



# Linux CLI Cheat Sheet

*Built for operators. Maintained in the open.*

Essential Linux command-line commands for navigating systems, inspecting files, and performing safe day-to-day operations in servers, containers, and bastion hosts.

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## Where Am I?

`pwd` → print working directory

`whoami` → current user

`hostname` → system hostname

`uname -a` → kernel and system info

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## Directory Navigation

`i` → insert mode (start editing)

`ls` → list files

`ls -la` → detailed list (including hidden files)

`cd /path` → change directory

`cd ..` → up one directory

`cd ~` → home directory

`cd /` → filesystem root

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## Files & Directories

`touch file.txt` → create empty file

`mkdir dir` → create directory

`rmdir dir` → remove empty directory

`cp src dst` → copy file

`cp -r dir1 dir2` → copy directory recursively

`mv src dst` → move or rename

`rm file` → delete file

`rm -rf dir` → delete directory recursively (DANGEROUS)

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## Viewing Files

cat file.txt → print file contents  
less file.txt → paged view (q to quit)  
head file.txt → first 10 lines  
tail file.txt → last 10 lines  
tail -f file.txt → follow file output (logs)

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## Searching & Filtering

grep text file → search for text in file  
grep -R text dir → recursive search  
→ pipe output to another command

## Example:

ps aux | grep nginx

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## Processes

ps aux → list running processes  
top → live process view  
htop → enhanced process view (if installed)  
kill PID → terminate process  
kill -9 PID → force kill (last resort)

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## Disk & Memory

df -h → disk usage by filesystem  
du -sh dir → size of directory  
free -h → memory usage

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## Networking

ip a → network interfaces  
ss -lntp → listening ports  
curl url → HTTP request  
ping host → connectivity test

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## Permissions & Ownership

ip a → network interfaces  
ls -l → view permissions  
chmod 644 file → change file permissions  
chmod +x script.sh → make executable  
chown user:group file → change ownership

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## Environment & Shell

env → list environment variables  
echo \$VAR → print variable  
export VAR=value → set variable (current shell)  
history → command history  
clear → clear screen

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## Operator Safety Tips

- Pause before running `rm -rf`
- Verify your path with `pwd`
- Use `less` instead of `cat` for large files
- Read commands twice before pressing Enter