Linux Command Line Cheat Sheet by DaveC.

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

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

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

Search Files

grep pattern files	Search 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 name	Find files owned by name in dir
find /dir/ -mmin num	Find files modifed less than num minutes ago in dir
whereis command	Find binary / source / manual for command
locate file	Find file (quick search of system index)

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

Bash Variables

env	Show environment variables
echo $NAME	Output value of $NAME variable
export NAME=value	Set $NAME to value
$PATH	Executable search path
$HOME	Home directory
$SHELL	Current shell

IO Redirection

cmd < file

> Input of cmd from file

cmd1 <(cmd2)

> Output of cmd2 as file input to cmd1

cmd > file

> Standard output (stdout) of cmd to file

cmd > /dev/null

> Discard stdout of cmd

cmd >> file

> Append stdout to file

cmd 2> file

> Error 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 &> file

> Every output of cmd to file

cmd refers to a command.

Pipes

cmd1 | cmd2

> stdout of cmd1 to cmd2

cmd1 |& cmd2

> stderr of cmd1 to cmd2

Command Lists

cmd1 ; cmd2

> Run cmd1 then cmd2

cmd1 && cmd2

> Run cmd2 if cmd1 is successful

cmd1 || cmd2

> Run cmd2 if cmd1 is not successful

cmd &

> Run cmd in a subshell

File Operations

touch file1

> Create file1

cat file1 file2

> Concatenate files and output

less file1

> View and paginate file1

file file1

> Get type of file1

cp file1 file2

> Copy file1 to file2

mv file1 file2

> Move file1 to file2

rm file1

> Delete file1

head file1

> Show first 10 lines of file1

tail file1

> Show last 10 lines of file1

tail -F file1

> Output 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 pid	Kill process with id pid
pkill name	Kill process with name name
killall name	Kill all processes with names beginning name

Screen Shortcuts

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 file

> Change mode of file to 775

chmod -R 600 folder

> Recursively chmod folder to 600

chown user:group file

> Change 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

gerben, 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, but not to the overall thread... assuming this post as I'm thinking it might.)

jim, 23:12 30 Nov 11

On the redirects, the one I most commonly use is ignoring errors (2>/dev/null, or more succinctly 2>&-).

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>&-

DaveChild
www.addedbytes.com

Cheat Sheet Language

English

Tags

bash, commandline, linux, ls, nano, server, shell, sysadmin, ubuntu

More by DaveChild

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mod_rewrite by DaveChild

Subversion by DaveChild

bash Shortcuts by CITguy

Thumbnail

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

wolvverine, 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 so ....so helpful! I would like to format a MicroDisk using Linux Centros. 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 the file:
tail -1000 filename | head -100
You could, of course, reverse the commands to get a section near the top of the file. To get lines 91-100:
head -100 filename | tail -10

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

Stylius, 09:17 15 Feb 13

I would also add the tar command. No sysadmin would survive without it.

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..

RobertAttfieldDotCom, 11:37 14 Feb 14

Good job on the cheatsheet - this will definitely come in handy for my Linux exam next week. Some commands on umask would be a good addition to this cheatsheet :).

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

I would suggest to put in screen <tty.device> <baudrate> â€“ just in case anybody needs to connect to some serial consoleâ€¦

Henning, 09:57 19 Feb 14

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).

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