Linux Directory Structure

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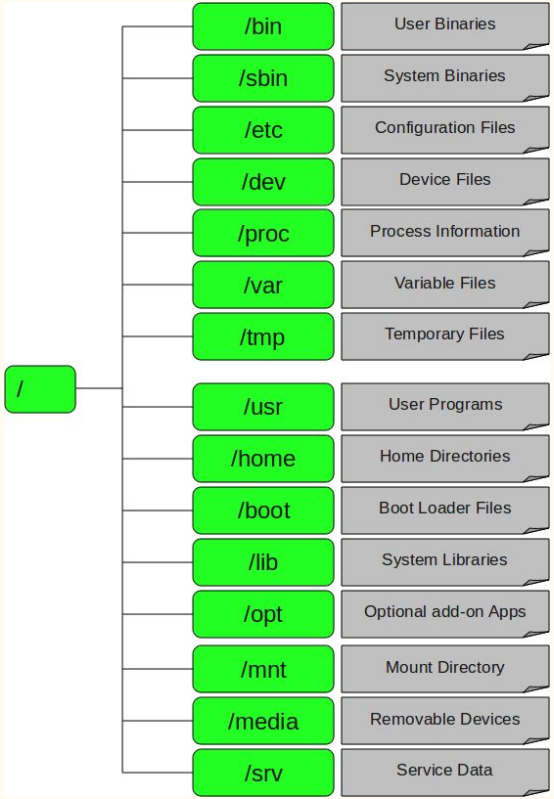

/ – root

Every single file and directory starts from the root directory.

Only root user has write privilege under this directory.

Please note that /root is root user’s home directory, which is not same as /.

/bin – User Binaries

Contains binary executables.

Common linux commands you need to use in single-user modes are located under this directory.

Commands used by all the users of the system are located here.

For example: ps, ls, ping, grep, cp.

/sbin – System Binaries

Just like /bin, /sbin also contains binary executables.

But, the linux commands located under this directory are used typically by system administrator, for system maintenance purpose.

For example: iptables, reboot, fdisk, ifconfig, swapon

/etc – Configuration Files

Contains configuration files required by all programs.

This also contains startup and shutdown shell scripts used to start/stop individual programs.

For example: /etc/resolv.conf, /etc/logrotate.conf

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/dev – Device Files

Contains device files.

These include terminal devices, usb, or any device attached to the system.

For example: /dev/tty1, /dev/usbmon0

/proc – Process Information

Contains information about system process.

This is a pseudo file system contains information about running process. For example: /proc/{pid} directory contains information about the process with that particular pid.

This is a virtual filesystem with text information about system resources.

For example: /proc/uptime

/var – Variable Files

var stands for variable files.

Content of the files that are expected to grow can be found under this directory.

This includes — system log files (/var/log); packages and database files (/var/lib); emails (/var/mail); print queues (/var/spool); lock files (/var/lock); temp files needed across reboots (/var/tmp);

/tmp – Temporary Files

Directory that contains temporary files created by system and users.

Files under this directory are deleted when system is rebooted.

/usr – User Programs

Contains binaries, libraries, documentation, and source-code for second level programs.

/usr/bin contains binary files for user programs. If you can't find a user binary under /bin, look under /usr/bin. For example: at, awk, cc, less, scp

/usr/sbin contains binary files for system administrators. If you can't find a system binary under /sbin, look under /usr/sbin. For example: atd, cron, sshd, useradd, userdel

/usr – User Programs (Cont.)

/usr/lib contains libraries for /usr/bin and /usr/sbin

/usr/local contains users programs that you install from source. For example, when you install apache from source, it goes under /usr/local/apache2

/home – Home Directories

Home directories for all users to store their personal files.

For example: /home/john, /home/nikita

/boot – Boot Loader Files

Contains boot loader related files.

Kernel initrd, vmlinux, grub files are located under /boot

For example: initrd.img-2.6.32-24-generic, vmlinuz-2.6.32-24-generic

/lib – System Libraries

Contains library files that supports the binaries located under /bin and /sbin

Library filenames are either ld* or lib*.so.*

For example: ld-2.11.1.so, libncurses.so.5.7

/opt – Optional add-on Applications

opt stands for optional.

Contains add-on applications from individual vendors.

add-on applications should be installed under either /opt/ or /opt/ sub-directory.

/mnt – Mount Directory

Temporary mount directory where sysadmins can mount filesystems.

/media – Removable Media Devices

Temporary mount directory for removable devices.

For examples: /media/cdrom for CD-ROM; /media/floppy for floppy drives; /media/cdrecorder for CD writer

/srv – Service Data

srv stands for service.

Contains server specific services related data.

For example, /srv/cvs contains CVS related data.