



# Introducing Debian GNU/Linux

JaldharHVyas  
jaldhar@debian.org  
The Debian Project

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## Debian Project: History & Aims

The Debian project was started in 1993 by Ian Murdock to create a Linux distribution which was community-based, comprised entirely of free software and technically excellent. The name Debian (pronounced 'deb-ee-an' with stress on the first syllable) is a contraction of the names of Ian and his wife Debra.

Debian was at one time sponsored by the Free Software Foundation (<http://www.gnu.org>) and still shares many of its aims. As the FSF's GNU project provides much of the core software that makes up Debian, the distribution is referred to as Debian GNU/Linux.

In 1997, the Debian Project decided to formally state their goals in a social contract with the Free Software community. A set of guidelines as to what the project considers to be free software was also issued. The Debian Free Software Guidelines (DFSG) later became the source of the Open Source Definition.

Today, Debian is estimated to be the second or third most popular Linux distribution and the only major non-commercial one. It is committed to supporting the Linux Standard Base (See <http://www.freestandards.org/>) and takes part in other initiatives to enhance the Linux operating system.

## The Debian GNU/Linux Social Contract

The Debian Project is an association of individuals who have made common cause to create a free operating system. This is the "social contract" we offer to the free software community.

1. *Debian Will Remain 100% Free.* We provide the guidelines that we use to determine if a work is "free" in the document entitled "The Debian Free Software Guidelines". We promise that the Debian system and all its components will be free according to these guidelines. We will support people who create or use both free and non-free works on Debian. We will never make the system require the use of a

non-free component.

2. *We Will Give Back To The Free Software Community.* When we write new components of the Debian system, we will license them in a manner consistent with the Debian Free Software Guidelines. We will make the best system we can, so that free works will be widely distributed and used. We will communicate things such as bug fixes, improvements and user requests to the "upstream" authors of works included in our system.

3. *We Will Not Hide Problems.* We will keep our entire bug report database open for public view at all times. Reports that people file online will promptly become visible to others.

4. *Our Priorities Are Our Users And Free Software.* We will be guided by the needs of our users and the free software community. We will place their interests first in our priorities. We will support the needs of our users for operation in many different kinds of computing environments. We will not object to non-free works that are intended to be used on Debian systems, or attempt to charge a fee to people who create or use such works. We will allow others to create distributions containing both the Debian system and other works, without any fee from us. In furtherance of these goals, we will provide an integrated system of high-quality materials with no legal restrictions that would prevent such uses of the system.

5. *Works That Do Not Meet Our Free Software Standards.* We acknowledge that some of our users require the use of works that do not conform to the Debian Free Software Guidelines. We have created "contrib" and "non-free" areas in our archive for these works. The packages in these areas are not part of the Debian system, although they have been configured for use with Debian. We encourage CD manufacturers to read the licenses of the packages in these areas and determine if they can distribute the packages on their CDs. Thus, although non-free works are not a part of Debian, we support their use and provide infrastructure for non-free packages (such as our bug tracking system and mailing lists).

## The Debian Free Software Guidelines

1. *Free Redistribution.* The license of a Debian component may not restrict any party from selling or giving away the software as a component of an aggregate software distribution containing programs from several different sources. The license may not require a royalty or other fee for such sale.

2. *Source Code.* The program must include source code, and must allow distribution in source code as well as com-

plied form.

3. *Derived Works.* The license must allow modifications and derived works, and must allow them to be distributed under the same terms as the license of the original software.

4. *Integrity of The Author's Source Code.* The license may restrict source-code from being distributed in modified form *only* if the license allows the distribution of "patch files" with the source code for the purpose of modifying the program at build time. The license must explicitly permit distribution of software built from modified source code. The license may require derived works to carry a different name or version number from the original software. (This is a compromise. The Debian group encourages all authors not to restrict any files, source or binary, from being modified.)

5. *No Discrimination Against Persons or Groups.* The license must not discriminate against any person or group of persons.

6. *No Discrimination Against Fields of Endeavor.* The license must not restrict anyone from making use of the program in a specific field of endeavor. For example, it may not restrict the program from being used in a business, or from being used for genetic research.

7. *Distribution of License.* The rights attached to the program must apply to all to whom the program is redistributed without the need for execution of an additional license by those parties.

8. *License Must Not Be Specific to Debian.* The rights attached to the program must not depend on the program's being part of a Debian system. If the program is extracted from Debian and used or distributed without Debian but otherwise within the terms of the program's license, all parties to whom the program is redistributed should have the same rights as those that are granted in conjunction with the Debian system.

9. *License Must Not Contaminate Other Software.* The license must not place restrictions on other software that is distributed along with the licensed software. For example, the license must not insist that all other programs distributed on the same medium must be free software.

10. *Example Licenses.* The "GPL", "BSD", and "Artistic" licenses are examples of licenses that we consider "free".

## Debian Distributions & Ports

At any given time, there are actually three Debian distributions—stable, testing, and unstable. Each one is made up of software packages (in a special format that makes them easy to install, uninstall, and upgrade) and their source code. Each distribution has a name, taken from characters in the Pixar animated film *Toy Story* which a former Debian project leader worked on. Publicly released distributions also have a version number, with sub-version numbers (X.Y or X.Y.Z) to indicate updated versions that are not complete new releases.

Currently the three distributions are: **Stable: (Etch or 4.0)** This is the version usually found on CDs. It is the most recent officially released Debian distribution and is suitable for production servers and other environments where high reliability is essential. No new code is added to a stable release except for fixes of security vulnerabilities which are backported from newer versions. While this conservative approach may appear to make stable lag behind other Linux distributions, it ensures that it is as bug-free as possible. **Unstable: (Sid)** This is where new development takes place. Although there might be occasional breakage, unstable refers to the fact this distribution is constantly in flux with new packages being added, bugs fixed etc, not to the quality of its software. Developers and other power users tend to use unstable. **Testing: (Lenny)** This distribution attempts to fall between stable and unstable. When packages in unstable are deemed sufficiently bug-free, they are added to testing. When testing itself is bug-free and any other release goals are met, it becomes the next stable distribution. It is a good choice for desktop users.

Within each distribution, there are three sections: **main:** is the official distribution made up entirely of free software packages. **Non-free:** is for packages that fail the DFSG **contrib:** is for those which are free but depend upon a non-free component.

You can find older Debian distributions at: <http://www.debian.org/distrib/archive>, A listing of third-party packages is available at <http://www.apt-get.org/>

Debian has been ported to many different architectures:**i386:** Intel's 80386 and its descendants and clones. Binaries optimized for Pentiums, AMD's Athlons etc are not provided, but can be created by the user. **sparc/sparc64:** Systems based on Sun Microsystems' 32 and 64 bit SPARC processors. **alpha:** Compaq's (formerly Digital's) Alpha processors. **powerpc:** IBM and Motorola PowerPC pro-

cessors used in IBM servers and newer Apple Macintoshes. **arm:** ARM processor used in the Netwinder and many embedded devices. **mips/mipsel:** MIPS processors which can be big-endian (as used in SGI machines) or little-endian (eg DECStations) **hppa:** Hewlett-Packard's PA-RISC architecture. **ia64:** Intel's 64-bit Itanium processor. **s390:** IBM's S/390 mainframes. **amd64:** Also known as x86-64, this 64-bit architecture is used by the newest processors from AMD and Intel.

Debian is also branching beyond Linux with ports in progress to the GNU Hurd, FreeBSD, and NetBSD kernels. For more information on each port such as exactly which hardware is supported, see <http://www.debian.org/ports>

## Obtaining Debian GNU/Linux

Debian makes its distribution available for free on the Internet for all to use as they wish without licenses or royalties. You can download it as a set of software packages by rsync or anonymous FTP (See <http://www.debian.org/distrib/ftplist> for servers) or as ISO9660 images suitable for burning on to CD-ROMs (see <http://cdimage.debian.org/>) If you don't have Internet connectivity or it is too slow for large downloads, you can get Debian by purchasing a CD set from a third-party vendor. Here is the contact information for two of the bigger ones in the India. **Note:**the Debian Project does not endorse these nor any other CD vendor.

### BuyLinuxDVD:

Email: [BuyLinuxDVD@gmail.com](mailto:BuyLinuxDVD@gmail.com)  
URL: <http://www.buylinuxdvd.com>

### Kiran Infotech:

Email: [linuxcd@kiraninfotech.com](mailto:linuxcd@kiraninfotech.com)  
URL: <http://linux.kiraninfotech.com/debian.html>

For a full list of vendors, including overseas ones, see: <http://www.debian.org/CD/vendors/#in> Many vendors (including those listed above) allow you to make a donation to the Debian Project along with your order.

## Getting Help

Email: Most of Debian's business is conducted via public email discussion lists. A full list plus subscription info can be obtained from <http://www.debian.org/MailingLists/> Here are some of the major ones. (Those marked with a \* are moderated or otherwise restricted.) **debian-announce\*:** Important announcements from the Debian Project. **debian-changes\*:** Notice of new or updated packages in stable **debian-devel-announce\*:** Announcements from the Debian project of interest to Debian developers. **debian-devel-changes\*:** Notice of new or updated packages in unstable. **debian-devel:**

Technical discussion amongst Debian developers. **debian-news\*:** A weekly roundup of what's going on in the Debian world. **debian-policy:** Discussion of Debian policy and proposed amendments to it. **debian-project:** discussions concerning the operation of the Debian Project. **debian-security-announce\*:** Security advisories from the Debian Project. **debian-security:** Open discussion of security issues. **debian-user:** The main discussion & support list for users.

IRC: Support is available via IRC in channel #debian on the OFTC IRC network. (For a list of servers, see <http://www.oftc.org/>)

The World-Wide Web: Some useful sites are the Debian wiki (<http://wiki.debian.org/>) and Debian Administration Resources (<http://www.debian-administration.org/>)

Maintainers: You can contact the maintainer of any Debian package by using our public bug-tracking system at <http://bugs.debian.org/> or by sending email to [package-name@packages.debian.org](mailto:package-name@packages.debian.org)

Commercial Support: See <http://www.debian.org/consultants/> for a list of companies and consultants who provide paid support.

## How To Help The Debian Project

Debian is a community project without paid staff. It depends on the help of volunteers and well-wishers to further its aims. There are several ways in which you can support the activities of the project: **Join Us As A Developer:** <http://www.debian.org/join/newmaint> describes the process for becoming a member of our team. **Help With Support And Quality Assurance:** You don't have to be a Debian developer to help improve our operating system. See <http://qa.debian.org/howto.html> for instructions and a TODO list. Or you can assist users by answering questions on the mailing lists or sharing a copy of Debian with them. **Donate Of Money Or Resources** Debian relies on donations of cash, servers, bandwidth etc for its operation. You are under no obligation to contribute but if you would like to do so, a non-profit organization registered in New York state called Software In The Public Interest Inc. has been set up to accept donations on behalf of the Debian Project. For further details, see <http://www.spi-inc.org/donations> or email [treasurer@spi-inc.org](mailto:treasurer@spi-inc.org)