

Debian and Ubuntu

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Why I am qualified to give this talk

- Debian Developer and Ubuntu Developer since 2006
- Involved in improving collaboration between both projects
Developed/Initiated : Multidistrotools, ubuntu usertag on the BTS, improvements to the merge process, Ubuntu box on the PTS, Ubuntu column on DDPO, ...
- Attended Debconf and UDS
- Friends in both communities

What's in this talk ?

- Ubuntu development process, and how it relates to Debian
- Discussion of the current state of affairs
- "OK, what should we do now ?"

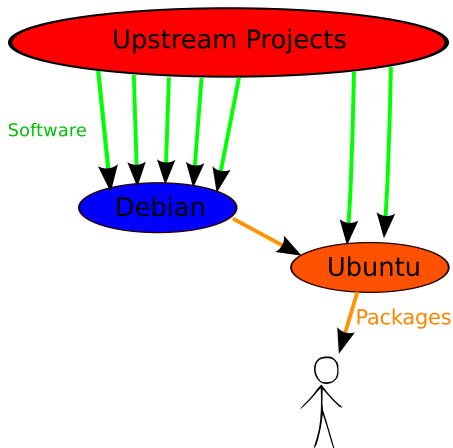
The Ubuntu Development Process

Linux distributions 101

- Take software developed by upstream projects
Linux, X.org, GNOME, KDE, ...
- **Put it all nicely together**
 - Standardization / Integration
 - Quality Assurance
 - Support
- Get all the fame

Ubuntu has one special upstream : Debian

Ubuntu's upstreams

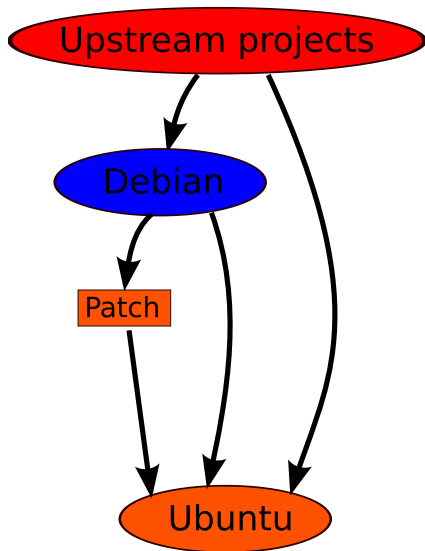


Not that simple :
changes required, sometimes

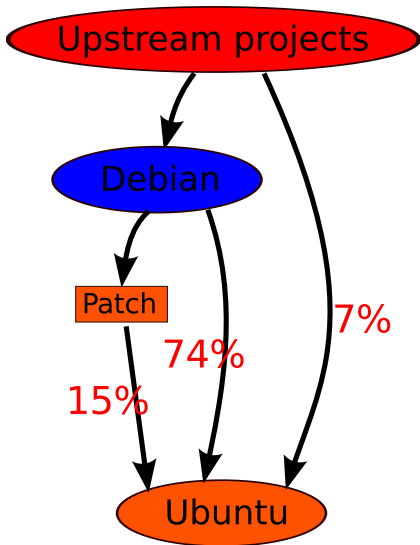
- Toolchain changes
- Bugfixes
- Integration (Launchpad)
- Newer releases

Often not possible to do work in Debian first

Ubuntu Packages Workflow



Ubuntu Packages Workflow



- Ubuntu Karmic
- Excluding specific packages
language-(support|pack)-*, kde-l10n-*, *ubuntu*, *launchpad*
- Missing 4% :
Newer upstream releases :
Based on the Debian version or
fully repackaged ?

Newer upstream releases (main)

akonadi alacarte amarok anthy aptdaemon arora at-spi atk1.0 auctex axis2c binutils bluez brasero byobu bzip2 cheese choqok clutter-1.0 clutter-gtk commons-pool compiz compiz-fusion-bcop compiz-fusion-plugins-extra compiz-fusion-plugins-main compizconfig-backend-gconf computer-janitor consolekit couchdb dbus deskbar-applet dkms dnsjava dovecot drbd8 ecj ecryptfs-utils eglibc emacs22 enchant eog espeak euca2ools evince evolution evolution-data-server evolution-exchange evolution-webcal file-roller foo2zjs foomatic-db foomatic-db-engine foomatic-filters freeradius gawk gcalctool gconf gconf-editor gdm gedit gegl geronimo-ejb-3.0-spec geronimo-j2ee-connector-1.5-spec geronimo-jacc-1.1-spec geronimo-jms-1.1-spec geronimo-jpa-3.0-spec geronimo-jta-1.0.1b-spec gfxboot ghostscript gir-repository glib2.0 gnome-applets gnome-bluetooth gnome-desktop gnome-disk-utility gnome-doc-utils gnome-games gnome-icon-theme gnome-keyring gnome-mag gnome-media gnome-menus gnome-nettool gnome-orca gnome-panel gnome-pilot gnome-power-manager gnome-python gnome-python-desktop gnome-screensaver gnome-session gnome-settings-daemon gnome-system-monitor gnome-system-tools gnome-terminal gnome-themes gnome-utils gnupg2 goocanvas gtk2-engines-qtcurve gtkhtml3.14 gtkmm-documentation gtkspell gucharmap gupnp-igd gutenprint gvfs gwt hal-info inkscape intltool italc json-glib jug k3b kaffeine kde-style-qtcurve kde4libs kdeaccessibility kdeadmin kdeartwork kdatabase kdatabase-runtime kdatabase-workspace kdebindings kdebluetooth kdedu kdegames kdegraphics kdelibs-experimental kdemultimedia kdenetwork kdepim-runtime kdepimlibs kdeplasma-addons kdesdk kdesudo kdetools kdeutils kdewebdev konq-plugins konversation kvkbd lazr.restfulclient lazr.uri ldm lensfun libaxiom-java libcanberra libcompizconfig libcompress-raw-zlib-perl libelf libgnome libgnomekbd libgtop2 libjibx-java liblastfm libnova liboobs libpam-radius-auth libproxy libpst libwnck libxext libxklavier libxml-security-java lirc llvm lsb ltsp lvm2 m2crypto magyarispell mail-spf-perl makedumpfile maximus media-player-info metacity mobile-broadband-provider-info moodle mouseemu mousetweaks nautilus nautilus-cd-burner nautilus-sendto network-manager network-manager-applet newlib notify-osd nspr nss nvidia-settings obexd open-iscsi openldap opie ossp-uuid oxygen-icons pangomm pessulus pinentry polkit-qt poppler portaudio19 ppp pulseaudio pygobject pygresql pygtk pyorbit python-adns python-cups python-defaults python-fstab python-gd python-httpplib2 python-oauth python-reportlab python-setuptools python-stdlib-extensions python-wadllib qedje qemu-kvm qt4-x11 quassel qzion radeontool rampart rhythmbox scim-anthy seahorse seahorse-plugins shared-mime-info silo sip4-qt3 skanlite speech-dispatcher system-config-printer taglib-extras telepathy-butterfly tomboy totem transmission ttf-liberation ttf-manchufont usbutils vinagre vino vte wacom-tools window-picker-applet xdg-user-dirs xine-lib xscreensaver xserver-xorg-video-ati xserver-xorg-video-openchrome xz-utils yelp zenity

Newer upstream releases (universe)

accerciser adblock-plus akonadi-googledata alexandria all-in-one-sidebar ampache-themes amsn amule anjuta apt-mirror aqualung ardour arista assogiate asterisk atomicparsley b2evolution basket bcfg2 binutils-z80 bitstormlite blender bpython bubblemon bug-buddy byfoot bzr-gtk cadabra cairo-dock calibre checkgmail clutter-gst clutter-perl compizconfig-backend-kconfig compizconfig-python conduit conky connman crawl crystalspace ctxextensions dbus-1-qt3 deja-dup denemo dirac dkim-milter dosbox duplicity earcandy eclipse evolution-mapi exaile fast-md5 fcrackzip fprobe file-browser-applet filezilla firefox-sage flashblock foxyproxy freej frei0r furiusisomount gajim gamgi gbrainy gcc-snapshot gedit-plugins gentoo geordi gjs glabels gmchess gmusicbrowser gnash gnomad2 gnome-commander gnome-do-docklets gnome-games-extra-data gnome-launch-box gnome-main-menu gnome-schedule gnome-shell gnome-speech gnome-spell gnome-user-share gnuCash gok goocanvas gpa gpredict graphmonkey greasemonkey gtk-nodoka-engine gtk-recordmydesktop gtkhash gtkparasite gtranslator gui-ufw guidance-power-manager guifications gwget2 gwibber hamster-applet herrie hildon-desktop hildon-thumbnail imapsync intel-gpu-tools ircp-tray isdnutils jack-rack jakarta-jmeter josm k3dsurf kannel kanyremote kbiff kcometen4 kdesvn kdevelop kdeplatform keysafe kio-gopher kmess kmidimon kmlDonkey kmobiletools kmplayer kmymoney2 kradio krename ktranslator kwave kwin-style-crystal lash lcdproc ldapscripts ldt libcgrou libcompress-raw-bzip2-perl libdc0 libgfs libimage-exiftool-perl libio-compress-perl libmoosex-declare-perl libopengl-ruby libosso libsmbios libticonv libtorrent libzrtppc livehttpheaders llvm-gcc-4.2 lms loggerhead lua-iconv lv2core lxm music makeztxt mapnik mednafen merb merkaartor midori mingw32-runtime mkvtoolnix modglue monobristol mozilla-stumbleupon mp3diags mpg123 music-applet mutter mysql-dfsg-5.0 naim network-manager-openconnect network-manager-openvpn network-manager-pptp network-manager-vpnc ntfs-config ocmgui onscripter osm-gps-map pacemaker paprefs parcellite partitionmanager passenger pavucontrol pdf2djvu pgpool2 phpb3 pidgin-sipe popfile prismstumbler psychopg2 purple-plugin-pack pyclamd pycxx pygoocanvas pyneighborhood pyopengl python-amqplib python-bsddb3 python-django-tagging python-gdata python-mechanize python-mhash python-testtools python-twitter pyzor qbzz qjackctl qjson qtads qtractor qtsmbstatus qwt rapidsvn recordmydesktop rkward rtorrent rutilit scanssh silc-client soundconverter source-highlight spectro springlobby stompserver sugar-artwork sugar-base sugar-datastore sugar-toolkit supertux svk svn-workbench swac-explore swac-get swftools tap-plugins thunar-media-tags-plugin tilp2 tinyproxy touchfreeze trash-cli ttb tumgreyspf twitux typespeed uim user-mode-linux v4l2ucp valknut vnc4 wallpaper-tray webkit2 wine wxwidgets2.8 xf86-input-evtouch xfce4-volumed xfce4-xkb-plugin xmp xserver-xorg-input-joystick xulrunner wxw yokadi

Still newer in Ubuntu Karmic

Compared to Squeeze from a few days ago

Main :

amarok anthy byobu clutter-gtk compiz compiz-fusion-plugins-extra compiz-fusion-plugins-main compizconfig-backend-gconf enchant foomatic-db foomatic-db-engine foomatic-filters gdm gegl ghostscript gnome-desktop gnome-panel gnome-pilot goocanvas gtkhtml3.14 gtkmm-documentation gtkspell intltool italc k3b kaffeine kdebluetooth kdesudo libcompizconfig libjibx-java libnova libpam-radius-auth libpst libwnck lirc lsb magyarispell maximus moodle mouseemu nautilus network-manager network-manager-applet notify-osd open-iscsi openldap opie ossp-uuid portaudio19 ppp pulseaudio python-cups python-defaults python-stdlib-extensions radeontool silo sip4-qt3 speech-dispatcher system-config-printer wacom-tools xdg-user-dirs xserver-xorg-video-ati

Universe :

alexandria amule apt-mirror aqualung arista b2evolution basket bcfg2 bubblemon bygfoot cairo-dock clutter-gst compizconfig-backend-kconfig conky deja-dup dkim-milter exaile fcrackzip fprobe frei0r gentoo gnome-launch-box goocanvasmm gtk-nodoka-engine gui-ufw guidance-power-manager guifications gwibber ircp-tray isdnutils jack-rack kannel kbiff kdevelop kio-gopher kmldonkey kmobiletools kradio kwave kwin-style-crystal lcdproc libdc0 libopengl-ruby mednafen midori mingw32-runtime mkvtoolnix music-applet network-manager-openconnect network-manager-openvpn network-manager-pptp network-manager-vpnc ocempgui onscripter pppool2 phpbb3 pidgin-sipe popfile prismstumbler purple-plugin-pack pygoocanvas pyopengl python-gdata rutilit scanssh spectro supertux svk swac-explore swac-get tap-plugins thunar-media-tags-plugin tilp2 tinyproxy trash-cli tumgreyspf twitux typespeed valknut vnc4

Managing the divergence

Keep local changes in Ubuntu :

- Requires a lot of manpower
- Need to merge them when Debian package updated

⇒ **Strong incentive to push changes upstream (to Debian)**

3 channels to push changes to Debian :

- Bug reports
- Direct interactions within teams / with maintainers
- Patch available in PTS/DDPO

Bugs and Bug Reports

Bugs

Ubuntu users have the choice :

- File bug upstream ⇒ might get flamed
- File bug in Debian ⇒ very likely to get flamed
- File bug in Launchpad ⇒ very likely to get ignored
 - Many users ⇒ many bug reports
 - Not enough Ubuntu developers for bug triaging and squashing
 - Lack of expertise for many packages

Why collaborate on bugs ?

- Niche packages that rarely receive bugs reports in Debian
- More users of Ubuntu \Rightarrow more opportunities to run into bugs
- Slightly different environment in Ubuntu (newer toolchain, X)
 \Rightarrow we are likely to run into the same issues in Debian later
- Solving bugs = improving Free Software
(That's what really matters, no ?)

Collaboration on bugs, today

- Some bugs get filed in Debian by Ubuntu developers
 - `origin-ubuntu` and `ubuntu-patch` usertags
 - 250-400 per Ubuntu release cycle
 - Mostly upstreaming of Ubuntu patches to reduce divergence
- Ubuntu box on the PTS, but :
 - Data imported using a fragile hack
for b in \$(ubuntu_open_bugs_list) ; do wget \$text_version_of_the_bug ; done
⇒ 80'000 HTTP requests per day
 - Doesn't include private bugs
 - Ongoing discussions with Launchpad team to solve that

Ubuntu box on the PTS



Overview of **nmap** source package

Go:

Switch style:

General information

Latest version:	4.68-1
Maintainer:	LaMont Jones
Conforms to:	3.7.2.2
Priority:	extra
Section:	net
VCS :	Git (browse)

Available versions (more...)

Oldstable :	4.11-1
Stable :	4.62-1
Testing :	4.68-1
Unstable:	4.68-1

Source package

Files [.dsc](#) [.orig](#)
: [.diff](#)

Binary packages

[nmap](#) (27 bugs: 0, 12, 9, 6)

Todo

[Lintian](#) reports [8 warnings](#) about this package. You should make the package *lintian clean* getting rid of them.

[mentors.debian.net](#) has [version 4.76-1](#) of this package, you should consider sponsoring its upload.

The package should be updated to follow the last version of [Debian Policy](#) (Standards-Version 3.8.2 instead of 3.7.2.2).

The BTS contains [patches fixing 1 bug](#), consider including or untagging it.

Latest news [RSS](#)

- [2009-02-16] [nmap 4.68-1 MIGRATED to testing](#) (Britney)
- [2008-08-01] [Accepted 4.68-1 in unstable \(low\)](#) (LaMont Jones)
- [2008-06-27] [nmap 4.62-1 MIGRATED to testing](#) (Britney)
- [2008-06-14] [Accepted 4.62-1 in unstable \(low\)](#) (LaMont Jones)
- [2008-04-25] [nmap 4.53-3 MIGRATED to testing](#) (Britney)
- [2008-04-04] [Accepted 4.53-3 in unstable \(low\)](#) (LaMont Jones)

Bugs count

All bugs (graph):	29 (32)
RC bugs :	0
I&N bugs :	13 (14)
M&W bugs :	12
F&P bugs :	4 (6)

PTS subscription

Subscribers count: 5

Other links

- [Changelog / Copyright](#)
- Build: [logs](#), [more](#), [exp](#), [ports](#)
- [Lintian report](#) (0, 8)
- [Popcon stats](#)

Ubuntu ...

- Version: [4.76-0ubuntu4](#)
- [Patch for version 4.76-0ubuntu4](#)
- [13 open bugs](#)

State of the Debian - Ubuntu relationship

Disclaimer :
Based on my perception
(which I hope is quite fair)

Feelings on the Debian side, in the past

Historically : many DDs were unhappy about Ubuntu

- Feeling of being stolen
- Public claims of "giving back", difficult to back with reality
- Problems with some Canonical employees tend to reflect on Ubuntu as a whole

Feelings on the Debian side, now

Things have improved considerably

Most DDs see some good points in Ubuntu

- Brings a lot of new Linux users
(and Debian derivative users !)
- Provides something that just works for their friends/family
- Brings new developers to Debian
Barry deFreese, Scott Kitterman, Luca Falavigna, Emilio Pozuelo Monfort, Albin Tonnerre
- Serves as a technological playground
dash as `/bin/sh`, boot improvements, debug packages, hardening GCC flags, ...

Feelings on the Ubuntu side

- Culture : contributing to Debian is The Right Thing to do
- Many Ubuntu developers contribute to Debian

However :

- Often not a lot to contribute back (on the package level)
 - Many bugfixes are just workarounds
- Canonical is a company
 - Contributes back when it benefits them
 - Don't expect many free "gifts" to Debian

Banner on ubuntu.com for Debian 15th birthday ; DebConf sponsorship



Problem : loss of relevance of Debian

- Debian user-base (or at least market share) decreased
 - Ubuntu won the desktop/laptop market
 - Slowly makes a place on the server

For many new Linux users, Linux = Ubuntu

- Recent innovations usually happen in Ubuntu
- As a result, Debian becomes less relevant
Even if Debian is now the basis of a major distribution

Problem : loss of relevance of Debian

Debian needs to be relevant

- Fights for important values
- Takes position on technical and political issues

But collaborating with Ubuntu (and improving it) is the right thing to do for Free Software world domination

**How do we make Debian relevant again
and still help Ubuntu ?**

Behave like a good Upstream

⇒ **Improve collaboration with Ubuntu :**

- Improve relationships with Ubuntu developers
 - More cross-distribution packaging teams
- Help Ubuntu maintain our packages
 - Notify them of important transitions
 - Bug triaging/fixing directly in Launchpad ?
- Acknowledge that some high-quality work is done in Ubuntu
 - Import it into Debian, create collaboration around it
(The packages import doesn't have to be one-way only !)

Communicate on why Debian is better

Yes, Debian is better !

- OK, maybe not for everybody
- But we totally fail at communicating that
Except when Bradley Kuhn does it for us
- Let's try !

Debian is better.

Better values :

- Debian :
 - Volunteer-based project. Decisions taken in the open.
 - Advocates the Free Software philosophy since 1993
- Ubuntu :
 - Project controlled by Canonical. Some decisions imposed.
Ubuntu One, switch to Yahoo ! for search
 - Advocates proprietary web services (UbuntuOne)
 - Installer recommends to add proprietary software
 - Copyright assignment to contribute to Canonical projects

Debian is better.

Better distribution :

- Debian :
 - All packages are maintained except orphaned packages
 - Many maintainers are experts
 - Emphasis on quality
- Ubuntu :
 - Most packages are just sync'd from Debian
 - No real knowledge about many packages

Debian testing : the perfect distribution for your laptop ?

Recent software, few problems (but interesting/useful ones)

Conclusion

- We can't ignore Ubuntu
- We can't fight Ubuntu
(Would not be the right thing to do)

**Ubuntu is a chance for Debian :
Leverage it to get back in the center
of the FLOSS ecosystem**

- Work with Ubuntu
 - Like a good upstream
- Be more vocal about Ubuntu problems (but be constructive)
 - Can also help improve Ubuntu (and Free Software)