

Debian

Debian

Part of the Unix-like family	
	
	
Debian 7.0 (Wheezy) with GNOME 3	
Company / developer	Debian Project
Working state	Current
Source model	Open-source
Initial release	September 15, 1993
Latest release	7.5 (Wheezy) (April 26, 2014) [±] ^[1]
Latest preview	8.0 (Jessie) (perpetual beta) [±] ^[2]
Available in	73 languages
Update method	APT (several front-ends available)
Package manager	dpkg
Supported platforms	IA-32, x86-64, PowerPC, SPARC, ARM, MIPS, S390
Kernel type	Monolithic: Linux, kFreeBSD Micro: Hurd (unofficial)
Userland	GNU
Default user interface	GNOME
License	Free software (mainly GPL). Proprietary software in a non-default area.
Official website	www.debian.org ^[3]

Debian (/ˈdɛbiən/) is an operating system composed of free software mostly carrying the GNU General Public License, and developed by an Internet collaboration of volunteers aligned with the Debian Project. It is one of the most popular Linux distributions for personal computers and network servers, and has been used as a base for other Linux distributions.

Debian was announced in 1993 by Ian Murdock, and the first stable release was made in 1996. The development is carried out by a team of volunteers guided by a project leader and three foundational documents. New distributions are updated continually and the next candidate is released after a time-based freeze.

As one of the earliest distributions in Linux's history, Debian was envisioned to be developed openly in the spirit of Linux and GNU. This vision drew the attention and support of the Free Software Foundation, who sponsored the project for the first part of its life.

Features

Debian is primarily a Linux distribution with access to online repositories hosting over 37,500 software packages. Debian is officially made of free software but hosts non-free software on its repositories. Debian includes popular free programs such as LibreOffice, Iceweasel (a rebranding of Firefox), Evolution mail, K3b CD/DVD burner, VLC media player, GIMP image editor and Evince document viewer. Debian is a popular choice for web servers.

The cost of developing all the packages included in Debian 5.0 Lenny (323 million lines of code) has been estimated to be about US\$ 8 billion, using one method based on the COCOMO model. As of 2014[4], Ohloh estimates that the codebase (78 million lines of code) would cost about US\$ 1.5 billion to develop, using a different method based on the same model.

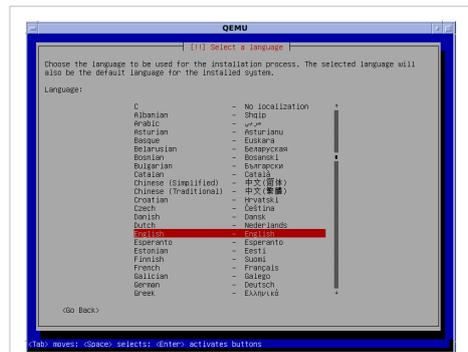
The current stable release, code-named Wheezy, is officially supported on eleven architectures and brought support for two new architectures: s390x and armhf. Notable new features in this latest release include: Multiarch, which allows 32-bit Linux software to run on 64-bit operating system installs; UEFI support for amd64; improved multimedia support, reducing reliance on third-party repositories; compiled packages with hardened security flags; AppArmor, which can protect a system against unknown vulnerabilities; and systemd, which shipped as a technology preview.

Kernels

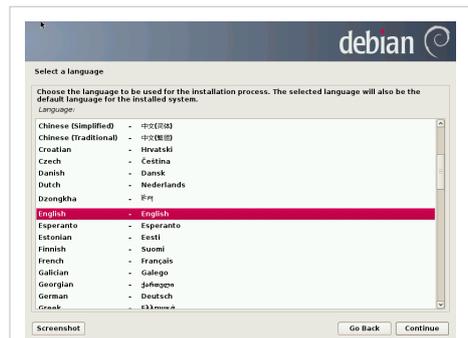
Debian 6.0 introduced a new kernel: the Debian GNU/kFreeBSD kernel. This project's new kernel is released as a technology preview and still lacks the amount of software available as on Debian's Linux. kFreeBSD is offered for Intel/AMD 32-bit and 64-bit architecture machines. Debian now supports two kernels, Linux and kFreeBSD, and offers GNU Hurd unofficially.

Installation

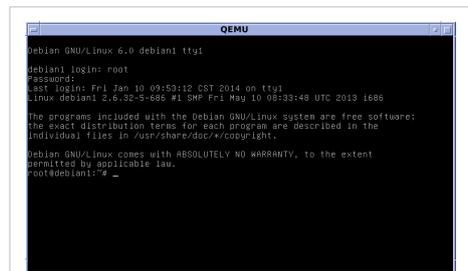
Debian offers DVD and CD images for installation that can be downloaded using BitTorrent, with jigdo and bought from retailers. The full sets are made up of several disks (the amd64 port consists of 10 DVDs or 69 CDs), but only the first disk is required for installation, as the installer can retrieve software not contained in the first disk image



Text version of the Debian Installer



Graphical version of the Debian Installer (available since Etch)



Debian GNU/Linux console login and welcome message

from online repositories. Installation images are hybrid on some architectures and can be used to create a bootable USB drive. The Wheezy release offers to install a variety of default Desktops (GNOME, KDE Software Compilation, Xfce, and LXDE) from its DVD boot menu and from special disk 1 CDs. The Debian installer includes aids for visually-impaired people, featuring in Wheezy a textual mode that performs audio output for each stage of installation. Debian offers different network installation methods. A minimal install of Debian is available via the "netinst" CD, whereby Debian is installed with just a base and later additional software can be downloaded from the Internet. Another option is to boot the installer from the network.

Desktop environments

Debian offers CD images specifically built for GNOME (the default in Wheezy), KDE Plasma Workspaces, Xfce and LXDE. MATE is officially supported, while Cinnamon is not ready to be released as of July 2014[4]. Less common window managers such as Enlightenment, Openbox, Fluxbox, IceWM, Window Maker and others are available.

It was previously suggested that the default desktop environment of version 7.0 Wheezy may be switched to Xfce, because GNOME 3 might not fit on the first CD of the set. In November 2013 it was announced that the desktop environment of version 8.0 Jessie would change to Xfce. Demand for Xfce will be evaluated and the default environment may switch back to GNOME again just before Jessie is frozen.



Blends

Debian Pure Blends are subsets of a Debian release configured out-of-the-box for users with particular skills and interests. For instance, Debian Jr. is targeted at children. The complete Debian distribution includes all available Debian Pure Blends. "Debian Blend" (without "Pure") is a term for a Debian-based distribution that strives to mainstream, improving Debian as a whole. Consequently, all extras offered by Blends will either become part of Debian, or are temporary workarounds to solve a need of the target group which cannot yet be solved within Debian.

Debian Live

Debian releases live install images for CDs, DVDs and USB thumb drives, for IA-32 and x86-64 architectures, and with a choice of desktop environments. These "Debian Live" images allow the user to boot from removable media and run Debian without affecting the contents of their computer. A full install of Debian to the computer's hard drive can be initiated from the live image environment. Personalized images can be built with the live-build tool for CD/DVD/USB drives and for network booting purposes.

Embedded systems

Debian supports a variety of ARM-based NAS devices. The NSLU2 was supported by the installer in Debian 4.0 and 5.0, and Martin Michlmayr is providing installation tarballs since version 6.0. Other supported NAS devices are the Buffalo Kurobox Pro, GLAN Tank, Thecus N2100 and QNAP Turbo Stations.

Devices based on the Kirkwood SoC are supported too, such as the SheevaPlug plug computer and OpenRD products. There are efforts to run Debian on mobile devices, but this is not a project goal yet since the Debian Linux kernel maintainers would not apply the necessary patches. Nevertheless, there are packages for resource-limited systems.

There are efforts to support Debian on other hardware, such as automobiles and wireless routers. Debian is known to run on set-top boxes. As of June 2014[4], there is an ongoing work to support the AM335x processor, which is used

in electronic point of service solutions. Debian may be customized to run on cash machines.

Package management

Package management operations can be performed with different tools available on Debian, from the lowest level command *dpkg* to graphical front-ends like *synaptic*. The recommended standard for administering packages on a Debian system is the *apt* toolset.

dpkg provides the low-level infrastructure for package management. The *dpkg* database is located under */var/lib/dpkg*; the "status" file contains the list of installed software on the current system. The *dpkg* command tool does not know about repositories. The command can work with local *.deb* package files as well as information from the *dpkg* database.

APT tools for repositories

An APT tool allows administration of an installed Debian system for retrieving and resolving package dependencies from repositories. APT tools share dependency information and cached packages.

- *aptitude* is a command tool and offers a TUI interface. The program comes with enhancements such as better search on package metadata.
- *apt-get* and *apt-cache* are command tools of the standard APT-class toolset *apt* package. *apt-get* installs and removes packages, and *apt-cache* is used for searching packages and displaying package information.

The GDebi tool and other front-ends

GDebi is an APT tool which can be used in command-line and on the GUI. GDebi can install a local *.deb* file via the command line alike the *dpkg* command, but with access to repositories to resolve dependencies. Other graphical front-ends for APT include Software Center, Synaptic and Apper.

Distributions

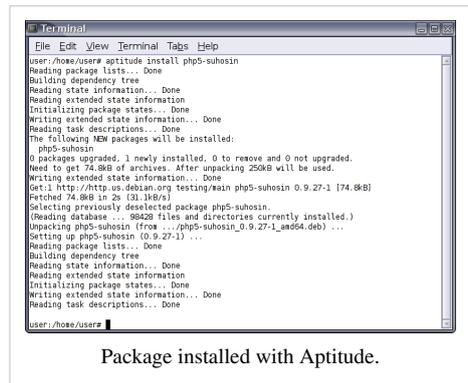
The Debian Project offers at least three maintained distributions, also called *releases*, at any one time. Packages which comply with the Debian Free Software Guidelines, usually under the GNU General Public License, Modified BSD License or Artistic License, are included inside the *main area*.

Official

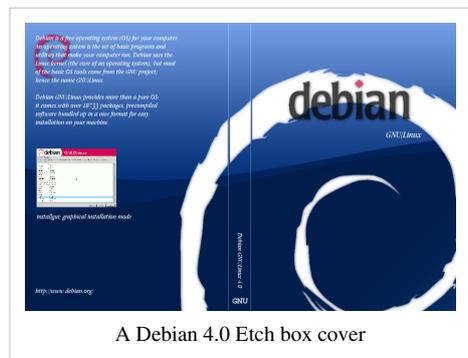
Main distributions are the following:



Using Aptitude to view Debian package details



Package installed with Aptitude.



A Debian 4.0 Etch box cover

- **stable**, currently aliased **Wheezy**, is the current release and targets stable and well-tested software needs. *Stable* is made by freezing *testing* for a few months where bugs are fixed and too buggy packages are removed; then the resulting system is released as *stable*. It is updated only if major security or usability fixes are incorporated. *Stable's* CDs and DVDs can be found in the Debian website.

Debian officially supports the optional backports service for this distribution. The backports repository provides users of *stable* with more recent versions of some software.

- **testing**, currently aliased **Jessie**, is the preview release that will eventually become the next major release. The packages included in this distribution have had some testing in *unstable* but they may not be fit for release yet. It contains newer packages than *stable* but older than *unstable*. This distribution is updated continually until it enters the "frozen" state. Security updates for *testing* distribution are provided by Debian testing security team. *Testing's* CDs and DVDs can be found on the Debian website.
- **unstable**, permanently aliased **Sid**, is the development release and is updated continually. Packages are accepted without checking the distribution as a whole. This distribution is usually run by software developers who participate in a project and need the latest libraries available, and by those who prefer bleeding-edge software. Debian does not provide Sid installation CDs/DVDs. This distribution can be installed through a system upgrade from *testing*.

Other distributions in Debian:

- **oldstable**, currently aliased **Squeeze**, is the prior *stable* release. It is supported until one year after a new *stable* is released. Eventually, *oldstable* is moved to a repository for archived distributions.
- **experimental** is a temporary staging area of highly experimental software that is likely to break the system. It is not a full distribution and missing dependencies are commonly found in *unstable*, where new software without the damage chance is normally uploaded.

The *snapshot* archive provides older versions of the distributions. They may be used to install a specific older version of some software.

Archive areas and unofficial repositories

The Debian Free Software Guidelines (DFSG) define their distinctive meaning of the word "free" as in "free and open source software". In accordance with these guidelines, a relatively small number of packages are excluded from the distributions' *main* area and included inside the *non-free* and *contrib* areas. These last two areas are not officially part of Debian. The project offers its distribution without these areas but can be adopted manually after initial setup.

- **non-free** includes packages which do not comply with the DFSG (this does not usually include legally questionable packages, like *libdvdcss*), such as documentation with invariant sections and proprietary software.
- **contrib** includes packages which do comply with the DFSG, but may fail other requirements. For instance, they may depend on packages which are in *non-free* or requires such for building them.

Richard Stallman and the Free Software Foundation have criticized the Debian Project for hosting the non-free repository and because the *contrib* and non-free areas are easily accessible, an opinion echoed by some in Debian including the former project leader Wichert Akkerman. The internal dissent in the Debian Project regarding the non-free section has persisted, but the last time it came to a vote in 2006, the majority decided to keep it.

Third-party repositories

These repositories are not part of the Debian Project, they are maintained by third party organizations. They contain packages that are either more up to date than the ones found in *stable* or include packages that are not included in the Debian Project for a variety of reasons such as: e.g. possible patent infringement, binary-only/no sources, or special licenses that are too restrictive. Their use requires precise configuration of the priority of the repositories to be merged; otherwise these packages may not integrate correctly into the system, and may cause problems upgrading or conflicts between packages from different sources. The Debian Project discourages the use of these repositories as

they are not part of the project.

Hardware support

Hardware requirements

Debian has no hardware requirements beyond those of the Linux kernel and the GNU tool-sets (gcc, coreutils, bash, etc.) Therefore, any architecture or platform to which these packages have been ported, and for which a Debian port exists, can run Debian. Linux, and therefore Debian, supports the use of multiple processors in a system (symmetric multiprocessing). This does not inhibit support for single-processor systems. Debian's recommended system requirements differ depending on the level of installation, which corresponds to increased numbers of installed components:

Install desktop	RAM minimum	RAM recommended	Minimum processor clock speed (IA-32)	Hard drive space used
No	64 MB	256 MB		1 GB
Yes	128 MB	512 MB	1 GHz	5 GB

The real minimum memory requirements depend on the architecture and may be much less than the numbers listed in this table. It is possible to install Debian with as little as 20 MB of RAM for s390, or 60 MB of RAM for x86-64. The installer will run in low memory mode and it is recommended to create a swap partition. Similarly, disk space requirements, which depend on the packages to be installed, can be reduced by manually selecting the packages needed. As of June 2014[4], there is no Pure Blend that would lower the hardware requirements easily, though there are plans to integrate Emdebian Grip into Debian.

It is possible to run graphical user interfaces on older or low-end systems, but the installation of window managers instead of desktop environments is recommended, as desktop environments are more resource-intensive. Requirements for individual software vary widely and must be considered as well as those of the base operating environment.

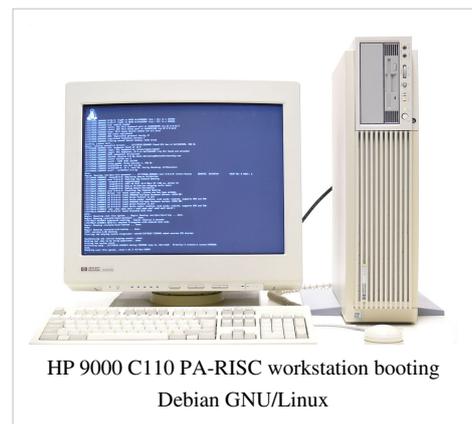
Architecture ports

Most software packages in the official Debian repositories are compiled for an abundance of available and older instruction sets.

Official ports

As of the current *stable* release (Wheezy), the official ports are:

- `amd64`: x86-64 architecture designed for 64-bit PCs, with the goal of supporting both 32bit- and 64bit-userland on this architecture
- `armel`: little-endian ARM architecture (*Instruction set ARMv4*) on RisePC and various embedded systems (EABI)
- `armhf`: ARM (*Instruction set ARMv7*) hard-float architecture requiring hardware with a floating-point unit (FPU)
- `i386`: IA-32 architecture designed for 32-bit PCs. Compatible with (but carries over the limitations of 32-bit to) 64-bit machines
- `ia64`: Intel Itanium (IA-64) architecture
- `kfreebsd-amd64`: Kernel of FreeBSD on x86-64 architecture
- `kfreebsd-i386`: Kernel of FreeBSD on IA-32 architecture
- `mips`, `mipsel`: MIPS architecture (big-endian and little-endian)
- `powerpc`: PowerPC architecture



- `s390`: IBM ESA/390 architecture and z/Architecture
- `s390x`: IBM ESA/390 architecture and z/Architecture with 64-bit userland
- `sparc`: Sun SPARC architecture on sun4u/v systems

There used to be an `arm` port using an old ABI (OABI) that was last included with the Lenny release.

Unofficial ports

Unofficial ports are available as part of the *unstable* distribution:

- `alpha`: DEC Alpha architecture
- `hppa`: HP PA-RISC architecture
- `hurd-i386`: GNU Hurd kernel on IA-32 architecture
- `m68k`: Motorola 68k architecture on Amiga, Atari, Macintosh and various embedded VME systems
- `powerpcspe`: PowerPC SPE architecture (binary-incompatible variant of the PowerPC)
- `ppc64`: PowerPC64 architecture supporting 64-bit PowerPC CPUs with VMX
- `sh4`: Hitachi SuperH architecture
- `sparc64`: Sun SPARC architecture with 64-bit userland
- `x32`: 32-bit userland for modern x86-64 processors, incompatible with IA-32

The `m68k` port was the second official one in Debian, and has been part of five stable Debian releases. Due to its failure to meet the release criteria, it was dropped before the release of Etch but is in current status of being revived.

The `alpha` and `hppa` ports were dropped before the release of Squeeze.

Localization

Several parts of Debian are translated into languages other than English, including package descriptions, configuration messages, documentation and the web site. The level of software localization depends on the language, ranging from the highly supported German and French to the hardly translated Creek and Samoan. The installer is available in 73 languages.

Derivatives

Debian GNU/Linux is one of the most popular Linux distributions, and many other distributions have been created from the Debian code base, including Ubuntu and Knoppix. As of 2014[4], DistroWatch lists 138 active Debian derivatives. Although Debian is not affiliated with its derivatives, the project provides guidelines for best practices and encourages derivatives to merge their work back into Debian.

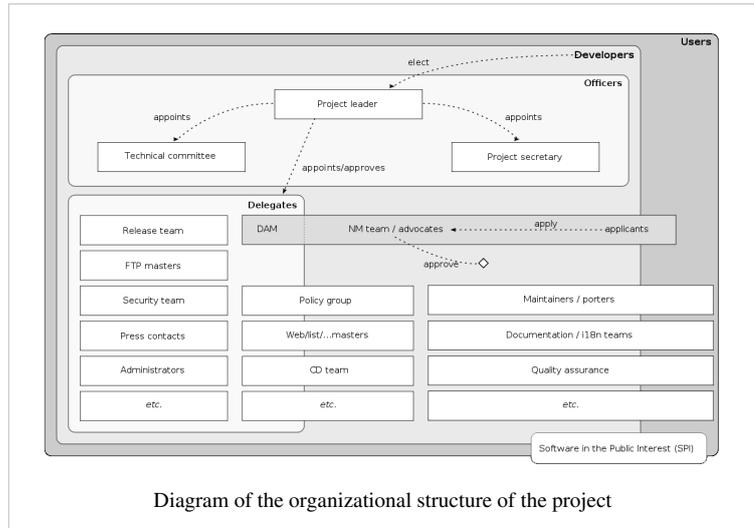
Policies

Debian is known for its manifesto, social contract, and policies. Debian's policies and team efforts focus on collaborative software development and testing processes and dedicates lengthy development time between stable release cycles. As a result of its strictly guarded policies, a new distribution release for Debian tends to occur every one to two years. The strategy policies used by the Debian project for minimizing software bugs, albeit with longer release cycles, has allowed it to remain one of the most stable and secure Linux distributions.

Organization

The Debian Project is a volunteer organization with three foundational documents:

- The **Debian Social Contract** defines a set of basic principles by which the project and its developers conduct affairs.
- The **Debian Free Software Guidelines** define the criteria for "free software" and thus what software is permissible in the distribution, as referenced in the Social Contract. These guidelines have been adopted as the basis of the Open Source Definition. Although it can be considered a separate document for all practical purposes, it formally is part of the Social Contract.
- The **Debian Constitution** describes the organizational structure for formal decision-making within the Project, and enumerates the powers and responsibilities of the Debian Project Leader, the Debian Project Secretary, and the Debian Developers generally.



Historical population		
Year	DD	±%
1999 [5]	347	—
2000 [6]	347	+0.0%
2001 [7]	?	—
2002 [8]	939	—
2003 [9]	831	-11.5%
2004 [10]	911	+9.6%
2005 [11]	965	+5.9%
2006 [12]	972	+0.7%
2007 [13]	1,036	+6.6%
2008 [14]	1,075	+3.8%
2009 [15]	1,013	-5.8%
2010 [16]	886	-12.5%
2011 [17]	911	+2.8%
2012 [18]	948	+4.1%
2013 [19]	988	+4.2%
2014 [20]	1,003	+1.5%

Source: Debian Voting Information [21]

There are at present[4] about one thousand active Debian developers, but it is possible to contribute to the project without being an official developer.

Debian is supported by donations through several nonprofit organizations around the world. The largest supporter is Software in the Public Interest, the owner of the Debian trademark, manager of the monetary donations and umbrella organization for various other community free software projects.

The project maintains official mailing lists and conferences for communication and coordination between developers. For issues with single packages and other tasks, a public bug tracking system is used by developers and end-users. Internet Relay Chat channels (primarily on the OFTC and freenode networks) are also used for communication among developers and to provide real time help.

Together, the Developers may make binding general decisions by way of a General Resolution or election. All voting is conducted by Cloneproof Schwartz Sequential Dropping, a Condorcet method of voting. A Project Leader is elected once per year by a vote of the Developers. The Debian Project Leader has several special powers, but they are not absolute. Under a General Resolution, the Developers may, among other things, recall the leader, reverse a decision by him or his delegates, and amend the constitution and other foundational documents.

The Leader sometimes delegates authority to other developers in order for them to perform specialized tasks. Delegates make decisions as they think is best, taking into account technical criteria and consensus.

A role in Debian with a similar importance to the Project Leader's is that of a Release Manager. Release Managers set goals for the next release, supervise the processes, and make the final decision as to when to release.

Project leaders

The Debian Project Leader is the public face of the project and defines the current direction of the project. The project has had the following leaders:

- Ian Murdock (August 1993 – March 1996), founder of the Debian Project
- Bruce Perens (April 1996 – December 1997)
- Ian Jackson (January 1998 – December 1998)
- Wichert Akkerman (January 1999 – March 2001)
- Ben Collins (April 2001 – April 2002)
- Bdale Garbee (April 2002 – March 2003)
- Martin Michlmayr (March 2003 – March 2005)
- Branden Robinson (April 2005 – April 2006)
- Anthony Towns (April 2006 – April 2007)
- Sam Hocevar (April 2007 – April 2008)
- Steve McIntyre (April 2008 – April 2010)
- Stefano Zacchiroli (April 2010 – April 2013)
- Lucas Nussbaum (April 2013 – present)

A supplemental position, Debian Second in Charge, was created by Anthony Towns. Steve McIntyre held the position between April 2006 and April 2007. From April 2009 to April 2010 this position was held by Luk Claes. Stefano Zacchiroli abandoned this unofficial position when elected in April 2010.

Release managers

- Brian C. White (1997–1999)
- Richard Braakman (1999–2000)
- Anthony Towns (2000–2004)
- Steve Langasek, Andreas Barth and Colin Watson (2004–2007)
- Andreas Barth and Luk Claes (2007–2008)
- Luk Claes and Marc Brockschmidt (2008–2009)
- Luk Claes and Adeodato Simó (2009–2010)
- Adam D. Barratt and Neil McGovern (2010–2013)
- Adam D. Barratt and Niels Thykier (2013–present)

Note that this list includes the active release managers; it does not include the release assistants (first introduced in 2003) and the retiring managers ("release wizards").

Developer recruitment, motivation, and resignation

The Debian project has an influx of applicants wishing to become developers. These applicants must undergo a vetting process which establishes their identity, motivation, understanding of the project's goals (embodied in the Social Contract), and technical competence. This process has become much harder throughout the years.^[22]

Debian Developers join the Project for a number of reasons; some that have been cited in the past include:

- A desire to contribute back to the free-software community (practically all applicants are users of free software)
- A desire to see some specific software task accomplished (some view the Debian user community as a valuable testing or proving ground for new software)
- A desire to make, or keep, free software competitive with proprietary alternatives
- A desire to work closely with people who share some of their aptitudes, interests, and goals (there is a very strong sense of community within the Debian project which some applicants do not experience in their paid jobs)
- A simple enjoyment of the iterative process of software development and maintenance

Debian Developers may resign their positions at any time by orphaning the packages they were responsible for and sending a notice to the developers and the keyring maintainer (so that their upload authorization can be revoked). Alternatively, when necessary, existing developers can be expelled.

Development procedures

Software packages in development are either uploaded to the project distribution named *unstable* (also known as Sid), or to the *experimental* distribution. Software packages uploaded to *unstable* are normally versions stable enough to be released by the original upstream developer, but with the added Debian-specific packaging and other modifications introduced by Debian developers. These additions may be new and untested. Software not ready yet for the *unstable* distribution is typically placed in *experimental*.

After a version of a software package has remained in *unstable* for a certain length of time (depending on the urgency of the software's changes), that package is automatically migrated to the *testing* distribution. The package's migration to *testing* occurs only if no serious ("release-critical") bugs in the package are reported and if other software needed for package functionality qualifies for inclusion in *testing*. From a distribution viewpoint, the migration process happens twice per day, rendering *testing* in perpetual beta.

Since updates to Debian software packages between official releases do not contain new features, some choose to use the *testing* and *unstable* distributions for their newer packages. However, these distributions are less tested than *stable*, and *unstable* does not receive timely security updates. In particular, incautious upgrades to working *unstable* packages can sometimes seriously break software functionality. Since September 9, 2005, the *testing* distribution's security updates have been provided by the *testing* security team.

When *testing* is deemed mature enough and the number of remaining bugs is acceptable, the *testing* distribution becomes the next *stable* release. The timing of the release is decided by the Release Managers, and in the past the exact date was rarely announced earlier than a couple of weeks beforehand.

Package maintenance

Each Debian software package has a maintainer who keeps track of releases by the "upstream" authors of the software and ensures that the package is compliant with Debian Policy, coheres with the rest of the distribution, and meets the standards of quality of Debian. In relations with users and other developers, the maintainer uses the bug tracking system to follow up on bug reports and fix bugs. Typically, there is only one maintainer for a single package, but, increasingly, small teams of developers "co-maintain" larger and more complex packages and groups of packages.

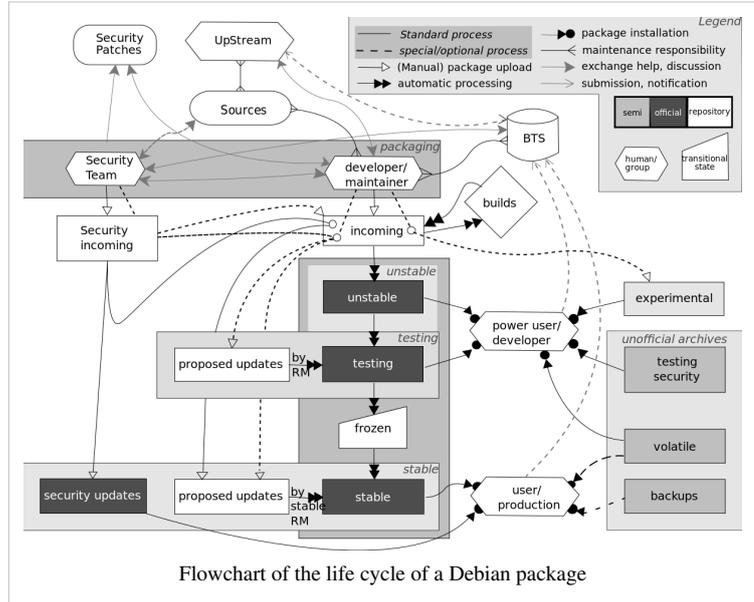
A package maintainer makes a release of a package by uploading it to the "incoming" directory of the Debian package archive (or an "upload queue" which periodically batch-transmits packages to the incoming directory). Package uploads are automatically processed to ensure that they are well-formed (all the requisite files are in place) and that the package is digitally signed by a Debian developer using OpenPGP-compatible software. All Debian developers have individual cryptographic key pairs. Developers are responsible for any package they upload even if the packaging was prepared by another contributor.

If the package in incoming is found to be validly signed and well-formed, it is installed into the archive into an area called the "pool" and distributed every day to hundreds of mirrors worldwide. Initially, all package uploads accepted into the archive are only available in the *unstable* distribution, which contains the most up-to-date version of each package.

For packages to become candidates for the next *stable* release of the Debian distribution, they first need to be included in the *testing* distribution. For a package to be included in *testing*:

- It must have been in *unstable* for the appropriate length of time (the exact duration depends on the urgency of the changes)
- It must not have a greater number of "release-critical" bugs filed against it than the current version in *testing*. Release-critical bugs are those bugs which are considered serious enough that they make the package unsuitable for release.
- It must be compiled for all release architectures the package claims to support (e.g.: the i386-specific package *gmod* can be included in *testing*)
- All of its dependencies must either be satisfiable by packages already in *testing*, or be satisfiable by the group of packages which are going to be installed at the same time.
- The operation of installing the package into *testing* must not break any packages currently in *testing*.

Thus, a release-critical bug in a new version of a shared library on which many packages depend may prevent those packages from entering *testing*, because the updated library must meet the requirements too.



Periodically, the release team publishes guidelines to the developers in order to ready the release. A new release occurs when all important software is reasonably up-to-date in the release-candidate distribution, and when any other significant issues are solved. At that time, all packages in the *testing* distribution become the new *stable* distribution.

A version of a package can belong to more than one distribution, usually *testing* and *unstable*. It is possible for a package to keep the same version between stable releases and be part of *oldstable*, *stable*, *testing* and *unstable* at the same time. Each distribution, also called *suite*, can be seen as a collection of pointers into the package "pool" mentioned above.

Security

The Debian Project, being free software, handles security policy through public disclosure rather than through security through obscurity. Many advisories are coordinated with other free software vendors and are published the same day a vulnerability is made public. Debian has a security audit team that focuses on packages in the stable release looking for new or unfixed security bugs. The Debian security advisories are compatible with the Common Vulnerabilities and Exposures dictionary.

The Debian Project offers documentation and tools to harden a Debian installation both manually and automatically. SELinux (Security-Enhanced Linux) packages are installed by default though not enabled. Debian provides an optional hardening wrapper and does not compile their packages by default using gcc features such as PIE and buffer overflow protection to harden their software, unlike Ubuntu, Fedora and Hardened Gentoo among others, but tries to build as many packages as possible with hardening flags. These extra features increase security at a performance cost of 1% in IA-32 and 0.01% in x86-64.

In May 2008, a Debian Developer revealed his discovery that changes made in 2006 to the random number generator in the version of the OpenSSL package distributed with Debian and other Debian-based distributions such as Ubuntu or Knoppix, made a variety of security keys vulnerable to a random number generator attack. The security weakness was caused by changes made to the OpenSSL code by another Debian Developer in response to memory debugger warnings. The security hole was soon patched by Debian and others, but the complete resolution procedure was cumbersome for users because it involved regenerating all affected keys. Being introduced by Debian, the vulnerability caused anger and embarrassment among Debian developers.

History

Releases

As of June 2014^[4], the *stable* release is version 7.5, code name Wheezy. When a new version is released, the prior *stable* version becomes *oldstable*. This is version 6.0.9, code name Squeeze.

In addition, a stable release gets minor updates (called *point releases*). The numbering scheme for the point releases up to Debian 4.0 was to include the letter *r* (for *release*) after the main version number (e.g. 4.0) and then the number of the point release; for example, the latest point release of version 4.0 (Etch) is 4.0r9. From Debian 5.0 (Lenny), the numbering scheme of point releases has been changed and conforms to the GNU version numbering standard; so, for example, the first point release of Debian 5.0 was 5.0.1 (instead of 5.0r1). The numbering scheme was once again changed for the first Debian 7 update, with the latter being assigned version 7.1.

Security updates

The Debian security team releases security updates for the latest stable major release, and for the prior stable release for one year. Version 4.0 Etch was released on April 8, 2007, and the security team supported version 3.1 Sarge until March 21, 2008. For most uses it is strongly recommended to run a system which receives security updates. The *testing* distribution receives security updates, but not in as timely a manner as *stable*.

Time-based development schedule

For Debian 6.0 (Squeeze) a new policy of time-based development freezes on a two-year cycle was announced. Time-based freezes are intended to allow the Debian Project to blend the predictability of time based releases with its policy of feature based releases. Having predictable freezes was expected to reduce overall freeze time. The Squeeze cycle was intended to be especially short to "get into the new cycle". However this short freeze cycle for Squeeze was abandoned.

Code names

The code names of Debian releases are names of characters from the *Toy Story* films. The *unstable* distribution is permanently nicknamed Sid, after the emotionally unstable next-door neighbor boy who regularly destroyed toys. The current release Wheezy is named after the rubber toy penguin in *Toy Story 2*. The release after Wheezy will be named Jessie, after the cowgirl in *Toy Story 2* and *Toy Story 3*.

Timeline

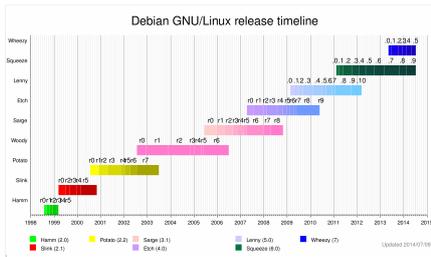
Debian has made twelve major stable releases:

Version	Code name	Release date	Ports	Packages	Supported until	Notes
1.1	Buzz	Jun 17, 1996	1	474	-	dpkg, ELF transition, Linux 2.0
1.2	Rex	Dec 12, 1996	1	848	-	-
1.3	Bo	Jun 5, 1997	1	974	May 1998	-
2.0	Hamm	Jul 24, 1998	2	≈ 1,500	1998	glibc transition, new architecture: m68k
2.1	Slink	Mar 9, 1999	4	≈ 2,250	Dec 2000	APT, new architectures: alpha, sparc
2.2	Potato	Aug 15, 2000	6	≈ 3,900	Apr 2003	New architectures: arm, powerpc
3.0	Woody	Jul 19, 2002	11	≈ 8,500	Aug 2006	New architectures: hppa, ia64, mips, mipsel, s390
3.1	Sarge	Jun 6, 2005	11	≈ 15,400	Apr 2008	Modular installer, semi-official amd64 support.
4.0	Etch	Apr 8, 2007	11	≈ 18,000	Feb 15, 2010	New architecture: amd64. Dropped m68k. Graphical installer, udev transition, modular X.Org transition.
5.0	Lenny	Feb 15, 2009	12	≈ 23,000	Feb 6, 2012	New architecture: armel Dropped SPARC 32-bit. Full Eee PC support.
6.0	Squeeze	Feb 6, 2011	9+2 ^[A]	≈ 29,000	Standard: May 31, 2014 LTS: Feb 2016	New architectures: kfreebsd-i386, kfreebsd-amd64. Dropped alpha, hppa, arm. Moved to eglibc. Dependency-based boot sequence. Free firmware.

7	Wheezy	May 4, 2013	11+2 ^[B]	≈ 36,000	TBA	New architectures: armhf, s390x. Multiarch support.
8	Jessie	TBA	TBA	TBA	TBA	Freeze date announced (November 2014).
Old version						
Older version, still supported						
Latest version						
Future release						

A 9 architectures with Linux kernel + 2 architectures with kernel of FreeBSD

B 11 architectures with Linux kernel + 2 architectures with kernel of FreeBSD



Due to an incident involving a CD vendor who made an unofficial and broken release labeled *1.0*, an official 1.0 release was never made.

1993–1998

Debian was first announced on August 16, 1993, by Ian Murdock, who initially called the system "the Debian Linux Release". The word "Debian" was formed as a combination of the first name of his then-girlfriend Debra Lynn and his own first name. Prior to Debian's release, the Softlanding Linux System (SLS) had been the first Linux distribution compiled from various software packages, and was a popular basis for other distributions in 1993–1994. The perceived poor maintenance and prevalence of bugs in SLS motivated Murdock to launch a new distribution.^[23]

In 1993 Murdock released the Debian Manifesto, outlining his view for the new operating system. In it he called for the creation of a distribution to be maintained in an open manner, in the spirit of Linux and GNU. Debian 0.01, released on September 15, 1993, was the first of several internal releases. Version 0.91 was virtually the first public release,^[24] providing support through mailing lists hosted at Pixar.

The Debian Project grew slowly at first and released the first 0.9x versions in 1994 and 1995. During this time it was sponsored by the Free Software Foundation's GNU Project. Ian Murdock delegated the base system, the core packages of Debian, to Bruce Perens and Murdock focused on the management of the growing project.^[24] The first ports to other, non-IA-32 architectures began in 1995, and Debian 1.1 was released in 1996. By that time and thanks to Ian Jackson, the dpkg package manager was already an essential part of Debian.^[25]

In 1996, Bruce Perens assumed the project leadership. Perens was a controversial leader, regarded as authoritarian and strongly attached to Debian.^[26] He drafted a social contract and edited suggestions from a month-long discussion on the Debian mailing lists into the Debian Social Contract and the Debian Free Software Guidelines. He initiated the creation of the legal umbrella organization, Software in the Public Interest. He led the conversion of the project from a.out to ELF.^[27] He created the BusyBox program to make it possible to run a Debian installer on a single floppy, and wrote a new installer. Perens was responsible for many policy and design elements of Debian that persist to this day. By the time Debian 1.2 was released the project had grown to nearly two hundred volunteers.^[27] Perens left the project in 1998.

1999–2004

The Project elected new leaders and made two more 2.x releases, each including more ports and packages. The Advanced Packaging Tool was deployed during this time and the first port to a non-Linux kernel, Debian GNU/Hurd, was started. The first Linux distributions based on Debian, namely Libranet, Corel Linux and Stormix's Storm Linux, were started in 1999. The 2.2 release in 2000 was dedicated to Joel Klecker, a developer who died of Duchenne muscular dystrophy.

In late 2000, the project made major changes to archive and release management, reorganizing software archive processes with new "package pools" and creating a testing distribution as an ongoing, relatively stable staging area for the next release. In the same year, developers began holding an annual conference called *DebConf* with talks and workshops for developers and technical users.

In July 2002, the Project released version 3.0, codenamed Woody, the first release to include cryptographic software, a free licensed KDE and internationalization.^[28] During these last release cycles, the Debian Project drew considerable criticism from the free software community because of the long time between stable releases.

2005–present

The 3.1 Sarge release was made in June 2005. There were many major changes in this release, mostly due to the long time it took to freeze and release the distribution. This release updated 73% of the software and included over 9,000 new packages. A new installer replaced the aging boot-floppies installer with a modular design. This allowed advanced installations (with RAID, XFS and LVM support) including hardware detection, making installations easier for novice users. The installation system boasted full internationalization support as the software was translated into almost forty languages. An installation manual and release notes were released in ten and fifteen different languages respectively. This release



included the efforts of the Debian-Edu/Skolelinux, Debian-Med and Debian-Accessibility sub-projects which raised the number of packages that were educational, had a medical affiliation, and ones made for people with disabilities.

In 2006, as a result of a much-publicized dispute, Mozilla software was rebranded in Debian, with Firefox becoming Iceweasel and Thunderbird becoming Icedove. The Mozilla Corporation stated that Debian may not use the Firefox trademark if it distributes Firefox with modifications which have not been approved by the Mozilla Corporation. Two prominent reasons that Debian modifies the Firefox software are to change the artwork and to provide security patches. Debian Free Software Guidelines consider Mozilla's artwork non-free. Debian provides long term support for older versions of Firefox in the stable release, where Mozilla preferred that old versions not be supported but has since included Legacy versions of programs. These software programs developed largely by the Mozilla Corporation were rebranded despite having only minor differences in the source code.

Debian 4.0 (Etch) was released April 8, 2007. It included the x86-64 port but dropped support for m68k. The m68k port was, however, still available in the *unstable* distribution. There were approximately 18,200 binary packages maintained by more than 1,030 Debian developers.

Debian 5.0 (Lenny) was released February 14, 2009. It included more than 25,000 software packages. Support was added for Marvell's Orion platform and for netbooks such as the Asus Eee PC, but support was dropped for 32-bit SPARC machines. The release was dedicated to Thiemo Seufer, an active developer and member of the community who died in a car accident on December 26, 2008. On September 5, 2010, the backports service became official, providing more recent versions of some software for the stable release.



Debian 6.0 Squeeze (2011)

Debian continued to support new architectures and add new features with each release. Debian 6.0 (Squeeze) was released February 6, 2011, introducing Debian GNU/kFreeBSD as a technology preview. Debian 7.0 (Wheezy) was released May 4, 2013, featuring multiarch support. At present[4], Debian is still in development, working on the *unstable* distribution.

Throughout Debian's lifetime, both the Debian distribution and their website have won various awards from different organizations, including *Server Distribution of the Year 2011*, *The best Linux distro of 2011*, and a *Best of the Net* award for October 1998.

Notes

- [1] http://en.wikipedia.org/w/index.php?title=Template:Latest_stable_software_release/Debian&action=edit
- [2] http://en.wikipedia.org/w/index.php?title=Template:Latest_preview_software_release/Debian&action=edit
- [3] <http://www.debian.org>
- [4] <http://en.wikipedia.org/w/index.php?title=Debian&action=edit>
- [5] https://www.debian.org/vote/1999/vote_0001#quorum
- [6] https://www.debian.org/vote/2000/vote_0007#quorum
- [7] https://www.debian.org/vote/2001/vote_0001#quorum
- [8] https://www.debian.org/vote/2002/vote_0001#quorum
- [9] https://www.debian.org/vote/2003/vote_0001#quorum
- [10] https://www.debian.org/vote/2004/vote_001.quorum.log
- [11] https://www.debian.org/vote/2005/vote_001.quorum.log
- [12] https://www.debian.org/vote/2006/vote_001_quorum.log
- [13] https://www.debian.org/vote/2007/vote_001_quorum.log
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- [16] https://www.debian.org/vote/2010/vote_001_quorum.log
- [17] https://www.debian.org/vote/2011/vote_001_quorum.log
- [18] https://www.debian.org/vote/2012/vote_001_quorum.log
- [19] https://www.debian.org/vote/2013/vote_001_quorum.log
- [20] https://www.debian.org/vote/2014/vote_001_quorum.log
- [21] <https://www.debian.org/vote/>
- [22] Hertzog 2013, p. 13.
- [23] Scheetz 1998, p. 17.
- [24] Scheetz 1998, p. 18.
- [25] Krafft 2005, pp. 31–32.
- [26] Hertzog 2013, p. 9.
- [27] Scheetz 1998, p. 19.
- [28] Krafft 2005, p. 33.

References

- Hertzog, Raphaël (2013). *The Debian Administrator's Handbook* (<http://debian-handbook.info/browse/stable/>). Lulu Press. ISBN 979-10-91414-02-9. Retrieved 2014-06-22.
- Krafft, Martin F. (2005). *The Debian System* (<http://www.debiansystem.info>). U.S.A.: No Starch Press. ISBN 1-59327-069-0.
- Scheetz, Dale (1998). *The Debian Linux User's Guide*. Linux Press. ISBN 0-9659575-1-9.

External links

- Official website (<https://www.debian.org>)
 - Debian GNU/Linux (<http://distrowatch.com/table.php?distribution=debian>) at DistroWatch
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