

## A GNU/Linux Cheatsheet

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<http://www.unexpected-vortices.com/>

**Note:** a number of these commands must be run as root, otherwise they will silently return with no output.

## Using the Terminal

Alt-F keys switch you between virtual terminals.

Shift-{PgUp,PgDn} for paging up and down.

## Services

```
/etc/init.d/{SERVICE-NAME} {start|stop|restart}
# or
service {SERVICE-NAME} {start|stop|restart}
```

Note that systemd provides `systemctl`, rather than `service`, but on most OS's `service` will be smart enough to do the right thing whether your service is managed by `rc-init` or `systemd`.

## Network

The `ip` command (provided by the `iproute2` project) has replaced: `ifconfig`, `arp`, `netstat`, `mii-tool`, `rarp`, `nameif`, and `route` (which are all in the `net-tools` package).

The Debian package for `iproute2` is `iproute`.

`ip` supports multiple subcommands, which take commands themselves, ex:

```
ip addr show
ip link show
ip route show
```

`ifup/ifdown` bring a given interface up/down

`ss` dump socket stats. Ex.: `ss -tupl`

`ethtool` apt-get install this.

`tracepath` Like `traceroute`, but doesn't require root and supports fewer options.

`mtr` Matt's `traceroute`

`ping` {pass}

`arping` ARP request

`tcpdump` todo

`iftop` like `top`, but for network traffic. See also `top`, `iotop`.

For name resolution, use `dig` (which replaces `nslookup`).

## Hard Disk

**fdisk** Ex.: `fdisk -l`  
**hdparm** Ex.: `hdparm -I /dev/sda`  
**parted** Alt to `fdisk`. Ex.: `parted -i`  
**smartctl** To get this, apt-get install smartmontools.  
**blkid** Shows devices and their UUIDs.  
**badblocks** Low-level block scanner. On large drives, may take a while to run.  
**fsck** File-system check. Requires that the partition is formatted.

Also:

```
mount
cat /etc/mount
cat /etc/fstab
```

## Package Management

```
dpkg -L {pkg-name} # List files provided by this pkg
# Search for filenames provided by all installed pkgs.
dpkg -S {some-str}
```

To see what files a not-yet-installed package provides:

```
# install apt-file, if necessary
apt-file update
apt-file list {package-name}
```

Or look in <http://packages.debian.org/{DISTRO-NAME}/all/{PACKAGE-NAME}/filelist>.

Or, if you have the .deb file: `dpkg -c <pkg-name.deb>`

## Files, Dirs, IO

**lsof** list open files  
**fuser** todo  
**iostat** like top, but for IO

## Hardware Info

```
lspci
lshw # Has option for abbreviated output.
ipmi-sensors
uname -a
```

## Processes and Memory Usage

```
free -h # see memory usage
top # table of processes
htop # interactive top
vmstat
```

## RAID

```
# Takes args like "/c0".
/opt/3ware/bin/tw_cli.x86_64
```

## Misc

```
watch some-command
tail -f some-file
```