



# Linux Cheat Sheet

## For DevOps



### File and Disk Management

ls Lists files and directories in current directory

ls -l Lists files and directories with information such as permissions, ownership, size, and modification date

ls -a Lists all files and directories including hidden ones

cat -b Inserts line numbers to non-blank lines

cat -n Inserts line numbers to all lines

cat -s Squeezes multiple blank lines into a single blank line while displaying the file contents

cat -E Displays contents of a file ending with a \$ symbol in each line

chmod Changes permissions of a file or directory

chown Changes ownership of a file or directory

dd Copies raw data from one file/ device to another

tail Displays last 10 lines of a specified file

find Finds files and directories based on specific criteria

scp Copies securely files between hosts on a network using SSH (Secure Shell) protocol

df Estimates space used by entire file system

du Displays the amount of disk space used by individual file

### Process Management

htop Interactive process viewer that displays system resource usage in real-time

ps Lists information about currently running processes

kill Sends a signal to a process to terminate it

history Displays the list of previously executed commands

free Displays the amount of free and used memory in the system

### User and Group Management

sudo useradd <username> Creates a new user account with the specified username

sudo passwd <username> Changes the password for the specified user

sudo userdel <username> Deletes the specified user account from the system

sudo groupadd <groupname> Creates a new group with the specified group name

sudo groupdel <groupname> Deletes the specified group from the system

sudo usermod -g <groupname> <username> Modifies the primary group of the specified user to the specified group

id Displays the user ID (uid) and group ID (gid) of the current user

id -g <groupname> Displays the group ID (gid) of the specified group

id -u <username> Displays the user ID (uid) of the specified user

id <username> Displays the user ID (uid), group ID (gid), and supplementary group IDs (sgid) of specified user

### Text Manipulation

sort -r Sorts the output in reverse order

sort -f Sorts the output ignoring the case

sort -n Sorts the output numerically

cut Extracts specific portion from a file or input stream

diff Compares two files and displays the differences between them

tr Translates or deletes characters from standard input and writes to standard output

sed Editor used for modifying text

uniq Filters out duplicate lines in a file

### System Information

uname -o Displays the operating system name

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

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

netstat Creates a pair of public and private authentication keys

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

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

`nmap` 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

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