

# Ros installation

done the following steps in this link <http://wiki.ros.org/melodic/Installation/Ubuntu>:

- 1.1: enabled Restricted, Universe and Multiverse repositories.
  - 1) `sudo add-apt-repository universe`
  - 2) `sudo add-apt-repository restricted`
  - 3) `sudo add-apt-repository multiverse`

- 1.2: setup the computer to accept software from packages.ros.org

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

- 1.3: setup our keys.

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

- 1.4: installation.

```
sudo apt update
```

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

- 1.5: initialize rosdep

```
sudo rosdep init
rosdep update
```

- 1.6: Environment setup:

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

- 1.7: dependencies for building packages.

```
sudo apt install python-rosinstall python-rosinstall-generator python-wstool build-essential
```