

To install ROS on an Ubuntu based computer, we have to follow the following steps .

- First we have to set up the computer to accept software from the ros repository, we have to issue the following command :

- For ubuntu 10.04 (Lucid)

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

- For ubuntu 10.10 (Maverick)

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

- For ubuntu 11.04 (Natty)

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

- For ubuntu 11.10 (Oneiric)

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

- After that, we have to set up the keys before installing the ROS

```
wget http://packages.ros.org/ros.key -O - | sudo apt-key add -
```

- Now comes the installation of ROS in the computer, first of all update the software already present in the computer

```
sudo apt-get update
```

-Now comes the command that effectively installes the ROS

```
sudo apt-get install ros-electric-desktop-full
```

-However if that doesn't work, try this command :

```
sudo apt-get install ros-electric-desktop
```

- Now to set up the shell environment and to have the variables of ROS recognized by the shell every time we open it

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

-Then :

```
. ~/.bashrc
```

- Also we have to source the setup.bash present in ros/electric/

```
source /opt/ros/electric/setup.bash
```

- After that, we have to create a workspace for ROS that will be used in eclipse later by issuing the following command :

```
mkdir ~/ros_workspace
```

- After that, we have to download the android sdk from the following source :

<http://developer.android.com/sdk/index.html>

-Extract the folder into a source and remember the place where it has been extracted

-Download eclipse from

<http://www.eclipse.org/downloads/>

-Download the Eclipse IDE for Java Developers

-Install the ADT Plugin by following the following tutorial

<http://developer.android.com/sdk/eclipse-adt.html#installing>

- After that, we have to configure the .bashrc file by executing the following command :

```
gedit ~/.bashrc
```

-We add the following lines in the .bashrc

```
export
ROS_PACKAGE_PATH=/home/<username>/ros_workspace:${ROS_PACKAGE_PATH}
export PATH=/path_to_android_sdk/android-sdk-linux/tools:
path_to_android_sdk/android-sdk-linux/platform-
```

```
tools:${PATH}  
export  
ROS_MASTER_URI=http://hostname\_of\_the\_desktop\_computer:11311/  
export ROS_IP=ipv4_of_the_desktop_computer
```

- Last thing to do is to download the rosjava folder from

```
hg clone https://rosjava.googlecode.com/hg/
```

-And to place it in the ros_workspace