Ubuntu 14.04.3 Setup

Monday, January 11, 2016 1:31 PM

This is just a quick guide of how to setup PCL and ROS on Ubuntu Linux

The link for ROS+PCL integration is <http://www.ros.org/integration/>
Linux download can be found here <http://www.pointclouds.org/downloads/linux.html>

So, I am starting this by setting up UBUNTU at a VM using VMWARE PLAYER which
Is free software. I am using UBUNTU 14.04.3 64-bit. 50 GB will be given to the VM.

To install PCL on Ubuntu follow the steps bellow

```
sudo add-apt-repository ppa:v-launchpad-jochen-sprickerhof-de/pcl
sudo apt-get update
sudo apt-get install libpcl-all
```

Next: set up ROS (Jade Turtle)
NOTE: universe and multiverse are enabled by default according to the link in step 1.1

1. Installation

1.1 Configure your Ubuntu repositories

Configure your Ubuntu repositories to allow "restricted," "universe," and "multiverse." You can follow the Ubuntu guide for instructions on doing this.

1.2 Setup your sources.list

Setup your computer to accept software from packages.ros.org. ROS Jade **ONLY** supports Trusty (14.04), Utopic (14.10) and Vivid (15.04) for debian packages.

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

Mirrors

1.3 Set up your keys

```
sudo apt-key adv --keyserver hkp://pool.sks-keyservers.net:80 --recv-key 0xB01FA116
```

1.4 Installation

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

```
sudo apt-get update
```

If you are using Ubuntu Trusty **14.04.2** and experience dependency issues during the ROS installation, you may have to install some additional system dependencies.

⚠ **Do not install these packages if you are using 14.04, it will destroy your X server**:

```
sudo apt-get install xserver-xorg-dev-lts-utopic mesa-common-dev-lts-utopic libxatracker-dev-lts-utopic libopenvg1-mesa-dev-lts-utopic libgles2-mesa-dev-lts-utopic libgles1-mesa-dev-lts-utopic libgl1-mesa-dev-lts-utopic libgbm-dev-lts-utopic libegl1-mesa-dev-lts-utopic
```

⚠ **Do not install the above packages if you are using 14.04, it will destroy your X server**

Alternatively, try installing *just* this to fix dependency issues:

```
sudo apt-get install libgl1-mesa-dev-lts-utopic
```

For more information on this issue see this answers.ros.org thread or this launchpad issue

There are many different libraries and tools in ROS. We provided four default configurations to get you started. You can also install ROS packages individually.

Desktop-Full Install: (Recommended) : ROS, rqt, rviz, robot-generic libraries, 2D/3D simulators, navigation and 2D/3D perception

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

or click here

Desktop Install: ROS, rqt, rviz, and robot-generic libraries

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

or click here

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

```
sudo apt-get install ros-jade-ros-base
```

or click here

Individual Package: You can also install a specific ROS package (replace underscores with dashes of the package name):

```
sudo apt-get install ros-jade-PACKAGE
```

e.g.

```
sudo apt-get install ros-jade-slam-gmapping
```

To find available packages, use:

```
apt-cache search ros-jade
```

1.5 Initialize rosdep

Before you can use ROS, you will need to initialize `rosdep`. `rosdep` enables you to easily install system dependencies for source you want to compile and is required to run some core components in ROS.

```
sudo rosdep init
rosdep update
```

1.6 Environment setup

It's convenient if the ROS environment variables are automatically added to your bash session every time a new shell is launched:

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

If you have more than one ROS distribution installed, `~/.bashrc` must only source the `setup.bash` for the version you are currently using.

If you just want to change the environment of your current shell, you can type:

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

1.7 Getting rosinstall

rosinstall is a frequently used command-line tool in ROS that is distributed separately. It enables you to easily download many source trees for ROS packages with one command.

To install this tool on Ubuntu, run:

```
sudo apt-get install python-rosinstall
```

1.8 Build farm status

The packages that you installed were built by ROS build farm. You can check the status of individual packages here.