Debian: 20 years of Free Software, *do-ocracy*, and democracy

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Outline

Debian: once upon a time

Fellow Linuxers,
   This is just to announce the imminent completion of a brand-new Linux release, which I'm calling the Debian Linux Release. [...]

Ian A Murdock, 16/08/1993
`comp.os.linux.development`

- make GNU/Linux competitive with commercial OS
- easy to install
- built collaboratively by software experts
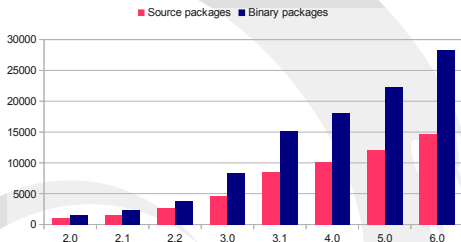- 1st major distro developed "*openly in the spirit of GNU*" FSF-supported for a while

$\frac{1}{3}$ of Debian: the operating system

flagship product: Debian stable

- binary distribution
- completely Free (DFSG)
- released every 24 months ($\approx$)
- a dozen architectures
- archive-wide security support (3-3.5 years)

one of the largest Free Software porting platforms

renowned for

ports, stability, packaging system, old hw support, documentation, smooth upgrades, i18n/l10n, the `testing` suite, runs anywhere, technical policy, package choice, . . .

Debian 7.0 "Wheezy" — highlithgs

- multiarch
  - 3rd party software, easily
  - cross-compilation
- private cloud deployment
  - OpenStack, Xen/XCP, . . .
- public cloud support
  - EC2, Azure, GCE, . . .
- multimedia codecs & frontends
  - ~~3rd party repositories~~
- new archs: armhf, s390x
- desktop: GNOME 3.x, KDE Plasma 4.x, XFCE, . . .
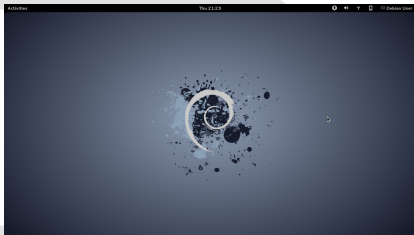
- upgrades throughout the archive

released: May 4th, 2013

Most popular GNU/Linux on the Web (32.7%) overall, 1+ Web server out of 10 (10.8%) runs Debian — w3techs.com, March 2013

$\frac{1}{3}$ of Debian: the Project

Common goal:

Create the best, Free operating system.

Debian Social Contract (1997)

- 100% Free Software
- give back
- don't hide problems
- priorities: users & Free Software

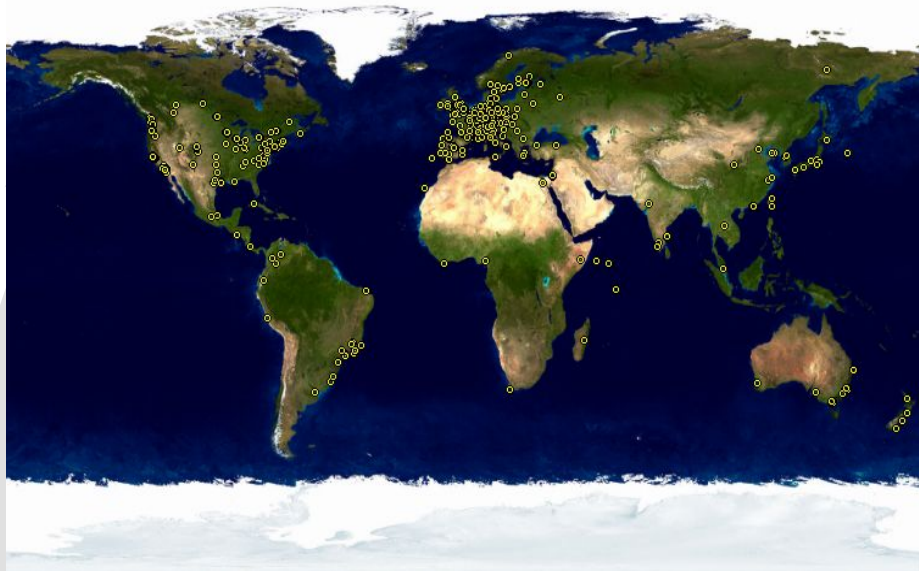### Debian Constitution (1998)

Structures and rules of a Free-Software-compatible democracy

Strong motive to join: ≈ 1'000 project members, world-wide

$\frac{1}{3}$ of Debian: the Project (cont.)

Demography

Developer's per country

2012 statistics:
`www.perrier.eu.org/weblog/2012/06/06#devel-countries-201206`

Take a guess: France's position?

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Take a guess: France's position?

in terms of. . .

- n. of (active) project members: #3
  (ranking: us, de, **fr**, uk, ca, au, es)
- n. of (active) project members *pro capite*: #12
  (after: most nothern EU countries)

$\frac{1}{3}$ of Debian: the community

Open development
- we don't hide problem
- easy to have an impact (just "show me the code!")

Large amounts of communication
- mailing lists
- IRC
- (a few) Web services(, growing)
  - ▸ social: @debian, !debian on identi.ca

Large number of tech-savvy users
- users help each other, contribute patches, get involved

Outline

1. Debian and Wheezy

2. **Specialties**

3. Derivatives

4. Contribute

Debian: one of a kind?

1993 — not many distros back then
20 years later — *lots* of other distros ($\approx$300 — DistroWatch)

openSUSE, Linux Mint, PCLinuxOS, Slackware, Gentoo Linux, CentOS, FreeBSD, Arch, Sabayon, Puppy, Lubuntu, MEPIS, Ultimate, NetBSD, Tiny Core, Zenwalk, CrunchBang, Dreamlinux, Vector, Kubuntu, Maemo, Red Hat, aptosid, Peppermint, PC-BSD, Chakra, Salix, ClearOS, KNOPPIX, Xubuntu, Super OS, BackTrack, gOS, TinyMe, Zentyal, EasyPeasy, Frugalware, Clonezilla, Pardus, Meego, OpenBSD, Quirky, PC/OS, Zorin, **Debian**, SystemRescue, Element, Unity, SliTaz, Macpup, wattOS, Scientific, Mythbuntu, Slax, DragonFLY, Elive, linux-gamers, 64 Studio, Ubuntu, mageia, Nexenta, Parisx, NuTyX, GhostBSD, Kongoni, moonOS, LFS, Lunar, Imagineos, Untangle, Fedora, Yellow Dog, aLinux, Yoper, IPFire, BlankOn, Mandriva, PureOS, FreeNAS, Moblin, Linpus, TurboLinux, blackPanther, . . .

with many differences:

- technical choices
- release management
- release schedule
- target user
- community

- support
- packaging system
- user base
- look & feel
- . . .

How is Debian different?

Debian's special #1: package quality

" Culture of technical excellence "

- package design: Policy
  i.e. "how a package should look like"
- package testing: `lintian`, `piuparts`,
  archive rebuilds (FTBFS), ...
- package maintainers are software experts
- no 2nd class packages, all are equal

Debian release mantra

we release when it's ready

Debian's special #2: freedom

Firm principles: developers and users bound by the *Social Contract*

1. promoting the "culture of Free Software" since 1993
2. Free the bottom up

   - in its <u>software</u>
     firmware included !

   - in its <u>infrastructure</u>
     no non-free web services   (for users)
     no non-free infrastructure   (for developers)

Community awareness

- users know
- users trust Debian not to betray Free Software principles
- high bar for software freedom advocates

Debian's special #3: independence

Debian is an independent project

- no (single) company babysitting us
- living up on:
    1. donations (money & hardware)
    2. gift-economy

... truly remarkable in today "big" distro world

people trust Debian choices not to be "profit-driven"

Debian's special #4: decision making

1. **do-ocracy**

   An individual Developer may make any technical or nontechnical decision with regard to their own work;

   — Debian Constitution, §3.3.1.1

2. **democracy**

   Each decision in the Project is made by one or more of the following:

   1. The Developers, by way of General Resolution [...]

   — Debian Constitution, §2

that means:

- reputation follows work
- no benevolent dictator, no oligarchy
- no imposed decisions
  by who has money, infrastructure, people, . . .

Outline

Interlude — derivatives how to

Free Software 101

Freedom #0, to run the program, for any purpose
Freedom #1, to study how the program works, and change it
Freedom #2, to redistribute copies
Freedom #3, to improve the program, and release improvements

When applied to distros: derived distributions, AKA derivatives

How?
1. take existing packages and add your extras
2. patch & rebuild packages as needed
3. sync periodically

Debian derivatives

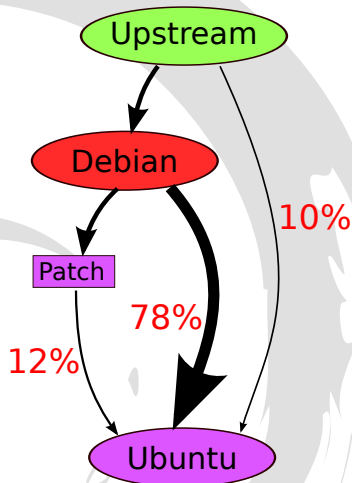Debian: a base for ≈140 <u>active</u> derivatives — DistroWatch

- Tucunare, LinEx, Inquisitor, Grml, UniventionCorporateServer, Vanillux, Emdebian, Crunchbang, PureOS, StormOS, Ubuntu, GNUSTEP, gNewSense, Debathena, Maemo, LMDE, SPACEflight, BCCD, Bayanihan, semplice, ArchivistaBox, Knoppix, Tails, BlankOn, AlienVault-OSSIM, DoudouLinux, Vyatta, Symbiosis, VoyageLinux, Lihuen, LinuxAdvanced, Aptosid, Canaima, siduction, ZevenOS-Neptune, BOSSlinux, Parsix, AstraLinux, ProgressLinux, Finnix, SprezzOS, CoreBiz, Epidemic-Linux, MetamorphoseLinux , ...

  Why?
  - quality & licensing assurances
  - solid base system
  - huge package base
  - the "*universal* OS", perfect for customizations

A Debian derivative example: Ubuntu

- started in 2004 by Canonical
  target: desktop
- Debian derivative
- very popular (15–20x Debian?)
- historical/past correlations

main	↔	corporate
universe	↔	community

  - ▶ heavily customized/forked in main
  - ▶ very close to Debian elsewhere
- sprouting its own derivatives (≈80)
  - ▶ ... as Debian *transitive* derivatives

Data for Raring Ringtail, Jan 2013,
main + universe

Do you Debian?

- Ubuntu appears to be the most customized Debian derivative
- other derivatives ⇒ much closer to *pristine* Debian

Tucunare, LinEx, Inquisitor, Grml, UniventionCorporateServer, Vanillux, Emdebian, Crunchbang, PureOS, StormOS, Ubuntu, GNUSTEP, gNewSense, Debathena, Maemo, LMDE, SPACEflight, BCCD, Bayanihan, semplice, ArchivistaBox, Knoppix, Tails, BlankOn, AlienVault-OSSIM, DoudouLinux, Vyatta, Symbiosis, VoyageLinux, Lihuen, LinuxAdvanced, Aptosid, Canaima, siduction, ZevenOS-Neptune, BOSSlinux, Parsix, AstraLinux, ProgressLinux, Finnix, SprezzOS, CoreBiz, Epidemic-Linux, MetamorphoseLinux , Debian, Xubuntu, Linux Mint, Ubuntu Studio, Mythbuntu, ArtistX, Asturix, Peppermint OS, TurnKey Linux, Kubuntu, Caixa Mágica, Lubuntu , . . .

if you are running a Debian (transitive) derivative, chances are you heavily depend on Debian and on its well-being

even if your distro hasn't told you

Outline

Donate to Debian

even if completely volunteer-driven, Debian needs resources

- hardware for essential services
  - ▸ archive, buildds, devel. machines, . . .
- money for hardware-related services
  - ▸ guarantees, shipments, hosting, . . .
- money to sponsor developer meetings
  - ▸ strengthen the community
  - ▸ get work done

Donations

- donations: http://www.debian.org/donations
- partners program: http://www.debian.org/partners

Contributing #1 — using Debian

1. test, report, triage, fix bugs
   - reportbug on your Debian, `http://bugs.debian.org`
2. monitor packages you care about
   - subscribe on `http://packages.qa.debian.org`

   - try to reproduce bug and provide patches
   - (eventually, become co-maintainer)

Contributing #2 — adopt orphaned packages

- find the ones you use:

  ```
  apt-get install devscripts ; wnpp-alert
  ```

- learn packaging with the Debian packaging tutorial

  ```
            http://www.debian.org/doc/manuals/
      packaging-tutorial/packaging-tutorial.en.pdf
  ```

  or:

  ```
            apt-get install packaging-tutorial
  ```

Contributing #3 — join packaging teams

- many teams
- focused on a programming language or on a field of use
  - Python, Java, Perl, Ruby, OCaml, . . .
  - Bluetooth, Cloud, Games, Med, Science, VoIP, . . .

- excellent way to learn from experienced contributors

      http://wiki.debian.org/Teams#Packaging_teams

Contributing #4 — hack *on* the Debian infrastructure

- suitable for all programmers
- opportunity
  - ▸ complex and heterogeneous infrastructure
  - ▸ impact on millions of (indirect) users

- services provide link to source and setup instructions in page footer, e.g.

  The source code for wanna-build is available as a Git repository (Gitweb). [. . .] sbuild and buildd live together in the sbuild.git repository (Gitweb) in the buildd-tools Alioth project.

Contributing #5 — work on non-development tasks

- translation
- design (themes, websites)
- communication (newsletters & press releases)
- events (DebConf, mini-DebConf)
- videoteam
- documentation
- accounting
- . . .

Fundamental activities for the Debian Project to live long and prosper.

http://wiki.debian.org/Teams

Join Debian

choose your commitment:

> package maintainer: maintain packages, via sponsoring
> Debian Maintainer (DM): upload your own packages
> > ► advocacies required
> Debian Project Member (DD): become a Debian "citizen"
> > ► http://nm.debian.org
> > ► voting right
> > ► upload access to the whole archive *for packagers*
> > ► all kinds of contributions equally welcome!

Zack's tips for wannabe Debianers

1. pick a team: http://wiki.debian.org/Teams
2. stay on their mailing list and IRC channel
3. triage bugs, test patches, etc.
4. . . . the rest will come!

Association Debian France

> *L'Association Debian France a pour buts le soutien et la promotion du Projet Debian en France.*

- ≈60 membres
- activités récentes
  - production de goodies
    (polos, Buff, autocollants, ...)
  - organisation mini-DebConf Paris 2012
    (150 contributeurs Debian de toute Europe)
  - présence Debian à Solution Linux 2012 et 2013

```
http://france.debian.net/
```

Want to know more?

- on the web
  - http://www.debian.org
  - http://wiki.debian.org
- social media: http://identi.ca/debian
- mailing lists: http://lists.debian.org
- IRC: #debian-* channels on irc.debian.org

- ask me!

Thanks!

Questions?

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