

Command Line Reference

File System Navigation

pwd	Prints the working directory pathname
ls	Lists file and directory names
ls -al	Displays file type, permissions, links, size, access date, and filenames of all files
cd dirNm	Changes to another working directory
.	current directory
..	parent directory
~	home directory
/	root directory, directory separator

File System Management

cp fromFile toFile	Copies a file or directory
mv fromFile toFile	Renames or moves a file
touch fileNm	Creates a file or changes file timestamps
mkdir dirNm	Creates a directory
rm fileNm	Deletes a file
rm -r dirNm	Recursively removes a directory and contents
rm -rf dirNm	Recursively removes a directory and contents without confirmation

Viewing & Manipulating Files

cat fileNm	Displays a text file
head fileNm	Displays the beginning of a file
tail fileNm	Displays the end of a file
less fileNm	Displays a text file one page at a time
diff file1 file2	Lists the differences between two files
sort fileNm	Displays the contents of a file in order
uniq fileNm	Displays the contents of a file without duplicates
uniq file1 file2	Writes the contents of file1 out to file2 without duplicates
wc fileList	Displays the number of lines, words, and bytes of a file

Help

man cmd	Displays the system manual
<i>q (quit), h (help), f (forward), b (backward), g (go to first line), G (go to last line)</i>	
info cmd	Displays utility information
<i>q (quits), ? (help), n (next), p (previous)</i>	

Shortcuts

tab	Auto-completes a filename
tab tab	Cycles through filenames
ctrl-w	Deletes a word
ctrl-u	Deletes a line
ctrl-d	Log out of Shell
!!	Repeats the previous command
up arrow	Cycles through previous commands

Filename & Pathname expansion

?	Matches any single character
*	Matches any character from 0 to many
[list]	Matches one character from the list
[^list]	Matches one character NOT in the list
{v1,...,vn}	Matches any values from the list

Editing & Manipulating Files

cat > fileNm	Redirects command line input, ctrl-d writes it out
nano fileNm	Opens a small friendly text editor
vim fileNm	Opens a programmers text editor
vimtutor	Opens a vim tutorial

File Searching

find dirList opt exp	Searches for files given some criteria
grep opt pattern fileList	Searches through files for a string

File Processing

sed opt command fileList	(Stream editor) filters and transforms text
awk/gawk/mawk	A pattern scanning and text processing language

Miscellaneous Utilities

echo 'text'	Displays text
clear	Clears the terminal screen
date	Displays the time and date
gcc	Compiles c and c++ programs
make	Keeps a set of programs current
open fileList	(MacOS) Opens files, directories, and URLs

Access Root Privileges

su	Become a superuser or another user
sudo	Executes commands as a superuser or another user

Access Permissions

File Type	File access permissions	ACL flag	Links	Owner	Group	Size	Access Date	Filename
d	rwxr-xr-x	+	8	joe	devs	1024	03-16 11:56	projects

chmod	Changes file or directory permissions
chgrp	Changes the group associated to a file
chown	Changes the owner of a file

Redirection

Pipelines

Compression & Archiving

gzip	Compresses a file
zip	Compresses a file
tar	Packs and unpacks archives

Location Utilities

which	Displays the full pathname of a utility
whereis	Displays any references to a utility

User & System Information

df	Displays disk space usage
echo \$0	Displays the name of the working shell
hostname	Displays the system name
who	Lists the users on the system

Secure Networking

ssh	Securely opens a shell on a remote system
sftp	Securely transfer files to and from a remote system
scp	Securely copies files to and from a remote system

Process Management

jobs	Lists jobs
ps	Displays process status
kill	Terminates a process by PID
killall	Terminates a process by name
ctrl-c	Sends a TERM signal
ctrl-l	Sends a QUIT signal
ctrl-z	Suspend
&	Sends a process to the background
fg	Brings a job to the foreground