

Linux Command Cheatsheet

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man shows the command manual page
apropos searches a word from manual pages headlines

1 Files and Directories

ls list directory contents
cd change the working directory
pwd print name of working directory
mkdir make directories
rmdir remove empty directories
cp copy files and directories
rm remove files or directories
mv move (rename) files

df report file system disk space usage
touch change file timestamps (or create an empty file)
file determine file type
ln make links between files

dos2unix convert dos-style linebreaks to unix-style

unix2dos convert unix-style linebreaks to dos-style

2 Process Control

ps print list of current processes
pstree display a tree of processes
kill sends a signal to a process (usually to terminate)
top interactive process list

uptime tells how long the system has been running

free display amount of free and used memory

logout/exit cause the terminal session to exit

reboot reboot the machine

halt power-off the computer

shutdown power-off or reboot the computer

3 Finding data

In this context *data* is either text or binary files.

find finds files
locate finds files (using pre-collected database)
grep finds strings from input, for example from files
xargs changes input into parameters for another command

sort sorts input of strings

head print the first lines of files

tail print the last lines of files

cat print files into output

less views a given input

zless views a given compressed input

dd copy data from an input to an output

echo prints the given string

tee writes input into output and files

date prints system date and time

wc count amount of characters/words/lines in input

4 Redirecting input and output

Each command can take one input (stdin) and give out two outputs; printout (stdout) and errors (stderr). By default the input is from keyboard and outputs are written to the console.

command >file
redirects printout of command to file

command1 |command2
pipes printout of command1 to input command2

command <file
redirects file to input of command

command 2>file
redirects errors from command to file

command <file0 >file1 2>file2

command >/dev/null
throws away the printout

command 2>&1
combines errors to printout

command 2>&1 >file
redirects errors to console and printout to file

command >file 2>&1
redirects printout to file and errors there too

5 Users and Permissions

type
|owner permissions
|group permissions
|others permissions
-rwxrwxrwx
r = read, w = write, x = execute

chown change file owner

chgrp change file group

chmod change file permissions

adduser add user to the system

deluser remove user from the system

passwd change user password

who/w print who is logged in

6 Text Editors

Quick introduction to vim:

- Opening a file: vim <path to file>
- Basic use has two modes: command mode and edit mode. When starting vim is in command mode. You can enter edit mode by pressing *i* key (i=insert)
- Return back to command mode by pressing *ESC* key
- Search text /
- Write changes to file using command *:w*
- Quit editor with command *:q*
- You may notice that commands start with colon

Quick introduction to nano:

- Opening a file: nano <path to file>
- Lower part of screen has help for common commands.
- Search text: *CTRL-w*
- Write changes to file using command *CTRL-o*
- Quit editor with command *CTRL-x*

7 Network Settings

Computers have network devices that have addresses. Addresses are routed using the routing table.

ip link	network devices
ip addr	network addresses
ip neigh	neighbor data
ip route	routing data
iwconfig	wireless device settings
ipcalc	calculates network masks and addresses
wget	fetches a file from given URL address
ping	tests whether a node responds (either a name or IP address)
traceroute/mtr	tests the route to the target node
tcpdump	captures traffic from network devices
wireshark	graphical tcpdump + protocol analyzer
nslookup/dig	makes a name service request

8 Package Management

apt-get	package handling utility
apt-cache	searches the package database
aptitude	text-based user interface
synaptics	graphical user interface

9 Compression Tools

tar	collects/unpacks multiple files into one.
gzip	compresses a file into gz format
gunzip	decompresses a gz format file
zip	collects and compresses files to zip archive
unzip	unpacks a zip archive

10 Screen quick reference

ctrl-a c	create a new window
ctrl-a n	switch to next window
ctrl-a p	switch to previous window
ctrl-a NUM	switch to window index NUM
ctrl-a d	detach from session
exit	closes the active window/session
screen -r	reattach to an existing session
screen -rD	reattach to existing session, cut other screens off
screen -rx	reattach to existing session, alongside others

ref http://aperiodic.net/screen/quick_reference

11 SSH quick reference

ssh host	connects to computer <i>host</i>
ssh user@host	connects using username <i>user</i>
ssh host command	run <i>command</i> on computer <i>host</i>
ssh -i idfile host	connect using given public key
ssh-keygen	create a public authentication key
ssh-copy-id -i idfile host	copies given public key to computer <i>host</i>
sftp host	connects file transfer session to <i>host</i>
scp file host:	transfers <i>file</i> to <i>host</i>
scp host:file .	transfers <i>file</i> from <i>host</i>
-L [bindaddr:]port:host:hostport	makes a tunnel from local host (optional address <i>bindaddr</i>) port <i>port</i> to target <i>host:hostport</i>
-R [bindaddr:]port:host:hostport	makes a tunnel from remote host (optional address <i>bindaddr</i>) port <i>port</i> to local target <i>host:hostport</i>

12 Git quick reference

git init	creates a git repository
git clone url	copies a git repository from address <i>url</i>
git status	reports repository status
git diff	shows differences in the repository
git add tiedosto	adds a file to upcoming commit
git commit -m "short description"	commits a change to the repository
git pull	fetch and merge changes from source repository
git pull -rebase	fetch changes and rebase local changes on top of it
git push	send local commits to source repository
git branch	show branches in local repository
git branch name	create a local branch named <i>name</i>
git checkout name	switch to branch <i>nimi</i> and update directory contents
git merge name	combine branch <i>name</i> to current branch
git branch -d name	remove branch named <i>name</i>
git reset stamp	removes all changes made after commit <i>stamp</i> but keeps the modified files
git reset -hard stamp	removes all changes made after commit <i>stamp</i> and returns the directory contents to that version
git blame file	prints out <i>file</i> showing the authors who last modified each line