Step 1.1 - Reproducing the Ubuntu Image

Owner:

This document explains how to reproduce the Ubuntu image from scratch.

Current official releases

2016-01-10_duckiebot.img.zip
https://www.dropbox.com/s/jkafzo66avbunl8/duckiebot_v1_1.zip?dl=0

20151215_raspi_liam:
https://www.dropbox.com/s/fskyqbxu299s2gx/2015-12-15_raspi_liam.img.gz?dl=0

Things to add in the next version of the image

At each time we will be working on one official image. We might discover later that we need more packages or slight tweaks. Add them here.

- New packages to install that we had forgotten:

  ```
  sudo apt-get install vim htop byobu ntpdate  avahi-daemon
  avahi-discover avahi-utils  ros-indigo-theora-image-transport
  libav-tools
  ```

- Add passwordless login (i.e no need to add password)

- Add passwordless sudo for user ubuntu:
        $ sudo visudo
  Add line at the end:

```
        ubuntu ALL=(ALL) NOPASSWD: ALL
```

- Also use this command:
      git config --global push.default simple

- Add minimal desktop environment; however boot only at level 3 - not level 5 (desktop) so that boot time is not long

- add .authorized_keys in the image so that we can all do passwordless ssh.
      Create the authorized_key files

      On the PI, download the official key:
        $ cd ~
        $ mkdir .ssh
        $ chmod g-rwx,o-rwx .ssh
        $ wget -O .ssh/authorized_keys
      https://www.dropbox.com/s/pxyou3qy1p8m4d0/duckietown_key1.pub?dl=1

- Run byobu at least once, choose "option 1".
- New feature: have ntpdate run automatically at startup. That is, we don't want to run manually:
  $ sudo ntpdate -u us.pool.ntp.org
- Disable this mechanism that produces 70-persistent-net.rules.
  (Now we need to do: sudo rm /etc/udev/rules.d/70-persistent-net.rules)
- sudo apt-get install ros-indigo-joy

For lane_filter

- sudo apt-get install libblas-dev liblapack-dev libatlas-base-dev gfortran -y
- sudo pip install scipy --upgrade

Automatically mount the usb drive

- packages for the IMU
  $ sudo apt-get install ros-indigo-phidgets-drivers
  $ sudo apt-get install ros-indigo-imu-tools

Steps to reproduce 2016-01-10_duckiebot.img

1) Download a the fresh Ubuntu img at
   http://www.finnie.org/software/raspberrypi/2015-04-06-ubuntu-trusty.zip
2) Burn it to an sd card using Disk Tool in Ubuntu
3) Resize the partition
4) Get and run the script at
   https://github.com/duckietown/Software/blob/master/setup/duckiebot_img_creation.sh
5) Burn img from the sd card
6) Profit

Steps to reproduce 20151215_raspi_liam

1) Download a fresh Ubuntu image:
   …
   Please complete this by adding stuff from SWSetup.
...
   n) You have obtained 20151215_raspi_liam.img.gz