

Basic Shell

\$PATH	specifies a set of directories where executables are located
\$	command prompt
command	[options] <arguments> command structure
bc	bench calculator (e.g. \$ echo 4+5 bc)
cat	concatenate files
cd	change directory, [..] move up a directory
chmod	change mode: [+x] make executable, [755] change permissions: you can read and write, others only read
cp	copy, [-a] archive, [-n] do not overwrite, [-r] recursive: whole directory
file	determine file type
find	find files: [-name] based on name [-mtime] based on modification time [-iname] case insensitive
gzip	compress and replace with a .gz file
gunzip	uncompress a .gz file
head	display beginning of file on screen
less	view contents of file on screen
ln	create link between files
ls	list files in directory: [-l] include file sizes, permissions
man	manual (e.g. man unix)
mkdir	make directory
mv	move (or rename): [-n] no overwrite, [-i] interactive
pwd	print working directory
rm	remove [-r] recursive
script	make typescript of terminal session
split	split files: [-b] by size, [-l] by number of lines
stat	get file status
tail	display end of file on screen
tar	archive a file system: [-c] create new archive [-z] uncompress [-x] extract to disk [-v] verbose [-f] file
which	identify the path to an executable
>	redirect output to file
>>	appends output to an existing file
>&	redirect stderr and stdout to a file

Navigating Hydra & Job Monitoring

ssh	secure shell \$ssh name@hydra-login01.si.edu
scp	secure copy (e.g. move file local to remote host and back) [-p] to preserve time info \$scp mygenome.fasta me@hydra-login01.si.edu:/pool/cluster0/me
rsync	synchronize files in two locations
qstat	queue info: [-f] particular job [-u] jobs of a particular user [-q] summary of queues [-j] pending jobs
qsub	submit a job (e.g. \$qsub myjob.qsub)
qconf	get info on queue configuration
qdel	delete a job (e.g. \$qdel job-id)
qacct	report on SGE usage
vmstat	get info on memory usage
jobs	display status of jobs (fg: foreground, bg: background)
top	continuous look at processes
ps	snapshot of processes
df	disk free: [-h] display in KB, MB, or GB
du	disk usage [-sh] sum of directories
Hydra wiki:	http://confluence.si.edu
Qsub generator:	https://hydra-3.si.edu/sgktest/QSubGen/