



Salt community Release Working Group

Salt release process walkthrough at Debian

#147

2021-Sep-08 by donfede@casagrau.org



What is Debian



- community project of volunteers to create a free operating system

- no commercial backing or direction
- FOSS source of offshoot distributions
e.g. Ubuntu

- started 1993 by Ian Murdock; sponsored by FSF for 1 year

- first stable release in 1996 (v1.1 'buzz')
- current stable release in 2021-08-14 (v11 'bullseye')

- members

- Debian Developers (DD), are full members of the Debian project
- Debian Maintainers (DM), voting member with limited rights to a subset of packages
- packaging teams and community members, e.g. Debian SaltStack packaging team

- coordination via: email, IRC, wiki, BTS (bugs), debconf, GPG

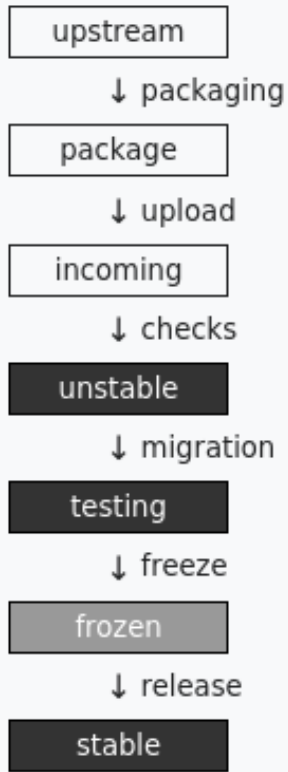
Debian Social Contract

Version 1.1 ratified on April 26, 2004

1. Debian will remain 100% free
2. We will give back to the free software community
3. We will not hide problems
4. Our priorities are our users and free software
5. Works that do not meet our free software standards



Debian releases



Flowchart of the life cycle of a Debian package

- Debian releases have a: **major number**, **minor number**, and **codename**.
 - current stable release is **Debian 11.0 'bullseye'**
- Debian distributions “at least 3 in active maintenance”
 - unstable sid
 - testing (next target stable release); bookworm
 - stable Debian 11 bullseye
 - oldstable Debian 10 buster # LTS support
 - oldoldstable Debian 9 stretch # extended LTS support



Creations of Sid (Toy Story movie 1995 by Pixar/Disney @1:02:55)

- Debian *ports* support alternate CPU architectures and kernels
- focus on stability , with minimal changes and backported security bug fixes
 - alternatives: Backports, Volatile/Stable-Updates

<div> <div>V · T · E</div> <div>recent Debian releases</div> <div>[hide]</div> </div>								
2015	2016	2017	2018	2019	2020	2021	2022	2023
Debian 8 'jessie'								
		Debian 9 'stretch'						
				Debian 10 'buster'				
						Debian testing/11 'bullseye'		

Package flowchart table from wikipedia.org/wiki/Debian



Debian packaging i/iii



- Salt package basic source access and build commands

```
apt-get build-dep salt
apt-get source salt
dpkg-buildpackage -us -uc # unsigned
```

- package numbering

```
- <upstream ver>[+optional repackaging]<-package maintainer
  update>[+optional non-maintainer/security team update]
```

```
- salt-minion-2018.3.4+dfsg1-6+deb10u2 # v10 buster
  salt-minion-3002.6+dfsg1-4 # v11 bullseye
```

Debian Salt package numbering – IRL detail
<https://qa.debian.org/madison.php?package=salt>

salt	0.17.5+ds-1-bpo70+1	wheezy-backports
salt	2014.1.13+ds-3	jessie
salt	2016.11.2+ds-1+deb9u4	stretch
salt	2018.3.4+dfsg1-6+deb10u2	buster
salt	3002.6+dfsg1-4	bullseye
salt	3002.6+dfsg1-4	sid

- Debian package contents - quick review

- 3.0 source format: orig.tar (rm non-DFSG), dsc , debian.tar
- binary output package: .deb
- debian/ subdirectory contents define and configure package
 - d/control # defines Maintainer: Uploader: Build-Deps:
 - d/copyright
 - d/changelog # defines version
 - d/rules # build makefile and unit tests
 - d/patches
 - d/tests # autopkgtests / unit tests

- Salt package development source;
multiple layer choices (local, chroot, build
environment tool options)

```
gbp clone -v git@salsa.debian.org:salt-team/salt.git
gbp buildpackage --git-builder=sbuild -A -v -d unstable
```

- Debian is a “bazaar” community effort;
decentralized, federated, and evolving

- Debian Salt package uses Git VCS hosted on
salsa.debian.org (gitlab open)

- useful links

- <https://tracker.debian.org/pkg/salt> package overview
- Debian Policy (v4.6.0.0, released on 2021-08-18)
<https://www.debian.org/doc/debian-policy/>



Debian packaging ii/iii



- package deb contents

```
donfed@saltdev14:~/hack_salt00/salt$ ls
AUTHORS          conf             debian           HACKING.rst     MANIFEST.in     PKG-INFO        README.rst      salt            scripts         setup.py        templates
CODE_OF_CONDUCT.md CONTRIBUTING.rst doc              LICENSE         pkg              pyproject.toml  requirements    salt.egg-info   setup.cfg       SUPPORT.rst     tests
donfed@saltdev14:~/hack_salt00/salt$ cd debian/
donfed@saltdev14:~/hack_salt00/salt/debian$ ls
changelog      rules           salt-common.bash-completion  salt-doc.docs          salt-master.install  salt-minion.manpages  salt-syndic.init
control        salt-api.init   salt-common.dirs             salt-doc.links          salt-master.manpages  salt-minion.postinst  salt-syndic.install
copyright      salt-api.install salt-common.install          salt-doc.lintian-overrides salt-master.postinst  salt-minion.postrm    salt-syndic.manpages
gbp.conf       salt-api.manpages salt-common.lintian-overrides salt-doc.maintscript   salt-master.postrm    salt-proxy.install    source
NEWS           salt-cloud.dirs salt-common.logrotate        salt-doc.manpages      salt-minion.dirs      salt-proxy.manpages   tests
patches        salt-cloud.install salt-common.manpages         salt-master.dirs       salt-minion.init      salt-ssh.install      upstream
pydist-overrides salt-cloud.manpages salt-doc.doc-base           salt-master.init       salt-minion.install  salt-ssh.manpages     watch

donfed@saltdev14:~/hack_salt00/salt/debian$ apt-cache search "^salt-"
salt-api - Generic, modular network access system
salt-cloud - public cloud VM management system
salt-common - shared libraries that salt requires for all packages
salt-doc - additional documentation for salt, the distributed remote execution system
salt-master - remote manager to administer servers via salt
salt-minion - client package for salt, the distributed remote execution system
salt-proxy - Proxy client package for salt stack
salt-ssh - remote manager to administer servers via Salt SSH
salt-syndic - master-of-masters for salt, the distributed remote execution system
salt-pepper - Library and stand-alone CLI tools to access a salt-api instance

donfed@saltdev14:~/hack_salt00/salt/debian$
```



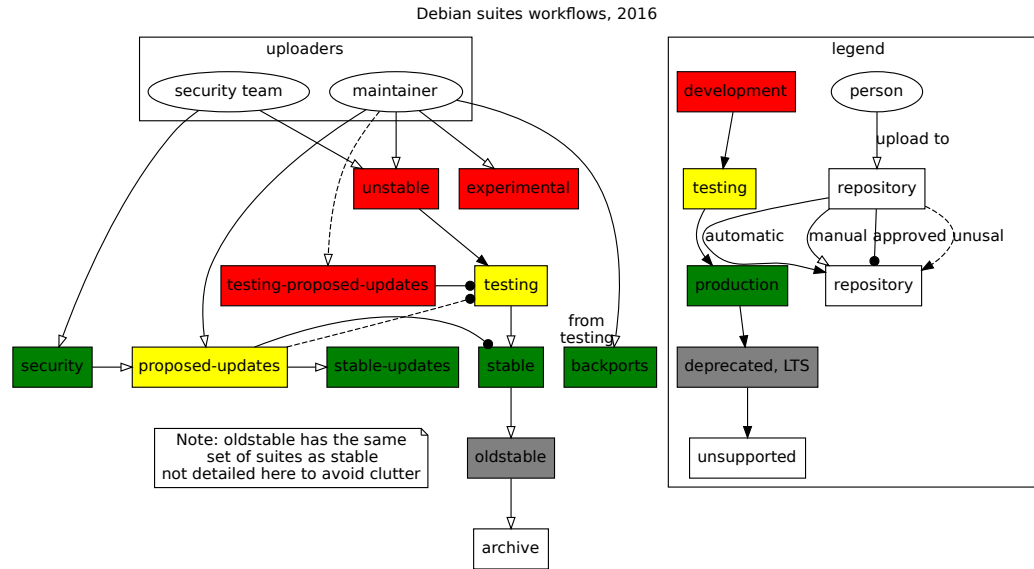
Debian packaging iii/iii



- packaging improvements
 - “reproducible builds”
 - “unit tests”; both upstream and Debian build “autopkgtests”
 - ¿mini lab with master, minion, and more?
 - VCS build CI pipelines



Debian package cycle



Source <https://salsa.debian.org/debian/package-cycle> package-cycle.svg



- signed packages published to Internet hosts, mirrors, and CDN



Security



- Appreciation for back-ported CVE security patches
 - <https://gitlab.com/saltstack/open/salt-patches>
- In future, how to best communicate CVE releases?
 - acquire patch fixes, to apply to package
 - coordinate release of updated package



Resources



- Debian Salt packaging team
 - <https://tracker.debian.org/pkg/salt>
 - <https://salsa.debian.org/salt-team/salt>
 - <https://wiki.debian.org/Teams/DebianSaltTeam>
- Salt Release Working Group - Salt process walkthrough at SUSE
 - <https://github.com/saltstack/community/issues/143>
- misc
 - <https://www.debian.org/intro/philosophy>
 - <https://wiki.debian.org/DebianHistory>
 - <https://www.debian.org/releases/>
 - <https://www.debian.org/doc/manuals/developers-reference/best-pkging-practices.en.html#repackaged-upstream-source>
 - <https://wiki.debian.org/Teams/FTPMaster>



¿Questions? / Thanks



- When is the next debconf?
 - ~~<https://debconf21.debconf.org/>~~ will be virtual and is scheduled from ~~2021-August-22~~ to ~~2021-August-29~~.
 - debconf22 will be in Prizren, Kosovo scheduled from 2022-July-17 to 2022-July-24.
- Many thanks to
 - Benjamin Drung