

Raspberry Pi: Prepare Raspbian

Note: This assumes the previous [how-to on preparing the SD card](#) has been covered and Raspbian is already 'installed' on the SD card.

Booting Raspbian

- Simply insert the SD card and power up
 - It will take some time, but a Linux Desktop will appear on screen.
- Initial Configuration:
 - locale set to US
 - timezone changed to Asia/Kuala_Lumpur
 - keyboard layout set to US (English)
- Run update `sudo apt update` and upgrade "`sudo apt upgrade`" if necessary
 - if error occurs, most probably problem with the mirror (change to another mirror)

Getting the tools

- Get kernel headers (compiling loadable kernel module)
 - `sudo apt install raspberrypi-kernel-headers`
- To be able to compile codes that require sqlite
 - `sudo apt install sqlite3 libsqlite3-dev`
- To have web server with php
 - `sudo apt install apache2 php php-cgi libapache2-mod-php php-sqlite3`
 - edit `php.ini` to enable pdo support
 - enable `mod_rewrite` (create link in `mods-enabled` from `mods_available`)
 - look for `rewrite`
 - default path for web is `/var/www/html`
- I also want screen and ntfs-3g (ntfs with r/w)
 - `sudo apt install screen ntfs-3g`

Prepare for GUI Development

This is about doing GUI development while running Raspbian on Pi itself.

- install glade (will also get gtk library)
 - `sudo apt install glade`

Using Camera & Image Processing

- to access camera, load the Video4Linux kernel module
 - `sudo modprobe bcm2835-v4l2`
 - not needed if you enabled camera using Configuration Page

- install ffmpeg stuffs
 - `sudo apt install libavcodec-dev libavdevice-dev`
- if going for GTK
 - `sudo apt install libgtk2.0-dev`
- if going for SDL
 - `sudo apt install libsdl1.2-dev`

Get some codes

- Get my source codes (e.g. download everything @/home/pi/Work)

```
mkdir -pv /home/pi/Work && cd /home/pi/Work
git clone git://github.com/azman/mylcode/lib.git
git clone git://github.com/azman/mylwebapp.git
git clone git://github.com/azman/mylapisrv.git
git clone git://github.com/azman/mylinuxpi.git
git clone git://github.com/azman/myltermu.git
git clone git://github.com/my1matrix/mylgoose.git
```

- Obviously, we need git for this
 - `sudo apt install git`

Upgrading Installed Packages

To upgrade locally installed software:

- Update apt database

```
$ sudo apt update
```

- Upgrade local packages

```
$ sudo apt upgrade
```

If packages got held/kept back, simply reinstall those packages:

- Reinstall

```
$ sudo apt install --reinstall
```

Upgrading Raspbian Version

To do an upgrade (e.g. I did this to upgrade stretch to buster):

- Modify `/etc/apt/sources.list` and replace the release codenames (e.g. change stretch to buster)

- do the same for `/etc/apt/sources.list.d/*.list`
- Update package list

```
$ sudo apt update
```

- Upgrade distribution

```
$ sudo apt dist-upgrade
```

- Do house cleaning

```
$ sudo apt autoremove  
$ sudo apt clean
```

That should do it!

Making Pi Visible on Local Network

Note: *This is already in the default install.*

To make Pi hostname visible on local network, get avahi-daemon (default install)

- `sudo apt install avahi-daemon`
- this is part of Bonjour/Rendezvous/ZeroConf multicast DNS (aka mDNS) services
- change hostname as desired
 - use raspi-configuration tool
- clients need to support mDNS as well:
 - windows need [this](#)
 - linux require avahi (for slackers, [slackbuilds.org](#) got this)

From:

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