Installing ROS Indigo on Ubuntu 14.04

This file will help you to install ROS (**R**obotics **O**perating **S**ystem) on your **Linux Ubuntu 14.04) machine**.

What is ROS?

Robot Operating System (ROS) is a framework which provides tools and libraries to help software developers to create robot applications. The primary goal of ROS is to support code reuse in robotics research and development. Testing of robot code can be time-consuming and error-prone and sometimes physical robot might not be present. ROS provides a solution to this problem as it separates the hardware part and decision making (coding) part. Because of this separation, we can replace hardware part with a model in the simulator and test the behavior of decision-making part. It is an **open-source** software. It also provides a simple way to record and play data.
To know more about ROS you can visit here.

The main ROS client libraries (C++ and Python) are geared toward a Unix-like system, primarily because of their dependence on large collections of open-source software. Hence these client libraries require Linux operating system.

You must install the **ROS-Indigo** in **Ubuntu 14.04** on your PC/Laptop.

You can Download the **Ubuntu 14.04 desktop image** here (64-bit) / (32-bit).

NOTE: ROS must be installed on Ubuntu 14.04 only.

Installing Instructions for ROS-Indigo on Ubuntu 14.04:

This document assumes that the host OS on which ROS Indigo is to be installed is Ubuntu 14.04 LTS. This document offers a very concise walkthrough of the ROS Installation. For a detailed step-by-step explanation of the commands used, please visit the ROS Indigo Installation page.

If you have the Trusty 14.04.2 distribution (use lsb_release -a in the terminal to find out), you might face dependency issues for which, it is recommended that you visit the link above before beginning the installation. The steps listed below installs the 'Desktop-Full' ROS Indigo. This means that simulators like **Gazebo, rViz** along with a large number of ROS packages are installed as well. If your host machine has any constraints regarding memory you should visit the link above to install a trimmed version of ROS Indigo.

Execute the following commands/steps in the terminal one after the other:
• *sudo sh –c 'echo "deb http://packages.ros.org/ros/ubuntu $(lsb_release -sc) main" >/etc/opt/sources.list.d/ros-latestlist'*
• *sudo apt-key adv --keyserver hkp://pool.sks-keyservers.net –recv-key   0xB01FA116* or
   sudo apt-key adv --keyserver hkp://ha.pool.sks-keyservers.net:80 --recv-key 0xB01FA116

• *sudo apt-get update*

- *sudo apt-get install ros-indigo-desktop-full*
- *sudo rosdep init*
- *rosdep update*
- *echo "source /opt/ros/indigo/setup.bash" >> ~/.bashrc*
- *source ~/.bashrc*
- *sudo apt-get install python-rosinstall*

You should now have ROS Indigo installed on your system.
If there is any problem at any step please visit ROS Indigo Installation page.