Bash Commands

uname -a	Show system and kernel
head -n1 /etc/issue	Show distribution
date	Show system date
mount	Show mounted file systems
uptime	Show uptime
whoami	Show your username
man command	Show manual for command

Bash Shortcuts

CTRL-c	Stop current command
CTRL-a	Go to start of line
CTRL-e	Go to end of line
CTRL-u	Cut from start of line
CTRL-k	Cut to end of line
CTRL-r	Search history
CTRL-z	Sleep program
!!	Repeat last command
!abc	Run last command starting with abc
!abc:p	Print last command starting with abc
!$	Last argument of previous command
ALT-.	Last argument of previous command
!*	All arguments of previous command

Pipes

cmd1 | cmd2	stdout of cmd1 to cmd2
cmd1 |& cmd2	stderr of cmd1 to cmd2

File Operations

touch file1	Create file1
cat file1 file2	Concat-enate files and output
less file1	View and paginate file1
file file1	Get type of file1
cp file1 file2	Copy file1 to file2
mv file1 file2	Move file1 to file2
rm file1	Delete file1
head file1	Show first 10 lines of file1
tail file1	Show last 10 lines of file1
tail -f file1	Output last lines of file1 as it changes

Process Management

ps	Show snapshot of processes
top	Show real time processes
kill pid	Kill process with id pid
pkill name	Kill process with name name
killall name	Kill all processes with names beginning name

IO Redirection

cmd < file	Input of cmd from file
cmd1 <(cmd2)	Output of cmd2 as file input to cmd1
cmd > file	Standard output (stdout) of cmd to file
cmd > /dev/null	Discard stdout of cmd
cmd >> file	Append stdout to file
cmd 2> file	Error output (stderr) of cmd to file
cmd 1>&2	stdout to same place as stderr
cmd 2>&1	stderr to same place as stdout
cmd &> file	Every output of cmd to file

Bash Variables

env	Show environment variables
echo $NAME	Output value of $NAME variable
export NAME=value	Set $NAME to value
$PATH	Executable search path
$HOME	Home directory
$SHELL	Current shell

Directory Operations

pwd	Show current directory
mkdir dir	Make directory dir
cd dir	Change directory to dir
cd ..	Go up a directory
ls	List files

Nano Shortcuts

Files

Ctrl-R	Read file
Ctrl-O	Save file
Ctrl-X	Close file

Cut and Paste

ALT-A	Start marking text
CTRL-K	Cut marked text or line
CTRL-U	Paste text

Navigate File

ALT-/	End of file
CTRL-A	Beginning of line
CTRL-E	End of line
CTRL-C	Show line number
CTRL-_	Go to line number

Search File

CTRL-W	Find

File permissions

chmod 775 file	Change mode of file to 775
chmod -R 600 folder	Recursively chmod folder to 600
chown user:group file	Change file owner to user and group to group

File Permission Numbers

Calculate permission digits by adding numbers below

4	read (r)
2	write (w)
1	execute (x)

ls Options

-a	Show all (including hidden)
-R	Recursive list
-r	Reverse order
-t	Sort by last modified
-S	Sort by file size
-l	Long listing format
-1	One file per line
-m	Comma-separated output
-Q	Quoted output

Search Files

grep pattern files	Search for pattern in files
grep -i	Case insensitive search
grep -r	Recursive search
grep -v	Inverted search
grep -o	Show matched part of file only
find /dir/ -name name*	Find files starting with name in dir
whereis command	Find binary / source / manual for command
locate file	Find file (quick search of system index)

Command Lists

cmd1 ; cmd2	Run cmd1 then cmd2
cmd1 && cmd2	Run cmd2 if cmd1 is successful
cmd1 || cmd2	Run cmd2 if cmd1 is not successful
cmd &	Run cmd in a subshell

Command Lists (cont)

find /dir/ -user name	Find files owned by name in dir
find /dir/ -mmin num	Find files modified less than num minutes ago in dir

Screen Shortcuts

screen	Start a screen session
screen -r	Resume a screen session
screen -list	Show your current screen sessions
CTRL-A	Activate commands for screen
CTRL-A c	Create a new instance of terminal
CTRL-A n	Go to the next instance of terminal
CTRL-A p	Go to the previous instance of terminal
CTRL-A "	Show current instances of terminals
CTRL-A A	Rename the current instance