

Process Management	
PS	Show process information
Show running processes	ps -ef
Show running processes hide threads	ps tree -Tp
Show detailed information about a process	pgrep -a process_name
KILL	Sends a signal to a process usually to stopping a process
Terminate a program using SIGTERM	kill pid
List available signal names	kill -l
Terminate a program using SIGHUP	kill -1 pid
Terminate a program using SIGINT	kill -2 pid
Signal the operating system to immediately terminate a program	kill -9 pid
Pause a program until it resumes with the SIGCONT signal	kill -17 pid
Cancel a running process	Ctrl + c
Pause a running process	Ctrl + z
Move process to background	bg %job_id
Move process to foreground	fg %job_id
Remove job from the shell	command & disown
Show status of all jobs	jobs
Show status of a particular job	jobs job_id
Show status and process id's of all jobs	jobs -l
Show process id's of all jobs	jobs -p

Permission	
CHOWN	Change user and group ownership of files and folders
Change the owner user of a file or folder	chown username path/to/file
Change the owner user and group of a file or folder	chown user:group path/to/file
Recursively change the owner of a folder and its contents	chown -R user path/to/folder
Change the owner of a symbolic link	chown -h user path/to/symlink
Change the owner of a file or folder to match a reference file	chown --reference=path/to/reference_file path/to/file
CHGRP	Change group ownership of files and folders.
Change the owner of a file or folder	chgrp group path/to/file
Recursively change the owner of a folder and its contents	chgrp -R group path/to/folder
Change the owner of a symbolic link	chgrp -h user path/to/symlink
Change the owner of a file/folder to match a reference file	chgrp --reference=path/to/reference_file path/to/file
CHMOD	Change the access permissions of a file or directory
Give the user who owns a file the right to e[x]ecute it	chmod u+x file
Remove executable rights from the group	chmod g-x file
Give the user rights to read and write to a file or directory	chmod u+rw file



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 Page 1 of 4.

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Permission (cont)

Give all users rights to read and execute `chmod a+rx file`

Give others (not in the file owner's group) the same rights as the group `chmod o=g file`

User, Group, Other `'u' | 'g' | 'o'`

Read, Write, Execute `'r' | 'w' | 'x'`

'+' | '-' | '=' Add, Revoke, Set

Octal
0 = None, 1 = execute only, 2 = write only, 3 = write and execute, 4 = read only, 5 = read and execute, 6 = read and write, 7 = read, write and execute (full permission)

Archive

TAR Create, Compress, Extract files

Create new archive from files `tar -cf name file1 file2 file3`

Append files to an existing archive `tar -rf archive_name files/to/add`

List archived files `tar -tvf archive_name`

Extract all files `tar -xf archive_name`

Extract an archive to specified directory `tar -xf archive_name -C path/to/dir`

Create a gzipped archive `tar -czf name file1 file2 file3`

Create a bziped archive `tar -cjf archive_name`

Extract gzipped archive `tar -xzf archive_name`

Extract bziped archive `tar -xjf archive_name`

Create a compressed archive, using archive suffix to determine the compression `tar -caf archive_name.tar.xz, archive_name.gz, archive_name.bz file1 file2 file3`

Storage Media

Show all mounted filesystems `mount`

Mount a device to a directory `mount path/to/dev path/to/dir`

Mount all the filesystems defined in /etc/fstab `mount -a`

Unmount a filesystem `umount path/to/device`

Fsck (Dry Run) `fsck -N /path/to/dev`

Check for filesystem errors `fsck path/to/dev`

Fix detected errors `fsck -y /path/to/dev`

Show partitions `fdisk -l`

Run fdisk `fdisk /dev/target/device`

Create filesystem `mkfs.ext2 /path/to/dev [ext3, ext4, btrfs, ntfs]`

Create filesystem with a volume-label `mkfs.ntfs -L name /path/to/dev`

Create filesystem with specific UUID `mkfs.ntfs -U UUID /path/to/dev`

Mkfs (Dry Run) `mkfs.ext4 -vv`

Create a bootable usb media from a iso `dd bs=8M if=/path/to/iso of=/dev/usb_drive conv=fsync oflag=direct status=progress image`

Secure Shell Host (SSH)

SSH Secure Shell is a protocol used to securely log onto remote systems. It can be used for logging or executing commands on a remote server.

Connect to a remote server `ssh username@remote_host`

Connect to a remote server with a specific identity (private key) `ssh -i path/to/key_file username@remote_host`

Connect to a remote server using a specific port `ssh -p 23 username@remote_host`

Execute a command on a remote server `ssh remote_host "example_command"`

Secure Shell Host (SSH) (cont)

Compress all data if the connection is slow	<code>ssh -C username@remote_host</code>
Print debug information	<code>ssh -v username@remote_host</code>
Enable X11 forwarding	<code>ssh -X username@remote_host</code>
Generate SSH keys	<code>ssh-keygen</code>
Copy public SSH key to a server	<code>ssh-copy-id ip_adress</code>
SCP	Secure copy files over ssh
Copy a local file to a remote host	<code>scp path/to/file username@remote_host:path/to/save</code>
Copy a file from a remote host to your local directory	<code>scp username@remote_host:path/to/remote_file path/local/dir</code>
Recursively copy the contents of a directory on a remote host to a local directory	<code>scp -r path/to/local_dir remote_host:path/to/save</code>
Use a specific ssh private key for authentication with the remote host	<code>scp -i ~/.ssh/private_key local_file remote_host:path/to/save</code>
Use a specific port	<code>scp -P 23 path/to/file username@remote_host:path/to/save</code>
Copying multiple files to a remote host	<code>scp file1 file2 username@remote_host:path/to/save</code>
Copying multiple file from remote host	<code>scp username@localhost:path/to/{file1, file2}</code>

Kernel module handling

Show active kernel modules	<code>lsmod</code>
Show information about a specific kernel module	<code>modinfo modulename</code>
Insert a module into the Linux Kernel	<code>insmod modulename</code>
Remove a module from the Linux Kernel	<code>rmmod modulename</code>
Generate a list of dependency description of kernel modules	<code>depmod</code>

Kernel module handling (cont)

MODPROBE	Add and remove modules from the Linux Kernel
Insert kernel modules	<code>modprobe -a modulename1 modulename2</code>
Remove kernel module	<code>modprobe -r modulename1 modulename2</code>
Prints current configuration	<code>modprobe -c</code>
Modprobe (Dry Run)	<code>modprobe --show</code>
Print messages about what the program is doing	<code>modprobe -v</code>

File Searching

FIND	It can be used to find files and directories and perform subsequent operations on them
Search by name case sensitive	<code>find /dir -name "search_term"</code>
Search by name case insensitive	<code>find /dir -iname "search_term"</code>
Search by file type	<code>find /dir -type f</code> type d=dir, f=file
Search by wildcard	<code>find /dir "search_term", "search_term"</code>
Search and execute a command	<code>find /dir -exec command {} \;</code>
PLOCATE	find files by name
Search for files	<code>plocate search_term</code>

Tmux

TMUX	Terminal Multiplexer (prefix ctrl + a)
Enter copy mode	prefix + pageup
Choose a session from a list	prefix + s
Choose a window from a list	prefix -w
Show a clock	prefix -t
Zoom active pane rather maximize	prefix - z



Tmux (cont)

Resize the pane up by 5	prefix + alt + up (arrow keys)
Resize the pane down by 5	prefix + alt + down (arrow keys)
Resize the pane left by 5	prefix + alt + left (arrow keys)
Resize the pane right by 5	prefix + alt + right (arrow keys)
Break the pane out and maximize to fullscreen	prefix + shift + !
Create a new window	prefix + c
Switch the attached client to the next session	prefix + shift +)
Switch the attached client to the previous session	prefix + shift + (
Select window	prefix + 0 to 9

Kitty

KITTY	Terminal emulator (prefix ctrl + shift)
New window	prefix + enter
Select window	prefix + 1
Open new tab	prefix + t
Close tab	prefix + t
Next tab	prefix + right (arrow key)
Previous tab	prefix + left (arrow key)
Set tab title	prefix + alt + t
Resize window or pane	prefix + r
Edit kitty config file	prefix + F2

User account administration

Create a user account	useradd username
Modify a user account	usermod username
Delete a user account	deluser username
Change user password	passwd username

Miscellaneous

ALIAS	Creates aliases words that are replaced by a command string
Create a generic alias	word="command"
Remove an aliased command	unalias word
List all aliased words	alias -p
View the command associated to a given alias	alias word
CAL	Prints calendar information
Display calendar for the current month	cal
Display calendar for a specific month	cal month_number
Display a 12 month calendar for the current year	cal -y
ECHO	Display a line of text
Print a text message	echo example_text
Redirect input to a file	echo example_text >> filename
Verify ISO files with sha1sum	echo "hash" isoname sha1sum -c
FILE	Determine file type and give a description of the type of the specified file
Determine file type	file path/to/file
Determine the mime encoding type of a file	file -i path/to/file
Try to look inside compressed files	file -z path/to/file
Try to look inside compressed files but report information about the contents	file -Z path/to/file
MAN	Display manual pages
Display man page for a command	man command

