Quick guide to SSH/SFTP/Linux

Author: Taffie Coler
taffie.coler@gmail.com

Notice: These are very basic, and not all commands nor are all the uses of the commands listed here. This is for a beginner's quick reference, and has some tips and tricks for starting out.

What is SSH?

Secure Shell is a protocol used to remotely access your shell account, proxy, etc. securely over a network.

Connecting using SFTP or SSH

sftp [username]@[remote-path]
ex: sftp slayerx@p1.cs.ohiou.edu

ssh [username]@[remote-path]
ex: ssh slayerx@p2.cs.ohiou.edu

Wildcard Characters

The asterisk * represents any amount of characters.
g++ *.cc says, "g++, compile all of my .cc files please"
The question mark ? represents exactly one character.
ls file.??? says, "list all files with a 3 character ext

Terminology

remote path/r-path – path of remote computer
local path/l-path – path of computer you are on
Bracketed words – are in place of strings, do not include brackets when you type commands in

Redirecting standard input and output

The pipe operator | feeds the output of one command to the input of another. For example, history | grep ssh will output any line in your command history where the string ssh occurs.
The output redirection operator > will direct the output of a command into a file. If the file does not exist, it will create it, if it does, it will **overwrite** the old file.
Another output redirection operator >> directs the output of a command into a file, but instead appends to the file.

Bash (Bourne-again Shell)

Bash is a shell for the GNU operating system. Its features include tab completion and unlimited command history, accessible by the up and down arrows. To get into the bash shell, simply type bash at the command prompt. To get out of bash shell, simply type exit.

Basic Linux Commands

bash	changes to bash shell
cat [files]	display or concatenate files
cat [file1] >> [file2]	append file1 to file2
cd	change directory
cp[file] [path]	copies a file to designated path
diff [file1] [file2]	compares two files, shows diff
exit	exits out of shell
find [path] -name [file]	returns full path of file
g++ [file.cc]	compiles your c++ programs
grep [pattern] [file]	searches through files for pattern
head [file]	displays first 10 lines of file
history	displays command history
kill -9 [process id]	kills process by pid
less [file]	lets you scroll through output
lpr [file]	send file to printer
man [command]	reference page for command
mkdir [dir name]	creates a directory
passwd	changes password
ps	shows active processes
pwd	print working directory
rm [file]	remove file
rmdir [directory]	remove [empty] directory
tail [file]	displays last 10 lines of file
top	shows top 15 system processes
which [command]	shows full path of shell commands

Running files in the background

When opening things from a terminal, you notice that if you type in the command line, gedit, you will no longer be able to run commands in your terminal. Instead, type gedit & the ampersand '&' tells it to run in the background. Using this method, you can run multiple programs and still retain the use of your command line.

What is SFTP?

Secure File Transfer Protocol is a protocol that uses SSH and lets you manage, access, and transfer your files securely over a network.

SFTP Commands

cd	change directory
dir/ls	display remote directory listing
exit/quit/bye	quit sftp
get [r-path] [l-path]	download file
help/?	display help text
lcd	change directory [locally]
lls	display local directory listing
lmkdir	make directory [locally]
lpwd	print local directory listing
mkdir	make directory [remotely]
put [l-path] [r-path]	upload file
pwd	print remote working directory
rename [old] [new]	rename remote file
rm	remove remote file
rmdir	remove remote directory
!	escape to local shell
![command]	execute command in local shell

Using text editors

Text editors are programs that are used to edit files. There are many that you can use, such as: emacs, gedit, nano/pico and vi/vim. To use these, simply type the editor name, followed by the file name - emacs file.cc & which will open an existing or create a new file with that name.

Warning about closing terminal windows

If you close a terminal window that you are currently using to run a program (for instance, gedit) it will close down all processes associated with that terminal window. Be careful to remember what you used it for and save often!

References
"User Commands."*Ubuntu 10.04.3 LTS, LucidLynx,* Man Page Tomb, Date: Man Page Reference. Shell. Date Accessed: January 29, 2012.