

## File Commands

**ls** - directory listing  
**ls -a** - directory listing with hidden files  
**ls -al** - formatted directory listing with hidden files  
**cd dir** - change directory to dir  
**cd** - change to home  
**cd -** - change back to previous directory  
**pwd** - show current directory  
**mkdir dir** - create a directory dir  
**rm file** - delete file  
**rmdir dir** - delete empty directory dir  
**rm -r dir** - recursively delete directory dir (use with caution)  
**rm -f file** - force remove file; no error output if file doesn't exist  
**rm -rf dir** - recursively force remove directory dir (use with caution)  
**cp file1 file2** - copy file1 to file2  
**cp file1 file2 file3 dir** - copy file1, file2 and file3 to dir  
**cp -r dir1 dir2** - recursively copy dir1 to dir2; create dir2 if it doesn't exist  
**mv file1 file2** - move file1 to file2 if file2 is an existing directory, moves file1 into directory file2  
**ln -s file link** - create symbolic link link to file  
**>file** - create file (use with caution, doing this on an existing file will overwrite the content)  
**touch file** - create or update file  
**cat > file** - places standard input into file  
**cat file1 > file2** - overwrites the content of file2 with the content of file1  
**cat file1 >> file2** - appends the content of file1 to file2  
**echo "Hello World" > file** - overwrites file's content with Hellow World  
**echo "Hello World" >> file** - appends Hello World to the end of file  
**less file** - output the contents of file  
**more file** - output the contents of file  
**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  
**sed 's/foo/bar/g' file** - replaces all occurrences of foo with bar in file  
**sed -i.backup 's/food/bar/g' file** - replaces all occurrences of foo with bar in file after backing up file as file.backup  
**rm {m,M}\*file** - remove files according to a pattern  
Example:  
\$ **ls**  
\$ **touch myfile Myfile myfile1 Myfile1**  
\$ **ls**  
myfile Myfile myfile1 Myfile1  
\$ **rm {m,M}\*file**  
\$ **ls**  
myfile1 Myfile1

## Process Management

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

## File Permissions

**chmod octal file** - change the permissions of file to octal, which can be found separately for user, group, and world by adding:

- 4 – read (r)
- 2 – write (w)
- 1 – execute (x)

Examples:

**chmod 777** - rwx for all

**chmod 755** - rwx for owner, rx for group and world. For more options, see man chmod

## SSH

**ssh user@host** - connect to host as user

**ssh -p port user@host** - connect to host on port port as user

**ssh-copy-id user@host** - add your key to host for user to enable a keyed or password-less login

## 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

**updatedb** - updates the slocate database; see next item

**locate file** - find all instances of file; may need to run updatedb first

**find \$HOME -user root** - find files owned by root in \$HOME

**find /path -depth -type d -empty** - find empty directories

**find /path -depth -type f -empty** - find empty files

**find /path -name [name\_of\_file]** - find a file with a specific name

**find /path -name ".\*[given\_extension]"** - find a file with a specific extension

**find /path -name '\*.txt' -perm 644** - find .txt files with specific permissions

**find /path -perm -[permission\_bits]** - find files with some given permissions

**find /path -name '[given\_name].\*' - find files with a given name and any extension**

## System Info

**date** - show the current date and time

**cal** - show this month's calendar

**uptime** - show current uptime

**w** - display who is online

**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

**man command** - show the manual for command

**df** - show disk usage

**du** - show directory space usage

**free** - show memory and swap usage

**whereis app** - show possible locations of app

**which app** - show which app will be run by default

**lshw -html > hardware.html** - create an overview of hardware

**lsb\_release -a** - show information about the distro

**tr : '\n' <<<\$PATH** - show directories in the PATH, one per line

**sed 's/:\n/g' <<<\$PATH** - show directories in the PATH, one per line with sed

## Compression

`tar cf file.tar files` - create a tar named file.tar containing files  
`tar xf file.tar` - extract the files from file.tar  
`tar cf file.tar.gz files` - create a tar with Gzip compression  
`tar xf file.tar.gz` - extract a tar using Gzip  
`tar cf file.tar.bz2` - create a tar with Bzip2 compression  
`tar xf file.tar.bz2` - extract a tar using Bzip2  
`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  
`whois domain` - get whois information for domain  
`dig domain` - get DNS information for domain  
`dig -x host` - reverse lookup host  
`wget file` - download file  
`wget -c file` - continue a stopped download

## Installation

Install from source:

`./configure` - execute the configure script  
`make` - compile the source  
`make install` - install needed files  
`dpkg -i pkg.deb` - install a deb package on .deb-based systems  
`rpm -Uvh pkg.rpm` - install an rpm package on .rpm-based systems

## Shortcuts

`Ctrl+A` - move to the start of the line  
`Ctrl+E` - move to the end of the line.  
`Ctrl+U` - delete from the cursor to the beginning of the line.  
`Ctrl+K` - delete from the cursor to the end of the line.  
`Ctrl+W` - delete from the cursor to the start of the word.  
`Ctrl+Y` - pastes text from the clipboard.  
`Ctrl+L` - clear the screen leaving the current line at the top of the screen.  
`Ctrl+C` - halts 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+R` - reverse search  
`^abc^xyz` - replace first occurrence of abc with xyz in last command and execute it  
`!!` - repeats the last command  
`sudo !!` - repeats the last command with sudo privileges  
`exit` - log out of current session