

Cluster commands

qstat	print list of all your jobs
qsub <i><script></i>	submit <i><script></i> as a job
qlogin	login to an interactive session on the cluster
qdel <i><job ids></i>	delete the jobs (<i><job ids></i> can be a pattern)

Browsing files

cd <i><destination></i>	change directory
ls <i>[pattern]</i>	list all files or match pattern
pwd	print current directory

You can return to your home directory by using **cd ~**

Modifying files

rm <i>[pattern]</i>	remove files (-r for recursive)
mv <i>[sources] [destination]</i>	move / rename file(s) or folder(s)
cp <i>[sources] [destination]</i>	copy file(s) (-r to create desination)

Modifying directories

mv <i>[sources] [destination]</i>	rename / move directory
mkdir <i><directory></i>	create a directory
rmdir <i><directory></i>	remove a directory
rm -rf <i><directory></i>	remove directory and all subdirectories

Finding files

find . -file -name <i>"*.txt"</i>	Find all .txt files in the current directory and below and print
locate <i>[pattern]</i>	match files with pattern anywhere in the full path and print

Can combine with **| grep**. locate may require **sudo updatedb** from time to time, and won't work on cluster without some modification.

Viewing files

head <i>[filenames]</i>	print first 10 lines of file
tail <i>[filenames]</i>	print last 10 lines of file
cat <i>[filenames]</i>	concatenate files and print

Task management

ps	See all of your active processes
top	Constantly updating list of ordered (by resources) processes
time <i><command></i>	print time taken to complete after command finishes running
kill <i><pid></i>	terminate process with id <i><pid></i>

Name Expansions

{a..z} or {1..100}	expands to the series e.g a b c d ...
*	expands to match anything, any number of times
?	Match anything once
\$((2 + 2))	Arithmetic expansion (evaluates to 2)
\$(<command>)	expands to the result of the command
~	absolute path to home directory

ls *.txt - list all .txt files

cp *{0..9} - list files which end in a number between 0 and 9

Processing stdout

awk -F "," '{print \$<n> column number }'	print only column n of files
sort (-n)	sort alphabetically (alphanumerically)
uniq (-c)	print only one instance of repeated lines (with count of lines)
grep (-i) [pattern]	print lines which contain <i>pattern</i> (ignore case)
wc -l	print number of lines
sed /<pattern>/<replacement>/g	replace all instances matching <i><pattern></i> with <i><replacement></i>

To use on a collection of files, all commands would be prefixed by:

cat [files] |

Remote Managment

ssh <i><username>@<host></i>	login to multi-user machine
scp <i><username>@<host>:[remote source] <local></i>	Cope file(s) from <i><host></i> to <i><local></i> destination.
rsync -t <i><username>@<host>:[remote source] <local></i>	only copy updated files from <i><host></i> to <i><local></i>

For the multi-user linux machine, *<host>* should be stem-ssu-linux

Useful

chmod +x <i><file></i>	give executable priveleges to <i><file></i>
seq <i><start></i> <i><stop></i> <i><step></i>	print sequence of numbers from <i><start></i> to <i><stop></i> in increments of <i><step></i>
man <i><command></i>	open the manual page for man
more <i><file></i>	print output in navigateable pages
fdisk -l	list all the connected drives and partitions
mount <i><partition></i> <i><directory></i>	directory will now lead to the partiton (useful for usb storage)

stdout can be piped into **more** to make long outputs readable.

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