

| Bash Commands | |
|---------------------|--------------------------------|
| uname -a | Show system and kernel |
| head -n1 /etc/issue | Show distribution |
| mount | Show mounted filesystems |
| date | Show system date |
| uptime | Show uptime |
| whoami | Show your username |
| man <i>command</i> | Show manual for <i>command</i> |

| Bash Shortcuts | |
|-------------------|---|
| CTRL-c | Stop current command |
| CTRL-z | Sleep program |
| 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 |
| !! | Repeat last command |
| ! <i>abc</i> | Run last command starting with <i>abc</i> |
| ! <i>abc</i> :p | Print last command starting with <i>abc</i> |
| \$_ | Last argument of previous command |
| !* | All arguments of previous command |
| ^ <i>abc</i> ^123 | Run previous command, replacing <i>abc</i> with 123 |

| Bash Variables | |
|-----------------------------------|---|
| env | Show environment variables |
| echo \$ <i>NAME</i> | Output value of \$ <i>NAME</i> variable |
| export <i>NAME</i> = <i>value</i> | Set \$ <i>NAME</i> to <i>value</i> |
| \$PATH | Executable search path |
| \$HOME | Home directory |
| \$SHELL | Current shell |

| IO Redirection | |
|-------------------------------------|---|
| <i>command</i> < <i>file</i> | Read input of <i>command</i> from <i>file</i> |
| <i>command</i> > <i>file</i> | Write output of <i>command</i> to <i>file</i> |
| <i>command</i> > | Discard output of <i>command</i> /dev/null |
| <i>command</i> >> <i>file</i> | Append output to <i>file</i> |
| <i>command</i> 1 <i>command</i> 2 | Pipe output of <i>command</i> 1 to <i>command</i> 2 |

| Directory Operations | |
|----------------------|--------------------------------|
| pwd | Show current directory |
| mkdir <i>dir</i> | Make directory <i>dir</i> |
| cd <i>dir</i> | Change directory to <i>dir</i> |
| cd .. | Go up a directory |
| ls | List files |

| 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 <i>pattern</i> | Search for <i>pattern</i> in <i>files</i> |
| grep -i | Case insensitive search |
| grep -r | Recursive search |
| grep -v | Inverted search |
| find / <i>dir</i> / - <i>name</i> <i>name</i> * | Find files starting with <i>name</i> in <i>dir</i> |
| find / <i>dir</i> / -user <i>name</i> | Find files owned by <i>name</i> in <i>dir</i> |
| find / <i>dir</i> / -mmin <i>num</i> | Find files modified less than <i>num</i> minutes ago in <i>dir</i> |
| whereis <i>command</i> | Find binary / source / manual for <i>command</i> |
| locate <i>file</i> | Find <i>file</i> (quick search of system index) |

| File Operations | |
|--------------------------------|--|
| touch <i>file</i> 1 | Create <i>file</i> 1 |
| cat <i>file</i> 1 | Concatenate files and output <i>file</i> 2 |
| less <i>file</i> 1 | View and paginate <i>file</i> 1 |
| file <i>file</i> 1 | Get type of <i>file</i> 1 |
| cp <i>file</i> 1 <i>file</i> 2 | Copy <i>file</i> 1 to <i>file</i> 2 |
| mv <i>file</i> 1 <i>file</i> 2 | Move <i>file</i> 1 to <i>file</i> 2 |
| rm <i>file</i> 1 | Delete <i>file</i> 1 |
| head <i>file</i> 1 | Show first 10 lines of <i>file</i> 1 |
| tail <i>file</i> 1 | Show last 10 lines of <i>file</i> 1 |
| tail -f <i>file</i> 1 | Output last lines of <i>file</i> 1 as it changes |

| Process Management | |
|---------------------|---|
| ps | Show snapshot of processes |
| top | Show real time processes |
| kill <i>pid</i> | Kill process with id <i>pid</i> |
| pkill <i>name</i> | Kill process with name <i>name</i> |
| killall <i>name</i> | Kill all processes with names beginning <i>name</i> |

| 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 |
| ALT-W | Find next |
| CTRL-\ | Search and replace |
| More nano info at: http://www.nano-editor.org/docs.php | |

| 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 of terminal. |

| File Permissions | |
|-------------------------------------|---|
| chmod 775 <i>file</i> | Change mode of <i>file</i> to 775 |
| chmod -R 600 <i>folder</i> | Recursively chmod <i>folder</i> to 600 |
| chown <i>user:group</i> <i>file</i> | Change <i>file</i> owner to <i>user</i> and group to <i>group</i> |

| File Permission Numbers | |
|--|-------------|
| The first digit is the owner permission, the second the group and the third for everyone. | |
| Calculate each of the three permission digits by adding the numeric values of the permissions below. | |
| 4 | read (r) |
| 2 | write (w) |
| 1 | execute (x) |