

NAME

hier – Description of the file system hierarchy

DESCRIPTION

A typical Linux system has, among others, the following directories:

- /* This is the root directory. This is where the whole tree starts.
- /bin* This directory contains executable programs which are needed in single user mode and to bring the system up or repair it.
- /boot* Contains static files for the boot loader. This directory only holds the files which are needed during the boot process. The map installer and configuration files should go to */sbin* and */etc*.
- /dev* Special or device files, which refer to physical devices. See **mknod(1)**.
- /etc* Contains configuration files which are local to the machine. Some larger software packages, like X11, can have their own subdirectories below */etc*. Site-wide configuration files may be placed here or in */usr/etc*. Nevertheless, programs should always look for these files in */etc* and you may have links for these files to */usr/etc*.
- /etc/opt*
Host-specific configuration files for add-on applications installed in */opt*.
- /etc/sgml*
This directory contains the configuration files for SGML and XML (optional).
- /etc/skel*
When a new user account is created, files from this directory are usually copied into the user's home directory.
- /etc/X11*
Configuration files for the X11 window system (optional).
- /home* On machines with home directories for users, these are usually beneath this directory, directly or not. The structure of this directory depends on local administration decisions.
- /lib* This directory should hold those shared libraries that are necessary to boot the system and to run the commands in the root file system.
- /media* This directory contains mount points for removable media such as CD and DVD disks or USB sticks.
- /mnt* This directory is a mount point for a temporarily mounted file system. In some distributions, */mnt* contains subdirectories intended to be used as mount points for several temporary file systems.
- /opt* This directory should contain add-on packages that contain static files.
- /proc* This is a mount point for the *proc* file system, which provides information about running processes and the kernel. This pseudo-file system is described in more detail in **proc(5)**.
- /root* This directory is usually the home directory for the root user (optional).
- /sbin* Like */bin*, this directory holds commands needed to boot the system, but which are usually not executed by normal users.
- /srv* This directory contains site-specific data that is served by this system.
- /tmp* This directory contains temporary files which may be deleted with no notice, such as by a regular job or at system boot up.
- /usr* This directory is usually mounted from a separate partition. It should hold only sharable, read-only data, so that it can be mounted by various machines running Linux.
- /usr/X11R6*
The X-Window system, version 11 release 6 (optional).

/usr/X11R6/bin

Binaries which belong to the X–Window system; often, there is a symbolic link from the more traditional */usr/bin/X11* to here.

/usr/X11R6/lib

Data files associated with the X–Window system.

/usr/X11R6/lib/X11

These contain miscellaneous files needed to run X; Often, there is a symbolic link from */usr/lib/X11* to this directory.

/usr/X11R6/include/X11

Contains include files needed for compiling programs using the X11 window system. Often, there is a symbolic link from */usr/include/X11* to this directory.

/usr/bin

This is the primary directory for executable programs. Most programs executed by normal users which are not needed for booting or for repairing the system and which are not installed locally should be placed in this directory.

/usr/bin/X11

is the traditional place to look for X11 executables; on Linux, it usually is a symbolic link to */usr/X11R6/bin*.

/usr/dict

Replaced by */usr/share/dict*.

/usr/doc

Replaced by */usr/share/doc*.

/usr/etc

Site-wide configuration files to be shared between several machines may be stored in this directory. However, commands should always reference those files using the */etc* directory. Links from files in */etc* should point to the appropriate files in */usr/etc*.

/usr/games

Binaries for games and educational programs (optional).

/usr/include

Include files for the C compiler.

/usr/include/X11

Include files for the C compiler and the X–Window system. This is usually a symbolic link to */usr/X11R6/include/X11*.

/usr/include/asm

Include files which declare some assembler functions. This used to be a symbolic link to */usr/src/linux/include/asm*.

/usr/include/linux

This contains information which may change from system release to system release and used to be a symbolic link to */usr/src/linux/include/linux* to get at operating system specific information.

(Note that one should have include files there that work correctly with the current libc and in user space. However, Linux kernel source is not designed to be used with user programs and does not know anything about the libc you are using. It is very likely that things will break if you let */usr/include/asm* and */usr/include/linux* point at a random kernel tree. Debian systems don't do this and use headers from a known good kernel version, provided in the libc*-dev package.)

/usr/include/g++

Include files to use with the GNU C++ compiler.

/usr/lib Object libraries, including dynamic libraries, plus some executables which usually are not invoked directly. More complicated programs may have whole subdirectories there.

/usr/lib/X11

The usual place for data files associated with X programs, and configuration files for the X system itself. On Linux, it usually is a symbolic link to */usr/X11R6/lib/X11*.

/usr/lib/gcc-lib

contains executables and include files for the GNU C compiler, **gcc**(1).

/usr/lib/groff

Files for the GNU groff document formatting system.

/usr/lib/uucp

Files for **uucp**(1).

/usr/local

This is where programs which are local to the site typically go.

/usr/local/bin

Binaries for programs local to the site.

/usr/local/doc

Local documentation.

/usr/local/etc

Configuration files associated with locally installed programs.

/usr/local/games

Binaries for locally installed games.

/usr/local/lib

Files associated with locally installed programs.

/usr/local/include

Header files for the local C compiler.

/usr/local/info

Info pages associated with locally installed programs.

/usr/local/man

Man pages associated with locally installed programs.

/usr/local/sbin

Locally installed programs for system administration.

/usr/local/share

Local application data that can be shared among different architectures of the same OS.

/usr/local/src

Source code for locally installed software.

/usr/man

Replaced by */usr/share/man*.

/usr/sbin

This directory contains program binaries for system administration which are not essential for the boot process, for mounting */usr*, or for system repair.

/usr/share

This directory contains subdirectories with specific application data, that can be shared among different architectures of the same OS. Often one finds stuff here that used to live in */usr/doc* or */usr/lib* or */usr/man*.

/usr/share/dict

Contains the word lists used by spell checkers.

/usr/share/doc

Documentation about installed programs.

/usr/share/games

Static data files for games in */usr/games*.

/usr/share/info

Info pages go here.

/usr/share/locale

Locale information goes here.

/usr/share/man

Manual pages go here in subdirectories according to the man page sections.

/usr/share/man/<locale>/man[1-9]

These directories contain manual pages for the specific locale in source code form. Systems which use a unique language and code set for all manual pages may omit the *<locale>* substring.

/usr/share/misc

Miscellaneous data that can be shared among different architectures of the same OS.

/usr/share/nls

The message catalogs for native language support go here.

/usr/share/sgml

Files for SGML and XML.

/usr/share/terminfo

The database for terminfo.

/usr/share/tmac

Troff macros that are not distributed with groff.

/usr/share/zoneinfo

Files for timezone information.

/usr/src

Source files for different parts of the system, included with some packages for reference purposes. Don't work here with your own projects, as files below */usr* should be read-only except when installing software.

/usr/src/linux

This was the traditional place for the kernel source. Some distributions put here the source for the default kernel they ship. You should probably use another directory when building your own kernel.

/usr/tmp

Obsolete. This should be a link to */var/tmp*. This link is present only for compatibility reasons and shouldn't be used.

/var

This directory contains files which may change in size, such as spool and log files.

/var/adm

This directory is superseded by */var/log* and should be a symbolic link to */var/log*.

/var/backups

Reserved for historical reasons.

/var/cache

Data cached for programs.

/var/catman/cat[1–9] or */var/cache/man/cat[1–9]*

These directories contain preformatted manual pages according to their man page section. (The use of preformatted manual pages is deprecated.)

/var/cron

Reserved for historical reasons.

/var/lib Variable state information for programs.

/var/local

Variable data for */usr/local*.

/var/lock

Lock files are placed in this directory. The naming convention for device lock files is *LCK.<device>* where *<device>* is the device's name in the file system. The format used is that of HDU UUCP lock files, that is, lock files contain a PID as a 10-byte ASCII decimal number, followed by a newline character.

/var/log

Miscellaneous log files.

/var/opt

Variable data for */opt*.

/var/mail

Users' mailboxes. Replaces */var/spool/mail*.

/var/msg

Reserved for historical reasons.

/var/preserve

Reserved for historical reasons.

/var/run

Run-time variable files, like files holding process identifiers (PIDs) and logged user information (*utmp*). Files in this directory are usually cleared when the system boots.

/var/spool

Spooled (or queued) files for various programs.

/var/spool/at

Spooled jobs for **at**(1).

/var/spool/cron

Spooled jobs for **cron**(8).

/var/spool/lpd

Spooled files for printing.

/var/spool/mail

Replaced by */var/mail*.

/var/spool/mqueue

Queued outgoing mail.

/var/spool/news

Spool directory for news.

/var/spool/rwho

Spooled files for **rwho**(8).

/var/spool/sm

Spooled files for the **sm**(1) mail delivery program.

/var/spool/uucp

Spooled files for **uucp**(1).

/var/tmp

Like */tmp*, this directory holds temporary files stored for an unspecified duration.

/var/yp Database files for NIS.

CONFORMING TO

The Filesystem Hierarchy Standard, Version 2.2 <<http://www.pathname.com/fhs/>>.

BUGS

This list is not exhaustive; different systems may be configured differently.

SEE ALSO

find(1), **ln**(1), **proc**(5), **mount**(8)

The Filesystem Hierarchy Standard

COLOPHON

This page is part of release 3.22 of the Linux *man-pages* project. A description of the project, and information about reporting bugs, can be found at <http://www.kernel.org/doc/man-pages/>.