General Linux Commands

Commands and General functions | In Terminal

- General Linux Commands | In terminal
- Time In Linux | setting time zones
- BASH | General commands
- Nginx | General Commands
- Docker | General Commands
- Linux command line: bash + utilities
- UnZip and UnCompress
- How to check IP address from command line | Internal and External
- UFW
- How to clean log files in Linux

General Linux Commands | In terminal

- Check operating system
  `cat/etc/*rel*`

- Check system info
  - CPU
    - `cat /proc/cpuinfo`
  - Memory
    - `cat /proc/meminfo`

- ports - Check for listening ports.
  `netstat -tulpn`

- Check users and passwords (PUID and)
  `getent passwd`

- change ownership of directory/folder or file
  - directory / folder
    - `chown root:root filename/`
    - `chown -R root:root filename/` (all sub folders/files)
  - files
    - `chmod 775 filename/`

Check file size and other info: Different ways to check for files size

- `ls -lh`
  - `ls -l` filename #check size of the specified file (bytes)
  - `ls -l` * #check size of all the files in the current directory

```
apt-get update
```

  - `ls -al` * #check size of all the files including hidden files in the current directory
  - `ls -al` dir/ #check size of all the files including hidden files in the ‘dir’ directory
  - `du -sh` filename
  - `du -sh -- *` Shows disk space usage
  - `df -h .` Shows free disk space

Show block devises | show drives

```
lsblk
```

Show drive serial numbers

```
lsblk --nodeps -o name,serial
```

Minimize: Go back to terminal without getting out of your doc

`Ctrl=Z`
To go back to the doc `fg` Press enter

Copy File from Host to Container

`docker cp doc.txt container_id:/doc.txt`
Copy host-file-name container_id:/new-file-name.txt

Run docker-compose from another directory

`docker-compose -f /tmp/myproject/docker-compose.yml up -d`

Updating:

Debian:

update the package index files in Linux to get the latest list of available packages in the repositories.

```
apt-get update
```

upgrade currently installed software packages to their latest versions. Under no circumstances are existing packages removed:

```
apt-get upgrade
```

enhanced version of the apt-upgrade command. Apart from upgrading existing software packages, it installs and removes some packages to satisfy some dependencies.

```
apt-get
```

Computer susbend / wakeup automatically

sudo rtcwake -m [type of suspend] -s [number of seconds]
`sudo rtcwake -m 5 -s 30`

Disk shutoff for 60 seconds

`sudo rtcwake -m disk -s 60`

Disk shutoff and turn on later

`sudo rtcwake -m no -l -t $(date +%s -d 'tomorrow 09:00')`

Types of Suspend

The `-m` switch accepts the following types of suspend:

`standby` – Standby offers little power savings, but restoring to a running system is very quick. This is the default mode if you omit the -m switch.

`mem` – Suspend to RAM. This offers significant power savings – everything is put into a low-power state, except your RAM. The contents of your memory are preserved.

`disk` – Suspend to disk. The contents of your memory are written to disk and your computer is powered off. The computer will turn on and its state will be restored when the timer completes.

`off` – Turn the computer off completely. rtcwake's man page notes that restoring from "off" isn't officially supported by the ACPI specification, but this works with many computers anyway.

`no` – Don't suspend the computer immediately, just set the wakeup time. For example, you could tell your computer to wake up at 6am. After that, can put it to sleep manually at 11pm or 1am – either way, it will wake up at 6am.

Seconds vs. Specific Time
`-s` this option takes a number of seconds in the future. For example, -s 60 wakes your computer up in 60 seconds, while -s 3600 wakes your computer up in an hour.

`-t` this option allows you to wake your computer up at a specific time. This switch wants a number of seconds since the Unix epoch (00:00:00 UTC on January 1, 1970). To easily provide the correct number of seconds, combine the **date** command with the rtcwake command.

`-l` this switch tells rtcwake that the hardware clock is set to local time, while the **-u** switch tells rtcwake that the hardware clock (in your computer's BIOS) is set to UTC time. Linux distributions often set your hardware clock to UTC time and translate that to your local time.

make a [[Cronjob]]

Time In Linux | setting time zones

Check your timezone on Linux by typing in `timedatectl` command.

Output:

```
$ timedatectl

                      Local time: Wed 2019-10-16 22:26:23 UTC
                  Universal time: Wed 2019-10-16 22:26:23 UTC
                        RTC time: Wed 2019-10-16 22:26:24
                       Time zone: Etc/UTC (UTC, +0000)
       System clock synchronized: no
systemd-timesyncd.service active: inactive
                 RTC in local TZ: no
```

If you don't know your time zone, find it and copy it.

```
timedatectl list-timezones
```

Set your time zone:

```
timedatectl set-timezone America/New_York
```

Make sure it worked:

```
timedatectl
```

Or

Go here. It tells you everything you need there.

- https://devconnected.com/how-to-set-date-and-time-on-linux/

BASH | General commands

When running bash scripts, you can include other commands on the same line by using these at the end of each "line" command.

bash:

```
A; B    # Run A and then B, regardless of success of A
A && B  # Run B if and only if A succeeded
A || B  # Run B if and only if A failed
A &     # Run A in background.
```

Example:
`apt install vim -y A && B apt update vim -y`

Running a bash script file .sh:

```
sh scriptfilename.sh
```

If you get a "Permission denied" error, either run "sudo" or you may need to make the script executable by running

```
chmod +x scriptname.sh
```

Nginx | General Commands

A few commands Nginx

`systemctl start nginx`
`systemctl stop nginx`
`systemctl restart nginx`
`systemctl status nginx`

Troubleshooting Nginx

```
sudo tail -f /var/log/nginx/error.log
```

```
sudo tail -f /var/log/odoo/odoo.log
```

Check connection

```
curl -I http://<your-external-ip>:80
```

```
curl -I https://<your-external-ip>:443
```

Docker | General Commands

Do you have docker?

`docker -v`

Install Docker: `apt install docker`

Do you have docker-compose? `docker-compose -v`

Docker in Linux Commands (From outside containers):
`docker images`
`docker ps -a`
`docker ps`
`docker`

Go into a Container

Standard login:

```
sudo docker exec -it containername bash
```

Log in as root:

```
docker exec -it --user root containername bash
```

To log in as root you can do it this way.

```
sudo docker exec -u 0 -it containername bash
```

Run docker from different directory:

`sudo docker-compose -f /directory/to/file/docker-compose.yml up -d`

Linux command line: bash + utilities

A		
	&	Start a new process in the background
	alias	Create an alias •
	apropos	Search Help manual pages (man -k)
	apt	Search for and install software packages (Debian/Ubuntu)
	apt-get	Search for and install software packages (Debian/Ubuntu)
	aptitude	Search for and install software packages (Debian/Ubuntu)
	aspell	Spell Checker
	at	Schedule a command to run once at a particular time
	awk	Find and Replace text, database sort/validate/index
B		
	basename	Strip directory and suffix from filenames
	base32	Base32 encode/decode data and print to standard output
	base64	Base64 encode/decode data and print to standard output
	bash	GNU Bourne-Again SHell
	bc	Arbitrary precision calculator language
	bg	Send to background
	bind	Set or display readline key and function bindings •
	break	Exit from a loop •

	builtin	Run a shell builtin
	bzip2	Compress or decompress named file(s)
C		
	cal	Display a calendar
	caller	Return the context of any active subroutine call •
	case	Conditionally perform a command
	cat	Concatenate and print (display) the content of files
	cd	Change Directory
	cfdisk	Partition table manipulator for Linux
	chattr	Change file attributes on a Linux file system
	chgrp	Change group ownership
	chmod	Change access permissions
	chown	Change file owner and group
	chpasswd	Update passwords in batch mode
	chroot	Run a command with a different root directory
	chkconfig	System services (runlevel)
	cksum	Print CRC checksum and byte counts
	clear	Clear terminal screen
	cmp	Compare two files
	comm	Compare two sorted files line by line
	command	Run a command - ignoring shell functions •
	continue	Resume the next iteration of a loop •
	cp	Copy one or more files to another location
	cpio	Copy files to and from archives
	cron	Daemon to execute scheduled commands

	crontab	Schedule a command to run at a later time
	csplit	Split a file into context-determined pieces
	curl	Transfer data from or to a server
	cut	Divide a file into several parts
D		
	date	Display or change the date & time
	dc	Desk Calculator
	dd	Data Duplicator - convert and copy a file, write disk headers, boot records
	ddrescue	Data recovery tool
	declare	Declare variables and give them attributes •
	df	Display free disk space
	diff	Display the differences between two files
	diff3	Show differences among three files
	dig	DNS lookup
	dir	Briefly list directory contents
	dircolors	Colour setup for 'ls'
	dirname	Convert a full pathname to just a path
	dirs	Display list of remembered directories
	dos2unix	Windows/MAC to UNIX text file format converter
	dmesg	Print kernel & driver messages
	dpkg	Package manager (Debian/Ubuntu).
	du	Estimate file space usage
E		
	echo	Display message on screen •
	egrep	Search file(s) for lines that match an extended expression

	eject	Eject removable media
	enable	Enable and disable builtin shell commands •
	env	Environment variables
	ethtool	Ethernet card settings
	eval	Evaluate several commands/arguments
	exec	Execute a command
	exit	Exit the shell
	expand	Convert tabs to spaces
	export	Set an environment variable
	expr	Evaluate expressions
F		
	false	Do nothing, unsuccessfully
	fdformat	Low-level format a floppy disk
	fdisk	Partition table manipulator for Linux
	fg	Send job to foreground
	fgrep	Search file(s) for lines that match a fixed string
	file	Determine file type
	find	Search for files that meet a desired criteria
	fmt	Reformat paragraph text
	fold	Wrap text to fit a specified width
	for	Expand *words*, and execute *commands*
	format	Format disks or tapes
	free	Display memory usage
	fsck	File system consistency check and repair
	ftp	File Transfer Protocol
	function	Define Function Macros

	fuser	Identify/kill the process that is accessing a file
G		
	gawk	Find and Replace text within file(s)
	getopts	Parse positional parameters
	getfacl	Get file access control lists
	grep	Search file(s) for lines that match a given pattern
	groupadd	Add a user security group
	groupdel	Delete a group
	groupmod	Modify a group
	groups	Print group names a user is in
	gzip	Compress or decompress named file(s)
H		
	hash	Remember the full pathname of a name argument
	head	Output the first part of file(s)
	help	Display help for a built-in command •
	history	Command History
	hostname	Print or set system name
	htop	Interactive process viewer
I		
	iconv	Convert the character set of a file
	id	Print user and group id's
	if	Conditionally perform a command
	ifconfig	Configure a network interface
	ifdown	Stop a network interface
	ifup	Start a network interface up
	import	Capture an X server screen and save the image to file

	install	Copy files and set attributes
	iostat	Report CPU and i/o statistics
	ip	Routing, devices and tunnels
J		
	jobs	List active jobs •
	join	Join lines on a common field
K		
	kill	Kill a process by specifying its PID
	killall	Kill processes by name
	klist	List cached Kerberos tickets
L		
	less	Display output one screen at a time
	let	Perform arithmetic on shell variables •
	link	Create a link to a file
	ln	Create a symbolic link to a file
	local	Create a function variable •
	locate	Find files
	logname	Print current login name
	logout	Exit a login shell •
	look	Display lines beginning with a given string
	lpc	Line printer control program
	lpr	Print files
	lprint	Print a file
	lprintd	Delete a print job
	lprintq	List the print queue
	lprm	Remove jobs from the print queue
	lsattr	List file attributes on a Linux second extended file system

	lsblk	List block devices
	ls	List information about file(s)
	lsof	List open files
	lspci	List all PCI devices
M		
	make	Recompile a group of programs
	man	Help manual
	mapfile	Read lines from standard input into an indexed array variable •
	mkdir	Create new folder(s)
	mkfifo	Make FIFOs (named pipes)
	mkfile	Make a file
	mkisofs	Create a hybrid ISO9660/JOLIET/HFS filesystem
	mknod	Make block or character special files
	mktemp	Make a temporary file
	more	Display output one screen at a time
	most	Browse or page through a text file
	mount	Mount a file system
	mtools	Manipulate MS-DOS files
	mtr	Network diagnostics (traceroute/ping)
	mv	Move or rename files or directories
	mmv	Mass Move and rename (files)
N		
	nc	Netcat, read and write data across networks
	netstat	Networking connections/stats
	nft	nftables for packet filtering and classification
	nice	Set the priority of a command or job

	nl	Number lines and write files
	nohup	Run a command immune to hangups
	notify-send	Send desktop notifications
	nslookup	Query Internet name servers interactively
O		
	open	Open a file in its default application
	op	Operator access
P		
	passwd	Modify a user password
	paste	Merge lines of files
	pathchk	Check file name portability
	Perf	Performance analysis tools for Linux
	ping	Test a network connection
	pgrep	List processes by name
	pkill	Kill processes by name
	popd	Restore the previous value of the current directory
	pr	Prepare files for printing
	printcap	Printer capability database
	printenv	Print environment variables
	printf	Format and print data •
	ps	Process status
	pushd	Save and then change the current directory
	pv	Monitor the progress of data through a pipe
	pwd	Print Working Directory
Q		
	quota	Display disk usage and limits
	quotacheck	Scan a file system for disk usage

R		
	ram	ram disk device
	rar	Archive files with compression
	rcp	Copy files between two machines
	read	Read a line from standard input •
	readarray	Read from stdin into an array variable •
	readonly	Mark variables/functions as readonly
	reboot	Reboot the system
	rename	Rename files
	renice	Alter priority of running processes
	remsync	Synchronize remote files via email
	return	Exit a shell function
	rev	Reverse lines of a file
	rm	Remove files
	rmdir	Remove folder(s)
	rsync	Remote file copy (Synchronize file trees)
S		
	screen	Multiplex terminal, run remote shells via ssh
	scp	Secure copy (remote file copy)
	sdiff	Merge two files interactively
	sed	Stream Editor
	select	Accept user choices via keyboard input
	seq	Print numeric sequences
	set	Manipulate shell variables and functions
	setfacl	Set file access control lists.
	sftp	Secure File Transfer Program

	sha256sum	Compute and check SHA256 (256-bit) checksums
	shift	Shift positional parameters
	shopt	Shell Options
	shuf	Generate random permutations
	shutdown	Shutdown or restart linux
	sleep	Delay for a specified time
	slocate	Find files
	sort	Sort text files
	source	Run commands from a file '.' •
	split	Split a file into fixed-size pieces
	ss	Socket Statistics
	ssh	Secure Shell client (remote login program)
	stat	Display file or file system status
	strace	Trace system calls and signals
	su	Substitute user identity
	sudo	Execute a command as another user
	sum	Print a checksum for a file
	suspend	Suspend execution of this shell •
	sync	Synchronize data on disk with memory
T		
	tail	Output the last part of a file
	tar	Store, list or extract files in an archive
	tee	Redirect output to multiple files
	test	Evaluate a conditional expression
	time	Measure Program running time
	timeout	Run a command with a time limit

	times	User and system times
	tmux	Terminal multiplexer
	touch	Change file timestamps
	top	List processes running on the system
	tput	Set terminal-dependent capabilities, color, position
	traceroute	Trace Route to Host
	trap	Execute a command when the shell receives a signal •
	tr	Translate, squeeze, and/or delete characters
	true	Do nothing, successfully
	tsort	Topological sort
	tty	Print filename of terminal on stdin
	type	Describe a command •
U		
	ulimit	Limit user resources •
	umask	Users file creation mask
	umount	Unmount a device
	unalias	Remove an alias •
	uname	Print system information
	unexpand	Convert spaces to tabs
	uniq	Uniquify files
	units	Convert units from one scale to another
	unix2dos	UNIX to Windows or MAC text file format converter
	unrar	Extract files from a rar archive
	unset	Remove variable or function names
	unshar	Unpack shell archive scripts
	until	Execute commands (until error)

	uptime	Show uptime
	useradd	Create new user account
	userdel	Delete a user account
	usermod	Modify user account
	users	List users currently logged in
	uuencode	Encode a binary file
	uudecode	Decode a file created by uuencode
V		
	v	Verbosely list directory contents ('ls -l -b')
	vdir	Verbosely list directory contents ('ls -l -b')
	vi	Text Editor
	vmstat	Report virtual memory statistics
W		
	w	Show who is logged on and what they are doing
	wait	Wait for a process to complete •
	watch	Execute/display a program periodically
	wc	Print byte, word, and line counts
	whereis	Search the user's $path, man pages and source files for a program
	which	Search the user's $path for a program file
	while	Execute commands
	who	Print all usernames currently logged in
	whoami	Print the current user id and name ('id -un')
	wget	Retrieve web pages or files via HTTP, HTTPS or FTP
	write	Send a message to another user
X		

	xargs	Execute utility, passing constructed argument list(s)
	xdg-open	Open a file or URL in the user's preferred application.
	xxd	Make a hexdump or do the reverse
	xz	Compress or decompress .xz and .lzma files
	yes	Print a string until interrupted
	zip	Package and compress (archive) files
	.	Run a command script in the current shell
	!!	Run the last command again
	###	Comment / Remark

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UnZip and UnCompress

xz-utils:

You will need xz-utils if you dont have it already. If not, You have to install xz-utils package first:

```
sudo apt-get install xz-utils
```

You can use unxz command to extract .xz files:

```
unxz file.xz
```

or using with --decompress option of xz:

```
xz --decompress file.xz
```

---

7 Zip

You will need 7zipif you dont have it already. If not, You have to install xz-utils package first:

```
sudo apt install p7zip
```

Then, uncompress using the `-d` command:

```
p7zip -d something.7z
```

How to check IP address from command line | Internal and External

Check your Internal IP address

To check you current machines addres: "ip add" or "ip addr" or;

```
ip address
```

Check your external IP address

First make sure that the curl command is installed. If not, do this

```
sudo apt install curl
```

By using curl, check the external address by doing this;

```
curl -w "\n" -s https://api.ipify.org
```

That should give an output of your external IP address.

UFW

Allow ports

```
sudo ufw allow 22
```

remove ports

```
sudo ufw delete allow 22
```

How to clean log files in Linux

Fisrt, See the logs that are in the logs area of /var

```
du -h /var/log/
```

The du command prints the estimated disk space usage of each file and directory for the path that you specified.
The -h argument causes the command to print the information in a human-readable format.

https://linuxhandbook.com/empty-file-linux/

https://support.hostway.com/hc/en-us/articles/360001972270-How-to-clean-log-files-in-Linux