

Steps to install ROS1:

1- Download Virtualbox

The link

<https://download.virtualbox.org/virtualbox/6.1.36/VirtualBox-6.1.36-152435-Win.exe>

2- Download ISO file for Ubuntu 20.04

The link :

<https://releases.ubuntu.com/20.04/ubuntu-20.04.4-desktop-amd64.iso>

3- Install Ubuntu on Virtualbox using the instructions here:

<https://www.geeksforgeeks.org/how-to-install-ubuntu-on-virtualbox/>

4- Install ROS1 on Ubuntu by following these instructions:

<http://wiki.ros.org/noetic/Installation/Ubuntu>

ROS1 is installed:

```
n@n-VirtualBox:~$ roscore
... logging to /home/n/.ros/log/61119532-fe65-11ec-8e46-eb7c2b746827/roslaunch-n-VirtualBox-33427.log
Checking log directory for disk usage. This may take a while.
Press Ctrl-C to interrupt
Done checking log file disk usage. Usage is <1GB.

started roslaunch server http://n-VirtualBox:42499/
ros_comm version 1.15.14

SUMMARY
=====

PARAMETERS
* /rostdistro: noetic
* /rosversion: 1.15.14

NODES

auto-starting new master
process[master]: started with pid [33437]
ROS_MASTER_URI=http://n-VirtualBox:11311/

setting /run_id to 61119532-fe65-11ec-8e46-eb7c2b746827
process[roscout-1]: started with pid [33447]
started core service [/roscout]
g
```

#algorithm of install ROS2 on Jetson nano

- 1- Download Xubuntu 20.04 using this link:
<https://github.com/Discombobulated88/Xubuntu-20.04-L4T-32.3.1/releases/download/v1.0/Xubuntu-20.04-l4t-r32.3.1.tar.tbz>
- 2- Extract the Xubuntu image using 7-Zip
- 3- Download Balena Etcher program to flash the CD card using this link:
<https://www.balena.io/etcher/>
- 4- In the balena etcher program we choose the Xubuntu image and hit flash
- 5- Complete the Xubuntu installation process
- 6- Install ROS2 Foxy by following the instructions in this link: <https://docs.ros.org/en/foxy/Installation/Ubuntu-Install-Debians.html>

