


















# #\_ Essential Linux Directories Quick Reference

-  **/bin**
  - **Usage:** Essential command binaries.
  - **Common Operations:**
    - Listing commands: `ls /bin`.
    - Using basic commands like `cp`, `mv`, `rm`, `echo`, etc.
    - Finding binary paths: `which command`.
-  **/sbin**
  - **Usage:** System binaries.
  - **Common Operations:**
    - Managing network: `ifconfig`, `route`.
    - Shutting down: `shutdown -h now`.
    - Rebooting: `reboot`.
    - Managing services: `service start/stop`.
-  **/etc**
  - **Usage:** Configuration files.
  - **Common Operations:**
    - Editing user info: `sudo vi /etc/passwd`, `sudo vi /etc/group`.
    - Configuring network: `sudo vi /etc/network/interfaces`, `sudo vi /etc/hostname`, `/etc/resolv.conf`.
    - Managing scheduled tasks: `crontab -e`.
    - Configuring firewalls: `sudo vi /etc/iptables`.
-  **/home**
  - **Usage:** User home directories.
  - **Common Operations:**
    - Changing user directories: `cd /home/username`.
    - Managing user files: `mkdir`, `rm`, `cp`.
    - Setting up user environment: `.bashrc`, `.profile`.
    - Securely copying files between servers: `scp`.

-  **/var**
  - **Usage:** Variable data like logs.
  - **Common Operations:**
    - Viewing logs: `tail /var/log/syslog`.
    - Clearing logs: `truncate -s 0 /var/log/syslog`.
    - Managing mail queue: `mailq`.
    - Managing print jobs: `/var/spool`.
    - Hosting websites in `/var/www`.
-  **/usr**
  - **Usage:** User utilities and applications.
  - **Common Operations:**
    - Installing software: Package managers like `apt`, `yum`.
    - Managing local binaries in `/usr/local/bin`.
    - Managing man pages: `/usr/share/man`.
    - Shared libraries: `/usr/lib`.
-  **/tmp**
  - **Usage:** Temporary files.
  - **Common Operations:**
    - Storing temp files: `mktemp`.
    - Clearing old files: `tmpwatch`.
    - Storing session data: `session.save_path` in `php.ini`.
    - Cleaning old files: `tmpwatch`.
- **+ /opt**
  - **Usage:** Optional software.
  - **Common Operations:**
    - Installing third-party software: `/opt/package_name`.
    - Managing software links to `/opt`.
    - Symlinking: `ln -s`.
-  **/boot**
  - **Usage:** Boot configuration and kernel files.
  - **Common Operations:**
    - Updating kernel: `sudo apt-get dist-upgrade`.
    - Configuring GRUB: `update-grub`.
    - Managing bootloader: `update-grub`.

-  **/dev**
  - **Usage:** Device files.
  - **Common Operations:**
    - Creating file systems: `mkfs`.
    - Disk management: `fdisk`, `lsblk`.
    - Serial port communication: `screen /dev/ttyUSB0`.
-  **/proc**
  - **Usage:** Info about system resources.
  - **Common Operations:**
    - Checking CPU: `cat /proc/cpuinfo`.
    - Viewing processes: `top`.
    - Checking memory: `cat /proc/meminfo`.
    - Kernel tuning: `/proc/sys`.
-  **/sys**
  - **Usage:** Kernel's view of the system.
  - **Common Operations:**
    - Changing kernel parameters: `echo value > /sys/path/to/parameter`.
    - Modifying kernel parameters: `sysctl`.
    - Managing subsystems and devices.
-  **/lib**
  - **Usage:** Library files.
  - **Common Operations:**
    - Updating library cache: `ldconfig`.
    - Checking library version: `ldd`.
-  **/mnt**
  - **Usage:** Mount point for external devices.
  - **Common Operations:**
    - Mounting: `mount /dev/sdx /mnt/point`.
    - Unmounting: `umount /mnt/point`.
-  **/media**
  - **Usage:** Removable media.
  - **Common Operations:**
    - Mounting CD-ROM: `mount /dev/cdrom /media/cdrom`.
    - Ejecting media: `eject`.

-  **/srv**
  - **Usage:** Data for system services.
  - **Common Operations:**
    - Managing FTP data.
    - Managing web server content.
-  **/run** - Run-time Variable Data
  - **Common Operations:**
    - Managing PID files.
    - Temporary sockets.
-  **/root** - Root User's Home Directory
  - **Common Operations:**
    - Storing system administration scripts.
    - Root user's settings and files.