

# Linux Simplified: Compact Command Reference

## 1. Quick Help

- Traditional help: `man` (exit with `q`)
- GNU online help: `info` (exit with `q`)
- Keyword search: `apropos`
- Display short description: `whatis`

## 2. File Management Made Easy

- Display and analyze files: `cat`, `more`, `less`, `head`, `tail`, `nl`, `od`, `hd`
- List files: `ls`
- List file attributes: `lsattr`
- Determine file type: `file`
- Identify program file: `type`
- Count characters, words, and lines: `wc`
- Calculate file checksum: `sum`, `md5sum`, `sha1sum`
- Display opened files: `lsdf`

## 3. Search and Find

- Search for files: `find`
- Quick file search: `locate`, `slocate`
- Update locate database: `updatedb`
- Search in files: `grep`, `fgrep`, `egrep`
- Display full path: `which`
- Display path: `whereis`

## 4. Compare, Unite, and Sort Files

- Compare text files: `diff`
- Merge files: `join`
- Sort files: `sort`

## 5. Efficient Compression and Archiving

- (De)compress files: `gzip`, `gunzip`, `pack`, `unpack`, `compress`, `uncompress`, `arc`, `unarcj`
- (De)compress with bzip: `bzip2`, `bunzip2`, `bzcat`
- View contents of gzip archives: `zcat`, `zless`, `zmore`
- Archive and copy files: `tar`, `cpio`

## 6. Control Access Rights and Attributes

- Change access rights: `chmod`
- Change owner: `chown`
- Change group: `chgrp`
- Change attributes: `chattr`
- Set/Display file creation mask: `umask`
- Change timestamp: `touch`

## 7. Transform and Split Files

- Replace characters: `tr`
- Transform strings: `sed`
- Convert tabs to spaces: `expand`

- Convert character sets: `recode`, `iconv`
- Output unique lines: `uniq`
- Cut columns: `cut`
- Split files: `split`, `csplit`

## 8. Printing and Managing Print Jobs

- Print file: `lp`, `lpr`
- Inquire status: `lpstat`, `lpq`
- Cancel print jobs: `cancel`
- Manage printers: `lpc`
- Delete print jobs: `lprm`

## 9. Device and Directory Management

- Create device files or named pipes: `mknod`
- Create FIFO files: `mkfifo`
- Display current directory: `pwd`
- Change to a directory: `cd`
- Create a directory: `mkdir`
- Delete a directory: `rmdir`
- Compare two directories: `diff`
- Basename of a path: `basename`
- Directory name of a path: `dirname`

## 10. Monitoring Disk Space

- Determine free disk space: `df`
- Analyze disk usage: `du`
- Display free main memory and swap: `free`

## 11. File System Control

- Mount a file system: `mount`
- Unmount a file system: `umount`
- Partition a hard disk: `fdisk`, `cfdisk`
- Create, shrink, enlarge, and move partitions: `parted`
- Format floppy disks: `fdformat`
- Copy and convert file systems: `dd`
- Information about an ext2/ext3 file system: `dumpe2fs`
- Change system parameters: `tune2fs`
- Write buffered data to disk: `sync`
- Access MS-DOS floppy disks: `mttools`

## 12. User and Group Management

- Add a user: `useradd`, `adduser`
- Modify user properties: `usermod`
- Set/display password expiration: `chage`
- Change password: `passwd`
- Delete a user: `userdel`
- Determine own login name: `logname`, `whoami`
- Determine user and group ID: `id`
- Add a group: `groupadd`

- Modify group name or ID: `groupmod`
- Delete a group: `groupdel`
- Display group memberships of a user: `groups`
- Show logged-in users: `who, w`
- Send a message to logged-in users: `wall`
- Display last logins: `last, lastlog`
- End a session: `logout, exit`

### 13. Process Management

- Display information about processes: `ps`
- Display process hierarchy: `pstree`
- List processes by CPU usage: `top`
- Perform time measurements for processes: `time`
- Send signals to processes: `kill, killall`
- Terminate a process under X: `xkill`
- Start processes in the background: `&`
- List suspended or background processes: `jobs`
- Terminate a process in the foreground: `[Ctrl] + C`
- Pause a process in the foreground: `[Ctrl] + Z`
- Resume a process in the background: `bg`
- Resume a process in the foreground: `fg`
- Schedule periodic execution of programs: `cron, crontab`
- Execute a program periodically and display output: `watch`
- Schedule programs for specific times: `at`
- Execute commands sometime later: `batch`
- Allow processes to continue after session end: `nohup`
- Make a process sleep: `sleep`
- Run programs as another user: `su`
- Execute as another user: `sudo`
- Change process priorities: `nice, renice`

### 14. System Maintenance and Restart

- Shut down the system: `shutdown`
- Restart the system: `reboot`
- Halt all processes: `halt`
- Display runlevel: `runlevel`
- Change runlevel: `init`
- Display boot messages: `dmesg`
- Display system information: `uname`
- Display time since system start and average load: `uptime`

### 15. Hardware Insights

- Display PCI devices: `lspci`
- Set hard disk parameters: `hdparm`

### 16. Date, Time, and Calendar

- Query and set date and time: `date`
- Set hardware clock: `hwclock`

- Display calendar: `cal`

## 17. Networking Capabilities

- Test connections: `ping`
- Display or change own hostname: `hostname`
- Determine hostname or IP: `host`
- Configure network interface: `ifconfig`
- Bring up or down network connection: `ifup`, `ifdown`
- Display network connections: `netstat`
- Trace the route of a packet through the network: `traceroute`
- FTP, Secure Shell, and secure file copying: `ftp`, `wget`, `ssh`, `scp`

## 18. Terminal Management

- Set and query terminal settings: `stty`
- Change terminal settings: `setterm`
- Restore terminal character set: `reset`
- Clear the screen: `clear`
- Query terminal name: `tty`
- Switch terminals: `[Alt] + [F1 to Fn]`
- Switch from X to terminal: `[Ctrl] + [Alt] + [F1 to Fn]`

## 19. Shell Know-How

- Change login shell: `chsh`
- Display or change environment variables: `printenv`, `set`
- Export environment variables: `export`
- Assign or delete command aliases: `alias`, `unalias`
- Input and output redirection: `|`, `tee`, `xargs`, `>`, `>>`, `2>`, `<`, `.`, `source`

## 20. Text Editing Made Easy

- Edit files: `nano`, `pico`, `joe`, `vi`, `emacs`

## 21. PostScript and PDF Conversion

- Convert PostScript and PDF files: `gs`
- Convert text to PostScript: `a2pdf`, `enscript`, `mpage`
- Convert PDF to PostScript and vice versa: `pdf2ps`, `ps2pdf`
- Convert HTML files to PostScript: `html2ps`
- Convert DVI files to PostScript: `dvips`
- Manipulate PostScript files: `psutils`

## 22. Other Handy Commands

- Output text: `echo`
- Display required shared libraries for program execution: `ldd`
- Compile and link C and C++ programs: `cc`, `gcc`, `g++`, `make`
- Encrypt files: `gpg`
- Calculator: `bc`