Learning Linux Command Line Cheat Sheet

by Anthony.Dominguez via cheatography.com/202519/cs/42984/

General Command Syntax

Command	Option(s)	Argument(s)
ls	-ahl	/usr/bin
sort	-u	users.txt
grep	-i "needle"	heystack

Commands are programs that take a particular action
Options tell the command *how* to operate
Arguments tell the command *what* to operate on

Finding Help for Commands

man	*argument*
argument	**--help**
apropos	*functionality search*

Useful Keyboard Shortcuts

Tab	Tab completion
Ctrl - A	Move to beginning of line
Ctrl - E	Move to end of line
Ctrl - Left arrow	Move left one word
Ctrl - Rig arrow	Move right one word
Ctrl - U	Delete from cursor to line start
Ctrl - K	Delete from cursor to line end
Ctrl - Shift - C	Copy selected text to clipboard
Ctrl - Shift - V	Paste text from clipboard
Up arrow	Recall previous command
Down arrow	Scroll previous command
Ctrl - R	Search command history
Ctrl - C	Cancel command

Commands for File Information

Command	Option(s)	Argument(s)	Description
file		*argument*	Determine file type
stat		*argument*	Display file status

Notable File System Directories

/	File system root
/home	User home directories
/root	Root user's home directory
/etc	Common configuration files

Notable File System Directories (cont)

/bin, /sbin	Common programs or commands
/lib	Shared libraries and modules
/mnt, /media	Standard location for mounting other file systems
/dev, /proc, /sys	Kernel and system information

Paths in Linux

/	Absolute path
.	Current working directory
..	Parent directory
~	Current user's home directory
\ - *space*	Equivalent to space key

The File System

cd	Change the shell working directory
pwd	Print the name of File system root: / User home directories: /home Root user's home directory: /root
ls	

The File System

Command	Option(s)	Argume-nt(s)	Description
cd	*available*	*new directory*	Change the shell working directory
pwd	*available*		Print the name of the current working directory
ls	-lh	*directory*	List information about the files

Working with Directories and Files

Command	Option(s)	Argume nt(s)	Description
mkdir	*available*	*direct-ory(ies)*	Create the directory(ies)Create the directory(ies)
rmdir	*available*	*direct-ory(ies)*	Remove the directory(ies), if they are empty

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Working with Directories and Files (cont)

cp	*available*	*source - destination*	Copy source to destination
mv	*available*	*source - destination*	Move source to destination
rm	-r	*file(s)*	Remove the file(s) (recursively)
find	-name	*directory - "expression*?*	Find directory or file by name

Search for Text

Command	Option(s)	Argument(s)	Description
grep	*options*	*"pattern*? file name*	Search for patterns in file

Tools for Text

Command	Option(s)	Argument(s)	Description
cat	*available*	*file name*	Concatenate to standard output
head	*available*	*file name*	Print the first number of something
tail	*available*	*file name*	Print the last number of something

Tools for Working with Text

Command	Description
awk	Often used to extract specific text from a file according to rule
sed	Often used to modify text in a command pipeline or in place
sort	Often used to sort text

Vim and nano are very popular text editors in CLI

Hard and Symbolic Links

Command	Option(s)	Argument(s)	Description
ln	-s	*source file link name*	Creates a soft link
ln		*source file link name*	Creates a hard link

- A hard link points to specific data (by inode) on the disk
- A soft link or symbolic link (symlink) points to another file

File Permissions

User	Group	Others	Description
rwx	rwx	rwx	Up to three letters indicate the permissions for the file or directory

Command	Option(s)	Argument(s)	Description
chmod	*octal or symbolic change*	*file or directory*	Changes the mode of the file or directory
chown	*new owner*	*file or directory*	Changes the owner of the file or directory
chgrp	*new group*	*file or directory*	Changes the group of the file or directory

r: read (value of 4)
w: write (value of 2)
e: execute (value of 1)

u: user
g: group
o: others
a: all

Two methods to represent permissions:
- Octal (like 755, 644, 777)
- Symbolic (like a=r, g+w, and o-x)

Tape Archives and Data Compression

Command	Option(s)	Argument(s)	Description
tar	-cvf	*file name*.tar *directory*	Creates a tape archive

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Tape Archives and Data Compression (cont)

tar	-caf	*file name*.tar.gz/tar.bz2 *directory*	Creates a compressed tape archive, the compression type depends on the extension
tar	-xf	*file name* -C *target directory*	Extracts a compressed tape archive inside a certain directory
zip	-r	*file name directory to compress*	Compresses a directory
unzip		*file name* -d *target directory*	Extracts a directory

Formats for compressed .tar files are: .tar.gz, .tgz, .tar.bz2

Superuser Rights

sudo + *command*	Executes the command with superuser rights (requires user password)
sudo + -s	Activates superuser rights for a period of time
sudo + -k	Gives up superuser rights

Environment Variables and PATH

env	Set some attributes in the environment
which	Locate a command
~/.bash_profile	Bash profile (create with command **nano**)

Inside nano, write:
PATH = "$PATH : /my/custom/path : /some/other/path"

Redirection

Stream	Number	Usage
Standard Input (stdin)	0	Text input
Standard Output (stdout)	1	Text output
Standard Error (stderr)	2	Error text

Redirection (cont)

command	*number>*	*file name*	Redirects the output to the file
command	*number>>*	*file name*	Appends the output to the file

Information About Linux Distribution & Hardware

Command	Description
ls -l /etc/*-release	List of the files that contain information about the release
cat /etc/*-release	Shows information about the two files in the release folder
uname -a	Show information about Linux Kernel
uname -r	Shows only the version of the Linux Kernel
free -h	Shows how much memory the system has
cat /proc/-cpuinfo	Shows how much CPU the system has
lscpu	Shows more comprehensive information about the system's CPU
df -h	Shows how much storage the system has

Install and Update Software

apt search *search*	Looks for packages whose description match the search term
apt show *package*	Displays information about the package
sudo apt update	Retrieve an updated list of the packages from the repositories before installing new software or upgrading the software package
sudo apt install *package*	Install the package
sudo apt upgrade	Upgrade the software package

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