**How to install Ubuntu and ROS2 in Jetson Nano**

* Install xubuntu in Jetson Nano

In this Repository I will show how to install Ubuntu & ROS2 on a Jetson Nano

We will download (Xubuntu 20.04 Focal Fossa L4T R32.3.1) instead of Ubuntu because it is a custom image for the Jetson Nano

1. Open ( <https://forums.developer.nvidia.com/t/xubuntu-20-04-focal-fossa-l4t-r32-3-1-custom-image-for-the-jetson-nano/121768>)
2. Click on the download link : [Xubuntu-20.04-l4t-32.3.1.tar.tbz2](https://github.com/Discombobulated88/Xubuntu-20.04-L4T-32.3.1/releases/download/v1.0/Xubuntu-20.04-l4t-r32.3.1.tar.tbz2)

Graphical user interface

Description automatically generated



1. After the following window pops up, click on Save file>OK

Graphical user interface, text, application

Description automatically generated

* Download balena

1. You need to flash your SD card using balenaEtcher (Recommended) , here is the link that will do that for you: [https://www.balena.io/etcher/](https://www.youtube.com/redirect?event=video_description&redir_token=QUFFLUhqbFEzWWxHVVhXb3N6S293Nlc4NWRVOHByTjVBQXxBQ3Jtc0trbTJmdlAyZVJ4VEtUcnZScnJEWml0VVR0MHMwY1JWVW43SktRaUtKZGN6eUFwemh1ckNLTVQ0SlZCRUZBR3A3REdfUzFiVDJuS3JFXzhMZVUzNHVITkdzbFNIalhIb1lDTXVfV0ZtRFdsNmFLekp2NA&q=https%3A%2F%2Fwww.balena.io%2Fetcher%2F&v=6WZOlkS4D7c) , click **Download for** **Linux x64** > **Save File**> **OK**

Graphical user interface, application

Description automatically generated

1. Click on **Extract Here** so you can have the app image

Website

Description automatically generated with low confidenceGraphical user interface

Description automatically generated

1. A screenshot of a computer

   Description automatically generated with medium confidenceNow the program is set up

1. Before you can flash the image you have to **Extract the zip file for ubuntu** that you’ve download it using the Terminal type this command to extract the Xubuntu image:

Graphical user interface, text

Description automatically generatedtar -xvjf Xubuntu-20.04-l4t-r32.3.1.tar.tbz2

1. Go back to the balena Etcher > **Flash from file**> **Downloads**>**Xubuntu-20.04….** (Select the image for xubuntu)

A screenshot of a computer

Description automatically generated with medium confidence Graphical user interface, text, application

Description automatically generated

1. Plug in the USB drive.
2. Identify the USB drive or click **Change** to select a different USB.
3. **Select Target** and select your device then click on **Flash**

Then you will have to put in your password for the authentication

1. The Flashing will start. This will take some time, you will have to wait until the *flash is completed*
2. When the process completes, close BalenaEtcher.
3. If your Jetson Nano is A02 then you have to plug in the SD card, and after its booting, it will take you to the XUbuntu installation screen.
4. To find out which .dtb file is compatible with your Jetson Nano run the following command on its terminal : cat /sys/firmware/devicetree/base/compatible

If your Jetson Nano was B01 version, from your SD card go to ***boot > extlinux > extlinux.conf***then open it in terminal and enter the following command: sudo vim extlinux.conf

then add this line in the extlinux.conf and save the file: FDT /boot/tegra210-p3448-0000-p3449-0000-b00.dtb

Finally we plug in the SD card, and after booting, it will take you to the XUbuntu installation screen.

* ROS2 in Jetson Nano

1. Installing ROS2 on Jetson Nano is pretty straightforward, all you have to do is to follow the instructions provided in this link  <https://docs.ros.org/en/foxy/Installation/Ubuntu-Install-Debians.html>