

The Debian Project

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Debian Project Leader



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- ▶ a **technical project**
 - ▶ Building a successful distribution
 - ▶ With a real impact on the world



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 - ▶ Promoting and defending Free Software
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Part of the landscape of Free Software:

1983 – GNU

1991 – Linux

1993 – Slackware, **Debian**, Red Hat

1998 – OSI created by former DPL; definition based on DFSG

2004 – Ubuntu



A Free Software distribution



Alice

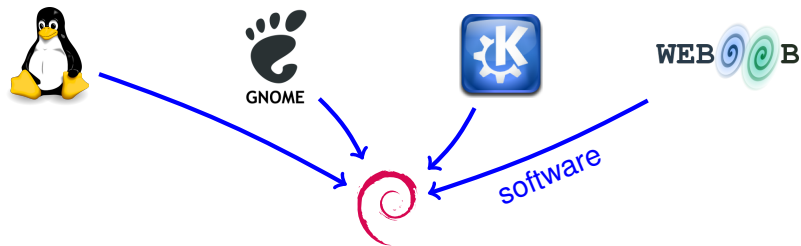
Bob

Carol

Dave



A Free Software distribution



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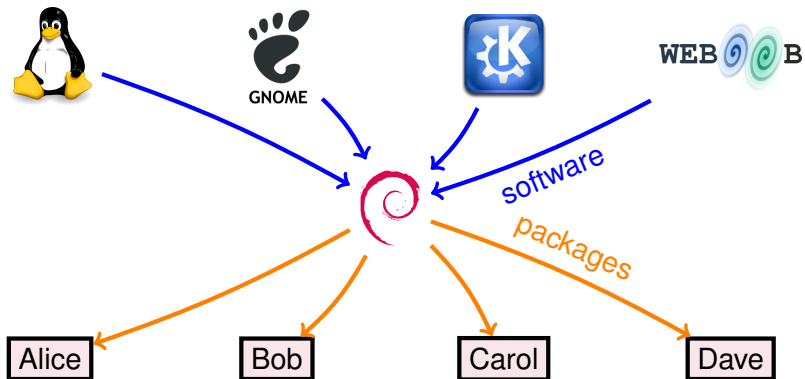
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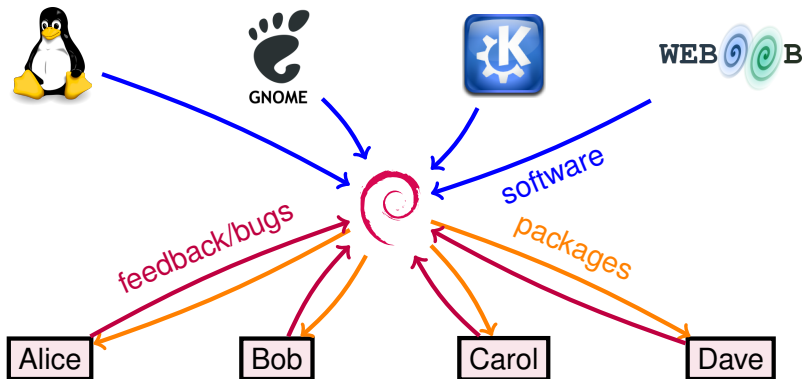
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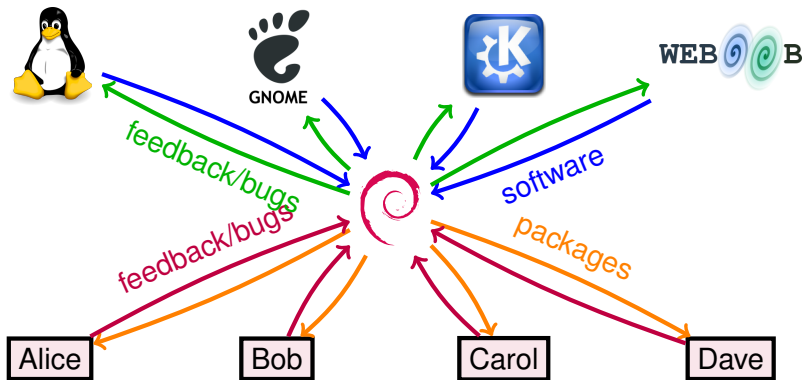
A Free Software distribution



A Free Software distribution



A Free Software distribution



- ▶ Integration of upstream projects (avoid conflicting versions)
- ▶ Infrastructure to distribute software to users (mirrors)
- ▶ Unified interface for software installation, upgrade and removal
- ▶ Intermediate, unified support layer



A very successful project

- ▶ 19600 source packages, 41000 binary packages
- ▶ a dozen of ports (with 3 different kernels – Linux, Hurd, FreeBSD)
amd64, armel, armhf, hurd-i386, i386, ia64, kfreebsd-amd64, kfreebsd-i386, mips, mipsel, powerpc, s390, s390x, sparc
- ▶ 100% Free Software (including infrastructure)
- ▶ Known for stability, robustness, expertise of package maintainers
- ▶ Stable releases every 2 years (+/- few months)

release	cycle	freeze
etch	22 months	17 weeks
lenny	22 months	28 weeks
squeeze	24 months	26 weeks
wheezy	28 months	44 weeks



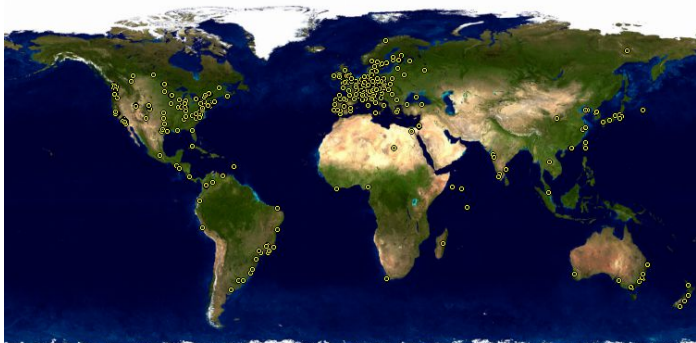
Who is doing Debian?

- ▶ **Thousands of volunteers** (including ~1000 Debian Developers)
- ▶ Organized in **teams**, focusing on:
 - ▶ **Packaging tasks**: Ruby, KDE, scientific, ...
and also: porters, security, release management, ...
 - ▶ **Distribution infrastructure**: system administration, packages archive, build daemons, mirrors, quality assurance, ...
 - ▶ **Project support & communication**: press, documentation, trademark, auditors & accounting, events, videos, ...
- ▶ Real **experts** of their packages



A distributed and independent organization

- ▶ Developers coming from 63 countries (us: 18%, de: 17%, **fr: 10%**)
- ▶ Distributed infrastructure: `ubc.ca`, `bytemark.co.uk`, `grnet.gr`, ...
- ▶ Myriad of loosely-connected services \leadsto easy to add your own
- ▶ Assets held by several Trusted Organizations
- ▶ No company with a major influence on Debian



Inner workings and governance

- ▶ **Debian Social Contract** (1997)
 - ▶ 100% Free Software
 - ▶ Give back to the free software community
 - ▶ Open development – don't hide problems
 - ▶ Priorities: users & Free Software

- ▶ **Debian Constitution** (1998)
 - ▶ Subtle balance between **democracy** and **do-ocracy**
 - ▶ Very **flat structure**
 - ▶ **Reputation** follows work
 - ▶ No benevolent dictator, no oligarchy
 - ▶ **No imposed decisions**
 - ▶ Special bodies: technical committee, secretary, project leader



The Debian Project Leader (DPL)

- ▶ Elected (using Condorcet), 1-year term
- ▶ **Roles & tasks:**
 - ▶ Debian facilitator: ensure functional core teams, mediation
 - ▶ Push important projects forward
 - ▶ Official frontend: money, legal, trademark
 - ▶ Public frontend: contact point, interviews
 - ▶ *Debian garbage collector*
- ▶ **Powers & means:**
 - ▶ Not that many!
 - ▶ Volunteers ~ cannot be forced to do work
 - ▶ Pinging, talking, convincing
 - ▶ Share the load: delegates, DPL helpers team

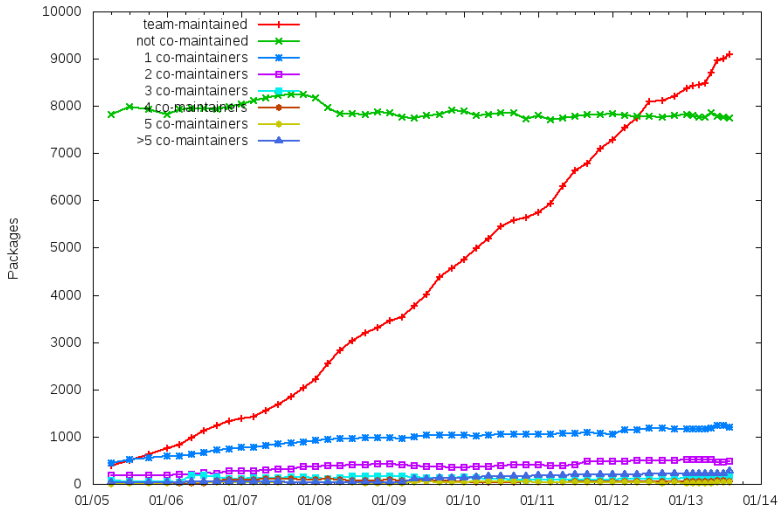




Big challenges for the future



Reorganization using teams

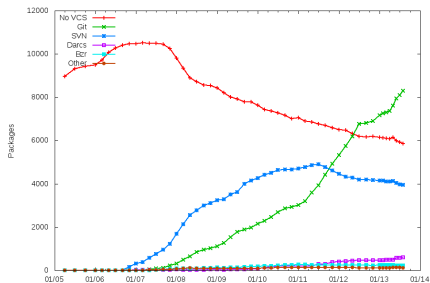


**Team maintenance is the new standard
But can we detect malfunctioning teams?**



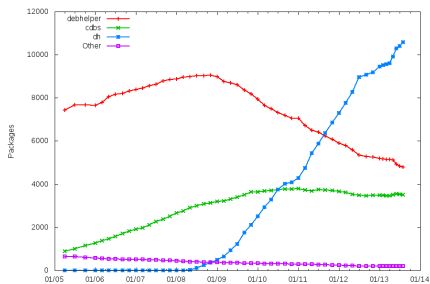
Improve our processes and tools

VCS



Git is the new standard
But with which workflow?

Packaging helpers

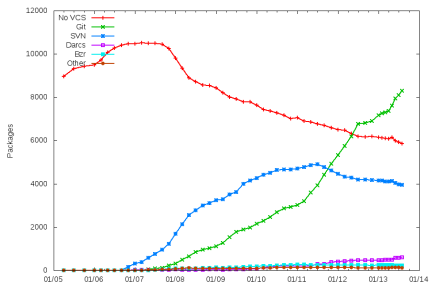


dh is the new standard
But should we migrate
our old packages?



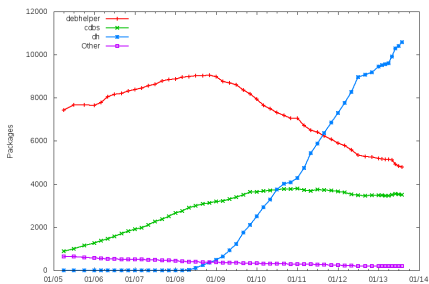
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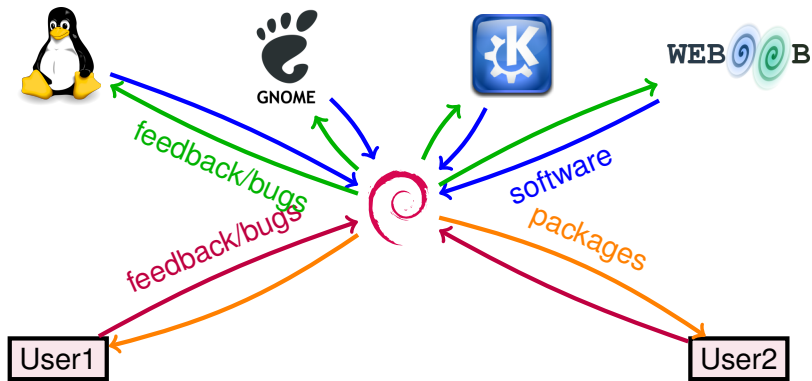


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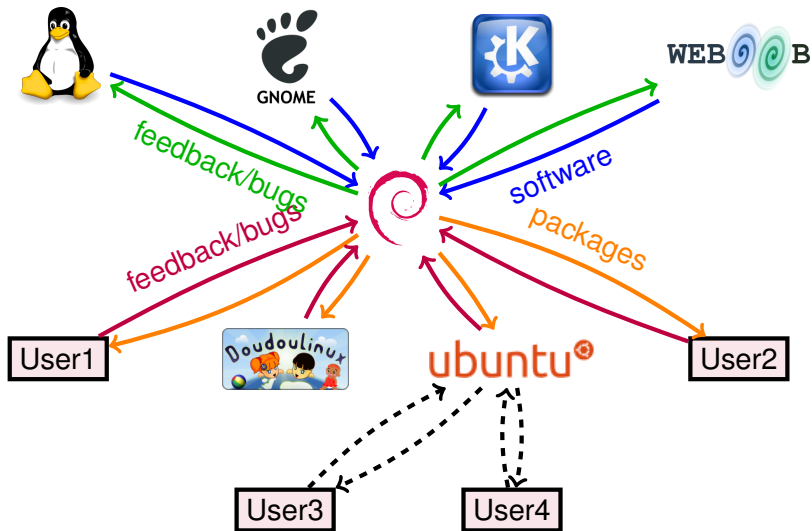
How do we design more efficient and more accessible workflows?



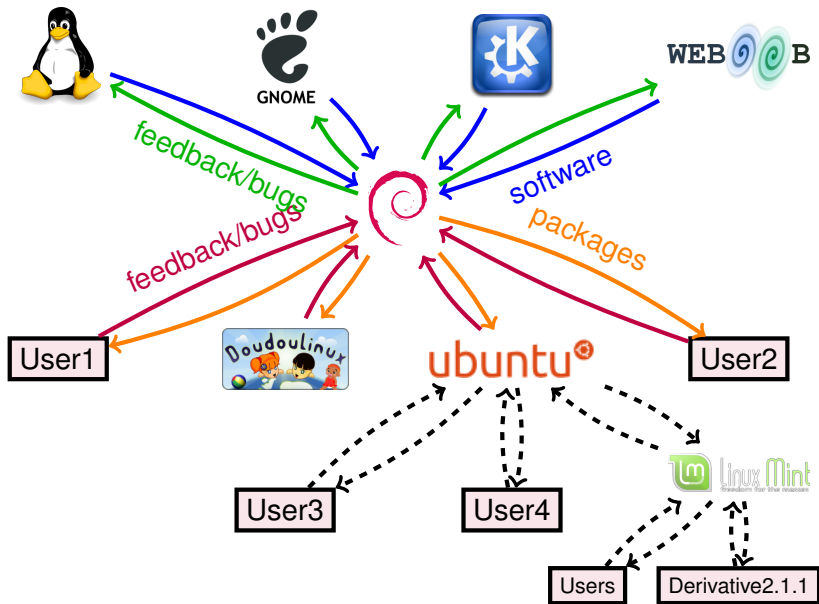
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Be(come) a real Hub for Free Software (1/2)



Be(come) a real Hub for Free Software (2/2)

- ▶ Are we really always:
 - ▶ A **good downstream** (for our upstreams)?
 - ▶ A **good upstream** (for our derivatives)?
- ▶ We should get better at:
 - ▶ Contacting our upstreams
 - ▶ Talk to them, ask them to review our plans
 - ▶ Provide them with feedback and bug reports
 - ▶ Advertise `http://patch-tracker.debian.org/`
 - ▶ Ask them to subscribe to the packages on the PTS
 - ▶ Looking at our downstreams' bugs and patches
- ▶ More generally:

**Debian is also about improving Free Software as a whole.
We should be a good player by collaborating with all entities.**



Reinforce our role in a changing ecosystem

- ▶ **Cloud** \rightsquigarrow virtualization & elasticity of infrastructure and software
 - ▶ Deprecates "*Install a system once, upgrade many times*"



Reinforce our role in a changing ecosystem

- ▶ **Cloud** \leadsto virtualization & elasticity of infrastructure and software
 - ▶ Deprecates "*Install a system once, upgrade many times*"
- ▶ Many **challenges** for Debian:
 - ▶ How to **help preserve freedom in the Cloud ecosystem**?
 - ▶ Packages for IaaS private clouds?
 - \leadsto Complex packages with custom config of services
 - ▶ Ready-to-use PaaS stacks?
 - \leadsto Many inter-related packages
 - ▶ Ready-to-use SaaS stacks?
 - \leadsto Problems of web applications packaging
 - ▶ Which **role for packages, package managers, debconf** in a world of Puppet and Chef?
 - ▶ **Official Debian images on public Clouds**?



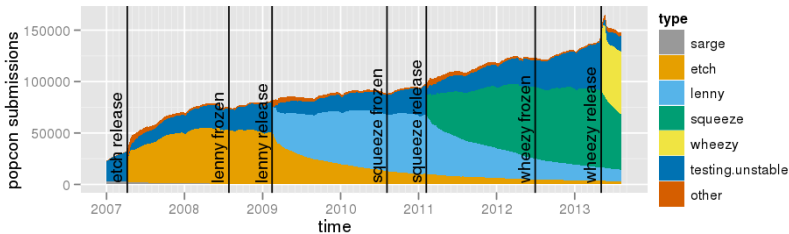
Meet all our users' needs: rolling distribution

- ▶ **Debian *testing*: the first and the best *rolling* distribution**
 - ▶ Acknowledge that, advertise it as such



Meet all our users' needs: rolling distribution

- ▶ **Debian *testing*: the first and the best *rolling* distribution**
 - ▶ Acknowledge that, advertise it as such
- ▶ *testing* is already widely used:
 - ▶ ftp.be.d.o users¹:
squeeze 42% - wheezy 60% - **testing 12%** - **unstable 11%**
 - ▶ popularity-contest submitters:
lenny 8% - squeeze 36% - wheezy 42% - **testing/unstable 10%**



¹distinct IPs fetching each Packages file - <http://deb.li/zXfy>



Many good reasons to go *rolling*

- ▶ Provide more recent software to users
 - ▶ **Shorter feedback loop** with upstream developers
- ▶ More testers of the next stable release \leadsto **find bugs earlier**
 - ▶ Ubuntu's bug reporting rate higher than Debian's
- ▶ Attract **different users** \leadsto prospective contributors
- ▶ **Low-hanging fruit**: do we need to change anything? \leadsto only PR?

Challenge: co-exist with stable releases, without harming them



Keep up with the load: recruit new contributors

- ▶ *We lack manpower*: regular (justified) complaint
- ▶ It's **hard to contribute** to Debian²:
 - ▶ Efficient but complex processes and tools
 - ▶ Very high quality requirements
 - ▶ Misalignment between contributors' goals and our goals
 - ▶ Very hard to get sponsored outside of teams

²Survey of new contributors: <http://deb.li/60ye>



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 - ▶ Misalignment between contributors' goals and our goals
 - ▶ Very hard to get sponsored outside of teams
- ▶ We **need to improve on that**:
 - ▶ Sponsor people on debian-mentors@ (**mistakes are OK!**)
 - ▶ Improve infrastructure around sponsoring
 - ▶ Help advertise tasks suitable for new contributors
 - ▶ Design better/simpler processes and tools, document!
 - ▶ Develop peer-mentoring and internship programs
 - ▶ In short: **help Debian become a more welcoming project**

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How can **you** contribute to Debian?

▶ First steps:

- ▶ Install Debian, upgrade to *testing*, report bugs
- ▶ Subscribe to packages you care about on <http://packages.qa.debian.org>
- ▶ Read debian-devel-announce@ and [debian-news\(-french\)@](mailto:debian-news(-french)@)
- ▶ Join the local community: <http://france.debian.net>

▶ Maintaining packages:

▶ **apt-get install how-can-i-help**

~> Unmaintained packages and tasks for new contributors

- ▶ Teams and entry points: <http://wiki.debian.org/Teams>
- ▶ **apt-get install packaging-tutorial** (in *de*, *es*, *fr*, *pt*, *ru*, *ja*)

▶ Other tasks

- ▶ Depends on the team ~> contact them (or me)

▶ **No special rights needed**: you can start today!





Thanks! Questions?

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