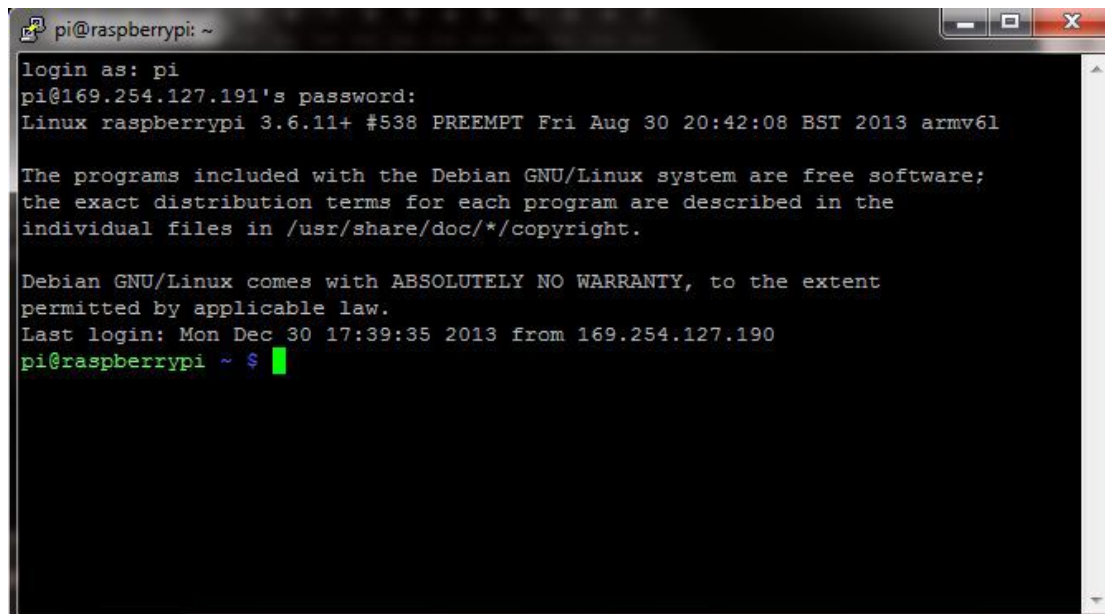Setting Up The Sofware for GrovePi

If you don't want to set up the software, you can use a Dexter Industries SD Card which comes will all the packages and necessary settings so you are directly start using your GrovePi.
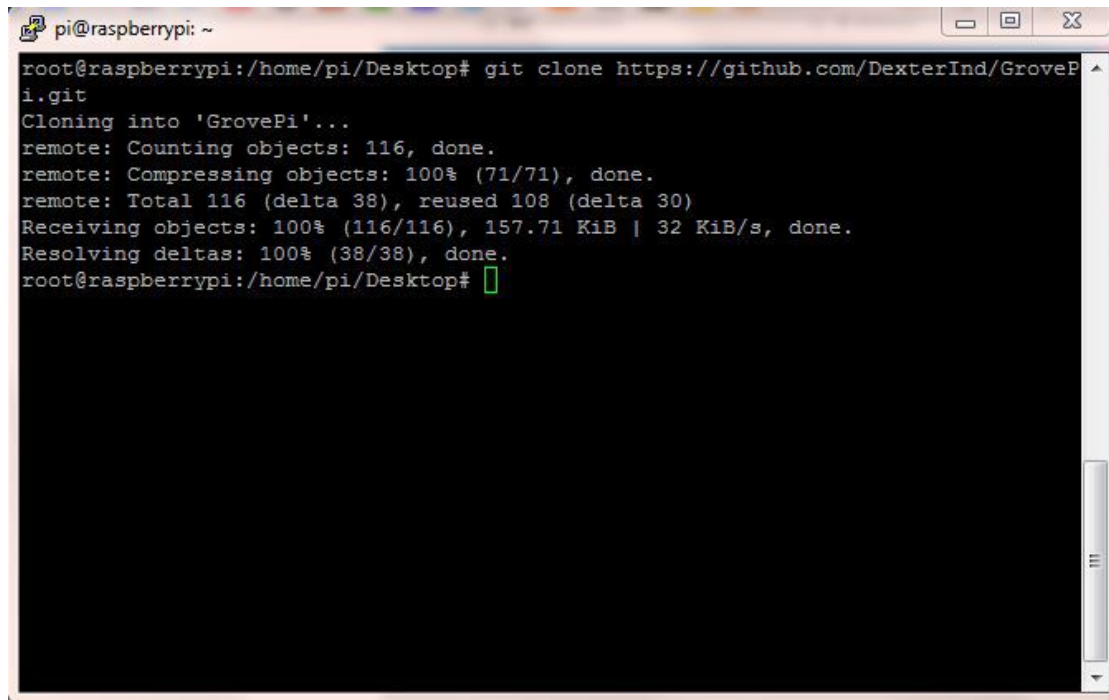
The first step with your new GrovePi is to get it working with the Raspberry Pi. Here's a step by step guide to getting the Grove Pi communicating with the Raspberry Pi. Before beginning this installation, make sure your Raspberry Pi is connected to the internet.

1. Power on the Raspberry Pi, without the GrovePi attached, and open a terminal (we'll be doing it on SSH, but it the same when using a standard Raspberry Pi setup with a monitor).

2. Change directories go to an appropriate location on your Pi where you want the GrovePi files to be stored (We recommend that you do it on the Desktop because it is easy to access and compatible with all our examples too). Clone the GrovePi git repository:
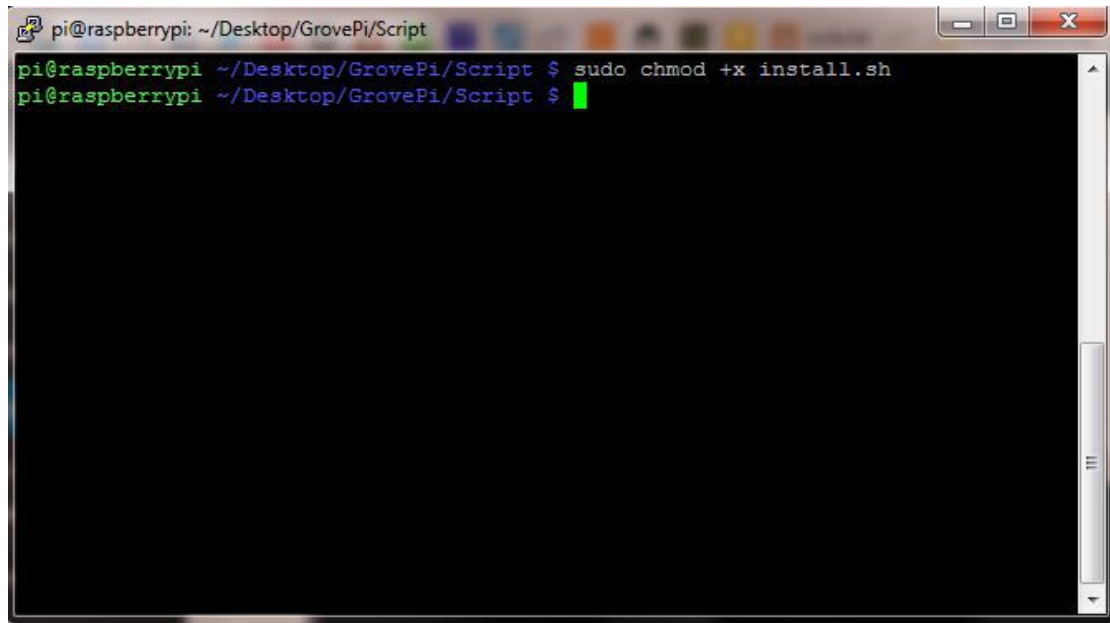
```
git clone https://github.com/DexterInd/GrovePi
```

When the repository is done downloading, there should be a new folder called "**GrovePi**".

3. Go to the Scripts folder in the GrovePi folder.

```
cd GrovePi/Script
```

4. Make the install.sh bash script as executable. We do this by modifying the permissions of the script:
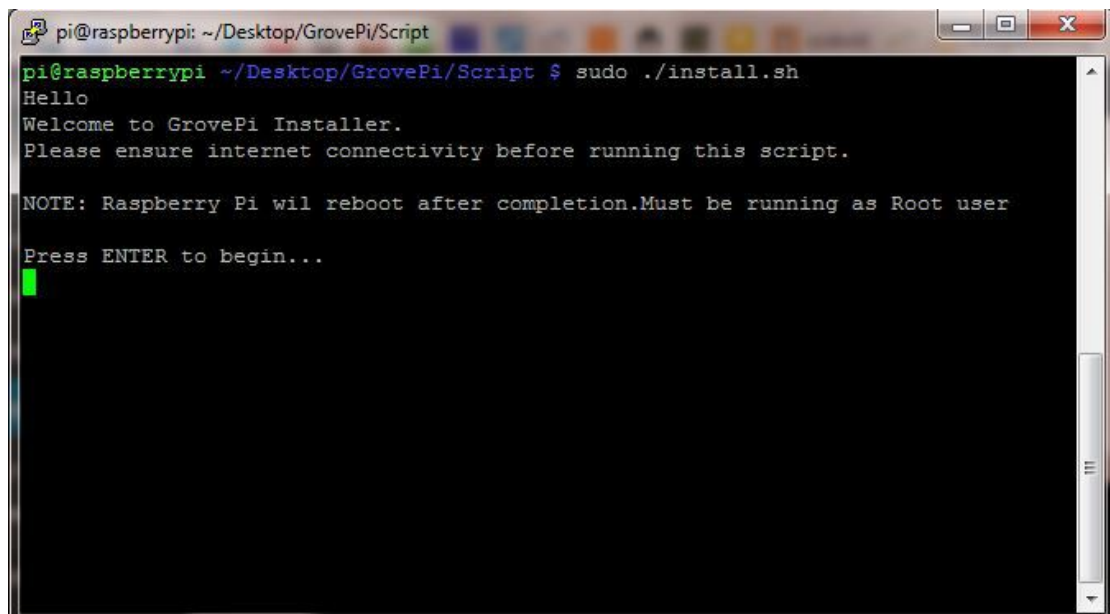
```
sudo chmod +x install.sh
```

5. Start the script. You must be the root user, so be sure to include "sudo"!

```
sudo ./install.sh
```


 Press "**Enter**" to start when you are prompted.

6. The script will download packages from the internet which are used by the GrovePi. Press "**y**" when the terminal prompts and asks for permission to start the download.

```
root@raspberrypi:/home/pi/Desktop/GrovePi/Script# chmod +x install.sh
root@raspberrypi:/home/pi/Desktop/GrovePi/Script# sudo ./install.sh
Hello
Welcome to GrovePi Installer.
Please ensure internet connectivity before running this script.

NOTE: Raspberry Pi wil reboot after completion.Must be running as Root user

Press ENTER to begin...


Check for internet connectivity...
===================================
Connected

Installing Dependencies
=======================
Reading package lists... Done
Building dependency tree
Reading state information... Done
git is already the newest version.
git set to manually installed.
python-rpi.gpio is already the newest version.
The following extra packages will be installed:
  arduino-core avr-libc avrdude binutils-avr extra-xdg-menus gcc-avr libftdi1
  libjna-java librxtx-java lrzsz python-pkg-resources python-setuptools
  python2.6 python2.6-minimal
Suggested packages:
  arduino-mk avrdude-doc task-c-devel gcc-doc gcc-4.2 libjna-java-doc
  python-distribute python-distribute-doc python-wxgtk2.8 python-wxgtk2.6
  python-wxgtk python2.6-doc binfmt-support
Recommended packages:
  python-dev-all
The following NEW packages will be installed:
  arduino arduino-core avr-libc avrdude binutils-avr extra-xdg-menus gcc-avr
  i2c-tools libftdi1 libi2c-dev libjna-java librxtx-java lrzsz minicom
  python-pip python-pkg-resources python-serial python-setuptools python-smbus
  python2.6 python2.6-minimal
0 upgraded, 21 newly installed, 0 to remove and 0 not upgraded.
Need to get 29.8 MB of archives.
After this operation, 98.1 MB of additional disk space will be used.
Do you want to continue [Y/n]?
```

7. The Raspberry Pi will automatically restart when the installation is complete.

```
PuTTY (inactive)

2013-12-30 17:32:04 (34.9 KB/s) - `avrdude_5.10-4_armhf.deb' saved [202814/20281
4]

(Reading database ... 69573 files and directories currently installed.)
Preparing to replace avrdude 5.11.1-1 (using avrdude_5.10-4_armhf.deb) ...
Unpacking replacement avrdude ...
Setting up avrdude (1:5.10-4) ...
Installing new version of config file /etc/avrdude.conf ...
Processing triggers for man-db ...
--2013-12-30 17:32:19--  http://project-downloads.drogon.net/gertboard/setup.sh
Resolving project-downloads.drogon.net (project-downloads.drogon.net)... 195.10.
226.169, 2a00:ce0:2:feed:beef:cafe:0:4
Connecting to project-downloads.drogon.net (project-downloads.drogon.net)|195.10
.226.169|:80... connected.
HTTP request sent, awaiting response... 200 OK
Length: 1870 (1.8K) [application/x-sh]
Saving to: `setup.sh'

100%[====================================>] 1,870       --.-K/s   in 0.003s

2013-12-30 17:32:20 (703 KB/s) - `setup.sh' saved [1870/1870]

Setting up Raspberry Pi to make it work with the Gertboard
and the ATmega chip on-board with the Arduino IDE.

Checking ...
  Avrdude: OK
  Arduino IDE: OK
Fetching files:
  boards.txt
  programmers.txt
  avrsetup
Replacing/updating files:
inittab: OK
cmdline.txt: OK
 boards.txt: OK
 programmers.txt: OK
All Done.
Check and reboot now to apply changes.

Restarting
3
2
1

Broadcast message from root@raspberrypi (pts/0) (Mon Dec 30 17:32:28 2013):
The system is going down for reboot NOW!
root@raspberrypi:/home/pi/Desktop/GrovePi/Script#
```
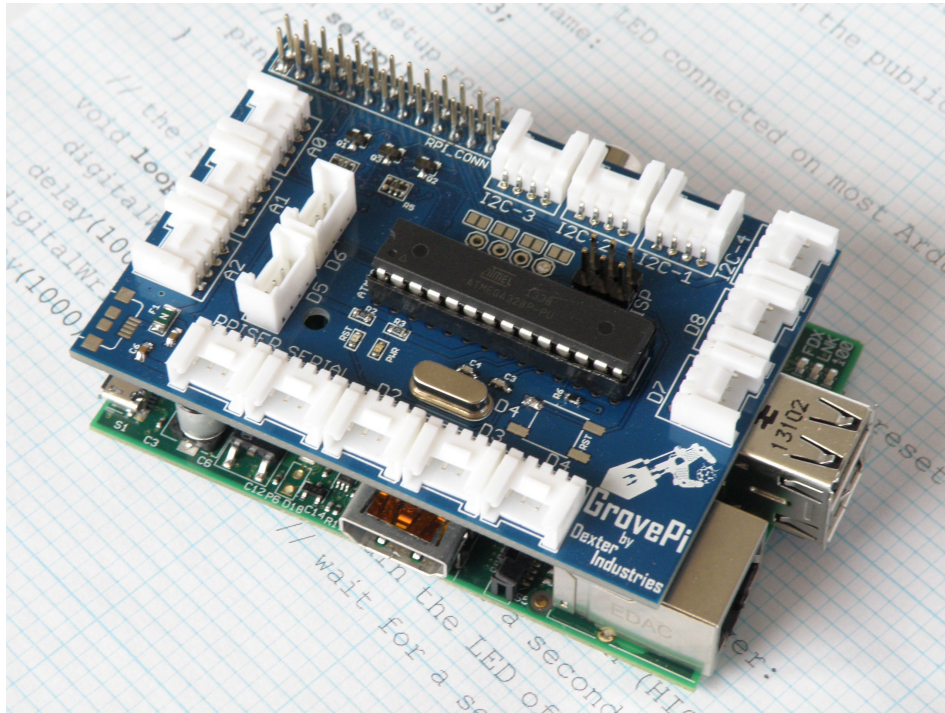
8.   Now when the Raspberry pi is powered down, stack the Grove Pi on top of the Raspberry Pi and power on the Raspberry Pi. A green light should power up on the Grove Pi. (Ensure that the pins are properly connected before powering the Raspberry Pi)

9. Now to check that the script was correctly installed. We will check that the Raspberry Pi is able to detect the Grove pi: run**i2cdetect**

```
sudo i2cdetect -y 1
```

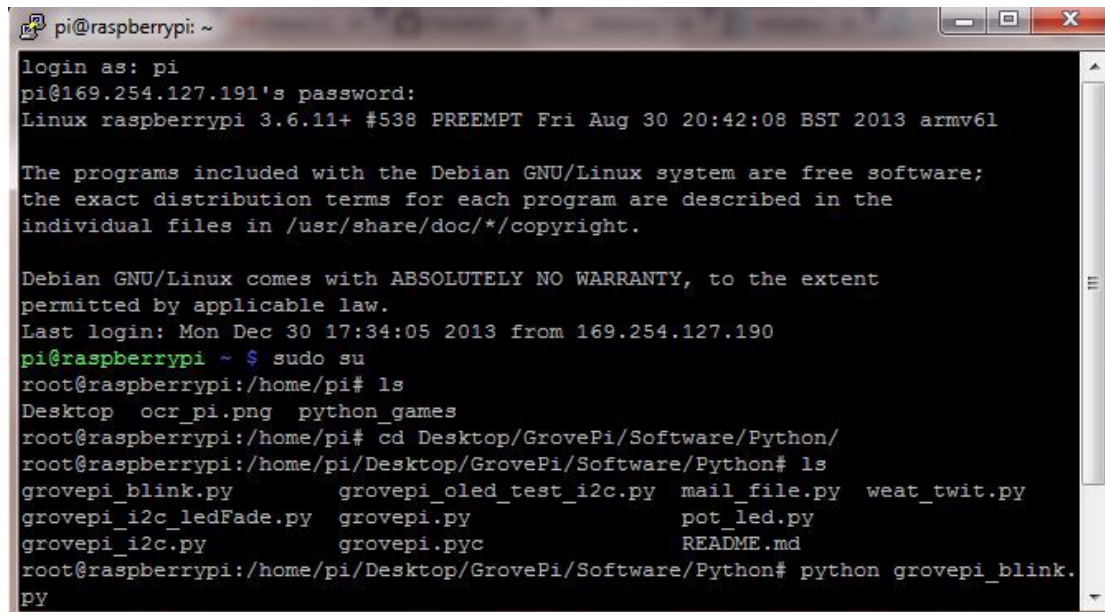If you have an Original Raspberry Pi (Sold before October 2012) – the I2C is port 0:

```
sudo i2cdetect -y 0
```

If you can see a "**04**" in the output, this means the Raspberry Pi is able to detect the GrovePi.

10. To test the Grove Pi, connect a Grove LED to port D4 and run the blink example

```
cd GrovePi/Software/Python
python grovepi_blink.py
```


If everything is installed correctly, the LED should start blinking.

Have a question or a problem?   Post it on the forums and we'll help you out.