

Linux Ubuntu Command Cheat Sheet

Quick reference • Common terminal commands • Examples included

How to use: Open Terminal with Ctrl+Alt+T. Replace items in angle brackets (such as <filename>) with your actual values. Commands are case-sensitive.

1. Getting help & understanding commands

Command	What it does	Example
man <command>	Open the manual page for a command.	man ls
<command> --help	Show a command's built-in help.	cp --help
whatis <command>	Show a short description of a command.	whatis grep
which <command>	Show the executable path found in PATH.	which python3
history	List commands entered in this shell.	history
clear	Clear the terminal display.	clear

2. Files and directories

Command	What it does	Example
pwd	Print the current working directory.	pwd
ls	List files and directories.	ls -lah
cd <directory>	Change directory.	cd /var/log
cd ..	Move up one directory.	cd ..
cd ~	Go to your home directory.	cd ~
mkdir <name>	Create a directory.	mkdir projects
mkdir -p a/b	Create nested directories as needed.	mkdir -p work/linux
touch <file>	Create an empty file or update its timestamp.	touch notes.txt
cp <source> <destination>	Copy a file.	cp notes.txt notes-backup.txt
cp -r <source> <destination>	Copy a directory recursively.	cp -r project project-copy
mv <source> <destination>	Move or rename a file/directory.	mv draft.txt final.txt
rm <file>	Delete a file (usually without a recycle bin).	rm old.txt
rm -r <directory>	Delete a directory and its contents recursively.	rm -r old-project/
file <path>	Identify a file's type.	file archive.tar.gz
stat <path>	Show file metadata such as size and timestamps.	stat report.pdf

3. Read, search and edit text

Command	What it does	Example
cat <file>	Print a file's contents.	cat notes.txt
less <file>	Read a file page by page; press q to quit.	less /var/log/syslog
head -n 20 <file>	Show the first 20 lines.	head -n 20 app.log
tail -n 20 <file>	Show the last 20 lines.	tail -n 20 app.log
tail -f <file>	Follow new lines added to a log file.	tail -f /var/log/syslog
grep '<text>' <file>	Search text in a file.	grep 'error' app.log

Command	What it does	Example
grep -R '<text>' <dir>	Search recursively through files in a directory.	grep -R 'TODO' ./src
find <dir> -name '<pattern>'	Find files by name.	find . -name '*.pdf'
wc -l <file>	Count lines in a file.	wc -l access.log
sort <file>	Sort lines of text.	sort names.txt
uniq <file>	Remove adjacent duplicate lines (often use after sort).	sort names.txt uniq
nano <file>	Open a simple terminal text editor.	nano notes.txt

4. Permissions and ownership

Command	What it does	Example
ls -l	View permissions, owner and group.	ls -l
chmod 644 <file>	Set owner read/write; group and others read.	chmod 644 notes.txt
chmod +x <file>	Make a file executable for applicable users.	chmod +x script.sh
chmod 755 <file-or-dir>	Owner full access; others read/execute.	chmod 755 script.sh
chown <user>:<group> <path>	Change file owner and group; often needs sudo.	sudo chown alice:alice notes.txt
sudo <command>	Run a command with elevated privileges when authorised.	sudo apt update
id	Show your user and group IDs.	id
whoami	Print the current username.	whoami
groups	List groups for the current user.	groups

5. Packages and software (APT)

Command	What it does	Example
sudo apt update	Refresh package index information.	sudo apt update
sudo apt upgrade	Install available package upgrades.	sudo apt upgrade
sudo apt install <package>	Install a package.	sudo apt install curl
sudo apt remove <package>	Remove a package but may leave configuration files.	sudo apt remove curl
sudo apt purge <package>	Remove a package and its system configuration files.	sudo apt purge package-name
sudo apt autoremove	Remove dependencies no longer needed.	sudo apt autoremove
apt search <term>	Search available package names/descriptions.	apt search editor
apt show <package>	Show package details.	apt show curl
dpkg -l	List installed packages.	dpkg -l less

6. Processes and system services

Command	What it does	Example
ps aux	List running processes.	ps aux
top	Interactive view of processes and resource usage.	top
pgrep <name>	Find process IDs by name/pattern.	pgrep firefox
kill <PID>	Request a process to terminate.	kill 1234
kill -9 <PID>	Force-kill a process; use only if normal termination fails.	kill -9 1234
systemctl status <service>	Check a systemd service's status.	systemctl status ssh
sudo systemctl start <service>	Start a service.	sudo systemctl start ssh

Command	What it does	Example
<code>sudo systemctl stop <service></code>	Stop a service.	<code>sudo systemctl stop ssh</code>
<code>sudo systemctl restart <service></code>	Restart a service.	<code>sudo systemctl restart ssh</code>
<code>journalctl -u <service></code>	View logs for a systemd service.	<code>journalctl -u ssh</code>
<code>uptime</code>	Show how long the system has been running and load averages.	<code>uptime</code>

7. System information, disk and memory

Command	What it does	Example
<code>uname -a</code>	Show kernel and system information.	<code>uname -a</code>
<code>hostnamectl</code>	Show or manage system hostname details.	<code>hostnamectl</code>
<code>lsb_release -a</code>	Show Ubuntu release information (if available).	<code>lsb_release -a</code>
<code>df -h</code>	Show filesystem disk space in readable units.	<code>df -h</code>
<code>du -sh <path></code>	Show total disk usage for a path.	<code>du -sh ~/Downloads</code>
<code>free -h</code>	Show memory and swap usage.	<code>free -h</code>
<code>lsblk</code>	List block devices and partitions.	<code>lsblk</code>
<code>mount</code>	Show mounted filesystems.	<code>mount</code>
<code>lscpu</code>	Show CPU architecture and details.	<code>lscpu</code>
<code>dmesg</code>	Show kernel ring-buffer messages; access may be restricted.	<code>dmesg less</code>

8. Networking

Command	What it does	Example
<code>ip addr</code>	Show network interfaces and IP addresses.	<code>ip addr</code>
<code>ip route</code>	Show routing table/default gateway.	<code>ip route</code>
<code>ping <host></code>	Test reachability and latency; some hosts block ping.	<code>ping -c 4 1.1.1.1</code>
<code>ss -tulpn</code>	List listening TCP/UDP sockets; some process details need sudo.	<code>sudo ss -tulpn</code>
<code>curl <URL></code>	Make a web request and print response content.	<code>curl -I https://example.com</code>
<code>wget <URL></code>	Download a file from a URL.	<code>wget https://example.com/file.zip</code>
<code>dig <domain></code>	Query DNS records (install dnsutils if missing).	<code>dig example.com</code>
<code>traceroute <host></code>	Trace network path (may need installation).	<code>traceroute example.com</code>
<code>hostname -I</code>	Print local IP addresses.	<code>hostname -I</code>
<code>resolvectl status</code>	Show DNS resolver status on systems using systemd-resolved.	<code>resolvectl status</code>

9. Archives and compression

Command	What it does	Example
<code>tar -czf <archive>.tar.gz <dir></code>	Create a gzip-compressed tar archive.	<code>tar -czf backup.tar.gz project/</code>
<code>tar -xzf <archive>.tar.gz</code>	Extract a gzip-compressed tar archive.	<code>tar -xzf backup.tar.gz</code>
<code>tar -tf <archive>.tar.gz</code>	List archive contents without extracting.	<code>tar -tf backup.tar.gz</code>
<code>zip -r <archive>.zip <dir></code>	Create a ZIP archive (zip may need installing).	<code>zip -r project.zip project/</code>
<code>unzip <archive>.zip</code>	Extract a ZIP archive.	<code>unzip project.zip</code>

10. Users, sessions and logs

Command	What it does	Example
<code>who</code>	Show users currently logged in.	<code>who</code>
<code>w</code>	Show logged-in users and their activity.	<code>w</code>
<code>last</code>	Show recent login history from system records.	<code>last</code>
<code>passwd</code>	Change your own password; admin rules may apply.	<code>passwd</code>
<code>sudo adduser <name></code>	Create a user interactively (administrator privileges needed).	<code>sudo adduser sam</code>
<code>sudo usermod -aG <group> <user></code>	Add a user to a supplementary group.	<code>sudo usermod -aG sudo sam</code>
<code>journalctl -b</code>	View logs from the current boot.	<code>journalctl -b</code>
<code>journalctl -p err -b</code>	Show error-priority logs from current boot.	<code>journalctl -p err -b</code>

11. Shell operators and shortcuts

Command	What it does	Example
<code>command1 && command2</code>	Run the second command only if the first succeeds.	<code>sudo apt update && sudo apt upgrade</code>
<code>command1 ; command2</code>	Run the second command regardless of the first result.	<code>date ; whoami</code>
<code>command1 command2</code>	Send first command's output to the second command.	<code>ps aux less</code>
<code>command > file</code>	Redirect output to a file, replacing its contents.	<code>ls > files.txt</code>
<code>command >> file</code>	Append output to a file.	<code>date >> log.txt</code>
<code>command 2> errors.txt</code>	Redirect standard error to a file.	<code>find / -name test 2> errors.txt</code>
<code>Ctrl+C</code>	Interrupt the foreground command.	—
<code>Ctrl+Z</code>	Suspend the foreground process (shell dependent).	—
<code>Tab</code>	Autocomplete commands, paths and filenames.	—
<code>↑ / ↓</code>	Browse command history.	—
<code>~</code>	Shortcut for your home directory.	<code>cd ~/Documents</code>
<code>.</code>	Current directory; often used in paths.	<code>cp file.txt .</code>

12. Useful safety checks

Command	What it does	Example
<code>history</code>	Review recent commands before repeating them.	<code>history</code>
<code>ls <path></code>	Check what exists before moving or deleting files.	<code>ls ~/Downloads</code>
<code>sudo -l</code>	Show commands your account may run via sudo.	<code>sudo -l</code>
<code>sha256sum <file></code>	Calculate a SHA-256 checksum.	<code>sha256sum download.iso</code>
<code>man rm</code>	Read the manual before using unfamiliar deletion options.	<code>man rm</code>

Important cautions

- Commands such as `rm`, `rm -r`, `chmod`, `chown`, `usermod` and `systemctl` can have significant effects. Check paths and options before running them.
- Use `sudo` only when necessary and only for commands you understand. Do not paste commands from untrusted sources.
- Examples are illustrative. Some commands (such as `dig`, `traceroute`, `zip`, `unzip` or `lsb_release`) may require installing a package or may differ by Ubuntu version.
- Linux commands and filenames are case-sensitive. Use quotes around paths containing spaces, for example: `cd "My Documents"`

Prepared as a practical quick reference for Ubuntu Desktop and Server.