

Unix Reference Card

For help, contact the HelpDesk:

Phone: 348-2435

E-mail: Help.Desk@ua.edu

Web: helpdesk.ua.edu

Open 8:00 a.m. - 4:45 p.m. Monday - Friday.

Getting Started

UNIX commands are used while connected directly to bama through an SSH or terminal interface. Our recommended programs include SSH Security Shell, TeraTerm with SSH, and Macintosh Terminal. More information is available online at ncs.ua.edu.

Commands are entered by giving the command name, any desired options, then any filenames or directory names all separated by spaces. When “enter” is pressed, the command is processed by bama.

UNIX is case sensitive. All UNIX commands are lower-case. Type commands demonstrated on this reference card exactly as shown. File and directory names can be mixed-case but always must be typed exactly as named.

For complete lists of options use the “man” command.

THE UNIVERSITY OF
ALABAMA

INFORMATION TECHNOLOGY

Directories

mkdir *directory-name* make a new directory
rmdir *directory-name* remove a directory (must be empty of all files)
cd *directory-name* change to a directory
cd change to your home directory
cd .. change to directory one level up

~ home directory
· current directory
.. directory one level back
/ entire filesystem root

Working With Files

ls *options filename* list files in a directory

Options for **ls** include:

- a show all files including hidden ones (those beginning with a “.”)
- l long list showing ownership, permission and links
- t time-ordered list
- F mark directories with “/”, links with “@” and executables with “*”

mv *options filename new-filename* rename a file

mv *options filename directory-name*
move file to a new directory

mv *options directory-name new-directory-name*
move a directory and all of its contents to a new directory, keeping the structure intact. New directory must already exist.

cp *options filename new-filename* copy file

rm *options filename* delete file

The most useful option for **mv**, **cp**, and **rm** is **-i**. This will cause command to verify (inquire) before execution.

Viewing File Contents

page *filename* go through file one page at a time
less *filename* page through file with capability to go backwards

head *options filename* view the first few lines
tail *options filename* view the last few lines

Printing

To select a new printer:

LPDEST *printername*

export LPDEST

lp *option filename* print file

cancel *printjob* cancel print job in queue. Get printjob name from **lp** command result

enscript *options filename* format file for PostScript printer

lpstat -p *printername* check printer queue. Use printername “all” to see full list.

Other Useful Commands

clear clear the screen

pine text-based email program

date current date and time

script keep a record of terminal session

quota -v show disk space usage and quota

cat *file1 >> file2* append *file1* to *file2*.

ispell *options filename* spell-check

grep *string filename* search for *string* in *filename*

wc *options filename* count lines, words, and characters

filep *options filename* print a file w/ formatting

Editing

vi *options filename* standard (vi)sual editor
emacs *options filename* terminal-based editor
pico *options filename* simple text editor
textedit *options filename* X-windows editor

Permissions and Security

chmod *permission filename(s)* set level of access.
permissions pertain to (u)ser, (g)roup and
(o)ther and include (r)ead, (w)rite, and
e(x)ecute.

Turn access on with “+”

Turn access off with “-”

Set access exactly to with “=”

chmod go-rwx *filename(s)* protect your files
from prying eyes

Shell Commands

history show previously-run commands
escape (repeat **k** or **j**) move up or down
through history of commands. Press “enter”
to re-execute (ksh only).
alias *newcommand command-string* create new
command that runs *command-string*, including
all of the given options

command > *outputfile* *command*’s output replaces
outputfile (>> will append)

command < *inputfile* *command*’s input comes
from *inputfile*

command1 | *command2* *command1*’s output
becomes *command2*’s input

Compressing and Archiving

compress (uncompress) *options filename(s)*
compress (uncompress) using LZ algorithm.

gzip (gunzip) *options filename(s)*
slightly more efficient compress/uncompress

zip (unzip) *options filename(s)* compress
(uncompress) and archive (unarchive)

tar *options -f archive-name filename(s)*

work with “tar” archive of files:

tar -cvf archive *files(s)* create archive

tar -xvf archive extract files

tar -tvf archive list files

Working With Processes

ps *option* show running jobs on system.

ps -fu *userid* show jobs running as *userid*

kill *pid* kill job given by process id *pid*.

Use **ps -fu** *userid* to find the pid.

control-z stop the foreground job

bg (fg) put a stopped job into the
background (foreground)

jobs show user’s running and
suspended jobs

nohup *command* & run *command* in the
background; it will not stop when you logout.
(applies to ksh only)

X-Windows

. enableX sets user DISPLAY.

Xwindows server must be enabled on PC

netscape start Netscape Navigator

textedit *filename* edit *filename*

jws Java Workshop programming suite

ws Sun Workshop programming and
debugging suite

Scripting

Programs can be be scripted using the any of the
following. Login startup files are in ().

/bin/ksh (.profile, .kshrc [if setup])

/bin/sh (.profile)

/usr/local/bin/bash (.bash_login, .bash_profile,
.profile)

/bin/csh (.login, .chsrc)

/usr/local/bin/tcsh (.login, .chsrc)

/usr/local/bin/perl

/usr/local/bin/wish8.0

/usr/local/bin/rexx

Compilers

f77 *options filename.f* FORTRAN77 (Sun)

f90 *options filename.f90* FORTRAN90 (Sun)

cc *options filename.c* C (Sun)

CC *options filename.cc* C++ (Sun)

gcc *options filename.c* C (gnu)

g++ *options filename.cc* C++ (gnu)

pc *options filename.p* Pascal (Sun)

Options are compiler-specific. Execute the
compiled binary with *./binary-name*

If not specified, binary will be called “a.out”