Packaging Samba for Debian

Christian Perrier, Steve Langásek, Noèl Köthe, Jelmer Vernooij,
Mathieu Parent, Luk Claes

Samba eXPerience 2009, Göttingen, Germany

1 **Introduction**

Debian highlights

Entirely volunteer project

Focus on freeness

Focus on stability

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Focus on stability

Erinn Clark and Martin Michlmayr, Debconf 4

Debian highlights

Easy to contribute

Not always easy to know where to start with!

Definitely not only for hard-core hackers

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Andrew Mc Millan, Debconf 7

Debian highlights

Commitment to Free Software since the origins...

... making it easier to any random astronaut to create its derived work

Some old timers: Joey Hess, Jeff Licquia, Petter Reinholdstem, Ian Murdock, Konstantinos Margaritis, Debconf 4

Debian highlights

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since the origins...

Mark Shuttleworth, Debconf 4

... making it easier to any
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The samba packagers for Debian

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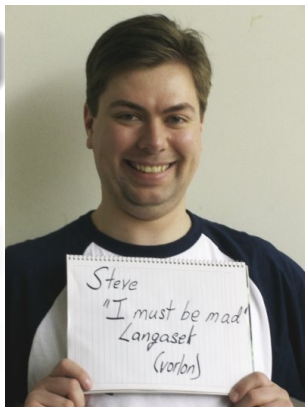# The samba packagers for Debian

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Christian Perrier

Jelmer Vernooij

Noèl Köthe

Mathieu Parent

Luk Claes

The clueful Debian developer. Gerente de lanziamento de Ubuntu

The samba packagers for Debian

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The clueless Debian developer

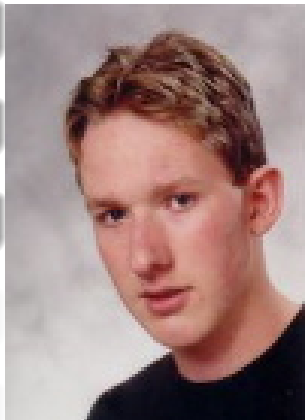# The samba packagers for Debian

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Legitimity from upstream

The samba packagers for Debian

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The German touch on bug triaging

The samba packagers for Debian

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CTDB wizard

The samba packagers for Debian

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Team newbie and our spy in the release team

Packages maintained by the team

Not only samba

Most related software:

- samba4 (Jelmer Vernooij)
- tdb (Jelmer Vernooij)
- talloc (Jelmer Vernooij)
- ldb (Jelmer Vernooij)
- tevent (Jelmer Vernooij)
- ctdb (Mathieu Parent)
- openchange (Jelmer Vernooij)

The Debian development model

Stable	Outdated
Clean and portable	Complicated package system
Free	Full of oversensitive GPL zealots
Easy to create derived work	Grumpy towards the success of some derivatives

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Debian release branches

Oldstable - Etch

- Released Jun 2007
- Supported for one year after the next version

Stable - Lenny

- Released Feb 2009
- Security and important fixes only

Testing - Squeeze

- The next stable release
- Planned end of 2010?

Debian development branches

Unstable - Sid

- Where development happens
- The testbed for testing and next release
- Packages automatically migrate to Testing when installable and non RC-buggy

Experimental

- For not releasable work
- No upgrade path guaranteed

Ubuntu release model

Long Term Support (LTS) versions

- Every 18 months - Supported for 3 years
- Dapper Drake: 3.0.22
- Hardy Heron: 3.0.28

Regular versions

- Every 6 months - Supported for 1.5 year
- Jaunty Jackalope: 3.3.2
- Intrepid Ibex: 3.2.3

Development versions

- The next release: snapshot from Debian unstable
- Karmic Koala: ?

Debian packages

Sources provided as original tarball + diff

- samba_3.3.2.orig.tar.gz: byte-per-byte upstream tarball
- samba_3.3.2-2.diff.gz: compressed diff with packaging specific stuff + patches

Binary packages (.deb)

- One or more binary package per source package
- Built from a specific Makefile: debian/rules
- Samba in Debian is 14 binary packages: samba samba-common samba-tools smbclient swat samba-doc samba-doc-pdf smbfs libpam-smbpass libsmbclient libsmbclient-dev winbind samba-dbg libwbclient0

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3. Workflow for samba packaging

Dealing with new published versions

Far from a Debian release: upload ASAP to unstable

During Debian release freezes: upload to experimental

We need users to test Debian testing...

...but users have chosen Debian for stability

From Etch to Lenny and beyond...

Release of Etch

Stable (Etch)	3.0.24-6
Testing (Lenny)	
Unstable (Sid)	
Expérimental	
Upstream	

From Etch to Lenny and beyond...

From Etch to Lenny and beyond...

First upload to unstable

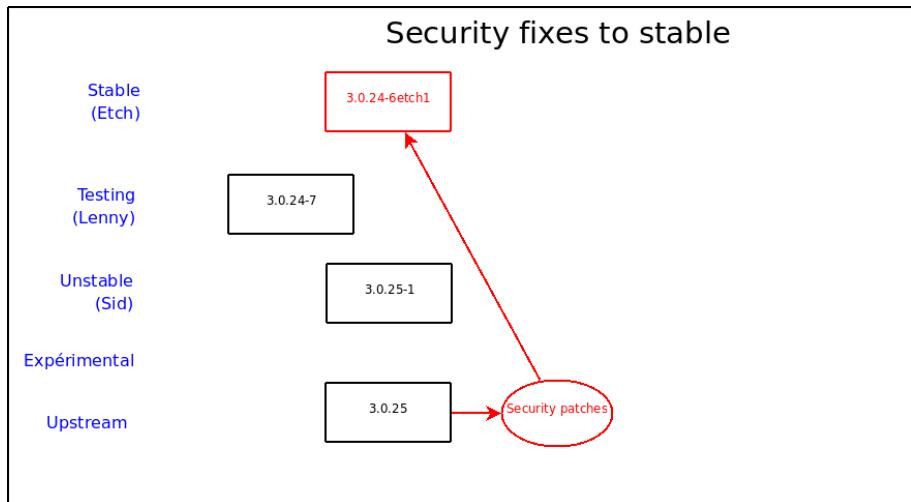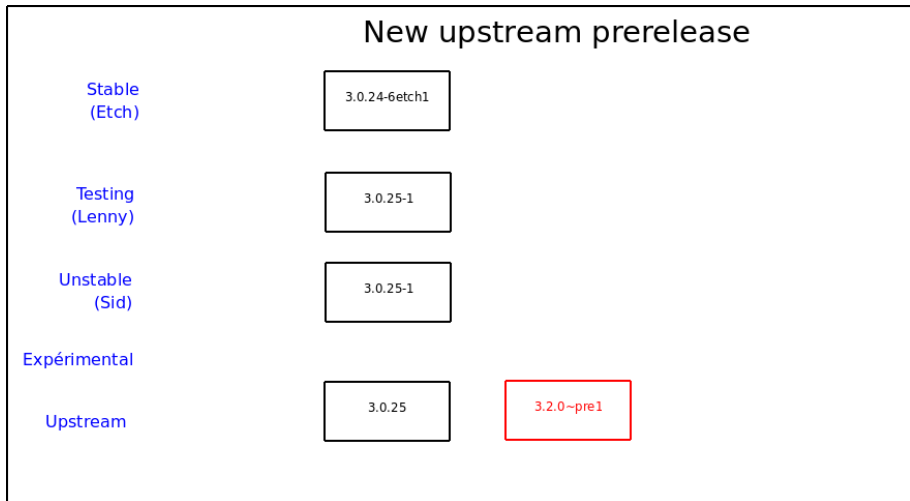|		
Stable (Etch)	3.0.24-6	
Testing (Lenny)	3.0.24-6	
Unstable (Sid)	3.0.24-7	
Expérimental		
Upstream		

From Etch to Lenny and beyond...

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From Etch to Lenny and beyond...

Security fixes to stable

Stable
(Etch)

3.0.24-6etch1

Testing
(Lenny)

3.0.24-7

Unstable
(Sid)

3.0.25-1

Expérimental

Upstream

3.0.25
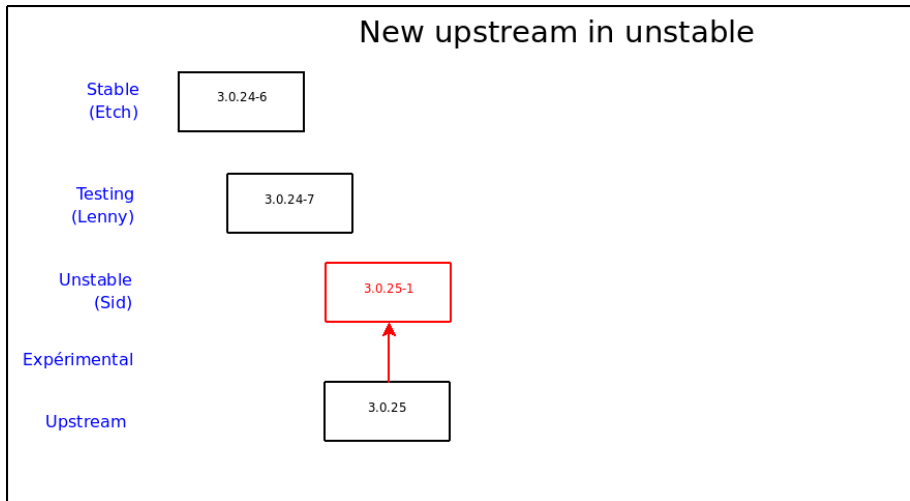
Security patches

From Etch to Lenny and beyond...

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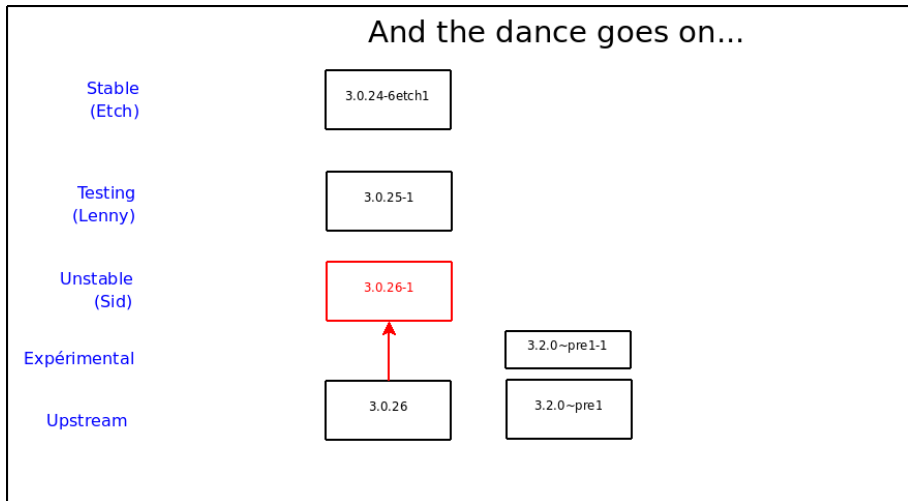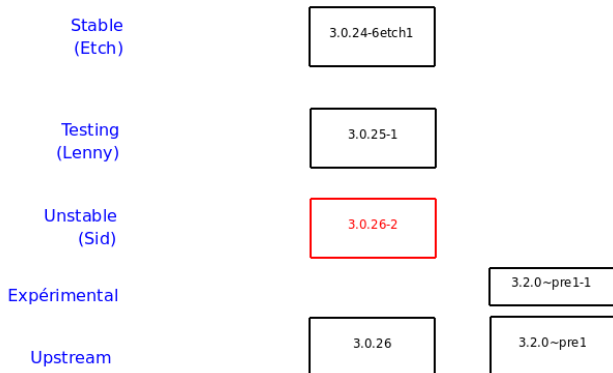And the dance goes on...

Stable (Etch)	3.0.24-6etch1
Testing (Lenny)	3.0.25-1
Unstable (Sid)	3.0.26-1
Expérimental	
Upstream	3.0.26

From Etch to Lenny and beyond...

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And the dance goes on......

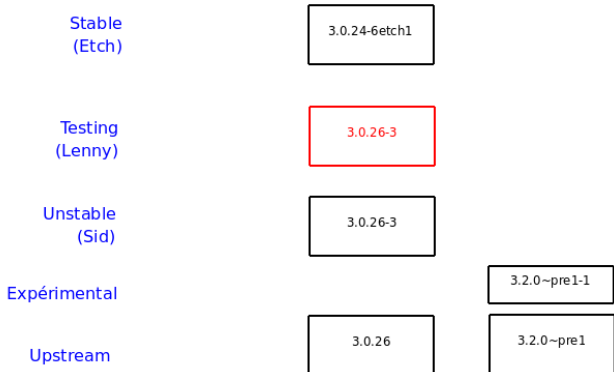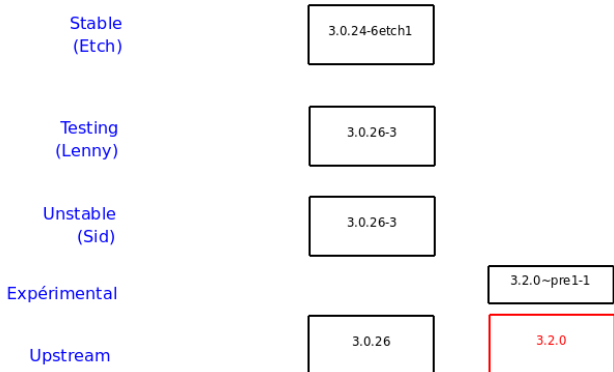|		
Stable (Etch)	3.0.24-6etch1	
Testing (Lenny)	3.0.26-3	
Unstable (Sid)	3.0.26-3	
Expérimental		3.2.0~pre1-1
Upstream	3.0.26	3.2.0~pre1

From Etch to Lenny and beyond...

From Etch to Lenny and beyond...

Let's follow our beloved upstream

Stable (Etch)	3.0.24-6etch1	
Testing (Lenny)	3.0.26-3	
Unstable (Sid)		3.2.0-1
Expérimental		
Upstream	3.0.26	3.2.0

From Etch to Lenny and beyond...

Let's follow our beloved upstream.

Stable (Etch)	3.0.24-6etch1	
Testing (Lenny)	3.0.26-3	
Unstable (Sid)		3.2.1-1
Expérimental		
Upstream	3.0.26	3.2.1
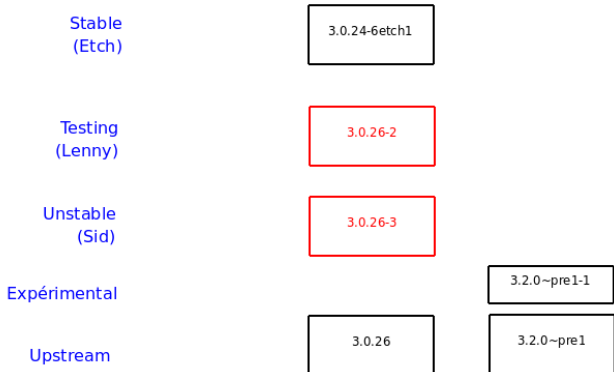
From Etch to Lenny and beyond...

And testing is following too...

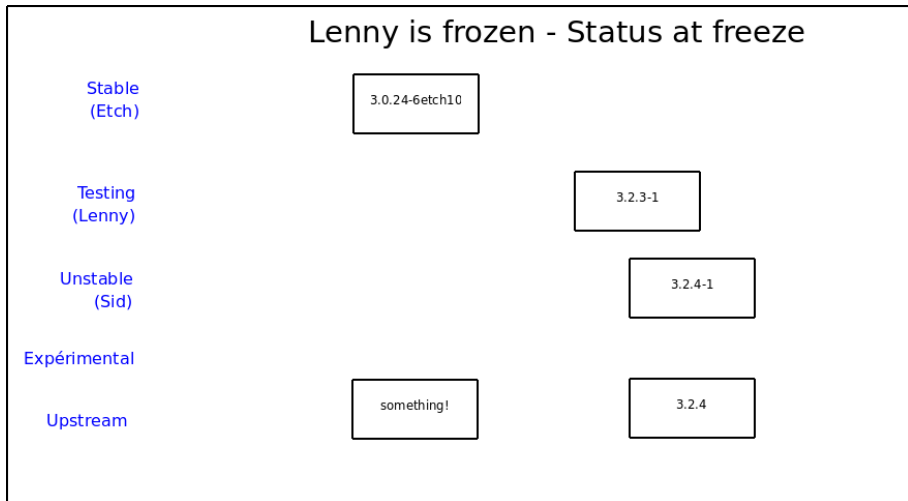|		
Stable (Etch)	3.0.24-6etch1	
Testing (Lenny)		3.2.2-1
Unstable (Sid)		3.2.2-1
Expérimental		
Upstream	3.0.26	3.2.2
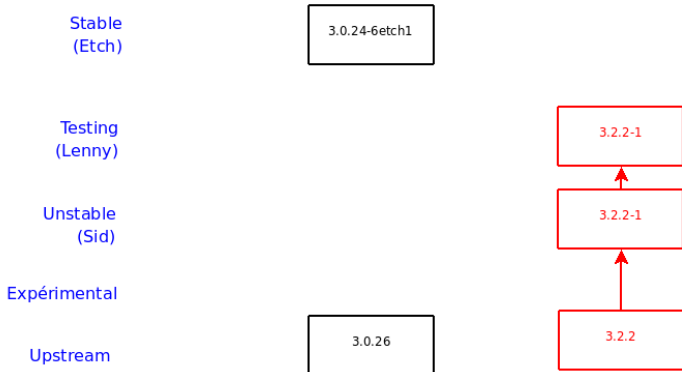
From Etch to Lenny and beyond...

Meanwhile, stable gets security updates!
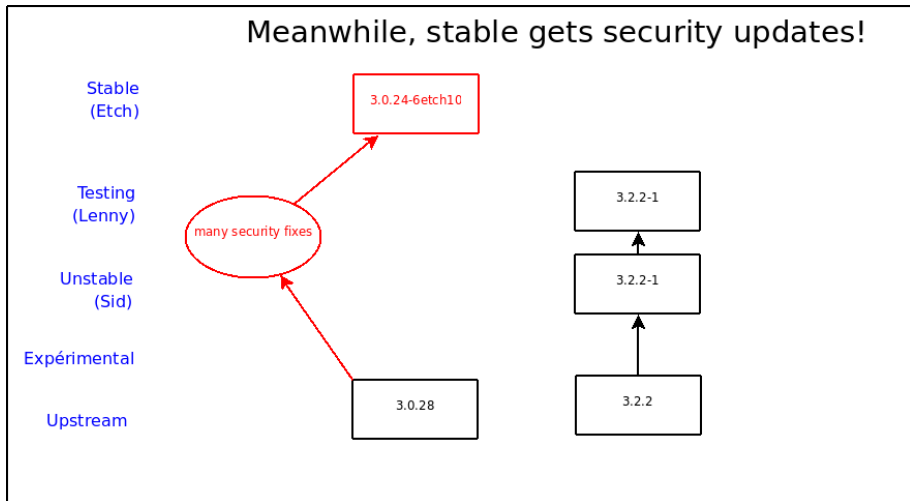
From Etch to Lenny and beyond...

Lenny is frozen - Status at freeze
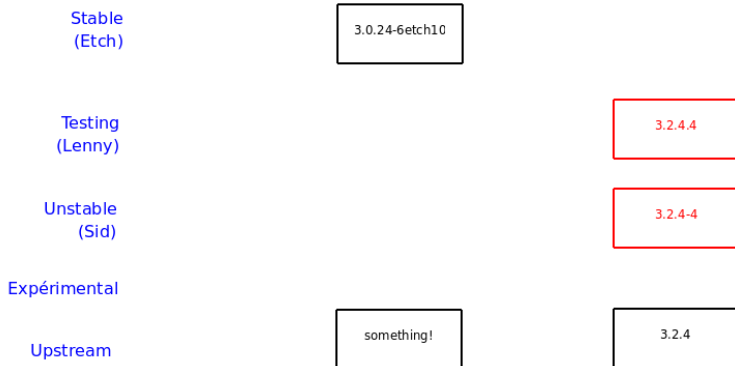
Stable (Etch)	3.0.24-6etch10	
Testing (Lenny)		3.2.3-1
Unstable (Sid)		3.2.4-1
Expérimental		
Upstream	something!	3.2.4

From Etch to Lenny and beyond...

From Etch to Lenny and beyond...

From Etch to Lenny and beyond...

Finally ready for Lenny

Stable (Etch)	3.0.24-6etch10	
Testing (Lenny)		3.2.5.4
Unstable (Sid)		3.2.5-4
Expérimental		
Upstream	something!	3.2.5

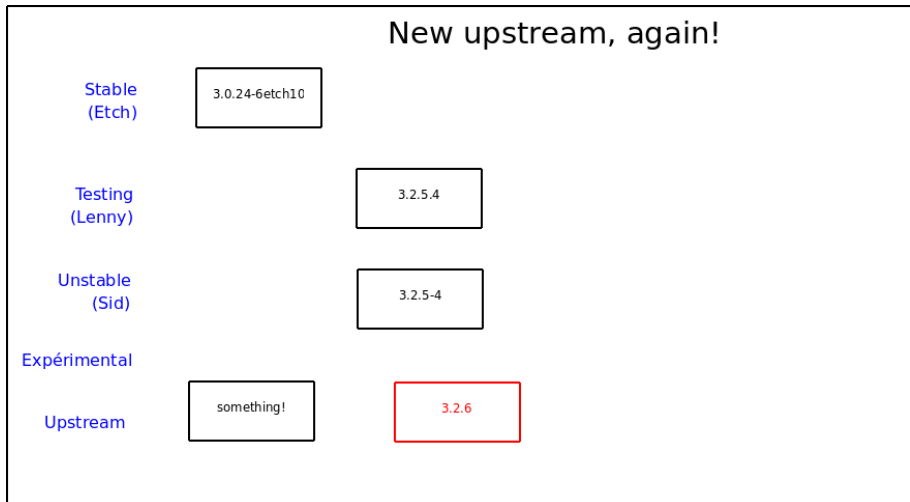# From Etch to Lenny and beyond...

From Etch to Lenny and beyond...

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And the game continues...
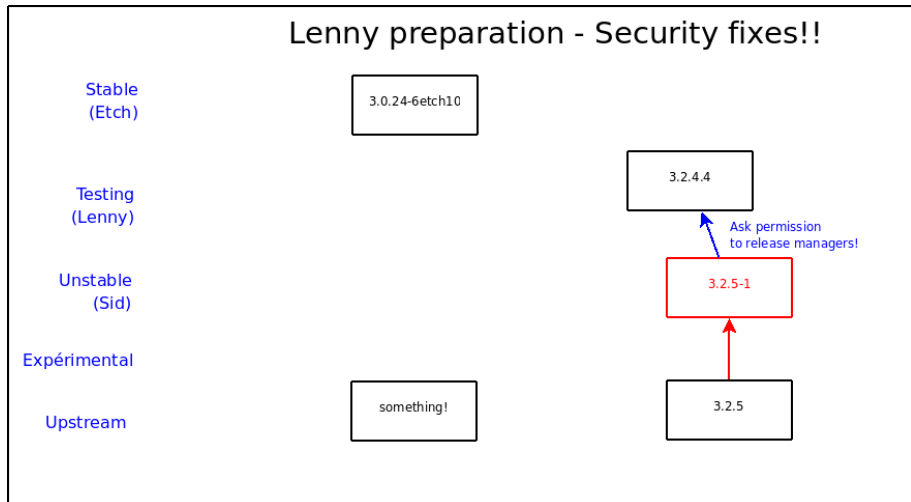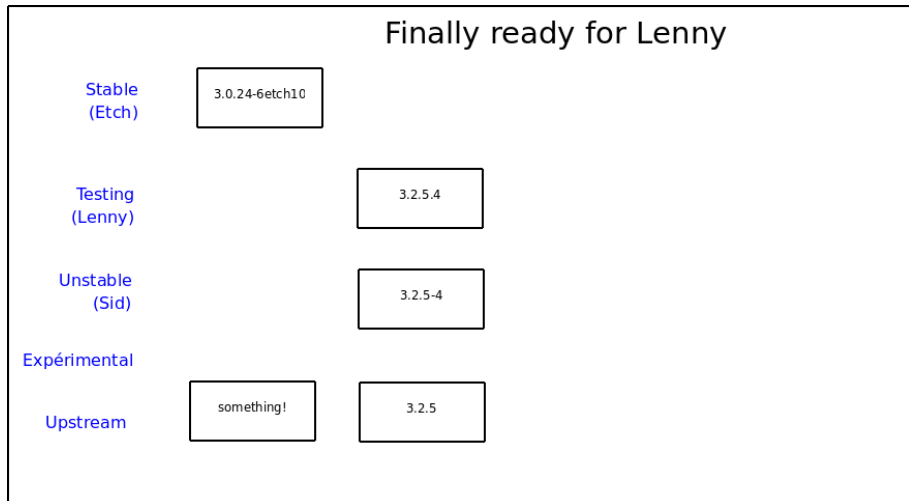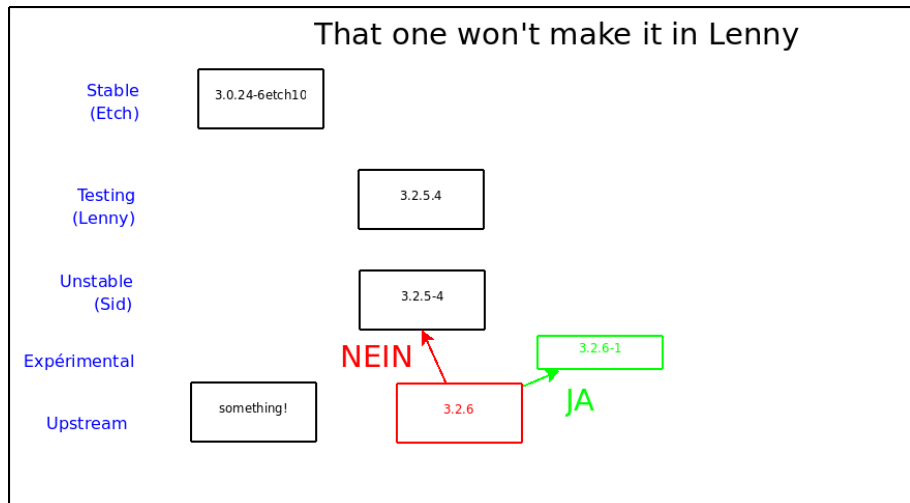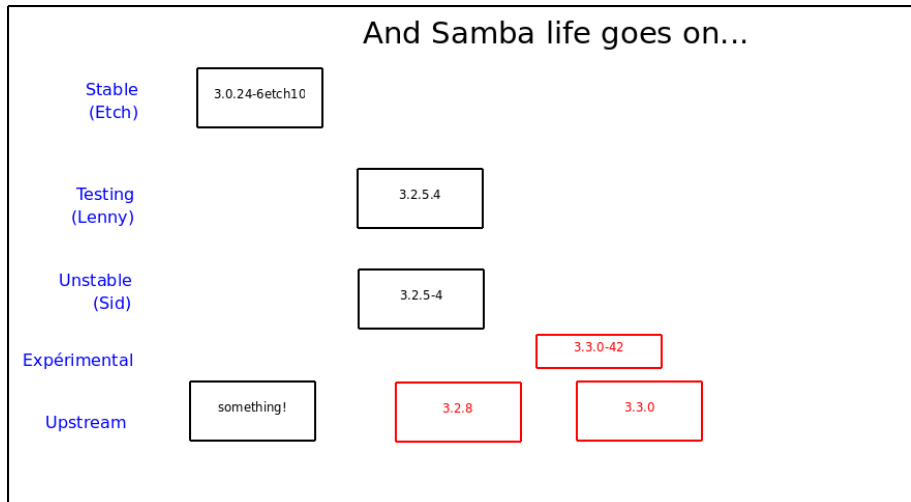
Oldstable (Etch)	3.0.24-6etch10
Stable (Lenny)	3.2.5-4lenny1
Testing (Squeeze)	
Unstable (Sid)	
Expérimental	
Upstream	

Important bugs fixed upstream

3.3.1-1

something!

3.2.9

3.3.1
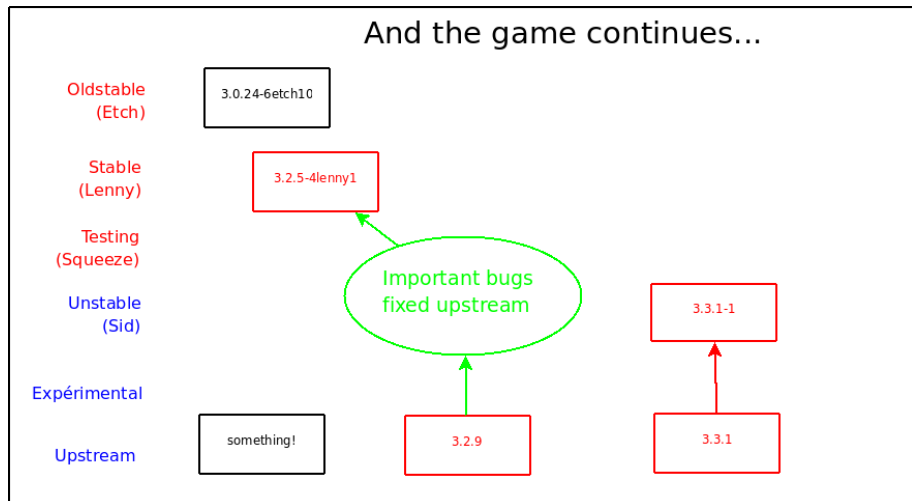
From Etch to Lenny and beyond...

Current status of packages

Oldstable (Etch)	3.0.24-6etch10	
Stable (Lenny)	3.2.5-4lenny2	
Testing (Squeeze)		3.3.2-2
Unstable (Sid)		3.3.3-1
Expérimental		
Upstream	3.0.33 3.2.10	3.3.3 3.4.*
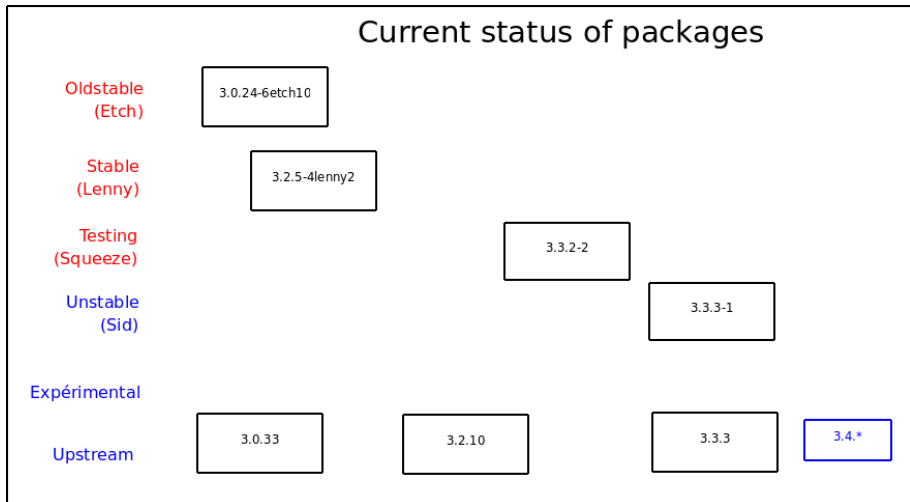
Current packages - Official

Etch (EOL: Feb 2010): 3.0.24-6etch10

Lenny (EOL: End 2011?): 3.2.5-4lenny2

Squeeze: 3.3.3-1

Unstable: 3.3.3-1

Current packages - Backports.org

http://www.backports.org

Etch backports: 2:3.2.5-4 bpo41+1

- deb http://www.backports.org/debian etch-backports main contrib non-free

Lenny backports: 2:3.3.2-2 bpo50+1

- deb http://www.backports.org/debian lenny-backports main contrib non-free

Current packages - unofficial backports

General goal: provide each stable release with the latest samba

NO security support or multi-architecture

Etch: either 3.0.34 or 3.2.11

Lenny: 2:3.2.11-1 unoff50+1

Plans for the next Debian release

Current version: 2:3.3.3-1

Target: 3.4

Include ctdb support

Installation along with samba4 packages

Following upstream

Debian experimental

- Current version: ¡none¿
- Target: post-3.4 for the post-squeeze versions
- Release and test-build -pre and -rc versions as they're published

4. Work involved in maintaining packages

Adapt samba to The Debian Way

General philosophy: change as little as possible

Changes live in debian/patches

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What do we change?

- adapt_machine_creation_script.patch
- autoconf.patch
- documentation.patch
- fhs-assignpaths.patch
- fhs-filespaths-debatable.patch
- fhs-filespaths.patch
- fix-manpages-warnings.patch
- installswat.sh.patch
- non-linux-ports.patch
- no-unnecessary-cups.patch

- pam-examples.patch
- proper-static-lib-linking.patch
- README_nosmbldap-tools.patch
- shrink-dead-code.patch
- smbclient-pager.patch
- smbpasswd-syslog.patch
- smbtar-bashism.patch
- swat-de.patch
- undefined-symbols.patch
- usershare.patch
- VERSION.patch

What do we REALLY change?

Default file locations (FHS)

- fhs-filespaths.patch
  - ▶ Mergeable upstream
  - ▶ Should be re-examined
- fhs-filespaths-debatable.patch
  - ▶ Introduces cachedir
  - ▶ Should be merged upstream in 3.4
- fhs-assignpaths.patch
  - ▶ Assign real paths to directories, those we can't do with "–with-foodir"
  - ▶ codepagedir: /usr/share/samba instead of /usr/lib/samba
  - ▶ statedir: /var/lib/samba instead of /var/run/samba
  - ▶ cachedir: /var/cache/samba
  - ▶ swatdir: /usr/share/samba/swat

What do we REALLY change?

Documentation parts - Debian specific

- adapt_machine_creation_script.patch
  - Adapt an example to Debian's file layout
- documentation.patch, pam-examples.patch
  - Remove installation hints for self-compiled SWAT
  - Adapt paths references to Debian file layout
  - Drop mentions such as "alternative paths are..."
- installswat.sh.patch
  - install/remove Using Samba, which is provided separately
- README_nosmbldap-tools.patch
  - Mention that smbldap-tools is packaged separately
- usershare.patch
  - Drop example usage advices that are not relevant for Debian

What do we REALLY change?

Compilation choices and design - Debian specific

- autoconf.patch
  - Avoid embarking autogenerated files in the Debian diff
  - Regenerated for each upstream version
- proper-static-lib-linking.patch
  - "Sane" library interdependencies with static and dynamic linking
- shrink-dead-code.patch
  - Avoid linking with unused code (talk with Steve Langasek!)

What do we REALLY change?

Various minor things - Debian specific

- smbclient-pager.patch
  - ► Use and hardcoded binary for pager if PAGER is undefined
- undefined-symbols.patch
  - ► Add -Wl,-z,defs to the libsmbclient link options to prevent future instances of undefined symbols
- VERSION.patch
  - ► Add Debian as vendor in version suffix

What do we REALLY change?

- no-unnecessary-cups.patch
  - ▶ Don't try to contact CUPS when no printer are needed (#5525)
- non-linux-ports.patch
  - ▶ Meant to deal with our kFreeBSD and Hurd ports
  - ▶ Was meant to be merged upstream in 3.0.26 but apparently lost in the meantime (#?????)
- swat-de.patch
  - ▶ Updated German translation of swat (#????
  - ▶ A full localization update for SWAT is sleeping in Bugzilla

What do we REALLY change?

> Remaining bits we could report upstream...or not

- fix-manpages-warnings.patch
  - Correct some harmless warnings in manpages that make our QA tools whine
- proper-static-lib-linking.patch
  - Sane library interdependencies with static and dynamic linking
- smbtar-bashism.patch
  - Drop a bashism in smbtar

Dealing with bugs reported in Debian

Ultimate goal: forward them all upstream

Challenge: reproduce with recent versions while users may be using older ones
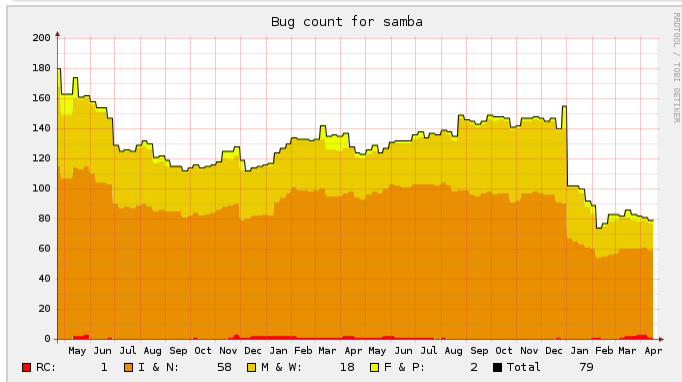
Contacts and thanks

Contacts

- pkg-samba-maint@lists.alioth.debian.org
- svn://svn.debian.org/pkg-samba

Thanks

- SerNet for 8 years of SambaXP
- The Samba Team for 16 years of Samba
- Former Samba package maintainers for 14 years of Samba packages: Bruce Perens, Andrew Howell, Klee Dienes, Eloy A. Paris, Peter Eisentraut
- Tridge, Jerry Carter, then Karolin Seeger for great release management of Samba