Here is a list of the main directories which should be present under **/**:

## Main Directories

| Directory | In FHS? | Purpose |
|---|---|---|
| **/** | Yes | Primary directory of the entire filesystem hierarchy |
| **/bin** | Yes | Essential executable programs that must be available in single user mode |
| **/boot** | Yes | Files needed to boot the system, such as the kernel, initrd or initramfs images, and boot configuration files and bootloader programs |
| **/etc** | Yes | System-wide configuration files |
| **/home** | Yes | User home directories, including personal settings, files, etc. |
| **/lib** | Yes | Libraries required by executable binaries in **/bin** and **/sbin** |
| **/lib64** | No | 64-bit libraries required by executable binaries in **/bin** and **/sbin**, for systems which can run both 32-bit and 64-bit programs |
| **/media** | Yes | Mount points for removable media such as CD's, DVD's, USB sticks etc. |
| **/mnt** | Yes | Temporarily mounted filesystems |
| **/opt** | Yes | Optional application software packages |
| **/proc** | Yes | Virtual pseudo-filesystem giving information about the system and processes running on it; can be used to alter system parameters |
| **/sys** | No | Virtual pseudo-filesystem giving information about the system and processes running on it; can be used to alter system parameters, is similar to a device tree and is part of the Unified Device Model |
| **/root** | Yes | Home directory for the root user |
| **/sbin** | Yes | Essential system binaries |
| **/srv** | Yes | Site-specific data served up by the system; seldom used |
| **/tmp** | Yes | Temporary files; on many distributions lost across a reboot and may be a ramdisk in memory |
| **/usr** | Yes | Multi-user applications, utilities and data; theoretically read-only |
| **/var** | Yes | Variable data that changes during system operation |

A system should be able to boot and go into single user, or recovery mode, with only the **/bin**, **/sbin**, **/etc**, **/lib** and **/root** directories mounted, while the contents of the **/boot** directory are needed for the system to boot in the first place.

Many of these directories (such as **/etc** and **/lib**) will generally have subdirectories associated either with specific applications or sub-systems, with the exact layout differing somewhat by Linux distribution. Two of them, **/usr** and **/var**, are relatively standardized and worth looking at.

## Directories Under /usr

| Directory | Purpose |
|---|---|
| **/usr/bin** | Non-essential binaries and scripts, not needed for single user mode; generally this means user applications not needed to start system |
| **/usr/include** | Header files used to compile applications |
| **/usr/lib** | Libraries for programs in **/usr/bin** and **/usr/sbin** |
| **/usr/lib64** | 64-bit libraries for 64-bit programs in **/usr/bin** and **/usr/sbin** |
| **/usr/sbin** | Non-essential system binaries, such as system daemons |
| **/usr/share** | Shared data used by applications, generally architecture-independent |
| **/usr/src** | Source code, usually for the Linux kernel |
| **/usr/X11R6** | X Window files; generally obsolete |

| Directory | Purpose |
| --- | --- |
| **/usr/local** | Local data and programs specific to the host; subdirectories include **bin**, **sbin**, **lib**, **share**, **include**, etc. |

## Directories Under /var

| Directory | Purpose |
| --- | --- |
| **/var/ftp** | Used for **ftp** server base |
| **/var/lib** | Persistent data modified by programs as they run |
| **/var/lock** | Lock files used to control simultaneous access to resources |
| **/var/log** | Log files |
| **/var/mail** | User mailboxes |
| **/var/run** | Information about the running system since the last boot |
| **/var/spool** | Tasks spooled or waiting to be processed, such as print queues |
| **/var/tmp** | Temporary files to be preserved across system reboot; sometimes linked to **/tmp** |
| **/var/www** | Root for website hierarchies |

✓ Complete