Penguinbookpro with Ubuntu 14.04

Ubuntu 14.04 LTS + MacOSX 1.5 + Win XP Pro, on a MacBookPro 5.5 laptop.

1.1. Triple boot 'Ubuntu 14.04 + MacOSX Leopard + Win XP Pro'

It took a while, but I finally managed to do it, which will allow using hardware with drivers for winXP only to work, such as the "Video to disc One Touch Recording" LG GSA-5169D.

Using rEFIt to boot the computer, WinXP to use the MBR, and Ubuntu to install biosgrub 1MB (different from the grub folder) on it's own root partition.

In general, see:

- https://help.ubuntu.com/community/MacBookPro5-5/Precise
- https://help.ubuntu.com/community/MacBookPro
- https://help.ubuntu.com/community/MacBook/TripleBoot

And also useful tips learned from:


1.1.1. Preliminary Notes

- Do not keep a 1Tb+ USB disk plugged to the computer while booting, since it might stop booting completely, with no error message.
- At Booting time:
  - Press "Alt" key to force showing the alternative booting media
  - Press "C" key to force booting from the CD rom
  - Press the left mouse button (or equivalent in the touch-pad) to force ejecting a CD while booting

1.1.2. Steps

Upgraded from Penguinbookpro with Ubuntu 12.04, installing Ubuntu-mate 14.04amd64-mac on the previous GNU/Linux partitions (/ and /home) on disk.

1.2. Ubuntu happy-path setup

At "System > Preferences > Mouse > Touchpad", enable the two-finger scrolling, as well as horizontal scrolling.

1.2.1. Enable Ubuntu Partners

First enable "partners" repos, since we will use it later to install adobe acrobat reader and skype, at least.

1.2.2. Extra repositories

Useful extra repositories

```
Command on a console
xavi@penguinbookpro:~$ sudo su
root@penguinbookpro:/home/xavi# add-apt-repository ppa:nilarimogard/webupd8
root@penguinbookpro:/home/xavi# add-apt-repository ppa:ubuntu-on-rails/ppa
root@penguinbookpro:/home/xavi# add-apt-repository ppa:danielrichter2007/grub-customizer
root@penguinbookpro:/home/xavi# add-apt-repository ppa:webupd8team/java
root@penguinbookpro:/home/xavi# add-apt-repository ppa:bit-team/stable
```
root@penguinbookpro:/home/xavi# add-apt-repository ppa: synapse-core/testing
root@penguinbookpro:/home/xavi# add-apt-repository ppa: jtaylor/keepass
root@penguinbookpro:/home/xavi# add-apt-repository ppa: marutter/rrutter
root@penguinbookpro:/home/xavi# add-apt-repository ppa: shutter/ppa
root@penguinbookpro:/home/xavi# add-apt-repository ppa: maarten-baert/simplescreenrecorder
root@penguinbookpro:/home/xavi# apt-add-repository ppa: x2go/stable
root@penguinbookpro:/home/xavi# add-apt-repository ppa: noobslab/apps

Press enter each time when requested.

After keys are imported, you can quit from the root session with "exit":

root@penguinbookpro:/home/xavi# exit
exit
xavi@penguinbookpro:/home/xavi#

Nowadays, you can update your sources list, and install launchpad-getkeys:

```
sudo apt-get update
dsudo apt-get install launchpad-getkeys
```

Launchpad-getkeys allows you to automatically import all the missing Launchpad GPG keys. Run the following command:

```
Command on a console
sudo launchpad-getkeys
sudo apt-get update
```

To use Launchpad Getkeys when you're behind a proxy:

```
sudo launchpad-getkeys -p http://proxydomain.com:port
```

1.2.3. Install with interaction

Install programs which require interaction, like a confirmation step, a new password or user interaction of some sort.

- mysql-server, for the webserver in localhost, etc.
- phpmyadmin, to manage mysql databases easily through a web browser
- apachetop, for monitoring Apache in real time
- ttf-mscorefonts-installer, required by other packages (PlayOnLinux, maybe?)
- acroread - Adobe Acrobat Reader (from 'Partners' repo), for the administration that require this closed source program to fill those complicated forms every now and then
  - missing (April 18th 2014)
- isight-firmware-tools, to have the drivers from the MacBookPro isight webcam, extracted to your Linux partition, so that your webcam can work out of the box.
  - You need first to fetch them from internet or from your MacOSX partition. See: https://help.ubuntu.com/community/MactelSupportTeam/AppleiSight#firmwareskip
  - You can download them from here[7], for instance. Extract it somewhere, and have the path info handy for the installation of the isight-firmware-tools later. In my case, the AppleUSBVideoSupport file was located at:
    /home/xavi/Progs_x_Instal_lar/Linux/isight-firmware-tools/AppleUSBVideoSupport

```
Command on a console
sudo apt-get install -y mysql-server phpmyadmin apachetop ttf-mscorefonts-installer isight-firmware-tools
```

1.2.4. Install the rest in one go

You can then install all the rest of the required and useful software for common tasks (including video editing, screencasting, etc). Note that the first package names until wcatalan are localization packages for our local language, and you can skip them or adapt
For your language, etc.

```
Command on a console

```

For Macs:

```
sudo apt-get install pommed
```

Other useful programs installed by hand in a later stage:

- rstudio
- nxclient
  - nxnode
  - nxserver
- chrome
- jitsi
- gdiskdump
- phpstorm
- acroread
- Google Chrome v34 (so that Java Plugin still works, because after v35 they stopped supported Java Plugin)
- canon scangear MG3200. See Canon PIXMA MG3200 Printer and Scanner

Also, "nvidia x server settings", through:

- "Software & Updates > Additional Drivers > NVIDIA Binary Driver 331.38"
  
  Click to expand

### 1.2.5. Synapse replacement while it's broken


```
sudo add-apt-repository ppa:kupfer-team/ppa && sudo apt-get update
sudo apt-get install kupfer
```

### 1.2.6. Fix webcam

Taken from: http://askubuntu.com/a/118201

Download AppleUSBVideoSupport driver file (e.g. dl.getdropbox.com/u/332246/AppleUSBVideoSupport) and place at –
sudo apt-get install isight-firmware-tools

Skip the prompt to immediately load the driver file.

cd ~
wget http://dl.getdropbox.com/u/332246/AppleUSBVideoSupport
sudo cp AppleUSBVideoSupport /lib/firmware/
sudo ift-extract -a /lib/firmware/AppleUSBVideoSupport
sudo nano /etc/default/acpi-support

Find MODULES and make it MODULES="isight_usb".

lsusb | grep -Po '(?=::)(\d+)(?=.*iSight)'

This outputs the product ID of your specific iSight USB device. Remember this number. Mine is 8507. The default Ubuntu driver seems to be hardcoded for 8300, which is a problem.

sudo nano /etc/udev/rules.d/isight.rules

Add (and be sure to replace the "8507" with your product ID.):

ACTION=="add", SYSFS{idVendor}=="05ac", SYSFS{idProduct}=="8507", RUN="/usr/lib/udev/ift-load --firmware /lib/firmware/isight.fw"

Shutdown/poweroff (not reboot or restart).

Reboot.

sudo apt-get install cheese; cheese

I've been using this fix for a couple weeks, and my webcam now reliably works across reboots and suspends. The bug seems to be caused by simply incorrect acpi and udev configurations.

1.2.7. Enable Encrypted DVD-playback

Ensure you have installed 'libdvdread4':

sudo apt-get install libdvdread4

Then run:

sudo /usr/share/doc/libdvdread4/install-css.sh

1.2.8. Other progs

Added tuxonice:
http://linuxg.net/how-to-install-tuxonice-on-ubuntu-13-04-12-10-12-04/[10]

Other programs installed and commands run:

sudo add-apt-repository ppa:tuxonice/ppa
sudo apt-get update
sudo apt-get install tuxonice-userui linux-generic-tuxonice linux-headers-generic-tuxonice
sudo ln -s /usr/lib/tuxonice-userui/tuxoniceui /usr/local/sbin/tuxoniceui_text

See also:

Cheese (webcam) works after the fix indicated in this page. 
SUSpending to RAM & Hibernating are disabled by default, but it is proven to work in this computer using TuxOnIce kernel, at least, after the Nvidia X Server settings binary driver has been installed. With the default Nouvau driver, I could never make suspend nor hibernate work. 
Improve Battery life & performance with:

Optionally:

1.2.9. Re-enable hibernation from menus 
First check if hibernation is compatible with your computer 
You should save all of your work before hibernating the computer, just in case something goes wrong and your open applications and documents cannot be recovered when you switch on the computer again. 
Run this in a console 
```bash 
sudo pm-hibernate 
```
Enter your password when prompted. 
After you computer turns off, switch it back on. Did your open applications re-open? 
If hibernate doesn't work, check if your swap partition is at least as large as your available RAM. 
If the hibernate test works, you can continue to use the sudo pm-hibernate command when you want to hibernate. 
You can also enable the hibernate option in the menus. To do that, use your favorite text editor to create 
```
/etc/polkit-1/localauthority/50-local.d/com.ubuntu.enable-hibernate.pkla 
```
Add the following to the file and save: 
```
[Re-enable hibernate by default] 
Identity=unix-user:* 
Action=org.freedesktop.upower.hibernate 
ResultActive=yes 
```
Alternatively, if the previous doesn't work for some reason, you can edit this file: 
```bash 
sudo gedit /var/lib/polkit-1/localauthority/10-vendor.d/com.ubuntu.desktop.pkla 
```
Search for the sections related to "hibernate", and set ResultActive=no to ResultActive=yes 
```
[Disable hibernate by default in upower] 
Identity=unix-user:* 
Action=org.freedesktop.upower.hibernate 
ResultActive=yes 
``` 
```
[Disable hibernate by default in logind] 
Identity=unix-user:* 
Action=org.freedesktop.login1.hibernate 
ResultActive=yes 
```

1.2.10. Add Java 6 or 7 (JRE) from Sun/Oracle 
If for some reason you need Java (jre) 6 or 7 from Sun (currently Oracle), because the openjdk doesn't work for you (if you want to
share your desktop with BigBlueButton, for instance, that doesn't seem to like the openjdk), you can add the proprietary java through external repositories.

For JRE 7 from Oracle, you can add the webupd8 repos

<table>
<thead>
<tr>
<th>Command on a console</th>
</tr>
</thead>
<tbody>
<tr>
<td>sudo add-apt-repository ppa:webupd8team/java</td>
</tr>
<tr>
<td>sudo apt-get update</td>
</tr>
<tr>
<td>sudo apt-get install oracle-java7-installer</td>
</tr>
</tbody>
</table>

Source: [http://www.webupd8.org/2012/01/install-oracle-java-jdk-7-in-ubuntu-via.html](http://www.webupd8.org/2012/01/install-oracle-java-jdk-7-in-ubuntu-via.html)[14]

If you need the earlier sun JRE 6 (keep in mind that you need a version like or higher than 1.6.0_23, because there were some known security holes with earlier versions):

<table>
<thead>
<tr>
<th>Command on a console</th>
</tr>
</thead>
<tbody>
<tr>
<td>sudo add-apt-repository ppa:flexiondotorg/java</td>
</tr>
<tr>
<td>sudo apt-get update</td>
</tr>
<tr>
<td>sudo apt-get install sun-java6</td>
</tr>
</tbody>
</table>

Source [http://www.ubuntuupdates.org/ppa/flexiondotorg_java_?dist=precise](http://www.ubuntuupdates.org/ppa/flexiondotorg_java_?dist=precise)[16]

### 1.2.11. Change the Java used by default

If you need to change the Java used by default, between OpenJDK & Sun/Oracle JRE, you must run:

```
sudo update-alternatives --config java
```

Then you can choose among the installed versions:

```
xavi@penguinbookpro:~$ sudo /usr/sbin/update-alternatives --config java
[sudo] password for xavi:
Hi ha 4 possibilitats per a l'alternativa java (que proveeix /usr/bin/java).

Selecció | Camí                                                                 | Prioritat | Estat                  |
----------|----------------------------------------------------------------------|-----------|------------------------|
0         | /usr/lib/jvm/java-7-oracle/jre/bin/java                              | 1062      | mode automàtic         |
1         | /usr/lib/jvm/java-6-openjdk-amd64/jre/bin/java                       | 1061      | mode manual            |
2         | /usr/lib/jvm/java-6-sun/jre/bin/java                                 | 63        | mode manual            |
* 3        | /usr/lib/jvm/java-7-openjdk-amd64/jre/bin/java                       | 1051      | mode manual            |
4         | /usr/lib/jvm/java-7-oracle/jre/bin/java                              | 1062      | mode manual            |

Premeu retorn per a mantenir l'opció per defecte[*], o introduïu un número de selecció: 0
update-alternatives: s'està emprant /usr/lib/jvm/java-7-oracle/jre/bin/java per a proveir /usr/bin/java (java) a "mode automàtic".

xavi@penguinbookpro:~$
```

### 1.2.12. Avoid issues in Java on Chrome 35+

Version 35 of Chrome changed something related to its plugins, and therefore, Java Plugin in GNU/Linux stopped working there. Solutions?

1. Stick with **Chrome 34**
   - [You can download Chrome 34 for GNU/Linux here](http://mirror.pcbeta.com/google/chrome/deb/pool/main/g/google-chrome-stable)[17]

2. Use Firefox instead.
1.2.13. Screencasts with simple-screen-recorder

Whether you’re wanting to make a video tutorial, capture an interface quirk for a bug report, or looking to show off your gaming prowess, there are a bunch of screen-recording tools available for Ubuntu.

While apps like GTK Record My Desktop and Kazam are popular they are not necessarily the best. Results can vary. Kazam in Ubuntu 14.04 is still quite buggy if you don’t use the default settings for everything, even if it looks a promising application.

The Qt-based SimpleScreenRecorder isn’t as well known as those above, and while it doesn’t reinvent the wheel, or redefine usability, what it does do it does well. Very well, in fact.

```bash
sudo add-apt-repository ppa:maarten-baert/simplescreenrecorder
sudo apt-get update && sudo apt-get install -y simplescreenrecorder
```

For more information, see:

http://www.maartenbaert.be/simplescreenrecorder/

See also Screencasts

1.2.14. Upgrade Apache to 2.4 and php to 5.5

For Tiki13+, you need php5.5, which requires Apache 2.4. Therefore you need to ensure that you have added two new repositories that didn’t come along with ubuntu 12.04 by default:

```bash
Command on a console
sudo add-apt-repository ppa:ondrej/apache2
sudo add-apt-repository ppa:ondrej/php5
```

In addition, if you had previous websites at the document root /var/www, you need to change the default document root in your new installation to keep using the same base folder:

```bash
Edit the /etc/apache2/sites-enabled/000-default.conf to leave this part like this
```

```bash
ServerAdmin webmaster@localhost
#       DocumentRoot /var/www/html
DocumentRoot /var/www
```

And restart apache:

```bash
Command on a console
sudo service apache2 restart
```

1.3. Install flash player

```bash
Command on a console
sudo apt-get install pepperflashplugin-nonfree
```

1.3.1. Add Acrobat Reader 9.x

By default you can get Adobe Acrobat 8.x in the repositories, as far as I see. But you can download 9.x version in English from Adobe website: http://get.adobe.com/reader/otherversions/

For instance, this version: AdbeRdr9.5.5-1_i386linux_enu_deb

For 32-bit system:

```bash
sudo dpkg -i ~/Downloads/AdbeRdr9.5.5-1_i386linux_enu.deb; sudo apt-get -f install
```
For 64-bit system:

The easier way to install Adobe Reader DEB on 64 bit Ubuntu is using Gdebi, which will automatically install all dependencies.

```
sudo dpkg -i --force-architecture AdbeRdr9.5.5-1_i386linux_enu.deb; sudo apt-get -f install
```

1.3.2. Edit PDFs

To edit pdf's easily with a GUI-based program, you have two options. See the instructions in the url's associated with each case:

1. "PDF Edit" (FLOSS, but apparently undocumented for Ubuntu 14.04)

2. "Master pdf editor"
   (http://code-industry.net/free-pdf-editor.php²⁴)

1.4. Backups

There are several options to create backups, mainly differing in the OS in which each program runs. Some nice options are the ones that run on a Live CD. Some of the more interesting ones:

Live CD:

- **REDO Live CD** (GUI of partclone).
  http://redobackup.org²⁵
  - That's the one I'm using to do some backups of the whole computer (partitions, mbr, etc) along the tri-boot setup (to avoid starting from zero if something fails at the end, or later on).

- **Clonezilla Live CD**
  http://clonezilla.org²⁶
  (text UI for partimage and others). It's the one I used at work to clone the dual-boot laptop, storing only sectors with information, and not the whole disk. **Unluckily, it doesn't work on my Macbookpro** (it's dreadfully slow, and never finished booting up, after 30 minutes...)

- **Mondo Rescue Live CD.**
  http://www.mondorescue.org²⁷
  We didn't use it (it's more than just a cloning disk, but a free disaster recovery software.

GNU/Linux:

- **Backintime, using rsync.**
  http://backintime.le-web.org²⁸
  Like the well known "Time Machine" from Mac OSX, but open sourced and for GNU/Linux.

- **Luckybackup**
  http://luckybackup.sf.net²⁹
  GUI to master all rsync power.

MacOSX:

- **Time Machine. Included in MacOSX**
- **CarboncopyCloner (freeware).** http://www.bombich.com³⁰

1.5. Add Mate desktop

Add the Ubuntu MATE PPAs and install the desktop.

```
sudo apt-get install python-software-properties software-properties-common
sudo apt-add-repository ppa:ubuntu-mate-dev/ppa
sudo apt-add-repository ppa:ubuntu-mate-dev/trusty-mate
sudo apt-get update
sudo apt-get install --no-install-recommends ubuntu-mate-core ubuntu-mate-desktop linux-firmware-nonfree
```
1.6. Older tips

1.6.1. Increase battery life

1.6.1.1. Jupiter

Jupiter is a light weight power and hardware control applet for Linux. It is designed to improve battery life of a portable Linux computer by integrating with the operating system and changing parameters of the computer based on battery or powered connection.


```
Command on a console
sudo add-apt-repository ppa:webupd8team/jupiter
sudo apt-get update
sudo apt-get install jupiter
```

1.6.1.2. TLP

TLP brings you the benefits of advanced power management for Linux without the need to understand every technical detail. TLP comes with a default configuration already optimized for battery life, so you may just install and forget it. Nevertheless TLP is highly customizable to fulfill your specific requirements.

http://www.webupd8.org/2013/04/improve-power-usage-battery-life-in.html
http://linrunner.de/en/tlp/docs/tlp-linux-advanced-power-management.html

```
Command on a console
sudo add-apt-repository ppa:linrunner/tlp
sudo apt-get update
sudo apt-get install tlp tlp-rdw
```

1.6.2. Use Lightum to use a daemon

(it doesn't seem to work with xfce out of the box)

https://github.com/poliva/lightum#lightum---macbook-automatic-light-sensor-daemon

```
sudo add-apt-repository ppa:poliva/lightum-mba
sudo apt-get update
sudo apt-get install lightum
```

1.6.3. Pair with the Apple Bluetooth Keyboard

See:

```
# We will start by getting the firmware
wget https://www.dropbox.com/s/xbmm9vfg2fby2zn/fw-04ca_2006.hcd
sudo cp fw-04ca_2006.hcd /lib/firmware/brcm/BCM43142A0-04ca-2006.hcd
sudo modprobe -r btusb
sudo modprobe btusb

# Then see if you can pair, if it doesn't pair edit question to include dmesg | tail from after the pairing attempt
```

Unsuccessful for me, so far

And trying also this one:
1.6.4. reset keyboard backlight manually

```bash
echo '5' > /sys/devices/pci0000:00/0000:00:02.0/backlight/acpi_video0/brightness
## this adjusts the screen backlight, the values range from 1 to 15.

echo '25' > /sys/devices/platform/applesmc.768/leds/smc::kbd_backlight/brightness
## this adjusts the keyboard brightness and ranges from 1 to 255.
```

1.6.5. NVidia Powermizer tweaks

See:

and

Other potential things to test:
Nvidiabl:
- https://github.com/guillaumezin/nvidiabl

1.6.6. Re-enable hibernate in xfce panels

See http://www.bio.brandeis.edu/~shaikh/linux/suspend.htm

```bash
sudo nano /etc/polkit-1/localauthority/50-local.d/com.ubuntu.desktop.pkla
```

Content to add:

```
[Re-enable hibernate by default]
Identity=unix-user:*
Action=org.freedesktop.upower.hibernate
ResultActive=yes
```

1.6.7. Solve gpg issues with BAD SIG

From: http://askubuntu.com/questions/127326/how-to-fix-missing-gpg-keys

For Ubuntu 12.04 Precise: Permanent solution
to this error message occurring after adding a new repository and updating repository list. This is due to a server which address is no more valid. So just change the address to a good one.

Open the file ~/.gnupg/gpg.conf with a text editor.

```bash
sudo nano ~/.gnupg/gpg.conf
```

then, in this file, find the following bold line (116th line) (which should be default as follow):

```
[...
keyserver hkp://keys.gnupg.net
# keyserver mailto:pgp-public-keys@keys.nl.pgp.net
# keyserver ldap://keyserver.pgp.com
[...
```

then add the following bold line, to finally give the following result:

(add # to the second line as follow to comment out the old address)

```
[...
```
Save the file

In terminal:

```bash
sudo rm /var/lib/apt/lists/* -vf
sudo apt-get upgrade
```

### 1.7. R packages

Some

R packages usually useful or needed, for things like PluginR[^44] or other needs.

```r
install.packages(c("stringr", "dplyr", "ggplot2", "rcharts", "tm", "sortableTables"))
```

### 1.8. Cron

Edited crontab for root to have weekly backups of critical files and folders in the computer.

#### 1.8.1. root user

Custom backups run with a clone of this backup script:


```bash
sudo crontab -e
```

Run the backup script in Wednesdays at 12:00h.

```bash
# m h  dom mon dow   command
00 12 * * 3 cd /home/xavi/scripts/;sh backup_manual_penguinbookpro.sh
```

#### 1.8.2. standard user

And the cron for the standard user (xavi, in my case) is this one below, set through Backintime GUI to backup daily my email data in a usbdisk:

Run the backup script in day at 11:00h.

```bash
xavi@penguinbookpro:~$ crontab -l
# m h  dom mon dow   command
#Back In Time system entry, this will be edited by the gui:
0 11 * * * /usr/bin/nice -n 19 /usr/bin/ionice -c2 -n7 /usr/bin/backintime backup-job >/dev/null
xavi@penguinbookpro:~$
```

### # Pending

Pending to test some new tricks described here:


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[^1]: https://help.ubuntu.com/community/MacBookPro5-5/Precise
[^2]: https://help.ubuntu.com/community/MacBookPro