

# Setup Roomba's Software

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## Abstract

This will show you how to setup the Roomba.

## Software Setup

### Mote

These scripts are to help setup a new Raspbian system. Once you `ssh` in, update the system:

```
sudo apt-get update
sudo apt-get -y upgrade
sudo apt-get -y install git
```

Get a copy of this software one of two ways:

```
mkdir github
cd github
git clone https://github.com/MomsFriendlyRobotCompany/mote.git # if you don't have write access to my r
git clone git@github.com:MomsFriendlyRobotCompany/mote.git # if you are me
```

Now go into the software directory and install/setup everything:

```
sudo ./install.sh
sudo ./setup.sh <hostname> <wifi-ssid> <wifi-password>
sudo ./setup-smb.sh # you will be asked for a SMB password, just use raspberry
./setup-git.sh <github-username>
./setup-ssh.sh
```

### Roomba Software

Now use the software here to install stuff:

```
pip install -U -r roomba.txt
sudo ./setup-access-point.sh
```

### OpenCV

```
git clone https://github.com/MomsFriendlyRobotCompany/dpkg_opencv
cd dpkg_opencv/opencv
sudo ./update-opencv.sh
dpkg -i libopencv3.4.0.deb
```

## User Accounts

Created accounts for t5 and t6, repeat this process for all accounts:

1. Create new user t5: `sudo adduser t5`
2. Give samba access: `sudo smbpasswd -a t5`
3. Fix access to give pi group access to home folder: `sudo chown -R t5:pi /home/t5`
4. Fix access so group can modify but others cannot access: `sudo chmod -R g+rwX o-rwX /home/t5`
5. [*So far I have not done this*] Give access to reboot and shutdown, in `/etc/sudoers` add: `t5 ALL=(ALL:ALL) NOPASSWD: /sbin/reboot, /sbin/shutdown`

## Bypass known\_hosts

Since all RPi's hostname are raspberrypi.local, it **sucks** when you try to connect to a new one and you get the man-in-the-middle attack warning.

You can bypass the check with:

```
ssh -o UserKnownHostsFile=/dev/null pi@raspberrypi.local
```

## Old Issues

### Fix python path

#### Python 2.7

```
pi@mario software $ cat /etc/python2.7/sitecustomize.py
# install the apport exception handler if available
import sys, os
my_site = os.path.join(
    os.environ['HOME'],
    '/usr/local/lib/python2.7/dist-packages'
)
sys.path.insert(0, my_site)

try:
    import apport_python_hook
except ImportError:
    pass
else:
    apport_python_hook.install()
```

#### Python3.5

```
pi@mario software $ cat /etc/python3.5/sitecustomize.py
# install the apport exception handler if available
import sys, os
my_site = os.path.join(
    os.environ['HOME'],
```

```
    '/usr/local/lib/python3/dist-packages'  
)  
sys.path.insert(0, my_site)  
  
try:  
    import apport_python_hook  
except ImportError:  
    pass  
else:  
    apport_python_hook.install()
```

## Debian Stupidity

For whatever retarded reason, the interface names have changed such that you can no longer predict what they are going to be. They are dynamic and it makes it difficult to write (maybe impossible) scripts that need access to standard interfaces.

To fix this mess and go back to the normal way the previous names eth0 and wlan0, just pass net.ifnames=0 on the kernel command line in /boot/cmdline.txt. So now it looks something like this:

```
dwc_otg.lpm_enable=0 console=serial0,115200 console=tty1 root=PARTUUID=c3f225c6-02 rootfstype=ext4 elev
```