



# Linux Cheat Sheet

## For DevOps



### File and Disk Management

<u>ls</u>	Lists files and directories in current directory
<u>ls -l</u>	Lists files and directories with information such as permissions, ownership, size, and modification date
<u>ls -a</u>	Lists all files and directories including hidden ones
<u>cat -b</u>	Inserts line numbers to non-blank lines
<u>cat -n</u>	Inserts line numbers to all lines
<u>cat -s</u>	Squeezes multiple blank lines into a single blank line while displaying the file contents
<u>cat -E</u>	Displays contents of a file ending with a \$ symbol in each line
<u>chmod</u>	Changes permissions of a file or directory
<u>chown</u>	Changes ownership of a file or directory
<u>dd</u>	Copies raw data from one file/ device to another
<u>tail</u>	Displays last 10 lines of a specified file
<u>find</u>	Finds files and directories based on specific criteria
<u>scp</u>	Copies securely files between hosts on a network using SSH (Secure Shell) protocol
<u>df</u>	Estimates space used by entire file system
<u>du</u>	Displays the amount of disk space used by individual file

### Process Management

<u>htop</u>	Interactive process viewer that displays system resource usage in real-time
<u>ps</u>	Lists information about currently running processes
<u>kill</u>	Sends a signal to a process to terminate it
<u>history</u>	Displays the list of previously executed commands
<u>free</u>	Displays the amount of free and used memory in the system

### User and Group Management

<u>sudo useradd</u> <u>&lt;username&gt;</u>	Creates a new user account with the specified username
<u>sudo passwd</u> <u>&lt;username&gt;</u>	Changes the password for the specified user
<u>sudo userdel</u> <u>&lt;username&gt;</u>	Deletes the specified user account from the system
<u>sudo groupadd</u> <u>&lt;groupname&gt;</u>	Creates a new group with the specified group name
<u>sudo groupdel</u> <u>&lt;groupname&gt;</u>	Deletes the specified group from the system
<u>sudo usermod -g</u> <u>&lt;groupname&gt;</u> <u>&lt;username&gt;</u>	Modifies the primary group of the specified user to the specified group
<u>id</u>	Displays the user ID (uid) and group ID (gid) of the current user
<u>id -g</u> <u>&lt;groupname&gt;</u>	Displays the group ID (gid) of the specified group
<u>id -u</u> <u>&lt;username&gt;</u>	Displays the user ID (uid) of the specified user
<u>id &lt;username&gt;</u>	Displays the user ID (uid), group ID (gid), and supplementary group IDs (sgid) of specified user

### Text Manipulation

<u>sort -r</u>	Sorts the output in reverse order
<u>sort -f</u>	Sorts the output ignoring the case
<u>sort -n</u>	Sorts the output numerically
<u>cut</u>	Extracts specific portion from a file or input stream
<u>diff</u>	Compares two files and displays the differences between them
<u>tr</u>	Translates or deletes characters from standard input and writes to standard output

<u>sed</u>	Editor used for modifying text
<u>uniq</u>	Filters out duplicate lines in a file

### System Information

<u>uname -o</u>	Displays the operating system name
<u>uname -m</u>	Displays the machine hardware name



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### Package Management

apt-get Handles packages on Ubuntu-based systems

`sudo apt-get remove` Removes a package from the system

### Network Configuration & Monitoring

ifconfig Displays network interface configuration information, such as IP address, netmask, and broadcast address

`ifconfig -a` Displays all interface available even if those are down

`ifconfig -s` Displays short list of network interface

ip Displays and manages routing, devices, and tunnels

`ip address` Displays all IP addresses related with all network devices

`ip link` Shows all network interfaces available on the system

nslookup Queries the DNS server for information about a domain name or IP address

`route` Access the Linux kernel's routing tables

iptables Sets up, maintains, and inspects the tables of IPv4/IPv6 packet filter rules in the Linux kernel firewall

netstat Displays network connections and network statistics, such as active sockets, routing tables, and network interface statistics

`ss-keygen` Creates a pair of public and private authentication keys

`telnet` Client-server protocol used to establish a connection to a remote computer

`nmap` Scans hosts and services on a network, and provides information about operating systems, open ports, and services running on the hosts

`curl` Facilitates the transfer of data to or from a server, using any of the protocols it supports, such as HTTP, HTTPS, FTP, FTPS, SCP, SFTP, TFTP, DICT, TELNET, LDAP, or FILE

`uname -r` Displays the kernel release number

`lscpu` Displays information about the CPU

### Text Searching

grep -i Performs a case-insensitive search

`grep -n` Displays the line numbers of the matched pattern

`grep -v` Inverts the search and displays all lines that do not match the pattern

`grep -c` Shows a count of the number of lines that match the pattern

### System Monitoring

lsof Lists all files opened by any process of a system

`lsof -u username` Lists all files opened by a user

### Miscellaneous

`docker ps` Lists all active Docker containers

`docker images` Lists all Docker images on user's machine

`docker build` Builds a Docker image from a Dockerfile

`docker run` Runs a Docker container

`docker stop` Stops an active Docker container

`docker-compose up` Starts containers defined in a docker-compose.yml file

`docker-compose down` Stops and removes containers defined in a docker-compose.yml file

getent Retrieves entries from databases, such as the user and group database or the Domain Name System (DNS) database



### Git Commands

<i>git init</i>	Initializes a new and empty Git repository
<i>git clone</i>	Creates a copy of a Git repository in a new directory from an existing URL
<i>git add</i>	Adds changes to the staging area in preparation for committing them to the repository
<i>git commit</i>	Records changes to the repository with a message describing the changes
<i>git status</i>	Shows the current status of the repository, including any changes that have been made but not yet committed
<i>git show</i>	Displays information about a specific commit or object
<i>git rm</i>	Removes files from the repository and stages the deletion
<i>git remote</i>	Connects remote server with the local repository
<i>git push</i>	Sends committed changes to a remote repository
<i>git pull</i>	Fetches changes from a remote repository and merges them into the local repository
<i>git branch</i>	Lists, creates, or deletes branches within the repository
<i>git checkout</i>	Switches between different branches or creates a branch and switches to it
<i>git merge</i>	Combines specified branch's history into the current one
<i>git rebase</i>	Moves all work from current to master branch