

# Installation ROS

## Installation ROS

Write the following steps codes in Ubuntu terminal:

### 1- Configure your Ubuntu repositories

you should configure Ubuntu after download it.

### 2- Setup your sources list

Setup your computer to accept software.

```
sudo sh -c 'echo "deb http://packages.ros.org/ros/ubuntu $(lsb_release -sc) main" > /etc/apt/sources.list.d/ros-latest.list'
```

### 3- Set up your keys

```
sudo apt-key adv --keyserver 'hkp://keyserver.ubuntu.com:80' --recv-key C1CF6E31E6BADE8868B172B4F42ED6FBAB17C654
```

### 4- Installation

First, make sure your Debian package index is up-to-date.

```
sudo apt update
```

**4.1 Desktop-Full Install:** (Recommended) : Everything in Desktop plus 2D/3D simulators and 2D/3D perception packages .

```
sudo apt install ros-noetic-desktop-full
```

**4.2 Desktop Install:** Everything in ROS-Base plus tools like rqt and rviz

```
sudo apt install ros-noetic-desktop
```

**4.3 ROS-Base:** (Bare Bones) ROS packaging, build, and communication libraries. No GUI tools.

```
sudo apt install ros-noetic-ros-base
```

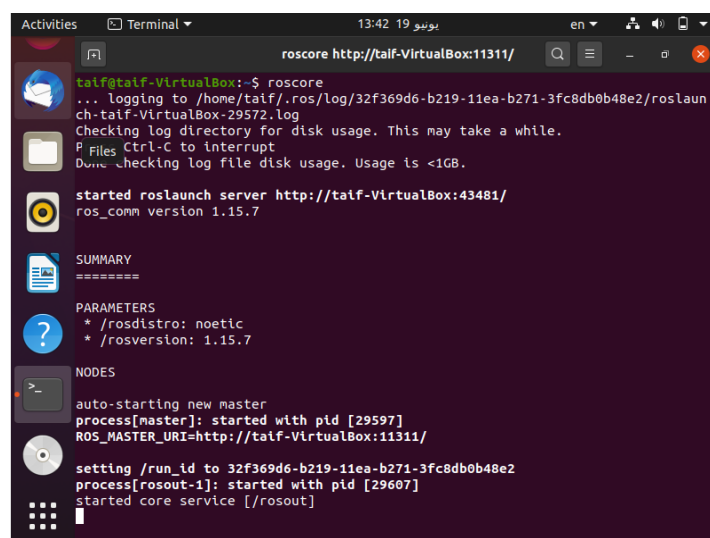
pick how much of ROS you would like to install from the above

### 5- Environment setup

```
echo "source /opt/ros/noetic/setup.bash" >> ~/.bashrc  
source ~/.bashrc
```

If you follow these steps, ROS will be installed easily.

To be sure ROS installed in your Ubuntu system , Write this `roscore` and after that press enter if it is give same below picture that is mean ROS installed successfully in your system .



```
Activities  Terminal  13:42 19 يونيو  en  roscore http://taif-VirtualBox:11311/  
taif@taif-VirtualBox:~$ roscore  
... logging to /home/taif/.ros/log/32f369d6-b219-11ea-b271-3fc8db0b48e2/roslaun  
ch-taif-VirtualBox-29572.log  
Checking log directory for disk usage. This may take a while.  
P Files Ctrl-C to interrupt  
Done checking log file disk usage. Usage is <1GB.  
started roslaunch server http://taif-VirtualBox:43481/  
ros_comm version 1.15.7  
  
SUMMARY  
=====  
PARAMETERS  
+ /rostdistro: noetic  
+ /rosversion: 1.15.7  
  
NODES  
+ auto-starting new master  
process[master]: started with pid [29597]  
ROS_MASTER_URI=http://taif-VirtualBox:11311/  
  
setting /run_id to 32f369d6-b219-11ea-b271-3fc8db0b48e2  
process[rosout-1]: started with pid [29607]  
started core service [/rosout]
```