Essential Linux Commands Cheatsheet

1 System information and administration

blkid	List the block devices, and its ids
cfdisk, fdisk	Alter the partition table
cpuid, lscpu	List detailed cpu information
df	Show available disk space
du	Show disk space usage
free	List both available and used memory, and SWAP space
halt, poweroff, shutdown	Stop the system
journalctl	Query the systemd journal
lsblk	Display information about the system's block devices
lsdev, lshw	Display information about installed hardware
lsof	List open files
lspci	List all pci devices
lsusb	List all usb devices
mailq	Listing of the contents of the mail queue on the standard output
reboot	Reboot the system
systemctl	Reboot the system
systemd-cat	Connect a pipeline or program's output with the journal
uname	Display the Linux kernel that is in use
uptime	Display the time the system is already up and running

2 Find files and directories

find	Find files, and directories by various criteria
locate	Find files, and directories by name based on the locate database
updatedb	Initialize, and update the locate database

3 File and directory operations

cd	Change to a directory
cp	Copy a file
file	Identify the file type
ln	Create a link
ls	List the contents of a directory
mkdir	Create a directory
mmv	Rename, or move multiple files, or directories
mv	Rename, or move a single file, or directory
pwd	Print the current working directory
rm	Remove one or more files, or directories
rmdir	Remove an empty directory
touch	Create an empty file, or update the timestamp of an existing file
umask	Set file mode creation mask

4 Package management (selection)

apt, apt-get, aptitude, synaptic	Install, update, and remove software packages	[1]
apt-cache	Manage, and query the package cache	[1]
dpkg	Install, update, and remove software packages	[1]
dpkg-reconfigure	Reconfigure package configuration	[1]
rpm, yum	Install, update, and remove software packages	[2]

Notes:
[1]: Debian GNU/Linux, Ubuntu, and Linux Mint
[2]: RedHat Linux, Fedora, and OpenSuse

5 Network commands

`dhclient`	Request a dynamic IP address
`host`	DNS lookup utility
`hostname`	Display the system's hostname
`ifconfig, iwconfig`	Configure network interfaces, and display interface configuration (deprecated)
`ifup`	Enable a network interface
`ip`	Configure network interfaces, and display interface configuration
`ifdown`	Disable a network interface
`iwlist`	List available wireless networks
`nc, netcat`	TCP/IP swiss army knife
`netstat`	Display network statistics
`nslookup`	Lookup name service entries
`ping, ping6`	Send ICMP package to a host
`route`	Display routing table
`tcpdump`	Dump traffic on a network
`traceroute, traceroute6`	Print the route packets trace to network host

6 Secure data transfer

`rsync, scp`	Synchronize data locally, or remotely using a secure, encrypted channel
`ssh`	Connect to a remote system using a secure, encrypted channel
`ssh-copy-id`	Transfer an SSH public key to a remote system for password-less authentification
`ssh-keygen`	Generate an SSH key pair for password-less authentification

7 Using pagers

`less, more`	Display data page by page
`most`	Display data page by page, and in multiple windows

8 Users, groups, and access control

`addgroup`	Add a new group [1]
`adduser`	Add a new user [1]
`chage`	Modify the duration a user account is valid
`chgrp`	Modify the group of a file, or directory
`chmod`	Modify the access rights of a file, or directory
`chown`	Modify the owner of a file, or directory
`delgroup`	Remove an existing group [1]
`deluser`	Remove an existing user [1]
`getent`	Lookup user information in local databases
`groupadd`	Add a new group [2]
`groupdel`	Remove an existing group [2]
`groupmod`	Modify an existing group [2]
`id`	Display user information
`last`	Show last login time for a user
`passwd`	Modify password for a user account
`su`	Switch to a different user account
`sudo`	Run command as administrative user
`useradd`	Add a new user [2]
`userdel`	Remove an existing user [2]
`usermod`	Modify an existing user [2]
`users, w, who`	List logged-in users
`wall`	Write a message to all users currently logged in
`whoami`	Display current user name

Notes:
[1] High-level tool [2] Low-level tool

9 Getting help

apropos	Display a short help text explaining the given command
info	Get help using the GNU Info system
man	Display an extended help text explaining the given command
manpath	Manage the path for manual pages
whatis	Looks up the index database for short help texts explaining the given command

10 Processes and job control

bg	Send process to the background
fg	Bring a process into the foreground
htop, top	A process monitor
jobs	List running jobs
kill	Send a signal to a process
killall	Send a signal to a number of processes
nice, renice	Modify the nice level of a process
pgrep	Find a process by its name, or by Regular Expression
ps	List running processes
pstree	Display processes as a tree structure
pkill	Look up or signal processes based on name and other attributes
sleep	Pause the execution of commands
watch	Execute a program periodically, showing output fullscreen

11 Text and data stream processing

awk	Alter, or extract data from text files preferably by column
cat	Output a file from top to bottom
colrm	Remove a column from a file
column	Display data column-wise
cut	Extract data from text files by column
diff	Compare two files, and show the differences between them
egrep, fgrep, grep	Filter text files by pattern line-wise
head	Print a specified number of lines beginning at the top of a file
hexdump	Output data as hexadecimal characters
nl	Output a file, and add line numbers
paste	Combine single files into one
sed	Modify a file line-wise
sort	Sort a file
split	Split a file based on conditions
tac	Output a file from bottom to top
tail	Print a specified number of lines beginning at the bottom of a file
tr	Replace text in a file
uniq	Report, or remove duplicate lines
tee	Read from stdin, and print to both a file, and stdout
wc	Count lines, words, and characters of a file

12 Dealing with log files

logger	A shell command interface to the syslog system log module
logrotate	Rotates, compresses, and mails system logs

13 Handling file systems

e2fsck, fsck	File system check
mkfs	Create a file system
mkswap	Prepare a partition for SWAP usage
mount	Mount a file system
swapoff	Disable a SWAP partition
swapon	Ensable a SWAP partition
tune2fs	Modify existing file system
umount	Unmount a file system

14 Working with terminals and shells, adjust the working environment

alias	List, or alter aliases for commmands
clear	Clear the screen
echo	Output text on the screen
env	Display the environment variables
exit	Quit the current shell session
history	Display the previously used commands
screen, tmux	A terminal multiplexer
set	Enable, or change a run-time parameter
time	Measure the execution time of a command
type	Identify command type
unalias	Remove an alias for a command
unset	Remove, or disable a runtime parameter
whatis	Lookup the index database for command descriptions
whereis	Lookup the binary files, source code files, and manual pages for a command
which	Identify which command will be run by the shell
xargs	Build and execute command lines from standard input

15 Handling the Linux kernel

dmesg	Display, and control the kernel ring buffer
insmod	Insert (activate) a kernel module into the currently running Linux kernel
lsmod	List the kernel modules from the currently running Linux kernel
modprobe	Try to insert (activate) a kernel module into the currently running Linux kernel
rmmode	Remove (deactivate) a kernel module from the currently running Linux kernel
uname	Display information about the currently running Linux kernel

16 Printing

lp, lpr	Print files, or change an existing printing job
lpc	Manage printers
lpq	Display the contents of the printer queue
lprm	Remove an existing job from the printer queue

17 System time, date, calendar, and locales

cal, ncal	Display a calendar
date	Display a date in various formats
hwclock	Manage both the hardware, and the system clock
locale	Display information about the current locale
ntpdate, ntpsec-ntpdate	Retrieve the time information from an NTP server
timedatectl	Control the system time and date

18 Archives and data compression

`bunzip2`	Unpack a compressed file (bzip2 format)
`bzcat`	Output file content to `stdout` from a compressed file (bzip2 format)
`bzegrep,` `bzfgrep,` `bzgrep`	Search in a bz-compressed file
`bzip2`	Compress a file (bzip2 format)
`gunzip`	Unpack a compressed file (gzip format)
`gzip`	Compress a file (gzip format)
`tar`	Create, and manage a tape archive (tar file)
`unzip`	Unpack a compressed file (zip format)
`xz`	Compress a file (xz format)
`xzcat`	Output file content to `stdout` from a compressed file (xz format)
`xzegrep,` `xzfgrep,` `xzgrep`	Search in a xz-compressed file
`zip`	Compress a file (zip format)
`zcat`	Output file content to `stdout` from a compressed file (zip format)
`zegrep, zfgrep,` `zgrep`	Search in a zip-compressed file

19 System libraries

`ldd`	Print shared library dependencies
`ldconfig`	Configure dynamic linker run-time bindings

Notes