

## FILE & DIRECTORY

### Create a File

- cat** > *file* - Enter text and end with ctrl-D
- vi** *file* - Enter text and end with :wq!

### Make a Directory

- mkdir** - directory-name

### Display File Contents

- cat** *file* - display contents of *file*
- more** *file* - page through contents of *file*
- less** *file* - scroll through contents of *file*

### Comparing Files

- diff** *file1 file2* - line by line comparison
- cmp** *file1 file2* - byte by byte comparison

### Changing Access Modes

- chmod** mode *file1 file2 ...* Mode Settings:
  - u user (owner)
  - g group
  - o other (world)
  - + add permission
  - remove permission
  - r read
  - w write
  - x execute
- Chmod -R mode dir** - (changes ALL files in dir)

### List Files and Directories

- ls** - list contents of directory
- ls .a** - include files with "."
- ls .l** - list contents in long format

### Move (or Rename) Files and Directories

- mv** *src-file dest-file* - Moves a file (rename)
- mv** *src-file dest-dir* - Move a file to a new directory
- mv** *src-dir dest-dir* - Moves a directory (rename)

### Copy Files

- cp** *src-file dest-file* - Copies a file.
- cp** *src-file dest-dir* - Copies a file to a directory
- cp -R** *src-dir dest-dir* - Copies a directory to new directory

### Remove Files

- rm** *file* - remove a file
- rmdir** *dir* - remove an empty directory
- rm -r** *dir* - remove a directory and its contents

### Change Working Directory

- cd** - return to your login (home) directory
- cd** *dir* - change to directory *dir*
- pwd** - display absolute path of working directory

### Pathnames

- simple:** - One filename or directory name for accessing local file or directory. Example: foo.c
- absolute:** - List of directory names from root directory to desired file or directory name, each separated by /. Example: /src/shared
- relative:** - List of directory names from working directory to desired file or directory name, each separated by /. Example: Mail/inbox/23

### Directory Abbreviations

- ~** - Your home (login) directory
- ~username** - Another user's home directory
- .** - Working (current) directory
- ..** - Parent of working directory
- ../..** - Parent of parent directory

## SHELL

### Commands

- history** - show previously-run commands
- alias** - Command to abbreviate command to strings

### Wild Cards

- ?** - single character wild card
- \*** - Arbitrary number of characters
- [abc]** - single .a. , .b. or .c.
- [m-n]** - single character from the .m. to .n. interval

### Redirection

- command > file** - direct output of *command* to *file* instead of standard output (screen), replacing current contents of *file*
- command >> file** - as above, except output is appended to the current contents of *file*
- command < file** - receives input from *file* instead of standard input (keyboard)

### Pipe

- cmd1 | cmd2** - "pipe" output of *cmd1* to input of *cmd2*

### Command substitution

- cmd1 `cmd2`** - The output from *cmd2* is used as an argument for *cmd1*.

### Command lists

Command list is a sequence of programs.

- cmd1 ; cmd2** - Executes the *cmd1*, then the *cmd2*
- cmd1 && cmd2** - *cmd2* is executed if, and only if, *cmd1* returns an exit status of zero.
- cmd1 || cmd2** - *cmd2* is executed if and only if, *cmd1* returns a non-zero exit status.

### Regular Expressions

- \$** - end of line
- (r)** - Regular expression *r* (egrep)
- .** - any single character
- [^abc]** - any character except a, b, or c
- [^a-c]** - any character except characters in a-c
- [abc]** - any character a, b, or c
- [a-c]** - any character in range a through c
- \(r\)** - tagged regular expression *r* (grep)
- \c** - special character *c*
- \n** - nth *\(...\)* match (grep only)
- ^** - beginning of line
- c** - non-special character *c*
- r\*** - zero or more occurrences of *r*
- r?** - zero or one occurrence of *r* exp
- r+** - one or more occurrences of *r* exp
- r1 | r2** - regular expressions *r1* or *r2*

## SEARCH / FIND

- find path.expression** - recursively descends the directory hierarchy for seeking files that match with the expression
- grep string filelist** - show lines containing string in any file in filelist
- grep -v string filelis** - show lines not containing *string*
- grep -i string filelist** - show lines containing *string*, ignore

## PROCESSES

- ps** - Shows users running jobs on system.

**ps -fu <userid>** - userid show jobs running as  
userid  
put a stopped job into the  
background (foreground)

**bg (fg)** - jobs show user's running  
and suspended jobs  
run command in the  
background; it will not stop  
when you logout. (applies to  
ksh only)

**nohup command &** - Send signal *SIGTERM* to  
process ID *PID*, or kill  
(terminate) process with  
process ID number.

**kill -SIGTERM PID** -

**fg** - restart a suspended command

**jobs** - display suspended commands

**^C** - interrupt currently running process

**^Z** - suspend currently running process

**^S** - stop output on screen

**^Q** - continue output on screen

## MANIPULATING DATA

**awk** - pattern scanning and processing  
language

**cmp** - compare the contents of two files

**cut** - cut out selected fields of each line of a  
file

**diff** - differential file comparator

**gawk** - pattern scanning and processing  
language

**sed** - stream text editor

**sort** - sort file data

**tr** - translate characters

**uniq** - report repeated lines in a file

**wc** - count words, lines, and characters

## COMPRESSED FILES

**compress** - compress files

**uncompress** - uncompress files

**zcat** - cat a compressed file

**zcmp zdiff** - Compare compressed files

**gzip** - GNU alternative compression  
method

**gunzip** - uncompress gzipped files

**tar options -f** - work with "tar" archive of  
files:  
tar -cvf archive files(s)  
archivename filename(s) - create archive  
tar -xvf archive extract  
files  
tar -tvf archive list files

## NETWORKING

**ftp** - file transfer program

**rcp** - remote file copy

**rlogin** - remote login to a UNIX host

**rsh** - remote shell

**tftp** - trivial file transfer program

**telnet** - make connection to a host

**ssh** - secure shell terminal or command  
connection

**scp** - secure shell remote file copy

**sftp** - secure shell file transfer program

## PRINT / PRINTER

**lp** - print a file (HP-UX, Solaris 2.x)  
query printer queue of the default printer. If

**lpq** - If printrname is given, will query printer  
printrname. (BSD, SunOS, Linux)  
filename print filename (send filename to the  
default printer). If printrname is given, will  
send to filename to printrname. (BSD,  
SunOS, Linux)

**lpstat** - check printer status (AIX, Solaris, HP-UX)

**lpq** - Check printer status (Linux)

**cancel** - Cancel print jobs

## MISCELLANEOUS

**history** - show command history

**quota -v** - display disk usage and limits

**ftp** - file transfer program

**reset** - reset terminal mode

**script** - keep script of terminal session

**stty** - set terminal options

**time** - time a command

**tset** - set terminal mode

**tty** - print current terminal name

**uptime** - display system status

## USEFUL WEBLINKS

### General UNIX Reference:

<http://www.unixguide.net/cgi-bin/unixguide.cgi>  
<http://bhami.com/rosetta.html>

### IBM AIX:

<http://www.rootvg.net/>  
[http://publib16.boulder.ibm.com/pseries/en\\_US/infocenter/base/resources.htm](http://publib16.boulder.ibm.com/pseries/en_US/infocenter/base/resources.htm)

### SUN Solaris:

<http://www.sun.com/bigadmin/home/index.html>

UNIX **FUN**damentals

UNIX Command Crib Sheet

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