Human-Robot Interaction

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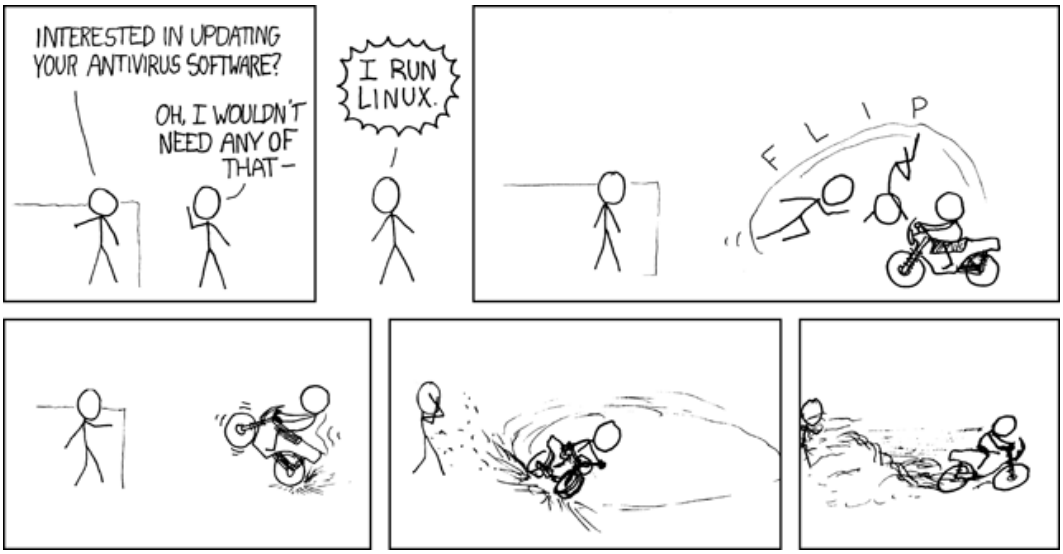
Computer Setup Instructions

There are two supported options to get a computer set up properly for the course. The first is to natively install Ubuntu on either an empty hard drive, or on a separate partition of a hard drive. The second is to install VMWare Player in an existing operating system and then set up a virtual machine (VM) with Ubuntu installed on it.

A native installation will run better, but a virtual machine is easier to get working and space won't need to be created for a separate partition. As long as the host computer is even modestly powerful, and as long as the processor supports hardware virtualization, a VM should run fine for anything encountered in the course.

Once Ubuntu is set up and ready to go, then the software needed for the course can be installed. Finally, once all the software is installed, the code repository for the course needs to be cloned. The rest of this document guides the reader to set all this up, and contains links to walkthrough videos outlining the processes.



xkcd.com/272

1. Operating System Setup

Regardless of whether a native installation or virtual machine is going to be used, the Ubuntu installation disk image needs to be downloaded. To do so, download Ubuntu version 16.04.6 LTS 64-bit from Ubuntu's website here. After the download is complete, then either use it to create a VM or create a USB installation drive to install it natively.

Native Install

1. Create a bootable USB flash drive to install Ubuntu by following the instructions found here.

2. Restart the computer and boot from the flash drive.

3. Install Ubuntu! This step depends on whether you're installing on a separate partition or on the entire hard drive. If you want to install Ubuntu next to Windows, you can use the Windows disk management utility to resize your existing Windows installation and create a new, second partition. Ubuntu can then be installed on this new partition. However, be careful when doing this, and back up any important files just in case something happens to your original Windows installation.

Virtual Machine

1. Download and install VMWare player for Windows (VMware-player-14.1.0-7370693.exe) from here.

2. Create a VM by following along with this walkthrough video:

2. Software

Once the operating system is set up properly in a native installation or VM, it is time to set up the software. This includes installing ROS, Git, the KDevelop IDE, and binaries for the supporting code that will be used during the course. To do this:

1. Open a terminal with Ctrl-Alt-T and enter the following command:

   ```
   bash <(wget -O - "https://docs.google.com/
   uc?export=download&id=1Z6p9_f1f3_PqQW133kA8J6IZ-KT3kNOf")
   ```

   This downloads and runs a script that automates the installation procedure. This will take a while to complete and require downloading about 1 GB of packages.

2. The following command downloads and runs a script that sets a few Ubuntu system settings that are helpful for developing ROS. Unless you already have carefully configured your settings, it is recommended to apply these settings:

xkcd.com/1597