

LINUX CHEAT SHEET



BY DEVOPS SHACK

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200 Linux Commands



Introduction

Linux is the backbone of modern computing. From powering over 90% of cloud infrastructure and web servers to enabling embedded systems, mobile devices, and supercomputers — Linux is everywhere. And at the heart of Linux is the command line — a powerful interface that gives users complete control over the operating system.

Whether you're a system administrator, DevOps engineer, developer, cybersecurity analyst, or a beginner learning Linux for the first time, mastering the command line is non-negotiable. The terminal isn't just a tool; it's a superpower that allows you to automate tasks, monitor systems, manage files, install software, troubleshoot issues, and interact with every layer of a Linux-based system — all at lightning speed.



What This Document Offers

This document is your ultimate companion to learning Linux. It contains the Top 200 most important and widely-used Linux commands, explained in plain English with clear syntax, use cases, examples, outputs, and pro tips for real-world usage.

Each command is grouped into logical categories such as:

- File management
- Process monitoring
- System information
- Networking
- Disk operations
- User & group management
- Package management
- Text processing (**awk**, **sed**, **grep**, etc.)
- Scripting
- Permissions & ownership
- System services
- Security and troubleshooting

Basic Linux Commands

1. **pwd** – Prints the current working directory you're in.
2. **ls** – Lists the files and directories in the current folder.
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3. **cd** – Changes the directory you're working in.
4. **clear** – Clears the terminal screen.
5. **echo** – Displays a line of text or variable value.
6. **exit** – Closes the terminal session.
7. **history** – Displays a list of previously used commands.
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8. **man** – Opens the manual page for a command.
9. **whoami** – Prints the current logged-in username.
10. **hostname** – Shows the system's hostname.

File and Directory Operations

11. **touch** – Creates a new empty file.

12. **mkdir** – Creates a new directory.

13. **rmdir** – Removes empty directories.

14. **rm** – Removes files or directories.

15. **cp** – Copies files or directories.

16. **mv** – Moves or renames files.

17. **stat** – Displays detailed file information.

18. **file** – Identifies the type of file (text, binary, image,

etc.). 19. **basename** – Returns the file name from a full

path.

20. **dirname** – Returns the directory path from a full file path.

File Permissions & Ownership

- 21. **chmod** – Changes file or directory permissions.
- 22. **chown** – Changes file ownership (user and/or group).
- 23. **chgrp** – Changes the group ownership of a file.
- 24. **umask** – Sets default permissions for newly created files.
- 25. **lsattr** – Lists file attributes on a Linux file system.
- 26. **chattr** – Changes file attributes on a Linux file system.
- 27. **getfacl** – Displays Access Control List (ACL) of a file.
- 28. **setfacl** – Sets ACL permissions on files or directories.

User & Group Management

- 29. **adduser** – Adds a new user to the system.
- 30. **useradd** – Low-level utility to add a user.
- 31. **passwd** – Changes user password.
- 32. **usermod** – Modifies a user account.
- 33. **userdel** – Deletes a user account.
- 34. **groupadd** – Creates a new group.
- 35. **groupdel** – Deletes a group.

- 36. **groupmod** – Modifies an existing group.
- 37. **id** – Displays user ID and group ID.
- 38. **who** – Shows who is logged in.
- 39. **w** – Shows logged-in users and what they are doing.
- 40. **groups** – Displays groups a user belongs to.
- 41. **su** – Switches to another user account.
- 42. **sudo** – Executes a command with elevated privileges.

Process Management

- 43. **ps** – Shows running processes.
- 44. **top** – Displays real-time system processes and usage.
- 45. **htop** – Interactive process viewer (enhanced **top**).
- 46. **kill** – Sends signals to processes (usually to terminate).
- 47. **killall** – Sends signals to all processes by name.
- 48. **nice** – Starts a process with a given priority.
- 49. **renice** – Changes priority of a running process.
- 50. **bg** – Resumes a job in the background.

51. **fg** – Brings a background job to the foreground.

52. **jobs** – Lists active jobs in the shell.

53. **pidof** – Finds the process ID of a running program.

54. **watch** – Repeats a command periodically and shows output.

Disk & Filesystem Commands

55. **df** – Reports file system disk space usage.

56. **du** – Estimates file or directory space usage.

57. **mount** – Mounts a file system.

58. **umount** – Unmounts a file system.

59. **fsck** – Checks and repairs file systems.

60. **blkid** – Displays block device information.

61. **lsblk** – Lists block devices in a tree-like structure.

62. **parted** – Manages disk partitions interactively.

63. **fdisk** – Partition table manipulator for Linux.

64. **mkfs** – Creates a new file system.

65. **tune2fs** – Tunes file system parameters.

66. **e2label** – Changes the label of an ext2/ext3/ext4 filesystem.

Archiving & Compression

67. **tar** – Archives files into **.tar** format.

68. **gzip** – Compresses files using **.gz** format.

69. **gunzip** – Decompresses **.gz** files.

70. **bzip2** – Compresses files using **.bz2** format.

71. **bunzip2** – Decompresses **.bz2** files.

72. **xz** – Compresses files using **.xz** format.

73. **unxz** – Decompresses **.xz** files.

74. **zip** – Compresses files into **.zip** archive.

75. **unzip** – Extracts files from **.zip** archives.

76. **7z** – High-compression archiver for **.7z** files.

77. **zcat** – Views contents of a compressed file.

Networking Commands

78. **ip** – Configures and displays IP networking.

79. **ifconfig** – Displays or configures network interfaces (deprecated but still used).

80. **ip a** – Displays all network addresses (modern alternative to **ifconfig**).

81. **ping** – Checks connectivity to another host.

82. **traceroute** – Traces the route packets take to a host.

83. **netstat** – Displays network connections, routing tables, and stats (older tool).

84. **ss** – Displays detailed socket statistics (modern replacement for **netstat**).

85. **dig** – Queries DNS name servers.

86. **nslookup** – Performs DNS lookups (older tool).

87. **host** – Simple DNS query tool.

88. **curl** – Transfers data from or to a server using supported protocols.

89. **wget** – Non-interactive network downloader.

90. **telnet** – Connects to remote machines using Telnet protocol.

91. **ssh** – Connects to remote machines securely.

92. **scp** – Securely copies files between systems.

93. **rsync** – Efficiently syncs files and directories between systems.

94. **ftp** – Transfers files over FTP (less secure, older protocol).

95. **nmcli** – Command-line tool for controlling NetworkManager.

96. nmap – Network scanner for hosts and open ports.

97. tcpdump – Captures and analyzes network

packets. 98. iptables – Manages firewall rules.

Package Management (Debian/Ubuntu)

99. apt – Modern package management tool for Debian-based systems.

100. apt-get – Legacy tool for package operations.

101. apt-cache – Queries package information.

102. dpkg – Low-level Debian package management tool.

103. snap – Manages snap packages (universal packages).

104. update-alternatives – Manages default system applications.

Package Management (RHEL/CentOS/Fedora)

105. yum – Package manager for RPM-based systems (older systems).

106. dnf – Modern replacement for **yum**.

107. rpm – Low-level RPM package management.

108. repoquery – Queries repository information.

109. dnf info – Retrieves package info from DNF repos.

110. **dnf clean** – Clears metadata cache.

System Information

111. **uname** – Displays system information like kernel version.

112. **hostnamectl** – Controls system hostname and related settings.

113. **uptime** – Shows how long the system has been running.

114. **whoami** – Displays the current username.

115. **id** – Shows user ID and group ID.

116. **top** – Displays dynamic real-time view of running processes.

117. **vmstat** – Reports memory, CPU, and I/O stats.

118. **free** – Shows memory usage.

119. **lscpu** – Displays CPU architecture info.

120. **lsblk** – Lists block storage devices.

121. **lspci** – Lists PCI devices.

122. **lsusb** – Lists USB devices.

123. **dmesg** – Displays kernel-related messages.

124. **uptime** – Shows system running time.

- 125. **arch** – Displays system architecture.
- 126. **env** – Shows all environment variables.

Text Processing

- 127. **cat** – Displays the contents of a file.
- 128. **tac** – Displays contents of a file in reverse order.
- 129. **nl** – Numbers the lines of a file.
- 130. **more** – Views files one page at a time (forward only).
- 131. **less** – Advanced pager to view files forward and backward.
- 132. **head** – Displays the beginning lines of a file.
- 133. **tail** – Displays the ending lines of a file.
- 134. **cut** – Removes sections from each line of input.
- 135. **split** – Splits a file into pieces.
- 136. **paste** – Merges lines of files horizontally.
- 137. **sort** – Sorts lines in a file.
- 138. **uniq** – Removes duplicate lines from sorted data.
- 139. **wc** – Counts lines, words, characters.
- 140. **tr** – Translates or deletes characters.

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- 141. **col** – Filters control characters.
 - 142. **fmt** – Formats text for readability.
 - 143. **fold** – Wraps text at a specified width.
 - 144. **strings** – Extracts printable strings from binary files.
 - 145. **grep** – Searches text using patterns.
 - 146. **egrep** – Extended version of **grep** with more regex support.
 - 147. **fgrep** – Searches fixed strings (no regex).
 - 148. **awk** – Pattern scanning and text processing language.
 - 149. **sed** – Stream editor for filtering and transforming text.
 - 150. **xargs** – Builds and executes command lines from standard input.
 - 151. **tee** – Reads from standard input and writes to file and stdout.
 - 152. **rev** – Reverses lines character-wise.
 - 153. **cut** – Cuts sections from each line (by delimiter or byte).
 - 154. **yes** – Outputs a string repeatedly until stopped.

Shell Scripting & Variables

- 155. **bash** – GNU Bourne Again SHell, standard shell on most systems.
- 156. **sh** – Original Bourne shell.

- 157. **alias** – Creates shortcuts for commands.
- 158. **unalias** – Removes defined aliases.
- 159. **export** – Sets environment variables.
- 160. **source** – Executes a script within the current shell.
- 161. **read** – Reads input from user into a variable.
- 162. **set** – Sets shell options and positional parameters.
- 163. **unset** – Removes a variable or function definition.
- 164. **declare** – Declares variables with attributes.
- 165. **trap** – Catches signals and executes commands.
- 166. **shift** – Shifts positional parameters in scripts.
- 167. **test** – Evaluates conditional expressions.
- 168. **[]** – Alternative syntax for **test**.

Job Scheduling

- 169. **cron** – Time-based job scheduler.
- 170. **crontab** – Installs, lists, and removes cron jobs.
- 171. **at** – Schedules a one-time task.

- 172. **batch** – Schedules tasks to run when system load allows.
- 173. **anacron** – Runs scheduled jobs missed due to downtime.
- 174. **systemctl list-timers** – Lists all scheduled timers in systemd.

System Services (Systemd)

- 175. **systemctl** – Manages services and the systemd system.
- 176. **service** – Legacy tool to manage services.
- 177. **journalctl** – Views logs managed by systemd.
- 178. **loginctl** – Manages user logins in a systemd environment.
- 179. **hostnamectl** – Configures hostname and related settings.
- 180. **timedatectl** – Configures date and time.
- 181. **localectl** – Configures system locale settings.

Log Management

- 182. **logrotate** – Rotates and compresses log files.
- 183. **tail -f** – Follows a file (commonly used for real-time log viewing).
- 184. **less /var/log/syslog** – Views system logs page by page.
- 185. **journalctl -xe** – Views system logs with error details.

Monitoring & Performance

- 186. **iostat** – Shows CPU and I/O statistics.
- 187. **vmstat** – Reports on memory, swap, I/O, system activity.
- 188. **sar** – Collects, reports system activity.
- 189. **uptime** – Shows system load averages.
- 190. **free -h** – Displays human-readable memory usage.
- 191. **watch** – Repeats and displays output of a command periodically.
- 192. **top -n 1** – Captures system processes snapshot once.
- 193. **iotop** – Monitors I/O usage by processes.
- 194. **dstat** – Versatile resource statistics viewer.
- 195. **glances** – Cross-platform monitoring tool.
- 196. **nmon** – Performance monitoring for CPU, memory, network, and more.
- 197. **mpstat** – Shows CPU usage for each processor.
- 198. **tlod** – Shows a graph of system load average.
- 199. **uptime -p** – Shows pretty uptime format.
- 200. **hostname -I** – Shows all IP addresses assigned to the host.