

Linux Command Line Cheat Sheet by DaveChild

A cheat sheet of the commands I use most for Linux, with popup links to man pages.

🔗 [bash](#) 🔗 [nano](#) 🔗 [linux](#) 🔗 [ls](#) 🔗 [commandline](#) 🔗 [ubuntu](#) 🔗 [server](#) 🔗 [sysadmin](#) 🔗 [shell](#)

Bash Commands

uname -a	Show system and kernel
head -n1 /etc/issue	Show distribution
mount	Show mounted filesystems
date	Show system date
uptime	Show uptime
whoami	Show your username
man command	Show manual for command

Bash Shortcuts

CTRL-c	Stop current command
CTRL-z	Sleep program
CTRL-a	Go to start of line
CTRL-e	Go to end of line
CTRL-u	Cut from start of line
CTRL-k	Cut to end of line
CTRL-r	Search history
!!	Repeat last command
!abc	Run last command starting with abc
!abc:p	Print last command starting with abc
!\$	Last argument of previous command
ALT-.	Last argument of previous command
!*	All arguments of previous command
^abc^123	Run previous command, replacing abc with 123

Bash Variables

env	Show environment variables
echo \$NAME	Output value of \$NAME variable
export NAME=value	Set \$NAME to value
\$PATH	Executable search path

Directory Operations

pwd	Show current directory
mkdir dir	Make directory dir
cd dir	Change directory to dir
cd ..	Go up a directory
ls	List files



ls Options

-a	Show all (including hidden)
-R	Recursive list
-r	Reverse order
-t	Sort by last modified
-S	Sort by file size
-l	Long listing format
-1	One file per line
-m	Comma-separated output
-Q	Quoted output

Nano Shortcuts

Files

Ctrl-R	Read file
Ctrl-O	Save file
Ctrl-X	Close file

Cut and Paste

ALT-A	Start marking text
CTRL-K	Cut marked text or line
CTRL-U	Paste text

Navigate File

ALT-/	End of file
CTRL-A	Beginning of line
CTRL-E	End of line
CTRL-C	Show line number
CTRL-_	Go to line number

Search File

CTRL-W	Find
ALT-W	Find next
CTRL-\	Search and replace

More nano info at:

<http://www.nano-editor.org/docs.php>

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61 Comments

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cmd < fileInput of *cmd* from *file*cmd1 <(cmd2)Output of *cmd2* as file input to *cmd1*cmd > fileStandard output (stdout) of *cmd* to *file*cmd > /dev/nullDiscard stdout of *cmd*cmd >> fileAppend stdout to *file*cmd 2> fileError output (stderr) of *cmd* to *file*cmd 1>&2

stdout to same place as stderr

cmd 2>&1

stderr to same place as stdout

cmd &> fileEvery output of *cmd* to *file*cmd refers to a command.

Pipes

cmd1 | cmd2stdout of *cmd1* to *cmd2*cmd1 |& cmd2stderr of *cmd1* to *cmd2*

Command Lists

cmd1 ; cmd2Run *cmd1* then *cmd2*cmd1 && cmd2Run *cmd2* if *cmd1* is successfulcmd1 || cmd2Run *cmd2* if *cmd1* is not successfulcmd &Run *cmd* in a subshellgrep pattern filesSearch for *pattern* in *files*grep -i

Case insensitive search

grep -r

Recursive search

grep -v

Inverted search

grep -o

Show matched part of file only

find /dir/ -name name*Find files starting with *name* in *dir*find /dir/ -user nameFind files owned by *name* in *dir*find /dir/ -mmin numFind files modified less than *num* minutes ago in *dir*whereis commandFind binary / source / manual for *command*locate fileFind *file* (quick search of system index)

File Operations

touch file1Create *file1*cat file1 file2

Concatenate files and output

less file1View and paginate *file1*file file1Get type of *file1*cp file1 file2Copy *file1* to *file2*mv file1 file2Move *file1* to *file2*rm file1Delete *file1*head file1Show first 10 lines of *file1*tail file1Show last 10 lines of *file1*tail -F file1Output last lines of *file1* as it changes

Watch a Command

watch -n 5 'ntpq -p'

Issue the 'ntpq -p' command every 5 seconds and display output

Process Management

ps

Show snapshot of processes

top

Show real time processes

kill pidKill process with id *pid*pkill nameKill process with name *name*killall nameKill all processes with names beginning *name*screen

Start a screen session.

screen -r

Resume a screen session.

screen -list

Show your current screen sessions.

CTRL-A

Activate commands for screen.

CTRL-A c

Create a new instance of terminal.

CTRL-A n

Go to the next instance of terminal.

CTRL-A p

Go to the previous instance of terminal.

CTRL-A "

Show current instances of terminals.

CTRL-A A

Rename the current instance.

More screen info at:

<http://www.gnu.org/software/screen/>

File Permissions

chmod 775 fileChange mode of *file* to 775chmod -R 600 folderRecursively chmod *folder* to 600chown user:group fileChange *file* owner to *user* and group to *group*

File Permission Numbers

First digit is owner permission, second is group and third is everyone.

Calculate permission digits by adding numbers below.

4 read (r)

2 write (w)

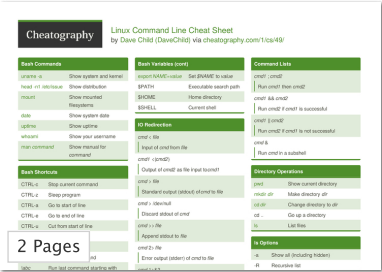
1 execute (x)




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Comments

[\[deleted\]](#), 10:02 28 Nov 11

Thanks for creating this cheat-sheet Dave. The one thing I missed was "grep -o"; Show only the part of a matching line that matches PATTERN

[DaveChild](#), 10:02 28 Nov 11

I've added "grep -o" to the cheat sheet :)

[a_statham](#), 10:02 28 Nov 11

The I/O redirection section could use "2>" and "&>" examples, I always forget how to redirect stderr

[DaveChild](#), 10:02 28 Nov 11

Good idea – I'll add that (once I remember how they work myself ... :))

[DaveChild](#), 10:02 28 Nov 11

I've updated that section to include stderr redirection. :)

[wattslevi](#), 19:51 29 Nov 11

How are the indented lines added several of the cells like Screen Shortcuts? RE: http://getsatisfaction.com/cheatography/topics/adding_a_two_line_entry_in_a_list

[DaveChild](#), 08:35 30 Nov 11

Those indented bits are a "question and answer" format box.

[wattslevi](#), 10:30 30 Nov 11

Ah, Q&A means I would be able to cheat with it and use it for two column with an extra line. Thanks for the info.

(Replying to my original post seems unintuitive for trying to reply under your post,

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Cheatographer

[DaveChild](#)
www.getpostcookie.com

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For example, if I'm looking for files and I don't care that I haven't access to parts of the filesystem, we might do something like:

```
find / -name "*.html" 2>&-
```

Tanner, [10:30 7 Mar 12](#)

ls -h is handy – changes sizes to human readable formats. Goes along good with -S. If I'm using it it is generally a ls -alhS

Wane, [07:28 21 Mar 12](#)

I think the "Bash Shortcuts" part is a little misleading. The "ctrl-a", "ctrl-e", "ctrl-k" is in emacs mode. But there should be many people preferring vim-mode or some thing like that.

Davis Peng, [13:57 22 Mar 12](#)

Thanks a lot for your sheet, I just need such a linux command summary such as this sheet.

[gamiclea](#), [00:05 2 Jun 12](#)

Awesome job! This will definitely come in handy

wolverine, [11:29 6 Jun 12](#)

download PDF is broken

Arpit, [10:51 29 Jun 12](#)

Good work. Thanks, its helpful.

Chetan Morajkar, [14:35 6 Aug 12](#)

Hi,

Fantastic good job..

Thanks

Donald J. Tambeau, [15:23 6 Aug 12](#)

Love your work....it is soso helpful! I would like to format a MicroDisk using Linux Centos. When I look at the Partition on the MicroDisk, I see the following comment....(non-Linux). This makes sense, since I formatted with a computer running Win 7! I want to use it on my Linux system but do not know how to do it. I tried format /dev/scd1 but no joy!
Thank you
Don

Eric, [08:59 7 Aug 12](#)

I'd just like to point out a trick I use with the head and tail commands:
First, you can designate the number of lines to return, like so: head -100 filename
I often use both head and tail together to get a section of a file by piping the output of one into the other. The following command gets 100 lines, starting 1000 lines before the end of

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Mark, [08:53 29 Aug 12](#)

I just wanted to take a moment to thank you for putting this together. This is a big help to me I am new to OpenFiler witch I believe uses bash at the core so I am of course new to Linux. I didn't really think it would be quite so difficult to find resources that one can use to navigate the command line but I guess most folks use the GUI. But, I'm not most folks when I bought my first IBM 8088 I started with DOS. Anyway, thanks for the time and effort you put into this, sorry about digressing there.

Shrinath, [13:08 4 Oct 12](#)

Excellent Stuff man.. I think these are the most commonly used commands.. Good Effort.

Jimmy, [21:43 11 Oct 12](#)

you need to figure out how to split your command sheet as a pdf

Niloufar, [21:43 11 Oct 12](#)

hi!.these are useful cheat sheet .

russ, [16:18 22 Oct 12](#)

CTRL-Z sleeps (stops) the running process. fg [#] brings it back to foreground.

```
top
CTRL-Z
ps aux | grep top
fg
```

chiahsun, [11:14 2 Jan 13](#)

Show human readable format (kb, mb...)
ls -lh

PierreBdR, [11:35 9 Feb 13](#)

This cheat-sheet is very good! Thanks for that.

However, I don't like the "chmod" commands you are using. I don't think anybody should use the numeric version of chmod anymore. Your example "chmod -R 600 folder", is the best way to lock yourself out of your own folder and loose any executable bits on the scripts. I would rather use the symbolic version:

```
chmod -R u+rw folder # Add read-write for user on all files in folder
chmod -R og-rwx # Remove read write and execute bits for "other" and "group" on all files in folder
```

And my all-time favorite:

```
chmod -R og=u-w folder # Give other and group the same rights as user, but removing writing rights.
```

Of course, this also handles t and s bits:

```
chmod u+s file
chmod o+t folder
```

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To extract tar.gz archive
tar xvzf archive.tar.gz

To extract tar.bz2 archive
tar xvjf archive.tar.bz2

To extract tar archive
tar xvf archive.tar

To create archive
tar cvzf archive.tar.gz /file_or_folder/to/archive

Sandeep, [08:43 16 Feb 13](#)

Nice one...really helpful

John, [08:43 16 Feb 13](#)

Great resource – thanks for taking the time and trouble to put this out there.

My favorite ls options are '-ltr'. The t sorts files by time, and r reverses that, so newest files show up right above the prompt, no matter how long the listing is.

daveydave400, [08:43 16 Feb 13](#)

What about CTRL+y to paste the stuff you cut back in? How can you leave that out? CTRL+a/e and CTRL+u/y are the pairs I remember.

gymka, [08:44 16 Feb 13](#)

Missing: sed
find -exec

Jared, [10:33 26 Feb 13](#)

Nice work, but it would be best as a single page PDF.

Darr247, [16:31 5 Apr 13](#)

Or if the PDF at least split into 2 pages (so it could be a laminated 2-sided sheet) without cutting commands in half.

[PastExpiryDotCom](#), [18:08 11 Jul 13](#)

This is bash-tastic!

[kimcy929](#), [11:09 9 Aug 13](#)

thank you very much, it is great

Pradeep, [15:12 13 Feb 14](#)

There is no commands for shutdown or reboot..

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Bill, 17:30 17 Feb 14

Hi, handy sheet. Just one thing. Find will do a recursive search by default. In the find /dir -name name* should be in double quotes if you want it to recursively find all files starting with name:

```
find /dir/ -name "name*"
```

That's because, without the quotes, the shell will expand the wildcard before handing the parameters to find. To unexpected things might happen if you don't have the quotes. Please see the examples below:

```
$ find .
.
./name1
./name2
./dir1
./dir1/name3
./dir1/name1
./dir1/test3
./test1
$ find . -name name*
find: paths must precede expression: name2
Usage: find [-H] [-L] [-P] [-Olevel] [-D help|tree|search|stat|rates|opt|exec] [path...]
[expression]
$ find . -name "name*"
./name1
./name2
./dir1/name3
./dir1/name1
$ touch dir1/fred1
$ find .
.
./name1
./name2
./dir1
./dir1/name3
./dir1/name1
./dir1/test3
./dir1/fred1
./test1
$ find . -name name*
find: paths must precede expression: name2
Usage: find [-H] [-L] [-P] [-Olevel] [-D help|tree|search|stat|rates|opt|exec] [path...]
[expression]
$ find . -name "name*"
./name1
./name2
./dir1/name3
./dir1/name1
$ find . -name fred*
./dir1/fred1
$ find . -name "fred*"
./dir1/fred1
$
```

Edser, 17:35 17 Feb 14

```
grep -B#
```

This shows what you are searching plus additional lines where number is added. Great for DHCP lease searching.

No4711, 09:56 19 Feb 14

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Great reference!

The section on Screen is missing "Ctrl-A d" for detaching.

Mads, [08:55 26 Feb 14](#)

Great resource - thanks a lot Dave!

Kabir, [22:03 10 Mar 14](#)

add task manage comman:

gnome-system-monitor

Isabel Ambriz, [13:08 30 Apr 14](#)

Command that might be used to test connectivity of Linux box to the Internet, get logged on user info, and get TCP/IP configuration info. Can anyone help me?

Aaron Tani, [08:27 1 May 14](#)

theres also a good one here: <http://www.techietek.com/2014/04/29/linux-cli-cheat-sheet-wallpaper/>

Damien, [10:43 23 Jul 14](#)

I've always found ``mkdir -p path/to/directory`` to be useful.

snakeroot, [10:46 14 Jan 15](#)

`head -n1 /etc/issue` as a means to access distribution name isn't reliable, since the post-login screen could have been customized.

A more reliable version would be `sed -nr 's/^PRETTY_NAME=(.*)/1/p' /etc/os-release`. This should be true even for distros using legacy init (i.e., current Debian, Gentoo and even Slackware).

jt, [12:38 22 Jul 15](#)

`ls -h`? human readable?

DF, [08:31 25 Aug 15](#)

would be good to add Ctrl-left/right for jumping arguments, Ctrl-home/end for jumping whole line.

Alex, [15:34 28 Sep 15](#)

'echo \$SHELL' actually prints the default shell, 'ps -p \$\$' will print the current shell

John Kershaw, [16:04 28 Mar 16](#)

Love the colour, but could it be a slightly darker/stronger green? It comes out almost impossible to read on my colour printer. I tried outputting in greyscale, but the green-on green sections are still unreadable. Needs more contrast.

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I agree, it's not a great colour. I've changed it.

Felipe, [19:22 3 Apr 16](#)

Could you add "passwd" to the file? :)

GloObi, [15:31 4 Apr 16](#)

thank you for this really useful sheet !

The download button seems to be broken though :(

NatalieMoore, [05:13 10 Apr 16](#)

Hey GloObi, thanks for the heads up about the broken download button on this cheatsheet. We'll get it fixed and I'll let you know when its been done. Have a great day.

NatalieMoore, [06:49 13 Apr 16](#)

Hi GloObi,

This is now fixed. Please let me know if you have any more problems.

Nat

d.falkovsky, [19:54 7 Apr 16](#)

Can't download. Sad.

NatalieMoore, [05:07 10 Apr 16](#)

Thanks d.falkovsky, I will let Dave know the download button on this cheat sheet needs to be fixed. I will let you know once he has fixed it :). Sorry for the inconvenience.

NatalieMoore, [06:48 13 Apr 16](#)

Hi d.falkovsky,

This is now fixed, you should now be able to download. Please let me know if you have any more problems.

Nat

d.falkovsky, [13:15 16 Apr 16](#)

Thank you, Natalie!

ramiissat, [13:01 22 Mar 17](#)

Good job Dave, Thank you :)

tejasshetty.1808, [18:51 8 Jul 17](#)

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