

NAME

hier - layout of file systems

SYNOPSIS

An overview of the file system hierarchy.

DESCRIPTION

/ root directory

/bin/ user utilities that are fundamental to single-user and multi-user modes

/boot/ programs and configuration files used during bootstrap of the operating system

defaults/ default bootstrap configuration files; see loader.conf(5)

dtb/ compiled flattened device tree (FDT) files; see fdt(4) and dtc(1)

overlays/ compiled flattened device tree (FDT) overlays; these can be applied using the *fdt_overlays* setting in loader.conf(5)

efi/ mount point for the EFI System Partition (ESP) on UEFI systems

firmware/ loadable kernel modules containing binary firmware, for hardware to which firmware must be downloaded

kernel/ pure kernel executable (the operating system loaded into memory at boot time) and kernel modules

modules/ third-party loadable kernel modules, such as those associated with ports(7)

zfs/ zfs(8) pool cache files

/compat/ files supporting binary compatibility with other operating systems

linux/ default location for linux(4) compatibility run-time

/dev/ the normal mount point for devfs(5)

fd/ file descriptor files; see fd(4)

/etc/ system configuration files and scripts

bluetooth/ bluetooth configuration files

defaults/ default system configuration files; see rc(8)

- localtime* local timezone information; see *ctime(3)*
- mail/* *sendmail(8)* control files
- mtree/* *mtree(8)* configuration files
- pam.d/* configuration files for the Pluggable Authentication Modules (PAM) library; see *pam(3)*
- periodic/* scripts that are run daily, weekly, or monthly by *cron(8)*; see *periodic(8)*
- ppp/* PPP configuration files; see *ppp(8)*
- rc.d/* system and daemon startup/control scripts; see *rc(8)*
- security/* OpenBSM audit configuration files; see *audit(8)*
- ssh/* OpenSSH configuration files; see *ssh(1)*
- ssl/* OpenSSL configuration files

- /home/* users' home directories; whilst the layout is not standardized, the typical home for an interactive user beastie would be */home/beastie/*

- /lib/* system libraries that are critical to binaries in */bin* and */sbin*
 - casper/* service-specific *libcasper(3)* Capsicum support libraries
 - geom/* class-specific libraries for the *geom(8)* utility
 - nvmecontrol/* vendor-specific libraries to extend the *nvmecontrol(8)* utility

- /libexec/* system utilities that are critical to binaries in */bin* and */sbin*

- /media/* empty directory commonly containing mount points for removable media such as USB drives, CDs, and DVDs

- /mnt/* empty directory commonly used by system administrators as a temporary mount point

- /net/* automounted NFS shares; see *auto_master(5)*

- /nonexistent/*
 - a non-existent directory; conventionally, a home directory for special user accounts that do not require a home directory. See also */var/empty/*

- /proc/* process file system; see *procfs(5)*

- /rescue/* statically-linked programs for emergency recovery; see *rescue(8)*

- /root/* home directory of the root user

- /sbin/* system programs and administration utilities that are fundamental to single-user and multi-user modes
- /tmp/* temporary files that may be removed by `rc(8)`; see the `clear_tmp_enable` variable of `rc.conf(5)`
- /usr/* contains the majority of user utilities and applications
 - bin/* common utilities, programming tools, and applications
 - frebsd-dist/* distribution files (like `base.txz`; see `release(7)` and `bsdinstall(8)`)
 - include/* standard C include files
 - lib/* shared and archive `ar(1)`-type libraries
 - compat/* shared libraries for compatibility
 - debug/* standalone debug data for the kernel and base system libraries and binaries
 - dtrace/* DTrace library scripts
 - engines/* OpenSSL (Cryptography/SSL toolkit) dynamically loadable engines
 - libdata/* miscellaneous utility data files
 - gcc/* GCC configuration data
 - ldscripts/* linker scripts; see `ld(1)`
 - pkgconfig/* `pc(5)` (`ports/devel/pkgconf`) files; collections of compiler flags, linker flags, and other information relevant to library use
 - libexec/* system daemons and system utilities that are executed by other programs
 - aout/* utilities to manipulate `a.out` executables
 - elf/* utilities to manipulate ELF executables
 - lpr/* utilities and filters for LP print system; see `lpr(1)`
 - sendmail/* the `sendmail(8)` binary; see `mailwrapper(8)`
 - sm.bin/* restricted shell for `sendmail(8)`; see `smrsh(8)`
 - local/* local executables, libraries, etc. Also used as the default destination for the `ports(7)` framework. Within *local/*, the general layout sketched out by **hier** for */usr* should be used. Exceptions are the ports documentation (in `share/doc/<port>/`), and `/usr/local/etc` (mimics `/etc`).
 - obj/* architecture-specific target tree produced by building FreeBSD from source; see `build(7)`

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|------------------|--|
| <i>ports/</i> | FreeBSD ports collection; see ports(7) |
| <i>sbin/</i> | system daemons and system utilities that are executed by users |
| <i>share/</i> | architecture-independent files |
| | |
| <i>calendar/</i> | system-wide calendar files; see calendar(1) |
| <i>dict/</i> | word lists; see look(1) |
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| <i>frebsd</i> | FreeBSD-specific terms, proper names, and jargon |
| <i>web2</i> | words from Webster's Second International |
| | |
| <i>doc/</i> | miscellaneous documentation |
| <i>examples/</i> | various examples for users and programmers |
| <i>firmware/</i> | firmware images loaded by userland programs |
| <i>games/</i> | used by various games |
| <i>keys/</i> | known trusted and revoked keys |
| | |
| <i>pkg/</i> | fingerprints for pkg(7) and pkg(8) |
| | |
| <i>locale/</i> | localization files; see setlocale(3) |
| <i>man/</i> | manual pages |
| <i>misc/</i> | miscellaneous system-wide files |
| | |
| <i>termcap</i> | terminal characteristics database; see termcap(5) |
| | |
| <i>mk/</i> | templates for make; see make(1) |
| <i>nls/</i> | national language support files |
| <i>security/</i> | data files for security policies such as mac_lomac(4) |
| <i>sendmail/</i> | sendmail(8) configuration files |
| <i>skel/</i> | example . (dot) files for new accounts |
| <i>snmp/</i> | MIBs, example files and tree definitions for the SNMP daemon |
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| <i>defs/</i> | tree definition files for use with gensnmptree(1) |
| <i>mibs/</i> | MIB files |
| | |
| <i>syscons/</i> | syscons(4) files |
| | |
| <i>fonts/</i> | console fonts; see vidcontrol(1) and vidfont(1) |
| <i>keymaps/</i> | console keyboard maps; see kbdcontrol(1) and kbdmap(1) |
| <i>scrnmaps/</i> | console screen maps |

sysroot/ files necessary for the `-sysroot` compiler/linker argument to build non-native binaries

VERSION/ files for FreeBSD release *VERSION*. By convention, "*VERSION*" matches `uname(1) -r`.

MACHINE.MACHINE_ARCH/

represent the binary ABI for these files.

"*MACHINE*" matches `uname(1) -m`.

"*MACHINE_ARCH*" matches

`uname(1) -p`.

tabset/ tab description files for a variety of terminals; used in the termcap file; see `termcap(5)`

vi/ localization support and utilities for `vi(1)`

vt/ `vt(4)` files

fonts/ console fonts; see `vidcontrol(1)` and `vidfont(1)`

keymaps/ console keyboard maps; see `kbdcontrol(1)` and `kbdmap(1)`

zoneinfo/ timezone configuration information; see `tzfile(5)`

src/ FreeBSD source code; see `development(7)`. The layout of the source tree is described by the top-level *README.md* file.

tests/ the FreeBSD test suite; see `tests(7)`

/var/ log, temporary, transient, and spool files

account/ system accounting files

acct execution accounting file; see `acct(5)`

at/ timed command scheduling files; see `at(1)`

jobs/ job files

spool/ output spool files

backups/ miscellaneous backup files

- cache/* miscellaneous cache files
 - pkg/* cached packages for `pkg(8)`
- crash/* default directory for kernel crash dumps; see `crash(8)` and `savecore(8)`
- cron/* `cron(8)` files
 - tabs/* `crontab(5)` files
- db/* miscellaneous automatically-generated system-specific database files
 - freebsd-update/* temporary files and downloads for `freebsd-update(8)`
- empty/* for use by programs that require an empty directory. Uses include privilege separation by `sshd(8)`
- games/* miscellaneous game status and score files
- heimdal/* Kerberos server databases; see `kdc(8)`
- log/* miscellaneous system log files
 - utx.lastlogin* last login log; see `getutxent(3)`
 - utx.log* login/logout log; see `getutxent(3)`
- mail/* user mailbox files
- msgs/* system messages database; see `msgs(1)`
- preserve/* unused, present for historical reasons
- quotas/* file system quota information files
- run/* files containing information about the operating system since it was booted
 - bhyve/* `bhyve(8)` virtual machine `unix(4)`-domain sockets
 - ppp/* writable by the "network" group for command connection sockets; see `ppp(8)`
 - utx.active* database of current users; see `getutxent(3)`
- rwho/* `rwho` data files; see `rwhod(8)`, `rwho(1)`, and `ruptime(1)`
- spool/* miscellaneous printer and mail system spooling directories
 - clientmqueue/* undelivered submission mail queue; see `sendmail(8)`
 - ftp/* ftp root directory; see `ftpd(8)`
 - mqueue/* undelivered mail queue; see `sendmail(8)`
 - output/* line printer spooling directories

tmp/ temporary files that are not removed by rc(8)

vi.recover/ vi(1) recovery files

yp/ the NIS maps; see yp(8)

NOTES

This manual page documents the default FreeBSD file system layout. The actual hierarchy on a given system is defined at the system administrator's discretion. A well-maintained installation will include a customized version of this document.

SEE ALSO

apropos(1), find(1), grep(1), ls(1), whereis(1), which(1)

HISTORY

A **hier** manual page appeared in Version 7 AT&T UNIX.