# LINUX AND HPC REFERENCE

#### Connecting

SSH/SFTP/SCP: login.compute.dundee.ac.uk
SMB: smb.compute.dundee.ac.uk/cluster

#### Getting Help

Command	Effect
man command	view man page for
	'command'
man -k term	Search man pages for
	'term'

#### File system operations

Command	Effect
pwd	Print working directory
ls	List directory contents
ls -a	Show hidden files
ls -1	Long format listing
ls -t	Sort by modification
	time
ls -S	Sort by file size
ls -r	Reverse sort order
cp file1 file2	copy file1 to file2
cp -r dir1 dir2	Recursively copy
	directory
mv file1 file2	move file1 to file2
cd dir	Change working
	directory to 'dir'
cd	Change to home dir
cd -	Change to previous
	working directory
mkdir dir	Make directory 'dir'
rmdir dir	Remove directory
	'dir'
rmdir -r dir	Recursively remove
	directory and contents

# Working with files

Command	Effect
cat file	Show contents of file
	on STDOUT
less file	View file one screen
	at a time
head file	Show first 10 lines of
	file on STDOUT
tail file	Show last 10 lines of
	file on STDOUT
cut -f2 file	Output field2 of a tab-
	delimited file file
cut -f2 -d',' file	Output field2 of a ','-
	delimited file file
grep string file	Search file for lines
	containing string
grep -c string	Report number of lines
file	containing string in
	file
grep -v string file	Search for lines not
lile	containing string in
	file
gzip file	Compress file
zcat file.gz	Shows contents of
	file.gz on STDOUT
gunzip file.gz	Decompress file.gz

#### Redirection

Command	Effect
command > out.txt	Redirect STDOUT
	of command to
	out.txt
command 2> err.txt	Redirect STDERR of
	command to err.txt
command1 command2	Pipe STDOUT of
	command1 to
	command2 STDIN

# Editing files with nano

Command	Effect
nano	Open nano with an empty buffer
nano file.txt	Open file.txt in nano
ctrl-o	Write-out (save)
ctrl-r	Read file into current
	buffer
ctrl-x	Exit nano
ctrl-w	Search forwards for term

# Univa Grid Engine (UGE)

#### Commands

Command	Effect
qsub script.sh	Submit script to queue
qstat	Show status of my jobs
qstat -F -j 12345	Show full status of job id
	12345
qdel 12345	Delete job 12345
qrsh	Request interactive job
qlogin	Request X11-interactive
	job

#### **Directives**

Directive	Effect
-cwd	Start job in current
	working directory
-jc [long 4week]	Assign job to job class
-j	Join STDOUT and
	STDERR
-mods l_hard	Modify mfree resource
mfree 16G	request of job class
-adds l_hard	Add local_free resource
local_free 50G	request to job class
-pe smp 16	Request 16 slot SMP
	parallel environment

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