Summary of UNIX commands

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This is a summary of UNIX commands available on most UNIX systems. Depending on the configuration, some of the commands may be unavailable on your site. These commands may be a commercial program, freeware or public domain program that must be installed separately, or probably just not in your search path. Check your local documentation or manual pages for more details (e.g. man programname). This reference card, obviously, cannot describe all UNIX commands in details, but instead I picked commands that are useful and interesting from a user's point of view.

Disclaimer

Conventions

bold
: represents program name

dirname
: represents directory name as an argument

filename
: represents file name as an argument

[dirname]
: optional directory name (or other optional argument) as argument. If it is not given, the current directory will be used.

Table of Contents

1. Directory and file commands

cat *filename*
: display the content of file filename

cd *[dirname]*
: change directory to dirname. If dirname is omitted, change to your home directory.

cp *source destination*
: copy file source into file destination.

df *[dirname]*
: display free disk space. If dirname is omitted, display all available disks. The output maybe in blocks or in Kbytes. Use df -k in Solaris.

du *[dirname]*
: display disk usage.

less *filename*
: display filename one screenful. A pager similar to (better than) more.

ls *[dirname]*
: list the content of directory dirname. Options: -a display hidden files, -l display in long format

mkdir *dirname*
: make directory dirname

more *filename*
: view file filename one screenfull at a time

mv *oldname newname*
: rename file oldname to file newname. If newname is a directory, then move oldname into directory newname.

pg *filename*
: view filename one screenfull at a time (a pager).

pwd
: print working directory

rmdir *dirname*
: remove directory dirname (if dirname is empty).

rm *file1 [file2 ...]*
: remove files file1, file2, etc.

rm -r *dirname*
: remove dirname recursively, removing all files and subdirectories underneath dirname.

2. Print-related commands

lpq *[-Pprintername]*
: query printer queue of the default printer. If printername is given, will query printer printername.

lpr *[-Pprintername] filename*
: print filename (send filename to the default printer). If printername is given, will send to filename to printername.

lprm *[-Pprintername] jobnum*
: remove printing job number jubnum from printer printername.

lpstat
: check printer status (HP-UX, Solaris 2.x)

3. Miscellaneous commands

env
: print or alter environment variables hostname display host name

man *topic*
: display on-line manual on topic.

screen
: create multiple screen with one physical screen. This program is useful if you have a text-only (e.g. vt100) terminal. Move around with control-A.

uname
: print system name

users
: display all users on-line

w
: check who is doing what

which *commandname*
: show the location of commandname

who
: who is on-line on this machine

4. Process management

kill *SIGNUM PID*
: Send signal SIGNUM to process ID PID, or kill (terminate) process with process ID number PID. For example:

kill -HUP 5555

nice *programname*
: run program programname with lower priority (nicer to other users). Recommended for running background processes.

ps
: check processes. The options for this command depends on the version and variation of your UNIX. Check your local documentation.

top
: show (continuously) what process(es) is running.

5. File archive and compression

compress *filename*
: make filename smaller (compression). filename will be replaced by filename.Z (a .Z extension is added).

gunzip *filename.gz*
: expand filename.gz into its original form (size) and remove the .gz extension. This is GNU unzip.

gzip *filename*
: compress filename with GNU zip (gzip) and add .gz extension

tar
: combine files into one tar file, or extract files from a tar file. A tar file could be a device (magnetic tape as /dev/rst0) or a plain file. To extract filename.tar
tar xvf filename.tar
To combine all files under dirname into filename.tar:
tar cvf filename.tar dirname

uncompress *filename.Z*
: expand filename.Z into its original size and remove the .Z extension

unarj *filename.arj*
: exteract files from an ARJ archive

unzip *filename.zip*
: extract files from filename.zip. The reverse of zip command.

zip *zipname files*
: create an archive file (and compress it) called zipname.zip which contains files.

MTOOLS
: There is a set of commands to access MS-DOS disks on systems equipped with floppy disk. Most DOS file commands are available (prefixed with 'm'):
mcopy, mdel, mdir, mmd, mtype, etc.

6. Text editors

asWedit *[filename]*
HTML editor

axe *[filename]*
a simple X window text editor

elvis *[filename]*
a vi clone

emacs *[filename]*
start emacs. A more extensive documentation is available on-line. Reference card for GNU emacs is also available from FSF GNU emacs distribution.

gvim *[filename]*
X11 gui version of vim

jed *[filename]*
jed text editor

joe *[filename]*
a WordStar-like editor

nedit *[filename]*
a Motif-based text editor

textedit *[filename]* OpenWindows text editor

vi *[filename]*
vi editor

vim *[filename]*
a vi-clone

xedit *[filename]*
a simple X window text editor

xemacs *[filename]*
X window Emacs (formerly Lucid Emacs)

7. Mail Programs

biff
notify new mail has arrived

elm
read and/or compose e-mail.

exmh
X windows mail reader based on MH, see below

fastmail
quick batch mail (part of Elm)

from
list senders of mails in your mailbox

frm *[foldername]*
similar to **from** but has a better output. If foldername is present, it will list senders in folder foldername instead your incoming mailbox. This program is distributed as part of the elm package.

mail *[userid]*
read mail. If userid is given in the command line, it will be used in compose mode. After done, mail will be sent to userid

mailtool
OpenWindows mail program

mush
mail user shell. Similar to

mail , but has a better user interface.

MH package
There are also other e-mail packages, such as MH, which come with their own commands. For example, MH has the following commands (and more):

inc
incorporate mail into inbox folder.

scan
scan mailbox/folder

show
show current selected e-mail.

8. Usenet news

knews
interactive X window-based news reader

nn
read news with **nn** (NoNews is good news.) Can be used to read through NNTP or spool.

nntidy
cleanup or tidy your .newsrc

rn
read news with **rn**.

trn
threaded **rn** newsreader

xrn
X window-based news reader

9. File transfer and remote access

bftp
batch FTP

ftp *hostname*
Using the **ftp** prgram to perform FTP to/from host hostname.

ftptool
X-window (xview) based FTP prgram

kermit
send or receive files with kermit protocol.

kermit -s*filename*
to send filename

kermit -r*filename*
: to receive filename

minicom
: communication package similar to Procomm

ncftp *hostname*
: a user-friendly FTP program

rlogin *hostname [-l userid]*
: remote login to host hostname. If -l userid is given, will login as userid

rsh *hostname*
: remote shell to host hostname

ssh *[-l login_name] hostname [command]*
: connect to hostname with ssh (secure shell). If no command is given a shell will be started on host hostname. This is similar to telnet but the communication will be encrypted.

telnet *hostname [portnum]*
: connect to hostname with telnet. If portnum is specified, connect to port portnum. (Usually portnum is required if you want to connect to various services such as IRC or MUD.)

xftp
: X-window interface to FTP

xrsh *hostname*
: Open remote shell on host hostname in a new xterm window.

10. X windows

Window manager One of the following programs (window managers) is usually started when you login on a Unix workstation, the actual choice is controlled by your .xsession or .xinitrc file.

fvwm2
: feeble window manager

mwm
: Motif window manager

olvwm
: OpenLook virtual window manager

olwm
: OpenLook window manager

twm
: tab window manager

X window programs

filemgr
: OpenWindows file manager

xcalc
: calculator

xclock
: display clock

xfm
: file managerX

xlock
: lock your screen

xman
: view/search manual pages

xterm
: a terminal or shell session

11. Graph, Plot, and Image Processing Tools

coreldraw
: start CorelDraw (commercial drawing program)

corelpaint
: start Corel Paint program (a commercial painting program)

ghostview or gv
: a front-end of ghostscript (**gs**).

giftrans
: converts GIF image to transparant GIF.

gimp
: image processing tool/drawing program with filters (plug-ins) to manipulate image.

gnuplot
: a freeware plotting program capable of plotting 2D and 3D plots. It supports a wide variety of output formats.

gs
: Ghostscript, a PostScript previewer. It can also be used to convert PostScript into other graphic formats.

ps2epsi*file.ps [file.epsi]*
: create Adobe's Encapsulated PostScript Interchange (EPSI) format from a postscript file.

psselect *infile [outfile]*
: select pages from a PostScript file.

pstoedit
: converts PostScript to tgif format for editing

rplot
: plot 2-D data

tgif
: an X window drawing tool. It can produce various output formats, including PostScript.

xfig
: an X window drawing tool capable of producing fig output

xgraph
: a simple X window graphing program able to produce a bar graph.

xloadimage *filename*
: image previewer

xpaint *[filename]*
: X window painting program, undrestands various image format including GIF

xv *[files]*
: image previewer and manipulation tools for X window. It supports various formats, including GIF, BMP, TIFF, and PostScript.

12. Information Systems

archie
: search the Archie database for anonymous FTP sites

arena
: X-window WWW-browser which understands HTML 3.0.

chimera
: X-window WWW-browser

gopher
: a Gopher client

hotjava
: WWW browser that understands Java language

hypermail
: converts mail into HTML

hytelnet
: access various libraries on the Internet

lynx
: a text-based WWW-browser

Mosaic
: NCSA X window WWW-browser

netscape
: a WWW browser (X window) with a built in threaded newsreader

swais
: a text-based WAIS client

tkwww
: Tk-based WWW browser

xarchie
: X-window interface of **archie**

xgopher X-window gopher client

xmosaic
: X-window WWW-browser

xwais
: X-window WAIS client

13. Networking programs

finger *userid@hostname*
: check information of userid at host hostname

host *domainname*
: find information about *domainname*, such as its MX record or IP address

irc
: Internet Relay Chat, a multi-user chat. Beware, addictive!

nslookup
: query information about a specific host through a domain name server. For example you can find IP address of a machine, MX record of a domain.

ping *hostname*
: check if host *hostname* is alive

rup *[hostname]*
: show status of local machines. If *hostname* is given, only check that *hostname*

talk *useri@hostname*
: talk to *userid* at host *hostname*

traceroute *hostname*
: tracing IP packet from this host to *hostname*

write *userid*
: write to *userid*'s screen/session

14. Programming tools and shells

bash
: Born again shell. A **sh** clone, but better

bison
: a GNU implementation of **yacc**

cc
: C compiler

CC
: C++ compiler

cpp
: C language preprocessor

csh
: C-shell

dbx
: a debugger program

dbxtool
: X window interface to **dbx**

f77
: FORTRAN compiler

find *[path...] [expression]*
: search recursively through directory tree starting from *path* for files satisfying *expression*

flex
GNU implementation of lex

g77
GNU Fortran compiler

g++
GNU C++ compiler

gawk
GNU **awk**

gcc
GNU C compiler

gcl
GNU Common Lisp

gdb
GNU debugger

grep pattern file(s)
search for a string, pattern, or regular expression in file(s)

imake
C preprocessor interface to the **make** command. Usually it uses file **Imakefile.**

ksh
Korn shell

lex
lexical analyzer generator

lint
verify a C program

m4
macro language processor

make
maintain, update, compile, and regenerate related files by a set of rules defined in file **Makefile.**

nm
print name list of object file

perl
Practical Extraction and Reporting Language, a powerful programming and scripting language

prolog
a Prolog system

rcs
resource / version control

sccs
source code control system

sed
stream editor

sh
Bourne shell

tclsh
Tcl shell, a Tcl interpreter

tcsh
tcshell, a csh compatible shell but better

tgrind
reformat source code to make it pretty for printout

wish
a simple windowing shell, a tk/tcl implementation

yacc
parsing program generator. Generate C code from a grammar

zsh
Z shell

15. Text processors, typesetters, and previewers

a2ps
converts ASCII to PostScript

groff
GNU *roff

gtroff
GNU troff

gxditview
display gtroff output files under X window.

ispell *filename*
interactive spelling program

latex *filename.tex*
process *filename.tex* with **LaTeX** and generate filename.dvi (a DVI file)

lout
a layout or typesetting program

mp
format text, mail, news into a nice PostScript output.

nroff *filename*
process *filename* with **nroff**

psnup
manipulate PostScript file to have n pages on one side

pstops
manipulate PostScript files to produce 2-up, 4-up, booklet, rotate and many other functions.

soffice
StarOffice, a complete Office Suit compatible with MicroSoft Office, read the manual pages first before you start to use it.

spell *filename*
spell the contents of filename

tex *filename.tex*
TeX document processing and typesetting.

troff *filename*
process filename with **troff**

xdvi *filename.dvi*
preview DVI file (*filename.dvi*)

xtem *[filename.tex]*
a X windows program to control the (La)TeX typesetting cycle, contains extensive helpfiles on LaTeX commands and syntax.

16. Spreadsheets

oleo
GNU spreadsheet

sc
spreadsheet calculator

xspread
X window version of **sc**