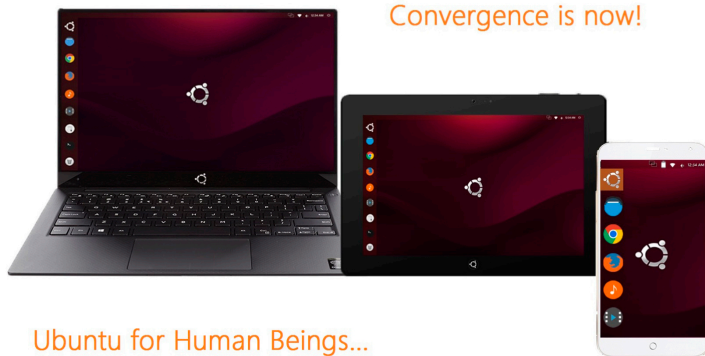


Ubuntu 16.04 LTS for Human Beans

This page collects information to have Ubuntu 16.04 LTS (Xenial Xerus) in a laptop or desktop as usable as possible for Human Beans willing to use it for production.



Ubuntu for Human Beings...

The leading OS for PC, tablet, phone and cloud!

1.1. Enable Ubuntu Partners

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

Contents of the updated `/etc/apt/sources.list`



```
## Uncomment the following two lines to add software from Canonical's
## 'partner' repository.
## This software is not part of Ubuntu, but is offered by Canonical and the
## respective vendors as a service to Ubuntu users.
deb http://archive.canonical.com/ubuntu xenial partner
deb-src http://archive.canonical.com/ubuntu xenial partner
```

1.2. Extra repositories

Useful extra repositories. You can fire them all in a single go once you have the sudo password in memory (i.e. you have called some command with sudo recently. That's why this list of commands includes some dummy `sudo ls` first, so that you type your password if needed, and afterwards, you are not interrupted with the rest of commands that will be executed automatically one after the other if you copied the whole list of lines together and pasted them in a terminal window:

Command on a console



```
sudo ls
sudo add-apt-repository -y ppa:nilarimogard/webupd8
sudo add-apt-repository -y ppa:danielrichter2007/grub-customizer
sudo add-apt-repository -y ppa:webupd8team/java
```

```
sudo add-apt-repository -y ppa:bit-team/stable
sudo add-apt-repository -y ppa:jtaylor/keepass
sudo add-apt-repository -y ppa:marutter/rutter
sudo add-apt-repository -y ppa:shutter/ppa
sudo add-apt-repository -y ppa:tuxonice/ppa
sudo add-apt-repository -y ppa:atareao/telegram
sudo add-apt-repository -y ppa:maarten-baert/simplescreenrecorder
sudo add-apt-repository -y ppa:yg-jensge/shotwell
sudo add-apt-repository -y ppa:philip5/extra
sudo add-apt-repository -y ppa:mkusb/ppa
sudo add-apt-repository -y ppa:hamishmb/myppa
sudo add-apt-repository -y ppa:utappia/stable
sudo add-apt-repository -y ppa:ubuntugis/ubuntugis-unstable # Needed for R package
tmap
sudo add-apt-repository -y ppa:opencpu/jq # Needed for R package tmap

# Add the release GPG keys for syncthing repo:
sudo curl -s https://syncthing.net/release-key.txt | apt-key add -
# Add the "release" channel to your APT sources for updated-twice-per-month
syncthing daemon:
sudo echo "deb https://apt.syncthing.net/ syncthing release" | tee
/etc/apt/sources.list.d/syncthing.list
```

Press enter each time when requested.

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



```
sudo apt-get update; sudo apt-get install -y launchpad-getkeys; sudo launchpad-
getkeys; sudo apt-get update
```

Launchpad-getkeys allows you to automatically import all the missing Launchpad GPG keys.

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



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

1.3. 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 mysqldatabases easily through a web browser
- apachetop, for monitoring apache in real time
- ttf-mscorefonts-installer, required by other packages (PlayOnLinux, maybe?)
- a few others like java, and network filesystem network packages

Command on a console



```
sudo apt-get install -y ttf-mscorefonts-installer nfs-common encfs libnss-winbind
winbind cifs-utils oracle-java8-installer libdvd-pkg
```

If you need a webserver & php/mysql:

Command on a console



```
sudo apt-get install -y mysql-server phpmyadmin apachetop postfix
```

1.4. Install the rest in program sets

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 wccatalan are localization packages for our local language, and you can skip them or adapt for your language, etc.

Command on a console



```
sudo apt-get install -y apt-show-versions backintime-common backintime-gnome
bluefish bluefish-plugins bum bzip-explorer cairo-dock cairo-dock-plug-ins cheese
chromium-browser classicmenu-indicator corkscrew create-resources cups-pdf diodon
filezilla firefox-locale-ca flashplugin-installer flvstreamer gdebi geany geany-
plugins gimp-plugin-registry gir1.2-gst-plugins-bad-1.0 git git-core glabels gnome-
alsamixer gnupg2 gparted grub2-splashimages grub-customizer gscan2pdf
gstreamer0.10-plugins-good gstreamer1.0-fluendo-mp3 gstreamer1.0-plugins-bad
gstreamer1.0-plugins-ugly gtk-recordmydesktop gufw guvcview gwenrename gwenview
handbrake hibernate htop hyphen-ca icatalan icc-profiles-free indicator-cpufreq
indicator-netspeed inkscape ispell kazam kde-l10n-ca kdenlive keepass2 keepass2-doc
kile kipi-plugins krename krusader kupfer language-pack-ca language-pack-ca-base
language-pack-gnome-ca language-pack-gnome-ca-base language-pack-kde-ca lftp
libcurl4-gnutls-dev libdbd-mysql libgstreamer-plugins-base0.10-dev libgtk2.0-dev
libmysqlclient-dev libreoffice-help-ca libreoffice-l10n-ca libsyntax-highlight-
engine-kate-perl linux-firmware luckybackup mailutils mc meld mobile-atlas-creator
```

```
mythes-ca nautilus-actions nautilus-columns nautilus-dropbox nautilus-scripts-
manager oggvideotools ogmrip ogmtools openjdk-8-jre openshot openshot-doc openssh-
server oxideqt-codecs p7zip p7zip-full p7zip-rar pavucontrol pdfchain pdfmod pdfsam
pepperflashplugin-nonfree pidgin pidgin-indicator pidgin-plugin-pack pidgin-skype
playonlinux povernap qemu-system qshutdown qtgstreamer-plugins-qt5 scribus scribus-
doc scribus-template sendemail shutter simplescreenrecorder sshfs synaptic
syncthing syncthing-gtk telegram telegram-purple terminator thunderbird
thunderbird-locale-ca totem-plugins totem-plugins-extra transmageddon ubuntu-
restricted-addons ubuntu-restricted-extras unetbootin unrar uswsusp variety virt-
manager virtualbox virtualbox-dkms vlc vpx-tools wcatlan webp wine winetricks
x2goclient xauth xfonts-100dpi xfonts-75dpi xfonts-base xsane xul-ext-lightning
gcolor2 gedit-plugins kio-mtp shotwell testdisk geeqie pyrenamer kwalletmanager
firefox libvdpau-va-gll soundconverter keychain mtp-tools mtpfs mkusb mkusb-nox
usb-pack-efi ddrescue-gui torbrowser-launcher icedtea-8-plugin pdfposter posterazor
youtube-dl youtube-dlg syslinux-utils ucaresystem-core alien pigz
```

And if you need R and similar developer programs, you can install also:

Command on a console



```
sudo apt-get install -y r-recommended r-cran-xml libgraphviz-dev libcairo2-dev r-
cran-cairodevice freeglut3 freeglut3-dev r-cran-rgl r-cran-rgl r-cran-misc3d
libx11-dev libxt-dev libcurl4-gnutls-dev libxml2-dev r-cran-xml libgraphviz-dev
libcairo2-dev bwidget tk-table libv8-dev r-cran-rjava libmpfr-dev libc6 libssl-dev
texlive-latex-extra texlive-lang-spanish libx11-dev libxml2-dev libxml2:i386 libxt-
dev r-cran-misc3d subversion git texmaker tk-dev unaccent xvfb libgdall-dev
libproj-dev r-cran-rmysql libmagick++-dev r-cran-rcolorbrewer r-cran-doparallel
libssh2-1-dev libudunits2-dev libgdal-dev libgeos-dev libproj-dev libjq-dev
libprotobuf-dev protobuf-compiler libssl-dev libcairo2-dev libglpk-dev
```

If you need webserver and other typical programs intended for servers, you can install this other set too:

Command on a console



```
sudo apt-get install -y php-sqlite3 postfix rabbitvcs-cli rabbitvcs-core
rabbitvcs-gedit rabbitvcs-nautilus rapidsvn subversion php-memcache php-gettext
php-intl php-mbstring php-pspell php-zip composer php-curl php-xmlrpc php-intl php-
mcrypt php5.6-curl php5.6-xmlrpc php5.6-intl php5.6-mcrypt php7.1-mcrypt php7.1-
curl php7.1-xmlrpc php7.1-intl php5.6-mysql php7.1-mysql poppler-utils php-
memcached memcached
```

If you want to have locale packages such as Catalan, you might be interested in installing these extra packages:

Command on a console



```
sudo apt-get install -y aspell-ca hunspell-ca
```

And for Spanish:

Command on a console



```
sudo apt-get install -y aspell-es hyphen-es ispanish language-pack-gnome-es  
myspell-es mythes-es wspanish
```

Removed packages from the list compared to Ubuntu 14.04 by the time of this writing (April 23rd, 2016), and the corresponding replacement with somewhat equivalent featureset in 16.04

- kdesvn -> rapidsvn | rabbitvcs (integrated in Nautilus)
- jitsi -> installed by hand from their website, v 2.8.x
- nautilus-open-terminal
- totem-plugins-dvb-daemon
- linux-firmware-nonfree
- gstreamer1.0-plugins-bad-multiverse -> gstreamer1.0-plugins-bad
- indicator-multiloader

Other useful programs installed by hand in a later stage:

- rstudio
- chrome
- jitsi
- gdiskdump
- phpstorm
- acroread
- canon scangear MG3200. See Canon PIXMA MG3200 Printer and Scanner
- "Master pdf editor"
<http://www.webupd8.org/2014/02/modify-pdf-files-in-linux-with-master.html>^[1]
(<http://code-industry.net/free-pdf-editor.php>^[2])
- elastic search
- skype

You can test email sending in the command line with:



```
echo testing | mail -s test_subject youremail@example.com
```

1.4.1. Main changes noticed for human beans

Good:

- Bluetooth works by default with most devices
- Battery icon displays battery info for connectd bluetooth devices using batteries (mouse, keyboard, etc)
- Icon to edit microphone volume levels shows up automatically on the top bar when the microphone is in use

Confusing:

- "USB startup creator" doesn't let you choose a persistent partition file when creating bootable usb disks with ubuntu distros.

1.4.2. R

1.4.2.1. R v3.4.x

Si empres R, et caldran paquets extra de sistema per a instal·lar alguns paquets d'R i eines habituals associades (git, svn, etc). Pots posar les dependències habituals amb:

Command on a console



```
sudo apt-get install -y r-recommended r-cran-xml libgraphviz-dev libcairo2-dev r-cran-cairodevice freeglut3 freeglut3-dev r-cran-rgl r-cran-rgl r-cran-misc3d libx11-dev libxt-dev libcurl4-gnutls-dev libxml2-dev r-cran-xml libgraphviz-dev libcairo2-dev bwidget tk-table libv8-dev r-cran-rjava libmpfr-dev libc6 libssl-dev texlive-latex-extra texlive-lang-spanish libx11-dev libxml2-dev libxml2:i386 libxt-dev r-cran-misc3d subversion git texmaker tk-dev unaccent xvfb libgdall-dev libproj-dev r-cran-rmysql libmagick++-dev r-cran-rcolorbrewer r-cran-doparallel libssh2-1-dev libudunits2-dev libgdal-dev libgeos-dev libproj-dev libjq-dev libprotobuf-dev protobuf-compiler libssl-dev libcairo2-dev dos2unix pandoc r-cran-rmio
```

Usual R packages that are useful in many cases. You can install them in an R console in a terminal (Type "R" in the terminal to launch the R console), or through RStudio command line:

Command on an R console



```
install.packages(c("devtools", "plotly", "Nozzle.R1", "VennDiagram", "stringr",  
"xml2", "parallel", "data.table", "doParallel", "xtable", "plyr", "dplyr",  
"reshape2", "rjson", "d3heatmap", "htmlwidgets", "googleVis", "doMC", "Rcmdr",  
"knitr", "checkpoint", "XLConnect", "sem", "rmarkdown", "relimp", "effects",  
"aplpack", "flexdashboards", "addinslist", "tidyverse", "magick", "webshot",  
"pacman", "officer", "flextable", "huxtable"))
```

{CODE}

1.4.2.2. R v3.5.x

Si necessites R 3.5.x en Ubuntu 16.04, pots afegir un repositori extra amb les següents de sota, després de llegir aquest advertiment:

Instruccions:

Command on a console



```
sudo apt-key adv --keyserver hkp://keyserver.ubuntu.com:80 --recv-keys  
E298A3A825C0D65DFD57CBB651716619E084DAB9  
sudo add-apt-repository 'deb https://cloud.r-project.org/bin/linux/ubuntu xenial-  
cran35/' # main binary packages for R 3.5.x  
sudo add-apt-repository -y ppa:marutter/c2d4u3.5 # extra binary packages for R  
3.5.x from the usual marruter repo  
sudo apt update  
sudo apt upgrade
```

Si estàs actualitzant des d'una versió d'R anterior, et poden ser útils aquestes instruccions de terminal de sistema:

Command on a console



```
sudo chmod 777 /usr/lib/R/site-library /usr/lib/R/site-library/* -R  
sudo chmod 777 /usr/lib/R/library /usr/lib/R/library/* -R  
sudo chmod 777 /usr/share/R/doc/html/* -R
```

I aquestes altres de consola d'R:

Command on an R console



```
update.packages(ask = F, lib="/usr/lib/R/site-library")
```

1.4.3. Install new php versions and switch between them

Ubuntu 16.04 comes with php 7.0, and some php applications might still fail with php 7.0 .Therefore, in some cases, it might be sensible to have both php 7.0 and php 5.x, so that you can choose which version to use for your needs at any time. Or even better, 7.1. You need to add a new repository to have other versions of php available, and you will require the equivalent branch for a patched apache2 that will work with the other php version repository.

You can do so with:



```
xavi@computer# sudo su
sudo add-apt-repository -y ppa:ondrej/php
sudo add-apt-repository -y ppa:ondrej/apache2
sudo apt-get update
sudo apt-get install php5.6 php5.6-mysql php-gettext php5.6-mbstring php-xdebug
libapache2-mod-php5.6 php5.6-curl php5.6-gd php5.6-mcrypt php5.6-xml php5.6-xmlrpc
libphp5.6-embed php-memcache php5.6-intl php5.6-zip php5.6-sqlite3
sudo install php7.1 php7.1-mysql php-gettext php7.1-mbstring php-xdebug libapache2-
mod-php7.1 php7.1-curl php7.1-gd php7.1-mcrypt php7.1-xml php-xml-parser php7.1-
xmlrpc libphp7.1-embed php-memcache php7.1-intl php7.1-zip php7.1-sqlite3
```

Installing both php5.6 & php7.1 resulted in a lot of complaining from apt and lots of conflicts. The first suggested resolution was to remove all the stock php5 packages so that PHP 5.6 could be installed - so I just accepted the first suggestion.

The config files are all in /etc/php/5.6 and /etc/php/7.1 respectively - inside here is where you can configure which extensions are loaded, set the ini settings, and everything else for each version in isolation.

So to switch from php 5.6 to php 7.1 you need to do two things:



```
sudo a2dismod php5.6; sudo a2enmod php7.1; sudo service apache2 restart # For php
in web apps
sudo ln -sf /usr/bin/php7.1 /etc/alternatives/php # For php-cli in the command
```

```
line
php -v
# PHP 7.0.6-1+donate.sury.org~xenial+1 (cli) ( NTS )
# Copyright (c) 1997-2016 The PHP Group
# Zend Engine v3.0.0, Copyright (c) 1998-2016 Zend Technologies
#   with Zend OPcache v7.0.6-dev, Copyright (c) 1999-2016, by Zend Technologies
#   with Xdebug v2.4.0, Copyright (c) 2002-2016, by Derick Rethans
```

or from php7.1 to php5.6:



```
sudo a2dismod php7.1 ; sudo a2enmod php5.6 ; sudo service apache2 restart # For php
in web apps
sudo ln -sfn /usr/bin/php5.6 /etc/alternatives/php # For php-cli in the command
line
php -v
# PHP 5.6.21-1+donate.sury.org~xenial+2 (cli)
# Copyright (c) 1997-2016 The PHP Group
# Zend Engine v2.6.0, Copyright (c) 1998-2016 Zend Technologies
#   with Zend OPcache v7.0.6-dev, Copyright (c) 1999-2016, by Zend Technologies
```

From the commandline, I have both php5.6 and php7.1 available as commands. I also still have a php command - look in /etc/alternatives to see that it symlinks to a particular version of PHP cli*. You can also quickly check which yours is using by running php -v.

Remember that php.ini and other files with settings are not in /etc/php5 anymore but in /etc/php/**version**/

1.5. PHP Debugger

You may use a nice (but closed source) IDE such as PHPStorm (which provides a version at no cost for FLOSS projects such as Tiki), or stick with pure FLOSS apps such as Aptana Studio IDE.

See:

- Download:
<http://www.aptana.com/products/studio3/download>^[3]
- Installation:
<http://linuxpitstop.com/install-aptana-studio-3-on-centos-and-ubuntu/>^[4]
- Setup XDebug for PHP applications
<http://digitaldisseny.com/es/blog/206-debug-php-aptana-ubuntu>^[5]
<http://devcircle.blogspot.com.es/2013/02/enable-xdebug-in-aptana-studio-3x.html>^[6]
- Add svn integration

<https://www.development-cycle.com/2013/09/installing-svn-support-in-aptana-studio-3/>^[7]

<http://majadc.com/installing-subversion-plugin-in-aptana-studio-3/>^[8]

1.6. PHPStorm for FLOSS development

You can install as a Snap app, as indicated here: <https://snapcraft.io/phpstorm>^[9]

Command in a terminal window



```
sudo snap install phpstorm --classic
```

1.7. Laptops

For laptops:



```
sudo apt install powertop tlp
```

For Macbook laptops:



```
sudo apt install gpomme wmpomme
```

For Battery saving - Suspend and Hibernate - Tuxonice Kernel



```
sudo apt-get install tuxonice-userui linux-generic-tuxonice linux-headers-generic-tuxonice
```

For hybrid graphic cards:

Intel + Nvidia:

Intel + ATI

fglrx-pxpress

1.7.1. Fixing battery drainage when switched off

Confirmed that problem still exists on a clean install from Ubuntu 13.04 up to 16.04 on a HP Pavillion dv6 i7. I installed the required program to fix the issue with:



```
sudo apt-get install ethtool
```

and we can check the "Wake on lan" current status with:



```
user@machine:~$ sudo ethtool eth0 | grep Wake-on
[sudo] password for user:
    Supports Wake-on: pumbg
    Wake-on: g
```

If under the option 'Wake-on:' it says anything other than '**d**' then it means this feature is enabled.

If it's enabled then on most occasions it'll say 'g' and you can use the below command to disable it.



```
sudo ethtool -s eth0 wol d
```

You may not have device **eth0** but **eno1** or similar (check using command `ifconfig` in the command line)

Then enter the previous command to who the status of 'Wake-on:' it should say '**d**'.

But the thing is, this setting will be lost as soon as you reboot your computer. So to make Ubuntu permanently save the changes, use the below steps.



```
gksudo gedit /etc/rc.local
```

Now simply copy and paste the below code into that newly opened configuration file (make sure to paste it above the 'exit 0' code).



```
ethtool -s eth0 wol d
```

Replace **eth0** for your own device name if it's different than this (in my case, it's **eno1**).

Since Ubuntu 12.04, you may do something else. Let's first copy the original script to the '/etc/pm ...' folder, as if we were to edit the file while keeping it on its original location, then it might get overwritten when your OS receives update. So for that, open the terminal window and enter the below command.



```
sudo cp /usr/lib/pm-utils/power.d/disable_wol /etc/pm/power.d
```

Now enter the below command to edit it.



```
gksudo gedit /etc/pm/power.d/disable_wol
```

Once opened locate a code called 'wol g' (you can search for it in the editor) as shown below then simply change the letter 'g' to 'd'.

```
set_wol_status() {
  for d in "/sys/class/net/*"; do
    [ -e "$d/wireless" ] && continue
    [ -h "$d/device/driver" ] || continue
    printf "Setting Wake On Lan for %s to %s..." "${d##*/}" "$1"
    case $1 in
      disable) ethtool -s "${d##*/}" wol d>/dev/null 2>&1;;
      enable) ethtool -s "${d##*/}" wol g>/dev/null 2>&1;;
    esac
    [ "$?" -eq 0 ] && echo Done. || echo Failed.
  done
}
```

Only change the letter 'g' to 'd', nothing more ...

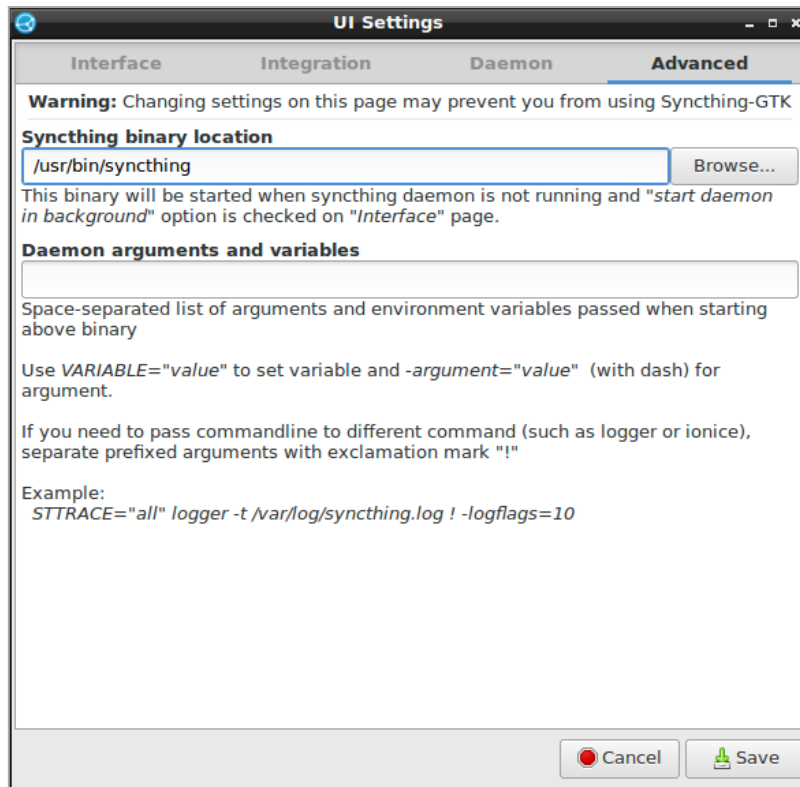
sh ▾ Tab Width: 8 ▾ Ln 15, Col

Then click on the 'Save' button and close the editor. Now reboot your PC and when you've logged into the desktop use the command `sudo ethtool eth0 | grep Wake-on` to know if it's working or not. If it's working, then under 'Wake-on', now it should say 'd' (= disabled).

1.8. Ensure Syncthing uses latest

daemon binary

Open syncthing-gtk UI, and update the syncthing daemon location to `/usr/bin/syncthing` if it doesn't get it from there by default, which will be v0.14.16 at the time of this writing .



Click to expand

Then restart the daemon to get the new and updated binary from the right path, in case you had a previous version of the daemon elsewhere (by default syncthing-gtk downloads a not-so-up-to-date version for you from elsewhere in this path: `/home/username/.local/bin/syncthing.x64`)

Otherwise, syncthing-gtk would download an earlier version of the daemon (for instance, v0.14.9 as of the time of this writing which is not compatible with the v0.14.14 of the daemon in the sync.evolutadata.com or Windows boxes at this time)

1.9. Fix hibernation

Trial 1

Taken from: <http://ubuntuforums.org/showthread.php?t=2314905>^[10]

With the new systemd configuration, the Unity menu's "hibernate" option does not call on pm-hibernate. It instead uses the hibernate and sleep service of logind / systemd. I'm using a tuxonice kernel, and the tlp power management setup on a thinkpad w520, running Ubuntu 16.04 (devel). I think this article is still relevant even if you don't have tlp or tuxonice, since it's systemd that changes how suspend and hibernate work.

When this laptop suspends or hibernates, sometimes the wifi stops working when it wakes back up. The solution is to unload the wifi device driver module prior to sleep, and then reload it upon

resume, the way the "hibernate" script does, and "pm-hibernate" also did.



```
/etc/systemd/system/wifi-modules-unload-reload.service
```

Contents of the previous file



```
# Unload and reload the wifi modules over suspend / resume.

[Unit]
Description=WIFI modules unload/reload over suspend/resume
Before=sleep.target
StopWhenUnneeded=yes

[Service]
Type=oneshot
RemainAfterExit=yes
ExecStart=/sbin/modprobe -r iwldvm
ExecStop=/sbin/modprobe iwldvm

[Install]
WantedBy=sleep.target
```

The other problem I had was that, using tuxonice, the user ui program was not visible during the hibernation process. I fixed this with:



```
sudo nano /etc/systemd/system/tuxonice-vtswitch.service
```

Contents of the previous file



```
# Switch vt for tuxonice UI

[Unit]
Description=Switch VT for tuxonice UI
Before=sleep.target
StopWhenUnneeded=yes

[Service]
Type=oneshot
```

```
RemainAfterExit=yes
ExecStart=/bin/chvt 63 ; /bin/sh -c "/bin/echo -ne '\033%@' > /dev/tty63"
ExecStop=/bin/chvt 7

[Install]
WantedBy=sleep.target
```

Enable them with:



```
sudo systemctl enable wifi-modules-unload-reload.service
sudo systemctl enable tuxonice-vtswitch.service
```

This worked well in the macbookpro laptop from 2008.

Trial 2

If the previous trick doesn't work (like in a hp laptop with dual graphics card), try this other one:
[https://www.youtube.com/watch?v=l8xa-PkDhhk^{\[11\]}](https://www.youtube.com/watch?v=l8xa-PkDhhk)



```
sudo gedit /etc/default/grub

GRUB_CMDLINE_LINUX_DEFAULT="quiet splash'"

to

GRUB_CMDLINE_LINUX_DEFAULT="quiet splash acpi_backlight=vendor acpi_osi='!Windows
2013' acpi_osi='!Windows 2012'"

sudo update-grub
reboot twice!!
```

However, this didn't work for me. Hibernation or suspending fails in that computer with dual graphics card (ati + intel)

1.10. 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



```
sudo pm-hibernate
```

Enter your password when prompted.

After your 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



```
sudo nano /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:



```
sudo nano /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
```

Re-enable hibernate in xfce panels

See <http://www.bio.brandeis.edu/~shaikh/linux/suspend.htm>^[12]



```
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
```

1.11. Boot-repair (in multi-boot environments)

These instructions will save you some headache in a multi-boot environment when one OS changes the boot menu and doesn't allow you boot in your preferred OS. You can boot from an Ubuntu live CS/DVD/USB, and install boot-repair program from its own repo, with:



```
sudo add-apt-repository ppa:yannubuntu/boot-repair
sudo apt-get update
sudo apt-get install -y boot-repair && boot-repair
```

More information:

<https://help.ubuntu.com/community/Boot-Repair>^[13]

1.12. Add mate desktop

From: <http://ubunlog.com/ya-disponible-mate-1-12-1-para-ubuntu-15-10-y-16-04-lts/>^[14]

Command on a console



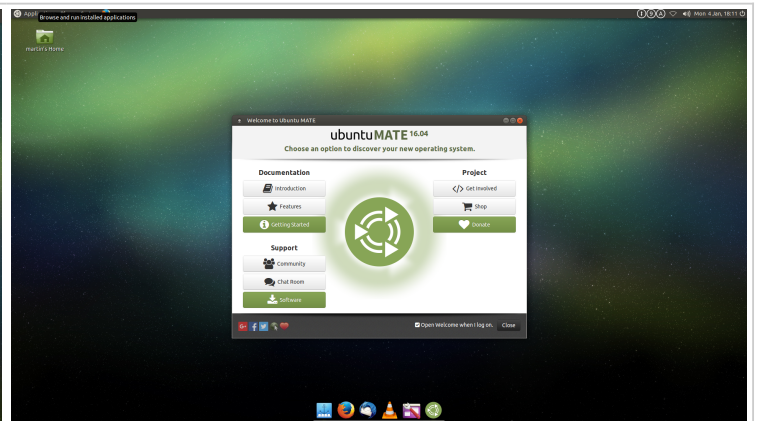
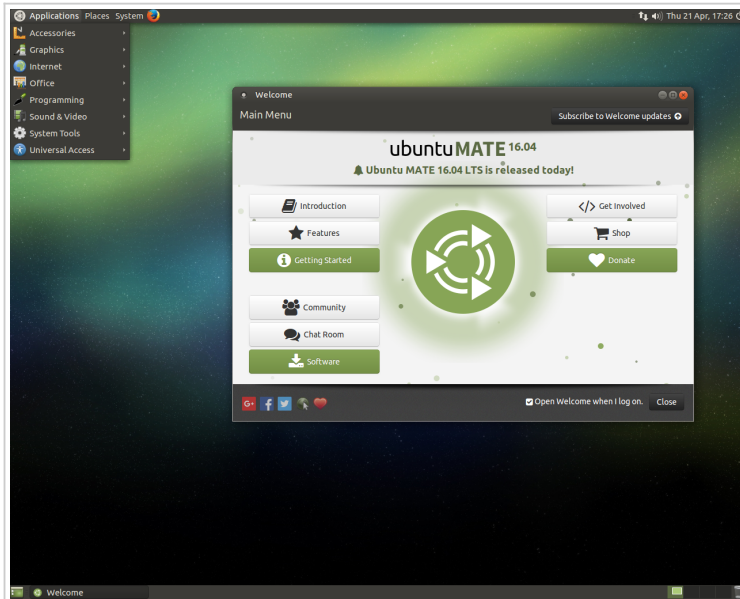
```
sudo add-apt-repository ppa:ubuntu-mate-dev/xenial-mate
sudo apt-get update
sudo apt-get install mate-core mate-desktop-environment mate-desktop-environment-
extras mate-dock-applet
```

If you need to remove it for some reason and reverse the system to its previous state, do:

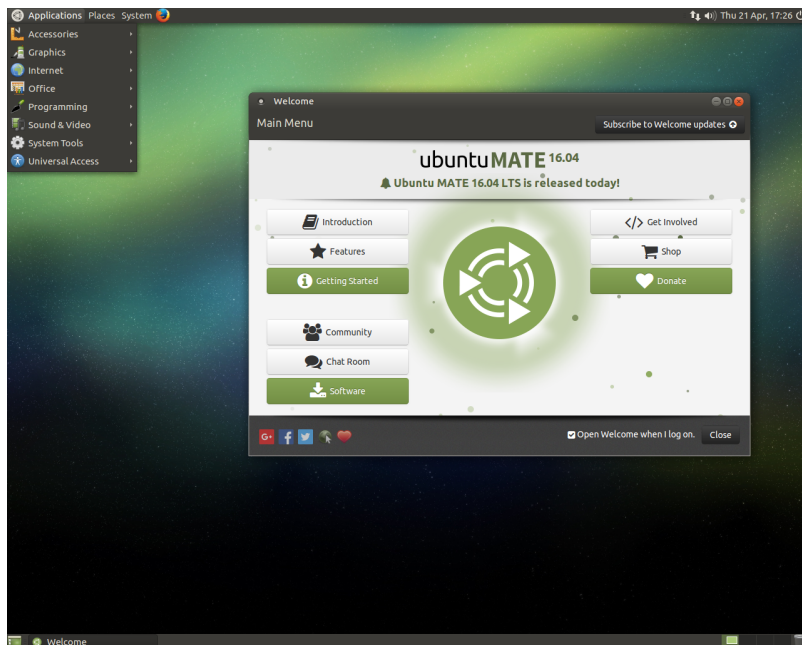
Command on a console



```
sudo apt-get install ppa-purge
sudo ppa-purge ppa:ubuntu-mate-dev/xenial-mate
```



Just a test if it renders the image in PDF if it is out of the table:



1.13. 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/>^[15]

For instance, this version: `AdbeRdr9.5.5-1_i386linux_enu.deb`^[16]

For 32-bit system:



```
sudo dpkg -i 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
```

1.14. Sign PDFs

You can Sign PDF documents with PortableSigner, a small Java app that does the job effectively: add the digital signature that can be recognized with Adobe Reader, and it can also place an extra page with a block of text (and you graphical signature as png/jpg in addition if desired) indicating that the document has been digitally signed by a method recognized by Adobe, and you can check the digital

signature by means of opening in Adobe Reader the source pdf from that printed document.

See:

<https://sourceforge.net/projects/portablesigner/>^[17]

1.15. Pair Bluetooth devices

Most devices work by default with standard procedures since the upgrade to Ubuntu 16.04 (they didn't in Ubuntu 14.04).

But Apple Bluetooth Keyboard seems to fail (since Ubuntu Jaunty in 2009, according to some posts elsewhere). I dream to find some valid workaround...



```
xavi@penguinbookpro:~$ hcitool scan
Scanning ...
        00:C0:DF:01:62:22      Targus Bluetooth Laser Mouse for Mac (AMB08)
        00:22:41:DD:36:4B      n/a
```

My solution was to buy a new bluetooth keyboard with backlight in the keys, for ~ 30€ in Amazon. It works as is with default procedures. And the battery icon in the top bar of the desktop also displays the battery status of the bluetooth devices (nice!): mouse, keyboard, ... aside of the klaptop battery.

1.16. Tweaks to run Tiki Wiki CMS

Allow runing mod rewrite in Apache

1.16.1. Fix apache2.4 default settings to run Tiki

Edit `/etc/apache2/sites-enabled/000-default`

and change docroot from `/var/www` to `/var/www/tiki` or your custom path, AllowOVERRIDE from None to All, and ensure that the syntax to allow access to override `.htaccess` file is set with the syntax for Apache 2.4 ("Require all granted") and not with the former one for Apache2.2 ("Order allow,deny" and "Allow from all")

The file should be left as like:



```
root@coprinus:~# cat /etc/apache2/sites-enabled/000-default.conf
<VirtualHost *:80>
    ServerAdmin webmaster@localhost
```

```

DocumentRoot /var/www/html
<Directory />
    Options FollowSymLinks
    AllowOverride None
</Directory>
<Directory /var/www/html/>
    Options Indexes FollowSymLinks MultiViews
    AllowOverride All
#Order allow,deny
#Allow from all
Require all granted
</Directory>

ScriptAlias /cgi-bin/ /usr/lib/cgi-bin/
<Directory "/usr/lib/cgi-bin">
    AllowOverride None
    Options +ExecCGI -MultiViews +SymLinksIfOwnerMatch
    Order allow,deny
    Allow from all
</Directory>

ErrorLog ${APACHE_LOG_DIR}/error.log

# Possible values include: debug, info, notice, warn, error, crit,
# alert, emerg.
LogLevel warn

CustomLog ${APACHE_LOG_DIR}/access.log combined

Alias /doc/ "/usr/share/doc/"
<Directory "/usr/share/doc/">
    Options Indexes MultiViews FollowSymLinks
    AllowOverride None
    Order deny,allow
    Deny from all
    Allow from 127.0.0.0/255.0.0.0 ::1/128
</Directory>

</VirtualHost>

```

enable also the mod rewrite in Apache

commands in a console



```
sudo a2enmod rewrite
sudo service apache2 restart
```

1.16.2. Install elasticsearch 5.x from repos

See:

<https://www.elastic.co/guide/en/elasticsearch/reference/5.0/deb.html#deb-repo>^[18]

Commands on a console:



```
wget -q0 - https://artifacts.elastic.co/GPG-KEY-elasticsearch | sudo apt-key add -
sudo apt-get install apt-transport-https
echo "deb https://artifacts.elastic.co/packages/5.x/apt stable main" | sudo tee -a
/etc/apt/sources.list.d/elasticsearch-5.x.list
sudo apt-get update && sudo apt-get install elasticsearch
```

Ubuntu 16.04 uses systemd, as it can be queried with:



```
ps -p 1
```

Running Elasticsearch with systemd

To configure Elasticsearch to start automatically when the system boots up, run the following commands:



```
sudo /bin/systemctl daemon-reload
sudo /bin/systemctl enable elasticsearch.service
```

Info provided in the console standard output:



Synchronizing state of elasticsearch.service with SysV init with /lib/systemd/systemd-sysv-install...

Executing /lib/systemd/systemd-sysv-install enable elasticsearch

Created symlink from /etc/systemd/system/multi-user.target.wants/elasticsearch.service to /usr/lib/systemd/system/elasticsearch.service.

Elasticsearch can be started and stopped as follows:



```
sudo systemctl start elasticsearch.service
sudo systemctl stop elasticsearch.service
```

These commands provide no feedback as to whether Elasticsearch was started successfully or not. Instead, this information will be written in the log files located in `/var/log/elasticsearch/`.

By default the Elasticsearch service doesn't log information in the systemd journal. To enable journalctl logging, the `--quiet` option must be removed from the `ExecStart` command line in the `elasticsearch.service` file.

When systemd logging is enabled, the logging information are available using the journalctl commands:

To tail the journal:



```
sudo journalctl -f
```

To list journal entries for the elasticsearch service:



```
sudo journalctl --unit elasticsearch
```

To list journal entries for the elasticsearch service starting from a given time:



```
sudo journalctl --unit elasticsearch --since "2016-10-30 18:17:16"
```

Check `man journalctl` or <https://www.freedesktop.org/software/systemd/man/journalctl.html>^[19] for more command line options.

1.16.2.1. Install also kibana 5.x from repos

See:

- <https://www.elastic.co/guide/en/kibana/5.0/install.html>^[20]
- <https://www.elastic.co/guide/en/kibana/5.0/deb.html>^[21]

If you don't have that yet, see above to get the gpg-key, the apt-transport-https package and the repository url.

Commands on a console:



```
sudo apt-get install elasticsearch
```

Running Kibana with systemd

To configure Elasticsearch to start automatically when the system boots up, run the following commands:



```
sudo /bin/systemctl daemon-reload
sudo /bin/systemctl enable kibana.service
```

Info provided in the console standard output:



*Synchronizing state of kibana.service with SysV init with /lib/systemd/systemd-sysv-install...
Executing /lib/systemd/systemd-sysv-install enable kibana*

Kibana can be started and stopped as follows:



```
sudo systemctl start kibana.service
sudo systemctl stop kibana.service
```

These commands provide no feedback as to whether Kibana was started successfully or not. Instead, this information will be written in the log files located in `/var/log/kibana/`.

1.17. Connect remotely using X2Go server

Coprinus usually gets local IP: 192.168.1.133 from eth0 (and 192.168.1.131 or another one from wlan when used instead)

Since Freenx doesn't seem to be easily installable in Ubuntu 14.04 servers (at least up to the time of this writing). Therefore, we can use an open-source equivalent alternative, called **x2go** (x2goserver and x2goclient), which is maintained for GNU/Linux based servers, and with supported clients for GNU/Linux, Mac and Windows.

Quick howto to turn your machine into an X2Go server:



```
sudo apt-get install python-software-properties
sudo apt-add-repository ppa:x2go/stable
sudo apt-get update
sudo apt-get install x2goserver x2goserver-xsession
sudo apt-get install x2gomatebindings # if you use MATE/mubuntu
sudo apt-get install x2golxdebindings # if you use LXDE/lubuntu
```

You also need to install some desktop environment which is supported by X2Go by default, and in our case, we will install one of the lightest desktops possible: **LXDE** (see <http://wiki.x2go.org/doku.php/doc:de-compat>^[22] for the full list)



```
sudo apt-get install -y lxde
```

Notes:

- Remember to install x2goclient in the client computer in order to connect to the server accordingly.



```
sudo apt-get install x2goclient
```

1.18. Multiple USB Writing

From: <https://www.howtoforge.com/tutorial/multiple-usb-writing-on-linux/>^[23]

1.18.1. Writing an ISO on multiple USBs

To write an ISO image file on multiple USB drives simultaneously, you will need the software that is named “MultiWriter”. Ubuntu users will find it in their default repositories with the package name “gnome-multi-writer”.



```
sudo apt install gnome-multi-writer
```

1.18.2. Writing multiple images on one USB

(a.k.a. "Multi-boot USB disk")

If you want to write multiple ISO images on one USB in order to have the capacity to boot into a selection of systems by using the same pen drive, you can do it with a tool called "MultiSystem", or with another one called multiboot.

Using multisystem

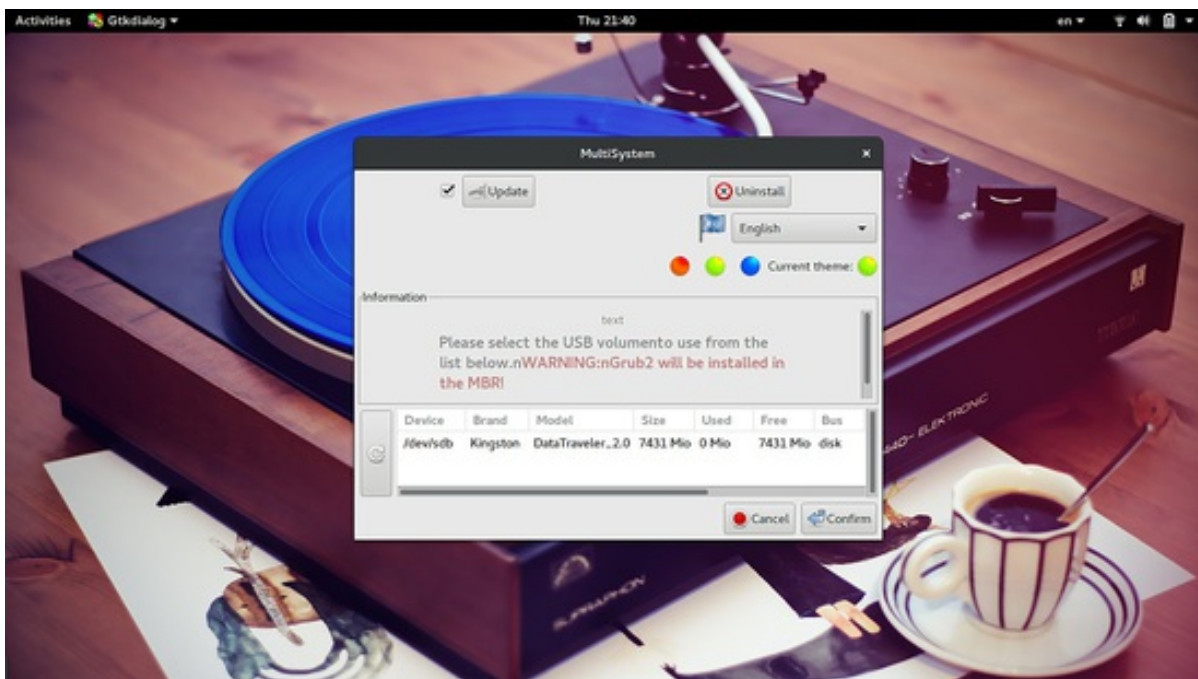
Add the corresponding repository by entering the following commands on the terminal:



```
sudo add-apt-repository 'deb http://liveusb.info/multisystem/depot all main'  
sudo launchpad-getkeys  
sudo apt update  
sudo apt install multisystem
```

Open the application and select the device from the list below. Note that the device must be mounted at "/media" and its filesystem must be "FAT32" in order for multisystem to detect it properly.

MultiSystem started



On the first tab of the application's menu, you may add your image files one by one. Just hit the

green arrow button and a file manager window will let you navigate your local files.

Add image file in MultySystem

Next, you may select the “Menus” tab which is basically a Grub configurator. It will allow you to set up the grub.cfg configuration file set the colors and background image of the bootloader and compile the menu list.

Grub Configurator

Other options include the use of non-free components like the PLoP boot manager and the FiraDisk. Moreover, in the “Boot” tab, you may select system-specific boot options, or just test-drive your creation in the QEMU system virtualization tool, or in VirtualBox. This of course, presupposes the existence of either in your system.

Other Bootmanagers

If MultiSystem isn't working for you, you may also try alternatives like the multibootusb or the YUMI that basically do the same thing. In general, I have found that all of these tools are a little bit underdeveloped and often riddled with bugs, so you should have patience and not give up easily. Having a multisystem USB stick is worth your time and effort.

Using multibootusb

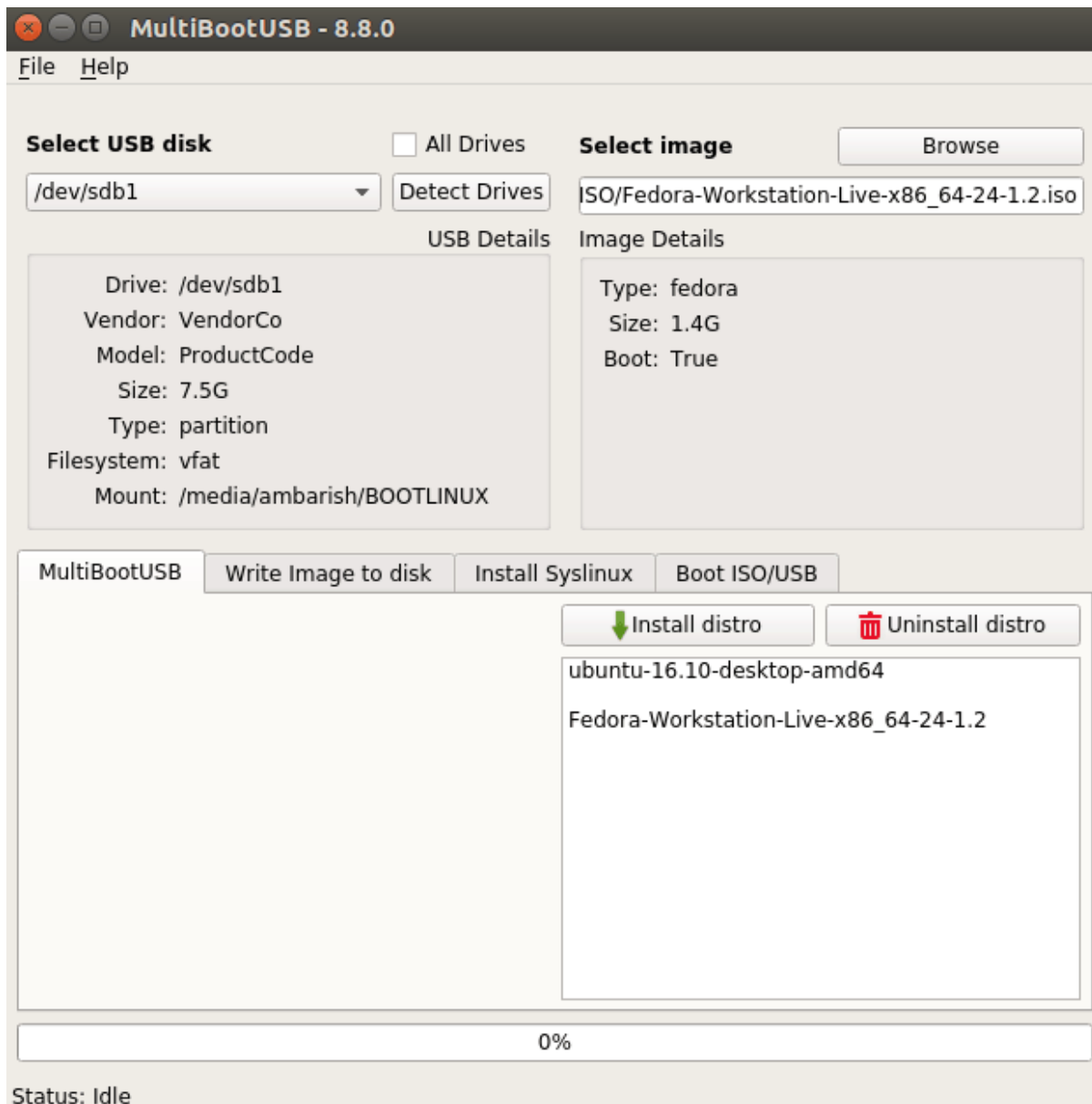
From: <https://itsfoss.com/multiple-linux-one-usb/>^[24]

Web: <http://multibootusb.org/>^[25]

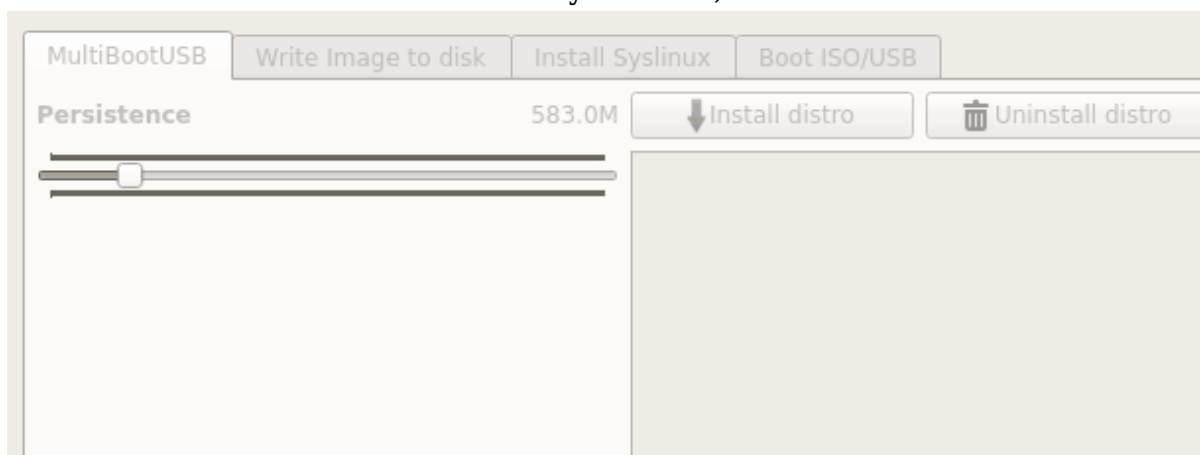
Deb:

[https://github.com/mbusb/multibootusb/releases/download/v9.2.0/python3-multibootusb_9.2.0-1_all.d](https://github.com/mbusb/multibootusb/releases/download/v9.2.0/python3-multibootusb_9.2.0-1_all.deb)
[eb](https://github.com/mbusb/multibootusb/releases/download/v9.2.0/python3-multibootusb_9.2.0-1_all.deb)^[26]

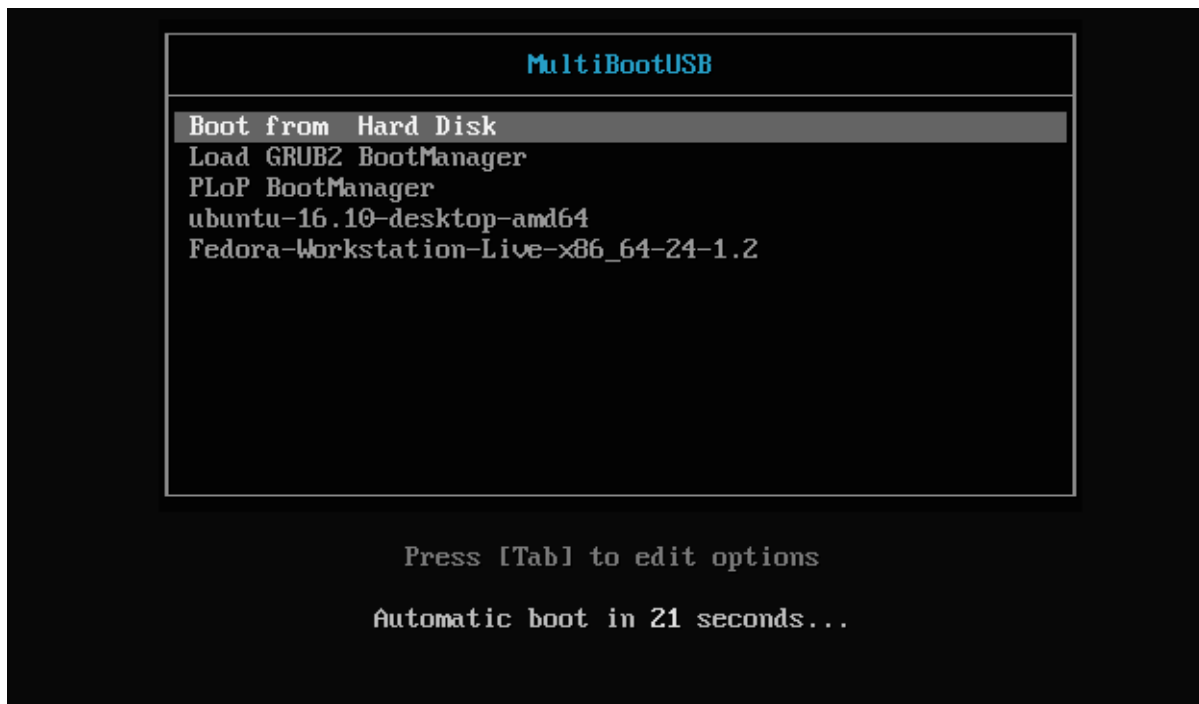
The recommended filesystem is FAT32, so make sure to format your USB drive before creating a multi-boot USB stick.



You can select the persistence size by dragging the slider under MultiBootUSB tab. Persistence gives you an option to save changes to the USB drive in runtime. (in theory; will it work since Ubuntu 16.04 doesn't seem to use it by default?)



Next time I boot through the USB, I get the option of choosing either of the distributions.



1.19. Create Linux Live USB disks

You can add an extra repository to include `mkusb dus` (**Do USB Stuff**), which will allow you to create boot usb disks with persistence of changes in a reliable way for recent Ubuntu distros such as 16.04 LTS and newer. In such distros the default traditional methods such as USB Disk Creator or UnetBootIn no longer work in all cases as they did with earlier Ubuntu versions.

Derived from: <https://help.ubuntu.com/community/mkusb>^[27]



```
sudo add-apt-repository ppa:mkusb/ppa # and press Enter
sudo apt-get update
sudo apt-get install mkusb mkusb-nox usb-pack-efi
```

And system for a tweaked version of LXLE 16.04.2 (32 bits; 1-disk-fits-all-computers approach):
<https://help.ubuntu.com/community/mkusb/persistent/LXLE>^[28]

1.20. Video Edition

The first program to try can be `OpenShot` (multiplatform).

But if you need more power/features, you can use `KDEnLive` (GNU/Linux only, and maybe MacOSX but not Windows).

And if you want to use a newer version than the one that comes with your distribution (either *ubuntu 16.04, 18.04, etc., or even with the Kubuntu-ppa/Backports repo), you can install KDEnLive

by means of the `Flatpack` system, which works nicely in my first tests



```
sudo add-apt-repository ppa:alexlarsson/flatpak
sudo apt update
sudo apt install flatpak # install flatpak software
sudo apt install gnome-software-plugin-flatpak # Install the Software Flatpak
plugin (optional)
flatpak remote-add --if-not-exists flathub
https://flathub.org/repo/flathub.flatpakrepo # -- Add the Flathub repository
flatpak install flathub org.kde.kdenlive # Install KdenLive through Flatpack -
KDENLive version 18.12.0 by the time of this writing December 2018 ! on top of
Kubuntu 16.04
flatpak run org.kde.kdenlive # Run KdenLive through Flatpack
```

1.21. Download your own full YouTube Playlists

You can easily download your own videos of youtube (or even your entire playlists) through the application `youtube-dl` or `yt-dlp`.

1. In (K)Ubuntu 24.04

In Kubuntu 24.04, I could download playlists with these apps that I could obtain from **Discover** app:

- Free/Libre Open Source Software:
 - **Ez Youtube Video Playlist Downloader**: worked like a charm.
<https://snapcraft.io/ez-youtube-video-playlist-downloader>^[29]
- Proprietary:
 - (free app for a short period of time)
 - **Video Downloader**. Its seems to be a nice and simple GUI for yt-dlp, which does all the job in the background for you, just after you paste the playlist url and select whether you want audio or video.
 - **UMD4** (Ultimate Media Downloader). However, it seems to be an evaluation version, available for free during 15d
 - **Youtube Downloader**. However, it seems to be an evaluation version, available for free during 3d

Other options, from console (`youtube-dl`, `yt-dlp`, failed for me for different reasons, even if I could

make them work in previous kubuntu versions)

2. Failed in 24.04

[+]

^[1] <http://www.webupd8.org/2014/02/modify-pdf-files-in-linux-with-master.html>

^[2] <http://code-industry.net/free-pdf-editor.php>

^[3] <http://www.aptana.com/products/studio3/download>

^[4] <http://linuxpitstop.com/install-aptana-studio-3-on-centos-and-ubuntu/>

^[5] <http://digitaldisseny.com/es/blog/206-debug-php-aptana-ubuntu>

^[6] <http://devcircle.blogspot.com.es/2013/02/enable-xdebug-in-aptana-studio-3x.html>

^[7] <https://www.development-cycle.com/2013/09/installing-svn-support-in-aptana-studio-3/>

^[8] <http://majadc.com/installing-subversion-plugin-in-aptana-studio-3>

^[9] <https://snapcraft.io/phpstorm>

^[10] <http://ubuntuforums.org/showthread.php?t=2314905>

^[11] <https://www.youtube.com/watch?v=l8xa-PkDhhk>

^[12] <http://www.bio.brandeis.edu/~shaikh/linux/suspend.htm>

^[13] <https://help.ubuntu.com/community/Boot-Repair>

^[14] <http://ubunlog.com/ya-disponible-mate-1-12-1-para-ubuntu-15-10-y-16-04-lts/>

^[15] <http://get.adobe.com/reader/otherversions/>

^[16] http://ardownload.adobe.com/pub/adobe/reader/unix/9.x/9.5.5/enu/AdbeRdr9.5.5-1_i386linux_enu.deb

^[17] <https://sourceforge.net/projects/portablesigner/>

^[18] <https://www.elastic.co/guide/en/elasticsearch/reference/5.0/deb.html#deb-repo>

^[19] <https://www.freedesktop.org/software/systemd/man/journalctl.html>

^[20] <https://www.elastic.co/guide/en/kibana/5.0/install.html>

^[21] <https://www.elastic.co/guide/en/kibana/5.0/deb.html>

^[22] <http://wiki.x2go.org/doku.php/doc:de-compat>

^[23] <https://www.howtoforge.com/tutorial/multiple-usb-writing-on-linux/>

^[24] <https://itsfoss.com/multiple-linux-one-usb/>

^[25] <http://multibootusb.org/>

^[26] https://github.com/mbusb/multibootusb/releases/download/v9.2.0/python3-multibootusb_9.2.0-1_all.deb

^[27] <https://help.ubuntu.com/community/mkusb>

^[28] <https://help.ubuntu.com/community/mkusb/persistent/LXLE>

^[29] <https://snapcraft.io/ez-youtube-video-playlist-downloader>

^[30] <https://snapcraft.io/install/playlist-dl/kubuntu#install>

^[31] <https://snapcraft.io/playlist-dl>

^[32] <https://www.youtube.com/watch?v=guFSSJTjyZI&list=>

^[33] <https://www.youtube.com/playlist?list=>

^[34] <http://www.webupd8.org/2014/03/multi-platform-youtube-dl-gui-youtube.html>

^[35] <https://pip.pypa.io/warnings/venv>

^[36] <https://forum.peppermintos.com/index.php?topic=5303.0>

^[37] <https://unix.stackexchange.com/a/328536>

^[38] <https://www.youtube.com/watch?v=guFSSJTjyZI&list=>

^[39] <https://www.youtube.com/playlist?list=>

^[40] <https://forum.peppermintos.com/index.php?topic=5303.0>

^[41] <http://www.webupd8.org/2014/03/multi-platform-youtube-dl-gui-youtube.html>

^[42] <http://www.ubuntugeek.com/ddrescue-gui-a-python-script-to-make-it-easier-to-use-ddrescue.html>

^[43] <http://www.outlet-pc.es>

^[44] <http://www.webupd8.org/2014/04/10-things-to-do-after-installing-ubuntu.html>

^[45] <https://wiki.ubuntu.com/X/Config/HybridGraphics>

^[46] <http://askubuntu.com/a/118201>

^[47] http://linkat.xtec.cat/portal_linkat/wikilinkat/index.php/Lubuntu

^[48] http://linkat.xtec.cat/portal_linkat/wikilinkat/index.php/Wiki_Linkat_edu_16.04