Unix/Linux Command Reference

File Commands

ls – directory listing
ls -al – formatted listing with hidden files
cd *dir* - change directory to *dir* (**..** to go one "up")
cd – change to home
pwd – show current directory
mkdir *dir* – create a directory *dir*
rm *file* – delete *file*
rm -r *dir* – delete directory *dir*
rm -f *file* – force remove *file*
rm -rf *dir* – force remove directory *dir*
cp *file1 file2* – copy *file1* to *file2*
cp -r *dir1 dir2* – copy *dir1* to *dir2*; create *dir2* if it doesn't exist
mv *file1 file2* – rename or move *file1* to *file2* if *file2* exists, moves *file1* into directory *file2*.
cat > *file* – type into *file* (exit with Ctrl-D)
less *file* – output the contents of *file* (exit with 'q')
head *file* – output the first 10 lines of *file*
tail *file* – output the last 10 lines of *file*
tail -f *file* – output the contents of *file* as it grows, starting with the last 10 lines
ln -s *file link* – create symbolic link *link* to *file*

Process Management

***app* &** – start *app* in the background
ps – display your currently active processes
top – display all running processes
kill *pid* – kill process id *pid*
killall *proc* – kill all processes named *proc* *
bg – lists stopped or background jobs; resume a stopped job in the background
fg – brings the most recent job to foreground

File Permissions

chmod *mode file* – change the permissions of *file* to *mode*, which consists of a combination of letters:
- who: u (user), g (group), o (others), a (all)
- how: + (add), - (remove), = (set)
- what: r (read), w (write), x (execute)

Examples:
chmod g+rx *file* – read and execute for group
chmod u=rwx *file* – rwx for owner
For more options, see **man chmod**.

SSH

ssh *user@host* – connect to *host* as *user*
ssh-copy-id *user@host* – *add your key to host for user to enable a keyed or passwordless login*
scp *user@host:remote_file* . – copy remote file to local filesystem
scp *local_file user@host:remote_dir* – copy local file to remote host

Searching

grep *pattern files* – search for *pattern* in *files*
grep -r *pattern dir* – search recursively for *pattern* in *dir*
command* | grep *pattern – search for *pattern* in the output of *command*
locate *file* – find all instances of *file*

System Info

man *command* – show the manual for *command*
passwd – change you password
quota – show your quota
df – show free space on disk
du – show directory space usage
w – display who is logged on this machine
whoami – who you are logged in as
finger *user* – display information about *user*
uname -a – show kernel information
cat /proc/cpuinfo – cpu information
cat /proc/meminfo – memory information
date – show the current date and time
which *app* – show which *app* will be run by default

Compression

tar -czf *file.tar.gz files* – create a (compressed) archive of files with Gzip compression
tar -xf *file* – extract the files from an archive (compressed or uncompressed)
gzip *file* – compresses *file* and renames it to *file.gz*
gzip -d *file.gz* – decompresses *file.gz* back to *file*

Network

ping *host* – ping *host* and output results
wget *file* – download *file*
wget -c *file* – continue a stopped download

Keys

<Tab> – command completion
<Up>/<Down> – previous/next command in history
Ctrl+C – terminates the current command
Ctrl+Z – stops the current command, resume with **fg** in the foreground or **bg** in the background
Ctrl+D – log out of current session, similar to **exit**
Ctrl+A – go to the beginning of the line
Ctrl+E – go to the end of the line
Ctrl+K – erase to the end of the line
Ctrl+U – erases the whole line
Ctrl+R – type to search for a recent command
!! - repeats the last command
exit – log out of current session