

Bash cheat sheet for regular users

Abbreviations

f	filename	F	2:nd filename
d	directory name	D	2:nd directory
s	string	p	pattern
c	character	\n	newline
\t	tab	MAC	not on MAC

Keyboard shortcuts

Ctrl-a go to beginning of line
Ctrl-e go to end of line
Ctrl-d remove character at cursor
or exit a shell
Ctrl-k remove text from cursor to the
end of line
Ctrl-u remove text from cursor to
the beginning of line
Ctrl-l clear the terminal
Ctrl-c exit a running program
Ctrl-r search command history
Alt-u make word UPPER case **MAC**
Alt-l make word lower case **MAC**
...
tab completion: extend the current
string to a file, command, program or
variable. Like: `mk <tab> <tab>`

Patterns, ranges, arithmetics and command substitution

***** any string `ls *.txt`
? any character `ls ?.txt`
{a,b,c} a b or c `ls *. {html,htm}`
{4..6} 4 5 6 `for i in {4..6}`
\$((expression)) `echo $((3+4*2))`
\$(command) `ls -l $(which whoami)`

Pipes

`echo -e "b\na\nb" | sort | uniq -c`

Files and directories

ls list files
ls -l long listing (size, permission..)
ls -lh list file sizes human readable
ls -1 one filename per line
ls -a show hidden files
cp f F copy file
cp -r copy directory
cp -i ask before overwriting
cd d change directory
cd cd to home directory
cd ~ cd to home directory
cd .. cd to parent directory
cd - cd to previous directory
mv f F rename **f** to **F**
mv f d move file into directory
mv d D rename or move **d** to **D**
mv -i ask before overwriting
rm f remove file
rm -r remove directory
rm -rf force remove **be careful!**
mkdir d make directory
rmdir d remove directory
touch f create empty file
chmod +x make file executable

Paths

pwd Current absolute path
which path to program/command

Remote access

ssh user@host log in to remote host
ssh -p 22 use port number
ssh -x use graphics
scp f secure copy
scp -P 22 use port number
scp -r copy directory
ssh user@130.235.244.18
scp -r ~/bin user@130.235.244.18:~

Search and replace

echo s print string with **\n**
echo -n s print without **\n**
echo -e s **\n** newline, **\t** tab
echo no | rev reverse, output: on
grep p f print lines containing **p**
grep -i p f ignore case in **p**
grep -c p f count lines containing **p**
grep -v p f print lines without **p**
grep -m 4 p f print 4 lines containing **p**
grep -A 3 p f print 3 lines starting
with matching line
grep -B 2 p f like -A but lines before
grep -f f F take patterns from file **f**
sed s/p/s/ replace first occurrence
of **p** on each line with **s**
sed s/p/s/i ignore case of **p**
sed s/p/s/g replace every occurrence
tr ac tg replace a with t, c with g
tr -d ac delete every a and c
find d -name *.txt find txt files in **d**

Status and history

free memory **MAC**
who logged in users
whoami current user
last last logged in users
top list processes, end: q
history retrieve command line history
alias see current aliases
df -h look at disk free space
du -sh d disk usage
diff f F compare files

Loops

`ls | while read var; do \
cp -i $var $var.backup; done
for var in $(ls); do \
cp -i $var $var.backup; done`

File content

cat f print content
more f content pager
less f content pager, quit: q
source f read (config) file
wc f count lines, words and
bytes (\approx characters)
wc -l count only lines
wc -m count only characters
sort f sort lines alphanumerically
sort -n f sort lines numerically
sort -r f sort lines reverse
uniq f remove adjacent identical
lines, often use sort before
uniq -c f count adjacent identical lines
cut -f 1,3 print field 1 and 3
cut -d c use **c** as delimiter, default **\t**
paste f F merge files line by line

Compression and archiving

gzip f compress, remove **f**
gzip -c f `gzip -c f>f.gz`, keeps **f**
gunzip f.gz uncompress, remove **f.gz**
bzip2 f compress, remove **f**
bzip2 -c f `bzip2 -c f>f.bz2`, keeps **f**
bunzip2 f.bz2 uncompress, remove **f.bz2**
zip f F creates **f.zip**
zip -r f d zip directory to file **f.zip**
unzip f.zip unzip
tar archive
-z gzip -j bzip2 -v verbose, -f file (last)
tar -cvzf d.tgz d -c create
tar -xvzf d.tgz -x extract
tar -tf d.tgz -t list files

Help

man command on-line reference manual
`man ls, man tar, man man ...`