

Unix reference sheet

Access

ssh secure shell
ssh -Y X11 forwarding
sftp secure file transfer protocol
scp secure copy

Environment

env show environment vars
setenv set/show environment var (**cs**)
setenv *varname* *somestring*
export set environment var (**sh**)
var=*value*; export var
echo *\$varname*
echo \$PATH command search path
which *command*
module simplified environment setup

Miscellaneous

du -h disk usage, human-readable
ps process list
top top cpu consumers
find *dir* -name *name*
look for *file* under *dir*
echo print a string
chmod change permissions
chmod +x *file* make executable
seq *n m* list numbers from *n* to *m*
xargs *cmd*
turn input into *cmd* arguments

Special symbols

***** wildcard, match partial filenames
< file take input from *file*...
> file send output to *file*...
>> file add output to end of *file*...
pgm1 | *pgm2*
"pipe" output of *pgm1* to *pgm2*
`cmd` (backquotes) use output of *cmd*
in script
\$(cmd) same as backquotes
\$var value of variable *var*

Filters

grep *pattern file*
find lines with *pattern* in *file*
sed *instructions file*
stream editor, copy file with
replacements, deletions *etc*
cut pick out columns or fields
paste put together columns
head show first few lines
tail show last few lines

More scripting

awk search plus programmable actions
perl widespread scripting language...
python ...and another

Online manual pages

man *command*
man -k *keyword*

More information

<http://www.ace-net.ca>
email: support@ace-net.ca

Internet tutorials

<http://www.tuxfiles.org/linuxhelp/cli.html>
<http://librenix.com/?inode=4052>
<http://www.ece.uwaterloo.ca/~ece250/OnlineUnix/>
<http://www.regular-expressions.info>

Books

The Unix Programming Environment,
Brian W. Kernighan & Rob Pike
ISBN 013937681X

Really, Really Basic Unix reference sheet

- **cd** change directories
- **ls** list directory contents
- **ls -a** list all, even hidden files
- **ls -l** long list, include permissions & modification dates & byte counts
- **pwd** print working directory
- **mkdir** make a new directory
- **rm file** remove (delete) a file
- **rmdir dir** remove an empty directory
- **mv f1 f2** move (rename) a file
- **cp f1 f2** copy a file
- **cd dir** change directories
- **cd ..** change up one directory
- **cd ~** change to home directory
- **/** is the directory separator
 - e.g. /home/jsmith/thesis/stuff
- **cat** show contents (concatenate)
- **more** show, one page at a time
 - ctrl-B to go backward
 - q to quit
- **man cmd** online manual for *cmd*
- **nano** simple text editor
- **nedit** another, needs X11
- **vim** more powerful editor
 - <esc>:q to quit
 - **vimtutor** for introduction
- **emacs** another popular editor