

FreeBSD 6.3-STABLE README

The FreeBSD Project

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This document gives a brief introduction to FreeBSD 6.3-STABLE. It includes some information on how to obtain FreeBSD, a listing of various ways to contact the FreeBSD Project, and pointers to some other sources of information.

1 Introduction

This distribution is a snapshot of FreeBSD 6.3-STABLE, the latest point along the 6-STABLE branch.

1.1 About FreeBSD

FreeBSD is an operating system based on 4.4 BSD Lite for DEC/Compaq/HP Alpha/AXP computers (alpha), AMD64 and Intel EM64T based PC hardware (amd64), Intel, AMD, Cyrix or NexGen “x86” based PC hardware (i386), Intel Itanium Processor based computers (ia64), NEC PC-9801/9821 series PCs and compatibles (pc98), and UltraSPARC® machines (sparc64). Versions for the PowerPC® (powerpc), and MIPS® (mips) architectures are currently under development as well. FreeBSD works with a wide variety of peripherals and configurations and can be used for everything from software development to games to Internet Service Provision.

This release of FreeBSD contains everything you need to run such a system, including full source code for the kernel and all utilities in the base distribution. With the source distribution installed, you can literally recompile the entire system from scratch with one command, making it ideal for students, researchers, or users who simply want to see how it all works.

A large collection of third-party ported software (the “Ports Collection”) is also provided to make it easy to obtain and install all your favorite traditional UNIX® utilities for FreeBSD. Each “port” consists of a set of scripts to retrieve, configure, build, and install a piece of software, with a single command. Over 19,000 ports, from editors to programming languages to graphical applications, make FreeBSD a powerful and comprehensive operating environment that extends far beyond what’s provided by many commercial versions of UNIX. Most ports are also available as pre-compiled “packages”, which can be quickly installed from the installation program.

1.2 Target Audience

This snapshot is aimed primarily at early adopters and various other users who want to get involved with the ongoing development of FreeBSD. While the FreeBSD development team tries its best to ensure that each snapshot works as advertised, 6-STABLE is very much a work-in-progress.

The basic requirements for using this snapshot are technical proficiency with FreeBSD and an understanding of the ongoing development process of FreeBSD 6-STABLE (as discussed on the FreeBSD-CURRENT mailing list¹).

For those more interested in doing business with FreeBSD than in experimenting with new FreeBSD technology, formal releases (such as 6.3-RELEASE) are frequently more appropriate. Releases undergo a period of testing and quality assurance checking to ensure high reliability and dependability.

2 Obtaining FreeBSD

FreeBSD may be obtained in a variety of ways. This section focuses on those ways that are primarily useful for obtaining a complete FreeBSD distribution, rather than updating an existing installation.

2.1 CDROM and DVD

FreeBSD -RELEASE distributions may be ordered on CDROM or DVD from several publishers. This is frequently the most convenient way to obtain FreeBSD for new installations, as it provides a convenient way to quickly reinstall the system if necessary. Some distributions include some of the optional, precompiled “packages” from the FreeBSD Ports Collection.

A list of the CDROM and DVD publishers known to the project are listed in the “Obtaining FreeBSD”² appendix to the Handbook.

2.2 FTP

You can use FTP to retrieve FreeBSD and any or all of its optional packages from <ftp://ftp.FreeBSD.org/>, which is the official FreeBSD release site, or any of its “mirrors”.

Lists of locations that mirror FreeBSD can be found in the FTP Sites³ section of the Handbook, or on the <http://mirrorlist.FreeBSD.org/> Web pages. Finding a close (in networking terms) mirror from which to download the distribution is highly recommended.

1. <http://lists.FreeBSD.org/mailman/listinfo/freebsd-current>
2. http://www.FreeBSD.org/doc/en_US.ISO8859-1/books/handbook/mirrors.html
3. http://www.FreeBSD.org/doc/en_US.ISO8859-1/books/handbook/mirrors-ftp.html

Additional mirror sites are always welcome. Contact <freebsd-admin@FreeBSD.org> for more details on becoming an official mirror site. You can also find useful information for mirror sites at the Mirroring FreeBSD⁴ article.

Mirrors generally contain the floppy disk images necessary to begin an installation, as well as the distribution files needed for the install process itself. Many mirrors also contain the ISO images necessary to create a CDROM of a FreeBSD release.

3 Contacting the FreeBSD Project

3.1 Email and Mailing Lists

For any questions or general technical support issues, please send mail to the FreeBSD general questions mailing list⁵.

If you're tracking the 6-STABLE development efforts, you *must* join the FreeBSD-CURRENT mailing list⁶, in order to keep abreast of recent developments and changes that may affect the way you use and maintain the system.

Being a largely-volunteer effort, the FreeBSD Project is always happy to have extra hands willing to help—there are already far more desired enhancements than there is time to implement them. To contact the developers on technical matters, or with offers of help, please send mail to the FreeBSD technical discussions mailing list⁷.

Please note that these mailing lists can experience *significant* amounts of traffic. If you have slow or expensive mail access, or are only interested in keeping up with major FreeBSD events, you may find it preferable to subscribe instead to the FreeBSD announcements mailing list⁸.

All of the mailing lists can be freely joined by anyone wishing to do so. Visit the [FreeBSD Mailman Info Page](#)⁹. This will give you more information on joining the various lists, accessing archives, etc. There are a number of mailing lists targeted at special interest groups not mentioned here; more information can be obtained either from the Mailman pages or the mailing lists section¹⁰ of the FreeBSD Web site.

Important: Do *not* send email to the lists asking to be subscribed. Use the Mailman interface instead.

3.2 Submitting Problem Reports

Suggestions, bug reports and contributions of code are always valued—please do not hesitate to report any problems you may find. Bug reports with attached fixes are of course even more welcome.

The preferred method to submit bug reports from a machine with Internet mail connectivity is to use the `send-pr(1)` command. “Problem Reports” (PRs) submitted in this way will be filed and their progress tracked; the FreeBSD

4. http://www.FreeBSD.org/doc/en_US.ISO8859-1/articles/hubs/

5. <http://lists.FreeBSD.org/mailman/listinfo/freebsd-questions>

6. <http://lists.FreeBSD.org/mailman/listinfo/freebsd-current>

7. <http://lists.FreeBSD.org/mailman/listinfo/freebsd-hackers>

8. <http://lists.FreeBSD.org/mailman/listinfo/freebsd-announce>

9. <http://www.FreeBSD.org/mailman/listinfo>

10. <http://www.FreeBSD.org/support.html#mailing-list>

developers will do their best to respond to all reported bugs as soon as possible. A list of all active PRs¹¹ is available on the FreeBSD Web site; this list is useful to see what potential problems other users have encountered.

Note that `send-pr(1)` itself is a shell script that should be easy to move even onto a non-FreeBSD system. Using this interface is highly preferred. If, for some reason, you are unable to use `send-pr(1)` to submit a bug report, you can try to send it to the FreeBSD problem reports mailing list¹².

For more information, “Writing FreeBSD Problem Reports”¹³, available on the FreeBSD Web site, has a number of helpful hints on writing and submitting effective problem reports.

4 Further Reading

There are many sources of information about FreeBSD; some are included with this distribution, while others are available on-line or in print versions.

4.1 Release Documentation

A number of other files provide more specific information about this snapshot distribution. These files are provided in various formats. Most distributions will include both ASCII text (`.TXT`) and HTML (`.HTM`) renditions. Some distributions may also include other formats such as PostScript (`.PS`) or Portable Document Format (`.PDF`).

- `README.TXT`: This file, which gives some general information about FreeBSD as well as some cursory notes about obtaining a distribution.
- `RELNOTES.TXT`: The release notes, showing what’s new and different in FreeBSD 6.3-STABLE compared to the previous release (FreeBSD 6.3-RELEASE).
- `HARDWARE.TXT`: The hardware compatibility list, showing devices with which FreeBSD has been tested and is known to work.
- `INSTALL.TXT`: Installation instructions for installing FreeBSD from its distribution media.
- `ERRATA.TXT`: Release errata. Late-breaking, post-release information can be found in this file, which is principally applicable to releases (as opposed to snapshots). It is important to consult this file before installing a release of FreeBSD, as it contains the latest information on problems which have been found and fixed since the release was created.

Note: Several of these documents (in particular, `RELNOTES.TXT`, `HARDWARE.TXT`, and `INSTALL.TXT`) contain information that is specific to a particular hardware architecture. For example, the alpha release notes contain information not applicable to the i386™, and vice versa. The architecture for which each document applies will be listed in that document’s title.

11. <http://www.FreeBSD.org/cgi/query-pr-summary.cgi>

12. <http://lists.FreeBSD.org/mailman/listinfo/freebsd-bugs>

13. http://www.FreeBSD.org/doc/en_US.ISO8859-1/articles/problem-reports/

On platforms that support `sysinstall(8)` (currently alpha, i386, ia64, pc98, and Sparc64®), these documents are generally available via the Documentation menu during installation. Once the system is installed, you can revisit this menu by re-running the `sysinstall(8)` utility.

Note: It is extremely important to read the errata for any given release before installing it, to learn about any “late-breaking news” or post-release problems. The errata file accompanying each release (most likely right next to this file) is already out of date by definition, but other copies are kept updated on the Internet and should be consulted as the “current errata” for this release. These other copies of the errata are located at <http://www.FreeBSD.org/releases/> (as well as any sites which keep up-to-date mirrors of this location).

4.2 Manual Pages

As with almost all UNIX like operating systems, FreeBSD comes with a set of on-line manual pages, accessed through the `man(1)` command or through the hypertext manual pages gateway¹⁴ on the FreeBSD Web site. In general, the manual pages provide information on the different commands and APIs available to the FreeBSD user.

In some cases, manual pages are written to give information on particular topics. Notable examples of such manual pages are `tuning(7)` (a guide to performance tuning), `security(7)` (an introduction to FreeBSD security), and `style(9)` (a style guide to kernel coding).

4.3 Books and Articles

Two highly-useful collections of FreeBSD-related information, maintained by the FreeBSD Project, are the FreeBSD Handbook and FreeBSD FAQ (Frequently Asked Questions document). On-line versions of the Handbook¹⁵ and FAQ¹⁶ are always available from the FreeBSD Documentation page¹⁷ or its mirrors. If you install the `doc` distribution set, you can use a Web browser to read the Handbook and FAQ locally.

A number of on-line books and articles, also maintained by the FreeBSD Project, cover more-specialized, FreeBSD-related topics. This material spans a wide range of topics, from effective use of the mailing lists, to dual-booting FreeBSD with other operating systems, to guidelines for new committers. Like the Handbook and FAQ, these documents are available from the FreeBSD Documentation Page or in the `doc` distribution set.

A listing of other books and documents about FreeBSD can be found in the bibliography¹⁸ of the FreeBSD Handbook. Because of FreeBSD’s strong UNIX heritage, many other articles and books written for UNIX systems are applicable as well, some of which are also listed in the bibliography.

5 Acknowledgments

FreeBSD represents the cumulative work of many hundreds, if not thousands, of individuals from around the world who have worked countless hours to bring about this snapshot. For a complete list of FreeBSD developers and

14. <http://www.FreeBSD.org/cgi/man.cgi>

15. http://www.FreeBSD.org/doc/en_US.ISO8859-1/books/handbook/

16. http://www.FreeBSD.org/doc/en_US.ISO8859-1/books/faq/

17. <http://www.FreeBSD.org/docs.html>

18. http://www.FreeBSD.org/doc/en_US.ISO8859-1/books/handbook/bibliography.html

contributors, please see “Contributors to FreeBSD”¹⁹ on the FreeBSD Web site or any of its mirrors.

Special thanks also go to the many thousands of FreeBSD users and testers all over the world, without whom this snapshot simply would not have been possible.

¹⁹. http://www.FreeBSD.org/doc/en_US.ISO8859-1/articles/contributors/