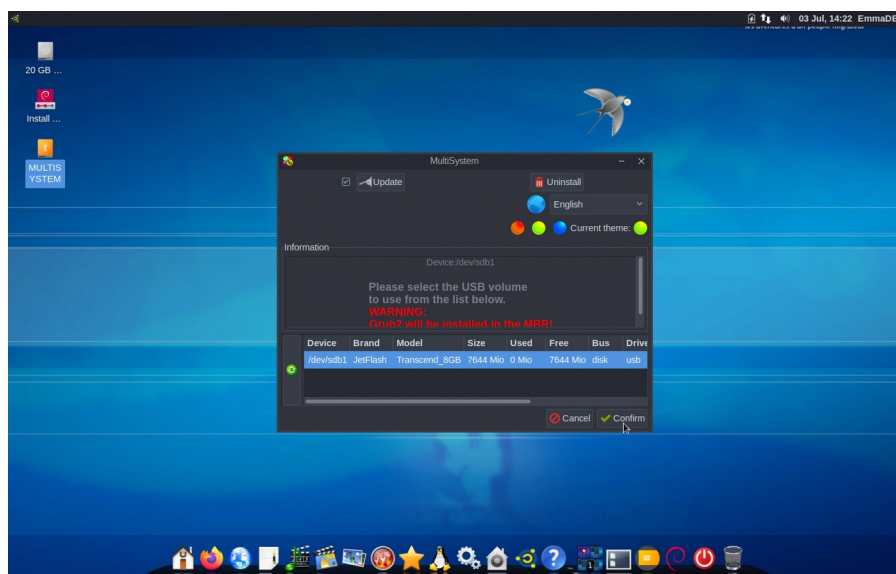
In the start-up menu take the option “Try Emmabuntus without installing”.



Emmabuntus Debian Edition includes MultiSystem in its software suite :

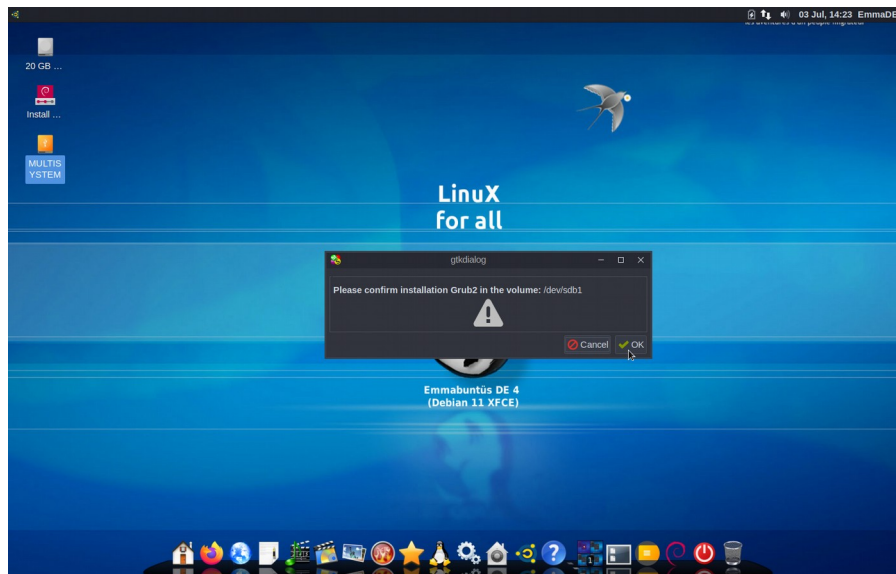


and you can easily create the USB key by selecting your target USB key :

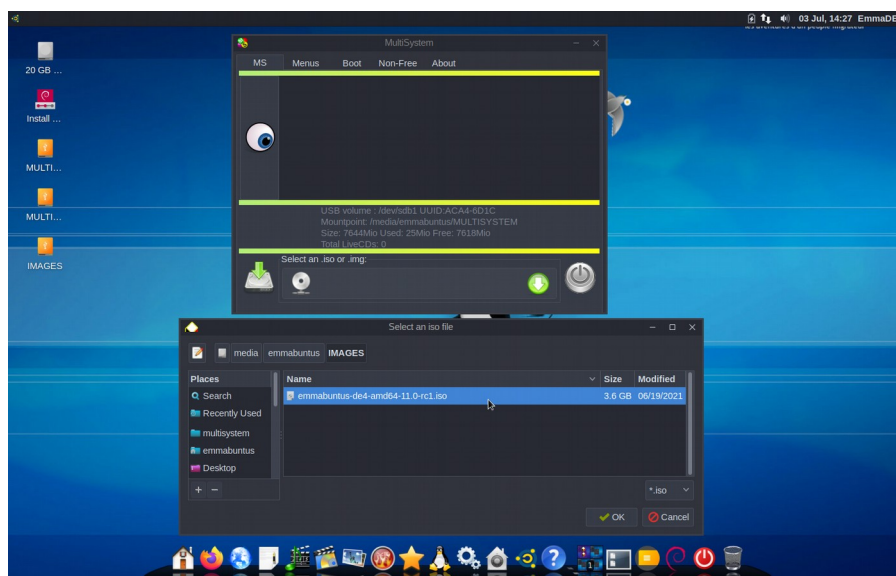




confirm that you understand that Grub2 will be installed on it:



and retrieve the path of the ISO image in the right folder of your Windows disk :



You should now be able to use MultiSystem to install Emmabuntüs Debian Edition from a USB key (a lot faster than using a DVD) by following the instructions described in the [chapter 6.1.2](#).

## 6.2.2 - Using Etcher

**Etcher** is a software utility to burn image files ([ZIP](#), [IMG](#), [ISO](#)) on various media ([USB key](#), [SD card](#), [micro-SD](#)). It is very easy to use and ensures an efficient burning process through its burnt image verification functionality.



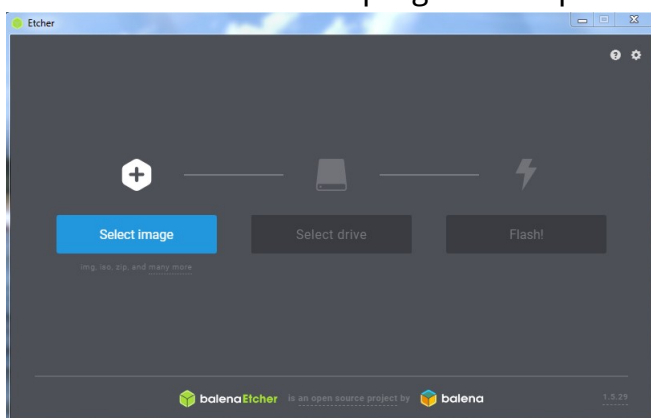
This is the recommended tool to transfer an ISO file from a computer running a Windows™ operating system.

1. Start by plugging your USB key in the computer.



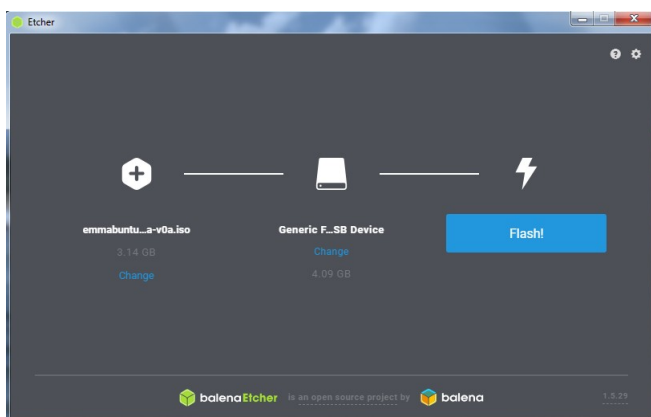
**If this key holds important data, be aware that they are going to be deleted by Etcher without any warning ! We strongly suggest you save them first on another medium.**

2. Download Etcher from the editor web-page : <https://www.balena.io/etcher/> and install it.
3. Launch the Etcher program and perform the following action :

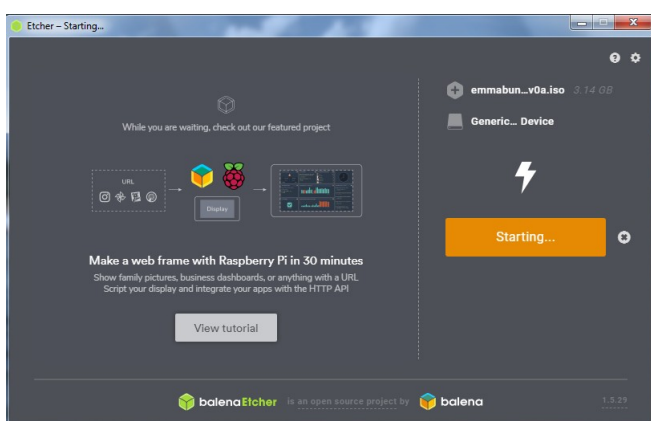


**A** - Click on the **Select image** button, and select the Emmabuntüs DE 4 image file (which you recently downloaded)

**B** - If you want to change the USB key before transferring the file, click on the **Select drive** button



**C** - Click on the **Flash** button to start the ISO file copy and verify process.

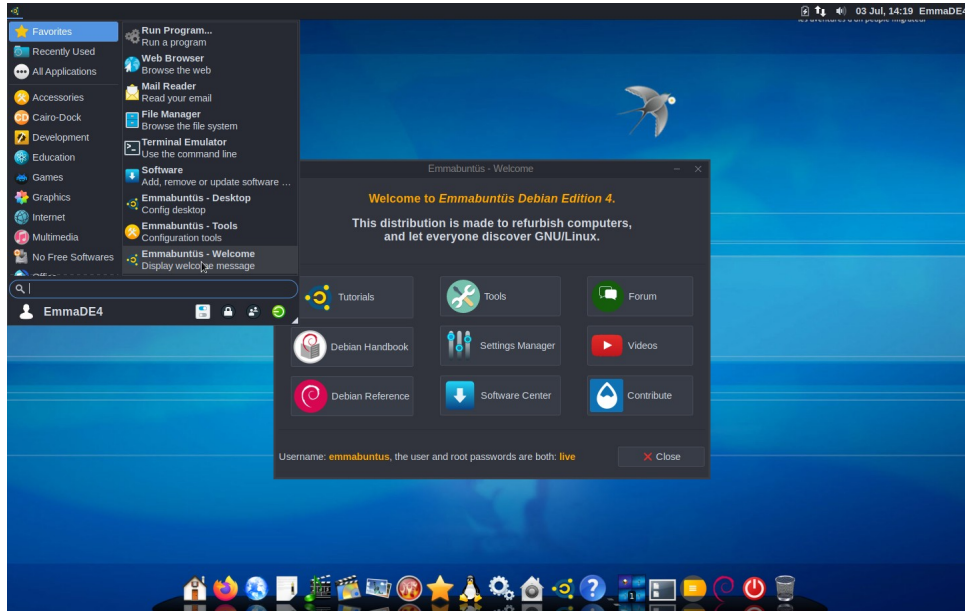


**D** - Wait a moment and you will hold an Emmabuntüs Debian Edition 4 bootable USB key ! You just have to restart your computer from this bootable key and start the new installation.



## 7 - Support

We invite you to read the “[The beginner's handbook](#)”. It is, by the way, already included in the EmmaDE4 distribution and directly accessible from the Emmabuntüs Welcome menu.



If you don't know which programs to use with your Emmabuntüs system, this [software presentation](#) page is for you. For the beginners who discover the GNU/Linux world, we suggest them to read first this article “[Migrate from Windows to Ubuntu](#)”, and [The table of equivalence between Windows and Linux software](#).

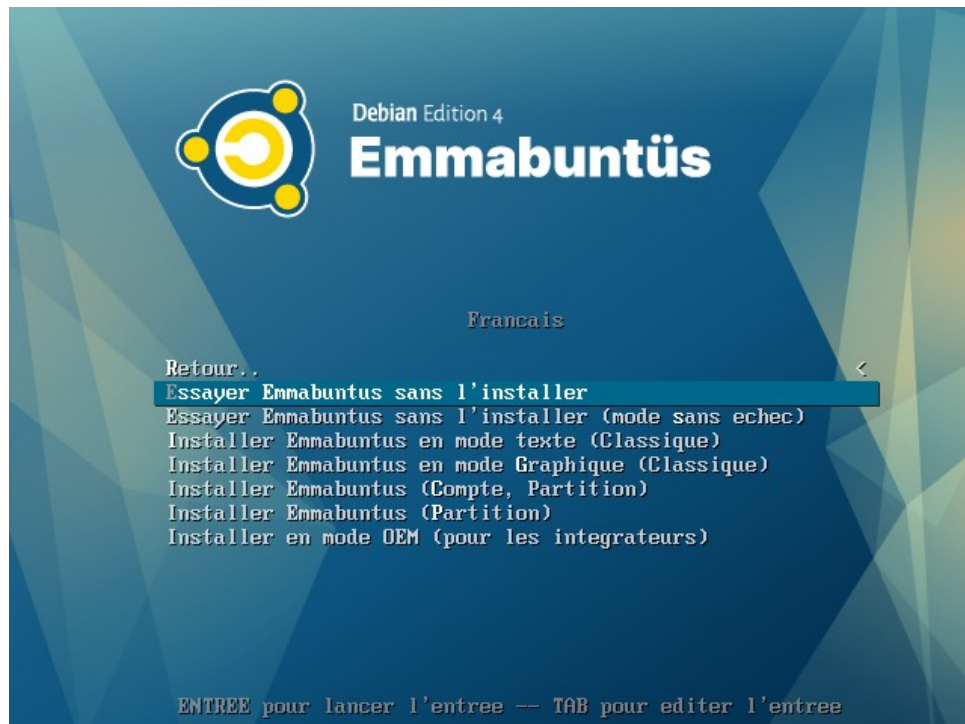
If you have any questions, please don't hesitate to visit the [Emmabuntüs Forum](#) or the [Debian User Forum](#).

## 8 - Conclusion

We went through the classic installation of the Emmabuntüs Debian Edition 4, and you can see that it is as simple as installing a Debian system, followed by a step where you can install - or not - some non-free software.

Several other installation modes are available when booting from a DVD or from some USB key system manager, in order to dramatically decrease the number of human interactions during the installations in the computer refurbishing workshops.

These special install modes are accessible in the startup menu of the installer :



Please note that this special install options are available in French language only.

Using a good quality USB key rather than a DVD is a very good solution for the computer refurbishing task, because the DVD readers tend to malfunction after several years of use, and on top of that, the installation with a USB is **three times faster** than with a DVD.



For the computers which do not handle bootstrap from a USB device, you can use a bootstrap CD based on the [Plop Boot Manager](#), that you can download from [here](#).

All these different methods are explained in this article : "[How to recondition old Boxes with Emmabuntüs](#)".

## 9 - Acknowledgments

Thanks to [ideefixe](#) who made the initial frame of this tutorial for the Emmabuntüs 1 & 2 distributions based on Ubuntu, and also to [rodinux](#) and [Saby43](#) for their contributions to the elaboration of this Emmabuntüs Debian Edition tutorial.

Thanks to [Zoom61](#) for his publishing assistance, and to [f-leb](#) for his spelling and syntax corrections during the initial release of Emmabuntüs DE on the [Developpez.com](#) site.

A big thank you to [arpinux](#) for his technical advises during the development of the Emma-DE distribution, the elaboration of this tutorial, and the one of "[The beginner's handbook](#)", which is really perfect for the beginners on Emma-DE and spare us the writing of a new tutorial on this very subject.

And a great tribute to [Ian](#) who left us prematurely, and without whom this new adventure won't be possible. We will keep an eternal gratitude to him, for the whole of his work.



Drawing by [Péhä](#) – [cc-0](#)  : "In memory of Ian Murdock"

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