Linux Command Line Cheat Sheet *(v0.3)*

File Management

cd		change directory
cp		copy files and directories
	-r	recursive
	-p	preserve attibutes
ln		make links between files
	-s	symbolic link
ls		list directory contents
	-l	more info
	-a	all files
	-h	human readable
mkdir		make directories
mv		move (rename) files
pwd		show current/working directory
rm		remove files or directories
	-r	recursive
	-f	force
rmdir		remove empty directories

File Viewing

cat		show file content
head		output the first part of files
	-n	specify number of lines to show
less		show scrollable output
more		show output in pages
od		dump file in octal format
tail		output the last part of files
	-f	keep showing new added lines
	-n	specify number of lines to show
xxd		make a hexdump

File Editing

nano		simple text editor
	-c	show cursor position
	-w	disable line wrapping
vi		text editor
	i	switch to insert mode
	esc	switch to command mode
	:w	save file
	:q	quit

File Properties

chattr		change file attributes
chgrp		change group ownership
	-R	recursive
chmod		change file access permissions
	-R	recursive
chown		change file owner and group
	-R	recursive
du		estimate file size
	-s	summarize
	-h	human readable
file		determine file type
lsattr		list file attributes
stat		display file or filesystem status
touch		change file timestamps

Finding Files

find	search for files
	find <path> -name <filename>
grep	find files containing text pattern
	grep <pattern> files
locate	search for files in Locate database
updatedb	update Locate database

File Manipulation

comm		compare sorted files line by line
cmp		compare files byte by byte
cut		select columns from files
	-f	column number
	-d	specify column delimiter
diff		compare files line by line
fold		wrap lines to specified width
grep		filter lines matching a pattern
md5sum		generate / check MD5 checksums
nl		number lines
sort		sort lines
strings		show printable characters
tee		write to standard output and file
	-a	append
tr		translate or delete characters
uniq		remove duplicate successive lines
wc		count lines, words, and bytes
	-l	count just lines

File Packaging and Compressing

bzip2	compress files
bunzip2	uncompress bzipped files
gzip	(un)compress files
gunzip	uncompress gzipped files
tar	pack or unpack files in tar archive
-x	extract from archive
-t	list contents of archive
-c	create archive
-f	specify archive filename
-z	perform gzip compression
-j	perform bzip2 compression
unzip	unpack and uncompress zip files
zip	package and compress files
-r	recursive

File System Management

df	report filesystem disk space usage
-h	human readable
fsck	check and repair a file system
lsof	list open files
-c	select matching processes
-i	show open network files
mkfs	create a file system (i.e. format)
mount	mount a file system
	mount <device> <mount point>
stat	display file or filesystem status
-f	show file system status
sync	flush file system buffers
umount	unmount a file system

System Information

date	print or set system date and time
free	show memory information
hostname	show or set the system's name
last	show log of last logged in users
lsof	list open files
lspci	list all PCI devices
lsusb	list all USB devices
ps	show current processes
-e/-A	all processes
pstree	display a tree of processes
time	summarize resource usage
top	display real-time list of processes
q	quit
uname	print system information
-a	all information
uptime	show uptime and system load
w	show users and what they run
which	locate a command on the PATH
who	show who is logged in

Process Management

at	queue jobs for later execution
bg	resume process in the background
ctrl-c	interrupt (stop) running process
ctrl-z	suspend running process
fg	bring process to foreground
kill	terminate a process
nice	change process priority
ps	show current processes
-e/-A	show all processes
renice	change priority of running process
sleep	delay a process
sudo	run command as different user
top	display real-time list of processes
q	quit
w	show users and what they run

Getting Help

apropos	search manual pages
info	read detailed documentation
man	view manual pages
whatis	view command descriptions

Networking

dig perform DNS lookup
    `dig @<server> <name> <type>`
host perform DNS lookup
    -t query type
ifconfig configure a network interface
    netmask specify subnet mask
    up/down enable or disable interface
netcat read/write over a network
    -l listening mode
netstat print network connections
    -l show listening sockets
    -p show PID and program name
    -t show TCP
    -u show UDP
nmap network exploration scanner
ping send ICMP echo requests
route print / manipulate IP routing table
scp secure copy (remote file copy)
    `scp <user1>@<host1>:file1 \`
      `<user2>@<host2>:<file2>`
    -r recursive
ssh SSH client (remote login)
    `ssh <user>@<host>`
tcpdump dump network traffic
    -i specify network interface
telnet communicate over TCP
    `telnet <host> <port>`
traceroute print network route
wget non-interactive downloader
    `wget <url>`
whois query whois database

I/O Redirection

| pipe output of cmd 1 to cmd 2
    `<command1> | <command2>`
< take input from file
    `<command> < <file>`
> redirect output to file
    `<command> > <file>`
>> append output to file
    `<command> >> <file>`
2> redirect error stream to file
    `<command> 2> <file>`
&> redirect output and error stream
    `<command> &> <file>`
2>&1 redirect error stream to output
    `<command> &> <file>`

Shell Wildcards

* wildcard for zero or more chars
? wildcard for zero or one char
[abc] exactly one of the listed chars
[a-z] exactly one char from the range
[!abc] any char that is not listed
[!a-z] any char not in the range
{go,no} exactly one of the words

Shortcuts

<up> scroll through command history
<down> " " " "
<tab> file or command completion
~ home directory
cd - cd to last visited directory
**** command continues on next line

Special keys

& execute command in background
    `<command> &`
alias create an alias for a command
    `alias ls='ls --color=auto'`
unalias remove a command alias
ctrl-R search in command history
history list executed commands

Special keys

ctrl + D End-Of-File (ends standard input)
ctrl + U erase complete line
ctrl + W erase last typed word

Misc

cal display a calendar
clear clear terminal
lpq show printer queue
lpr print files
lprm cancel print job
mail send and receive mail
    -s specify mail subject
reset re-initialize terminal
watch periodically execute program
xargs build complex command lines

Fun and Games

banner show large banner
fortune print random adage

System Administration

passwd	change user password
su	change user ID or become root
useradd	create new user
shutdown	bring the system down
-r	reboot

Regular Expressions

.	any single character
[ ]	one given characters
[aeiou]	matches one vowel
[a-m]	matches one of a,b,c,...,m
[^]	any single char except given
[^0-9]	matches one non-numeric char
^	start of the line
$	end of the line
*	0 or more times
+	1 or more times
?	0 or 1 times
{x,y}	at least x and max y times
( )	groups multiple expressions
([][][])+	
|	or
(me|you)	matches 'me' or 'you'
( )	marks an expression
\n	matches n-th marked expression
([ao])x\1	matches 'axa' and 'oxo', not 'axo'

Package Management

apt-get	Debian package management

```
apt-get install <package>
apt-get remove <package>
```

rpm	RedHat package management

```
rpm -i <package>
rpm -e <package>
```

Scripting

perl	execute Perl program
-e	execute perl oneliner
-n	execute for each line in given text file
-p	like -n, but prints resulting lines