From Sarge to Etch: what's new, how to upgrade, and how to stay sane.

Don Armstrong

February 11th, 2007

debian

Brief Overview of the Release Process
Etch in Review
How to Upgrade
Tips for Sanity
Where do we go from here?

Before we Release
Bugs and QA
Lets Release!
d-i and cds

Release Goals and Blockers

- **Release Blockers**
    - Known Release Critical bugs
      (Severity ≥ serious)
    - Documentation
    - d-i RC2
- Release Goals
    - GCC 4.1 Transition
    - LSB 3.1 Compatibility
    - SELinux Support
    - ipv6
    - Large File Support
    - Sane Python Framework

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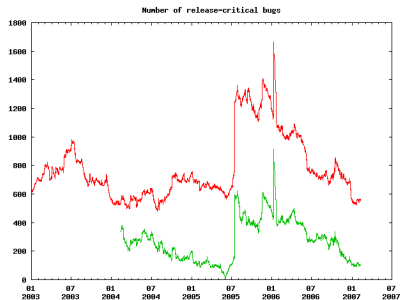 - Large File Support
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Bugs

- Growth of bugs

- $\approx 100,000$ bugs filed since the release of sarge

- $\approx 90,000$ bugs fixed since the release of sarge

- bugs.debian.org

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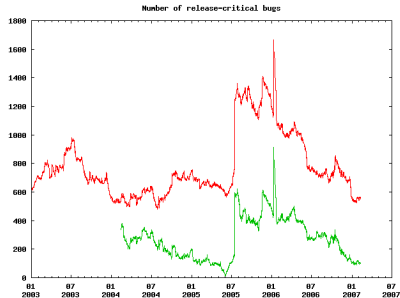Lets Release!
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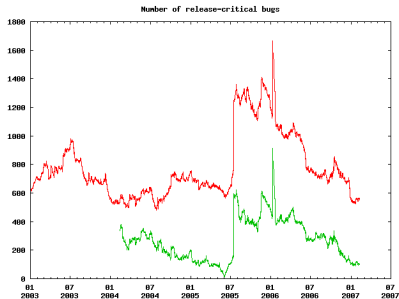Lets Release!
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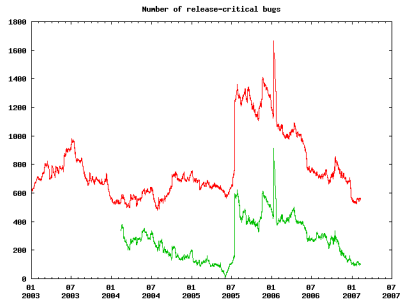Before we Release
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Number of release-critical bugs

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RC Bugs

- http://bugs.debian.org/release-critical/
- http://bts.turmzimmer.net/details.php

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QA

- QA Subproject
- piuparts, lintian, pbuilder
- Archive wide rebuilding and automated testing
- Users

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Archive overview

- Suites
- Package Migration
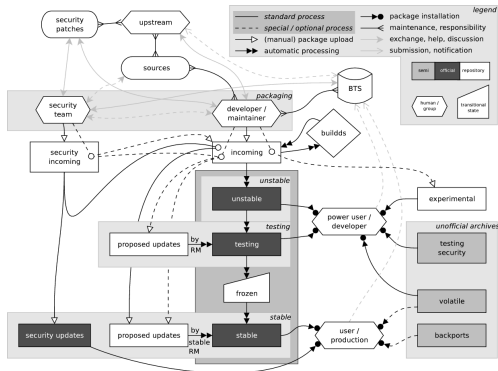
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How we release

- Über complex release process

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How we release

- Über complex release process

```
$ mv stable oldstable;
$ mv testing stable;
# Make lenny (the ''hard''
part)
$ ln -s lenny testing;
```

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How we release

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- ????

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How we release

- Über complex release process
- ????
- Profit!

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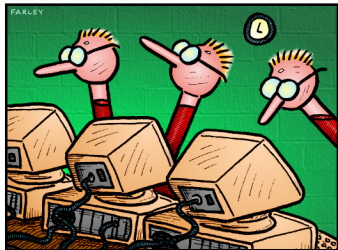Lets Release!
d-i and cds

How we release

- Über complex release process
- Press releases
- Partying
- Great unstable destabilization

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debian-installer

- boot-floppies rewrite, sarge debut
- built of μdeb
- modular, more easily maintained and upgraded
- A Drinky Nerd could install it
- http://www.debian.org/ devel/ debian-installer/

DOCTOR FUN   4 Apr 94

Drinky Nerds

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CDs and DVDs

- Multiboot CDs
  http://cdimage.debian.org/cdimage/weekly-builds/
  multi-arch/

- Live CDs, DVDs, and USB Keys

  ```
  $ aptitude install live-package
  $ make-live -d ${DIST} -p ${PACKLIST} -m ${MIRROR}
  ```

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New Features
DFSG and Controversy
Security

New in Etch

- New versions of $\approx 17,000$ packages
- Xen kernels
- Tomcat in main
- Sun Java
- LTSP
- debtags
- UTF-8 default
- dbconfig-common
- http://wiki.debian.org/NewInEtch

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Graphical d-i
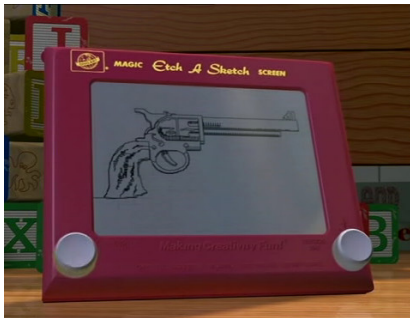
- http:
  //wiki.debian.org/
  DebianInstaller/GUI
- DirectFB and Gtk+ based
- Available on daily images,
  will be in RC2 (Use
  installgui)

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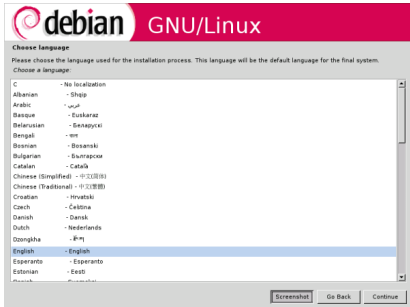
Udev

- Replaces devfs (sarge d-i)
- Default, but can still use MAKEDEV
- Writing udev rules

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Freedom and Controversy

- GFDL
- Iceweasel, Icedove, Iceape

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Signed release files

- Packages.gz
- Release
- Release.gpg
- Release Keyring and apt-key
- Per-Package signatures

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Security Updates

- Stable Security
  debian-security-announce@lists.debian.org
- Testing Security
  http://idssi.enyo.de/tracker

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Upgrading
Large Migrations

Getting starting with aptitude

- Getting started
- Marking packages you want to keep
- Automatically installed packages
- Drop in replacement for apt-get

Meet the Debian mantra

- `aptitude update`
- `aptitude upgrade`
- `aptitude;`
  1. **u**pdate
  2. **U**pgrade
  3. **g**o

```
$ apt-get moo
         (__)
         (oo)
  /------\/
 / |    ||
*  /\---/\
   ~~    ~~
...."Have you mooed today?"...
$ ▮
```

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Upgrading
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Mirroring for Large Migrations

- apt-proxy
- Full mirrors
  - Using rsyncd from a local mirror
  - anonftpsync
  - Single arch $\approx$ 24G

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Migrating large installs

- Start Early!
- Use cron-apt
- Test every package install
- Check configuration changes
- Configuration migration tips
  - Using DEBIAN_FRONTEND=noninteractive
  - Using debconf-get-selections and debconf-set-selections

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Upgrade errata

- 2.4 Kernels
    - Current RC bug may cause removal
    - No longer supported by installer
- Release Notes
    - Updated constantly
    - Answers many FAQs
- Obsoleted packages
- Test early before we release!

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Even more nifty tips

To avoid needing a brain transplant

I won't change my mind (Exploding Dog)

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Finding The Fine Manual

- `/usr/share/doc/foopkg/`
- `apropos`
- info pages (esp. `info coreutils`)
- Debian Reference
- Kernel Building Handbook

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Keeping on top of security updates

- cron-apt
- apt-listchanges
- apt-listbugs

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When stable is too stable

- http://backports.org
- Simple Backport
  1. Add deb-src://debian.usc.edu testing main contrib to /etc/apt/sources.list
  2. apt-get update
     - $ apt-get update
     - $ apt-get -b source foopkg
     - $ dpkg -i foopkg_sidversion_i386.deb
     - $ aptitude # and resolve any dependency issues
- Complex Backports using pbuilder
  - Backport howto
  - My .pbuilderrc

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Conflict resolution

- Dependency relationships (Pre-Depends, Depends, Conflicts, Provides)
- The problem resolver
- Dictating a solution

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Search Interface

- Manually installed packages
  `aptitude search '~i!~M'`
- Upgradeable packages
  `aptitude search '~U`
- Recommended/Suggested packages which aren't installed
  `aptitude search`
  `'(~RBrecommends:~i|~RBsuggests:~i)!~i'`
- Search Documentation

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Downgrading made **easier**

- Totally, completely and absolutely unsupported
- Yet, sometimes it works
- Pinning to force the downgrade
  ```
  Package: *
  Pin: release a=stable
  Pin-Priority: 1001
  ```
- Going nuts with conflict resolution

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Finding things

- Packages
    - `http://packages.debian.org`
    - `apt-cache search`
    - `apt-file`
    - `http://popcon.debian.org`
- Bugs
    - `http://bugs.debian.org`
    - `http://merkel.debian.org/~don/cgi/search.cgi`
    - `reportbug`
- Commands
    - `apropos`
    - `dpkg -L <foopkg>|grep 'bin/'`

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More nifty tips

- Keeping up with Debian
  - http://planet.debian.org
  - debian-news@lists.debian.org
  - debian-devel-announce@lists.debian.org
  - debian-announce@lists.debian.org
- Mirroring a system
  ```
  $ aptitude -F'%100p' search '~i!~M' > package_list;
  # On other machine
  $ xargs aptitude --schedule-only install \
      < package_list;
  $ aptitude install;
  ```
- Packages you may have missed
  devtodo, resolvconf, munin, nullmailer, build-essential, ...

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- Codename of next release

- Possible Release Goals
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