

## Adafruit's Raspberry Pi Lesson 2. First Time Configuration

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```
Raspi-config
info          Information about this tool
expand_rootfs Expand root partition to fill SD card
overcan       Change overscan
configure_keyboard Set keyboard layout
change_pass   Change password for 'pi' user
change_locale Set locale
change_timezone Set timezone
memory_split  Change memory split
ssh           Enable or disable ssh server
boot_behaviour Start desktop on boot?
update        Try to upgrade raspi-config

                <Select>                <Finish>
```

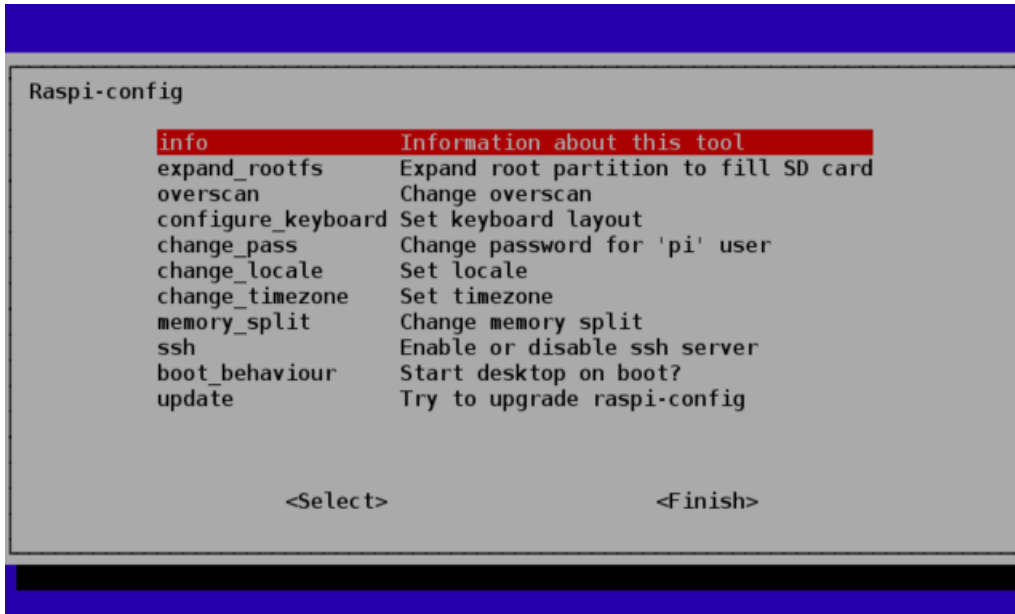
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## Overview

In the first lesson of this series, we showed you how to prepare an SD card containing an operating system for your Raspberry Pi. In this lesson, we will show you how to setup your Raspberry Pi the first time you boot it up.

A screenshot of the Raspi-config utility menu. The menu is displayed in a terminal window with a blue header and footer. The title "Raspi-config" is at the top left. A red bar highlights the "info" option, which is followed by "Information about this tool". Below this, a list of options is shown: "expand\_rootfs" (Expand root partition to fill SD card), "overscan" (Change overscan), "configure\_keyboard" (Set keyboard layout), "change\_pass" (Change password for 'pi' user), "change\_locale" (Set locale), "change\_timezone" (Set timezone), "memory\_split" (Change memory split), "ssh" (Enable or disable ssh server), "boot\_behaviour" (Start desktop on boot?), and "update" (Try to upgrade raspi-config). At the bottom, there are two options: "<Select>" and "<Finish>".

```
Raspi-config
info          Information about this tool
expand_rootfs Expand root partition to fill SD card
overscan      Change overscan
configure_keyboard Set keyboard layout
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ssh           Enable or disable ssh server
boot_behaviour Start desktop on boot?
update        Try to upgrade raspi-config

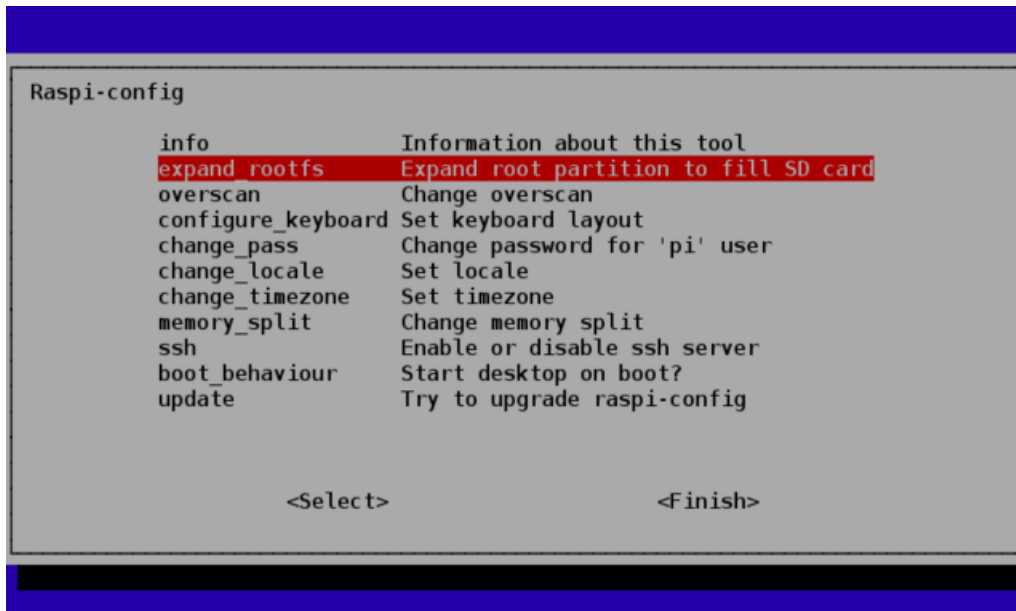
                <Select>                <Finish>
```

We do this using a tool called Raspi-Config that runs automatically the first time you boot your Raspberry Pi. This starts before the windowing system and so you have to use the cursor keys and Return key to navigate the menu system.

It is a bit like adjusting the BIOS settings on a PC, once you have things right, you probably won't need it again. We will start with the options that are most important and then look at some of the other options that you may wish to configure.

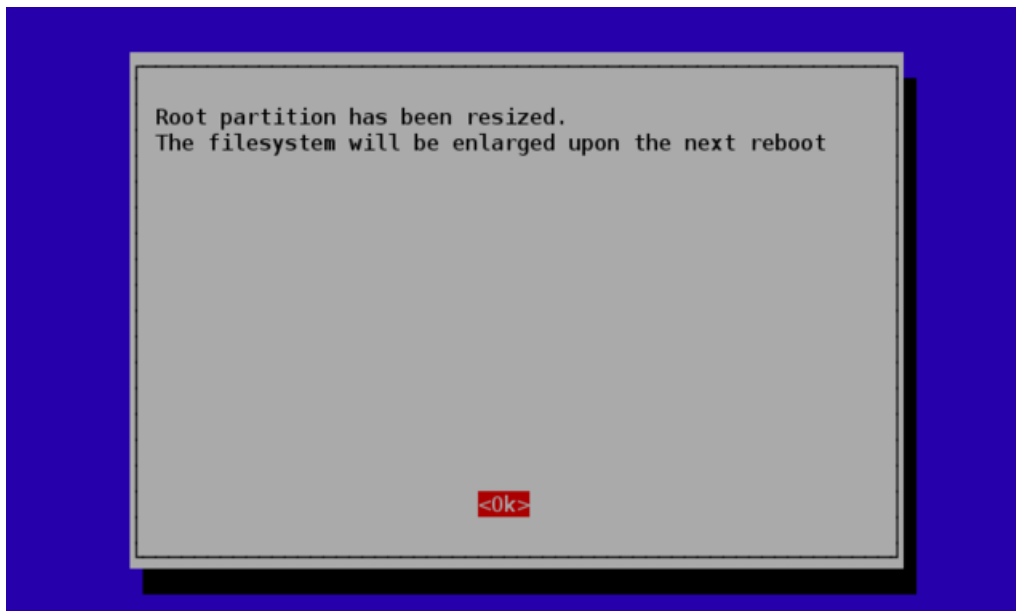
## Using the Whole SD Card

This may seem a bit strange, but by default the Raspberry Pi only uses as much of the SD card as the operating system requires. This means that even though you might have used a large SD card, the operating system won't use it.



To fix this so that all the space on the SD card can be used, use up / down cursor keys to select the 'expand\_rootfs' menu option and hit return.

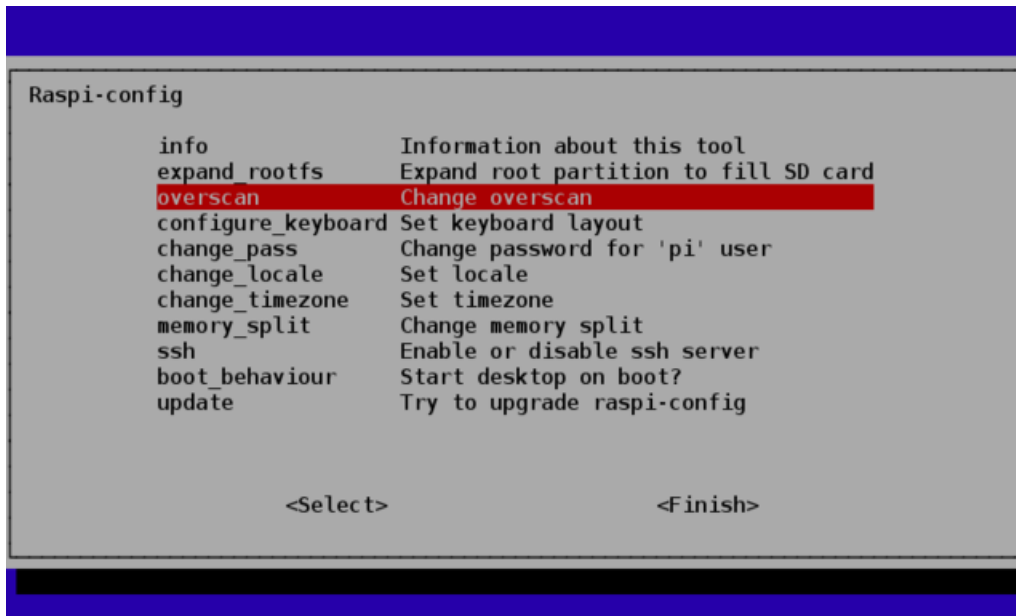
Once you do that, there will be some screen flashing as a script is run and then you will see the following confirmation.



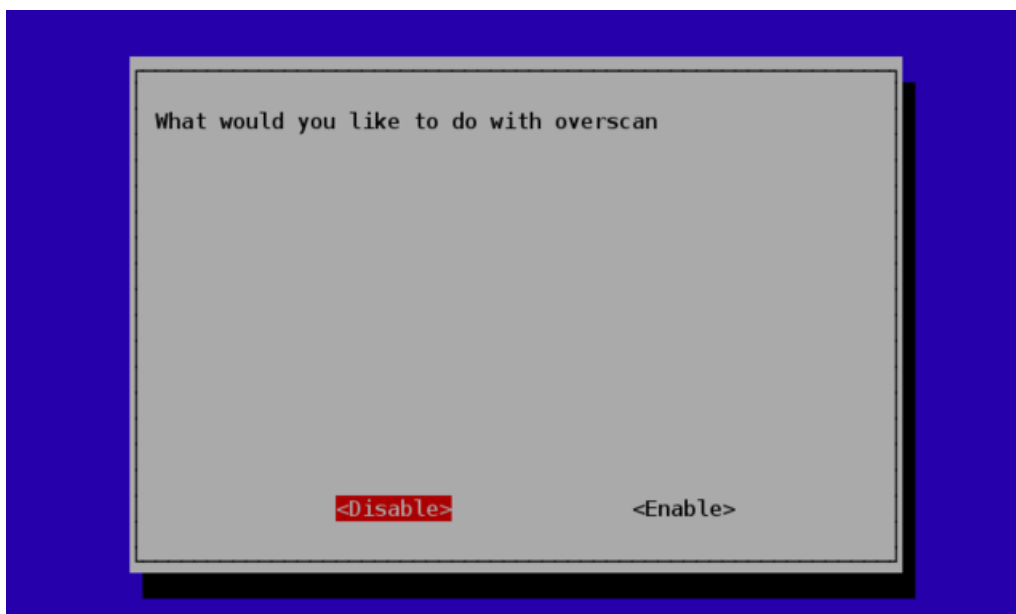
Press Return again to return to the main menu.

## Using the Whole Screen

Being designed to work with TVs, you may find that your Pi is only using the middle portion of the screen and there is a big unused area all round the screen.



This is not true of all TVs and monitors, but if it's happening for you then selecting the option to Disable Overscan may fix this for you.

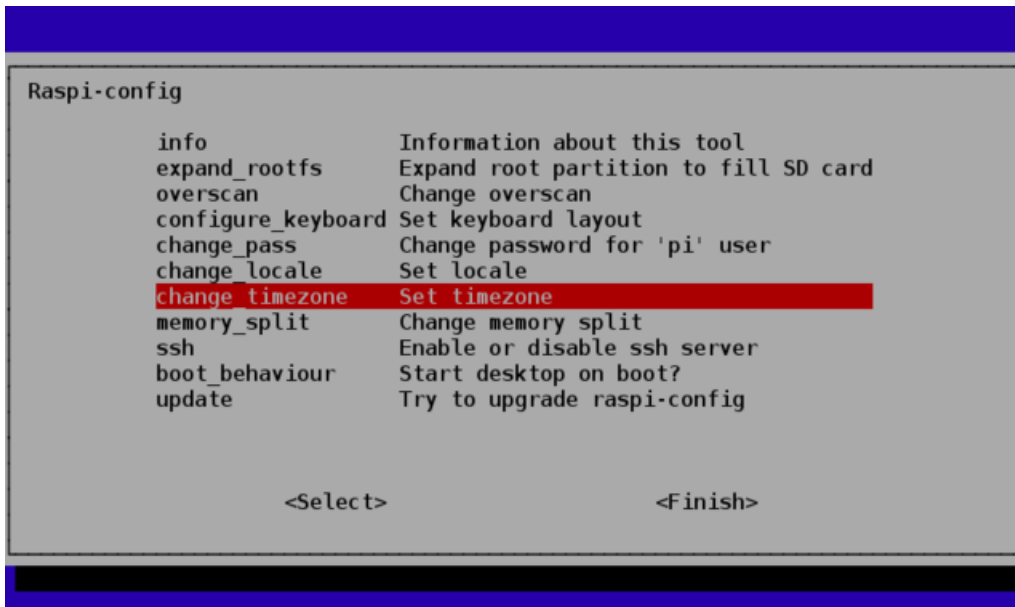


Use the left and right cursor keys to make your selection and then hit Return.

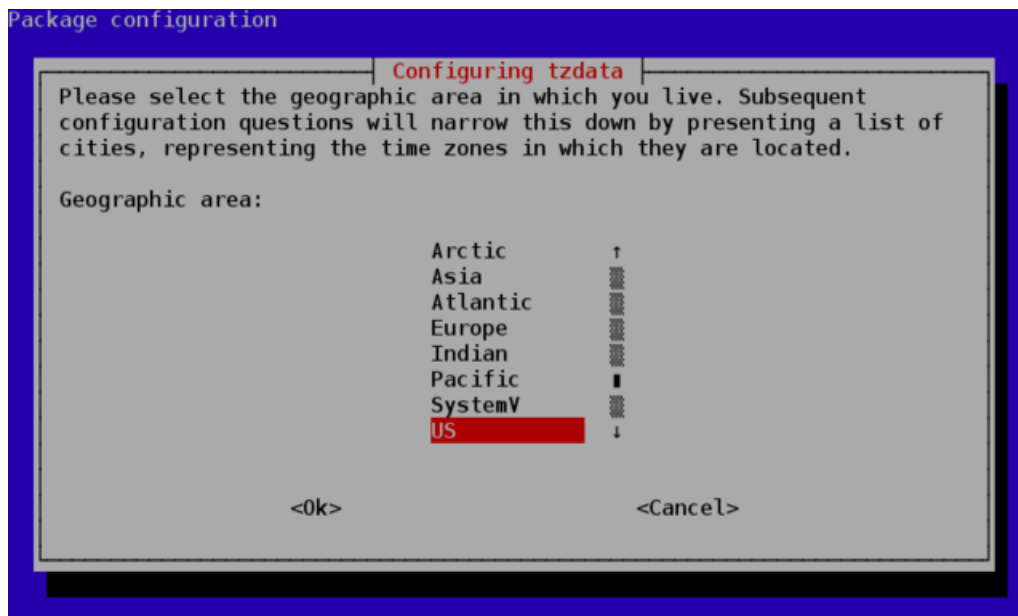
If after disabling overscan, you cannot see the left edge of the screen then see the section 'Running Raspi\_Config After Booting'.

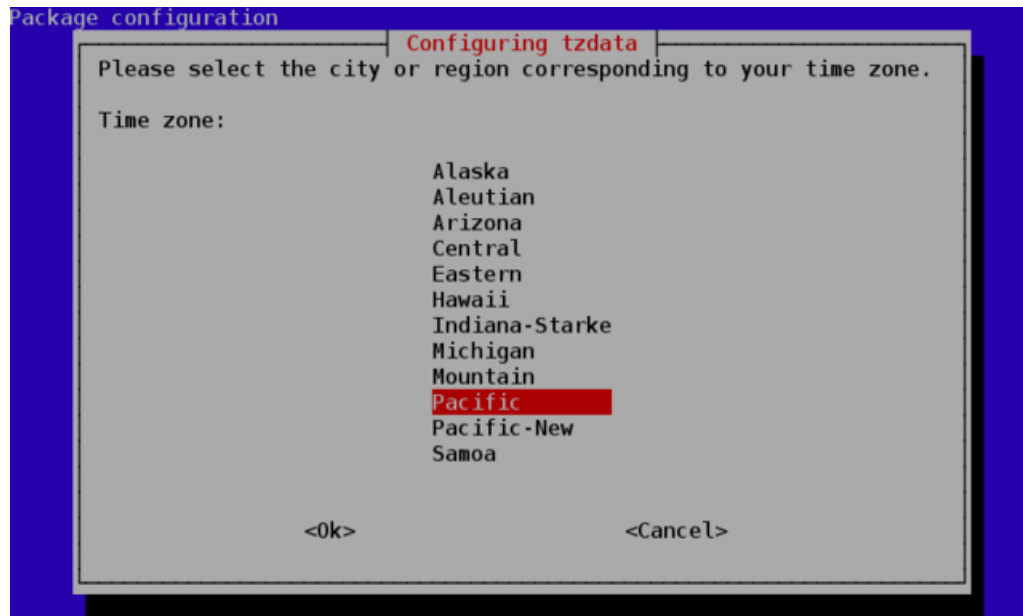
## Changing Timezone

Skipping past a few options for a moment, the next thing that you almost certainly need to do is (unless you live in the GMT timezone) is to change the timezone.



From the options, first select the Geographic Area, then the Timezone within that area.

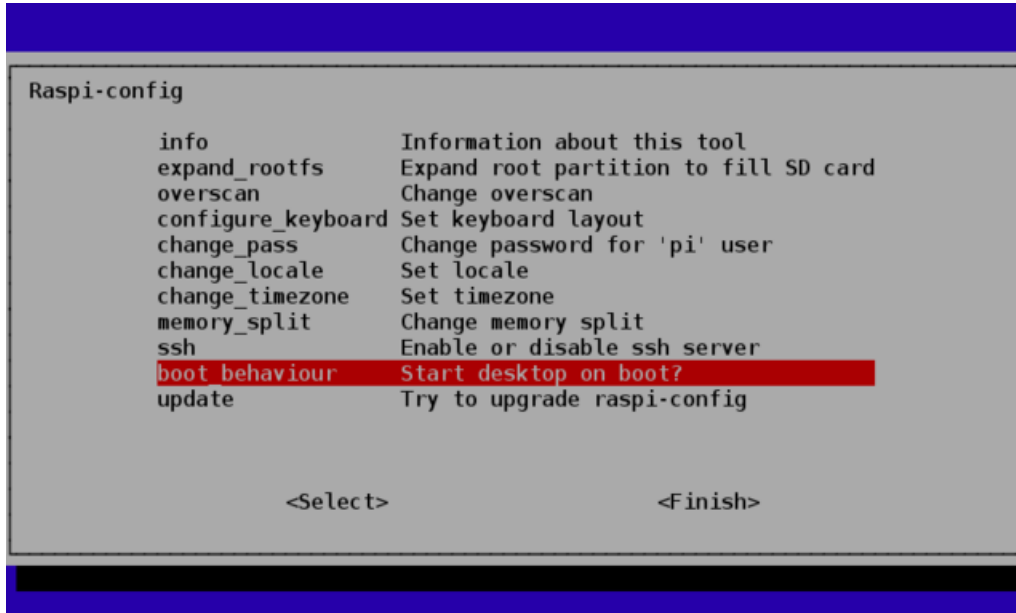




## Booting into Desktop

By default, when the Raspberry Pi boots, you just get a command line. No windows just a terminal where you can login and type commands.

The final configuration that you definitely want to make, unless you don't like windowing environments is to change the boot behaviour so that it automatically starts the windowing system and logs you in.



Select the sensible option and hit Return.





## Other Options

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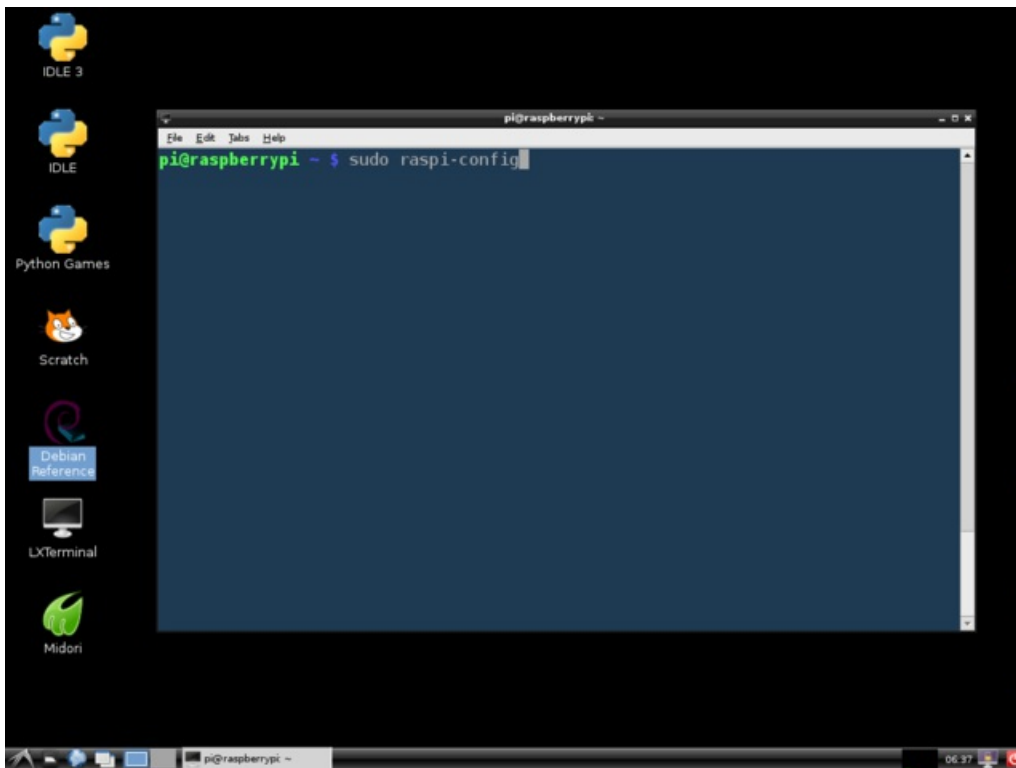
The options described above are those which could pretty much be considered essential when running your Raspberry Pi for the first time. There are some other options listed that are worth describing briefly.

- `configure_keyboard` – as it implies allows you to choose from a long list of keyboard layouts.
- `change_pass` – allows you to change the system password for the user 'pi' the default user on the system. By default, this password is 'raspberrypi' so those preoccupied with security may wish to change the password.
- `change_locale` – For non-English speakers, you can select which locales should be available on the system and which should be the default for the operating system.
  
- `memory_split` – allows you to adjust how much of the shared system memory is available for graphics and how much for the main processor. If you plan to run graphics hungry games, or video playback, then you may decide to alter these settings.
- `ssh` – in a later tutorial we will look at remote controlling your Pi from another computer using ssh. This option allows you to enable ssh so that you can do that.
  
- `update` – this option tries to find a newer version of `Raspi-Config` and download it. It is possible that new options will be added to the system in the future, so you may wish to do this.

## Running raspi-config After Booting

You can run `raspi-config` any time you like, if you find that there are some settings that you need to make.

Click on the desktop icon 'LXTerminal' to open a terminal session.

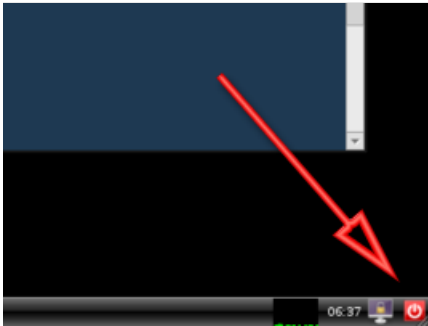


Then enter the following command and hit return:

```
sudo raspi-config
```

## Test & Configure

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Reboot your Pi – click the icon bottom right – and this time you should boot straight up into the windowing environment.

In the next tutorial, we will look at configuring WiFi and finding the IP address of your Pi.

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