Siliveri Hugo
Jalbaud Lucas
S°2

English Instructions

Dual-boot :

Introduction :
This page describes how to set up a dual-boot with Windows and Ubuntu on your computer. At the end of this guide you will be able to choose which OS you want to run when starting your computer.. The main advantage of being able to run Ubuntu and Windows is that you can run applications from both Windows and Ubuntu.

Requirements :
In order to install Ubuntu alongside Windows, you will need:
-A PC running Windows 7, 8 or 10;
-A USB stick of at least 8 GB.

1. Preparations before installation
Create a bootable Ubuntu flash drive:
-Download the latest available version of Rufus in the download area at this address https://rufus.ie/en/;
-Download the .iso file of the latest version of Ubuntu from their official website https://www.ubuntu-fr.org/;
("Download Ubuntu" => "latest LTS version (recommended)")
-When the installation of the Ubuntu .iso image is complete, run the Rufus.exe you just installed, then on the window that just opened:
-Enter your USB flash drive into the computer;
-Select the USB stick you want to turn into a bootable Ubuntu flash drive under "Device" at the top of the window;
-Select the Ubuntu .iso installation file by clicking on "Selection" located below "Startup type";
-Press "Start" at the very bottom of the window
-Press "Ok"
-Validate once again the dialog box that opens by clicking on "Ok" **/! \ Attention because all the content of the USB flash drive will be deleted!**
-When the installation is complete, you can remove the USB flash drive and go to the next step in the guide.

Disable fast startup:
-Open Windows settings; *(Windows shortcuts + i)*
-Then go to "System" => "Power and sleep" *(left column)* => "Additional power settings" *(normally located on the right)*, then in the window that opens, "Choose the action of the power buttons" => “Modify currently unavailable parameters”, finally uncheck the box “Enable fast startup” in the “Shutdown parameters” space.

2. Start the computer on the Ubuntu installation drive

Go back to the Windows settings.
Now go to "Update & Security" => "Recovery", then under "Advanced startup" click "Restart now".
Once your PC is back on, you should be on a blue screen with four options **/! \ Check that your bootable USB stick is still connected to your PC, otherwise the installation will not be possible!** Choose “Use a device” then select “EFI USB Device”.
Your PC should now boot from the USB flash drive you installed Ubuntu on.

3. Complete the installation of Ubuntu

In the Ubuntu installation window you will see that the displayed text is in English, however don't be afraid! To change the language, simply select the “French” language in the left column.

Once done click on "Install Ubuntu". Then choose the layout of your keyboard according to your preferences. By default, however, it should already be set to the French AZERTY keyboard, so you don’t need to change anything if that suits you. Click on "Continue".

In the next window do not change anything if you want Ubuntu to be ready from the get go after the installation is complete. Click "Continue" again.

In this new window select "Install Ubuntu next to Windows Boot Manager".

You will now be able to choose the disk on which you want to install Ubuntu, as well as the disk space you want to allocate for your Ubuntu installation. You can still leave the default choice if you are not interested. Keep going.

Click on "Continue", your location on the map should be Paris by default, otherwise select the box just below.
To finish installing Ubuntu all you have to do is enter a few details such as the password and username of the PC and click "Continue".

Once the installation is complete you will simply need to remove the installation media *(your USB flash drive)* and restart your computer.

Congratulations, you have now successfully installed Ubuntu and you can now choose to run Ubuntu on your computer at the start.

Virtual Machine :

1. Introduction:
This page describes how to set up your computer in order to run Ubuntu inside of a virtual machine. If you follow every step you will be able to run Ubuntu on Windows. The main advantage of running Ubuntu on Windows is that you can run any applications from Windows and Ubuntu at the same time.

2. Requirements/Warning section:
In order to run Ubuntu:
- Have Windows 7, 8 or 10.
- Have at least 10 GB of free disk space.
- A second hard drive to set up Ubuntu on. *(recommended)*

- **Downloading the files:**
- First, go on the internet, go to the VirtualBox website (virtualbox.org) and download the latest version of VirtualBox on Windows
- Second, go back to the internet, go to the Ubuntu website (ubuntu.com) and download the latest version of Ubuntu. The download time depends on your internet speed so it might take an hour if you have a bad internet speed.
- After downloading the file, go on the file explorer of your computer, go to the download section. At this point you should have an executable file named : “VirtualBox-(the version of the program)-Win.exe” and an ISO file named : “ubuntu-(the version of Ubuntu)-desktop-amd64.iso”. If you don’t have the file, you just need to start the guide again.
- If you have a second hard disk, it’s preferable to put the ISO file on a second hard disk to separate Windows and Ubuntu but it's an option

- **Installation on your computer**
- Secondly, still in the file explorer, execute the VirtualBox executable file.
- Now you just need to follow the instructions on the screen to install the virtual machine. During the installation, you will have pop-ups that ask you if you want to install device softwares, it’s an option. But for me, it’s preferable to install every option in order to have a fully working Ubuntu OS.
- Once this is done, if you have followed every instruction, you will be able to run VirtualBox, if you don’t have the software running, go on the navigation bar at the bottom-left side of Windows and search “VirtualBox”. If there is an application, run it or if it’s not the case, restart the installation of Virtual Box.

- **Set up VirtualBox**
- Thirdly, on the VirtualBox software, click on the “New” button. Next, write Ubuntu in the name section, change if you want the machine folder. After that, you can select the memory size that you can allow VirtualBox to use, choose a max limit. Once this is done, leave the selection as default and click on “Create”.
- After that, leave every option at their default. When you arrive at the “File location and size”, you can choose the file location of Ubuntu and the virtual hard disk size, and click on “Create” and you should have the name that you gave to your machine.

- Before you create a virtual machine, go on the settings option next to the “New” button, go on storage settings, below “Controller: IDE” click on “Empty”, at the right of the pop-up click on the disk icon button, select “Choose a disk file…”. After that, search your Ubuntu ISO file and select it,

- Initializing Ubuntu

- To finish the installation, select your virtual machine on VirtualBox and click on the start button. Now you should have a new window with Ubuntu. After waiting for the installation of Ubuntu, choose every setting you want until you go to the “Installation type” option.
- Once this is done, you will be on the “Installation type” option, You will want to pick the “Something else” option but this one's for dual-booting so pick the “Erase disk” option. Don’t worry, it won’t delete all your files in your hard drive, it will just “delete” the virtual hard drive on VirtualBox. After that, click on “Continue” and finish the installation of Ubuntu.
- Finally, you should be on the Ubuntu desktop and should get a pop-up which needs you to restart Ubuntu, click on “Restart now” and if everything is okay, Ubuntu is finally set up on a virtual machine.

3. Troubleshooting & Repair

Error	Cause	Fixes
"Invalid Settings Detected" System : Acceleration page VirtualBox not working	Hardware virtualization uncheck in the BIOS	Boot up in BIOS Mode (restart your computer and continually tap a key that makes you go in the BIOS, in order to know the key, search on the internet with the model of your motherboard). Once you are in the BIOS, search the CPU settings and search for virtualization. If you find it, check it, save and restart your computer. Be extremely careful to not modify anything in the BIOS or you will have problems when you will be back into Windows.