NAME
hier - layout of file systems

DESCRIPTION
A sketch of the file system hierarchy.

/　　　　　root directory of the file system

/bin/　　　user utilities fundamental to both single-user and multi-user environments

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

　　　　　defaults/ default bootstrapping configuration files; see loader.conf(5)
　　　　　dtb/　　 Compiled flattened device tree (FDT) files; see fdt(4) and dtc(1)
　　　　　firmware/
　　　　　　　　　loadable kernel modules containing binary firmware for hardware that needs
　　　　　　　　　firmware downloaded to it to function
　　　　　kernel/　 pure kernel executable (the operating system loaded into memory at boot time) and
　　　　　　　　　kernel modules
　　　　　modules/
　　　　　　　　　third-party loadable kernel modules; see kldstat(8)
　　　　　zfs/　　 zfs(8) zpool cache files

/cdrom/　 default mount point for CD-ROM drives

/compat/
　　　　　normally a link to */usr/compat*. If not, then the */usr/compat* comments apply

/dev/　　 device special files managed by devfs(5)

　　　　　fd/　 file descriptor files; see fd(4)

/etc/　　 system configuration files and scripts

　　　　　defaults/　 default system configuration files; see rc(8)
　　　　　bluetooth/　 bluetooth configuration files
　　　　　localtime　 local timezone information; see ctime(3)
　　　　　mail/　　　 Sendmail control files
　　　　　mtree/　　 mtree configuration files; see mtree(8)
　　　　　pam.d/　　 configuration files for the Pluggable Authentication Modules (PAM) library

      periodic/   scripts that are run daily, weekly, and monthly, via cron(8); see periodic(8)

      rc.d/   system and daemon startup/control scripts; see rc(8)

      security/   OpenBSM audit configuration files; see audit(8)

      ppp/   ppp configuration files; see ppp(8)

      ssh/   OpenSSH configuration files; see ssh(1)

      ssl/   OpenSSL configuration files

/lib/   critical system libraries needed for binaries in */bin* and */sbin*

      geom/ class-specific libraries for the geom(8) utility

/libexec/ critical system utilities needed for binaries in */bin* and */sbin*

/media/ contains subdirectories to be used as mount points for removable media such as CDs, USB drives, and floppy disks

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

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

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

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

/root/   root's HOME directory

/sbin/   system programs and administration utilities fundamental to both single-user and multi-user environments

/tmp/   temporary files that are not guaranteed to persist across system reboots

/usr/   contains the majority of user utilities and applications

      bin/   common utilities, programming tools, and applications

      compat/

           files needed to support binary compatibility with other operating systems, such as Linux

      include/

           standard C include files

arpa/	C include files for Internet service protocols	
bsnmp/	C include files for the SNMP daemon	
c++/	C++ include files	
cam/	C include files for the Common Access Methods Layer	
	scsi/	SCSI device on top of CAM
dev/	C include files for programming various FreeBSD devices	
	ic/	various header files describing driver- and bus-independent hardware circuits
	ofw/	Open Firmware support
	pbio/	8255 PPI cards; see pbio(4)
	ppbus/	parallel port bus; see ppbus(4)
	usb/	USB subsystem
	utopia/	physical chip driver for ATM interfaces; see utopia(4)
	wi/	wi(4) WaveLAN driver
fs/		
	fdescfs/	per-process file descriptors file system
	msdosfs/	MS-DOS file system
	nfs/	C include files for NFS (Network File System) version 2, 3 and 4
	nullfs/	loopback file system
	procfs/	process file system
	smbfs/	SMB/CIFS file system
	udf/	UDF file system
	unionfs	union file system
geom/	GEOM framework	
	concat/	CONCAT GEOM class
	gate/	GATE GEOM class
	mirror/	MIRROR GEOM class
	nop/	NOP GEOM class
	raid3/	RAID3 GEOM class
	stripe/	STRIPE GEOM class

libmilter/	C include files for libmilter, the sendmail(8) mail filter API
machine/	machine-specific C include files
net/	miscellaneous network C include files
	altq/ C include files for alternate queueing
net80211/	C include files for 802.11 wireless networking; see net80211(4)
netinet/	C include files for Internet standard protocols; see inet(4)
netinet6/	C include files for Internet protocol version 6; see inet6(4)
netipsec/	kernel key-management service; see ipsec(4)

netnatm/   NATM include files; see natm(4)
    api/   include files for the signalling API
    msg/   include files that describe signalling messages and declare
               associated functions
    saal/   include files for the signalling AAL layer
    sig/   include files for the UNI signalling protocol
netsmb/   SMB/CIFS requester
nfs/   C include files for NFS (Network File System) version 2 and 3 (legacy)
openssl/   OpenSSL (Cryptography/SSL toolkit) headers
protocols/ C include files for Berkeley service protocols
readline/ get a line from a user, with editing; see readline(3)
rpc/   remote procedure calls; see rpc(3)
rpcsvc/   definition of RPC service structures; see rpc(3)
security/ PAM; see pam(8)
sys/   system C include files (kernel data structures)
ufs/   C include files for UFS (The U-word File System)
    ffs/   Fast file system
    ufs/   UFS file system
vm/   virtual memory; see vmstat(8)

lib/   shared and archive ar(1)-type libraries
    aout/   a.out archive libraries
    compat/   shared libraries for compatibility
        aout/   a.out backward compatibility libraries
    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(1) configuration data
    ldscripts/   linker scripts; see ld(1)
    lint/   various prebuilt lint libraries; see lint(1)

libexec/

system daemons & system utilities (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 *man* directory (directly under *local/* rather than under *local/share/*), ports documentation (in *share/doc/<port>/*), and */usr/local/etc* (mimics */etc*).

obj/   architecture-specific target tree produced by building the */usr/src* tree

ports/   ports(7), the FreeBSD ports collection.

sbin/   system daemons & system utilities (executed by users)

share/   architecture-independent files

    calendar/ a variety of pre-fab calendar files; see calendar(1)

    dict/   word lists; see look(1)

            freebsd   FreeBSD-specific terms, proper names, and jargon

            web2   words from Webster's 2nd International

    doc/   miscellaneous documentation; source for most of the printed BSD manuals (available from the USENIX association)

            FAQ/   Frequently Asked Questions

            IPv6/   implementation notes for IPv6

            bind/   documents pertaining to BIND (the Berkeley Internet Name Domain)

            es/   Spanish translations of documents in /usr/share/doc

            handbook/ FreeBSD Handbook

            ja/   Japanese translations of documents in /usr/share/doc

            legal/   License files for vendor supplied firmwares

            ncurses/   HTML documents pertaining to ncurses; see ncurses(3)

            ntp/   HTML documents pertaining to the Network Time Protocol

            papers/   UNIX Papers

            psd/   UNIX Programmer's Supplementary Documents

            ru/   Russian translations of documents in /usr/share/doc

            smm/   UNIX System Manager's Manual

            tutorials/   FreeBSD tutorials

            usd/   UNIX User's Supplementary Documents

            zh/   Chinese translations of documents in /usr/share/doc

    examples/

        various examples for users and programmers

firmware/
             firmware images loaded by userland programs
games/   ASCII text files used by various games
groff_font/
             device description file for device name
keys/   known trusted and revoked keys.
             pkg/ fingerprints for pkg(7) and pkg(8)

locale/   localization files; see setlocale(3)
man/   manual pages
me/   macros for use with the me macro package; see me(7)
misc/   miscellaneous system-wide ASCII text files
             fonts/   ???
             termcap   terminal characteristics database; see termcap(5)
mk/   templates for make; see make(1)
nls/   national language support files; see mklocale(1)
security/ data files for security policies such as mac_lomac(4)
sendmail/
             sendmail(8) configuration files
skel/   example . (dot) files for new accounts
snmp/   MIBs, example files and tree definitions for the SNMP daemon.
             defs/   tree definition files for use with gensnmptree(1)
             mibs/   MIB files
syscons/   files used by syscons; see syscons(4)
             fonts/   console fonts; see vidcontrol(1) and vidfont(1)
             keymaps/ console keyboard maps; see kbdcontrol(1) and kbdmap(1)
             scrnmaps/
                            console screen maps
tabset/   tab description files for a variety of terminals; used in the termcap file; see
             termcap(5)
tmac/   text processing macros; see nroff(1) and troff(1)
vi/   localization support and utilities for vi(1)
vt/   files used by vt; see vt(4)
             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/   BSD, third-party, and/or local source files

bin/   source code for files in /bin

cddl/	utilities covered by the Common Development and Distribution License
contrib/	source code for contributed software
crypto/	source code for contributed cryptography software
etc/	source code for files in */etc*
gnu/	utilities covered by the GNU General Public License
include/	source code for files in */usr/include*
kerberos5/	build infrastructure for kerberos version 5
lib/	source code for files in */lib* and */usr/lib*
libexec/	source code for files in */usr/libexec*
release/	files required to produce a FreeBSD release
rescue/	source code for files in */rescue*
sbin/	source code for files in */sbin*
secure/	build directory for files in */usr/src/crypto*
share/	source for files in */usr/share*
sys/	kernel source code

amd64/	AMD64 architecture support
arm/	ARM architecture support
arm64/	ARMv8 architecture support
boot/	bootloader code
cam/	cam(4) and ctl(4)
cddl/	CDDL-licensed optional sources, including ZFS and DTrace
ddb/	ddb(4)
fs/	most filesystems
dev/	device drivers
geom/	geom(4)
i386/	i386 (32 bit) architecture support
kern/	main part of the kernel
mips/	MIPS architecture support
net80211/	net80211(4)
netgraph/	netgraph(4)
netinet/	inet(4)
netinet6/	inet6(4)
netipsec/	ipsec(4)
netpfil/	ipfw(4) and pf(4)
opencrypto/	crypto(7)
powerpc/	PowerPC/POWER architecture support
riscv/	RISC-V architecture support
security/	audit(4) and mac(4)
sparc64/	SPARC64 architecture support

	sys/	kernel headers
	ufs/	Unix File System
	x86/	code shared by AMD64 and i386 architectures
targets/		support for experimental DIRDEPS_BUILD
tests/		source code for files in */usr/tests*
tools/		tools used for maintenance and testing of FreeBSD
usr.bin/		source code for files in */usr/bin*
usr.sbin/		source code for files in */usr/sbin*

tests/   The FreeBSD test suite. See tests(7) for more details.

/var/   multi-purpose 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/   directory containing job files
    spool/   directory containing output spool files

backups/   miscellaneous backup files
cache/   miscellaneous cached files
    pkg/   cached packages for pkg(8)

crash/   default directory to store kernel crash dumps; see crash(8) and savecore(8)
cron/   files used by cron; see cron(8)
    tabs/   crontab files; see crontab(5)

db/   miscellaneous automatically generated system-specific database files
empty/   empty directory for use by programs that need a specifically empty directory. Used
    for instance by sshd(8) for privilege separation.
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/ temporary home of files preserved after an accidental death of an editor; see ex(1)

    quotas/ file system quota information files

    run/   system information files describing various info about system since it was booted

        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/   commonly ~ftp; the anonymous ftp root directory

        mqueue/ undelivered mail queue; see sendmail(8)

        output/ line printer spooling directories

    tmp/   temporary files that are kept between system reboots

        vi.recover/ the directory where recovery files are stored

    yp/   the NIS maps

NOTES

This manual page documents the default FreeBSD file system layout, but 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), finger(1), grep(1), ls(1), whatis(1), whereis(1), which(1), fd(4), devfs(5), fsck(8)

HISTORY

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