

The ULTIMATE Unix/Linux Command Cheat Sheet

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Note: Some commands require "sudo" in front for Administrator privileges

Command Line Options

apropos whatis	Show commands pertinent to string. See also threadsafe
man -t man ps2pdf - > man.pdf	Make a pdf of a manual page
which command	Show full path name of command
time command	See how long a command takes
time cat	Start stopwatch. Ctrl-d to stop. See also sw
nice info	Run a low priority command (The "info" reader in this case)
renice 19 -p \$\$	Make shell (script) low priority. Use for non interactive tasks
cmd1 ; cmd2	Run cmd1 and then run cmd2
cmd1 && cmd2	Run cmd2 only if cmd1 is successful
cmd1 cmd2	Run cmd2 only if cmd1 is not successful
cmd &	Run cmd in a subshell

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

User Management

groupadd [name]	Add a group with the appropriate name
useradd -c "User Name" - user	Create a user named user with the comment User Name
usermod -aG support user	Add the user account to the support group

Bash Commands and Shortcuts

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

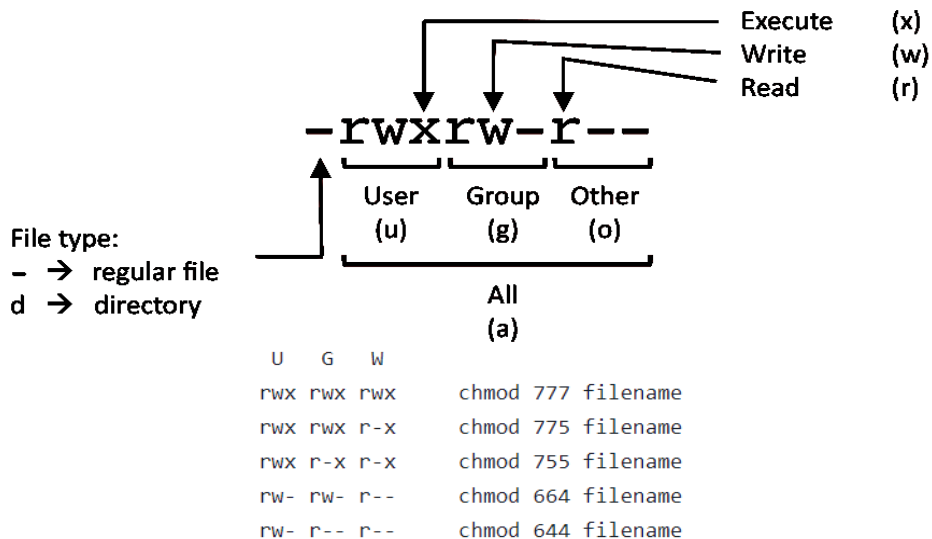
IO Redirection

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
Networking (Note ifconfig, route, mii-tool commands are obsolete)	
ethtool eth0	Show status of ethernet interface eth0
ethtool --change eth0 autoneg off speed 100 duplex full	Manually set ethernet interface speed
ifconfig -a	Display all interfaces and addresses
ifconfig eth0	Display networking details on eth0
iwconfig eth1	Show status of wireless interface eth1
iwconfig eth1 rate 1Mb/s fixed	Manually set wireless interface speed
iwlist scan	List wireless networks in range
arp	See your ARP table and more
curl	Make HTTP requests
who	Who is logged onto the system
w	Who is online and what they are doing
whoami	Who are you logged in as
ngrep	Like grep but for the network (must add/install)
mtr	My Traceroute tool for path to a destination
telnet	The Telnet tool - tough most systems no longer allow
ip link show	List network interfaces
ip link set dev eth0 name wan	Rename interface eth0 to wan
ip link set dev eth0 up	Bring interface eth0 up (or down)
ip addr show	List addresses for interfaces
ip addr add 1.2.3.4/24 brd + dev eth0	Add (or del) ip and mask (255.255.255.0)
ip route show	List IPv4 routing table
ip route add default via 1.2.3.254	Set default gateway to 1.2.3.254
iptables / nftables	Set up firewall rules and NAT
tc qdisc add dev lo root handle 1:0 netem delay 20msec	Add 20ms latency to loopback device (for testing)
tc qdisc del dev lo root	Remove latency added above
ftp / sftp	File Transfer Protocol
host pixelbeat.org	Lookup DNS ip address for name or vice versa
hostname	Display the host name of the system
hostname -i	Lookup local ip address (equivalent to host `hostname`)
hostname -I	Look up network IP address
ping [hostname]	Send echo request/reply to hostname or ip address
whois pixelbeat.org	Lookup whois info for hostname or ip address
nslookup	The old way to look up domain info
dig [domain]	Display domain information for [domain]
dig -x [ip address]	Reverse lookup of ip address
netstat -tupl	List internet services on a system
netstat -tup	List active connections to/from system
tcpdump -i eth0	Capture and display all packets on interface eth0
tcpdump -i eth0 'port 80'	Capture all traffic on port 80 (HTTP)
tcpdump not port 22	Show network traffic except ssh. See also tcpdump_not_me
wget http://domain.com/file	Download the file at the URL
Installable Networking Tools That Are Cool	
ngrep	Like grep but for the network
wireshark / tshark	The go to packet sniffer/analyzer
tcpflow	Capture and Assemble TCP streams
nmap / zenmap	The go to scanner and network mapper
p0f	Identify OS'es of hosts connecting to you
ngrep	Like grep but for the network (must add/install)
nc or netcat	Make manual TCP connections
hping3	Construct TCP packets
traceroute / paris-traceroute / dublin-traceroute	Trace the path to a destination (including ECMP)

ipcalc	IP Subnet calculator - a must have
iperf / iperf3	The load testing tool of choice
nload	Network Load monitor
iptraf / nethogs/iftop / ntop	See what is using traffic
python3 -m http.server	Serve files from a directory
openvpn / wireguard	A VPN Client
openssl	Do anything you wnt with SSL certificates
mitmproxy	Spy on SSL connections you software is making
Windows/Samba Networking	
smbtree	Find windows machines. See also findsmb
nmblookup -A 1.2.3.4	Find the windows (netbios) name associated with ip address
smbclient -L windows_box	List shares on windows machine or samba server
mount -t smbfs -o fmask=666,guest //windows_box/share /mnt/share	Mount a windows share
echo 'message' smbclient -M windows_box	Send popup to windows machine (off by default in XP sp2)
Directory 'dir' Navigation/File Manipulation	
cd ..	Go to previous directory
cd	Go to \$HOME directory
cd /etc	Change to the /etc directory
(cd dir && command)	Go to dir, execute command and return to current dir
mkdir [directory name]	Make a directory, use mkdir --help for options
rmdir	Remove directory
cp [source] [destination]	Copy file from source to destination, use cp --help for options
rm [filename]	Remove (unlink) file - use rm --help for options
rm -f [filename]	Remove file without confirmation
rm -r	Remove directory and its contents recursively
rm -rf	Forcefully remove directory recursively
mv [sourcename] [destname]	Move filename - use mv --help for details
pushd .	Put current dir on stack so you can popd back to it
touch [filename]	Create an empty file
Files/File Operations/File Searching	
alias l='ls -l --color=auto'	alias to make "l" a quick dir listing
pwd	Present Working Directory
ls -lrt	List files by date. See also newest and find_mm_yyyy
ls /usr/bin pr -T9 -W\$COLUMNS	Print in 9 columns to width of terminal
ls -lSr	Show files by size, biggest last
ls -al	List all files with long format
ls -a	Show all (including hidden)
ls -R	Recursive list
ls -r	Reverse order
ls -t	Sort by last modified
ls -S	Sort by file size
ls -l	Long listing format
ls -1	One file per line
ls -m	Comma-separated output
ls -Q	Quoted output
touch file1	Create file1
cat [filename]	view the contents of a file
file file1	Get type of file1
cp file1 file2	Copy file1 to file2
mv file1 file2	Move file1 to file2
rm file1	Delete file1
less [filename]	browse through a text file
head [filename]	Display the first 10 lines of a file
tail [filename]	Display the last 10 lines of a file
tail -f [filename]	Display the last 10 lines of a file, follow as it grows
find -name '*.ch' xargs grep -E 'expr'	Search 'expr' in this dir and below. See also findrepo
find -type f -print0 xargs -r0 grep -F 'example'	Search all regular files for 'example' in this dir and below
find -maxdepth 1 -type f xargs grep -F 'example'	Search all regular files for 'example' in this dir

<code>find -maxdepth 1 -type d while read dir; do echo \$dir; echo cmd2; done</code>	Process each item with multiple commands (in while loop)
<code>find -type f ! -perm -444</code>	Find files not readable by all (useful for web site)
<code>find -type d ! -perm -111</code>	Find dirs not accessible by all (useful for web site)
<code>locate -r 'file[^\]*\.txt'</code>	Search cached index for names. This re is like glob <code>*file*.txt</code>
<code>look reference</code>	Quickly search (sorted) dictionary for prefix
<code>grep --color reference /usr/share/dict/words</code>	Highlight occurrences of regular expression in dictionary
File Permissions:	



<code>chmod 777 file</code>	rwX for everyone
<code>chmod 775 file</code>	rw for owner, rx for group/world
<code>chmod -R 600 folder</code>	Recursively chmod folder to 600
<code>chown user:group file</code>	Change file owner to user and group to group

Archiving and Compression

<code>gpg -c file</code>	Encrypt file
<code>gpg file.gpg</code>	Decrypt file
<code>tar -c dir/ bzip2 > dir.tar.bz2</code>	Make compressed archive of dir/
<code>tar cf archive.tar directory</code>	Create a tar named archive.tar containing directory
<code>tar xf archive.tar</code>	Extract contents of archive.tar
<code>bzip2 -dc dir.tar.bz2 tar -x</code>	Extract archive (use gzip instead of bzip2 for tar.gz files)
<code>tar -c dir/ gzip gpg -c ssh user@remote 'dd of=dir.tar.gz.gpg'</code>	Make encrypted archive of dir/ on remote machine
<code>find dir/ -name '*.txt' tar -c --files-from=- bzip2 > dir_txt.tar.bz2</code>	Make archive of subset of dir/ and below
<code>find dir/ -name '*.txt' xargs cp -a --target-directory=dir_txt/ --parents</code>	Make copy of subset of dir/ and below
<code>(tar -c /dir/to/copy) (cd /where/to/ && tar -x -p)</code>	Copy (with permissions) copy/ dir to /where/to/ dir
<code>(cd /dir/to/copy && tar -c .) (cd /where/to/ && tar -x -p)</code>	Copy (with permissions) contents of copy/ dir to /where/to/ dir
<code>(tar -c /dir/to/copy) ssh -C user@remote 'cd /where/to/ && tar -x -p'</code>	Copy (with permissions) copy/ dir to remote:/where/to/ dir
<code>dd bs=1M if=/dev/sda gzip ssh user@remote 'dd of=sda.gz'</code>	Backup harddisk to remote machine

Search

GREP	GREP allows you to search patterns in files [ZGREP for GZIP files]
<code>\$grep {pattern} file.log</code>	Generic grep
<code>-n</code>	Number of lines that match
<code>-i</code>	Case sensitive
<code>-v</code>	Invert matches
<code>-E</code>	Extended Regex
<code>-c</code>	Count number of matches
<code>-l</code>	Find filenames that match the pattern
<code>grep [pattern] file</code>	Search for a [pattern] in a file
<code>grep -r [pattern] directory</code>	Search recursively for [pattern] in a directory
<code>grep -o</code>	Show matched part of file only
NGREP	NGREP is like GREP, but used for analyzing network packets
<code>\$ngrep -l file.pcap</code>	Generic ngrep
<code>-d</code>	Specify the network interface
<code>-i</code>	Case insensitive

-X	Print in alternate hexdump
-t	Print timestamp
-l	Read pcap file
locate name	Find files and directories by name
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 modified less than num minutes ago in dir
find /home/user -name 'prefix'	Find files in /home/user that start with "prefix"
find /home -size +100M	Find files that are larger than 100MB in /home
whereis command	Find binary / source / manual for command
rsync (Network efficient file copier: Use the --dry-run option for testing)	
rsync -P rsync://rsync.server.com/path/to/file file	Only get diffs. Do multiple times for troublesome downloads
rsync --bwlimit=1000 fromfile tofile	Locally copy with rate limit. It's like nice for I/O
rsync -az -e ssh --delete ~/public_html/ remote.com:~/public_html/	Mirror web site (using compression and encryption)
rsync -auz -e ssh remote:/dir/ . && rsync -auz -e ssh . remote:/dir/	Synchronize current directory with remote one
SSH (Secure Shell)	
ssh \$USER@\$HOST command	Run command on \$HOST as \$USER (default command=shell)
ssh -f -Y \$USER@\$HOSTNAME xeyes	Run GUI command on \$HOSTNAME as \$USER
scp -p -r \$USER@\$HOST: file dir/	Copy with permissions to \$USER's home directory on \$HOST
ssh -g -L 8080:localhost:80 root@\$HOST	Forward connections to \$HOSTNAME:8080 out to \$HOST:80
ssh -R 1434:imap:143 root@\$HOST	Forward connections from \$HOST:1434 in to imap:143
wget (Multi Purpose Download Tool)	
(cd dir/ && wget -nd -pHEKk http://www.pixelbeat.org/cmdline.html)	Store local browsable version of a page to the current dir
wget -c http://www.example.com/large.file	Continue downloading a partially downloaded file
wget -r -nd -np -l1 -A '*.jpg' http://www.example.com/dir	Download a set of files to the current directory
wget ftp://remote/file[1-9].iso/	FTP supports globbing directly
wget -q -O- http://www.pixelbeat.org/timeline.html grep 'a href' head	Process output directly
echo 'wget url' at 01:00	Download url at 1AM to current dir
wget --limit-rate=20k url	Do a low priority download (limit to 20KB/s in this case)
wget -nv --spider --force-html -i bookmarks.html	Check links in a file
wget --mirror http://www.example.com/	Efficiently update a local copy of a site (handy from cron)
Editing Text and Handling Text	
nano	A great small editor
Nano Shortcuts	http://www.nano-editor.org/docs.php
<i>Files</i>	
Ctrl-R	Read file
Ctrl-O	Save file
Ctrl-X	Close file
<i>Cut and Paste</i>	
ALT-A	Start marking text
CTRL-K	Cut marked text or line
CTRL-U	Paste text
<i>Navigate File</i>	
ALT-/	End of file
CTRL-A	Beginning of line
CTRL-E	End of line
CTRL-C	Show line number
CTRL-_	Go to line number
<i>Search File</i>	
CTRL-W	Find
ALT-W	Find next
CTRL-\	Search and replace
SED	The Stream Editor (SED) is used to replace strings in a file
\$sed s/regex/replace/g	Generic example of SED
s	Search
g	Replace
d	Delete
w	Append file

-e	Execute command
-n	Suppress output
sed ':a; \\\\$/N; s\\\n//; ta'	Concatenate lines with trailing \
sed 's/[\t]*\$//'	Remove trailing spaces from lines
sed 's/([\"\$\])\\/\1/g'	Escape shell metacharacters active within double quotes
seq 10 sed "s/^ / /; s/ *\({7,\})\1/"	Right align numbers
sed -n '1000{p;q}'	Print 1000th line
sed -n '10,20p;20q'	Print lines 10 to 20
sed -n 's/.*<title>\\.*)<\\title>.*\\1/ip;T;q'	Extract title from HTML web page
sed -i 42d ~/.ssh/known_hosts	Delete a particular line
sort -t. -k1,1n -k2,2n -k3,3n -k4,4n	Sort IPV4 ip addresses
echo 'Test' tr '[:lower:]' '[:upper:]'	Case conversion
tr -dc '[:print:]' < /dev/urandom	Filter non printable characters
history wc -l	Count lines
Set Operations (Note you can export LANG=C for speed. Also these assume no duplicate lines within a file)	
SORT	Sort is used to Sort a file
\$sort example.txt	Example SORT command
-o	Output to file
-r	Reverse order
-n	Numerical sort
-k	Sort by column
-c	Check if ordered
-u	Sort and remove
-f	Ignore Case
-h	Human sort
sort file1 file2 uniq	Union of unsorted files
sort file1 file2 uniq -d	Intersection of unsorted files
sort file1 file1 file2 uniq -u	Difference of unsorted files
sort file1 file2 uniq -u	Symmetric Difference of unsorted files
UNIQ	UNIQ is used to extract unique occurrences
\$uniq example.txt	Example UNIQ command
-c	Count the number of duplicates
-d	Print duplicates
-i	Case insensitive
DIFF	Diff is used to display differences in files by comparing line by line
\$diff file1.txt file2.txt	Example diff command
a	Add
c	Change
d	Delete
#	Line Numbers
<	File1
>	File2
AWK	AWK is a programming language used to manipulate data
\$awk {print \$2} file.txt	Example AWK command
\$awk -F: '{print \$1}' /etc/passwd	Print the first column with a separator ":"
\$awk 'FNR==NR {a[\$O]++;next} !(\$O in a)' file1.txt file2	Extract a unique value from two files
join -t'\0' -a1 -a2 file1 file2	Union of sorted files
join -t'\0' file1 file2	Intersection of sorted files
join -t'\0' -v2 file1 file2	Difference of sorted files
join -t'\0' -v1 -v2 file1 file2	Symmetric Difference of sorted files
Math	
echo '(1 + sqrt(5))/2' bc -l	Quick math (Calculate φ). See also bc
echo 'pad=20; min=64; (100*10^6)/((pad+min)*8)' bc	More complex (int) e.g. This shows max FastE packet rate
echo 'pad=20; min=64; print (100E6)/((pad+min)*8)' python	Python handles scientific notation
echo 'pad=20; plot [64:1518] (100*10**6)/((pad+x)*8)' gnuplot -persist	Plot FastE packet rate vs packet size
echo 'obase=16; ibase=10; 64206' bc	Base conversion (decimal to hexadecimal)
echo '\$((0x2dec))'	Base conversion (hex to dec) ((shell arithmetic expansion))
units -t '100m/9.58s' 'miles/hour'	Unit conversion (metric to imperial)

units -t '500GB' 'GiB'	Unit conversion (SI to IEC prefixes)
units -t '1 googol'	Definition lookup
seq 100 (tr '\n' '+'; echo 0) bc	Add a column of numbers. See also add and funcpy
Calendar	
cal -3	Display a calendar
cal 9 1752	Display a calendar for a particular month year
date	Display current date
date -d fri	What date is it this friday. See also day
[\$(date -d "tomorrow" +%d) = "01"] exit	Exit a script unless it's the last day of the month
``date MMDDhhmm"	Set the current system date/time
date --date='25 Dec' +%A	What day does xmas fall on, this year
date --date='@2147483647'	Convert seconds since the epoch (1970-01-01 UTC) to date
TZ='America/Los_Angeles' date	What time is it on west coast of US (use tzselect to find TZ)
date --date='TZ="America/Los_Angeles" 09:00 next Fri	What's the local time for 9AM next Friday on west coast US
echo "mail -s 'get the train' P@draigBrady.com < /dev/null" at 17:45	Email reminder
echo "DISPLAY=\$DISPLAY xmessage cooker" at "NOW + 30 minutes"	Popup reminder
Locales	
printf "%d\n" 1234	Print number with thousands grouping appropriate to locale
BLOCK_SIZE='1 ls -l	Get ls to do thousands grouping appropriate to locale
echo "I live in `locale territory`"	Extract info from locale database
LANG=en_IE.utf8 locale int_prefix	Lookup locale info for specific country. See also ccodes
locale cut -d= -f1 xargs locale -kc less	List fields available in locale database
Recode (Obsoletes iconv, dos2unix, unix2dos)	
recode -l less	Show available conversions (aliases on each line)
recode windows-1252.. file_to_change.txt	Windows "ansi" to local charset (auto does CRLF conversion)
recode utf-8/CRLF.. file_to_change.txt	Windows utf8 to local charset
recode iso-8859-15..utf8 file_to_change.txt	Latin9 (western europe) to utf8
recode ../b64 < file.txt > file.b64	Base64 encode
recode /qp.. < file.qp > file.txt	Quoted printable decode
recode ../HTML < file.txt > file.html	Text to HTML
recode -lf windows-1252 grep euro	Lookup table of characters
echo -n 0x80 recode latin-9/x1..dump	Show what a code represents in latin-9 charmap
echo -n 0x20AC recode ucs-2/x2..latin-9/x	Show latin-9 encoding
echo -n 0x20AC recode ucs-2/x2..utf-8/x	Show utf-8 encoding
CD Devices	
gzip < /dev/cdrom > cdrom.iso.gz	Save copy of data cdrom
mkisofs -V LABEL -r dir gzip > cdrom.iso.gz	Create cdrom image from contents of dir
mount -o loop cdrom.iso /mnt/dir	Mount the cdrom image at /mnt/dir (read only)
cdrecord -v dev=/dev/cdrom blank=fast	Clear a CDRW
gzip -dc cdrom.iso.gz cdrecord -v dev=/dev/cdrom -	Burn cdrom image (use dev=ATAPI -scanbus to confirm dev)
cdparanoia -B	Rip audio tracks from CD to wav files in current dir
cdrecord -v dev=/dev/cdrom -audio -pad *.wav	Make audio CD from all wavs in current dir (see also cdrdao)
oggenc --tracknum='track' track.cdda.wav -o 'track.ogg	Make ogg file from wav file
Disk Space (See also FSInt)	
du -s * sort -k1,1rn head	Show top disk users in current dir. See also dutoop
df -h or watch df -h	Show free space on mounted filesystems
df -i	Show free inodes on mounted filesystems
fdisk -l	Show disks partitions sizes and types (run as root)
rpm -q -a --qf '%10{SIZE}\t%{NAME}\n' sort -k1,1n	List all packages by installed size (Bytes) on rpm distros
dpkg-query -W -f='\${Installed-Size;10}\t\${Package}\n' sort -k1,1n	List all packages by installed size (KBytes) on deb distros
dd bs=1 seek=2TB if=/dev/null of=ext3.test	Create a large test file (taking no space). See also truncate
> file	Truncate data of file or create an empty file
Monitoring and Debugging	
tail -f /var/log/messages	Monitor messages in a log file
top	Display and manage the top processes
kill pid	Kills the process with ID of pid
killall processname	Kills all processes named processname
vmstat 1	Display virtual memory statistics

strace -c ls >/dev/null	Summarize/profile system calls made by command
strace -f -e open ls >/dev/null	List system calls made by command
ltrace -f -e getenv ls >/dev/null	List library calls made by command
lsdf	List of all open files on the system
lsdf -u [username]	List of all open files by a user
lsdf -p \$\$	List paths that process id has open
lsdf ~	List processes that have specified path open
ps	Display current running processes
ps -ef	Display current running processes on the system
ps -ef grep [processname]	Display process information for [processname]
ps -e -o pid,args --forest	List processes in a hierarchy
ps -e -o pcpu,cpu,nice,state,cputime,args --sort pcpu sed '/^ 0.0 /d'	List processes by % cpu usage
ps -C firefox-bin -L -o pid,tid,pcpu,state	List all threads for a particular process
ps -p 1,2	List info for particular process IDs
last reboot	Show system reboot history
free -m or free -h	Show amount of (remaining) RAM (-m displays in MB)
watch -n.1 'cat /proc/interrupts'	Watch changeable data continuously
System Information (see also sysinfo) ('#' means root access is required)	
uname -a	Show kernel version and system architecture
uname -r	Display just kernel release information
head -n1 /etc/issue	Show name and version of distribution
uptime	Displays how long the system has been running
last reboot	Displays last reboot time
cat /proc/partitions	Show all partitions registered on the system
cat /proc/cpuinfo	Display CPU information
cat /proc/meminfo	Display memory information
dmesg	Display or control the kernel ring buffer
lspci -tv	Display PCI devices
lsusb -tv	Display USB devices
grep MemTotal /proc/meminfo	Show RAM total seen by the system
grep "model name" /proc/cpuinfo	Show CPU(s) info
mount column -t	List mounted filesystems on the system (and align output)
grep -F capacity: /proc/acpi/battery/BAT0/info	Show state of cells in laptop battery
dmidecode -q less	Display SMBIOS/DMI information
smartctl -A /dev/sda grep Power_On_Hours	How long has this disk (system) been powered on in total
hdparm -i /dev/sda	Show info about disk sda
hdparm -tT /dev/sda	Do a read speed test on disk sda
badblocks -s /dev/sda	Test for unreadable blocks on disk sda
Interactive (see also linux keyboard shortcuts)	
readline	Line editor used by bash, python, bc, gnuplot, ...
screen	Virtual terminals with detach capability, ...
mc	Powerful file manager that can browse rpm, tar, ftp, ssh, ...
gnuplot	Interactive/scriptable graphing
links	Web browser
xdg-open ...	open a file or url with the registered desktop application
Miscellaneous - Other	
alias hd='od -Ax -tx1z -v'	Handy hexdump. (usage e.g.: • hd /proc/self/cmdline less)
alias realpath='readlink -f'	Canonicalize path. (usage e.g.: • realpath ~/./\$USER)
set grep \$USER	Search current environment
touch -c -t 0304050607 file	Set file timestamp (YYMMDDhhmm)
python -m SimpleHTTPServer	Serve current directory tree at http://\$HOSTNAME:8000/
program &	Starts program in the background
bg	Display stopped of background jobs
fg	Brings most recent background job to foreground
fg -n	Brings job n to the foreground