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LINUX FILE SYSTEM HIERARCHY

AIM

Understand the different Linux File System and its Hierarchy

The Linux File System Hierarchy Standard (FSH) defines the organization and structure of files and directories in a Linux-based operating system. It provides a consistent and standardized way to organize system files, configuration files, libraries, binaries, and other resources. The following is a brief overview of the main directories in the Linux File System Hierarchy:

/ (root):

The root directory is the top-level directory in the file system hierarchy. It contains all other directories and files.

/bin:

This directory holds essential executable files that are required for the system to boot and run, accessible to all users.

/boot:

The /boot directory contains files necessary for booting the system, such as the Linux kernel, bootloader configuration, and initial RAM disk (initramfs).

/dev:

This directory contains device files that represent hardware devices or pseudo-devices. It allows direct access to various hardware devices.

/etc:

The /etc directory contains system-wide configuration files, such as network settings, user account information, and startup scripts.

/home:

Each user on the system has a dedicated subdirectory under /home, which serves as their home directory. Users can store personal files and configuration here.

/lib and /lib64:

These directories contain libraries that are essential for the system and various programs to run. The /lib directory is used for 32-bit libraries, while /lib64 is for 64-bit libraries.

/media:

The /media directory is used as a mount point for removable media devices, such as USB drives or optical discs.

/mnt:

The /mnt directory is a generic mount point for temporarily mounting file systems or other devices.

/opt:

The /opt directory is used for installing optional software or third-party applications. Each application typically has its own subdirectory here.

/proc:

The /proc directory provides a virtual file system that contains information about running processes and system configuration. It allows access to system information through special files.

/root:

The /root directory is the home directory for the system's root user (superuser). It is different from /home/root, which would be a separate directory for a user named "root." /sbin:

Similar to /bin, the /sbin directory contains essential system binaries. However, the binaries in /sbin are typically meant for system administration tasks and require administrative privileges.

/srv:

The /srv directory is used for storing data files related to services provided by the system. It may include files for web servers, FTP servers, or other network services.

/tmp:

The /tmp directory is used for temporary files created by various programs and users. The files in this directory are usually deleted upon system reboot.

/usr:

The /usr directory contains most of the user-readable, non-system-critical files. It includes subdirectories like /usr/bin (user binaries), /usr/lib (user libraries), /usr/share (shared data), and more.

/var:

The /var directory holds variable files that frequently change during system operation, such as log files, spool files (for printing), and temporary files generated by system processes.

RESULT

Understood the Linux File System Hierarchy