Basic BASH and Linux commands

Some useful Linux BASH, vi and other commands

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ls, find and grep

`ls -al` **list hidden files**

`grep -RHI “pattern” .`

search for pattern recursively, ignoring binary files and printing filenenames

`find . -type f -name "*-eabi-gcc"`

Finds filenames with the pattern

vi or vim (1)

Designed for touch typing and very fast:

- `$` **end of line**
- `v` **select text for**
  - `d` **cut**
  - `y` **copy**
  - `p` **paste**
- `V` **select whole lines**
- `:split <filename>` **vertical split**
- `^w^w` **to move between split screen**

vi or vim (2)

`/<txt>`	**find <txt>**
`n`	**search forward**
`N`	**search backwards**
`:%s/xxx/yyy/gc`	**global search and replace with confirm (/g is global on a line, % is all lines)**
`O/o`	**insert line above/below**
`^`	**start of line**
`:%s/ ctrl-v ctrl-m//gc`	**deletes all ^M line endings**
`J`	**combine this line with the one below**

Tags in vi

`sudo apt-get install ctags`	**install it**
`ctags -R *`	**to build a tags file**
`^]`	**to find tags for the symbol you are over**
`^t`	**to go back a level of stack tags**
`g^]`	**to list all tags**

Tmux (1)

`Sudo apt-get install tmux` **install it**

tmux commands

`^b %`	**split horizontal**
`^b "`	**split vertical**
`^b arrows`	**move to the pane indicated**
`^b o`	**move to next pane**
`^b ;`	**move to previous active pane**
`^b x`	**kill pane**
`^b &`	**kill window (all tmux panes)**

Tmux (2)

`^b pageup`	**enters scroll mode and does a scroll up**
`ESC`	**to exit scroll mode.**
`arrows`	**to move about**
`exit`	**end this pane**

apt-get

```
sudo apt-get ctags
```

installs a package

```
sudo apt-get update
```

updates the package list

```
sudo apt-get upgrade
```

upgrades all installed packages

```
sudo apt-get dist-upgrade
```

upgrades your distribution (E.g. Debian)

odds

`lsusb` **lists all usb devices**

`.bashrc` **the resource file for BASH runs when each BASH shell is reated**

`alias dir='ls -al'` **creates a shortcut command**

`dmesg` **here what the kernel has to say**

Linux Versions

Linux kernel version

```
uname -r
```

or

```
cat /proc/version
```

or look in

```
dmesg
```

redirection

Linux output redirection: Send everything to file

```
&> file
```

Send stderr to stdout

```
2>&1
```

Send stderr to file

```
2> file
```

Making sd card images

to make a copy of an SD card (to a file "img"):
to copy to a file

```
dd if=/dev/sdb of=img
```

to do the reverse

```
dd if=img of=/dev/sdb
```

tar

TAR ing (detar and tar):
To extract a tar file to current directory

```
tar xzf CodeSourcery.tgz
```

And to create a tar file from a directory:

```
tar czf filename.tgz dir_to_compress/
```

Using SD cards

Find which device my usb stick is loaded as

```
ll /dev/disk/by-label/
```

Mount/unmount USB stick

```
sync
sudo mount /dev/sdc1 /mnt/tmp
sudo umount /mnt/tmp
```

List mounted devices

`mount -v` **(shows filesystem and r/w attributes)**

`df -h` **(shows how much free space you have)**

To check fs on the sd card (must be unmounted)

```
sudo e2fsck /dev/sdb2 -y
```

Questions